



## **INVESTMENT STRATEGY BRIEF:**

Signposts for Investors: Recession Ahead?

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STIFEL

**Signposts For Finding Balance**

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**China**

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**Labor Market**

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**Inflation**

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**Federal Reserve (Fed) Policy**

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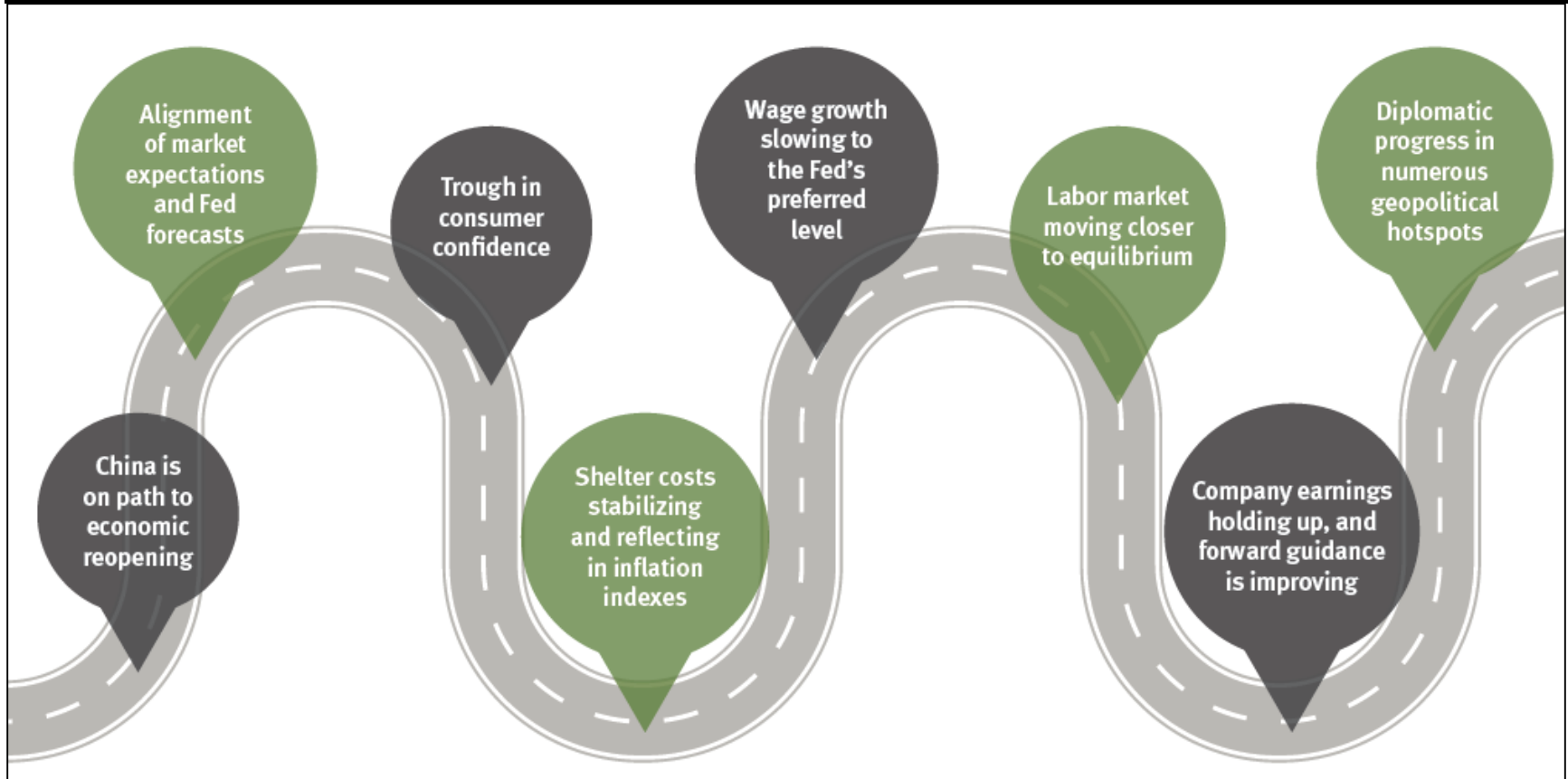
**Economy**

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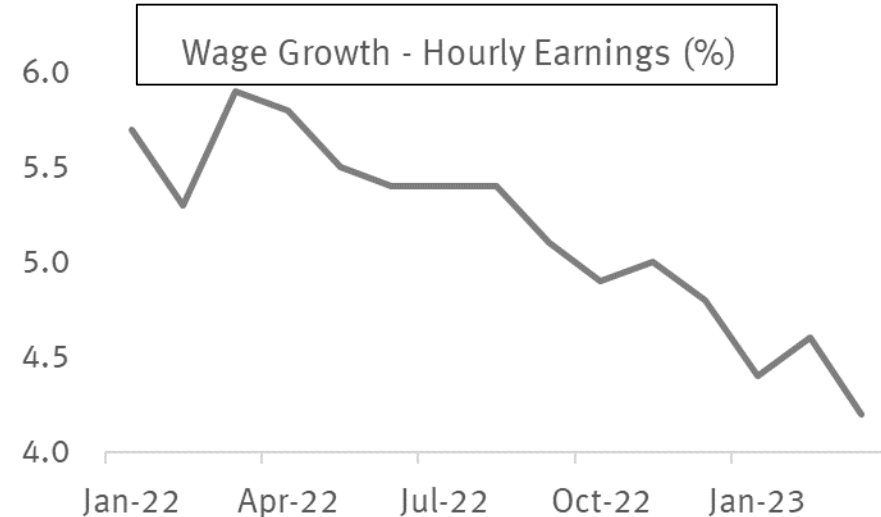
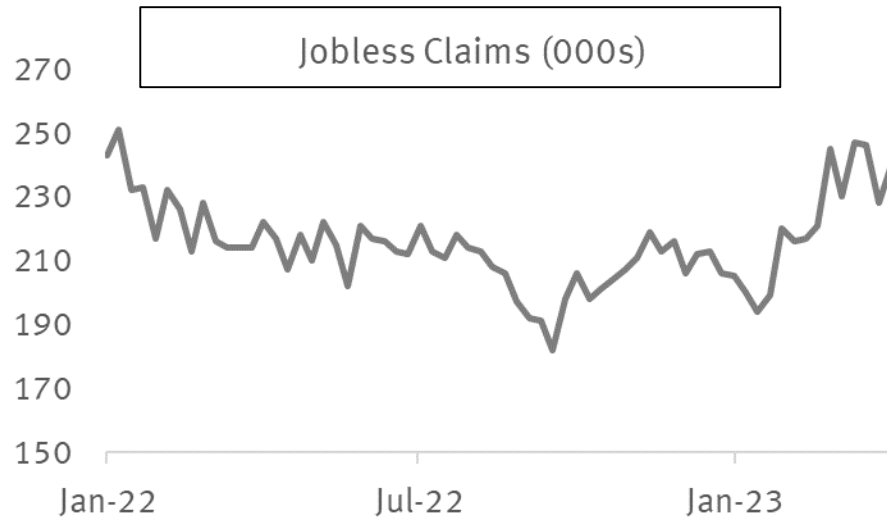
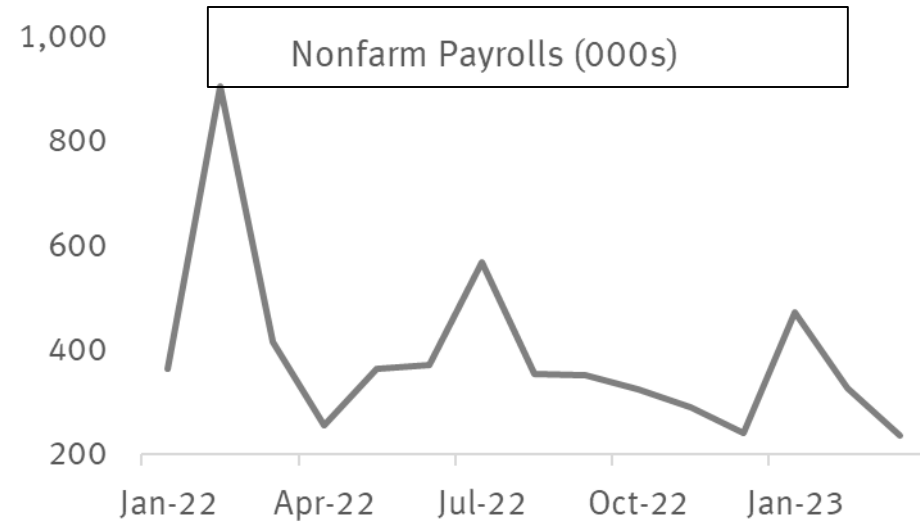
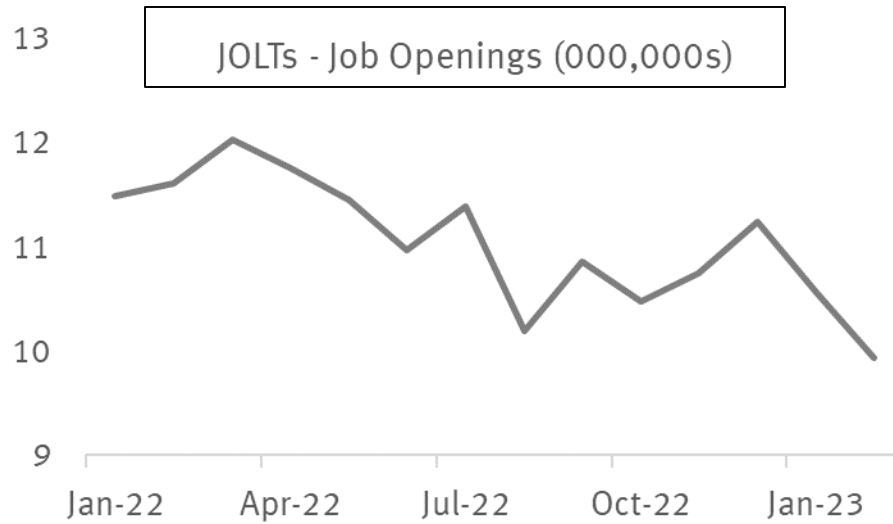
**Macro Environment/Markets/Dynamic Leanings**

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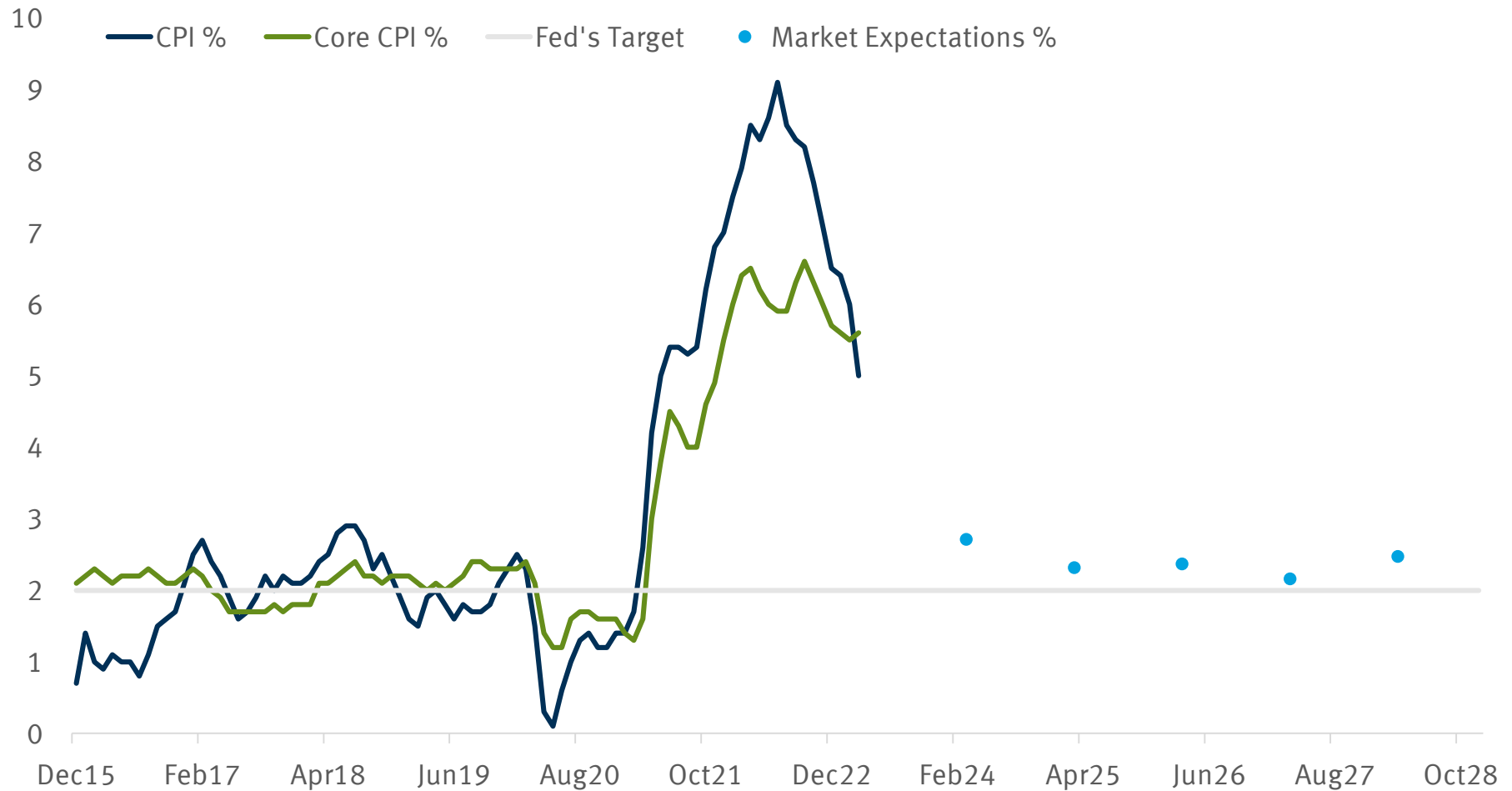
## SIGNPOSTS

