# BREAKWAVE DRY BULK SHIPPING ETF (BDRY) SHORT

PORT DECONGESTION; RECOVERING LABOR MARKET; SHORT

10/10/2021

# BDRY ETF
## SHORT
### PORT DECONGESTION; RECOVERING LABOR MARKET; SHORT

## THESIS

Global shipping prices have increased substantially and have remained highly elevated in 2021. However, we believe that a combination of rising interest rates and resolution of key shipping chain constraints will help alleviate the struggling global shipping industry. A rise in global interest rates will help slow economic growth, dampen demand for key commodities, and thus help ease pricing pressures on the dry bulk shipping industry. As vaccines become increasingly prevalent and society recaptures a sense of normalcy, labor shortages (a key current issue for ports) will improve dramatically allowing ports to begin eliminating current backlogs and delays. Although this process may extend into mid-2022, we believe that supply shortages combined with accelerated economic recovery in recent months has created a delicate bubble in the shipping industry and an attractive opportunity

## KEY DRIVERS

**Concerning inflation statistics and rising interest rates likely to curb global shipping demand.** The Consumer Price Index is up 5.4% YoY as of September 2021 and many experts believe that high inflation numbers are likely to persist far into 2022. The headwinds created by high inflation will likely curb aggregate demand in the foreseeable future. Some experts have been increasingly suspicious of the "transitory" nature of recent inflation, predicting that price increases could last much longer than 2022. When the Federal Reserve begins tapering its bond purchases, interest rates will rise and contribute to slowing economic growth. High inflation also creates the possibility that the Federal Reserve will be forced to increase interest rates sooner than their announced plans in 2023. Collectively, these developments will likely curb demand for commodities, and thus, the demand for dry bulk shipping. High inflation numbers may increase the price of fuel, a key input in global shipping, however we believe that a slowing economy, and associated reduction in shipping demand, will have a stronger, declinatory impact on prices.

**Continued economic recovery will alleviate trucking, train, and warehouse shortages.** A record 73 ships dropped anchor outside of Los Angeles in September awaiting clearance to unload goods. The pandemic has caused severe labor shortages resulting in a lack of truck drivers, warehouse workers, crane operators, and key workers in other areas of the global supply chain. The recent Delta variant outbreak exacerbated labor issues and associated supply chain disruptions. As the pandemic appears to abate with the onset of winter and the result of expiring unemployment benefits force more people back into the workforce, the labor shortages plaguing the global shipping industry will resolve. We believe that this will increase the availability of trucks, trains, and warehouses, essential to resolving the backlogs at major shipping ports globally and easing global shipping prices.

**Resolution of pandemic-related supply chain constraints**. Countries worldwide have implemented highly restrictive pandemic policies that have hindered the global shipping industry. At some Chinese ports, ships from locations experiencing high infection rates are forced to quarantine for up to 28 days before they can begin unloading cargo. In the United States, vaccination mandates are threatening to revitalize labor issues preventing ports from alleviating severe cargo backlogs. As vaccination numbers continue to increase globally and countries return to normalcy, international labor markets will stabilize and pandemic restrictions will abate. United States unemployment has fallen to just 4.6% from 6.3% in January, indicating a healthy labor market recovery. We expect this trend to continue, decreasing supply chain pressures and freeing ships, containers, and warehouses to transport more goods.

PRICE:
$38.84
(Pricing as of 10/07/21)

TARGET:
$28.00


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### SUMMARY

| | |
|---|---|
| Rating | Short |
| Price | $38.84 |
| Price Target | $28.00 |
| 52 Week High/ Low | 42.22/ 6.10 |
| Expense Ratio | 3.5% |
| Average Volume YTD | 304,000 / day |

## INVESTMENT OVERVIEW

The Baltic Exchange tracks the daily price movements of dry bulk freight shipping costs by contacting shippers worldwide to gather their price levels for different shipping paths and then an average is calculated. It issues monthly future contracts that track the averages through three dry bulk shipping sub-indices – Capemax, Panamax, and Supramax – that measure different sizes of dry bulk carriers.

