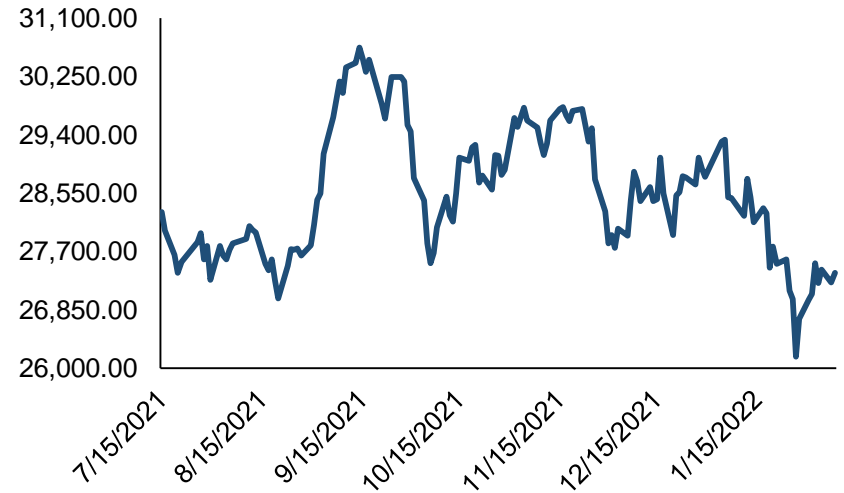


Nikkei 225 Index | Six-Month Price Chart



Position Details

- Nikkei 225 Index | NKY 7
- Underlying Price: 27171.36
- Bull Call Spread
- Expiration Date: July 22, 2022

Index Derivatives Sector

Associate
Kenneth Spencer
kenspencer2002@gmail.com

Analyst
Nabil Lahlou
nlahlou27@gmail.com

Analyst
Carly Stello
carlystello@gmail.com

President
Luke Palma
lukepalma25@gmail.com

Vice President
Nico Mahramas
nicomahramas@gmail.com

Chief Investment Officer
Joseph Palermo
joseph.palermo12@gmail.com

Table of Contents

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



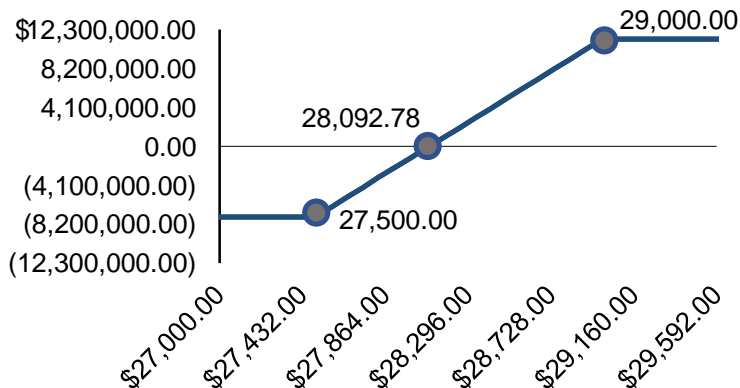
I. Product & Position Overview

Product & Position Overview

Product Description

- **Nikkei 225 Index (NI225)**
 - The Nikkei is short for Japan's Nikkei 225 Stock Average, the leading index of Japanese stocks
 - The Nikkei 225 is a price-weighted index, meaning the index is an average of the share prices of all companies, composed of Japan's top 225 blue-chip companies traded on the Tokyo Stock Exchange
 - Nikkei 225 Index Sector Weightings: Information Technology (23.95%), Industrials (19.32%), Consumer Discretionary (18.79%), Health Care (12.20%), Communications (9.50%), Consumer Staples (6.22%), Materials (6.13%), Financials (2.03%), Real Estate (1.47%), Energy (0.25%), and Utilities (0.13%)

Payoff Diagram



Trade Breakdown

- **Bull Call Spread**
 - The trade benefits from bullish price movements in the underlying up to 6.73% while still protecting downside risk
- **Setup**
 - We Buy – 1,250.00 k ITM 27,500.00 Calls (\$1,226.14) | NKY 7 C27500
 - We Sell – 1,250.00 k OTM 29,000.00 Calls (\$690.41) | NKY 7 C29000
 - Max Profit: \$11,340,250.00
 - Max Loss: (\$7,409,750.00)
- **Expiration**
 - Date: July 22, 2022

Exit Strategy & Potential Hedge Strategy

- **Bull Base & Bear Case**
 - **29,000.00 / 28,092.78 / 27,500.00**
 - Breakeven – 28,092.78
- **Methodology**
 - The Sector predicts a ~6.00% increase back to near all-time high levels pre-Omicron variant news
- **Hedge Strategy**
 - Sell the Sector's holding in iShares MSCI Japan ETF (EWJ US EQUITY) through sector briefings