[VIEW REPORT](#)[VIEW VIDEO](#)

- **REOPENING** – end of “zero-COVID” policy
  - Gradually **eased restrictions in late 2022**, announced full **reopening in March**
  - Mobility not back to pre-COVID levels, yet
    - Domestic **air travel at 92%** of pre-COVID levels
    - **Restaurants at 81%**
    - **Traffic** congestion in major cities **at 76%**
- **RECOVERY** – economic growth accelerating
  - Real **GDP** forecasted to grow **5.3% in 2023** vs. 3.0% in 2022 – boosting global growth
  - **Retail sales grew 3.5%** year-over-year during first two months vs. 1.8% contraction in December
  - **Service and manufacturing sectors diverging**, similar to U.S. experience following lockdowns
- **RISKS** – geopolitical tensions intensify
  - **Chinese spy balloons** – attempting to collect intelligence on U.S. military basis and national security interests
    - U.S. Secretary of State Blinken canceled visit to Beijing
  - **Concerns** over China providing lethal aid to **Russia**, **Taiwan’s** President visits U.S., **Tik Tok** privacy
  - China reasserting itself as a global power
    - Brokered **Iran-Saudi Arabia** pact
    - Released 12-point **peace framework for Russia-Ukraine war**
    - **Hosted French President and Brazilian President**
  - **Two themes** reflected in our **geopolitical dashboard**:
    - **Increased localization and protectionism**
    - **A more divided world**

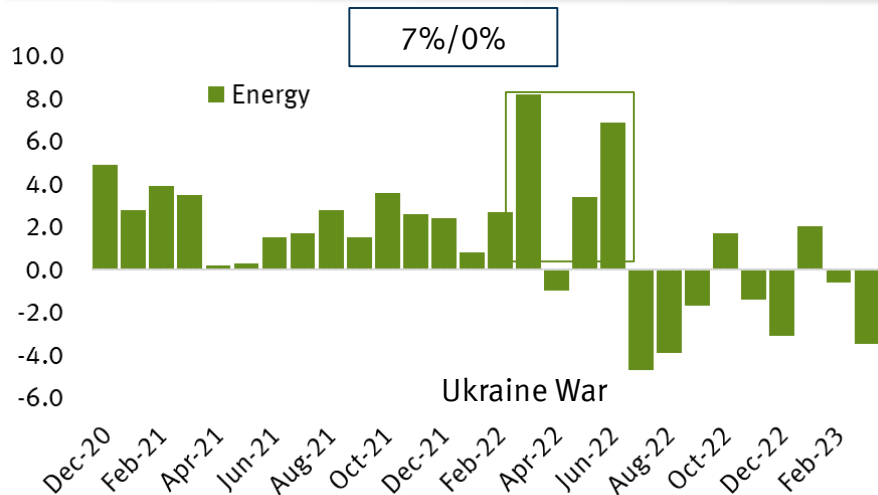
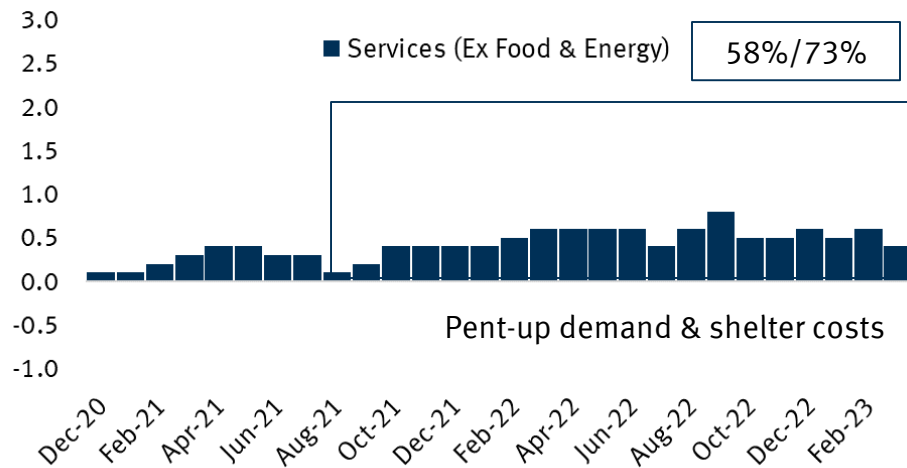
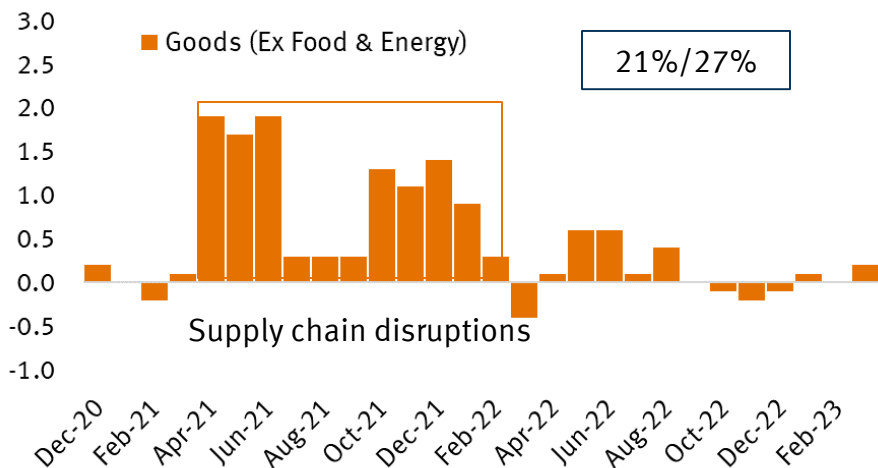


Source: Stifel CIO Office via Bloomberg, as of April 13, 2023



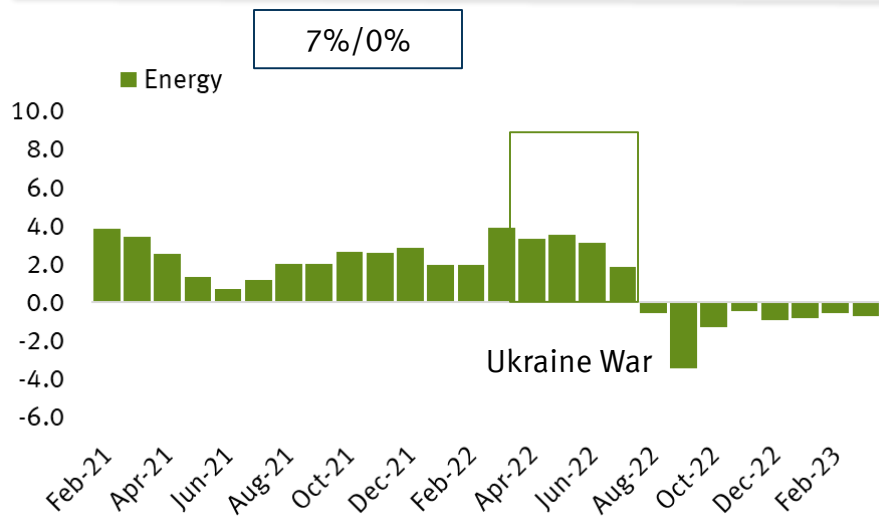
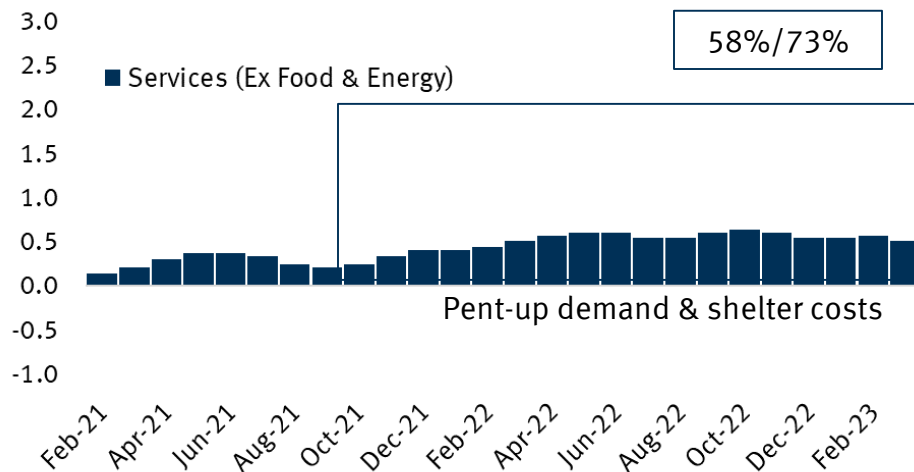
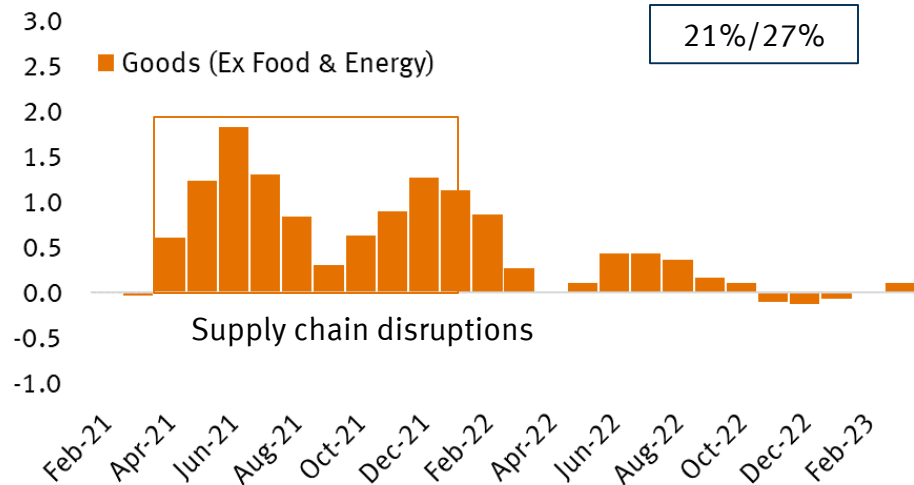
Source: Stifel CIO Office via Bloomberg, as of April 17, 2023 (intra-day)  
CPI = Consumer Product Index

Month over Month % shown below



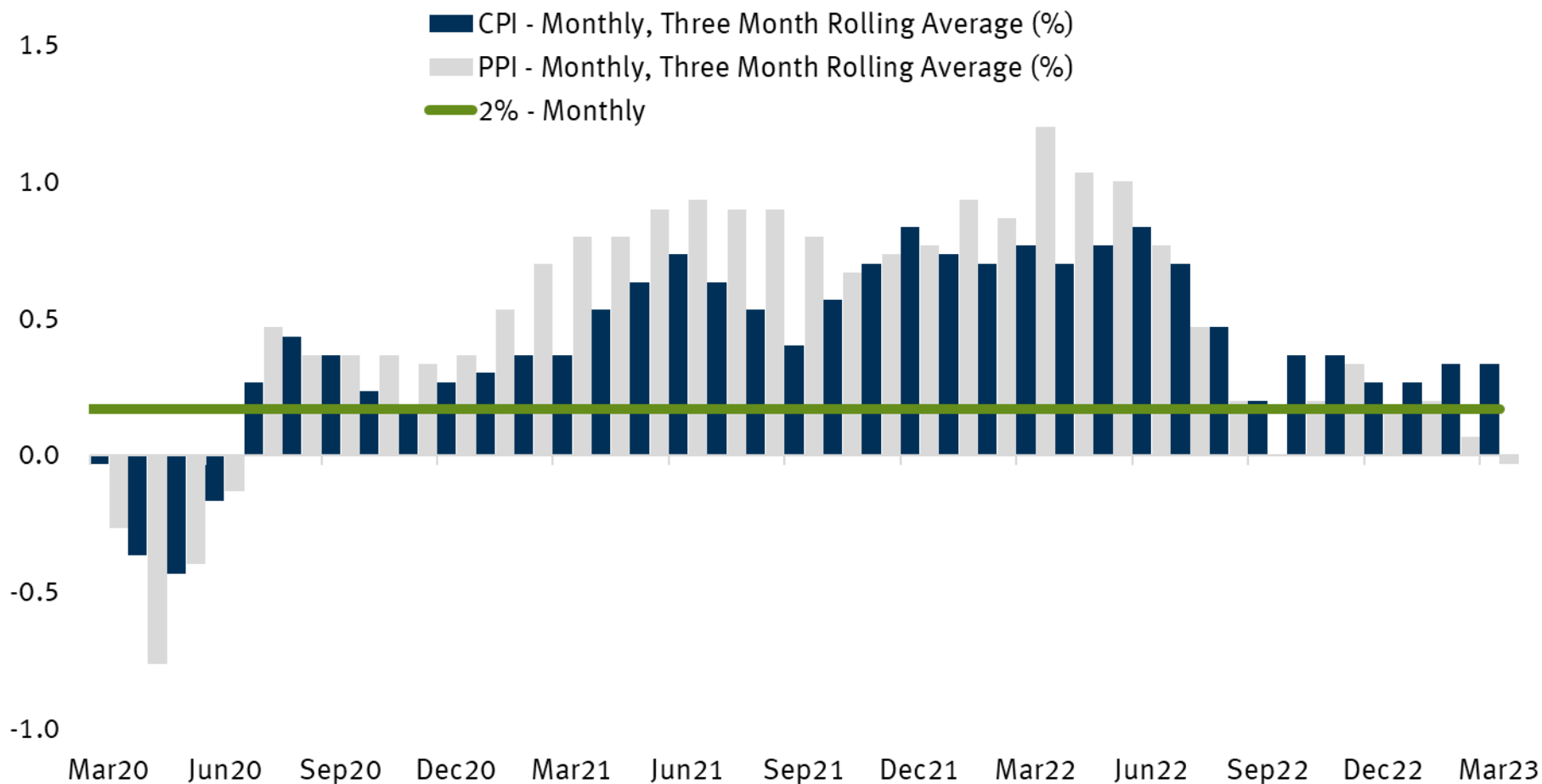
Source: Stifel CIO Office via Bloomberg, as of April 13, 2023