Breakwave Dry Bulk Shipping (NYSEArca: BDRY) is an ETF founded by Breakwave Advisors LLC. BDRY is designed to provide long exposure to the dry bulk shipping market through a portfolio of near-dated freight futures contracts on the three dry bulk indices. BDRY reflects the daily price movements of these monthly future contracts and offers investors unleveled exposure without the need for a futures account. BDRY is designed to minimize the effects of rolling contracts by using a laddered strategy to buy contracts while letting existing positions expire and settle in cash. Since its inception on March 22, 2018, the fund has performed 237.68% YTD. It trades at an average volume of 305,704 and has an expense ratio of 3.47% currently

## SHIPPING INDUSTRY OVERVIEW

The global shipping industry drives economic growth through international trade, by transporting key products between countries. The United State's highly integrated supply chain network links producers and consumers through multiple transportation methods, including flight delivery services, freight rail, maritime and truck transportation. Shipping, specifically includes the carriers, seaports, terminals, and labor responsible for the movement of cargo. The shipping industry transports nearly 70% of all U.S. international trade and 72% of U.S. exports by tonnage.

The major shipping firms include the Danish shipping giant, Mærsk, the Japanese transportation company, Nippon Yusen Kabushiki Kaisha, and highly-integrated Chinese transportation firm, Cosco Shipping. The dominant importing countries include the United States, China, Germany, United Kingdom and France, while the exporters are China, United States, Germany, Japan and South Korea. The main shipping centers in the world include Singapore, Hong Kong, London, and Shanghai. Likewise, the Port of Shanghai, Singapore, Shenzhen, Ningbo-Zhoushan, and Hong Kong are amongst the busiest in the world.

Sea routes like the Suez Canal, Panama Canal, Strait of Malacca, and Dover are the core routes that link key continents and pass through the nationals with high import or export demand. These routes are the vital commercial shipping hubs and control the shipping flow. In 2019, the Port of Shanghai managed 43.6 million 20-foot equivalent unit (TEU) containers and 542.46 million tonnes of cargo. In 2020, the Port of Singapore handled approximately 37.2 million TEU of containers and 626.2 tonnage, through 130,000 vessel calls annually.

Recently, shipping a container to U.S. ports requires triple the waiting time, as container shortages, coupled with price and demand surges during COVID-19, have caused a backlog of cargo ships in southern California ports. To add on, from the Suez Canal blockage in March 2020 to the bottlenecks in Yantian port in China have accelerated the pricing surge.

Companies implemented the just-in-time (JIT) inventory management strategy, which aligns raw-material orders from suppliers directly to the company's production schedule. Firms utilize this to increase efficiency and decrease waste by ordering goods only as required for the production process. This reduces inventory costs and requires producers to accurately forecast demand. Typically, large firms utilize their stockpile of inventory to meet consumer demand in times of supply shocks. However, many have blamed JIT shipping for the global supply chain issues, as large retailers implement the JIT strategy to optimize, leaving them with no excess capacity.

Globally, container prices are rising to historic levels, as cargo owners bid rates to secure the required transportation storage. Average prices for a 40-foot container quadrupled from a year ago to $8,399 in July. To ship from China to Los Angeles and Long Beach ports costs an unprecedented, $12,000 a container. Overall, there is a 25% increase in cargo shipping from Asian ports in the 2021, as the demand for consumer goods has increased by 22%, compared to the pre-pandemic levels. Moreover, annually 7 and 8 million TEUs are handled by the Long Beach and Los Angeles ports respectively, far greater than their counterparts in the United States.

