Pennsylvania State University





Position Details

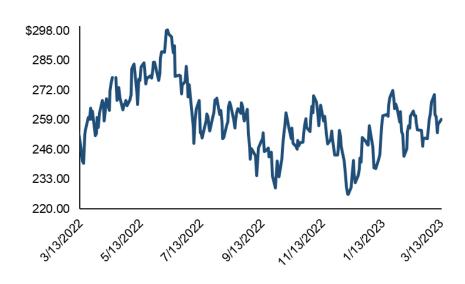
• RBOB Gasoline | XBN3

Underlying Price: 252.25¢

Bull Call Spread

Expiration Date: July 31, 2023

RBOB Gasoline | One-Year Price Chart



Energy Sector

Analyst

Jon Meyer jonmeyer760@gmail.com

President

Anthony Bruno anthonybruno2186@gmail.com

Vice President

Julia Petrova julia.petrova6100@gmail.com

Chief Investment Officer

Phil Sullivan philsullivan10@gmail.com

Energy Sector March 14, 2023

Pennsylvania State University



Table of Contents

- I. Product & Position Overview
- II. Macroeconomic Thesis
- III. Risk Analysis
- IV. Technical Bias & Fair Value
- V. Capital Allocation





I. Product & Position Overview

Pennsylvania State University



Product & Position Overview

Product Description

RBOB Gasoline

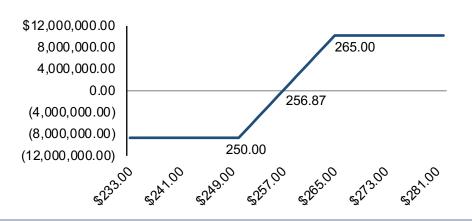
- Reformulated Blendstock for Oxygen Blending
- RBOB is a refined product of crude oil that is commonly used in motor engines and gasoline powered vehicles. It is created through a blend of hydrocarbons and contains around 9.00% ethanol. This formula allows for reduced amount of greenhouse emissions.

Global Gas Production Leaders

- Producers (k Bbl/d)
 - United States | 8.90
- Japan | 0.92

- China | 2.10
- Russia | 0.90

Payoff Diagram



Trade Breakdown

Bull Call Spread

 This trade will benefit from bullish price movements in the underlying asset

Setup

- We Buy 30.00 ITM 250.00¢ Calls | XBN3
- We Sell 30.00 OTM 265.00¢ Calls | XBN3
- Max Profit: \$10,234,980.00
- Max Loss: (\$8,665,020.00)

Expiration

July 31, 2023

Exit Strategy & Potential Hedge Strategy

Bull Base & Bear Case

- 265.00¢ / 257.00¢ / 250.00¢
- Breakeven 256.87¢

Methodology

The Energy Sector expects the underlying to increase by 3.00%. The breakeven and max profit can be attained by a 1.48% and a 5.05% increase in the underlying

Hedge Strategy

If the price of RBOB gas was to decrease past the lower breakeven, the sector would hedge by reverse trading





II. Macroeconomic Thesis

Pennsylvania State University



Macroeconomic Thesis

Macroeconomic Summary

· Increased Demand From China Reopening

- China's economy is reopening faster than expected after a prolonged lockdown. Households have saved 4.60T and are expected to increase consumption by 7.00% in 2023
- Passenger traffic, domestic tourism, and international travel has been bolstered as the Chinese government indicated policies to boost consumption
 - Economic indicators show Chinese PMI rising to 52.60 in February from 50.10 in January
 - Chinese GPD estimates were revised upward to 5.50% after growing only 3.00% in 2022

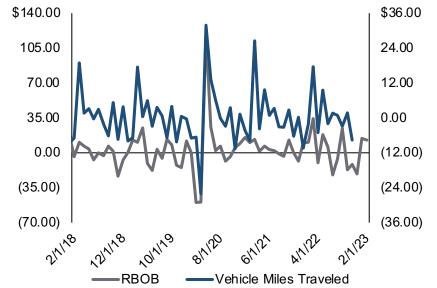
Decreased Oil and Refined Product Supply From Russia

- Refined product output is down 200.00k Bbl/d compared to January as Russia struggles to find buyers
 - Russia imported 700.00k Bbl/d to Europe alone in 2022 leaving countries in high demand for alternative oil sources
- Russia plans to cut oil production by 5.00% in March on account of increased sanctions from the West

Approaching Travel Season with Warmer Months

- Pent up travel demand has 22.00% of adults listing leisure travel as their top budget priority in 2023
- Airfares have increased 25.60% y/y leaving Americans reluctant to travel by air and more willing to drive





Market Pros & Cons

- Increased refinery utilization
- Low global oil inventories
- U.S. entering a recession
- Redirection of Russian crude oil through alternative markets





