



# ECONOMIC AND MARKET REVIEW

FIRST QUARTER 2022



# Important information continued

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Standard Deviation is a statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. The greater the degree of dispersion, the greater the risk.

Correlations measure the strength and direction of a linear relationship between two random variables. The value will range between -1 and 1. Rolling correlations are trailing correlations in overlapping cycles for a given period of time. The periods shift based on a chosen length (typically one month) resulting in a continuous stream of trailing correlations e.g., a three-year rolling value shifted by one month will show you the trailing three-year value for each month displayed. Correlations are useful for understanding the behavior of correlations over multiple time periods. Demonstrates patterns or longer-term trends in the return data.

# Important information continued

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Bond investors should carefully consider risks such as interest rate, credit, default and duration risk. Greater risk, such as increased volatility, limited liquidity, prepayment, non-payment and increased default risk, inherent in portfolios that invest in high yield (“junk”) bonds or mortgage-backed securities, especially mortgage-backed securities with exposure to sub-prime mortgages. Generally, when interest rates rise, prices of fixed income securities fall.. Investment in non-domestic and emerging market securities is subject to the risk of currency fluctuations and to economic and political risks associated with such foreign countries.

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# AGENDA

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# Economic indicators dashboard



## MARKET VOLATILITY

Up on Russia's invasion of Ukraine and rising interest rates

%

## TREASURY YIELD

Up from 1.52% in Q4 in anticipation of more rate hikes



## UNEMPLOYMENT

Down from 4.20% in Q4, lowest level since Feb. 2020



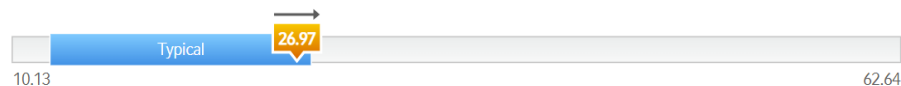
## CONSUMER SENTIMENT

Down on inflation concerns & geopolitical uncertainty

MOST RECENT | 3-MO. TREND | TYPICAL RANGE | ACTUAL RANGE | [FAQ](#)

### ▼ MARKET INDICATORS

Market Volatility (CBOE VIX)  
[HISTORICAL DETAILS](#)



10 Yr. U.S. Treasury Yield  
[HISTORICAL DETAILS](#)



Yield Spread  
[HISTORICAL DETAILS](#)



Home Prices (HPI)  
[HISTORICAL DETAILS](#)

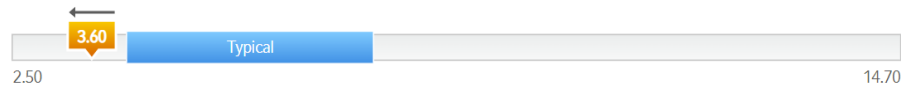


### ▼ ECONOMIC INDICATORS

Inflation (CPI)  
[HISTORICAL DETAILS](#)



Unemployment  
[HISTORICAL DETAILS](#)



Economic Expansion (GDP)  
[HISTORICAL DETAILS](#)



Consumer Sentiment (CSI)  
[HISTORICAL DETAILS](#)

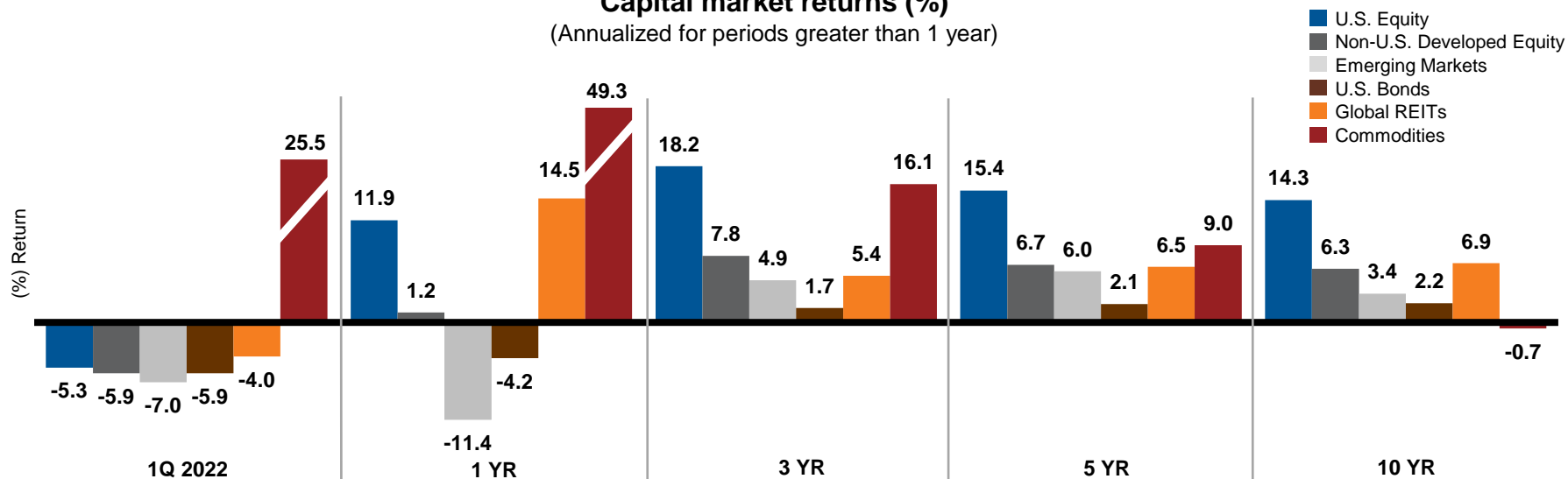


<http://www.russellinvestments.com>, current state as of 4/4/2022. See appendix for category definitions. Russell Investments' Economic Indicators Dashboard charts several key indicators to help investors assess economic and market trends.

# Capital markets

Periods ending March 31, 2022

**Capital market returns (%)**  
(Annualized for periods greater than 1 year)



**U.S. equity:** (Russell 3000® Index) U.S. stock index which includes the 3,000 largest U.S. stocks as measured by market capitalization

**Non-U.S. developed equity:** (MSCI EAFE Index) International market index that includes Western Europe, Japan, Australia

**Emerging markets:** (MSCI Emerging Markets Index) Emerging markets index that includes S. Korea, Brazil, Russia, India and China

**U.S. bonds:** (Bloomberg U.S. Aggregate Bond Index) Broad index for U.S. Fixed Income market

**Global REITs:** (FTSE EPRA/NAREIT Developed Index) Index for global publicly traded real estate securities

**Commodities:** (Bloomberg Commodity Index Total Return) Broad index of common commodities

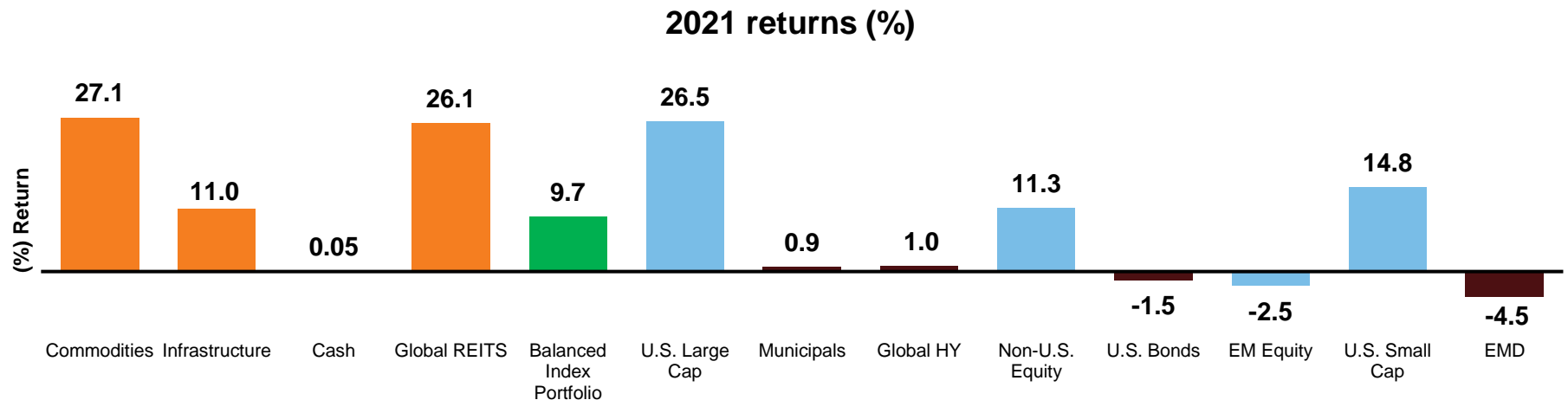
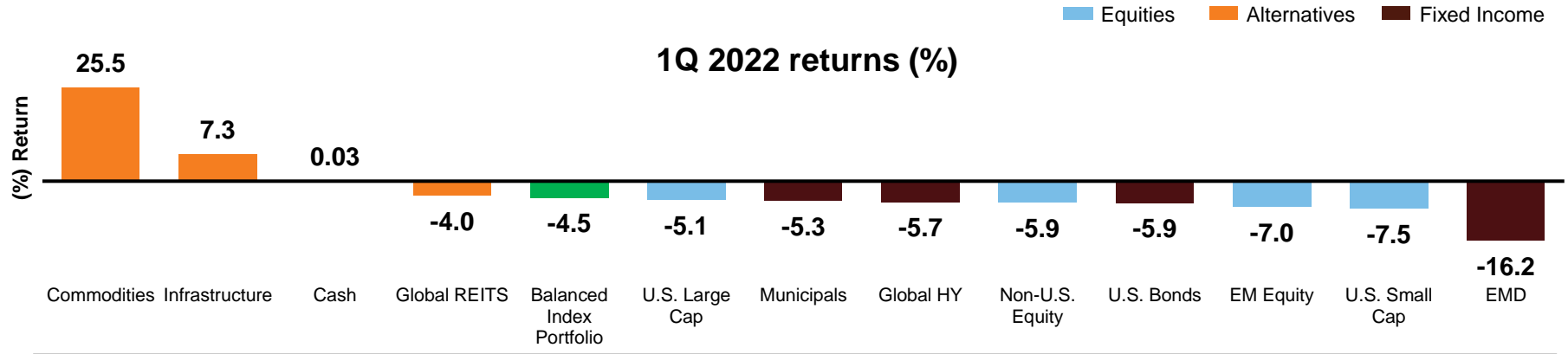
## CAPITAL MARKETS 1Q 2022:

