



## ECONOMIC OVERVIEW

Investors continued to monitor economic data in November for signs that the Federal Reserve's aggressive interest rate hiking policy was beginning to slow down the U.S. economy. Having taken the Federal Funds rate from 0.00% to 4.00% in a mere 8 months, the Fed has indicated it won't slow down until inflation is firmly under control and trending back towards the 2% target level. Recent jaw-boning from Fed Chair Powell suggesting the FOMC might be closer to a pause spurred risk taking at month-end, driving long-term bond yields lower and equity prices higher.

As for inflation readings, the October CPI number showed a lower-than-expected +0.4% MoM rise in prices (vs. +0.6% est.), while Core CPI rose just +0.3% MoM against a +0.5% estimate. Annualized, consumer prices are up +7.7%, while ex-food & energy, prices have risen +6.3%. Producer prices edged modestly higher in October by +0.2% MoM (+0.4% est.) and +8.0% YoY (+8.3% est.), while Core PPI was flat MoM and rose +6.7% YoY. Lastly, but perhaps most importantly, the PCE Deflator ticked up +0.3% MoM (+6.0% YoY) while the Core PCE Deflator rose just +0.2% in October (+5.0% YoY).

The second reading for Q3 GDP showed the economy grew at a 2.9% annualized rate, slightly higher than expected, with Personal Consumption continuing to lead the way, up +1.7%. Purchasing Manager surveys, however, largely dipped below the 50.0 mark during November, suggesting that the economy might begin contracting soon.

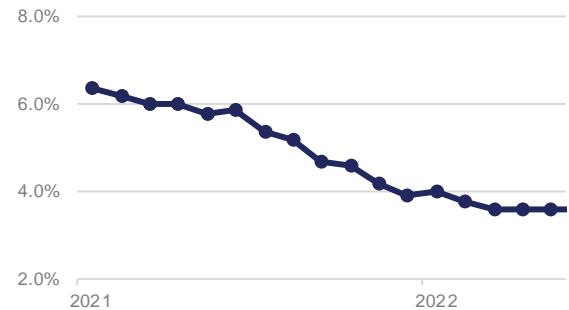
The labor market remains a bright spot for the U.S. (less so for the Fed), as the Unemployment Rate for October came in at 3.7%, while the Job Openings data for October revealed 10.3 million positions available. Weekly Initial Jobless Claims averaged around 225k in November while Continuing Claims rose slightly on the month to 1.6 million. The tech sector is seeing growing layoffs as stock prices there remain under pressure; however we have yet to see that spread to other industries at this point.

Fed Chair Powell gave a speech on 11/30 which triggered a risk-on rally in markets, largely because it wasn't deemed "hawkish". Although he did indicate that short-term rates would continue to move higher, he sensed that a pause early in 2023 might be in order. Thus far, nothing has "broken", however the Fed's history of hiking until something does break can not be ignored. The yield curve remains firmly inverted and investors everywhere will be watching for signs of recession as we move into 2023.

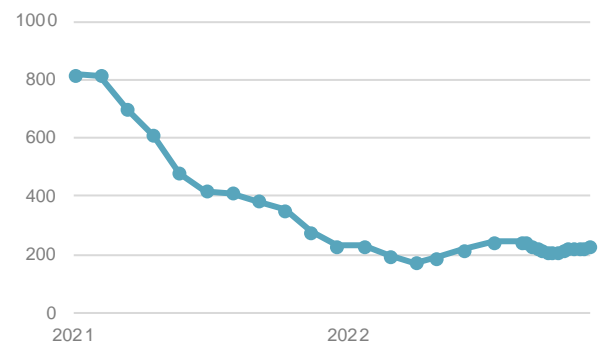
### KEY DATA POINTS

Data Point	Current	For	Previous	For
Retail Sales ex. Autos MOM %	1.4%	Nov	1.3%	Oct
Housing Starts	1418k	Nov	1425k	Oct
Factory Orders MOM %	1.1%	Oct	0.3%	Sep
Leading Indicators MOM %	-0.8%	Nov	-0.8%	Oct
Unit Labor Costs	3.5%	Q3 2022	10.2%	Q2 2022
GDP QOQ (Annualized)	2.9%	Q3 2022	-0.6%	Q2 2022
Wholesale Inventories	0.8%	Nov	0.8%	Oct
MBA Mortgage Applications	-0.8%	Nov	-0.5%	Oct

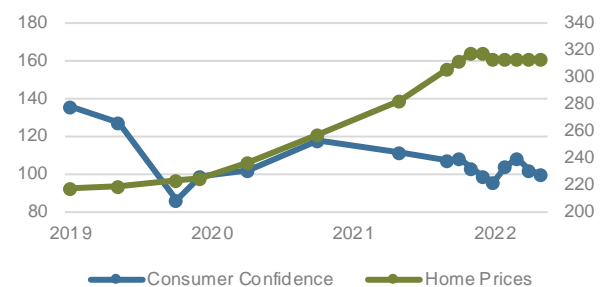
### UNEMPLOYMENT RATE (%)



