BREAKWAVE ADVISORS

IMO 2020 and dry bulk shipping

The catalyst of the decade

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Key Takeaways

- We expect IMO 2020 to have a profound impact on shipping and more specifically on dry bulk shipping, as logistical inefficiencies, delays and confusion will cause rates to trade at a premium to the supply/demand balance equilibrium.

- Freight futures are not currently (as of early September 2019) pricing any such premium, rather they are reflecting global macro fear and a bearish outright supply/demand balance for dry bulk.

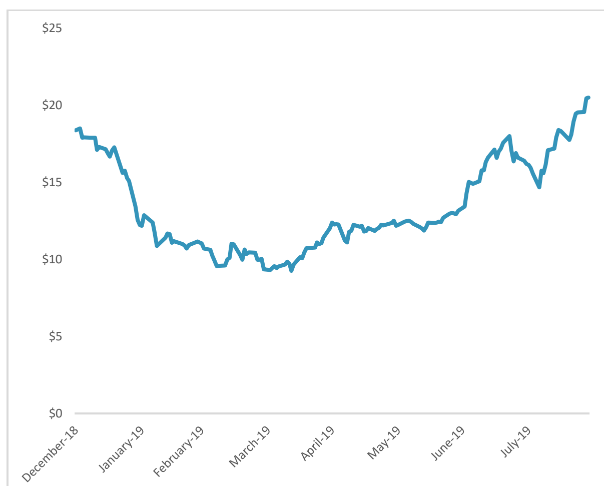
- History has shown that freight rates can exceed outright demand/balance equilibriums over a short period of time as supply in shipping is highly inelastic while the cost of waiting by charterers for better freight prices is extremely high in todays' logistical chain environment.

- We expect significant volatility in spot freight prices during the fourth quarter of 2019 and the first quarter of 2020 as a result of the adoption of the IMO 2020 regulations.

- The most efficient way to participate in what we view as a favorable risk reward trade over the next six months, is through BDRY, the Dry Bulk shipping ETF that tracks freight futures prices.

BDRY, the dry bulk shipping ETF provides an easy and efficient way to access an esoteric, cumbersome and complicated market, while passing through all the benefits that freight futures have over other more traditional shipping investments to the investor.

Figure 1. BDRY performance, year-to-date



As of August 28, 2019. Past performance is no guarantee of future results.

IMO 2020: a game changer for shipping

The new limits for sulphur in fuel oil used on board ships set by the International Maritime Organization (IMO) will have a profound impact on commercial shipping for years to come. What is widely known as IMO 2020 regulations will impact all commercial shipping but also the pricing on various sectors of the economy, from refining products and crude oil to final delivered products that will incorporate a higher freight cost. (for further information on IMO 2020 and its impact on shipping please visit: https://www.visualcapitalist.com/imo-2020-the-big-shipping-shake-up/)

The purpose of this short paper is to identify the impact on freight rates for dry bulk over the transition period (three months prior to implementation to three months after such implementation).

The dry bulk market has generally remained immune to environmental regulations over the past decade, with the most important one being the implementation of Emission Control Areas (ECA) in 2010 and in 2015. Given the trading routes for dry bulk (mainly South America to China and Australia to China) the ECA rules that mainly affected trading to and from the European Union and the US had a small impact on dry bulk shipping operations.

However, the upcoming IMO 2020 regulations will have a major impact on dry bulk, and all else being equal, we expect heightened volatility in rates during the implementation period, with considerable spikes and sudden drops in spot rates. We see various reasons why such an environment will exist:

- *Logistical issues*
- *Route inefficiencies*
- *Port congestion*
- *Reduced active fleet supply*
- *Strong seasonal demand*

Overall, we envision an environment with heightened volatility and extreme opportunities for ship owners that are optimally positioned during the transition period.

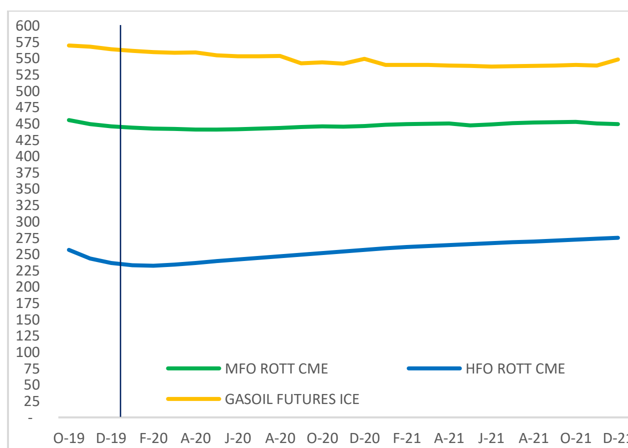
Logistical issues

In an industry that is well known for inefficiencies, bunkering, one of the most important aspects of operations, will become a challenge during the regulations implementation period, in our view. The regulation calls for the use of low sulphur fuels and the global banning of the existing high sulphur fuels (except for ships that have Exhaust Gas Cleaning Systems, also known as scrubbers, installed).