- **U.S. equity** down for the quarter on inflation concerns and rising energy costs
- **Non-U.S. developed equity** down on lowered growth expectations and fears concerning energy supply
- **Emerging markets** down due to struggles in China and Russia's invasion of the Ukraine
- **U.S. bonds** down on a hawkish Fed that raised rates in March
- **Global REITs** down with mixed sector performance; hotels and healthcare were the top performers and malls was the worst
- **Commodities** up driven by sharply higher energy and wheat prices following the Russian invasion of Ukraine

Source: FTSE/Russell, Bloomberg, MSCI and FTSE NAREIT. Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment.

# What worked and what didn't

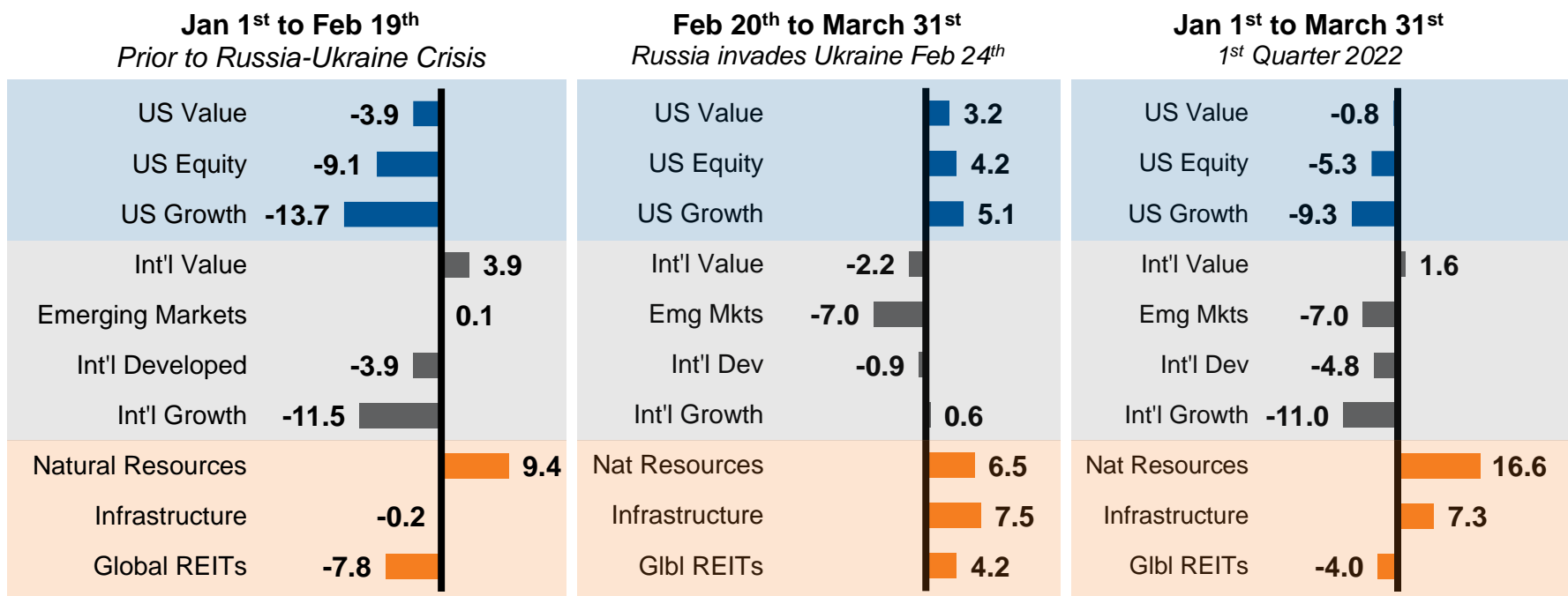
1Q 2022 vs. 2021



Source: U.S. Small Cap: Russell 2000® Index; U.S. Large Cap: Russell 1000® Index; Global: MSCI World Net Index; Non-U.S.: MSCI EAFE Net index; Infrastructure: S&P Global Infrastructure Index; Global HY (High Yield): Bloomberg Global High Yield Index; Global REITs: FTSE EPRA/NAREIT Developed Index; Municipals (Municipal Bonds): Bloomberg Municipal Index, Cash: FTSE Treasury Bill 3 Month Index; EM (Emerging Markets) Equity: MSCI Emerging Markets Index; U.S. Bonds: Bloomberg U.S. Aggregate Bond Index; EMD (Emerging Markets Debt) : JPM EMBI Plus Bond Index; Commodities: Bloomberg Commodity Index Total Return; Balanced Index: 5% U.S. Small Cap, 15% U.S. Large Cap, 10% Global, 12% Non-U.S., 4% Infrastructure, 5% Global High Yield, 4% Global REITs (Real Estate Investment Trusts), 0% Cash, 6% EM Equity, 30% U.S. Bonds, 5% EMD and 4% Commodities. Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are unmanaged and cannot be invested in directly.

# Equity market leadership

Region & style leadership changed quickly during Q1



- First quarter market trends were a story of pre-invasion and post-invasion
- 2022 started the year with many of 2021's winners giving back some gains
- Post-invasion, many of the "safer" segments such as U.S. large cap led, along with commodity and inflation plays

Source: Morningstar. Data illustrated represents the total return for the specified period. U.S. Equity: Russell 3000 TR Index; US Value: Russell 3000 Value TR Index; US Growth: Russell 3000 Growth Index; Int'l Developed: MSCI World ex-USA (Net) Index; Int'l Value: MSCI World ex-USA Value (Net) Index; Int'l Growth: MSCI World ex-USA Growth (Net) Index; Emerging Markets: MSCI Emerging Markets (Net) Index; Natural Resources: S&P Global Natural Resources (Net) Index; Global REITs: FTSE EPRA Nareit Developed (Net) Index; Infrastructure: S&P Global Infrastructure (Net) Index. Indexes are unmanaged and cannot be invested in directly. Returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment.

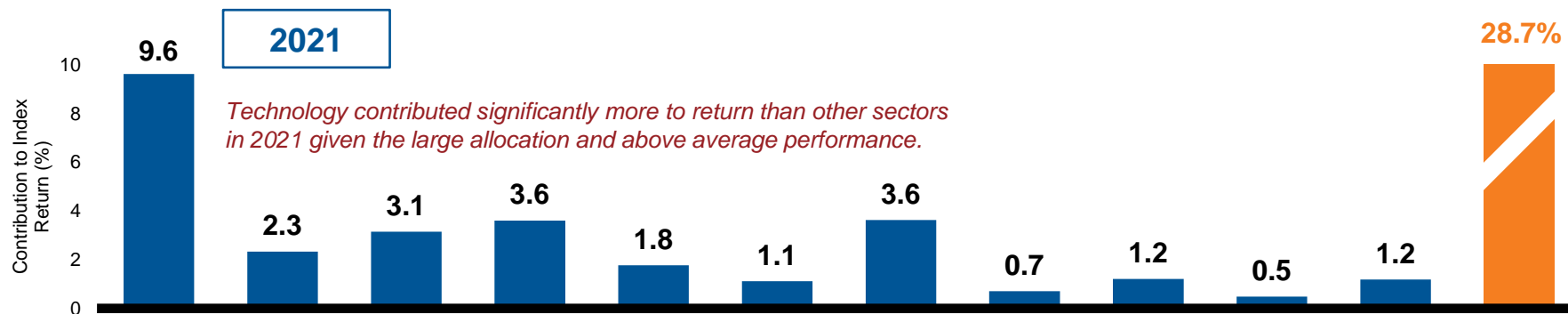
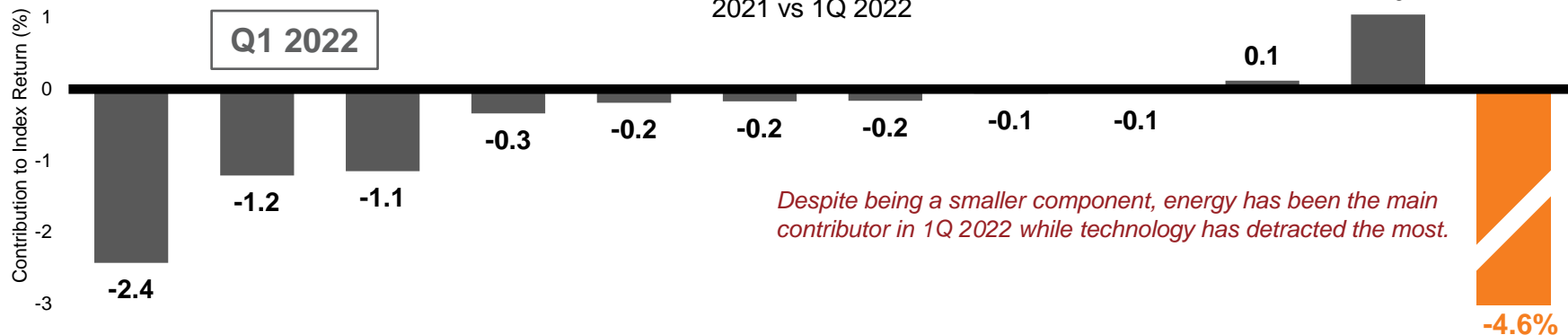