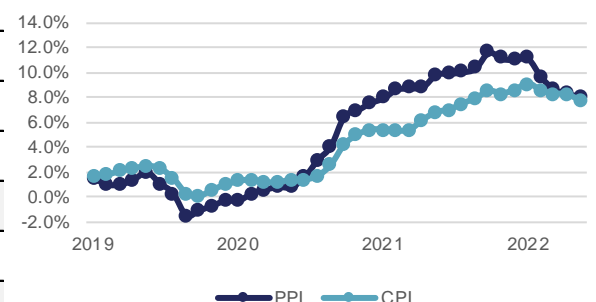
### 4-WK MOVING AVERAGE OF INITIAL CLAIMS (000S), SA



### CONSUMER CONFIDENCE LHS VS. HOME PRICES RHS



### PPI & CPI YOY % CHANGE





## DOMESTIC EQUITY

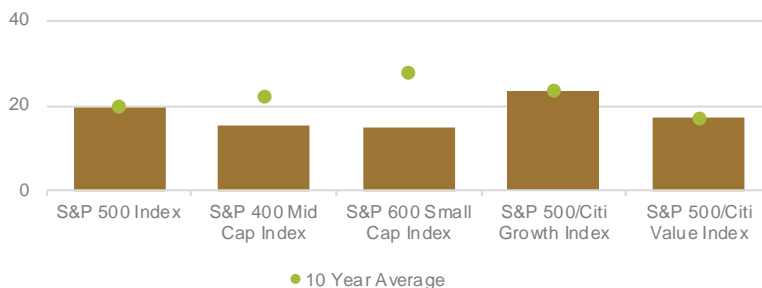
U.S. equities finished the month of November on a high note, with the benchmark S&P 500 rallying over +3% on the last trading day of the month to close at 4,080. For the month, U.S. Large-Cap equities rose sharply, gaining +5.6% during the period. Mid- and Small-Caps, as measured by the S&P 400 and 600 Indices, rose +6.1% and +4.2%, respectively. Quarter to date, equities have risen double digit percentages across the board, with Large-, Mid-, and Small-Caps returning +14.1%, +17.3%, and +17.1%, respectively. Small- and Mid-Caps continue to outperform Large-Caps, bolstered by less sensitivity to foreign currencies, and more exposure to a strong underlying U.S. economy. For the year, Mid- and Small-Caps are the top performers, down -8.0% and -10.1%, respectively, compared to -13.1% for Large-Caps. The outperformance of U.S. SMID Cap can also be seen in the performance of the S&P 500 Equal Weight Index, which gained +6.7% in November, and is outperforming on both a quarter to date (+17.2%) and year to date (-7.1%) basis.

From a style perspective, Value stocks continued their streak of outperformance versus Growth, despite falling interest rates and dovish sentiment from Fed Chair Powell at the Brookings Institute conference yesterday. On the month, the S&P 500 Value Index returned +6.0%, while the S&P 500 Growth Index returned +5.1%. For the quarter, Value has returned +18.2%, while Growth has returned about half as much, gaining +9.8% during the period. On the year, Value has stealthily lost only -1.3%, while Growth has lost nearly -23.6%.

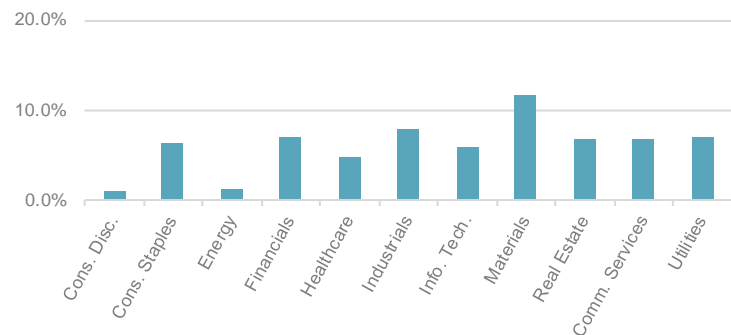
At the sector level, Materials were the top performer on the month, gaining +11.8%, followed by other Value and Cyclical oriented sectors such as Industrials and Financials, which gained +7.9% and +7.0%, respectively. Utilities were also an outperformer in November, gaining +6.9%, on the back of lower interest rates and an overall resilience of defensive sectors. Consumer Discretionary and Energy were notable laggards during the period, gaining +1.0% and +1.3%, respectively. Consumer Discretionary has been a mixed bag post earnings, with significant performance dispersion at the company level, coupled with overall weakness from Amazon and Tesla, the sector's top weights. Energy was a laggard on the back of lower oil prices; however, the divergence is notable in the sense that Energy stocks were still positive, while West Texas Intermediate prices were down -6.9% on the month.

Looking ahead to 2023, earnings estimates continue to come down, from \$252/share to \$232/share at present time. Current estimates put the S&P 500 valuation at just over 17x earnings for 2023. Significant uncertainty remains, however, signs of resiliency within the U.S. economy are notable as GDP estimates show the economy accelerating in Q4. This backdrop continues to bode well for Small-Caps, which trade at 12x 2023 earnings, a significant discount to their historical averages and an attractive valuation for long-term investors.

