

Key Takeaways

- Bitcoin, and digital asset markets broadly, continue to digest Terra's aftermath
- Technicals for Bitcoin are suggestive of high timeframe oversold conditions
- Bitcoin hash rate continues to rise and has remained price agnostic thus far

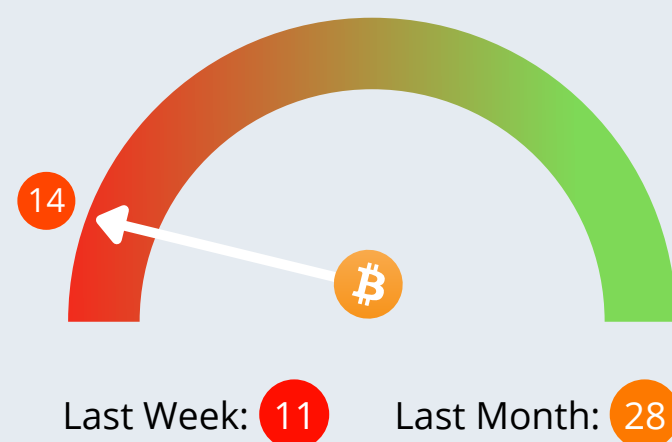
Weekly Thoughts

For the first time, Bitcoin has closed in the red for seven straight weeks as sentiment indicators also continue to hold near lows. Extreme fear, partially from the blowout of the Terra ecosystem, and associated forced selling to cover collateral requirements, have led to ongoing bearish price action. In the face of this, including heavily bearish price action in global equity markets, Bitcoin continues to hold near the 2021 price range. Although technicals show a bearish bias, with prices below both the 20-week moving average and the 200-day moving average, price has begun to approach historic gauges for oversold conditions. Since 2013, the zone between the 2-year moving average and 200-week moving average has held as price support. Other than March 2020, price bottoms have formed in this area over the course of multiple months, suggestive of bearish exhaustion and gradual accumulation.

Bitcoin's monthly average hash rate continues to hold near all-time highs, remaining price agnostic thus far, suggesting miners continue to find profitable electricity rates relative to costs. Three new ASICs with increased efficiency are set for release in July this year, which will likely continue to push hash rate higher. Although many variables determine mining profitability, including Bitcoin price, network difficulty, block reward, and transaction fees, 2016 and 2017 ASIC models remain profitable at 5 cents per kilowatt hour.

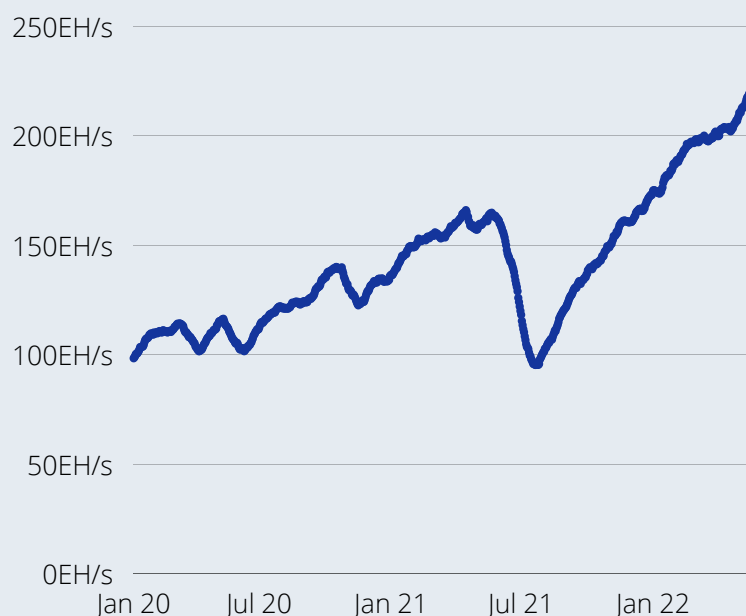
Bitcoin Fear and Greed Index

Multifactorial Market Sentiment Analysis



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Bitcoin Monthly Average Hashrate