# Drivers of U.S. equity returns

Leaders and laggards in 1Q 2022 flipped from the prior year

## Sector contributions to S&P 500 returns

2021 vs 1Q 2022

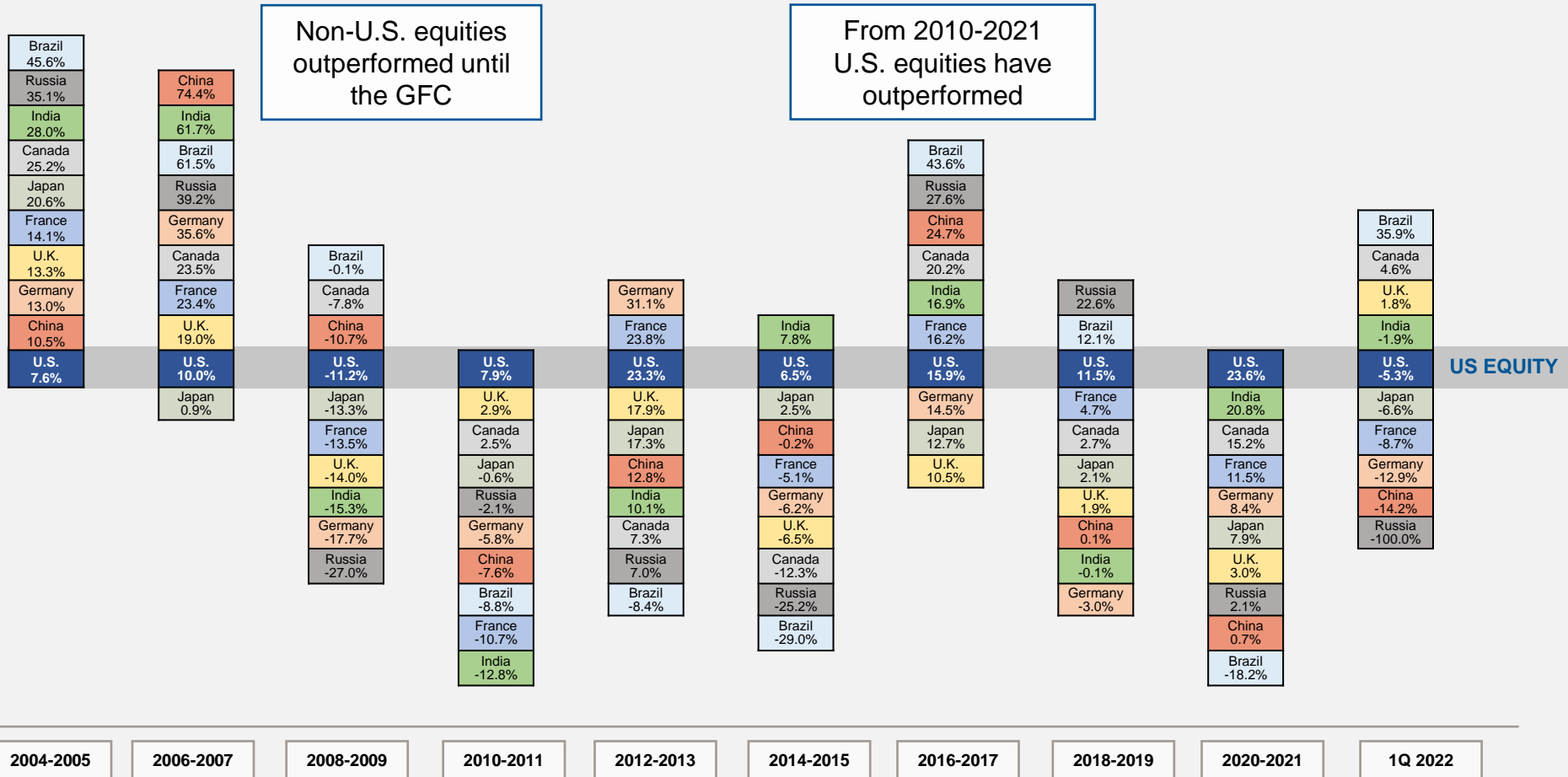


Sector	Inf. Tech	Comm. Services	Cons. Disc.	Health Care	Industrials	Real Estate	Financials	Materials	Cons. Staples	Utilities	Energy	S&P 500 Index
Index Weight	28.0%	9.4%	12.0%	13.6%	7.9%	2.7%	11.1%	2.6%	6.1%	2.7%	3.9%	100%

Source: Morningstar, Russell Investments and S&P. Data as of 3/31/2022. Numbers may not sum to total index due to rounding. Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are unmanaged and cannot be invested in directly.

# Global market leadership rotates

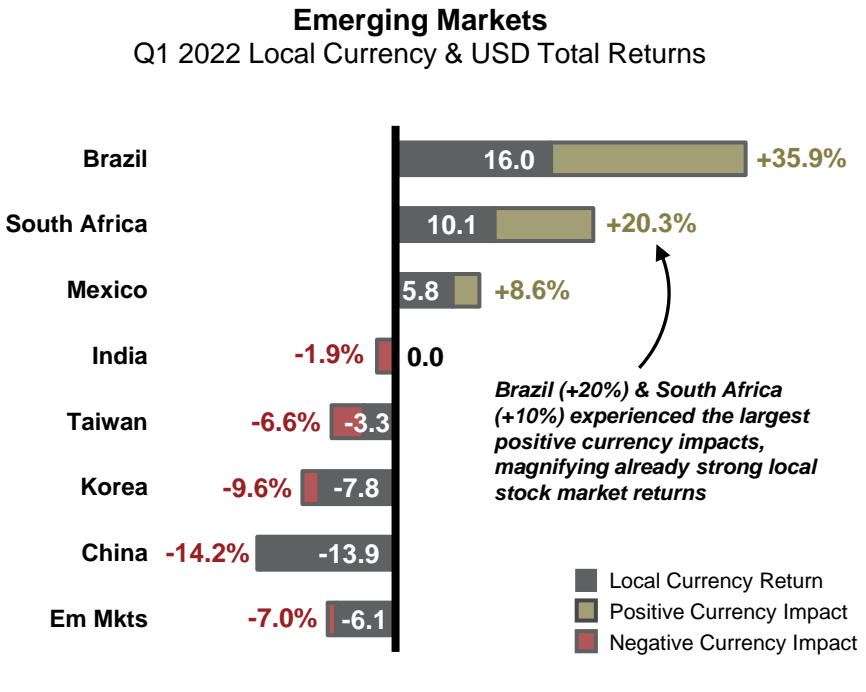
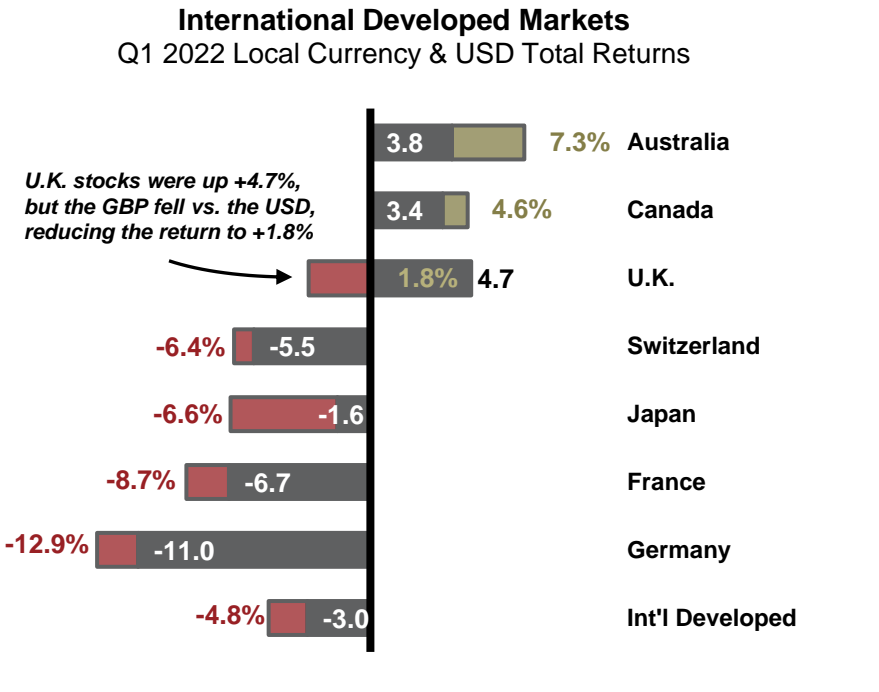
The 21<sup>st</sup> Century