DOMESTIC EQUITY MARKET  
P/E RATIOS



MTD S&P 500 SECTOR RETURNS



S&P 500 SECTOR RETURNS

Sector	MTD	QTD	YTD	1 Year	3 Year	5 Year	%S&P 500
Consumer Discretionary	0.99%	122%	-29.04%	-29.22%	6.55%	9.22%	10.71%
Consumer Staples	6.37%	15.99%	2.26%	12.79%	11.19%	9.92%	7.62%
Energy	1.26%	26.53%	70.17%	75.36%	22.65%	10.84%	5.01%
Financials	7.04%	19.88%	-5.59%	-2.50%	8.68%	7.92%	11.19%
Healthcare	4.82%	15.00%	-0.05%	8.93%	13.97%	12.81%	14.98%
Industrials	7.85%	22.87%	-2.59%	2.59%	9.37%	8.39%	8.42%
Information Technology	6.03%	14.31%	-21.63%	-18.98%	16.56%	17.83%	26.16%
Materials	11.76%	21.82%	-7.11%	-0.08%	13.70%	9.10%	2.62%
Real Estate	6.90%	9.09%	-22.47%	-14.53%	3.94%	6.82%	2.63%
Communication Services*	6.85%	7.00%	-34.77%	-33.12%	-0.01%	3.77%	7.75%
Utilities	7.02%	9.22%	2.10%	11.94%	7.69%	8.31%	2.91%

DOMESTIC EQUITY RETURNS

Name	MTD	QTD	YTD	1 Year	3 Year	5 Year
S&P 500 Index	5.59%	14.14%	-13.12%	-9.23%	10.86%	10.95%
S&P 400 Mid Cap Index	6.10%	17.26%	-8.00%	-3.34%	10.25%	7.95%
S&P 600 Small Cap Index	4.15%	17.03%	-10.11%	-6.05%	9.27%	7.18%
S&P 500/Citi Growth Index	5.10%	9.82%	-23.58%	-21.70%	11.46%	12.15%
S&P 500/Citi Value Index	6.02%	18.22%	-1.39%	5.54%	8.75%	8.78%

S&P 500 FACTOR RETURNS

Name	MTD	QTD	YTD	1 Year	3 Year	5 Year
S&P 500 Quality	7.11%	17.19%	-11.22%	-6.80%	11.42%	11.07%
S&P 500 Momentum	3.25%	17.43%	-7.43%	-4.90%	14.19%	13.11%
S&P 500 Equal Weight	6.70%	17.15%	-7.07%	-1.31%	11.76%	10.42%
S&P 500 High Beta	9.48%	19.13%	-12.87%	-9.81%	17.74%	12.52%
S&P 500 Low Volatility	-4.27%	-6.99%	-8.58%	3.98%	6.45%	9.29%

\*The S&P 500 Communication Services Sector was reclassified from the Telecommunications Sector on September 21st, 2018



## INTERNATIONAL EQUITY

The wild ride of volatility that we have seen this year for international risk assets continued during the month of November. Developed Market (DM) equities, as measured by the MSCI EAFE Index returned +11.29% during the month (in USD terms) while Emerging Market (EM) equities, as measured by the MSCI EM Index returned +14.85% (in USD terms), which marks the largest monthly gain for EM equities since 2009.

A key development during the month of November for international markets was the decline of the US Dollar. Data indicating that inflation is cooling in the US has raised the likelihood that the Fed will begin to slow interest rate increases. This caused the US Dollar to fall almost 5% against a basket of other countries' currencies – a welcomed development from international investors.

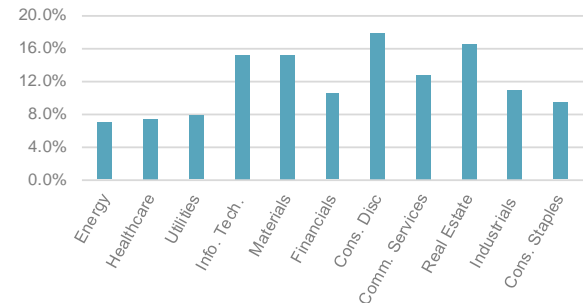
Chinese markets saw a surge during the last week of November as authorities showed signs of preparing to ease Zero-COVID restrictions as protests against the policies began to erupt in at least 18 cities throughout the country, which rattled markets. The change in tone from Chinese policy makers caused an influx of buying from foreign investors as many traders bet on the hopes that this would mark the beginning of a possible reopening of the Chinese economy. The MSCI China Index posted a stunning +28.97% return (in USD terms) for the month of November. Year-to-date, the country is down a staggering -25.59%.

Risks still remain prevalent in the Chinese economy as the November Manufacturing PMI (Purchasing Manager Index) declined to 48.0 from 49.2 during the previous month and below consensus expectations of 49. A reading below 50 represents a contraction of the manufacturing sector compared to the previous month and can often be looked at as a leading indicator of slowing GDP growth.