Weekly Market Review - May 16th, 2022

| Crypto | Ticker | Price (\$) | Returns (%) | | | | | M Cap (bn) | Annualized | | | |
|--------------|--------|------------|-------------|---------|---------|--------|--------|------------|--------------|-----------------|------------|--------|
| | | | 1 week | 1 month | 3 month | YTD | 1 year | | Issuance (%) | Stake Yield (%) | Volatility | Sharpe |
| Bitcoin | BTC | 30093.27 | -5.04 | -21.08 | -33.36 | -35.71 | -31.83 | 565.69 | PoW | 1.77 | N/A | 0.73 |
| Ethereum | ETH | 2047.11 | -5.72 | -25.92 | -36.61 | -45.05 | -38.48 | 243.99 | PoW | 4.13* | N/A* | 0.95 |
| Binance Coin | BNB | 299.73 | -4.71 | -21.26 | -31.35 | -41.89 | -42.04 | 48.51 | PoS | 0.00 | 7.12 | 1.01 |
| Solana | SOL | 54.96 | -8.46 | -36.58 | -49.20 | -68.43 | 14.83 | 18.10 | PoS | 4.46 | 5.44 | 1.39 |
| Polkadot | DOT | 10.98 | -8.60 | -25.89 | -46.68 | -59.62 | -72.18 | 10.62 | PoS | 8.09 | 13.99 | 1.30 |
| Avalanche | AVAX | 33.62 | -9.76 | -42.19 | -64.59 | -69.86 | -2.19 | 8.87 | PoS | 5.29 | 9.02 | 1.46 |
| Tron | TRX | 0.07 | -4.60 | 10.31 | 2.43 | -8.44 | -38.92 | 6.75 | PoS | 1.72 | 4.83 | 1.01 |
| Polygon | MATIC | 0.69 | -7.70 | -33.88 | -63.53 | -72.93 | -60.47 | 5.43 | PoS | 4.44 | 6.22 | 1.53 |
| Cosmos | ATOM | 11.63 | -7.75 | -36.19 | -60.67 | -64.82 | -46.05 | 3.26 | PoS | 10.53 | 15.66 | 1.48 |
| Algorand | ALGO | 0.46 | -7.49 | -20.32 | -53.29 | -72.67 | -64.76 | 3.09 | PoS | 3.11 | 7.17 | 1.32 |
| Helium | HNT | 9.13 | -8.67 | -27.58 | -67.67 | -76.37 | -37.78 | 1.05 | PoC | Variable | Variable | 1.31 |
| Fantom | FTM | 0.36 | -8.56 | -47.49 | -82.80 | -84.01 | -38.15 | 0.92 | PoS | 8.38 | 5.82 | 1.77 |
| Zilliqa | ZIL | 0.05 | -8.75 | -30.09 | -1.93 | -32.82 | -70.42 | 0.64 | PoW/PBFT | 11.28 | 13.95 | 1.85 |
| Dash | DASH | 58.68 | -8.73 | -32.00 | -47.38 | -56.97 | -80.47 | 0.62 | PoW/PoS | 2.85 | 5.99 | 1.20 |

Bitcoin 30-Day Rolling Volatility



Bitcoin Moving Averages



Key Takeaways

- Turbulent and volatile conditions in traditional markets continue
- The Fed's strategy to combat inflation likely means further 50 bp hikes
- Digital assets may begin to see relief relative to further potential downside in equities

Macro Commentary

Markets experienced heavy turbulence last week following the release of the Consumer Price Index (CPI) and Producer-Price Index (PPI), where indications left investors unsettled on the current strategy in taming inflation. Fed chair Powell's comments have helped traditional markets rebound slightly, but until a clear change in direction, markets will likely continue their way down. Future 50 basis point hikes are still expected at each meeting over the next couple of months.

While CPI year over year declined, under surveyed expectations, the monthly reading inched higher, which caused markets to drop through Thursday afternoon before investors found some value and bounced to about unchanged for the week. The S&P 500 traded in range 4,000-4,050 before Wednesday, then dived lower to about 3,865 before trending higher to just below 4,025. Year to date, the SPX is down about 15%. Similarly, the Nasdaq Composite traded in range around 11,700 before dropping to 11,125 before finishing around unchanged. The Composite is down about 25% for the year. Both markets traded sideways throughout the week and closed flat on Friday.

Volatility brought investors seeking safety as the 10 year treasury yield slid lower last week finishing near 2.85% after starting near 3.15%. The 2/10 year treasury yield spread fell back to 30 basis points after rising as much as 48 last week. Mortgage rates also regressed to 5.4% after reaching a recent high of almost 5.6%. Crude oil futures look to jump higher this week as prices finished about unchanged last week. Technicals call for a breakout looking at prices towards \$120. Stockpiles in the Strategic Petroleum Reserve (SPR) fell to the lowest levels since 1987.