MSCI individual country index data. Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. See appendix for ratio definitions. GFC = Global Financial Crisis

# International stocks delivered mixed results

Geopolitical events impact equity & currency markets

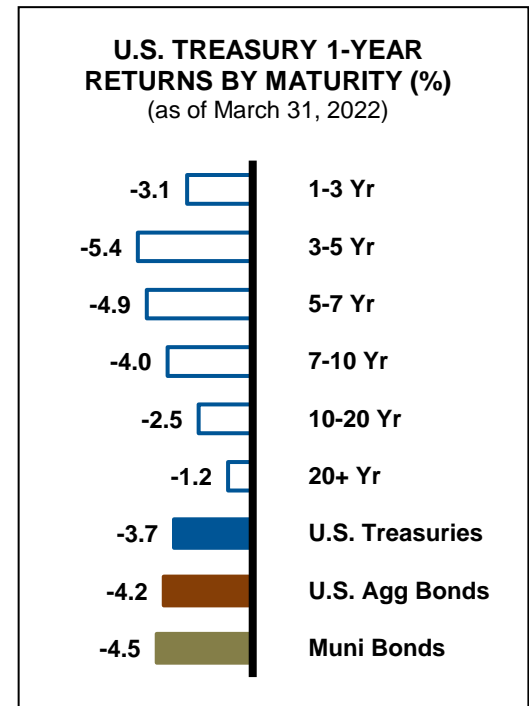
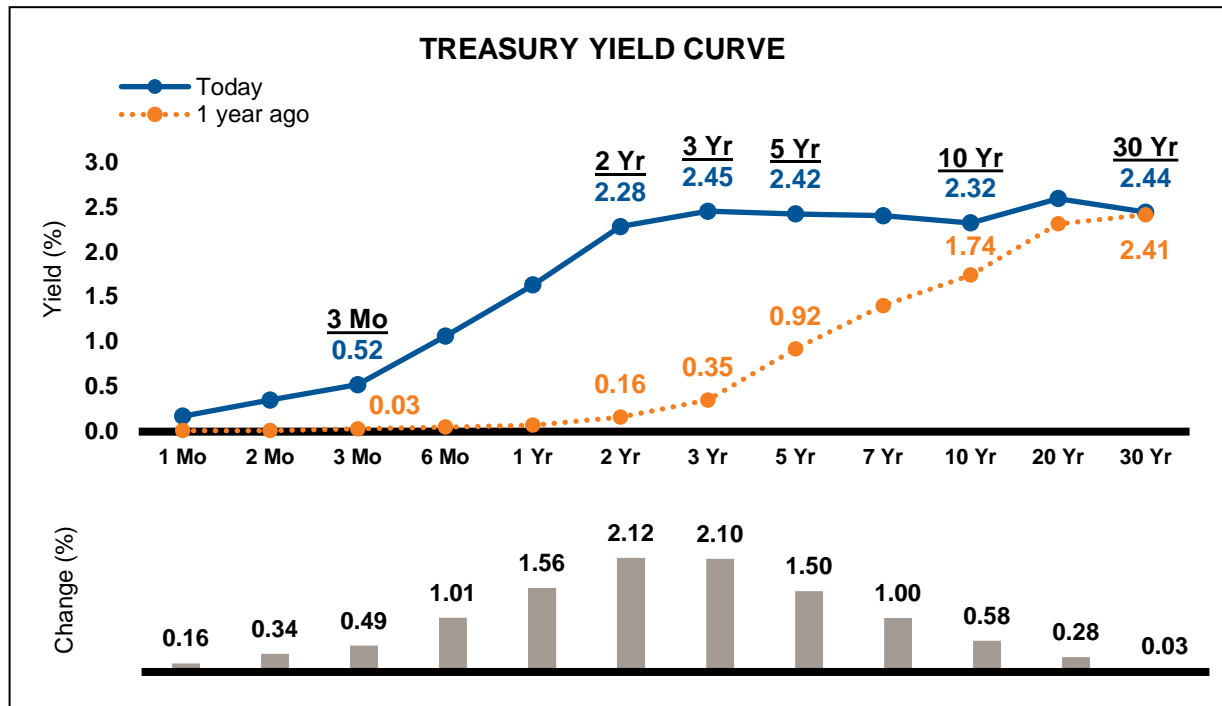


- For U.S. investors, investment returns overseas are impacted by stock returns plus currency movements
- In Q1, resource-rich markets like Australia & Brazil saw strong stock returns locally & their currency strengthen abroad
- A rapid rise in energy prices impacted energy-dependent economies in Europe & Japan, resulting in currency headwinds
- Currency volatility may impact returns in the short-term, but tend to moderate in the long run

Developed: MSCI World ex-USA NR Index. Em Mkts: MSCI EM NR Index. Indexes are unmanaged and cannot be invested in directly. Returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment.

# Interest rates rise

Yield curve flattens as short- and intermediate-term rates rise



- Industry news tends to focus on the very short-term (Fed Funds Rate) and the 10-Year Treasury, but the fixed income market encompasses bonds all along the yield curve from less than 1-month to 30+ years
- The “middle” of the yield curve shifted higher over the last year, but with little movement at the two ends
- This has greatly influenced bond returns based upon maturity and has created the appearance of “flattening” depending on which bond terms are being compared

Source: Morningstar Direct & U.S. Department of Treasury, “Daily Treasury Yield Curve Rates”, <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield>. “1 year ago” represents the treasury yield curve as of 3/31/2021. “Today” represents the treasury yield curve as of 3/31/2022. “Change” represents the difference in the treasury yield curve from 1 year ago vs. today. “U.S. Treasury Returns by Maturity (%)” represents the total return from 4/1/2021 to 3/31/2022. Bloomberg index definitions: 1-3 Yr – U.S. Treasury 1-3 Year Index, 3-5 Yr – U.S. Treasury 3-5 Year Index, 5-7 Yr – U.S. Treasury 5-7 Year Index, 7-10 Yr – U.S. Treasury 7-10 Year Index, 10-20 Yr – U.S. Treasury 10-20 Year Index, 20+ Yr – U.S. 20+ Year Index, U.S. Treasuries – U.S. Treasury Index, U.S. Agg Bonds – U.S. Aggregate Bond Index, Muni Bonds – Municipal Index.

# Rare for bonds to be down more than stocks

Diversification was not rewarded in 1Q 2022

## QUARTERS WITH NEGATIVE STOCK RETURNS SINCE 1976

50

Negative  
quarters for  
stocks

47

Quarters  
bonds  
outperformed

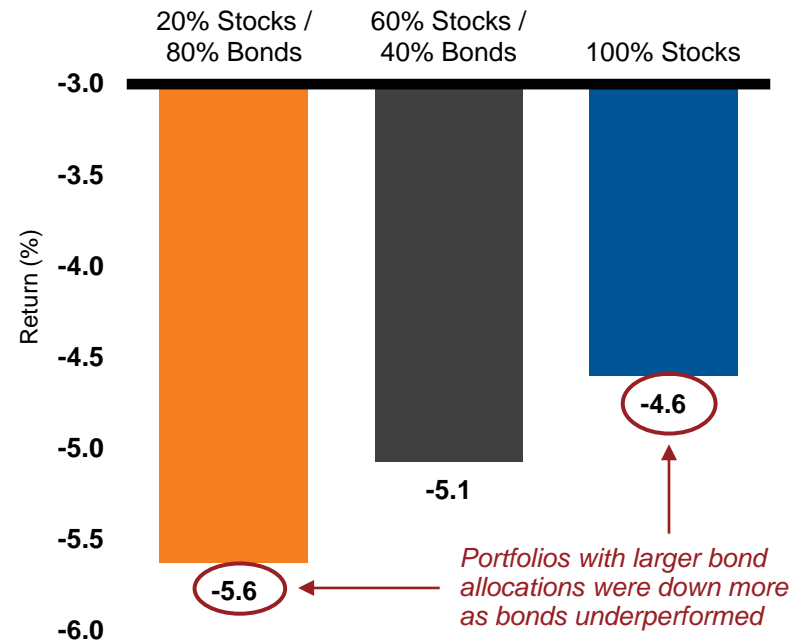
7.6%

Average  
bond excess  
return

-1.3%

Bond  
underperformance  
in 1Q

## IMPLICATION FOR PORTFOLIOS 1Q 2022 RETURNS



- Stocks and bonds historically have had complementary performance patterns
- For just the 3<sup>rd</sup> time since 1976 bonds declined more than stocks, uncharacteristically lowering portfolio returns
- Investors should not lose focus on the role of bonds in a portfolio to help protect from extreme market events

Source: Morningstar. Stocks: S&P 500 Index; Bonds: Bloomberg U.S. Aggregate Bond Index; Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are unmanaged and cannot be invested in directly.