Monthly, three-month rolling average shown below



Source: Stifel CIO Office via Bloomberg, as of April 13, 2023





Source: Stifel CIO Office via Bloomberg, as of April 13, 2023

PPI = Producer Price Index

## Fed's Dual Mandate



### Price Stability: 2%

- Wage pressures subside
- Food/shelter/core goods prices ease
- Supply chain pressures ease
- Inflation expectations fall towards 2%
- Monthly Consumer Price Index (CPI) trends lower
- Monthly Personal Consumption Expenditures (PCE) trends lower

### Maximum Employment

- Job quits slow
- Initial jobless claims rise
- Unemployment to job openings ratio declines
- Unemployment above 4.4%
- Severe financial conditions
- Deep recession

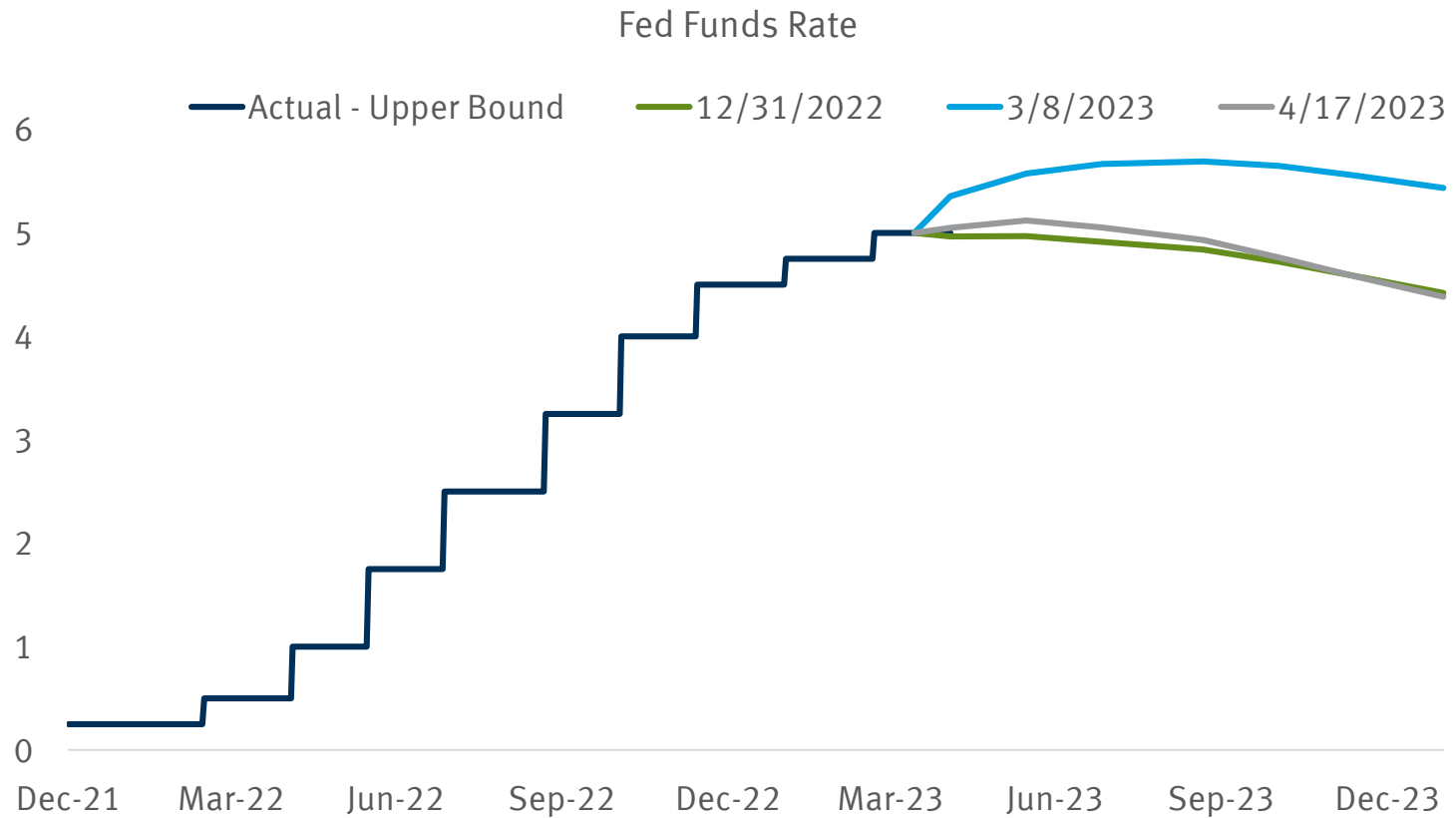
## March 21/22 Fed Meeting and Minutes

### Summary of Fed Meeting

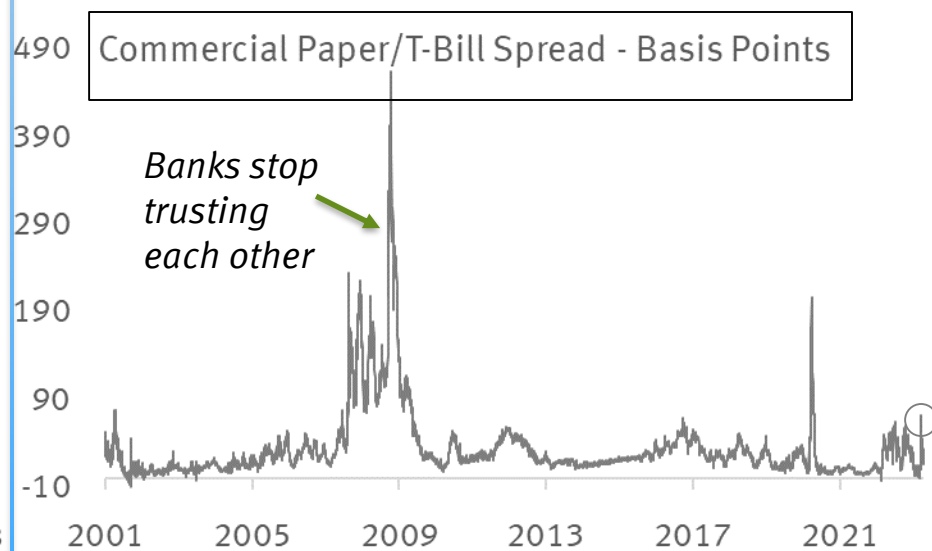
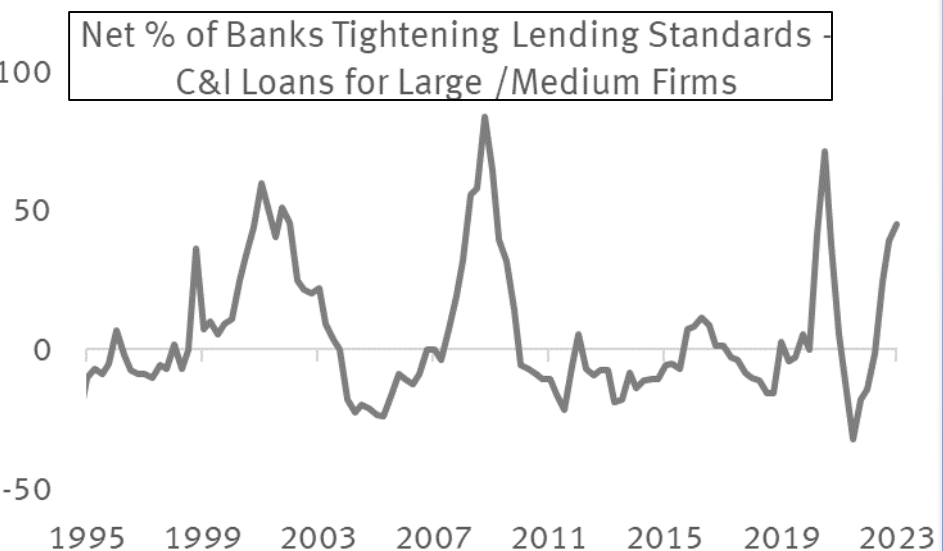
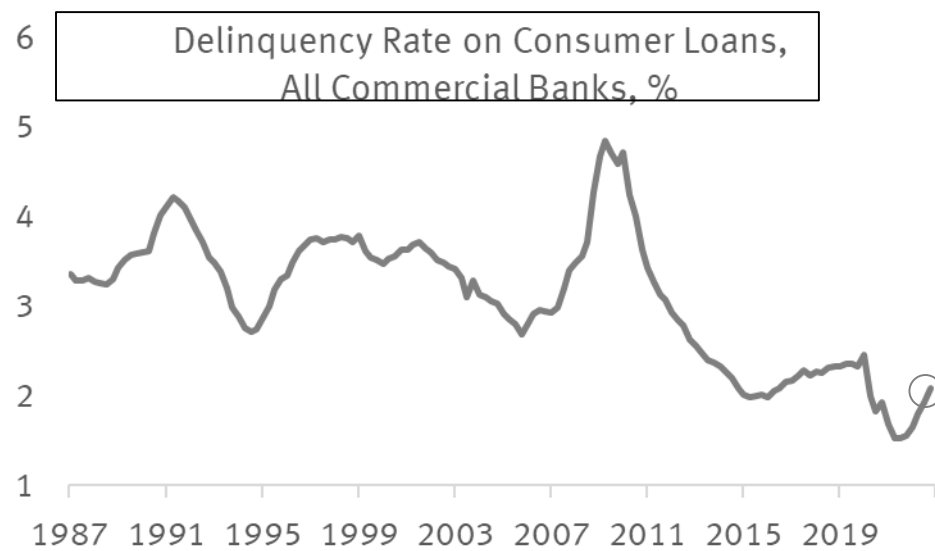
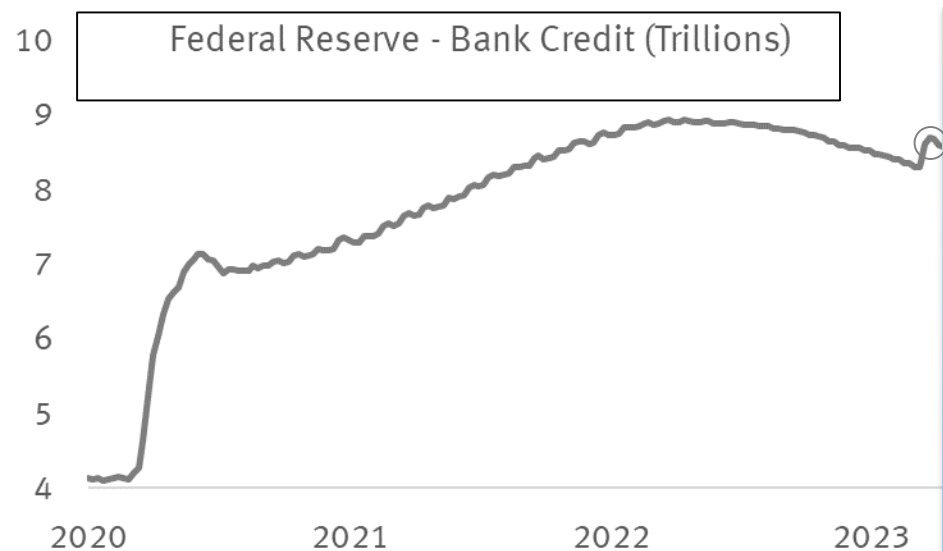
- The Fed hiked rates by 0.25%, signaled more **may** be appropriate. Important to focus on the words “**may**” and “**some**” rather than “**ongoing**.”
- Fed **Summary of Economic Projections** (SEP) were **roughly unchanged**, signaling one more 0.25% move in 2023.
- Noted the **labor market** remains “**robust**” and **inflation elevated**.
- “Recent developments are likely to result in **tighter credit conditions for households and businesses** and to weigh on economic activity, hiring, and inflation.”
- Noted **strong capital and liquidity levels** of the **banking sector**.