In comparison to the traditional shipping containers, dry bulk carriers are designed to ship commodities in large quantities. Bulk carriers ship major dry bulk commodities, including iron ore, coal, and grain, and steel products, and are foundational to the global trade industry. Freight, or goods (cargo) transported in bulk, futures are derivatives contracts that reflect the expected future level of freight rates. For dry bulk, freight futures are the future expected price of different vessel sizes over a specified period. Common vessel size contracts include Capesize, Panamax and Supramax vessels. Often, contracts are monthly and reflect the monthly average price of spot freight

## TRUCKING, TRAIN, AND WAREHOUSE SHORTAGES

Trucking, train and warehouse shortages are driving down demand across the shipping sector. A recent CBRE group survey has found the vacancy rate for warehouses near the ports of LA and Long Beach Ca to be hovering around 1%. Surges in demand for warehouse space have been largely driven by the consumer shift towards online e-commerce and efforts by retailers to position goods closer to their customers for faster delivery. Warehouse shortages across the board are projected to catalyse a sharp decline in shipping demand as companies scramble to find adequate storage space.

Nationwide labor shortages have disproportionately impacted the transportation sector, in particular the trucking industry. According to a recent study by the American Trucking Association the United States is short about 80'000 truckers, making it nearly impossible to move goods away from major ports, and towards inland domestic and regional hubs. This coupled with the warehouse shortage has compounded the problem as there are few options available to hold the products at the ports until trucking capacity is reached.

While there have been proposed policies to alleviate supply chain snarls, few seem particularly promising, and even fewer are targeted at solving the warehouse vacancy issue. One of the few promising solutions, is perhaps the most straightforward and looks to revamp truckers pay structures and working hours, there are also a few government policies which are looking to simplify the process for foreign truckers to work in the US. Although these policies could effectively alleviate the trucking shortage, the likelihood of them taking effect near enough in the future to alleviate the current strain is unlikely. Furthermore there are no proposed or efforts to alleviate the warehouse and storage shortage which is a largely responsible for the current situation.

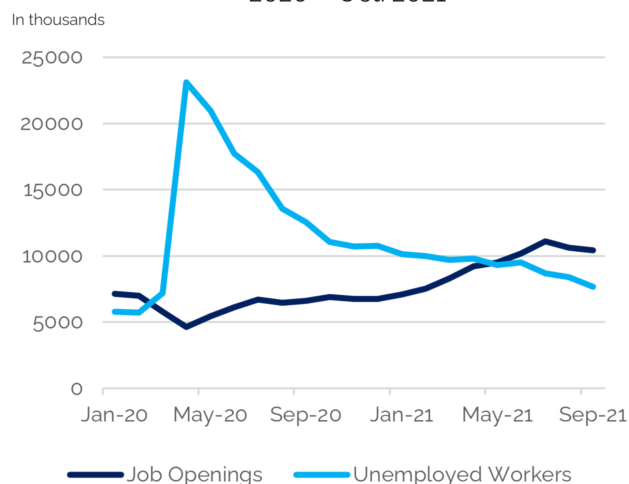
These supply chain snarls have made it increasingly difficult for companies to move goods from overseas factories to store shelves. Ultimately these snarls are projected to tamper shipping demand, as it becomes more cost effective for companies to hold product's at their own manufacturing facilities, and then to move them in much smaller quantities. All told this decrease in flow of goods should drive down shipping demand and free up supply, which should drive down shipping prices and consequently the price of the BDRY ETF.

## WEAK LABOR MARKET

Job openings in the US have grown at a CMGR of 6.31% from a mere 7.1 million in the beginning of 2021 to 10.9 million at the end of July. However, this lies far in contrast to unemployment that has been on a steady decline as economies have streamlined recovery, dropping from just over 10 million to below 8 million across the same time frame. Now that the number of job openings exceed natural unemployment numbers, labor shortages exist and are deeply rooted in issues such as vaccine mandates and long-term unemployment benefits.