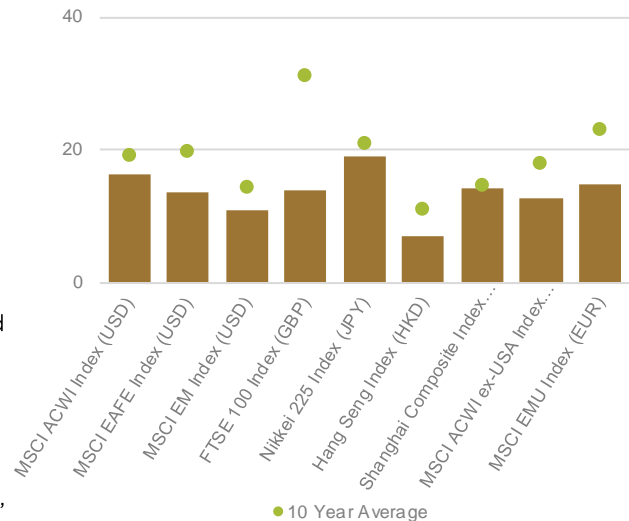
The Eurozone welcomed news that the annual rate of inflation fell for the first time since mid-2021. Consumer prices in November were 10% higher than a year prior, which is down from the one year period recorded in October of 10.6%. However, European Central Bank President Christine Lagard reinforced the need for future rate increases because of uncertainty around how much of an impact increased energy prices will have on consumers.

Every MSCI ACWI Ex-US sector posted positive returns during the month of November. Consumer Discretionary led the way with a +17.91% gain during the month, followed by Real Estate +16.42% and Materials +15.20%. Even the worst performer, Energy, posted a respectable +6.92% increase. Year-to-date, the MSCI ACWI Ex-US Energy sector boasts a +13.29% gain.

MTD MSCI ACWI SECTOR RETURNS



INTERNATIONAL EQUITY MARKET P/E RATIOS



MSCI ACWI EX U.S. SECTOR RETURNS

Sector	MTD	QTD	YTD	1 Year	3 Year	5 Year	% of ACWI
Energy	6.92%	17.85%	13.29%	18.99%	5.32%	4.51%	10.41%
Healthcare	7.53%	13.03%	-13.31%	-10.19%	2.89%	5.32%	7.87%
Utilities	7.92%	10.40%	-3.82%	4.06%	5.25%	6.12%	6.27%
Information Technology	15.17%	20.51%	-30.25%	-27.17%	7.96%	6.59%	9.41%
Materials	15.20%	18.03%	-9.41%	-4.04%	8.97%	5.23%	7.87%
Financials	10.58%	15.16%	-7.08%	-2.16%	3.04%	1.25%	18.53%
Consumer Discretionary	17.91%	15.49%	-20.89%	-20.07%	-1.56%	-0.70%	10.89%
Communication Services*	12.71%	8.73%	-23.61%	-24.04%	-3.58%	-3.19%	5.56%
Real Estate	16.42%	10.72%	-20.24%	-19.05%	-9.69%	-5.27%	2.25%
Industrials	10.95%	18.30%	-17.37%	-12.71%	2.31%	2.40%	11.73%
Consumer Staples	9.34%	9.26%	-12.00%	-6.78%	0.60%	1.47%	9.21%

INTERNATIONAL EQUITY RETURNS

Name	MTD	QTD	YTD	1 Year	3 Year	5 Year
MSCI ACWI Index (USD)	7.81%	14.34%	-14.62%	-11.17%	7.14%	6.96%
MSCI EAFE Index (USD)	11.29%	17.28%	-14.01%	-9.59%	2.49%	2.43%
MSCI EM Index (USD)	14.85%	11.30%	-18.71%	-17.11%	0.47%	-0.08%
FTSE 100 Index (GBP)	7.12%	10.32%	6.15%	11.19%	4.58%	4.56%
Nikkei 225 Index (JPY)	1.38%	7.83%	-0.86%	2.74%	8.34%	6.32%
Hang Seng Index (HKD)	26.79%	8.13%	-17.81%	-18.06%	-8.18%	-5.60%
Shanghai Composite Index (CNY)	8.92%	4.24%	-11.17%	-9.28%	5.57%	1.35%
MSCI ACWI ex-USA Index (USD)	11.83%	15.18%	-14.93%	-11.37%	2.27%	2.01%
MSCI EMU Index (EUR)	8.39%	16.97%	-8.45%	-3.91%	4.32%	4.41%
MSCI China Index (USD)	28.97%	7.30%	-25.59%	-27.93%	-6.56%	-5.04%
MSCI Canada Index (USD)	5.47%	11.49%	-0.93%	2.24%	9.22%	7.84%
MSCI EM ex-China (USD)	9.36%	12.80%	-15.65%	-11.88%	3.78%	2.09%

\*The MSCI ACWI Ex U.S. Communication Services Sector was reclassified on November 30th, 2018



## FIXED INCOME

At the November Federal Reserve meeting, the committee voted to increase the Federal Funds Rate by 75 basis points. This increase brought the target range to 3.75%-4.00%. The general tone of speeches given by Fed members since have supported further rate increases, and holding the target rate at an elevated level for an extended period to bring inflation down. The next Federal Reserve meeting will take place on December 13/14 with expectations for a 50 basis point increase in the Fed Funds Rate, a reduction in the magnitude of rate increases.

