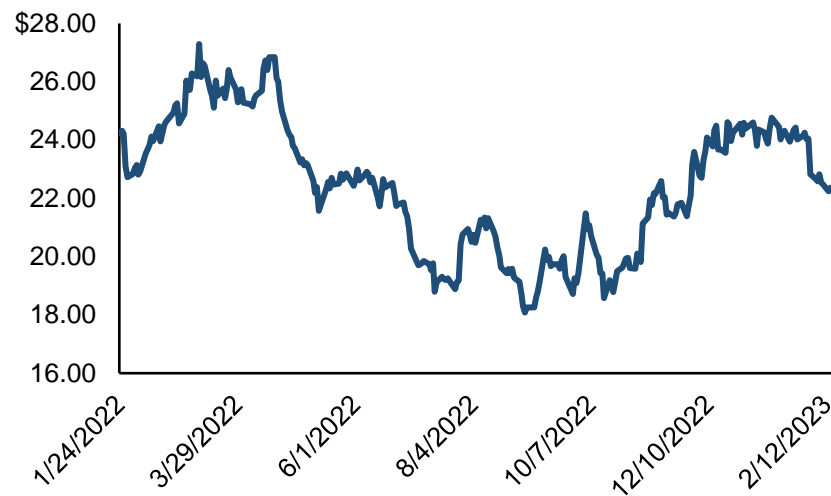




Silver | One-Year Price Chart



Position Details

- Silver | SIN3
- Underlying Price: \$21.84/oz
- Bull Call Spread
- Expiration Date: June 27, 2023

Metals Sector

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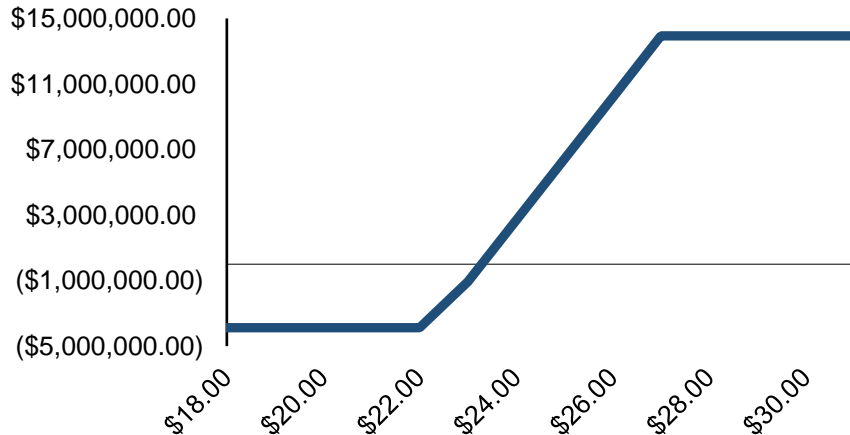
I. Product & Position Overview

Product & Position Overview

Product Description

- Silver is a precious metal used in jewelry, electronics, photography, and automotive industries
 - It has the highest electrical, thermal, and reflectivity values of any precious or base metal
 - Industrial and technological sectors account for over 50.00% of demand, and with the global push towards clean energy production, silver has become highly attractive
- **Major countries involved**
- Producers
 - Mexico | 23.00%
 - China | 17.00%
 - Peru | 13.00%
- Consumers
 - India | 52.00%
 - United States | 24.00%
 - United Kingdom | 16.00%

Payoff Diagram



Trade Breakdown

- **Bull Call Spread**
 - This strategy benefits from bullish price movement in the underlying asset
- **Setup**
 - We Buy – 750 OTM \$22.25 Calls | SIN3
 - We Sell – 750 OTM \$27.00 Calls | SIN3
 - Max Profit: \$13,946,250.00
 - Max Loss: \$3,866,250.00
- **Expiration**
 - Date: June 27, 2023

Exit Strategy & Potential Hedge Strategy

- **Bull Base & Bear Case**
 - **\$26.00 / \$24.50 / \$23.00**
 - Breakeven – \$23.28
- **Methodology**
 - The sector expects ~10.00% increase in the price of the underlying before expiry
- **Hedge Strategy**
 - In the event that the trade faces adverse price movement, the Sector will look to reverse trade and/or sell off some of the futures positions in silver