# Russell Investments' global market outlook

## ECONOMIC VIEWS



### U.S. GROWTH

- 3% real GDP growth projected for 2022
- Strong household and corporate balance sheets keep economy on firm footing



### FEDERAL RESERVE RATE HIKES

- Inflation concerns in Fed sight lines
- Markets projecting six more hikes in 2022
- Likely year-end Fed Funds Rate of ~2.25%



### EUROPEAN GROWTH

- Forecasts lowered to ~2.5% growth
- Potential for significant impacts from Ukraine conflict - energy dependence at the forefront



### ECB MONETARY POLICY

- Likely more focused on growth than inflation
- As energy prices impact growth, rate hikes become less certain



### CHINESE STIMULUS

- Likely more stimulus in 2022
- Easing by the Bank of China
- Fiscal spending through infrastructure spending

## ASSET CLASSES



### GLOBAL EQUITIES

- Increased uncertainty given Ukraine conflict
- If hostilities subside, above-trend growth should favor better valued non-US stocks
- Escalation of the conflict tips favor back towards the U.S.



### FIXED INCOME

- Sell-off brings U.S. bonds back to fair value
- Japanese, German, and UK bonds remain expensive
- Markets appear to have priced in expected rate hikes, hopefully limiting near-term downside



### REAL ASSETS

- Should continue to benefit from recovery trade
- Infrastructure and REITs could prove beneficial due to inflation pass through characteristics
- Commodities likely to be volatile amid conflict



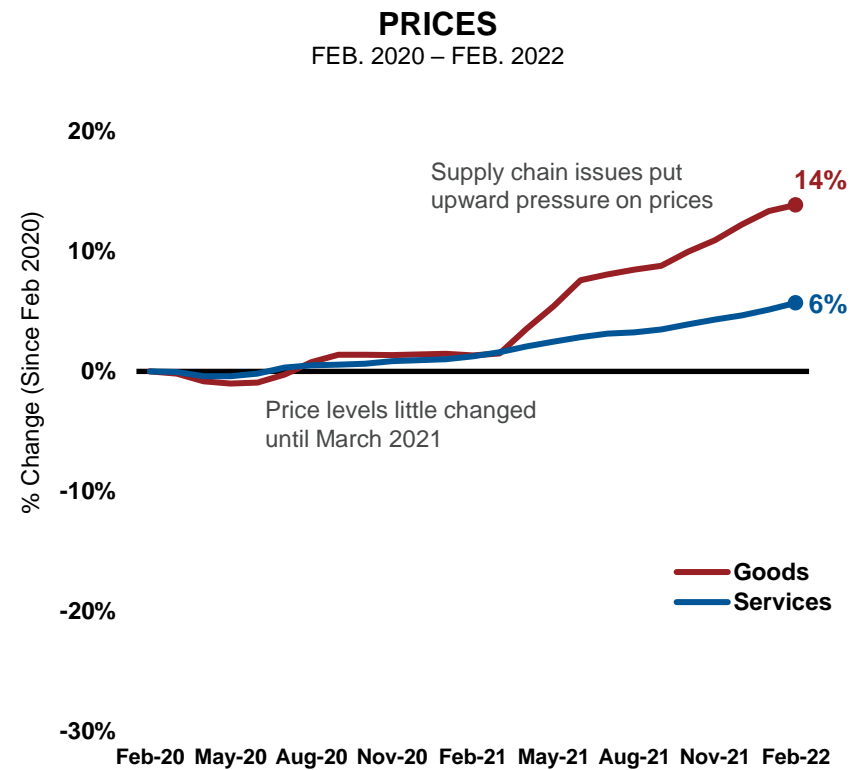
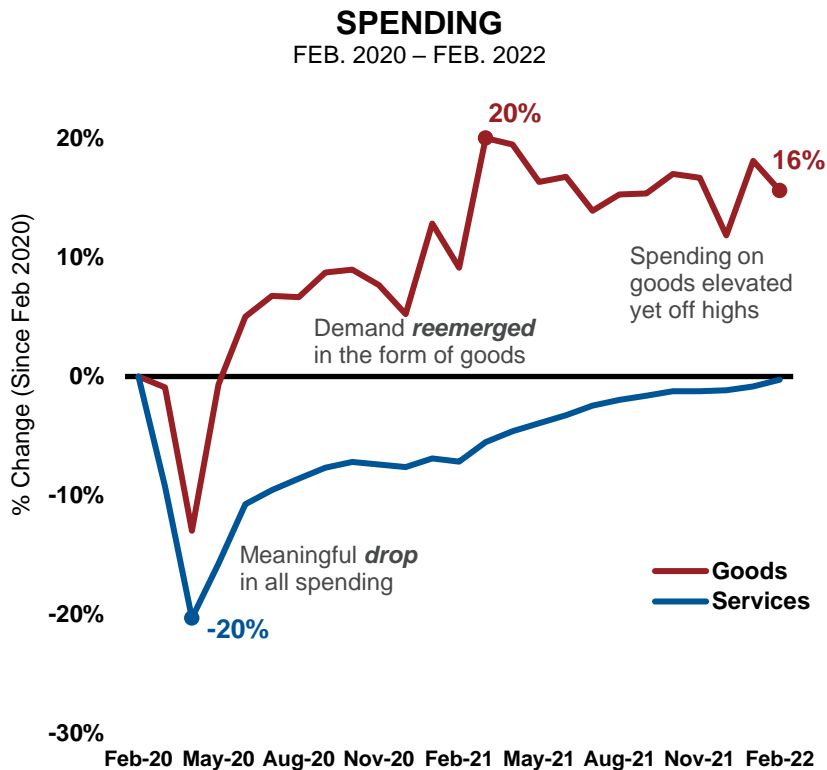
### CURRENCIES

- The U.S. dollar has risen, acting as a safe-haven during the Ukraine conflict
- If hostilities subside, USD could weaken with the Euro and Yen benefitting

There is no guarantee the stated expectations will be met. As of 3/17/22. Forecasting represents predictions of market prices and/or volume patterns utilizing varying analytical data. It is not representative of a projection of the stock market, or of any specific investment.

# The great spending shift

## Impact on personal consumption & inflation



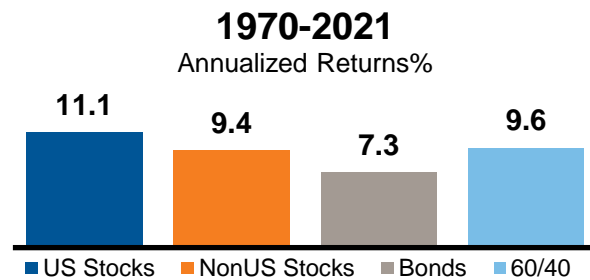
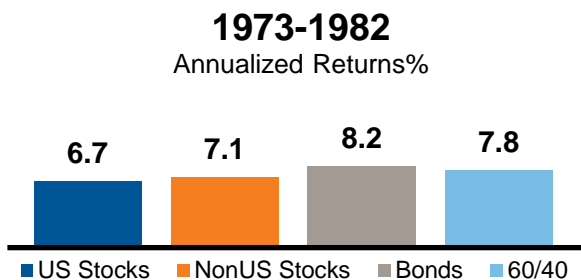
- Spending on all goods and services experienced large decreases from Feb-April 2020
- Lockdowns and unprecedented fiscal stimulus sparked online spending sprees and home improvements causing supply chain issues and inflation levels not seen since the 1970s
- As spending on goods and services start to converge this should help alleviate supply chain bottlenecks and inflated prices

Source: St. Louis Fed. Source: St. Louis Fed. Spending: Goods-Real Personal Consumption Expenditures: Goods Index, Services-Real Personal Consumption Expenditures: Services Index. Prices: Prices: Goods-Consumer Price Index: Commodities Less Food and Energy Commodities, Services-Consumer Price Index: Services Less Energy Services, for All Urban Consumers in U.S. City Average

# Stagflation vs inflation

The U.S. experienced stagflation during the 1973 – 1982 period

STAGFLATION 1973 - 1982		ECONOMIC FACTOR		INFLATION 2022
Avg +8.9%	↑	PRICES	↑	+7.7% YoY
2 years of reductions	↓	SPENDING	↑	+13.7% YoY
4 years of YoY negative growth	↓	GROWTH	↑	+6.9% YoY (4Q)
Avg 7.3%	↑	UNEMPLOYMENT	↓	3.6%