The Biden administration's roll out of vaccine mandates to hasten the end of the pandemic has exacerbated the shortage of labor, which has adverse effects on broken supply chains and rising inflation. Data from Littler's survey of 1,630 US employers revealed that within the manufacturing industry, 71% of company executives fear losses in employees when the government begins enforcing its mandate come January 2022. The American Trucking Association warns that companies could lose 37% of drivers due to resignations and retirements as a result of vaccine requirements. Certain states have begun making efforts to push back against vaccine mandates; A federal court in Louisiana temporarily blocked this requirement for large businesses, which has been followed by similar suits in Florida, Georgia, and Alabama. As the potential impact of vaccine mandates on employment becomes more evident, specifically in industries directly linked to the global shipping crisis, a rise in resistance could alleviate these worker shortages in the future.

Figure 1.0: Unemployment and Job Openings Jan. 2020 – Oct. 2021




Another driver that impacted the onset and sustenance of the labor shortage is the generous unemployment benefits instituted by the federal government. Research by economists from the University of Pennsylvania discovered that a 10% increase in out of work benefits equated to the number of jobs being applied to experiencing a 3% drop. The Biden administration has already instituted a plan that has reaped benefits for the labor market; The expiration of the $300 weekly unemployment bonus in September of this year was directly linked to an increase of 531,000 filled jobs in October, which greatly surpassed estimates of 450,000 and grew from 194,000 the month prior. Moreover, the US government has expressed plans to increase wages to incentivize laborers to return to the workforce. Results from a poll conducted by the US Chamber of Commerce indicated that 61% of those that were unemployed were in no rush to return to work, many of whom were frustrated with current low wages relative to unemployment benefits. Once the government begins reversing the minor benefits associated with unemployment in addition to increasing wages, job growth could surge at exponentially higher rates going into next year.

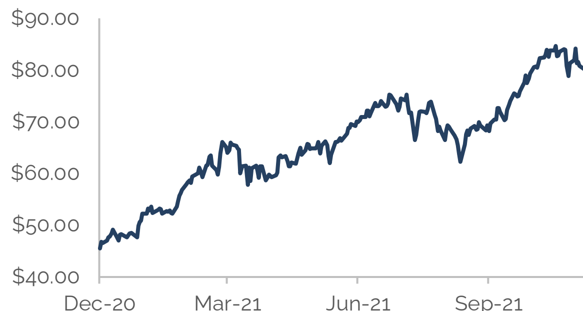
## ELEVATED FUEL PRICES

BDRY reflects shipping costs. It was hypothesized that the price of the fuel would influence index performance. By running a regression analysis of WTI on BDRY returns it was concluded that with 95% confidence level changes in oil prices have a significant positive impact on the shipping index. The model used returns to ensure stationary data. The outcome confirmed the need to analyze the oil market to determine the direction of the BDRY movement.

COVID-19 had a negative economic impact leading to a significant reduction in oil prices. Stalled economic activity in the beginning of the 2020 aggravated by the price war between Russia and Saudi Arabia had a downward price pressure taking WTI futures to the negative territory. Early months of the pandemic significantly undercut oil demand which soon was reversed by the V-shaped economic recovery caused by accelerating vaccines rollout, accommodative fiscal and monetary policies by governments around the globe. The excess oil demand has persisted for months with OPEC hesitant to raise output believing the worst of the pandemic is yet to be over. Such conditions resulted in WTI reaching $85 per barrel, the highest rate since 2014.

Record high oil prices put inflationary pressure on the US economy with CPI index YOY change of 6.2%. The Biden administration has been under growing pressure to contain gasoline price growth by increasing oil output in the short-term. We believe the US will negotiate lower prices with OPEC in early 2022. Increases in supply from OPEC next year as well as U.S. producers will ultimately pressure prices lower. The US benchmark crude will fall below $80 a barrel by December and reach as low as $62 by the end of next year and Brent will average $72 a barrel in 2022, the Energy Information Administration said in the report. Such conditions are expected to reduce cost of shipping and are favorable for the BDRY short strategy.

Figure 1.1: WTI Crude Oil Price YTD




## RISING INTEREST RATES

Swift economic recovery from the coronavirus recession in conjunction with soaring inflation has placed significant pressure on the Federal Reserve to hike interest rates. Whilst the Fed has made projections to raise rates by 25 bp come Q4 2022, 29 out of 37 economists surveyed by Reuters poll expects this cycle to come earlier than expected.