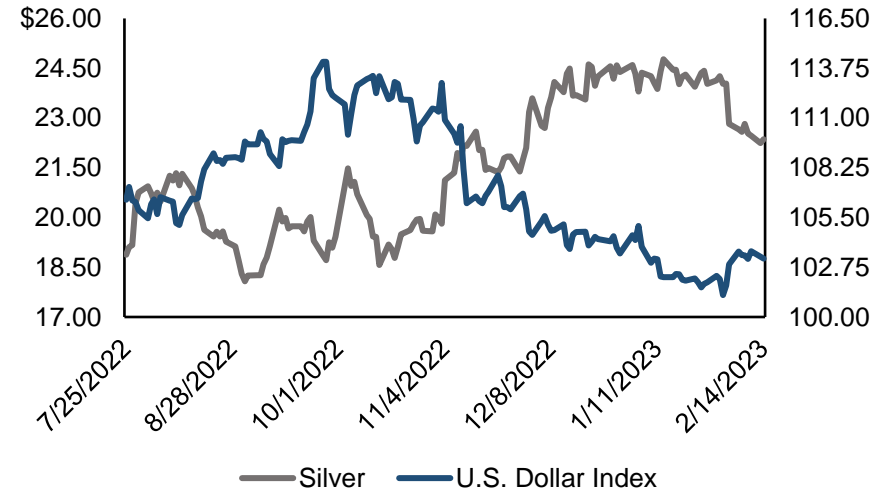
II. Macroeconomic Thesis

Macroeconomic Thesis

Macroeconomic Summary

- **Enhanced Supply Shortages**
 - Silver production has been on a steady decline in recent years totaling 843.20 mm oz. The current output is down from the peak of production in 2016 of 900.00 mm oz
 - Most of the silver production comes as a byproduct of mines for other metals such as zinc, copper, and gold. Silver specific mines only account for 25.00% of the total silver supply generated every year
 - Silver production is not capable of quickly adjusting to match demand and analysts forecast that the supply shortages will continue to grow moving forward, causing the already precious metal to become more scarce
- **Weakening USD**
 - The USD is down over 2.30% the past three months amid continuation of an aggressive rate hiking cycle by the Fed
 - Markets have begun to price in lower rate hikes at the future Fed meetings despite a slightly more hawkish tone
 - ECB inflation is anticipated to be 8.50% and is expected to raise rates to at least 3.50% especially after employment grew twice as fast as anticipated last quarter
- **New Applications Driving Demand**
 - Silver is very electrically conducive when compared to industrial metals such as copper. It is used heavily in tech to make circuit boards in phones/laptops
 - Silver is heavily used in the emerging EV market for critical functions in building batteries as well as conductors, charging stations, and safety features. EV sales increased by 65.00% in 2022 and accounted for nearly 6.00% of all vehicles sold in 2022, up 3.10% from the previous year
 - Commitment to sustainable energy has provided increased demand growth in silver as well as it a key component to the production of solar panels

Silver vs. USD Index | Sixth Month Chart



Market Pros & Cons

- Bullish pressure from the disconnect between supply and demand
- The Fed navigates a soft-landing spurring consumer spending
- Resurgence of the strength of the U.S. dollar from a hawkish Fed
- Development of cheaper substitutes in electronics



III. Risk Analysis

Risk Analysis

Directional & Magnitude Risk

- **Delta Analysis**
 - This trade has a Delta value of 0.320069
 - The trade benefits from bullish movement of the underlying. Since the trade consists of one long call and one short call, the net delta changes very little as the price of the underlying changes
- **Gamma Analysis**
 - This trade has a Gamma value of 0.029842
 - Gamma is near-zero in this trade as the long call and short call options have almost offsetting gamma values

Implied Volatility Risk

- **Vega Analysis**
 - The trade has a Vega value of 0.021411
 - Initially vega is positive in the trade as the underlying is below the breakeven point. As the trade moves past the breakeven point, vega will become negative as volatility will hurt the overall position
 - Implied volatility for both legs of the trade is 28.50%

Time Risk

- **Theta Analysis**
 - The trade has a Theta value of (0.005302)
 - Theta is slightly negative in the trade as the value of the contract erodes by each passing day. If, however, the underlying asset price rises above the breakeven point, theta will become positive