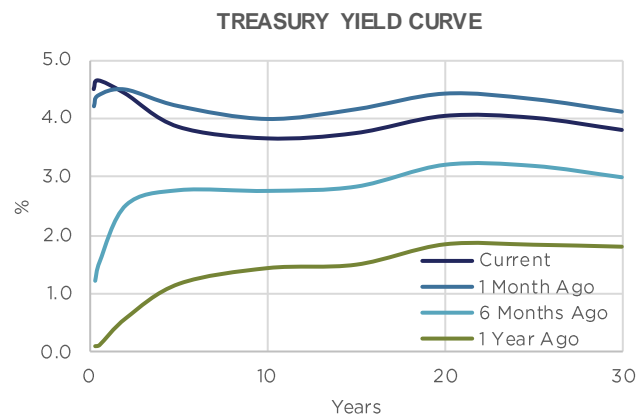
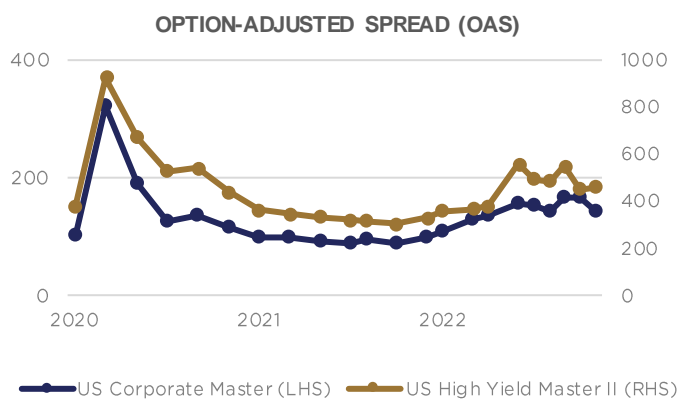
In the month of November, the Treasury yield curve experienced an interest rate decline broadly, with a roughly 40 basis point reduction in yields from the 3 year maturity out to the 30 year maturity. Lower interest rates combined with flat to tighter credit spreads has spurred a positive month for fixed income returns.

Investment grade corporate bonds had a very strong month, with credit spreads tightening significantly. The one month return in excess of 5% is welcome, particularly given that investment grade credit has experienced the largest drawdown in 2022. Even with this significant one month rally, IG remains among the worst performers for the year.

High Yield's spread rally/strong relative performance occurred last month. Even so, the category was able to add to its performance recovery by another 2.17%. The income provided by the higher coupons, stable spreads, and lower yields continued to support returns. High Yield has held up better than most fixed income categories year to date.

The U.S. Government index had a positive month due to falling yields pushing prices higher, but the performance lagged Investment Grade bonds this month and High Yield bonds last month. This is because Government bonds do not benefit from spread tightening, which has given the credit exposures a boost recently. The offset is that when spreads widen, credit exposures typically underperform Government bonds.

Municipal bonds experienced strong performance in November. Tax-free muni bonds have held up the best in a tough year for fixed income exposure.



### U.S. TREASURY YIELDS

Period	3 Month	2 Year	5 Year	10 Year	20 Year	30 Year
Current	4.50%	4.43%	3.85%	3.65%	4.04%	3.79%
1Month Ago	4.22%	4.51%	4.23%	4.00%	4.44%	4.13%
6 Months Ago	1.21%	2.51%	2.76%	2.75%	3.20%	2.98%
1Year Ago	0.10%	0.58%	1.16%	1.43%	1.83%	1.79%

### CENTRAL BANK ACTIVITY

Name	Current	1 Month Ago	6 Months Ago	1 Year Ago
Fed Funds Rate	4.00%	3.25%	1.00%	0.25%
Bank of Japan Target Rate	0.10%	0.10%	0.10%	0.10%
European Central Bank Rate	2.00%	1.25%	0.00%	0.00%
Bank of England Base Rate	3.00%	2.25%	1.00%	0.10%

### FIXED INCOME RETURNS

Name	MTD	QTD	YTD	1 Year	3 Year	5 Year
Bloomberg Barclays US Government Index	2.64%	123%	-11.87%	-12.32%	-2.58%	0.10%
Bloomberg Barclays US Agg Index	3.68%	2.33%	-12.62%	-12.84%	-2.59%	0.21%
Bloomberg Barclays US Corporate Index	5.18%	4.09%	-15.39%	-15.46%	-2.63%	0.72%
Bloomberg Barclays US Corporate High Yield Index	2.17%	4.83%	-10.63%	-8.96%	0.92%	2.50%
Bloomberg Barclays EM USD Agg Index	6.63%	5.69%	-15.98%	-15.16%	-3.67%	-0.51%
Bloomberg Barclays Global Agg Treasuries USD Index	1.84%	1.71%	-9.33%	-9.97%	-2.35%	0.64%
Bloomberg Barclays Municipal Index	4.68%	3.81%	-8.79%	-8.64%	-0.76%	1.40%



## ALTERNATIVE INVESTMENTS

Alternative investments were positive overall for the month, with the Bloomberg Commodity Index up +2.38% during the period. Commodities were supported by a weaker US Dollar, as the DXY Index fell -4.83% in November, its worst monthly performance in a decade. Weaker than expected inflation readings and the market expecting the Fed to slow down the pace of rate hikes led to the currency's decline.

Gold finished November up +8.26%, its best monthly performance in over a year. The price of gold was helped by a weaker US Dollar and expectations for the Fed to be less hawkish than originally anticipated. The shiny metal acts as a safe haven but offers no yield, making its performance sensitive to potential interest rate movements.