Digital assets have been hit so hard, they could potentially perform better than equities over the summer, or at least experience decreased downside. For the most part, the pain has been led by mixed funds blowing out of crypto first, and will now move on to equities. And of course, bond funds seeing the biggest rate of redemptions ever.

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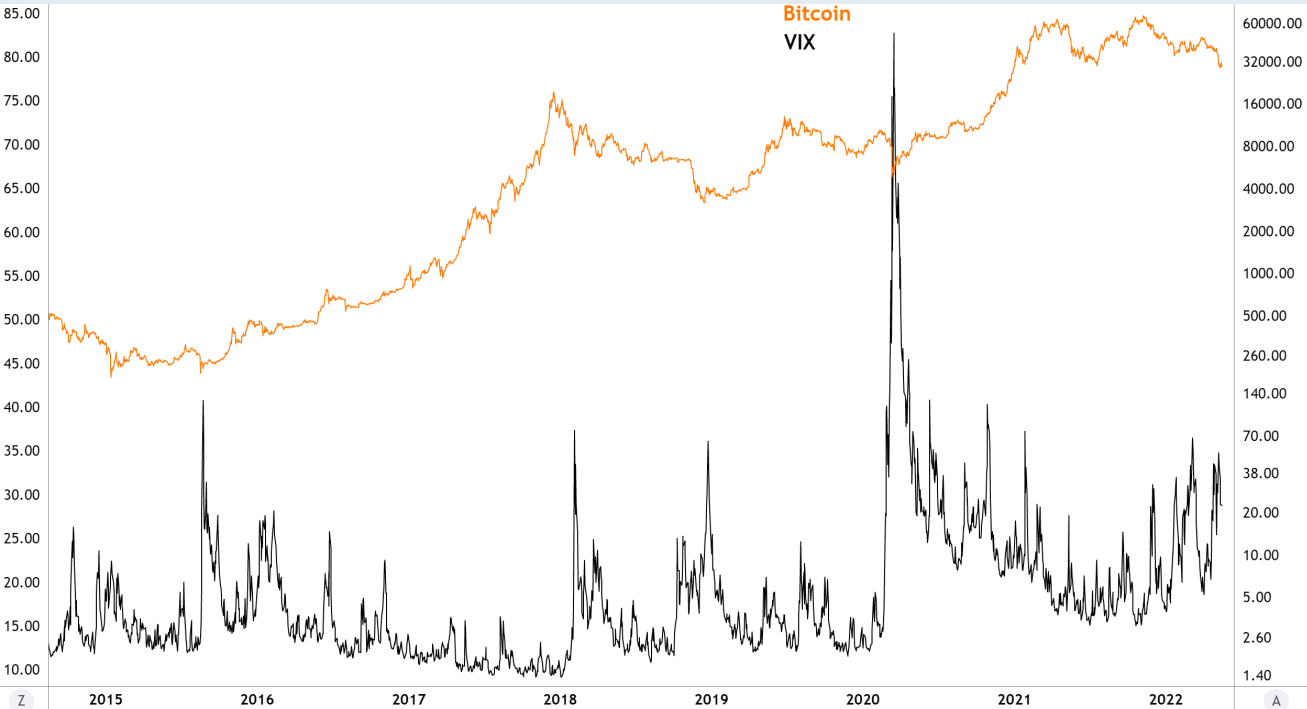
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Weekly Market Review - May 16th, 2022