Interest Rate Risk

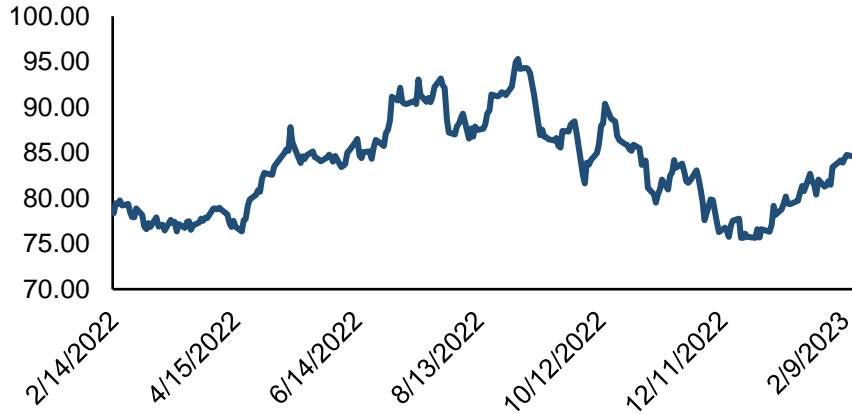
- **Rho Analysis**
 - The trade has a Rho value of (0.005468)
 - Rho is slightly negative for the trade as we have a relatively long time till expiration and there are expected rate hikes
 - It is minimal in the trade as interest rate expectations have been priced in by markets and unless there is glaring economic data that changes the course of the Fed, the effect will be minimal