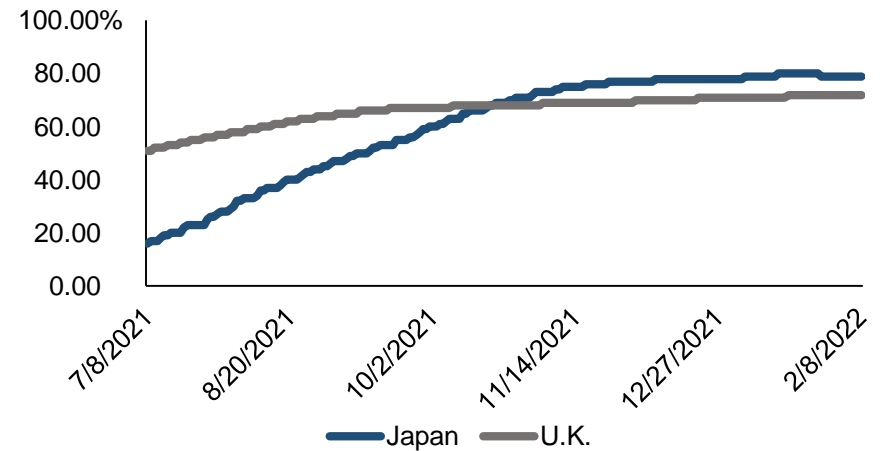
I. Macroeconomic Thesis

Macroeconomic Thesis

Macroeconomic Summary

- **Continued Historical Fiscal Policy Support**
 - In November 2021, record \$490.00 bn stimulus package planned targeting economic recovery and Covid-19 relief, Prime Minister Fumio Kishida stated new package could help to boost economic output by 5.60% in 2020 and accounts for 10.00% of the country's economic output
 - Days before 2022, a record additional budget of \$320.00 bn was enacted, to help fund the stimulus plan that was enacted, promote Covid-19 relief, alleviate supply chain issues, and continue aggressive support
 - For 2022, Prime Minister Fumio Kishida has laid out a record budget of \$940.00 bn that awaits approval by parliament, targeting economic revival
- **The BOJ Reluctant on the Prospects of Aggressive Tightening**
 - Japan's CPI rose by 0.80% y/y in December and the 10-year JGB rallied to 0.19%, that has not been seen in years
 - BOJ revised its 2022 economic fiscal growth forecast to 3.80%, up from original forecasts of 2.80%
 - The BOJ could shift its yield curve control target from the current 10-year to the five-year bond yields
 - In January, the yen was at a five year low of ¥116.34 against the dollar, due to BOJ not normalizing monetary tightening compared to its global peers
- **Japan Loosening Restrictive Covid-19 Measures**
 - As of February, Japan has given 207.00 mm total doses and 79.30% of the population are fully vaccinated
 - Most cities will complete boosters for those over 65.00 by the end of February and begin for 12.00 and younger after
 - Prime Minister Kishida plans to lessen the restrictive measures in place due to minimal severity of Omicron

Japan vs. U.K. Vaccination Rates



Market Pros & Cons

- Unprecedented levels of fiscal support, countering global tapering
- BOJ governors believe it would be premature to tighten monetary policy before inflation hits the BOJ's target
- A weaker yen could hit consumers with more expensive durable goods on the back of higher import prices
- New record budget for 2022 fiscal year yet to pass parliament

I. Risk Analysis

Risk Analysis

Directional & Magnitude Risk

- **Delta Analysis**
 - Delta has a value of 0.1610
 - The trade is long Delta as increases in the underlying result in a higher premium for a long call
 - A \$1.00 change is minimal due to size of the index
- **Gamma Analysis**
 - Gamma has a value of just above 0.0000
 - Gamma currently has a minimal effect on our trade due to our low value of Delta

Implied Volatility Risk

- **Vega Analysis**
 - Vega has a value of 6.9281
 - The position benefits from higher volatility which increases the chances the trade moves ITM
 - Vega seems high however with the spot price near 27,000.00 a 1.00% change in volatility will cause a \$6.00 change which is not drastic compared to the overall options price
 - The implied volatility was 19.00%

Time Risk

- **Theta Analysis**
 - Theta has a value (1.4791)
 - The position has a negative Theta because the trade is currently OTM
 - Thus, as time to expiration decreases the trade value decreases over time