An inevitable consequence of increasing interest rates is slower economic growth. Analysts at Goldman Sachs recently cut projections of real GDP growth from 4.4% to 4% in 2022 as the Fed's hike continues to loom. From a consumer standpoint, a higher cost of borrowing elicits a shortage in disposable income, which disincentives consumption and reduces overall demand for goods. Likewise, demand for dry bulk commodities used in production processes would be negatively affected as the cost of storing these inputs would be relatively expensive. Manufacturing companies would be forced to cut down on the quantity of these orders, which logically corresponds to lower derived demand for physically shipping these dry bulk goods. In turn, a reduced volume of shipping would cause freight rates to fall.

Recent research has revealed a secondary connection between higher interest rates and freight rates. Consistent with reduced demand for dry bulks, increased interest rates are inversely related to commodity prices. After the Fed began its cycle of interest rate hikes in the end of 2015, the global price index of all commodities fell nearly 50% within a year. Economists Konstantinos Melasa and Nektarios Michail from the Cyprus Center for Business Research published a study that identified a lead-lag relationship between commodity prices and the rates of shipping dry bulk cargo. In their analysis, a decrease in the price of wheat by 5.78% was followed by a delayed drop in its supramax freight rate by 2.15%.

Shortly thereafter the Fed raises interest rates as soon as Q2 2022, freight rates will decline due to reduced demand for dry bulk goods in addition to lower commodity prices.

## SLOWING ECONOMIC GROWTH

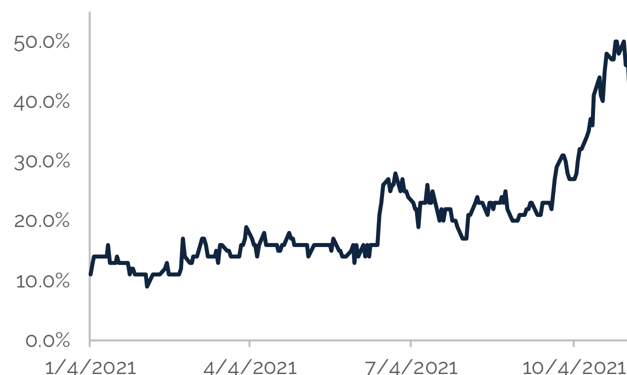
The global rise in vaccination rates, coupled with the sharp decrease in COVID-19 case loads lead to a global reopening which catalysed rapid economic growth in the second quarter of 2021. Real GDP in the United States grew by almost 6.7% YoY, putting the tally at close to $22.74 trillion in Q2. In spite of this strong growth in the second quarter, economic growth in the worlds largest economy has lagged in the third quarter with the economy expanding at 2% on an annualised basis in the three months to end september. While there are many factors at play, economic growth has primarily been slowed by fears of endemic COVID-19, and slow down in spending on consumer goods, although this is expected to increase as the country moves into the holiday season.

Millions of households within the United received stimulus payments from the federal government between March and April 2021, this helped underpin the higher spending which drove economic growth in the third quarter. With stimulus money largely spent, and no more stimulus on the horizon, the likelihood of expendable income levels remaining where they have been for the last 6 months are low, and the effects of this on consumer spending are a contributing factor to the slowdown in economic growth.

The uptick in expendable income levels as a consequence of federal stimulus, coincided with peaking consumer demand. The pandemic catalysed an unprecedented consumption shock, and upended long standing consumer habits. Extended closures, and the loss of in person events led to pent up consumer demand, demand which caused a spending spree early in the post lockdown period. This pent up demand has largely peaked, and was a temporary catalyst for short term economic growth, but will not drive long term growth.

Slowing economic growth in Q3 is projected to tamper shipping demand going forward. The Baltic Exchange's dry bulk sea freight index, widely considered an accurate measure of shipping demand, has fallen for a fourth straight session, weighed down by weak demand across all vessel segments. The exchanges sustained losses in the wake of a slowing Q3 economy evidence the effect of strong economic growth on shipping demand.