III. Risk Analysis

Pennsylvania State University



Risk Analysis

Directional & Magnitude Risk

Delta Analysis

- The trade has a Delta value of 0.0989
 - Theoretically, for every \$1.00 change in the underlying, the options contracts will gain or lose \$0.0989

Gamma Analysis

- The trade has a Gamma value of (0.0046)
 - As the underlying increases, the play will benefit from an increase in the position's delta

Implied Volatility Risk

Vega Analysis

- The trade has a Vega value of 0.0000
- This trade has an implied volatility of 37.00% which remains in line with expectations. This trade will not need much volatility for profit as the breakeven can be reached by a 1.48% increase in the underlying

Time Risk

Theta Analysis

- The trade has a Theta value of 0.0000
 - As time passes, the value of the options premium will decrease, negatively impacting profitability.
 However, the Theta value is zero as the expiration is 141 days out

Interest Rate Risk

Rho Analysis

- The trade has a Rho value of (0.0002)
- The Rho value for this trade is very small as future rate hikes have minimal effect on this trade
- This value is slightly negative as more rate hikes and increased fear of recession will be negative for the trade





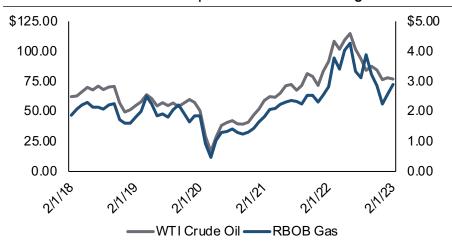
IV. Technical Bias & Fair Value

Pennsylvania State University

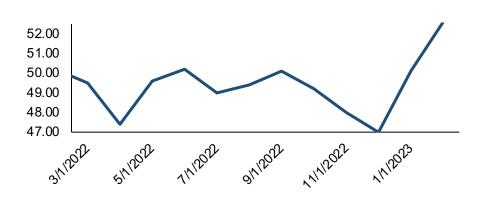


Technical Bias & Fair Value

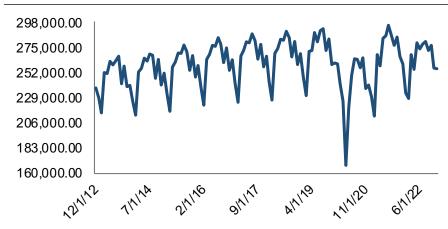
RBOB Gas vs. WTI Crude Oil | Five-Year Percent Change Chart



Chinese PMI | One-Year Chart



Vehicle Miles Traveled | Ten-Year Chart



Synopsis

- With RBOB being a product of WTI, the price of Gasoline and oil are very correlated and continue to be affected by similar events. As macro events continue to add demand and strip supply to global energy markets, RBOB will be subjected to bullish movements
- Vehicle Miles Traveled is an extremely cyclical data that historically peaks in July every summer. As travel season approaches, the Energy Sector expects demand for motor fuel to increase
- Chinese PMI is a great indicator of manufacturing, construction, and service growth. A reading above 50.00 indicates economic expansion while below 50.00 indicates contraction





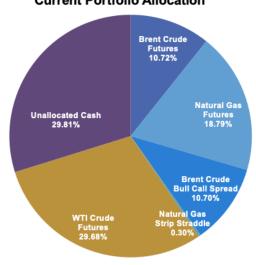
V. Capital Allocation

Pennsylvania State University

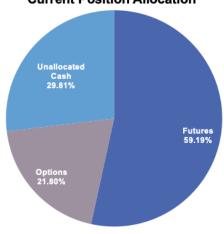


Capital Allocation





Current Position Allocation

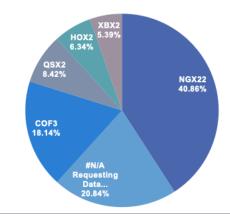


| Transaction Summary | | |
|------------------------------|-----------------|----------------|
| | Position Change | |
| Ticker | Contracts | Allocation |
| WTI Crude Futures | 0 | \$0.00 |
| Brent Crude Futures | 0 | \$0.00 |
| Natural Gas Futures | 0 | \$0.00 |
| Natural Gas Strip Straddle | 0 | \$0.00 |
| Brent Crude Bull Call Spread | 0 | \$0.00 |
| RBOB Bull Call Spread | + 30 | \$8,665,020.00 |
| | | |
| | | |
| | | |
| | | |
| | | |

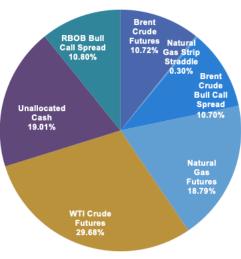
Benchmark Allocation

Allocation Change

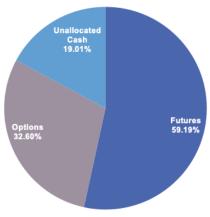
(\$8,665,020.00)



Proposed Portfolio Allocation



Proposed Position Allocation



Energy Sector