| Indices | Ticker | Price (\$) | Returns (%) | | | | |
|---------------------------|--------|------------|-------------|---------|---------|--------|--------|
| | | | 1 week | 1 month | 3 month | YTD | 1 year |
| S&P 500 | SPX | 4023 | -2.41 | -8.39 | -8.98 | -15.57 | -3.59 |
| Nasdaq 100 | NDX | 12387 | -2.41 | -10.84 | -13.09 | -24.10 | -7.51 |
| Russell 2000 | RUT | 1792 | -2.55 | -10.59 | -11.70 | -20.16 | -19.42 |
| Dow Jones Ind. | DJI | 32196 | -2.14 | -6.54 | -7.32 | -11.40 | -6.36 |
| Commodities | | | | | | | |
| Crude Oil | CL1 | 110.18 | 7.65 | 2.42 | 16.25 | 46.03 | 66.03 |
| Brent Crude | BRN00 | 111.10 | 5.58 | -1.52 | 15.93 | 42.57 | 59.66 |
| Natural Gas | NG00 | 7.99 | 12.32 | 2.93 | 91.22 | 122.99 | 156.51 |
| Unleaded Gas | RB00 | 4.00 | 10.69 | 19.42 | 44.99 | 80.59 | 85.15 |
| Gold | GC00 | 1806.60 | -2.54 | -8.85 | -3.57 | -1.33 | -3.29 |
| Silver | SI00 | 21.25 | -2.39 | -18.41 | -10.96 | -8.99 | -24.96 |
| Copper | HG00 | 4.18 | -0.45 | -12.95 | -6.88 | -6.27 | -11.39 |
| Corn | C00 | 798.00 | 3.27 | -0.99 | 21.51 | 34.68 | 22.39 |
| Wheat | W00 | 1229.75 | 12.80 | 9.00 | 53.62 | 59.66 | 75.30 |
| Bloomberg Commodity Index | BCOM | 129.92 | -0.30 | -1.87 | 18.25 | 30.05 | 41.32 |
| Bitcoin | BTC | 30093.27 | -5.04 | -21.08 | -33.36 | -35.71 | -31.83 |



News Review

- [How to Be Stable — USDC Transparency and Trust](#)
 - USDC reserves are kept in the custody BlackRock and Bank of New York Mellon
 - USDC reserves are held entirely in cash and short-dated U.S. government obligations, consisting of U.S. Treasuries with maturities of 3 months or less
 - Circle, the issuer of USDC, publishes monthly third-party attestations of reserves
 - Circle and the USDC reserves are audited annually
- [Tether Cuts Holdings of Commercial Paper, Says Majority of Exposure in Treasuries -CTO](#)
- [‘Stable in Name Only’: Stablecoin Issuers Speak Out as UST Craters](#)
- [UST’s Do Kwon Was Behind Earlier Failed Stablecoin Basis cash, Ex-Terra Colleagues Say](#)
- [In Cuba, Cryptocurrency Gains Momentum via International Commerce](#)
- [Waste Tire Demanufacturing Process Unlocks Stored Energy to Mine Bitcoin](#)
- [Home Sold for Bitcoin in Louisville, Kentucky for the First Time](#)
- [Nubank, Brazil’s Largest Digital Bank, Launches Bitcoin and Ether Trading](#)
- [Crypto Forensics Firm Chainalysis Raises \\$170 million at \\$8.6 billion Valuation](#)
- [Ex-Facebook Crypto Chief David Marcus Launches Bitcoin Payments Startup Backed by a16z and Paradigm](#)
- [FTX Founder Sam Bankman-Fried Buys 7.6% Stake in Robinhood](#)

Stablecoin Origins & Purpose

Stablecoins are a sector of cryptocurrencies which attempt to peg value to \$1, typically using an external reference, such as USD or EUR. The main types of stablecoins include; fiat-backed, crypto-backed, algorithmic, or hybrid collateralization.

Tether (USDT) was initially created in 2014 to act as a potential hedge against market volatility, as well as increasing the transferability and convertibility of fiat currencies to cryptocurrencies. Tether’s usage and supply grew substantially throughout the 2017 Bitcoin bull run, which significantly increased adoption of USDT trading pairs on crypto exchanges. As scrutiny increased over Tether’s reserves, competing projects like Circle’s USD Coin (USDC) arose with a focus on increased transparency. Today, most fiat-backed stablecoins, including Tether, release monthly reserve attestations.

Fiat-Backed

The two largest stablecoins by circulating supply, USDT and USDC, are both backed by USD reserves and/or USD equivalents held in third-party financial institutions. Issuing these types of stablecoins directly from the servicer also requires KYC/AML compliance and minimum capital requirements.

Crypto-Backed

Crypto-collateralized stablecoins require on-chain management with the use of smart contracts, which also allows for 100% transparency of reserves and collateralization levels. Most crypto-backed stablecoins do not have KYC/AML or minimum capital requirements for initialization but do require overcollateralization of loans to buffer against market volatility. If these loans fall below the required collateralization level, they are liquidated.