### Highlights from Federal Open Market (FOMC) Minutes

- Fed staff expects a “**mild recession starting later this year**, with a recovery over the subsequent two years”...as a result of the banking-sector developments
- “**All participants**” agreed that a **25basis point (bps) hike was appropriate**...“several” **considered holding rates unchanged**, and “some” had **considered a 50 bps hike** absent the banking crisis
- “In light of the highly uncertain economic outlook, participants underscored the importance of **closely monitoring incoming information** and assessing the implications for future monetary policy decisions.”
- **Inflation remains elevated and unacceptably high.**



Source: Stifel CIO Office via Bloomberg, as of April 17, 2023 (intra-day)



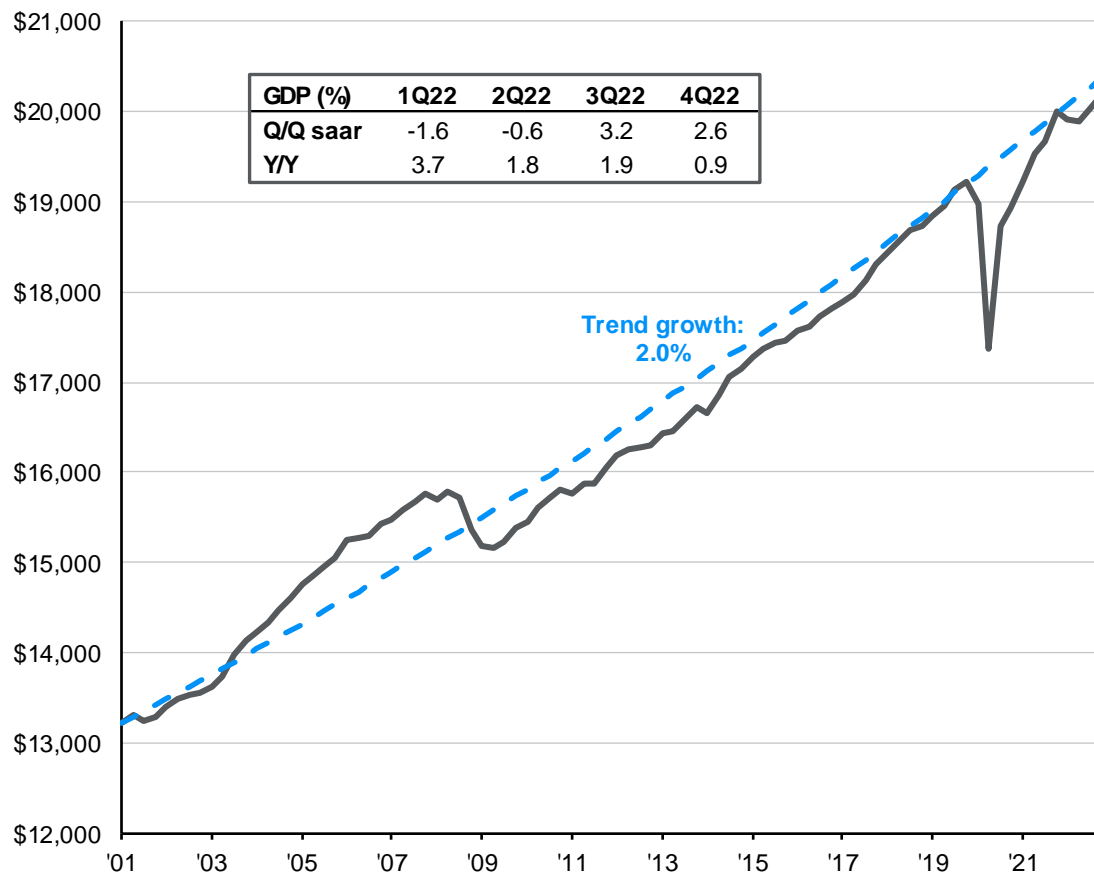
Source: Stifel CIO Office via Bloomberg and Federal Reserve, as of April 13, 2023

- **Increased the risk of a recession, primarily as a result of tighter lending**
  - Total domestic deposits have declined by \$131 billion since 3/8 (-0.8%)
    - Balances appear to be stabilizing – evidence that the initial panic has subsided
  - The pace of borrowing has slowed considerably, particularly at the small banks
- **Short-term impact**
  - 1Q23 earnings: expect relative stock performance to be dictated by balance sheet trends (deposits, liquidity, and capital)
- **Medium/Long-term impact**
  - Increased regulations, particularly for non-GSIBs (Global Systematically Important Banks)
  - Fed's Tailoring Rule likely to experience meaningful reconstruction
    - Asset thresholds moving lower and more onerous regulatory requirements
  - Increased liquidity requirements
  - Mark-to-market of securities will be built into capital requirements for non-GSIBs
  - Possibly reduced overall Bank lending activity
  - Higher FDIC insurance expense
  - Likely safer, but less profitable banks
- Each crisis is different, but ultimately solved...takes time and usually means greater regulation
  - **S&L Crisis (1982-1994)** — Banks declined 45% with >2,300 bank failures. Took 1.5 years to reach pre-crisis peak.
  - **Global Financial Crisis (2007-2009)** — KBW Bank Index (BKX) -85%
    - >500 bank failures. Took BKX 12 years to reach pre-crisis peak and KRX 8 years.
  - **Current Troubles (2023)** — Since SIVB failure, BKX -25%



## Real GDP

Billions of chained (2012) dollars, seasonally adjusted at annual rates

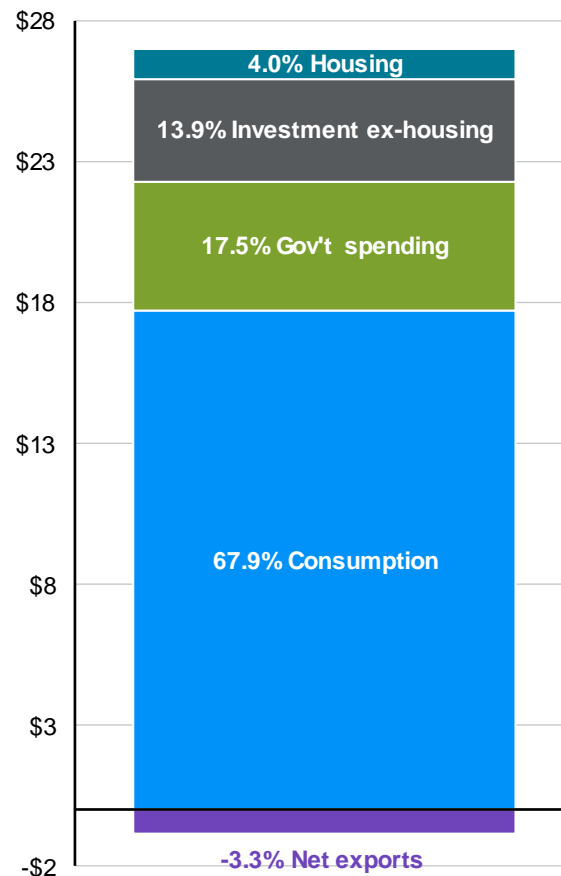


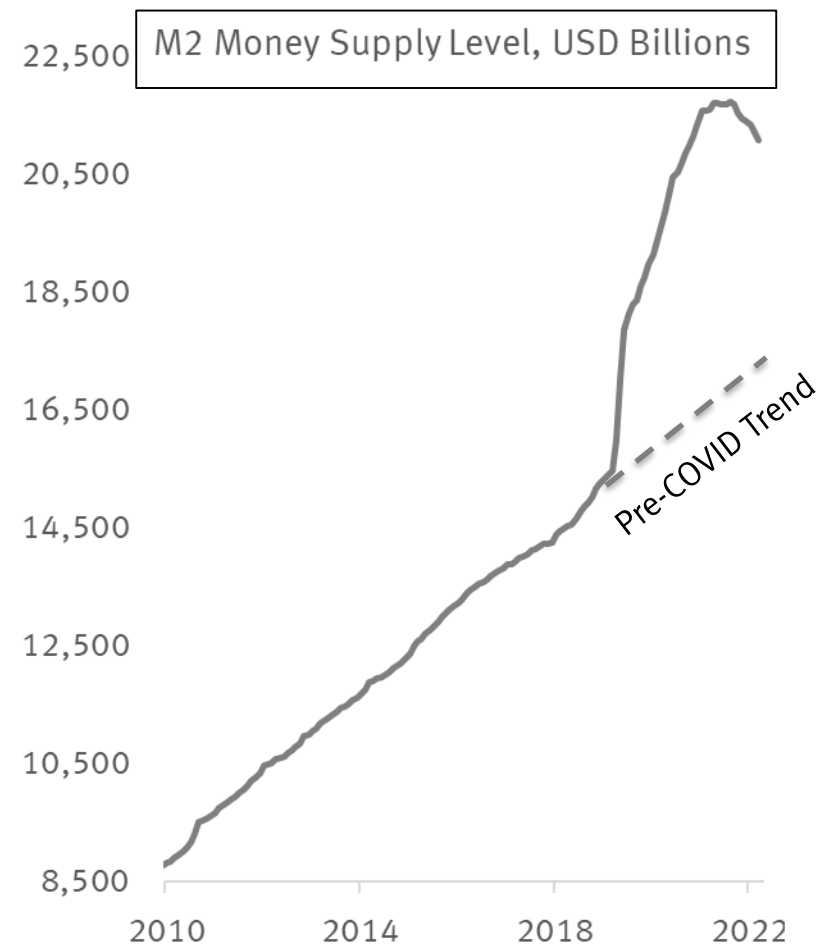
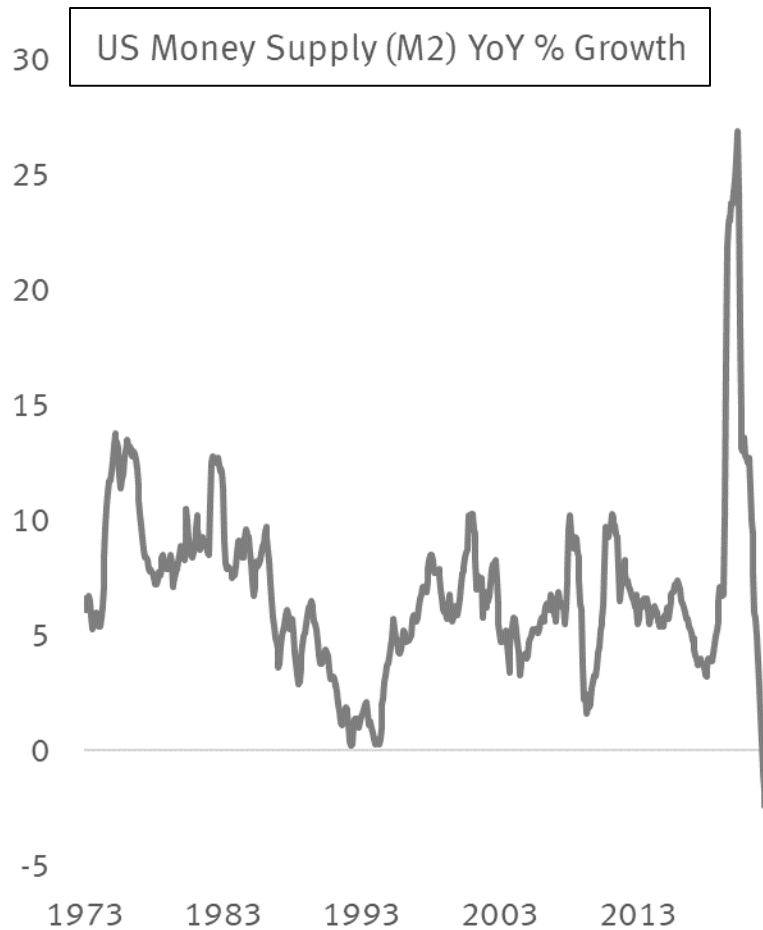
Source: BEA, FactSet, J.P. Morgan Asset Management. Values may not sum to 100% due to rounding. Trend growth is measured as the average annual growth rate from business cycle peak 1Q01 to business cycle peak 4Q19.

Guide to the Markets – U.S. Data are as of April 12, 2023.