Oil prices continued their volatile ride in November and WTI crude oil finished the month down -6.91% to close at \$80.55 per barrel. The EU is aiming to approve a price cap on Russian oil in an attempt to squeeze revenues for the Kremlin. The European Commission aims to have the price cap of \$60 per barrel in place by December 5<sup>th</sup> but its effect on global oil prices is to be determined. US officials are worried that this cap combined with the EU's oil embargo, may push oil prices higher globally which could end up helping Russia. Other officials in the EU question its effectiveness because the expected cap is above the price that Russian oil exports are currently sold in some areas. The balancing act will be setting a price that hurts Russian revenues but is high enough to ensure Russia won't take their oil off the market, reducing global supply.

Cryptocurrency, thought by some as a viable and diversifying alternative investment class, took a large hit in credibility in November. A major crypto platform, FTX, filed for bankruptcy after issues arose related to its own crypto token and relationship with the trading firm Alameda. The firm lost billions in equity value overnight and customers on the exchange are not sure if or when they will be able to recover any assets. The firm's collapse led to fears across the entire cryptocurrency landscape, adding negative pressure to a space that has experienced a rough year already. Bitcoin, arguably one of the most reliable and "safest" digital currencies, is down more than -60% YTD. Time will tell if cryptocurrency is able to overcome its recent challenges to become a mainstream and institutional alternative asset class.

### SPOT RATES

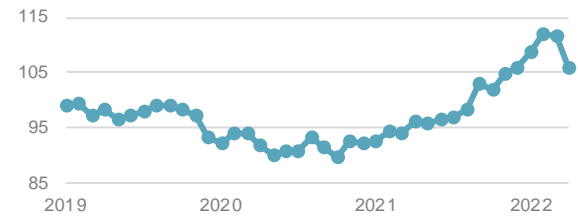
Description	Current	1 M th Ago	3 M ths Ago	6 M ths Ago	1 Year Ago
CAD / USD	134	136	132	127	128
JPY / USD	136.1	148.27	140.21	130.13	112.78
USD / GBP	122	115	115	125	133
USD / EUR	105	0.99	0.99	107	113

### HEDGE FUNDS

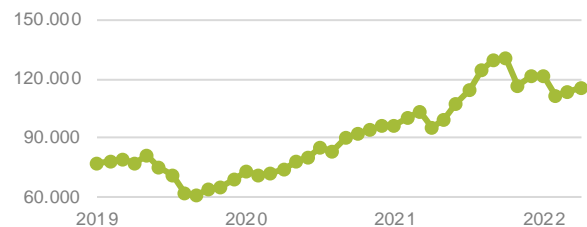
Name	MTD	QTD	YTD	1 Year	3 Year	5 Year
Global Hedge	0.03%	0.11%	-4.46%	-4.00%	2.30%	154%
Convertible Arbitrage	124%	2.55%	-12.40%	-12.12%	189%	2.00%
Equity Hedge (L/S)	0.33%	137%	-3.50%	-185%	4.63%	2.78%
Equity Market Neutral	-0.15%	0.22%	-100%	0.17%	-160%	-195%
Event Driven	-0.04%	-170%	-6.98%	-8.05%	127%	-0.15%
Macro	-2.43%	-2.29%	3.66%	4.53%	2.45%	186%
Merger Arbitrage	-0.35%	164%	-114%	-0.83%	2.56%	114%
Relative Value Arbitrage	148%	2.23%	-7.81%	-7.35%	0.37%	120%
Absolute Return	-0.90%	-0.84%	0.31%	126%	192%	184%

Note: Price Return, Returns as of 11/29/2022

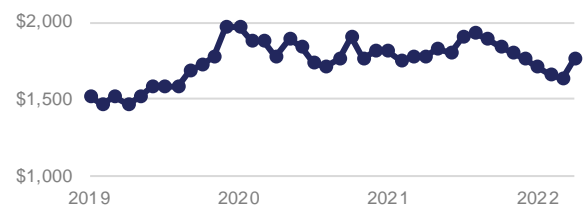
### U.S. DOLLAR INDEX SPOT



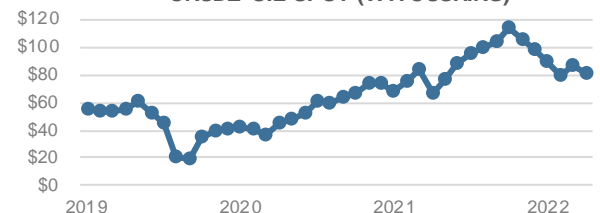
### BLOOMBERG COMMODITY INDEX



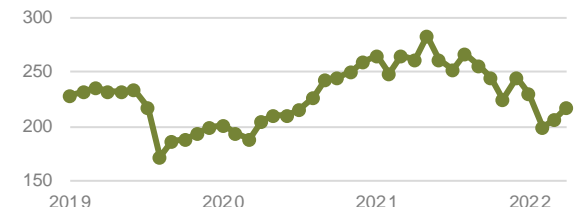
### GOLD SPOT



### CRUDE OIL SPOT (WTI CUSHING)



### FTSE NAREIT All REIT's



### COMMODITIES

	MTD	QTD	YTD	1 Year	3 Year	5 Year
Dollar	-4.83%	-5.06%	8.21%	7.37%	165%	176%
BCOM	2.38%	4.09%	17.02%	21.14%	14.57%	6.06%
Gold	8.26%	6.50%	-3.32%	-0.34%	6.49%	6.61%
WTI	-6.91%	4.25%	4124%	59.37%	22.60%	12.73%
FTSENAREIT	5.99%	9.58%	-2103%	-13.44%	2.67%	5.40%