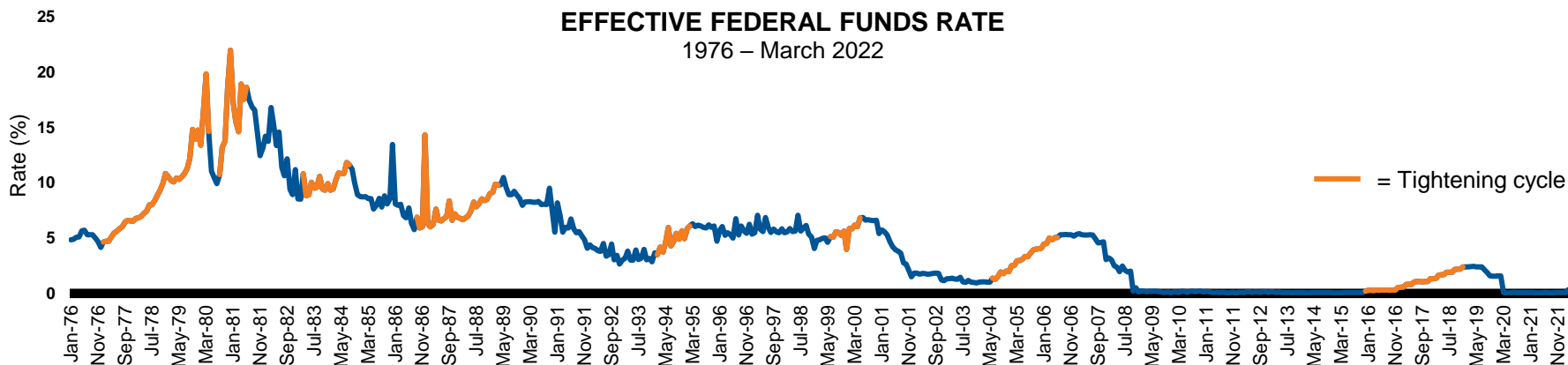


Sources: Prices: Federal Reserve Bank of Minneapolis; Spending: Bureau of Economic Analysis (BEA), Growth: (BEA), Unemployment: Bureau of Labor Statistics; US Stocks: S&P 500 Index, NonUS Stocks: MSCI EAFE Index, Bonds: Bloomberg Aggregate Bond Index; 60/40: 40% S&P 500, 20% MSCI EAFE, 40% Bloomberg Aggregate



# Returns during Fed tightening cycles

Historically has not derailed markets



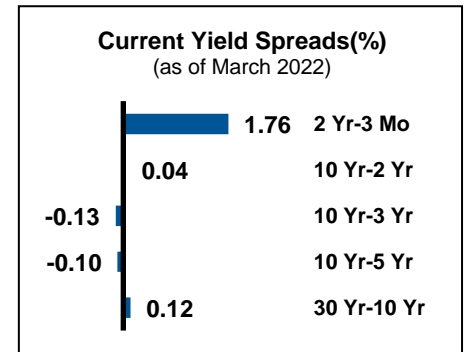
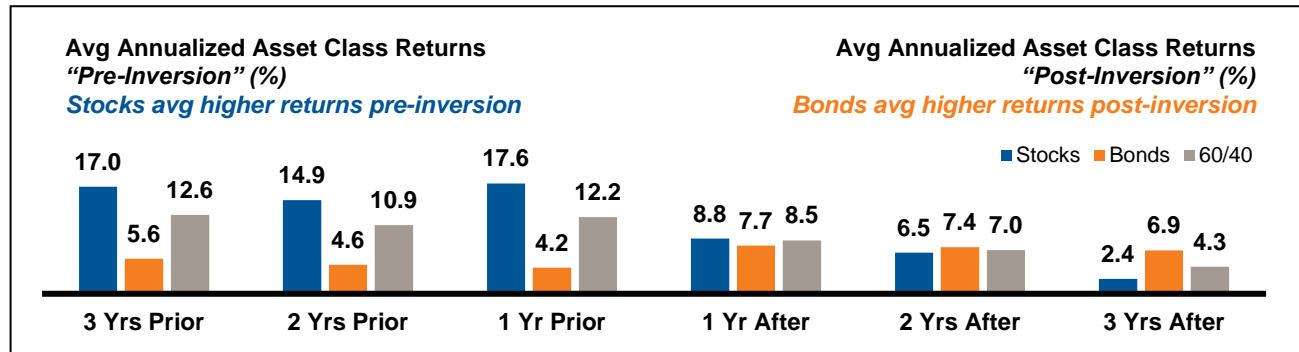
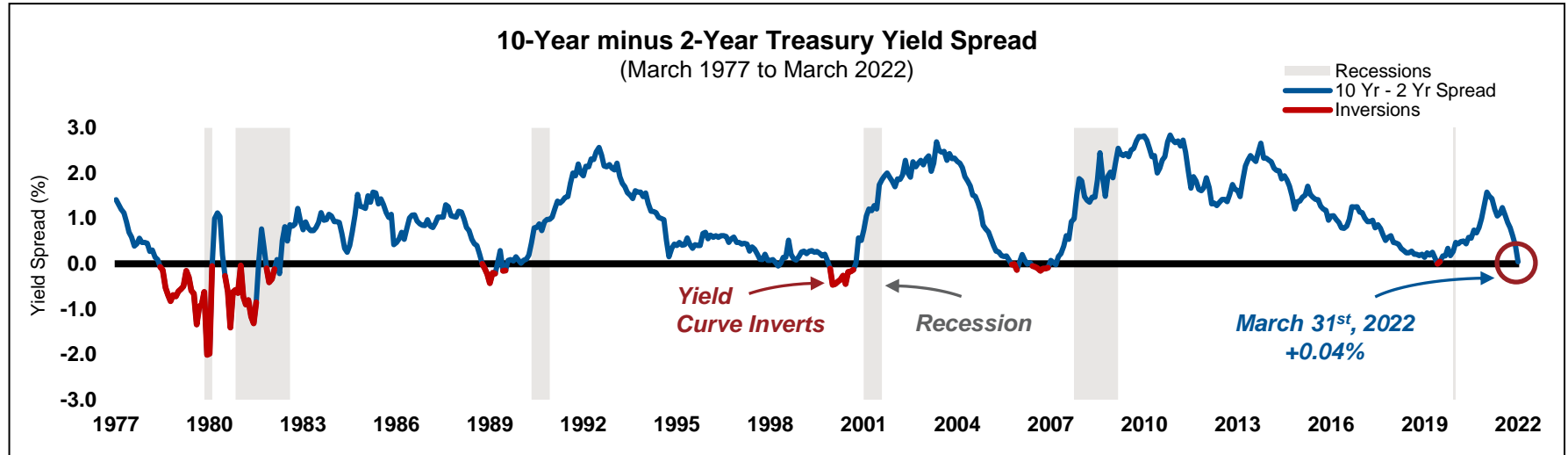
TIGHTENING CYCLE			STOCKS		BONDS		60% STOCKS / 40% BONDS	
Start Date	End Date	Starting Fed Funds Rate	Total Return %	Max Decline %	Total Return %	Max Decline %	Total Return %	Max Decline %
Jan-77	Apr-80	4.2%	17.7	-14.3	8.2	-12.7	11.5	-6.9
Aug-80	Jun-81	9.9%	12.8	-7.1	-3.1	-6.3	10.7	-1.5
Mar-83	Aug-84	8.5%	20.5	-7.4	9.9	-4.9	14.2	-4.4
Sep-86	Mar-89	5.8%	27.3	-29.6	14.6	-4.9	25.1	-13.9
Feb-94	Feb-95	3.0%	4.4	-8.5	0.0	-6.5	2.7	-7.3
Jun-99	May-00	4.8%	10.5	-11.8	2.1	-2.8	7.4	-7.4
Jun-04	Jun-06	1.0%	17.7	-7.5	6.5	-2.4	13.3	-4.2
Dec-15	Dec-18	0.0%	28.4	-19.4	6.0	-4.4	19.5	-11.2
<b>AVERAGE</b>			<b>17.4</b>	<b>-13.2</b>	<b>5.5</b>	<b>-5.6</b>	<b>13.1</b>	<b>-7.1</b>

Volatility may increase due to Federal Reserve actions, but historically stocks and bonds still produced positive returns.

Source: Morningstar, St. Louis Federal Reserve and Federal Reserve Bank of New York. Stocks: S&P 500 Index; Bonds: Bloomberg U.S. Aggregate Bond Index; End of tightening cycle identified by Federal Reserve prior to 1990 and based on date of last Fed rate increase after. Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are unmanaged and cannot be invested in directly. Returns based on monthly data.