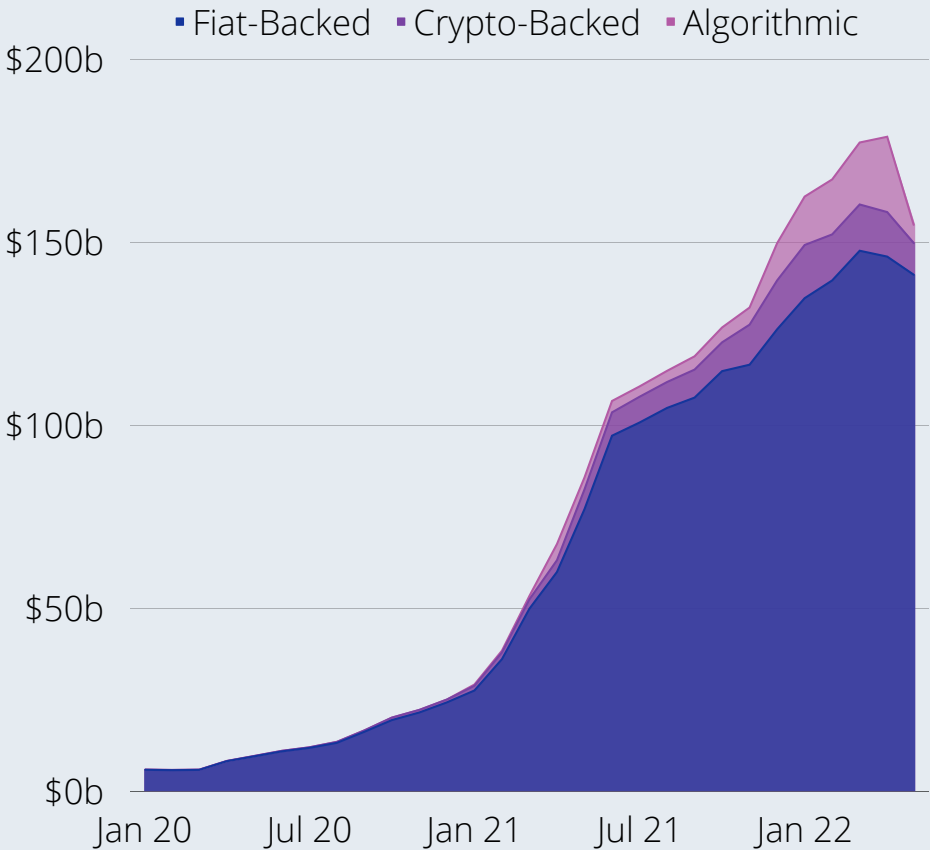
Algorithmic

Of all stablecoin types, algorithmic or seigniorage-style stablecoins have had the most difficulty maintaining a \$1 peg, historically. This stablecoin type does not require collateral and are managed on-chain via smart contracts. Algorithmic stablecoins will increase or decrease the circulating supply to maintain stablecoin value.

Terra and UST De-pegging Event







In early May, as digital asset prices turned increasingly bearish, the UST \$1 peg for Terra’s algorithmic stablecoin began to slip below \$1. Theoretically, in this scenario, UST is burned (sent to an irretrievable address) and LUNA is minted in order to correct the UST target price of \$1. The Terra and UST ecosystem had minted nearly 20 billion tokens over the past few months, in large part due to the 20% APY incentives on Terra’s lending and borrowing platform, Anchor Protocol. As destabilization of the equilibrium began, UST selling pressure far outpaced the ability of Terra to course correct the peg price. Terra had prepared for this possibility occurring and had acquired over \$3 billion in a mixture of USDC, USDT, Bitcoin, and Avalanche in recent weeks to act as an additional backstop in the event of a de-pegging death spiral. Unfortunately, even these reserves have been unable to hold UST near the \$1 price as a greater amount of UST was exiting the ecosystem while the Terra price was also decreasing.






Stablecoin Circulating Supply







Stablecoin Net Exchange Flow



| | Fiat-Backed | Ticker | Supply (\$, bn) | Launch | Chain |
|---|-------------|--------|-----------------|----------|----------|
|  | Tether | USDT | 77.17 | Sept '14 | Multi |
|  | Circle | USDC | 43.91 | Sept '18 | Multi |
|  | Binance | BUSD | 17.74 | Sept '19 | Multi |
|  | Paxos | USDP | 0.94 | Sept '18 | ETH, BSC |
|  | TrueUSD | TUSD | 0.82 | Jan '18 | Multi |
|  | Huobi | HUSD | 0.31 | Nov '18 | ETH, SOL |
|  | Gemini | GUSD | 0.17 | Sept '18 | ETH |