## Components of GDP

4Q22 nominal GDP, USD trillions

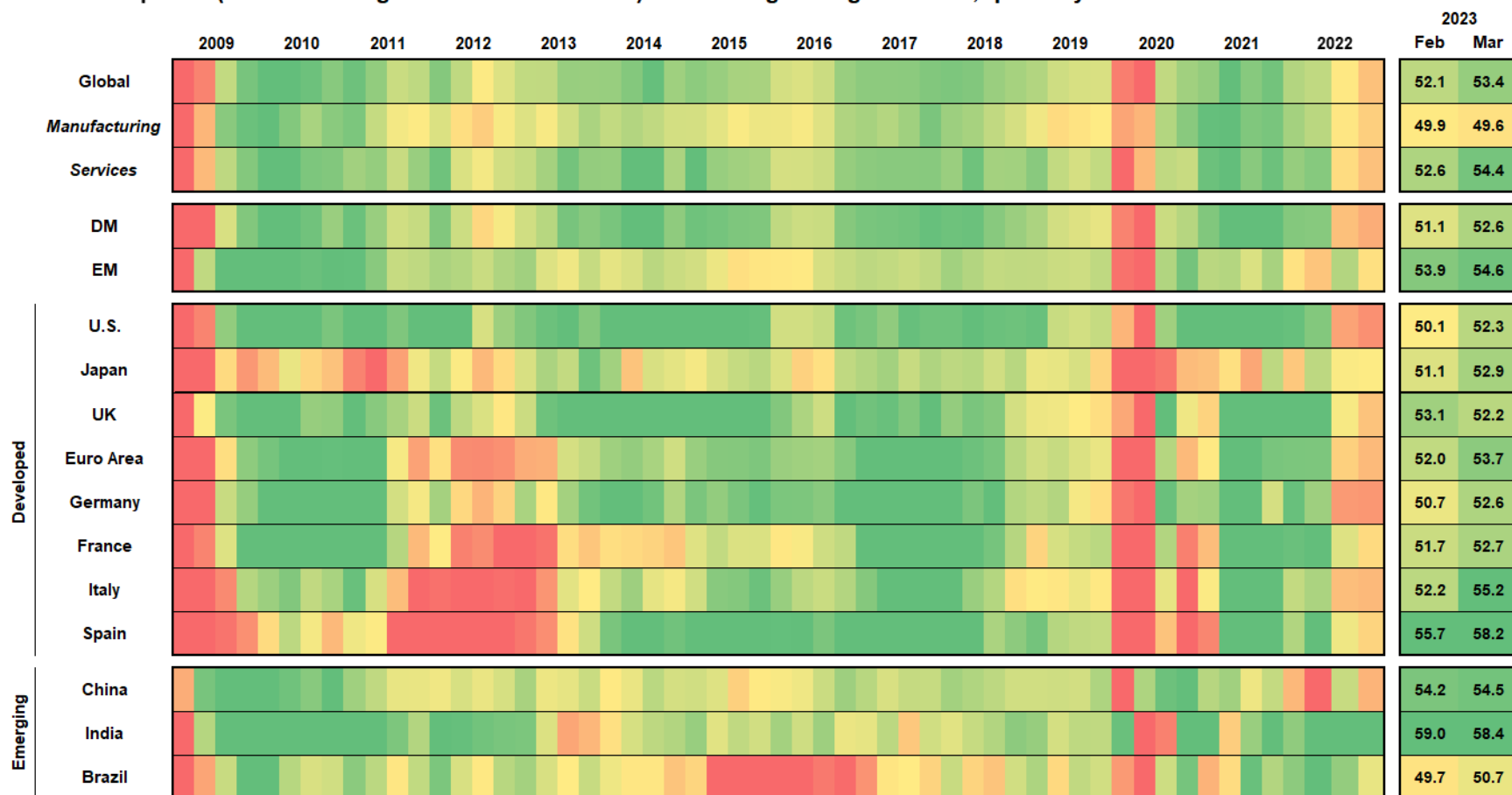




Source: Stifel CIO Office via Bloomberg, as of April 13, 2023



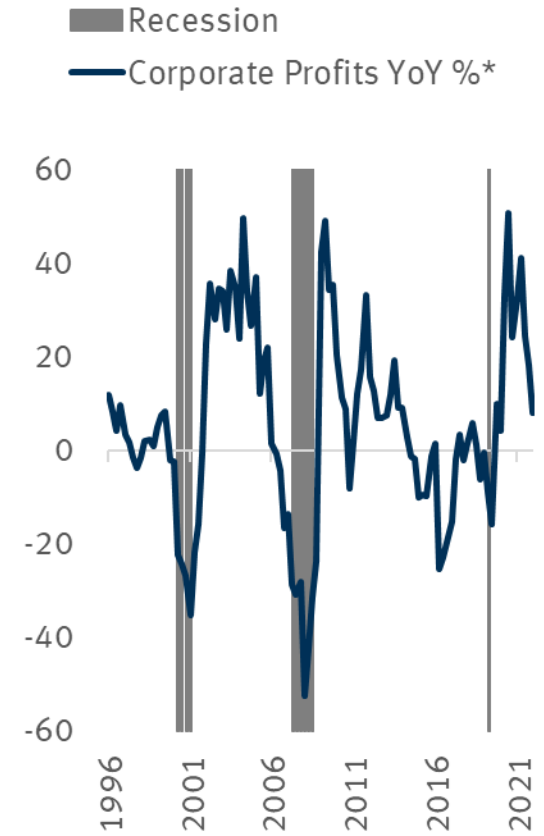
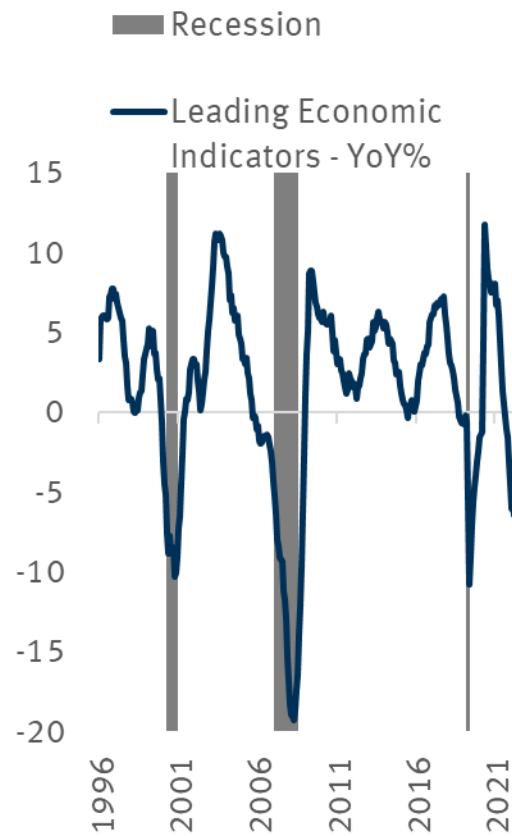
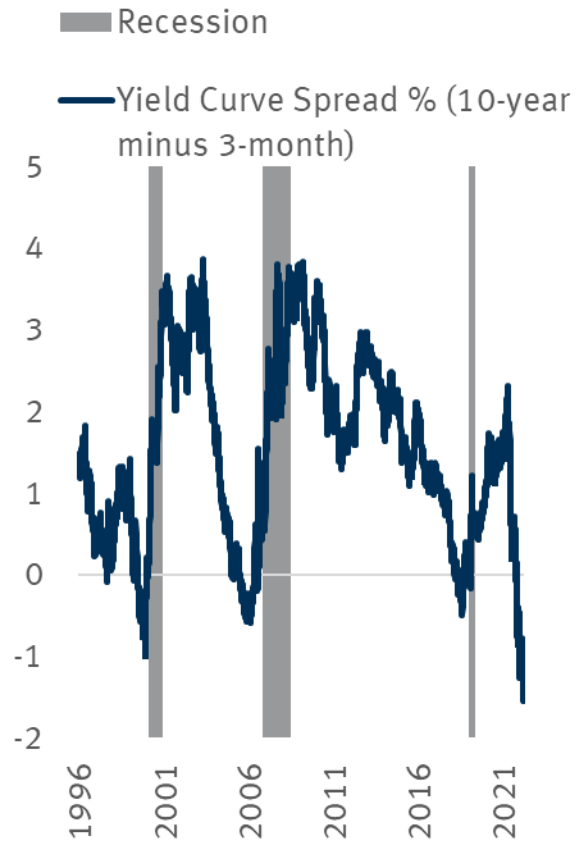
Global Composite (manufacturing &amp; services combined) Purchasing Managers' Index, quarterly



Source: Standard & Poor's, J.P. Morgan Asset Management.

The Composite PMI includes both manufacturing and services sub-indices. Heatmap colors are based on PMI relative to the 50 level, which indicates acceleration or deceleration of the sector, for the time period shown. Heatmap is based on quarterly averages, except for the two most recent figures, which are single month readings. Data for the U.S. are back-tested and filled in for 2009. DM and EM represent developed markets and emerging markets, respectively.

Guide to the Markets – U.S. Data are as of April 12, 2023.



Source: Stifel CIO Office via Bloomberg, as of April 13, 2023; \*Corporate profits with capital consumption and inventory valuation adjustment used.

U.S. GDP	Q1 22	Q2 22	Q3 22	Q4 22	Q1 23	Q2 23	Q3 23	Q4 23	2021	2022	2023	2024
Consensus Estimates	-1.6	-0.6	3.2	2.6	1.3	0.2	-0.6	0.2	5.9	2.1	1.0	1.0
Stifel**	1.2	0.5	-1.1	1.2	-0.6	-1.8	0.3	-0.9	5.3	0.5	-0.7	1.6
Goldman Sachs	1.5	0.7	2.5	2.2	2.1	0.6	0.6	0.9	5.7	2.0	1.6	1.5
Capital Economics	1.2	1.2	3.3	1.4	1.8	-1.3	-2.0	-0.7	5.7	2.0	0.8	0.6
Strategas	1.0	-0.5	1.0	2.0	2.0	0.5	1.0	-0.5	5.6	2.0	1.5	0.3
UBS	1.5	-0.8	1.5	1.7	2.0	-0.8	-1.8	-1.4	5.6	2.0	0.9	0.3
Wells Fargo	0.6	0.2	2.9	3.1	0.7	1.2	-0.9	-2.6	5.6	2.1	1.0	0.3
Bloomberg Economics	1.2	1.0	2.0	3.0	2.5	0.5	-1.3	-1.1	5.6	2.0	1.4	0.3
Barclays	1.5	-0.4	2.0	2.0	1.0	1.0	-0.5	-1.5	5.6	2.0	1.2	0.0
JPMorgan Chase	1.1	0.7	3.0	2.8	3.3	1.0	0.5	-0.5	5.7	2.1	1.9	0.4
Bank of America ML	1.0	-1.5	1.0	2.5	1.0	0.5	-1.0	-2.0	5.6	2.1	1.0	-0.1
<b>Federal Reserve**</b>									5.5	0.5	0.4	1.2

Annualized percent change from prior quarter and year-over-year change are shown for quarterly and yearly periods, respectively. Stifel estimates based on Stifel sell-side Economics department estimates. \*\*Percent change from fourth quarter to fourth quarter one year ago.

Source: Stifel CIO Office via Bloomberg, as of April 12, 2023. Federal Reserve estimates are as of March 22, 2023. Figures in grey areas under “Consensus Estimates” represent reported results

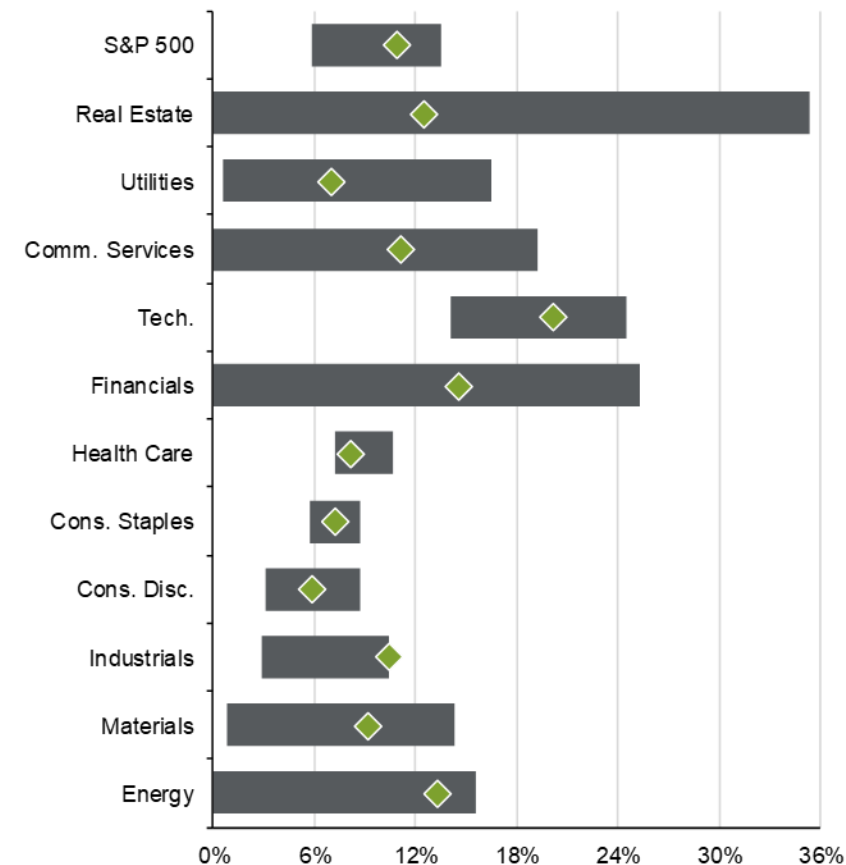
## S&P 500 profit margins

Quarterly operating earnings/sales



## S&P 500 operating margins by sector

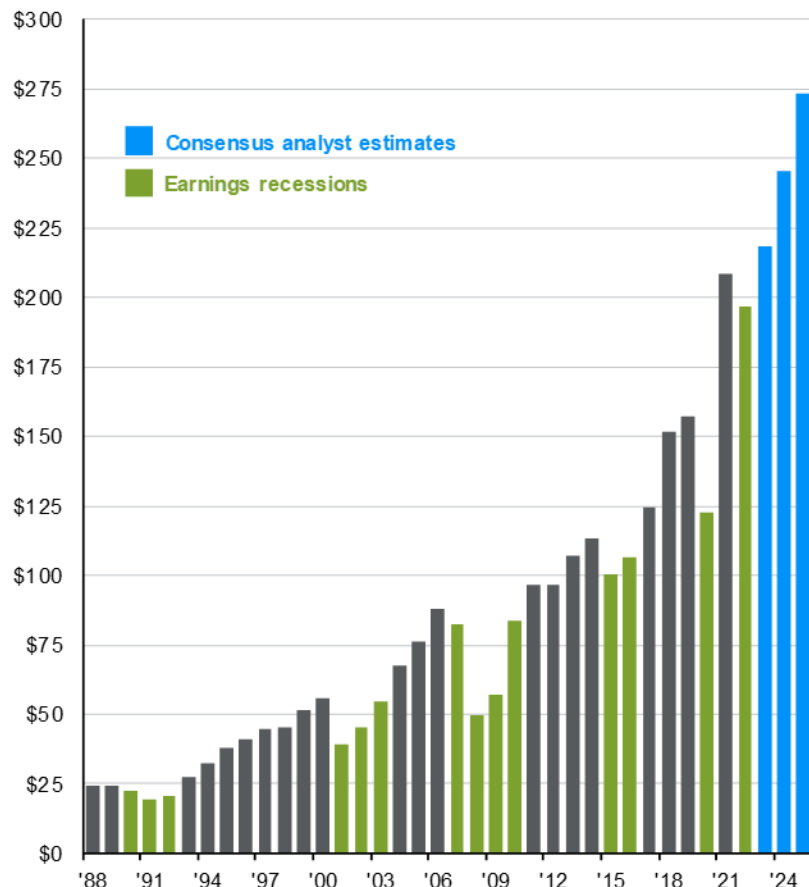
Current operating margins versus historical range\*



Source: Compustat, FactSet, NFIB, Standard & Poor's, J.P. Morgan Asset Management. Past performance is not indicative of future returns. \*Quarters with negative operating margins are not shown, with zero set as the lower bound for troughs.  
 Guide to the Markets – U.S. Data are as of April 12, 2023.