Interest Rate Risk

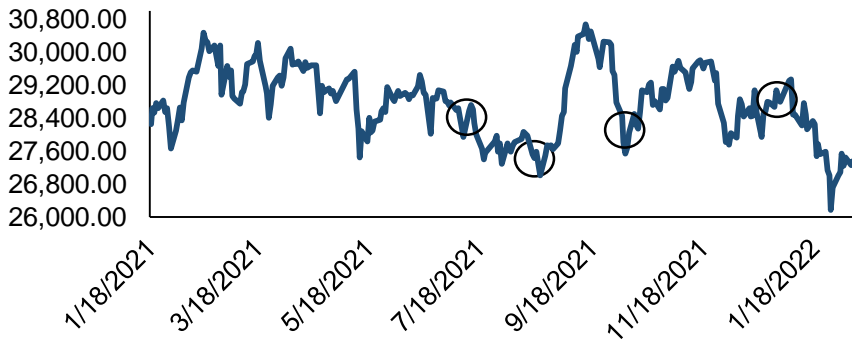
- **Rho Analysis**
 - Rho has a value of (2.3924)
 - Rho is negative as interest rates could move higher during the duration of the trade
 - Therefore, the opportunity cost of entering the trade versus investing in fixed income is higher
 - Rho may seem inflated as well but a 1.00% rate hike will only cause a \$2.00 change which is not drastic considering the value of the option



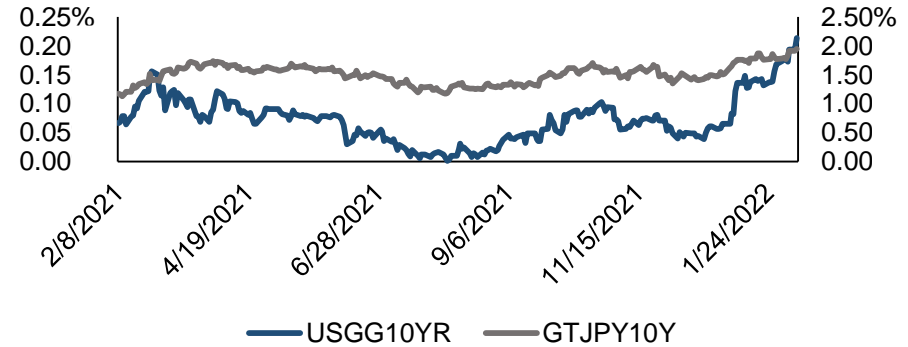
I. Technical Bias & Fair Value

Technical Bias & Fair Value

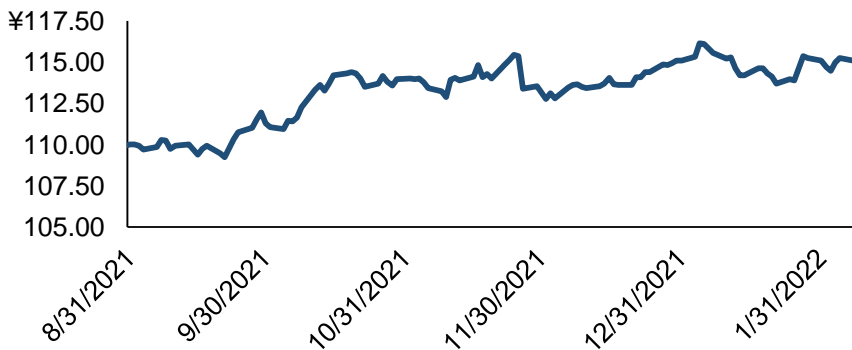
Nikkei 225 Index | One-Year Price Chart



U.S. 10-Year Yield vs. Japan 10-Year Yield | One-Year



Yen vs. U.S. Dollar | Six-Month



Synopsis

- One-Year Price Chart
 - July 20, 2021: Nikkei 225 hits second low of the year amid concerns over the Delta variant of COVID-19
 - September 7, 2021: Nikkei surges on revived hopes
 - October 8, 2021: Prime Minister Kishida calls for new economic approach, days after taking office
 - December 20, 2021: Japan's parliament approves record \$317.00 bn budget targeting economic recovery
- Yen weakening due to inflation in Japan is slower than other countries
- U.S. and Japan 10-year yield moving conversely

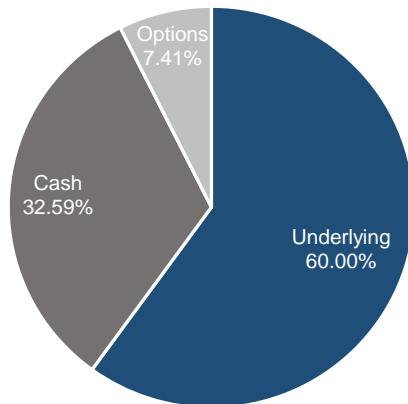


I. Capital Allocation

Capital Allocation

Allocation Breakdown & Portfolio Implications

- The Sector is allocating 7.41% of its total capital to this trade
 - This brings total capital use for options to 7.41%
- This trade will increase our exposure to Japan
 - Currently, 20.14% of our cash is invested in iShares MSCI Japan ETF (EWJ US EQUITY), so this trade increases exposures to our second heaviest holding
- The Sector is bullish that the Nikkei 225 will see upwards price movements in the upcoming months and generate profit



Portfolio vs. Benchmark Allocation Weights