# Yield curve inversion

Beware trying to time your portfolio

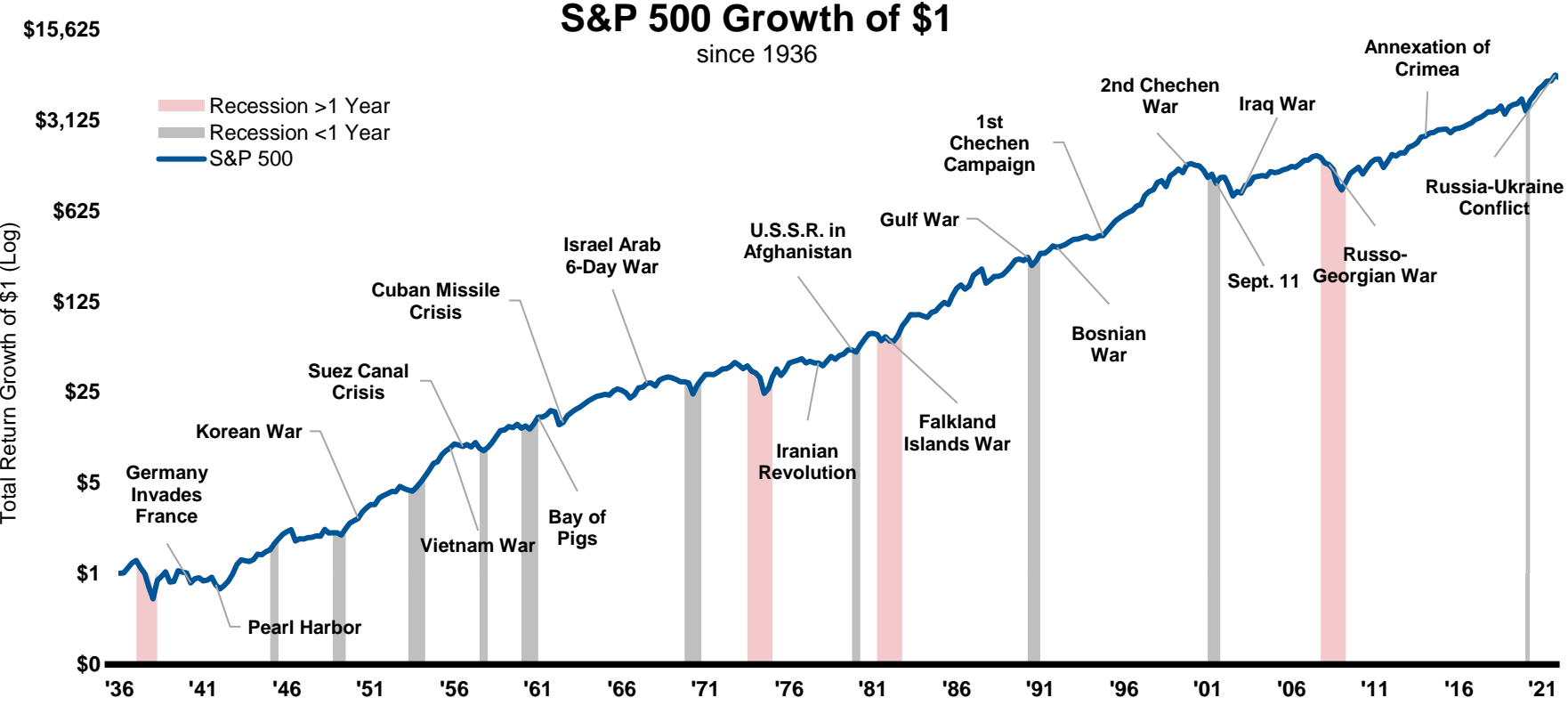


Diversified portfolios are positioned to participate in market returns *before and after* the yield curve inverts

Data as of 3/31/2022. Source: Federal Reserve Bank of St. Louis, 10-Year Treasury Constant Maturity Minus 2-Year Treasury Constant Maturity [T10Y2Y], retrieved from FRED, Federal Reserve Bank of St. Louis. Asset class returns retrieved from Morningstar Direct and represent average annualized returns. Stocks = MSCI World Net Index; Bonds = Bloomberg U.S. Treasury Index from 8/1/1975 to 7/31/1976 & Bloomberg US Aggregate Bond Index from 8/1/1976 to 3/31/2022.; 60/40 = 60% Stocks/40% Bonds as previously defined. Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are unmanaged and cannot be invested in directly.

# Resilience of U.S. stock market

## History of moving through global conflicts



- Equity markets historically overcome geopolitical events, continuing to produce positive long-term returns
- Since 1936, the S&P 500 Index has an average annualized return of 10.78%

Source: St. Louis Federal Reserve & Morningstar Direct. S&P 500 Index as of 3/31/2022. Log: Lognormal scale. Total Return: Includes dividend reinvestments.

# Be invested, stay invested

Time is more important than timing

1 Perfect timing	2 First of the year	3 Dollar cost averaging	4 Worst timing	5 Holding cash
This strategy is ideal, yet implausible	Investing for the longest amount of time can yield the best gain in most market environments	A popular rules-based strategy. Can help investors cope with volatile markets	Despite bad timing, assets invested in the market may grow faster than if left in cash	Holding cash too long can result in the least growth of wealth

## HYPOTHETICAL ENDING WEALTH AFTER INVESTING \$12,000 PER YEAR



Source: Russell Investments & Morningstar. Note that one year represents a 12-month period ending December 31<sup>st</sup>. Assumes an investment of \$12,000 per year into a hypothetical S&P 500 Index portfolio with no withdrawals between Jan 1<sup>st</sup> and Dec 31<sup>st</sup>. Cash return based on return of \$12,000 invested each year in a hypothetical portfolio of 3-month Treasury bonds represented by the FTSE Treasury Bill 3-month Index without any withdrawals between Jan 31<sup>st</sup> and Dec 31<sup>st</sup>. Indexes are unmanaged and cannot be invested in directly. Returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Hypothetical analysis provided for illustrative purposes only.

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## RISKS OF ASSET CLASSES DISCUSSED IN THIS PRESENTATION:

**Global, International and Emerging markets** return may be significantly affected by political or economic conditions and regulatory requirements in a particular country. Investments in non-U.S. markets can involve risks of currency fluctuation, political and economic instability, different accounting standards and foreign taxation. Such securities may be less liquid and more volatile. Investments in emerging or developing markets involve exposure to economic structures that are generally less diverse and mature, and political systems with less stability than in more developed countries.

**Real Assets:** Investments in infrastructure-related companies have greater exposure to adverse economic, financial, regulatory, and political risks, including, governmental regulations. Global securities may be significantly affected by political or economic conditions and regulatory requirements in a particular country. Declines in the value of real estate, economic conditions, property taxes, tax laws and interest rates all present potential risks. Investments in international markets can involve risks of currency fluctuation, political and economic instability, different accounting standards, and foreign taxation.

**Commodities:** Commodities may have greater volatility than traditional securities. The value of commodities may be affected by changes in overall market movements, changes in interest rates or sectors affecting a particular industry or commodity, and international economic, political and regulatory developments.

**Bonds:** With fixed income securities, such as bonds, interest rates and bond prices tend to move in opposite directions. When interest rates fall, bond prices typically rise and conversely when interest rates rise, bond prices typically fall. When interest rates are at low levels there is risk that a sustained rise in interest rates may cause losses to the price of bonds. Bond investors should carefully consider these risks such as interest rate, credit, repurchase and reverse repurchase transaction risks. Greater risk, such as increased volatility, limited liquidity, prepayment, non-payment and increased default risk, is inherent in portfolios that invest in high yield ("junk") bonds or mortgage-backed securities, especially mortgage-backed securities with exposure to sub-prime mortgages. Investment in non-U.S. and emerging market securities is subject to the risk of currency fluctuations and to economic and political risks associated with such foreign countries. When interest rates are at low levels there is risk that a sustained rise in interest rates may cause losses to the price of bonds.

**Small capitalization (small cap) investments** involve stocks of companies with smaller levels of market capitalization (generally less than \$2 billion) than larger company stocks (large cap). Small cap investments are subject to considerable price fluctuations and are more volatile than large company stocks. Investors should consider the additional risks involved in small cap investments.

**Large capitalization (large cap) investments** involve stocks of companies generally having a market capitalization between \$10 billion and \$200 billion. The value of securities will rise and fall in response to the activities of the company that issued them, general market conditions and/or economic conditions.

Although stocks have historically outperformed bonds, they also have historically been more volatile. Investors should carefully consider their ability to invest during volatile periods in the market.

**Growth:** Growth investments focus on stocks of companies whose earnings/profitability are accelerating in the short-term or have grown consistently over the long-term. Such investments may provide minimal dividends which could otherwise cushion stock prices in a market decline. A stock's value may rise and fall significantly based, in part, on investors' perceptions of the company, rather than on fundamental analysis of the stocks. Investors should carefully consider the additional risks involved in growth investments.

**Value:** Value investments focus on stocks of income-producing companies whose price is low relative to one or more valuation factors, such as earnings or book value. Such investments are subject to risks that the stocks' intrinsic values may never be realized by the market, or, that the stocks may turn out not to have been undervalued. Investors should carefully consider the additional risks involved in value investments.

An **Investment Grade** is a system of gradation for measuring the relative investment qualities of bonds by the usage of rating symbols, which range from the highest investment quality (least investment risk) to the lowest investment quality (greatest investment risk).

**Gross domestic product (GDP)** refers to the market value of all final goods and services produced within a country in a given period. It is often considered an indicator of a country's standard of living.