If you have any questions or comments, please feel free to contact any member of our investment team:

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**S&P 500 Index (SPX)** – Standard and Poor's 500 Index is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

**S&P 500 Sector Indices (S5COND, S5CONS, S5ENRS, S5FINL, S5HLTH, S5INDU, S5INFT, S5MATR, S5TELS, S5UTIL, S5RLST)** – The S&P 500 is broken down into eleven sub-indices according to the Global Industry Classification Standard (GICS) sectors. These eleven sectors include Consumer Discretionary, Consumer Staples, Energy, Financials, Health Care, Industrials, Information Technology, Materials, Communication Services, Utilities, and Real Estate.

**S&P 400 Mid Cap Index (MID)** – Standard and Poor's Mid Cap 400 Index is a capitalization-weighted index, which measures the performance of the mid-range sector of the U.S. stock market.

**S&P 600 Small Cap Index (SML)** – Standard & Poor's Small Cap 600 Index is a capitalization-weighted index that measures the performance of selected U.S. stocks with a small market capitalization.

**S&P 500/Citigroup Growth Index (SGX)** – The S&P 500/Citigroup Growth Index is a market capitalization weighted index. All the stocks in the underlying parent index are allocated into value or growth. Stocks that do not have pure value or pure growth characteristics have their market caps distributed between the value & growth indices.

**S&P 500/Citigroup Value Index (SVX)** – The S&P 500/Citigroup Value Index is a market capitalization-weighted index. All the stocks in the underlying parent index are allocated into value or growth. Stocks that do not have pure value or pure growth characteristics have their market caps distributed between the value & growth indices.

**MSCI AC World Index (MXWD)** – The MSCI AC World Index is a free float-weighted equity index. The index includes both emerging and developed world markets.

**MSCI EAFE Index (MXEA)** – The MSCI EAFE Index is a capitalization-weighted index that monitors the performance of stocks from developed markets in Europe, Australia-Asia, and the Far East.

**MSCI Emerging Market Index (MXEF)** – The MSCI Emerging Market Index is a free-float weighted index that is designed to measure the equity performance of international emerging markets.

**FTSE 100 Index (UKX)** – The FTSE 100 Index is a capitalization weighted index of the 100 most highly capitalized companies traded on the London Stock Exchange. The equities use an investability quotient weighting in the index calculation.

**Nikkei 225 Stock Average Index (NKY)** – The Nikkei-225 Stock Average is a price-weighted average of 225 top-rated Japanese companies listed in the First Section of the Tokyo Stock Exchange.

**Hang Seng Index (HSI)** – The Hang Seng is a free-float capitalization-weighted index of selected companies from the Stock Exchange of Hong Kong. The components of the index are divided into four sub-indices: Commerce and Industry, Finance, Utilities, and Properties.

**Shanghai Stock Exchange Composite Index (SHCOMP)** – The Shanghai Stock Exchange Composite Index is a capitalization weighted index. The index tracks the daily price performance of all A-shares and B-shares listed on the Shanghai Stock Exchange.

**MSCI USA Extended ESG Focus Index** – The Index is designed to maximize exposure to positive environmental, social and governance (ESG) factors while exhibiting risk and return characteristics similar to those of the MSCI USA Index.

**MSCI EAFE Extended ESG Focus Index** – The Index is designed to maximize exposure to positive environmental, social and governance (ESG) factors while exhibiting risk and return characteristics similar to those of the MSCI EAFE Index.

**MSCI Emerging Markets Extended ESG Focus Index** – The Index is designed to maximize exposure to positive environmental, social and governance (ESG) factors while exhibiting risk and return characteristics similar to those of the MSCI Emerging Markets Index.

**MSCI ACWI ex USA Index (MXWDU)** – The MSCI ACWI ex USA Index is a free-float weighted index.

**MSCI ACWI ex USA Sector Indices** – The MSCI ACWI ex USA Index is broken down into eleven sub-indices according to the Global Industry Classification Standard (GICS) sectors. These eleven sectors include Consumer Discretionary, Consumer Staples, Energy, Financials, Health Care, Industrials, Information Technology, Materials, Communication Services, Utilities, and Real Estate.

**MSCI EMU Index (MXEM)** – The MSCI EMU (European Economic and Monetary Union) Index is a free-float weighted equity index.

**Bloomberg Barclays Global Treasuries USD Hedged Index (LGTRTRUH)** – The Bloomberg Barclays Global Treasury Index tracks fixed-rate, local currency government debt of investment grade countries. The index represents the treasury sector of the Global Aggregate Index and contains issues from 37 countries denominated in 24 currencies.

**Bloomberg Barclays Municipal Bond Index (LMBITR)** – The Bloomberg Barclays Municipal Bond Index covers the USD denominated long-term tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds.