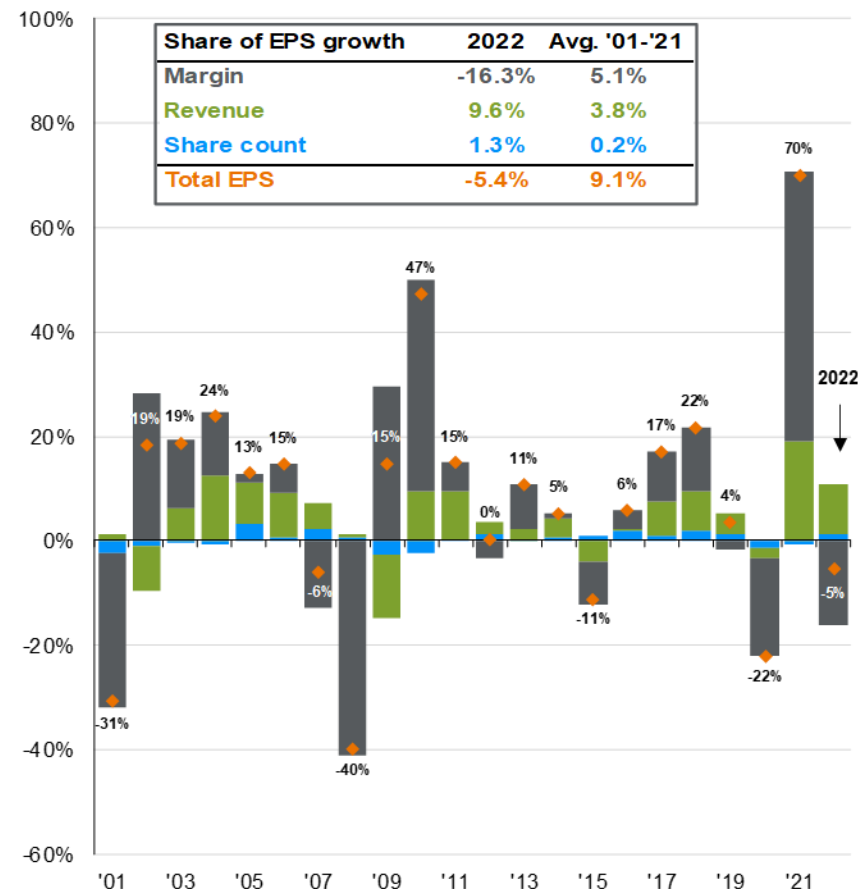
## S&P 500 earnings per share

Index annual operating earnings, USD



## S&P 500 year-over-year operating EPS growth

Annual growth broken into revenue, changes in profit margin & changes in share count

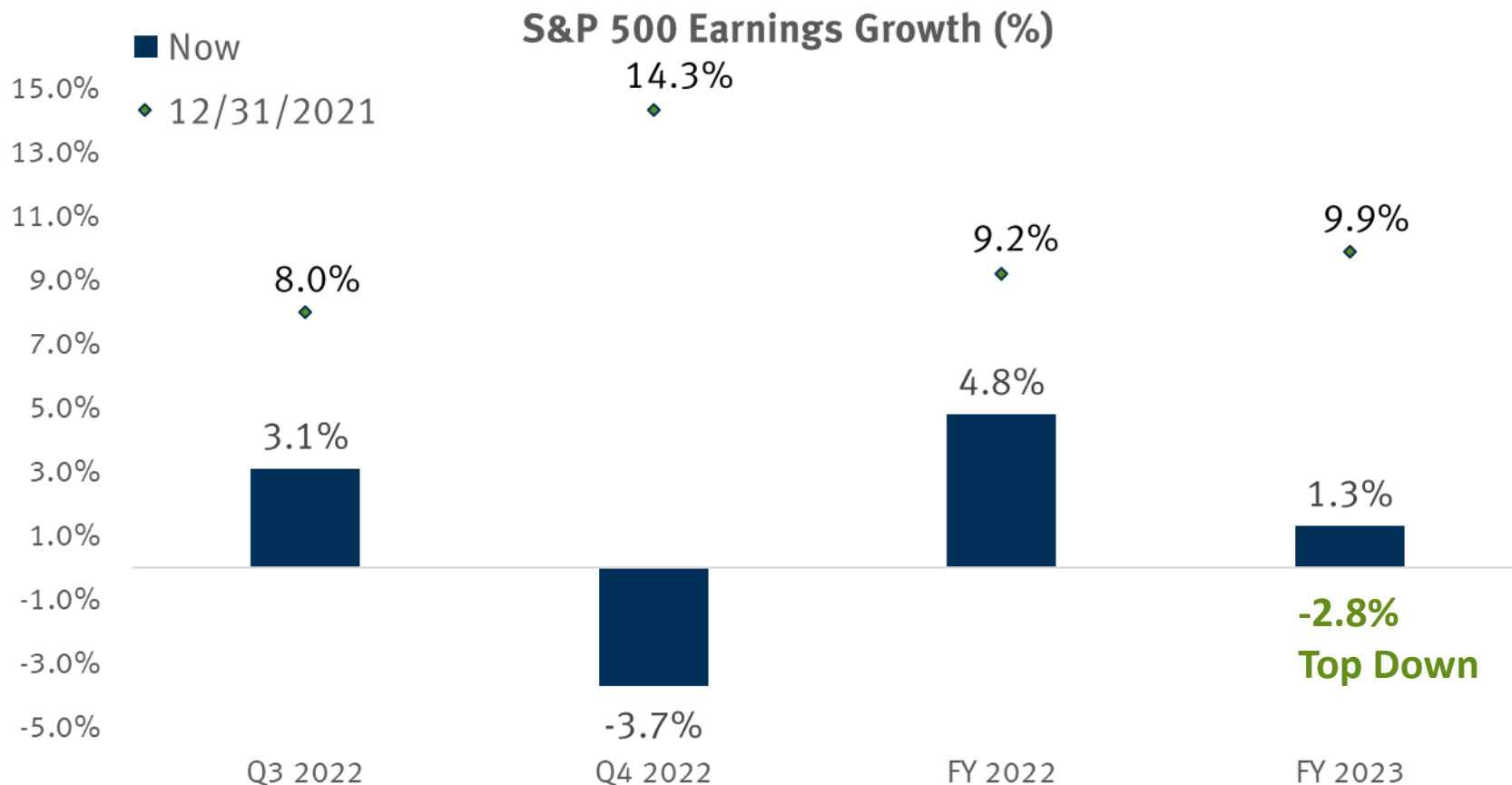


Source: Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management.

Historical EPS levels are based on annual operating earnings per share. Earnings estimates are based on estimates from Standard & Poor's and FactSet Market Aggregates. Percentages may not sum due to rounding. Past performance is not indicative of future returns.

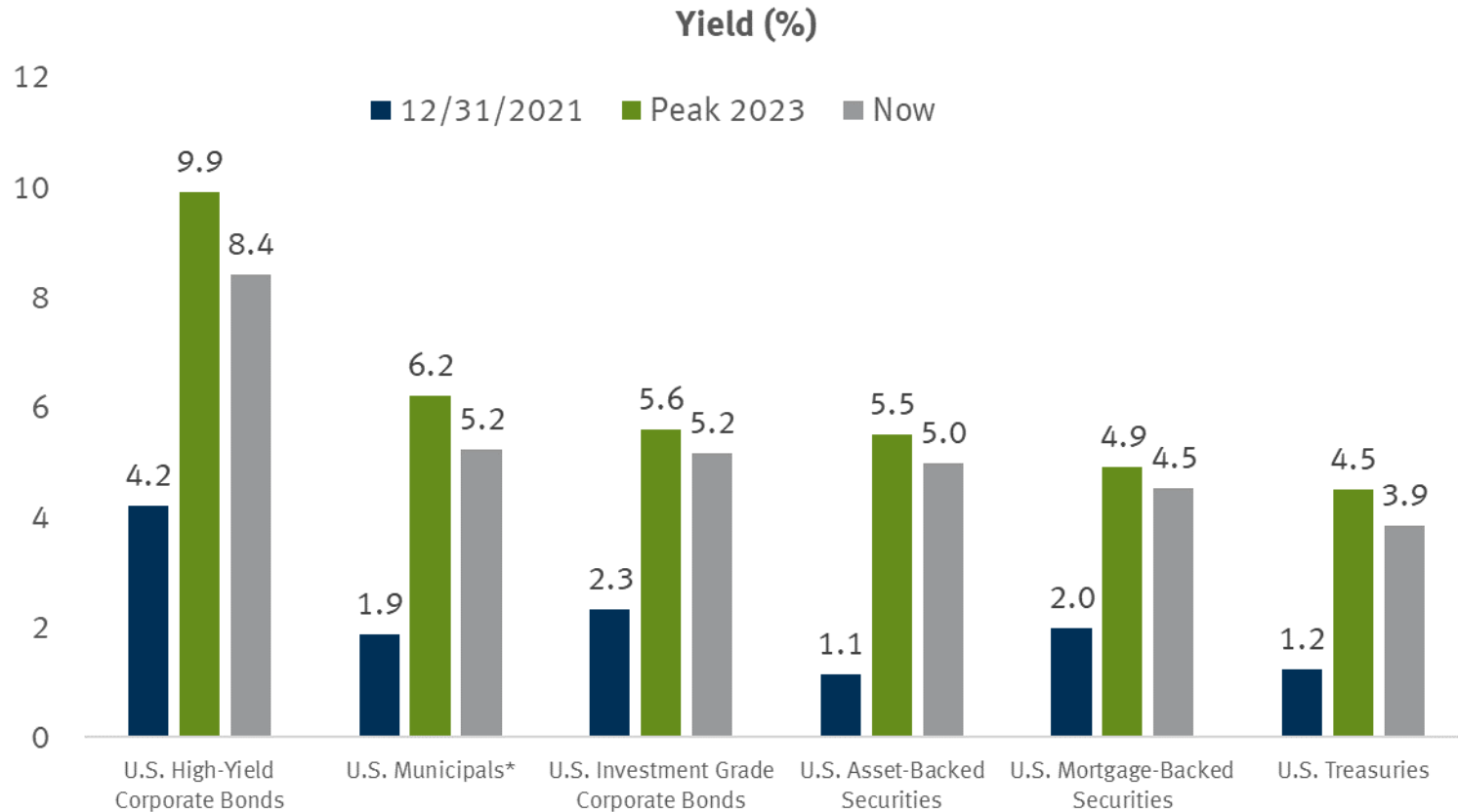
Guide to the Markets – U.S. Data are as of April 12, 2023.

Many companies citing supply chain, inflation, and recession



Source: Stifel CIO Office via FactSet, as of April 13, 2023

Index	2020	2021	2022	Jan 2023	Feb 2023	Feb 28 – Mar 8 2023	Mar 8 – Apr 14 2023
S&P 500 Index	18.4%	28.7%	-18.1%	6.3%	-2.4%	0.6%	3.8%
S&P 500 Financials	-1.8%	34.9%	-10.6%	6.9%	-2.3%	-2.1%	-5.5%
KBW Regional Banking	-8.7%	36.7%	-6.9%	2.9%	0.5%	-5.0%	-19.9%
Russell 1000 Value	2.8%	25.1%	-7.6%	5.2%	-3.5%	-0.1%	1.0%
Russell 1000 Growth	38.5%	27.6%	-29.1%	8.3%	-1.2%	1.2%	5.5%
NYSE FANG+ Index	103.1%	17.7%	-40.0%	18.7%	3.8%	0.6%	9.7%
Russell 2000 Index	19.9%	14.8%	-20.5%	9.7%	-1.7%	-0.9%	-5.0%
MSCI EAFE Index	7.8%	11.3%	-14.5%	8.1%	-2.1%	0.3%	4.9%
MSCI EM Index	18.3%	-2.5%	-20.1%	7.9%	-6.5%	1.5%	2.7%
Bloomberg U.S. Agg	7.5%	-1.5%	-13.0%	3.1%	-2.6%	-0.5%	3.1%



*\*Based on taxable equivalent yield. Taxable equivalent yield assumes a 37% federal tax and 3.8% net investment income tax.*

Source: Stifel CIO Office via Bloomberg, as of April 14, 2023



## APRIL

7	Employment
12	Federal Open Market Committee (FOMC) Minutes
12/13	Inflation
14	Consumer Sentiment
14	Retail Sales
18/25	Housing

## MAY

3	Fed Policy Decision
5	Employment
10/11	Inflation
12	Consumer Sentiment
16	Retail Sales
17/23	Housing
24	Federal Open Market Committee (FOMC) Minutes

## JUNE

2	Employment
13/14	Inflation
14	Fed Policy Decision with Economic Projections
15	Retail Sales
16	Consumer Sentiment
20/27	Housing

## JULY

5	Federal Open Market Committee (FOMC) Minutes
7	Employment
12/13	Inflation
14	Consumer Sentiment
18	Retail Sales
19	Housing
26	Fed Policy Decision

## OTHER IMPORTANT TOPICS

- Russia-Ukraine War
- China-Taiwan Tensions
- Progression of Earnings Forecasts
- First Quarter Earnings Season
- Progression of PMI measures
- Business and consumer sentiment
- Global Inflation
- Global Central Bank Policy

## WHERE TO FIND STIFEL GUIDANCE

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***stifelinsights.com***



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VIDEO | PODCAST | NEWSLETTER