**Trailing price-to-earnings (P/E)** is a relative valuation multiple that is based on the last 12 months of actual earnings. It is calculated by taking the current stock price and dividing it by the trailing earnings per share (EPS) for the past 12 months.

**Forward price to earnings (forward P/E)** is a quantification of the ratio of price-to-earnings (P/E) using forecasted earnings for the P/E ratio.

**Price-to-book ratio** compare a firm's market to book value by dividing price per share by book value per share.

# Index definitions

**Bloomberg Global High-Yield Index:** An index which provides a broad-based measure of the global high-yield fixed income markets. The Global High-Yield Index represents that union of the U.S. High-Yield, Pan-European High-Yield, U.S. Emerging Markets High-Yield, CMBS High-Yield, and Pan-European Emerging Markets High-Yield Indices.

**Bloomberg High Yield Municipal Bond Index:** An unmanaged index considered representative of noninvestment-grade bonds. FactSet Research Systems Inc. Intermediate U.S. Credit Index is an unmanaged index of dollar-denominated, investment-grade, publicly issued securities with maturities of one to 10 years.

**Bloomberg Intermediate Treasury Index:** Measures the performance of U.S. Dollar denominated U.S. Treasuries, government-related and investment grade U.S. corporate securities that have a remaining maturity of greater than one year and less than ten years.

**Bloomberg Short Treasury Index:** Is composed of all treasuries that have a remaining maturity between one and twelve months.

**Bloomberg U.S. Aggregate Bond Index:** An index, with income reinvested, generally representative of intermediate-term government bonds, investment grade corporate debt securities, and mortgage-backed securities. (specifically: Bloomberg Government/Corporate Bond Index, the Asset-Backed Securities Index, and the Mortgage-Backed Securities Index).

**Bloomberg U.S. Credit Bond Index:** Measures the performance of investment grade corporate debt and agency bonds that are dollar denominated and have a remaining maturity of greater than one year.

**Bloomberg 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 U.S. Municipal Index:** Covers the USD-denominated long-term tax-exempt bond market.

**Bloomberg Commodity Index Family:** Represents the major commodity sectors within the broad index: Energy (including petroleum and natural gas), Petroleum (including crude oil, heating oil and unleaded gasoline), Precious Metals, Industrial Metals, Grains, Livestock, Softs, Agriculture and Ex-Energy. Also available are individual commodity sub-indices on the 19 components currently included in the DJ-UBSCI<sup>SM</sup>, plus Brent crude, cocoa, feeder cattle, gas oil, lead, orange juice, platinum, soybean meal and tin.

**Bloomberg Commodity Index Total Return:** Composed of futures contracts on physical commodities. Unlike equities, which typically entitle the holder to a continuing stake in a corporation, commodity futures contracts normally specify a certain date for the delivery of the underlying physical commodity. In order to avoid the delivery process and maintain a long futures position, nearby contracts must be sold and contracts that have not yet reached the delivery period must be purchased. This process is known as "rolling" a futures position.

**BofA Merrill Lynch Global High Yield Index:** Tracks the performance of USD, CAD, GBP and EUR denominated below investment grade corporate debt publicly issued in the major domestic or Eurobond markets.

**Citigroup 1-3 Month T-Bill Index:** An unmanaged index that tracks short-term U.S. government debt instruments.

**FTSE NAREIT:** An Index designed to present investors with a comprehensive family of REIT performance indexes that span the commercial real estate space across the U.S. economy, offering exposure to all investment and property sectors. In addition, the more narrowly focused property sector and sub-sector indexes provide the facility to concentrate commercial real estate exposure in more selected markets.

**FTSE NAREIT all Equity Index:** Measures the performance of the commercial real estate space across the U.S. economy offering exposure to all investment and property sectors.

**FTSE EPRA/NAREIT Developed Index:** A global market capitalization weighted index composed of listed real estate securities in the North American, European and Asian real estate markets.

# Index definitions (cont'd)

**Ibbotson Intermediate Bond Index:** Measures the performance of U.S. Dollar denominated treasury and government-related bonds

**JPM Emerging Market Bond Index (EMBI):** Dollar-denominated sovereign bonds issued by a selection of emerging market countries.

**JPM EMBI Plus Bond Index:** Tracks total returns for traded external debt instruments in the emerging markets.

**MSCI AC World ex-USA Index:** An index that tracks global stock market performance that includes developed and emerging markets but excludes the U.S.

**MSCI AC World ex-USA Equal-weighted Index:** An equal weighted index that tracks global stock market performance that includes developed and emerging markets but excludes the U.S.

**MSCI country indices:** Indices which include securities that are classified in that country according to the MSCI Global Investable Market Index Methodology, together with companies that are headquartered or listed in that country and carry out the majority of their operations in that country.

**MSCI EAFE (Europe, Australasia, Far East) Index:** A free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. and Canada.

**MSCI Emerging Markets Index:** A float-adjusted market capitalization index that consists of indices in 24 emerging economies.

**MSCI Europe Index:** A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in Europe. The MSCI Europe Index consists of the following 15 developed market country indexes: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**MSCI World Index:** A broad global equity index that represents large and mid-cap equity performance across 23 developed markets countries.

**Russell 3000® Index:** Index measures the performance of the largest 3000 U.S. companies representing approximately 98% of the investable U.S. equity market.

**Russell 2000® Index:** measures the performance of the 2,000 smallest companies in the Russell 3000 index.

**Russell 1000® Growth Index:** Measures the performance of the broad growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

**Russell 1000® Value Index:** Measures the performance of the broad value segment of U.S. equity value universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

**The S&P 500® Index:** A free-float capitalization-weighted index published since 1957 of the prices of 500 large-cap common stocks actively traded in the United States. The stocks included in the S&P 500® are those of large publicly held companies that trade on either of the two largest American stock market exchanges: the New York Stock Exchange and the NASDAQ.

**The S&P Global Infrastructure Index:** Provides liquid and tradable exposure to 75 companies from around the world that represent the listed infrastructure universe. To create diversified exposure across the global listed infrastructure market, the index has balanced weights across three distinct infrastructure clusters: Utilities, Transportation, and Energy.

**S&P Global Natural Resources Index:** The index includes 90 of the largest publicly-traded companies in natural resources and commodities businesses that meet specific investability requirements, offering investors diversified and investable equity exposure across 3 primary commodity-related sectors: agribusiness, energy, and metals & mining.

# Economic Indicators Dashboard definitions

## **Market Indicators**

**HOME PRICES** – The S&P/Case-Shiller Home Price Index is a measurement of U.S. residential real estate prices, tracking changes in top 20 metropolitan regions. This indicator value represents the trailing year over year % change in the home prices index as of last month-end. Residential real estate represents a large portion of the U.S. economy and the Home Price index helps us monitor the value of real estate.

**MARKET VOLATILITY(VIX)** – CBOE VIX (Chicago Board Options Exchange Volatility Index) measures annualized implied volatility as conveyed by S&P 500 stock index option prices and is quoted in percentage points per annum. For instance, a VIX value of 15 represents an annualized implied volatility of 15% over the next 30-day period. The VIX measures implied volatility, which is a barometer of investor sentiment and market risk.

**10 YR. U.S. TREASURY YIELD** – The yield on the 10-year U.S. Treasury note issued by the U.S. Government. It is important because it is seen as a benchmark for interest rate movements and borrowing costs in the economy.

**YIELD SPREAD** – The spread between 3-month Treasury bill yields and 10-year Treasury note yields measures the market outlook for future interest rates. A normal or upward-sloping yield curve, can imply that investors expect the economy to grow and inflation to eat into asset returns. They thus demand a higher yield for long-term Treasuries. An inverted yield curve has often been an indicator of coming recessions, but not always. For example, reduced inflation expectations could cause the yield curve to flatten.

## **Economic Indicators**

**CONSUMER SENTIMENT** – The University of Michigan Survey of Consumer Sentiment Index is an economic indicator which measures the degree of optimism that consumers feel about the overall state of the economy and their personal financial situation.

**ECONOMIC EXPANSION (GDP)** – GDP (Gross Domestic Product) measures the total market value of a nation's output of goods and services during a specific time period. It is usually measured on a quarterly basis. Current GDP is based on the current prices of the period being measured. Nominal GDP growth refers to GDP growth in nominal prices (unadjusted for price changes). Real GDP growth refers to GDP growth adjusted for price changes. Calculating Real GDP growth allows economists to determine if production increased or decreased, regardless of changes in the purchasing power of the currency.

**INFLATION** – The Consumer Price Index (CPI) NSA (non-seasonally adjusted) measures changes in the price level of a market basket of consumer goods and services purchased by households. This indicator value represents the trailing year over year % change in the CPI index as of last month-end.

**UNEMPLOYMENT** – The Bureau of Labor Statistics measures employment and unemployment of all persons over the age of 15 using two different labor force surveys conducted by the United States Census Bureau (within the United States Department of Commerce) and the Bureau of Labor Statistics (within the United States Department of Labor) that gather employment statistics monthly. The data reported here is seasonally adjusted (SA) to account for seasonal gains in employment leading up to Christmas.