Currently, the great majority of such fuels are basically diesel-based fuels, but such fuels come at a much higher price compared to the existing high sulphur fuel. Supply of the new, compliant marine fuels that will be more price competitive, remain challenging and widely unknown.

As a result, operational issues relating to bunkering will become more pronounced, which should have a negative impact on the global active fleet supply.

Figure 2. Prices of Heavy Fuel Oil (HFO), Very Low Sulphur Fuel Oil (VLSFO) and Gasoil.



Source: Bloomberg and Breakwave Advisors

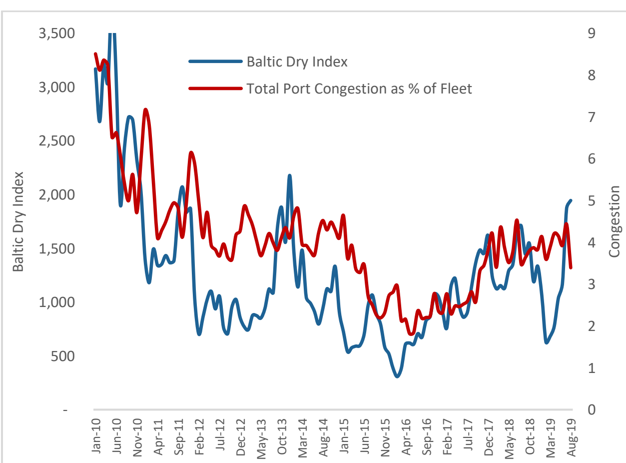
Route inefficiencies

Bunker availability during the voyage will play a key role for shipowners in accepting business in the first few months of implementation. Preference will be given to cargoes and routes that involve ports where supply of fuel looks available and easy to access. As a result, premiums on freight for specific routes will become a practice around implementation, as owners will require a higher price for more complicated operations and bunkering compared to more normal routes. Over time, such issues will normalize, and freight prices will default back to market levels.

Port congestion and delays

For owners who have not secured a future supply of fuel, there is the potential of significant delays in ports as the industry switches to low sulphur products. The surge in demand, although anticipated, can lead to shortages of both fuel and bunkering operations (i.e. barges), leading to port congestion and voyage delays. That in turn, can tighten the market and lead to higher freight rates, all else being equal.

Figure 3. Port Congestion and the Baltic Dry Index



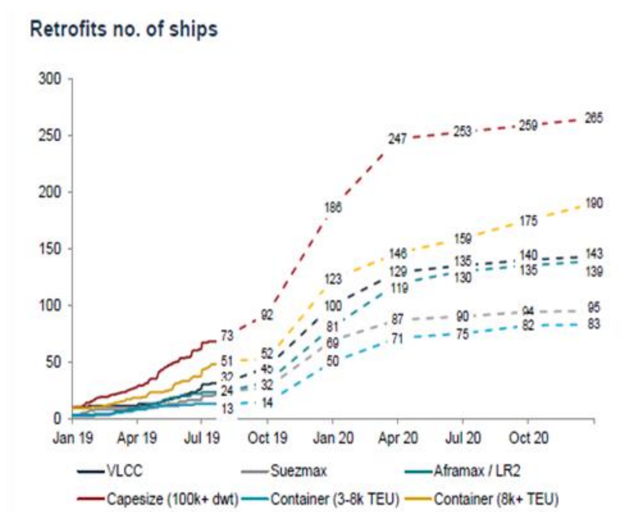
Source: Clarksons and Breakwave Advisors

The Baltic Dry Index (BDI) measures the average spot rates for dry bulk freight with a sector weighting of 40% Capesize, 30% Panamax and 30% Supramax.

Reduced active fleet supply

Over the next six months a significant number of vessels will be entering the shipyards in order to install exhaust gas cleaning systems, or scrubbers as commonly known. Such a process, although initially was estimated to last no more than 3 weeks, is proven to take much longer to complete. Anecdotal evidence from various owners and asset classes point to several weeks of delays. Such a process reduces the active fleet supply and is the main reason, in our view, for the recent strengthening in freight rates (in late August 2019, the Baltic Dry Index reached a nine year high).

Figure 4. Estimated vessels entering for scrubber fittings



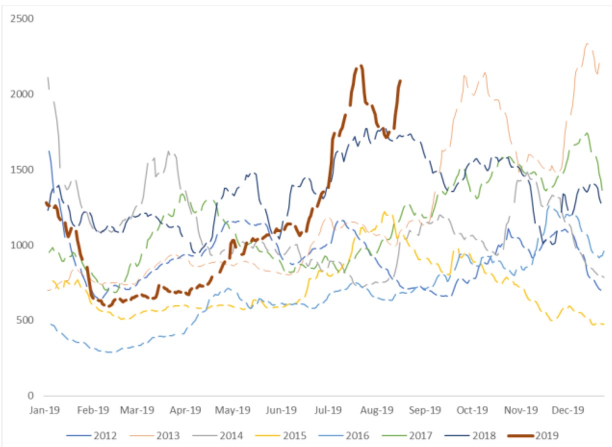
Source: Clarksons and Breakwave Advisors

Strong seasonal demand

The IMO 2020 transition coincides with the strongest period of the year for dry bulk, based on historical seasonal patterns. Iron ore exports tend to peak in the fourth quarter of the year and fall sharply during the first quarter. Weather, purchasing patterns and inventory management are the main reasons for such a seasonal pattern.