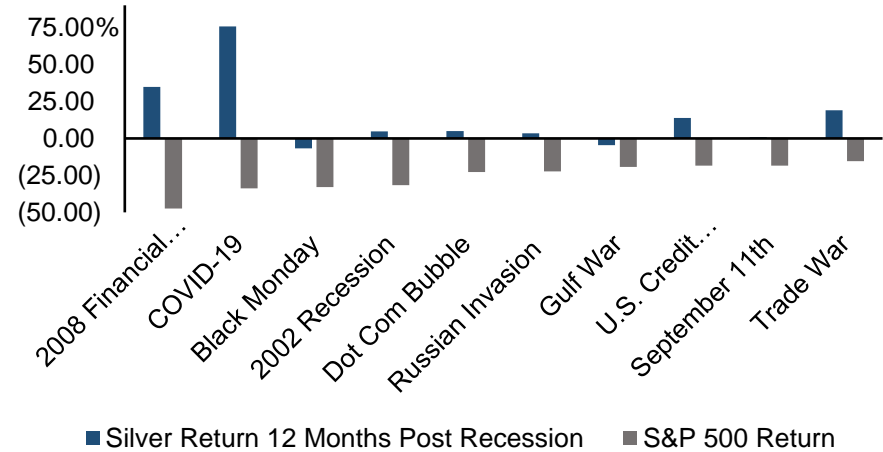
IV. Technical Bias & Fair Value

Technical Bias & Fair Value

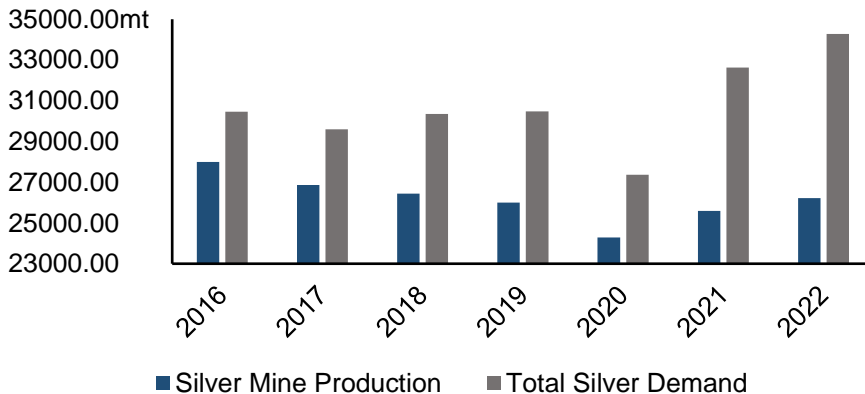
Gold:Silver Ratio | One-Year Chart



Silver Performance One Year Post 15.00% Decline in the S&P 500



Silver Mine Production vs. Silver Demand in MT | Seven-Year Chart



Synopsis

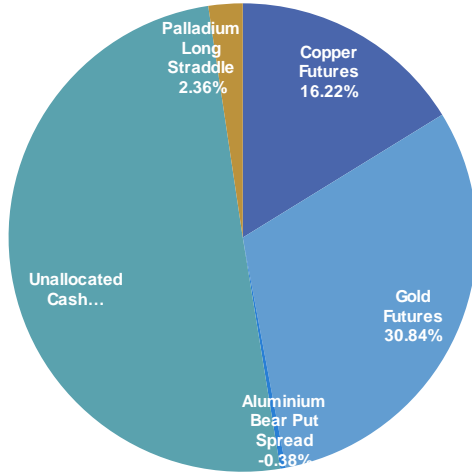
- The gold to silver ratio is often a metric used to measure the value of the respective precious metals. Over the past twenty years the average ratio has been 60:1 showing the value in silver markets
- The disconnect between supply and demand of silver cannot be understated. Over the last seven years the supply of silver has steadily declined while new industrial applications have driven demand to all-time highs
 - Many analysts foresee these supply constraints to continue throughout 2023 as the world navigates the rate hiking cycle
- Silver has performed well after a decline in equities a year prior with the average 12-month return coming in at 14.64%. The Sector will look to take advantage of the plethora of industrial uses and the influx of investors after the volatile year the S&P 500 experienced in 2022



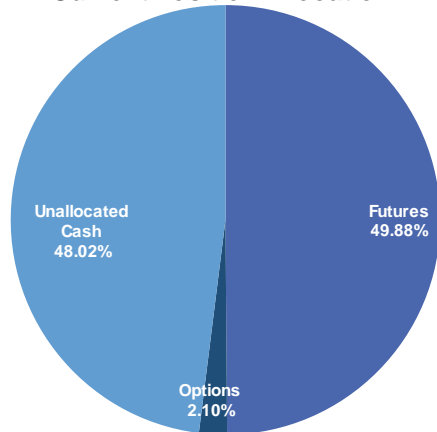
V. Capital Allocation

Capital Allocation

Current Portfolio Allocation



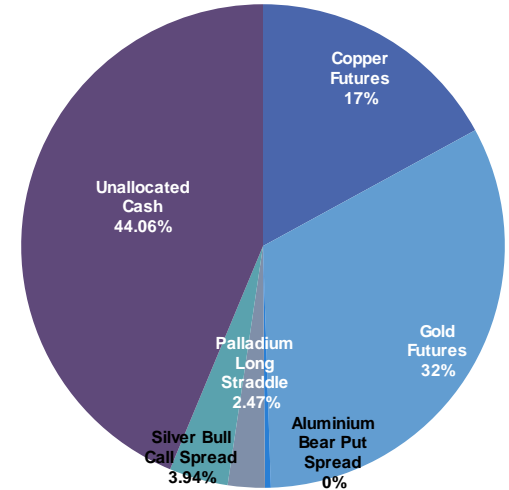
Current Position Allocation



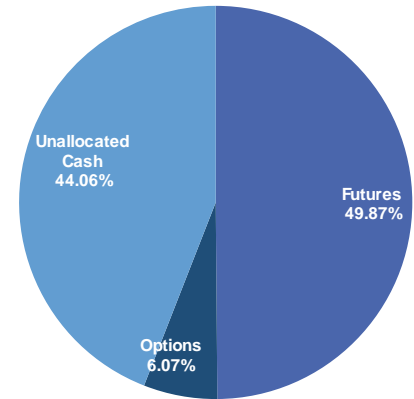
Transaction Summary

Ticker	Position Change	
	Contracts	Allocation
Aluminium Bear Put Spri	0	\$0.00
Copper Futures	0	\$0.00
Gold Futures	0	\$0.00
Palladium Long Straddle	0	\$0.00
Silver Bull Call Spread	+ 750	\$3,866,250.00
Allocation Change		\$3,866,250.00

Proposed Portfolio Allocation



Proposed Position Allocation



Benchmark Allocation