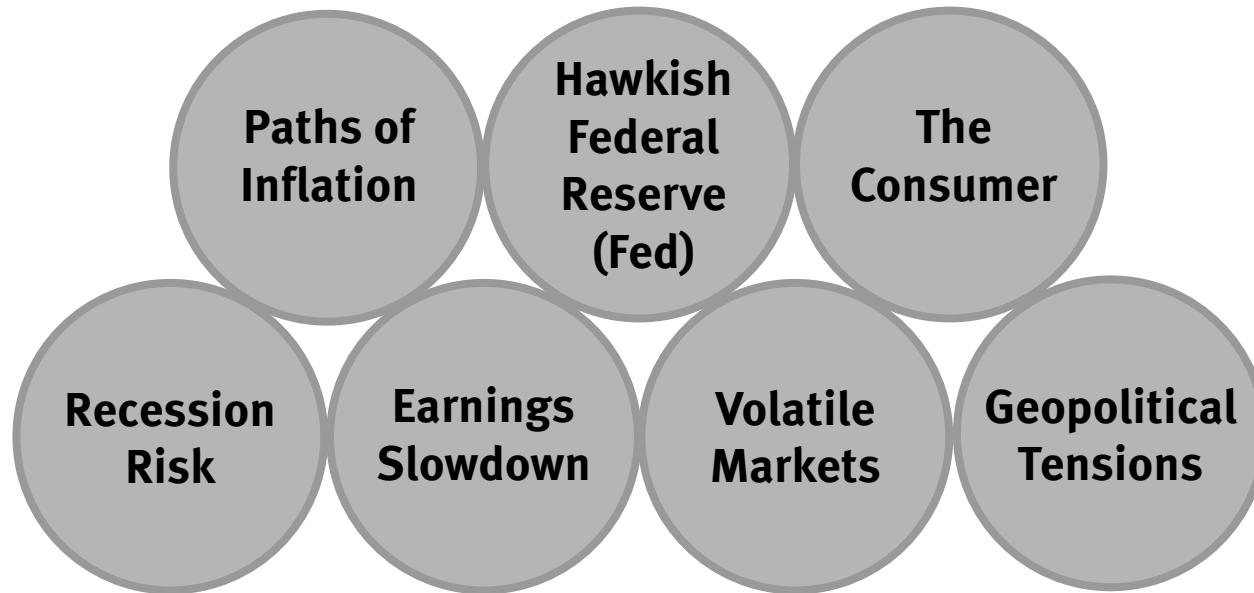


VIDEO | PODCAST | NEWSLETTER





## **Macro Environment**



**2.71%**  
*1-Year*

**2.41%**  
*5-Year*

***Investors:***  
Breakeven  
Inflation  
Rates

**2.32%**  
*10-Year*

**2.23%**  
*5-year, 5-year  
forward*

***Consumers:***  
Surveys

**3.6%**

*University of Michigan  
1-year*

**2.9%**

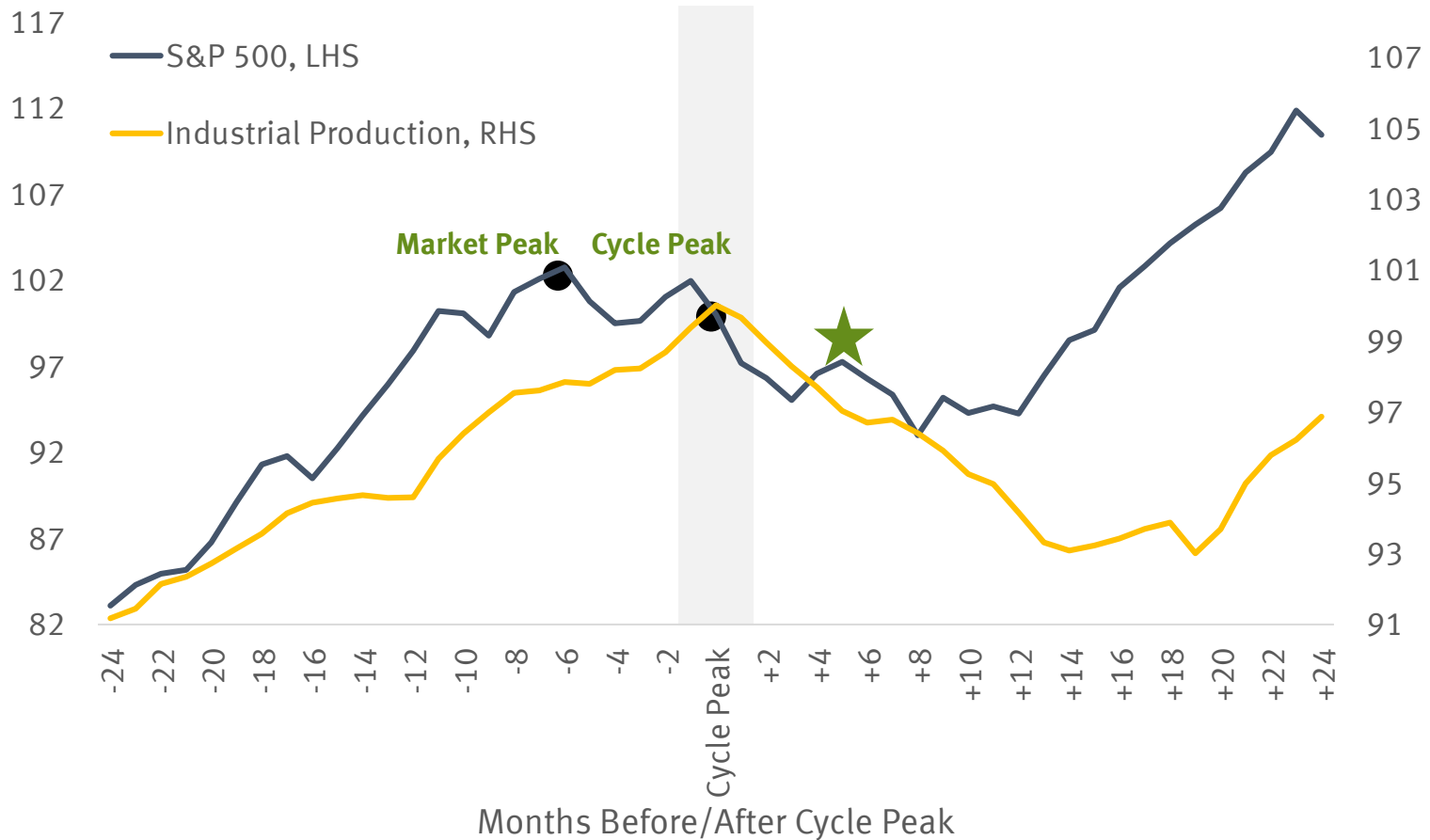
*University of  
Michigan 5-10  
year*

**6.3%**

*Conference Board 1-year*

EARLY Acceleration in economic growth	MID Positive, but moderating growth	LATE Growth rate slows to trend or below-trend	RECESSION Growth contracts
Lower consumer spending	Recovering consumer spending	Strong consumer spending	Falling consumer spending
Credit creation low	Credit creation rising	Credit creation rising faster	Credit creation declining
Company profits recovering	Company profits peaking	Company profits under pressure	Company profits contracting
Fiscal/monetary policy accommodative	Fiscal/monetary policy shifting to neutral	Fiscal/monetary policy contractionary	Fiscal/monetary policy easing





Source: Stifel CIO Office via Strategas Research Partners, as of April 11, 2023; Data since 1950.

	<u>10-year Yield</u>	<u>IG Spread</u>	<u>HY Spread</u>	<u>VIX Index</u>	<u>MOVE Index</u>	<u>Financial Conditions</u>
High	4.24	1.65	5.83	34.8	198.7	0.5
Median	3.45	1.39	4.53	23.7	126.5	(0.4)
Low	2.57	1.15	3.45	17.9	97.3	(1.3)
Current	3.45	1.39	4.59	18.2	129.7	0.0
% Tile	50%	51%	45%	100%	41%	19%
2/28/23	3.57	1.52	4.94	26.52	173.59	(1.27)
% Tile	37%	16%	22%	29%	2%	99%

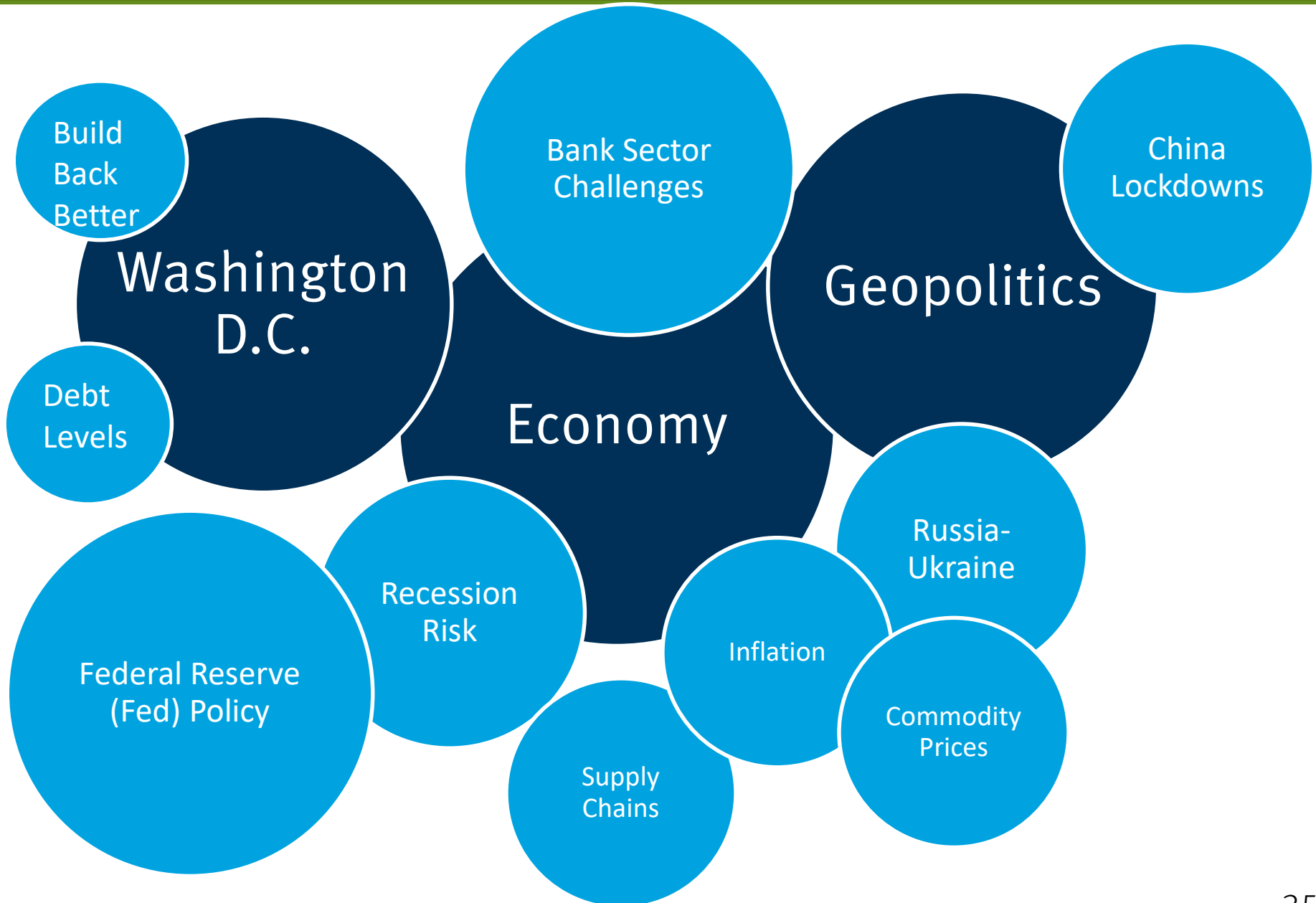
Source: Stifel CIO Office via Bloomberg, as of April 17, 2023; based on last 12 months data. (intra-day)



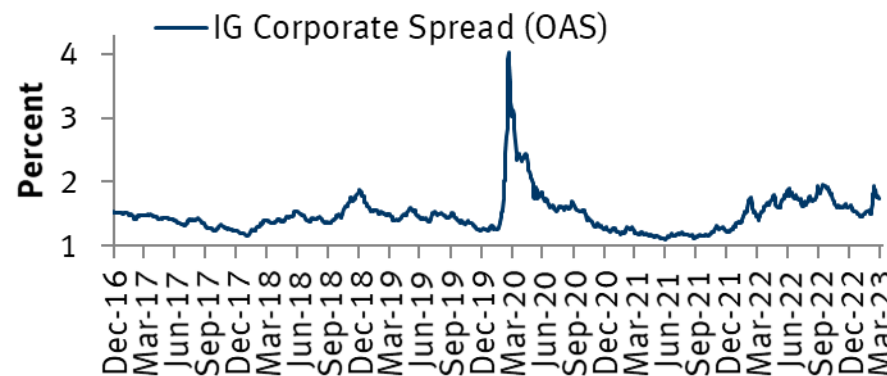
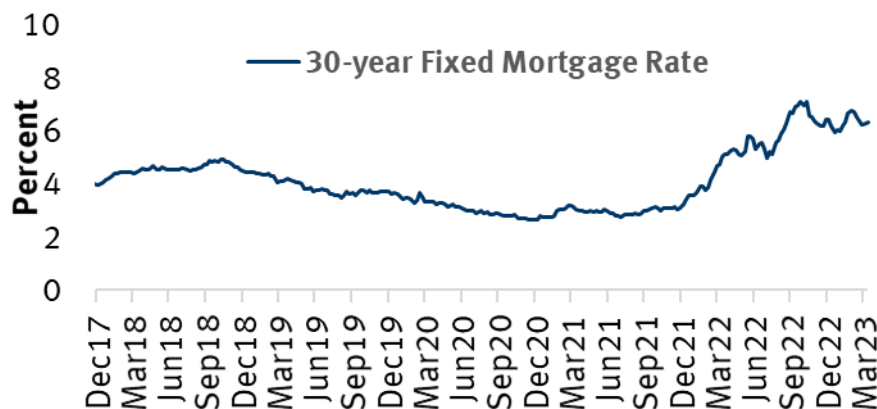
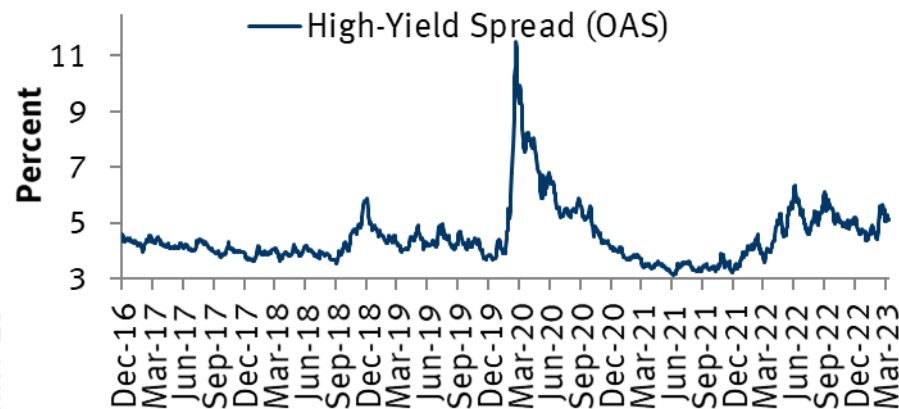
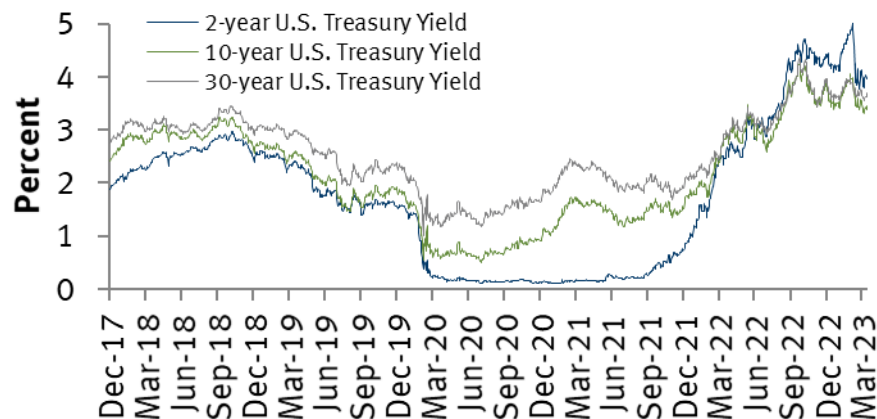