| Crypto-Backed | | | | | |
|---|-------------|------|------|---------|----------|
|  | MakerDAO | DAI | 6.39 | Dec '17 | Multi |
|  | Abracadabra | MIM | 1.83 | May '21 | Multi |
|  | Liquity | LUSD | 0.35 | Apr '21 | ETH |
|  | Synthetix | sUSD | 0.08 | Dec '18 | ETH, FTM |
|  | mStable | mUSD | 0.06 | May '20 | ETH |

| Algorithmic | | | | | |
|---|----------|------|------|----------|-------|
|  | TerraUSD | UST | 2.06 | Sept '20 | Multi |
|  | Frax | FRAX | 1.49 | Dec '20 | Multi |
|  | Neutrino | USDN | 0.88 | Oct '19 | Multi |
|  | Fei USD | FEI | 0.54 | Dec '20 | ETH |



Weekly Market Review - May 16th, 2022

Weekly Thoughts: Source: Valkyrie Investments, Inc.

Stablecoin Origins & Purpose, Fiat-Backed, Crypto-Backed, Algorithmic, Terra and UST De-pegging Event: Valkyrie Investments, Inc., Tether Operations, CoinMetrics, Circle, and Paxos

Macro Commentary: Source: Valkyrie Investments, Inc.

Coin Prices, Market Capitalizations, and Returns: Source: Valkyrie Investments, Inc., TradingView, Messari. All returns represent total return for stated period. Coin Logos: Source: cryptologos.cc

Annualized Issuance, Staking Yield, Volatility, and Sharpe Ratio: Source: Valkyrie Investments, Inc., Messari, StakingRewards.com. *ETH's EIP-1559 token burn and ETH-2 staking not included.

Bitcoin Fear and Greed Index Source: Valkyrie Investments, Inc., alternative.me and represents a multifactorial sentiment analysis index of volatility, market momentum and volume, social media, bitcoin market cap dominance, and Google trends

Bitcoin Monthly Average Hashrate, Bitcoin 30-Day Rolling Volatility: Source: Valkyrie Investments, Inc., CoinMetrics

Bitcoin Weekly Moving Averages: Source: Valkyrie Investments, Inc., TradingView - INDEX:BTCUSD

Stablecoin Circulating Supply: Source: Valkyrie Investments, CoinMetrics, The Block, and CoinGecko

Stablecoin Net Exchange Flow: Source: Valkyrie Investments, Inc., Nansen and represent wallet inflows and outflows of Tether, USD Coin, Binance USD, PAX, and Huobi USD through crypto exchanges, including but not limited to; Binance, Curve.fi, AnySwap, Crypto.com, Uniswap, Hop Protocol, OKEx, Kucoin, dYdX, Coinbase, Kraken, Huobi, FTX, Gemini, FTX US, CoinList, SushiSwap, Gate.io, Balancer, BitMEX, Bitfinex, Bittrex, Binance US, Bitstamp, BlockFi, Paxos, Celsius, Alameda OTC, Poloniex, HitBTC, Bancor, Kyber, and ShibaSwap.

List and examples shown in the Stablecoin table are non-exhaustive, intended for illustrative purposes only. Chain data sourced from CoinMarketCap. "Multi" description can include Ethereum, Solana, Binance Smart Chain, Algorand, Tron, Fantom, Polygon, Avalanche, Arbitrum, Secret, Terra, Moonriver, Velas, and Harmony. Coin Logos: Source: cryptologos.cc

"Indicies" prices and returns: Source: Valkyrie Investments, Inc., MarketWatch. "S&P 500" provided by Standard & Poor's and is a stock market index tracking the performance of 500 large companies listed on stock exchanges in the United States, "Nasdaq 100" provided by NASDAQ OMX Group and includes 100 of the largest domestic and international non-financial companies listed on the Nasdaq Stock Market based on market capitalization. "Russell 2000" provided by FTSE Russell and is a small-cap stock market index that makes up the smallest 2,000 stocks in the Russell 3000 Index. "Dow Jones Ind." provided by S&P Dow Jones Indices and is a price-weighted measurement stock market index of 30 prominent companies listed on stock exchanges in the United States. "Gold" provided by NYMEX - CME Group and is a continuous futures product. All returns represent total return for stated period.

"Commodities" prices and returns: Source: Valkyrie Investments, Inc., Wall Street Journal. Bloomberg Commodity Index provided by Bloomberg and tracks prices of futures contracts on physical commodities on the commodity markets. All returns represent total return for stated period.

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