This time around, the gradual strengthening in demand will happen during a period of limited supply and logistical constraints, pointing to an even tighter supply/demand balance.

Figure 5. Dry bulk seasonality, Baltic Dry Index 2012-2019



Source: Bloomberg and Breakwave Advisors

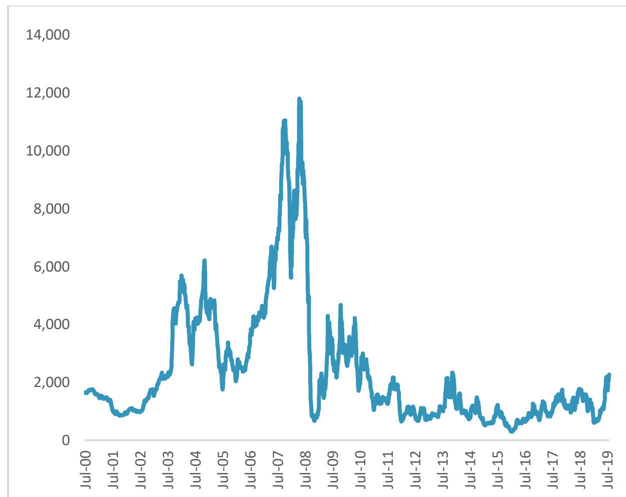
How high can rates go?

Freight rates have historically exhibited very high volatility around events that disrupt the logistical efficiency of operations. The extremely inelastic nature of shipping supply and the commoditized nature of freight makes any prediction of pricing impossible during periods of strain. In addition, cargo owners and operators have limited ability to withhold cargo for long periods of time waiting for freight prices to return to normal levels.

There are not a lot of past instances of similar disruptions to look into. The most prominent logistical impact on dry bulk was in 2007, when significant port congestion caused dry bulk rates to spike in an environment of strong demand from China and limited fleet supply. Rates reached 200,000/day for Capesize vessels.

As a result, we believe in an environment like the one described above, the potential for significant spikes in rates is real (albeit not at the same magnitude). That does not mean rates will remain elevated or that there is any sustainability of such an environment. On the contrary, we believe the fundamentals of dry bulk shipping are not favorable currently, as demand is suffering from slower economic growth while supply is still growing, albeit at low rates compared to history.

Figure 6. Baltic Dry Index, 2000-2019



Source: Bloomberg and Breakwave Advisors

Overall, we view the risk/reward as favorable in an environment of relatively steady demand for dry bulk transportation and potential supply issues affecting the active global dry bulk fleet. The bearish macro sentiment makes such a trade even more interesting, as backwarded curves in dry bulk futures provide an even better risk/reward trade for investors.

BDRY Historical Performance (as of 6/30/2019)

	Cumulative				**Annualized**	
	1 Month	**3 Month**	**YTD**	**Since Inception**	**1 Year**	**Since Inception**
Market	7.35%	40.50%	-28.44%	-47.40%	-40.04%	-39.54%
NAV	8.02%	39.27%	-28.56%	-46.97%	-39.69%	-39.15%

Inception date: 3/22/18

Performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance of the Funds may be lower or higher than the performance quoted. All performance is historical and includes reinvestment of dividends and capital gains. Performance data current to the most recent month end may be obtained by calling 1-844-ETF-MGRS (1-844-383-6477).

Investing in freight futures can be volatile and is not suitable for all investors.

Carefully consider the Fund's investment objectives, risk factors, charges, and expenses before investing. This material must be accompanied or preceded by a prospectus. Please read the prospectus carefully before investing.

The Fund is not a registered investment company, so shareholders do not have the protections of the Investment Company Act of 1940.

An investment in the Fund involves significant risks. You could lose all or part of your investment in the Fund, and the Fund's performance could trail that of other investments.

The value of the Shares of the Fund relates directly to the value of, and realized profit or loss from, the Freight Futures and other assets held by the Fund, and fluctuations in price could materially affect the Fund's shares. Investments in freight futures typically fluctuate in value with changes in spot charter rates. Charter rates for dry bulk vessels are volatile and have declined significantly since their historic highs and may remain at low levels or decrease further in the future.

The Fund will not take defensive positions to protect against declining freight rates, which could cause a decline to the value of the Fund's shares.

The Fund is distributed by ETFMG Financial LLC, which is not affiliated with Breakwave Advisors.

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