Figure 1.2: Market Rate on 2-Year Treasury Bonds




Ultimately these factors should reduce shipping demand, while freeing up supply. Ultimately this should catalyse a sharp decrease in shipping prices, ultimately driving down the price of

BDRY, a breakwave dry bulk shipping etf, which provides exposure to shipping prices

## COMMODITY PRODUCTION CONSTRAINTS IN CHINA

The global dry-bulk shipping industry is heavily reliant on commodity exchange between countries. Currently, China is a highly influential determinant of dry bulk shipping demand. China currently produces 57% of the world's steel and over 50% of the world's aluminum and coal as of FYE 2020. The country is the number 1 producer of magnesium, lead, and a variety of other key commodities. The country is also a major importer of raw iron ore, unloading over 95 million metric tons during the month of September. However, China has been importing less iron ore as this number is down 13% from a year earlier. Nevertheless, China is heavily reliant on the import of raw ore from countries around the world, primarily Australia because their domestic mining infrastructure is lacking. Australia currently supplies China with 60% of their iron ore used in the production of steel. The steel industry affects demand for dry bulk shipping in two ways: 1) it adds to demand when China exports its finished steel products and 2) it adds to demand when China imports massive quantities of raw iron ore to produce its steel. This supply chain dynamic exists for a number of China's other commodity exports.

Source: Edison electric Institute EV data from 2011-2019

China's major role in global commodity markets makes any developments in the country extremely impactful. In regard to global dry bulk shipping, any reduction in China's commodity production will have drastic effects on supply, demand, and pricing. China recently announced its plans to drastically reduce its emissions. Unfortunately, its steel industry accounts for up to 20% of the country's overall pollution, and so the Chinese government has identified the industry as a major focus of its effort to become more environmentally conscious. The government enacted measures requiring steel producers to eliminate older steel producing infrastructure before building new capacity. The measure is meant to encourage the replacement of older, less efficient, and more polluting steel equipment with newer infrastructure. There is a possibility that these regulations will impact China's steel production, which could affect demand for dry bulk shipping.

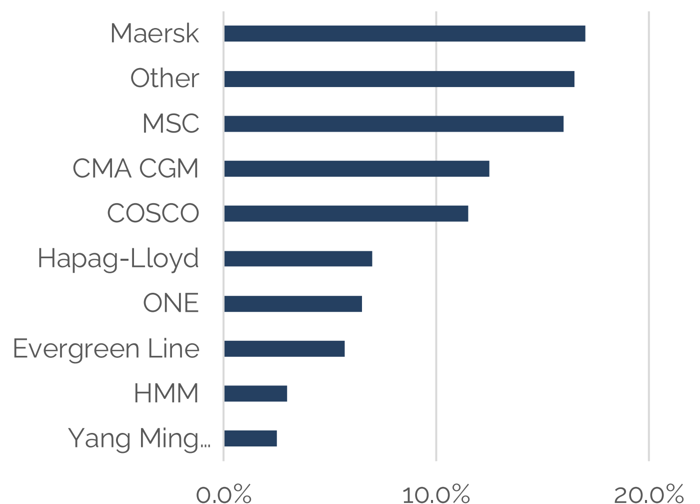
At the same time, China is on pace to grow their steel production this year relative to 2020. This increase exists despite government goals to limit production. China's central authority has made significant progress limiting steel production in certain eastern provinces, but has a long way to go throughout the rest of the country according to analysts at TransitionZero, a firm that tracks statistics influential to furthering carbon neutrality worldwide. Earlier this year, many aluminum factories in China were forced to cease production and curb output as the Chinese government implemented energy consumption restrictions on the industry. The current outlook for commodity production is uncertain, however, the goals and recent actions of the Chinese government seem to point to a future of decreased commodity output for the world's largest producer of steel, aluminum, coal, magnesium, and a variety of other key commodities transported by dry bulk shipping.