**Bloomberg Barclays U.S. Government Index** – Bloomberg Barclays US Government Bond Index is comprised of the US Treasury and US Agency Indices. The index includes US dollar-denominated, fixed-rate, nominal US Treasuries and US agency debentures (securities issued by US government owned or government sponsored entities, and debt explicitly guaranteed by the US government).

**Bloomberg Barclays EM Hard Currency Aggregate Index (LG20TRUU)** – The Bloomberg Barclays Emerging Markets Hard Currency Aggregate Index is a hard currency Emerging Markets debt benchmark that includes USD-denominated debt from sovereign, quasi-sovereign, and corporate EM issuers.

**Bloomberg Barclays U.S. Aggregate Bond Index (LBSTRUU)** – The Bloomberg Barclays US Aggregate Bond Index is a broad-based benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-through), ABS and CMBS (agency and non-agency).

**Bloomberg Barclays U.S. Corporate Index (LUACTRUU)** – The Bloomberg Barclays US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

**Bloomberg Barclays U.S. Corp High Yield Index (LFTR ML U.S. Corporate Index (COAO))** – The Bloomberg Barclays US Corporate High Yield Bond Index measures the USD denominated, high yield, below-investment grade fixed-rate corporate bond market.

**S&P Green Bond Select Index (SPGRSLLT)** – The S&P Green Bond Select Index is a market value-weighted subset of the S&P Green Bond Index that seeks to measure the performance of green-labeled bonds issued globally, subject to stringent financial and extra-financial eligibility criteria.

**ML U.S. Corporate Index (COAO)** – The Merrill Lynch U.S. Corporate Index tracks the performance of U.S. dollar denominated investment grade corporate debt publicly issued in the U.S. domestic market.

**ML U.S. High Yield Index (HOOA)** – The Merrill Lynch U.S. High Yield Index tracks the performance of U.S. dollar denominated below investment grade corporate debt publicly issued in the U.S. domestic market.

**FTSE NAREIT All REITs Index (FNAR)** – The FTSE NAREIT All REITs Index is a free float adjusted market capitalization-weighted index that includes all tax qualified REITs listed in the NYSE, AMEX, and NASDAQ National Market.

**Bloomberg Commodity Index (BCOM)** – Bloomberg Commodity Index (BCOM) is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight-caps are applied at the commodity, sector and group level for diversification. Roll period typically occurs from 6th-10th business day based on the roll schedule.

**U.S. Dollar Index (DXY)** – The U.S. Dollar Index (USDIX) indicates the general int'l value of the USD. The USDIX does this by averaging the exchange rates between the USD and 6 major world currencies. The ICE US computes this by using the rates supplied by some 500 banks.



**HFRX Global Hedge Fund Index (HFRXGL)** – The HFRX Global Hedge Fund Index is designed to be representative of the overall composition of the hedge fund universe. It is comprised of all eligible hedge fund strategies.

**HFRX Convertible Arbitrage Index (HFRXCA)** – The HFRX Convertible Arbitrage Index is designed to reflect the general performance of strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a convertible fixed income instrument.

**HFRX Distressed Securities Index (HFRXDS)** – The HFRX Distressed Securities Index is designed to reflect the general performance of strategies focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance of obliged (par value) at maturity as a result of either formal bankruptcy pro

**HFRX Macro Index (HFRXM)** – The HFRX Macro Index reflects the general performance of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency, and commodity markets.

**HFRX Equity Hedge Index (HFRXEH)** – The HFRX Equity Hedge Index is designed to reflect the general performance of strategies that maintain both long and short positions in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques. Strategies can be broadly diversified or narrowly focused.

**HFRX Equity Market Neutral Index (HFRXEMN)** – The HFRX Equity Market Neutral Index is designed to reflect the general performance of strategies that employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities.

**HFRX Event Driven Index (HFRXED)** – The HFRX Event Driven Index reflects the general performance of strategies that maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including, but not limited to, mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance, or other capital structure adjustments.

**HFRX Merger Arbitrage Index (HFRXMA)** – The HFRX Merger Arbitrage Index reflects the general performance of strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are current engaged in a corporate transaction.

**HFRX Relative Value Arbitrage Index (HFRXRVA)** – The HFRX Relative Value Arbitrage Index reflects the general performance of strategies that maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities.

#### **Economic Data Sources:**

**PPI & CPI** – Bureau of Labor Statistics

**Unemployment Rate** – Bureau of Labor Statistics

**Consumer Confidence** – Conference Board

**SP/Case-Shiller Composite 20** – Case-Shiller

**Industrial Production** – Federal Reserve

**Capacity Utilization** – Federal Reserve

**Retail Sales** – U.S. Census Bureau

**Housing Starts** – U.S. Department of Commerce

**Factory Orders** – U.S. Census Bureau

**Leading Indicators** – Conference Board

**Unit Labor Costs** – Bureau of Labor Statistics

**GDP** – Bureau of Economic Analysis

**Wholesale Inventories** – U.S. Census Bureau

**MBA Mortgage Applications** – Mortgage Bankers Association

**4-Week Moving Average of Initial Claims, SA** – Bureau of Labor Statistics

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