## POSSIBLE ANTI-TRUST REGULATION

The spike in shipping rates over the past year has attracted the attention of the Biden's administration. The mission to provide stable post-COVID economic recovery has been undermined by rising inflation fears. Consumer prices in the US rose at the fastest pace in 31 years in October. The Consumer price index has risen 6.2% YoY, well beyond Fed's 2% target. Partially the increase in prices for the average US consumer was caused by supply chain disruptions causing record high shipping prices, according to the government officials. The relationship between freight rates and inflation comes from the fact that the US is operating a historically high good trade deficit of $87.6 billion where the country's imports exceed exports. Most finished and intermediate goods must be delivered from overseas, consequently the cost of transportation must be priced in causing shipping-inflation correlation.

To contain inflation and eliminate shortages, the Biden administration is looking into shipping prices. According to people familiar with the matter, the president acknowledges that the shipping industry consolidation might be responsible in part for the disruptions and that laws promoting competitive behavior must be put in place. In fact, nine cargo companies organized into 3 major alliances control around 80% of the global market for vessels. Having few market players gives alliances the bargaining power to negotiate better fee terms while having considerable control over prices. The research on 4 shipping companies that account for 50% of the market revealed EBITDA YoY growth ranging from 98% to 346% as these companies are using their pricing power to drive profits. If the trend persists, the government will be encouraged to put greater legislative pressure on the industry to help lower shipping rates.

Figure 1.3: Market Share of Global Shipping by Company



On July 9, 2021, the Biden administration signed an executive order to enhance competition and antitrust enforcement. This prompted the collaboration between the U.S. Federal Maritime Commission ("FMC") and the Antitrust Division of the U.S. Department of Justice ("DOJ") which created an enhanced antitrust framework for shipping companies bringing goods to the United States. FMC will now require detailed disclosure on billing, appeals procedures, and pricing procedures and will be conducting competition audits of selected companies. Any violation of the new framework will lead to fines up to $255 million and criminal charges of the people involved. Collaboration between FMC and DOJ creates incentives for companies to comply with the new antitrust framework to avoid significant criminal charges and fines reaching $250 million. Such risks will promote fair pricing strategy and help drive shipping rates lower.

## PRICING MODEL

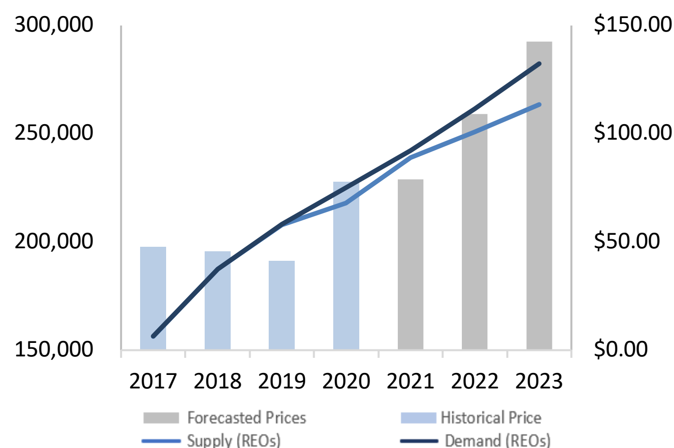
The price of BDRY was $40 when making the report. It is expected that the price of BDRY will fall and stabilize at around $28 before the end of 2021. The BDRY pricing model is a multiple quadratic regression analysis which accounts for historical global economic activity, market interest rates, shipping demand and supply to identify a relationship between these independent variables and the price of BDRY. We then ran these data points through a regression model to generate a multivariable regression function we could use to forecast price. Then, the data was projected twelve months forward to forecast the price of BDRY.

Analyst forecasts predict that BDRY price will fall in the near-term. Since there are high short-term fluctuations in price, we cannot use linear regression because it fails to react to the quick price movements; instead, quadratic regression can be used to better capture the price movements of BDRY. Considering that $40 represents the high, we can use it as the maximum for the regression.

Our regression model used historical data points from the inception of the ETF on March 22, 2018 and projected the results until the end of year 2022. Our model had a correlation coefficient of 0.83 and an R-squared of 0.69. Based on the numbers, we are confident that our model establishes a fairly strong relationship between price and economic activity.

Considering the short-term and bearish nature of the play, it makes sense to short the ETF. Even though our model can project pricing up to the end of year 2022, we decided to use it our forecast up until the end of year 2021. We believe that the possibility for supply chain issues and shipping disruptions creates significant volatility and uncertainty in the dry bulk shipping industry that our model cannot predict for. Over a longer-term, we need to account for a larger number of the dips and peaks in the price of BDRY, which can be modeled via a polynomial function to estimate how the long-run economy will affect pricing. However, these functions are too complex to regress and tend to lose efficiency as they reach a higher order, making them beyond the scope of our analysis. As a simpler alternative, we used our regression model to predict over a shorter time horizon. Beyond the next 2 years, we believe that complicated factors, including the interaction of global inflation, economic policy, and uncertainty over supply chain costs, will affect supply and demand, as the world continues to proceed through an unprecedented period of economic recovery.

Figure 1.4: Pricing Model for BDRY




## RISK FACTORS

There are three main risks that could affect our investment thesis.

**Global demand for shipping may continue to outpace supply despite slowing economic growth.** Despite a prediction for slowing economic growth, we are unable to gauge how the global shipping industry will respond in the foreseeable future. Considering the record levels of global stimulus and the resulting levels of liquidity locked in consumer pockets, aggregate demand may remain elevated beyond levels that the global shipping industry can comfortably support. Although supply chain challenges are showing promising signs of recovery, the unpredictability of the ongoing pandemic casts meaningful doubt on how quickly the shipping industry can return to an outlook of normalcy. It is very possible that labor market issues persist, perpetuating cargo backlogs at major ports, and keeping shipping prices elevated. Furthermore, despite high inflation statistics, the economy continues a healthy recovery with GDP in Q3' 21 increasing to $23.17 trillion in the United States. The combination of unresolved labor shortages and the possibility of sustained demand could cause high shipping costs to persist through the end of next year

**Vaccine mandates may cause labor shortages to persist.** Despite a prediction for slowing economic growth, we are unable to gauge how the global shipping industry will respond in the foreseeable future. Considering the record levels of global stimulus and the resulting levels of liquidity locked in consumer pockets, aggregate demand may remain elevated beyond levels that the global shipping industry can comfortably support. Although supply chain challenges are showing promising signs of recovery, the unpredictability of the ongoing pandemic casts meaningful doubt on how quickly the shipping industry can return to an outlook of normalcy. It is very possible that labor market issues persist, perpetuating cargo backlogs at major ports, and keeping shipping prices elevated. Furthermore, despite high inflation statistics, the economy continues a healthy recovery with GDP in Q3' 21 increasing to $23.17 trillion in the United States. The combination of unresolved labor shortages and the possibility of sustained demand could cause high shipping costs to persist through the end of next year.

**Rising interest rates and heightened economic uncertainty may impact fees and cut into return.** Considering that we are recommending shorting the BDRY ETF, rising interest rates and greater economic uncertainty will likely impact short fees and cut into returns. As the Federal Reserve begins tapering its purchase of bonds, interest rates are likely to rise throughout the financial industry. The market interest rate on 2-Year Treasury bonds hit 50 bps, a 2021 yearly high in late October. The combination of the Fed's tapering and concerning inflation statistics will push market interest rates higher. This in turn will likely decrease aggregate investment across the economy, an essential driver of current economic growth and recovery. The current issues in the global supply chain, semiconductor shortage, and persistent labor market challenges also create a troubling degree of uncertainty. The combination of these factors may result in the market judging our ETF as a comparably risky investment considering the severe backlogs and delays already plaguing the global shipping industry. We believe that there is considerable risk that short fees may increase substantially, cutting into our return significantly.