**Markets**

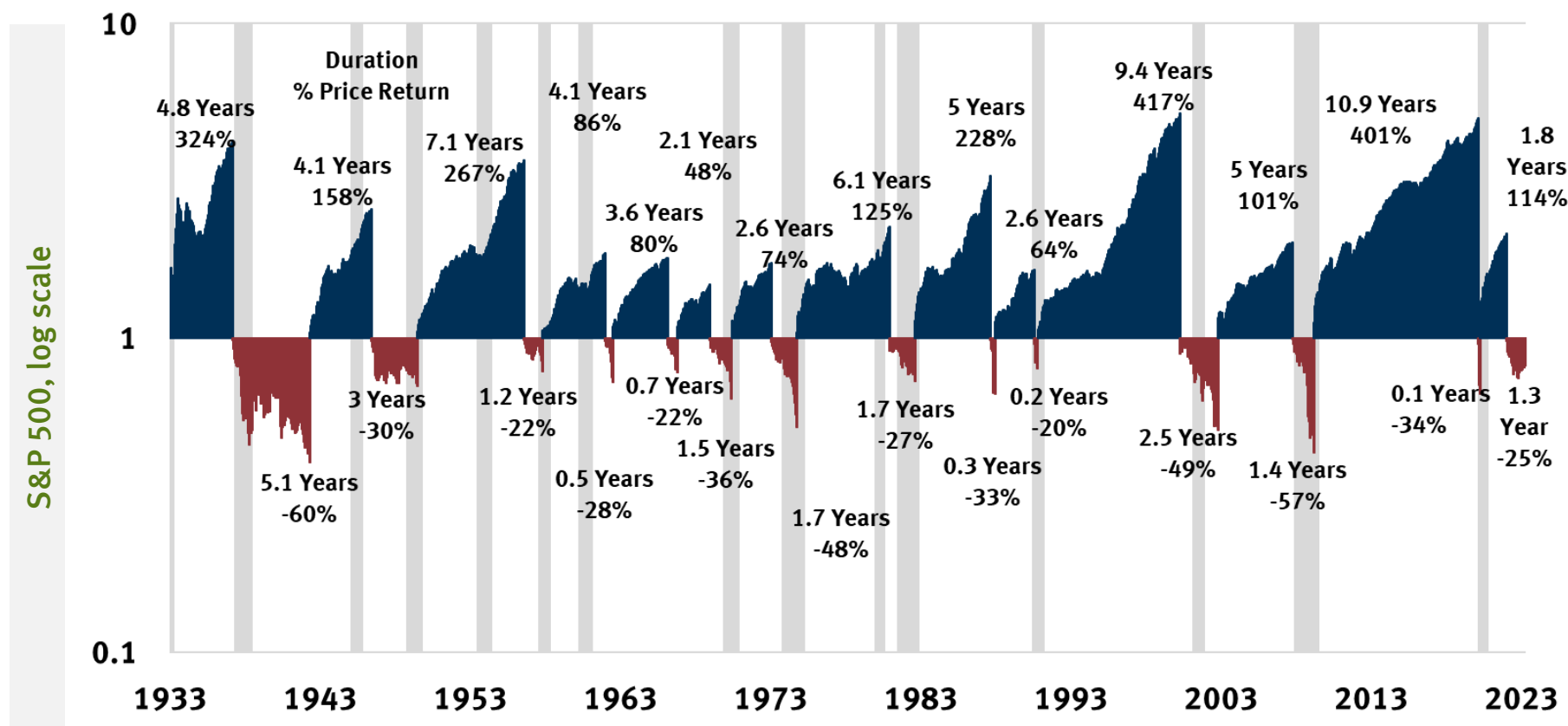


## Rates and Spreads



*OAS Spread is the measurement of the spread of a fixed-income security rate and the risk-free rate of return, which is adjusted to take into account an embedded option*

Source: Stifel CIO Office via Bloomberg, as of April 13, 2023 (intra-day)

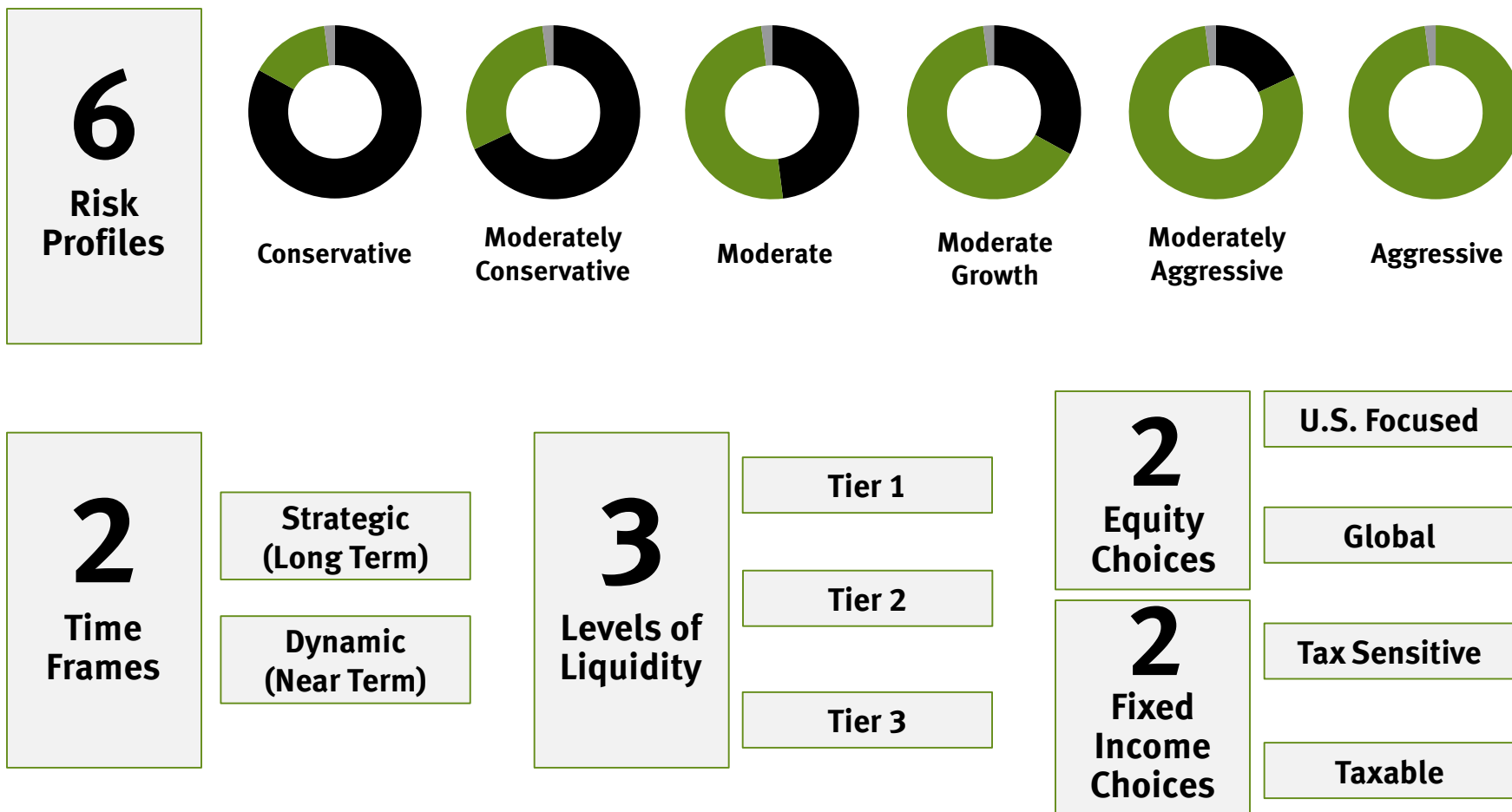





Source: Stifel CIO Office via Bloomberg, Strategas Research Partners, as of April 11, 2023 (Intra-Day)











## **Dynamic leanings**

## 144 ASSET ALLOCATION MODELS FOR YOUR SELECTION



 Underweight
  Neutral
  Overweight




## DYNAMIC LEANINGS

ASSET CLASS	CURRENT			COMMENTS
				
U.S. Equity vs. Non-U.S. Equity				While non-U.S. equity relative valuations remain attractive for longer-term investors, we remain neutral given the global economic and geopolitical headwinds. The strength of the U.S. consumer and corporate balance sheets put the U.S. on a stronger footing, but richer valuations mean near-term weakness is possible.
U.S. Large Cap vs. U.S. Small Cap				Small cap company valuations are providing an attractive entry point for skilled investors. Falling prices reflect, to a good degree, the concerns about higher interest rates and an economic slowdown. But lower valuations create opportunities. We guide investors to implement an overweight with active management.
U.S. Large Value vs. U.S. Large Growth				In this environment we believe investors should diversify across both value and growth styles. Within U.S. large cap, we have a modest overweight to dividend growth and quality companies, regardless of style.
Non-U.S. Developed Markets vs. Emerging Markets				Risks stemming from China and the war in Ukraine are each binary, meaning one or both could quickly dissipate, or get worse. Our team is closely following the developments in China and Europe, and we are prepared to act swiftly as we receive further clarity on the macroeconomic outlook.
Europe vs. Japan				We see investment opportunities across regions of the world. Japan's corporate governance reform is a positive and likely to enhance shareholder value in the medium-to-long term. Risks from the war in Ukraine are largely reflected in European stock valuations, and there is meaningful upside potential if and when we see a diplomatic resolution there.

EQUITY



## DYNAMIC LEANINGS

 Underweight
  Neutral
  Overweight

## ASSET CLASS

## CURRENT

## COMMENTS

## FIXED INCOME

U.S. Investment Grade  
vs. U.S. High Yield

Bond yields are the most attractive they have been in the last 10–15 years, despite coming off of recent highs. Near-term volatility and an economic slowdown may exacerbate near-term price losses in high yield.

Corporates/  
Government/Agency  
MBS

While our base case is for Treasury yields and corporate spreads to remain range bound, we remain neutral and diversified across fixed income supersectors given the fat tail risks of our bear and bull scenarios.

Duration



We view duration as a diversifier in a multi-asset class portfolio given the near-term uncertainty and remain neutral to the overall market.

## ALTERNATIVES

Private Assets



For investors interested in alternative investments and able to handle illiquidity, exposure to some combination of private equity, private debt, and/or private real estate can be considered as part of a diversified portfolio.

Hedge Funds



For investors interested in alternative investments and able to handle less liquidity who have conviction about manager skill, exposure to hedge funds can be a helpful part of a diversified portfolio. This is especially true in volatile, low-return environments.

Past performance is no guarantee of future results.

Index returns include the reinvestment of dividends but do not include adjustments for brokerage, custodian, and advisory fees.

Indices are unmanaged, do not reflect fees and expenses, and are not available for direct investment.

Past performance does not guarantee future results. Investing involves risk, including the possible loss of principal. Asset allocation and diversification do not ensure a profit or protection against loss.

**Alternative Investments or Non-Traditional Assets** – Alternative investments may include, but are not limited to: Real Estate Investment Trusts (REITs), Commodities, Futures, Hedge Funds, Venture Capital, Limited Partnerships, etc.

**Real Estate** – When investing in real estate companies, property values can fall due to environmental, economic, or other reasons, and changes in interest rates can negatively impact the performance.

**Commodities and Futures** – The risk of loss in trading commodities and futures can be substantial. You should therefore carefully consider whether such trading is suitable for you in light of your financial condition. The high degree of leverage that is often obtainable in commodity trading can work against you as well as for you. The use of leverage can lead to large losses as well as gains.

**Hedge Funds** – *Investors should be aware that hedge funds often engage in leverage, short-selling, arbitrage, hedging, derivatives, and other speculative investment practices that may increase investment loss. Hedge funds can be highly illiquid, are not required to provide periodic pricing or valuation information to investors, and often charge high fees that can erode performance. Additionally, they may involve complex tax structures and delays in distributing tax information. While hedge funds may appear similar to mutual funds, they are not necessarily subject to the same regulatory requirements as mutual funds.*

**Venture Capital** – Venture capital investments involve substantial risks. The risks associated with investing in companies in the start-up or expansion stages of development are greater than those of companies in later stages, because the companies' business concepts generally are unproven and the companies have little or no track record.

**Limited Partnerships** – Generally, limited partnership investments are suitable only for a narrow class of relatively sophisticated investors. Limited partnership investments may be speculative in nature and be subject to resale restrictions or illiquidity. An investment is appropriate only for investors who have the capacity to absorb a loss of some or all of their investment.

**Bonds** – When investing in bonds, it is important to note that as interest rates rise, bond prices will fall. High-yield bonds have greater credit risk than higher quality bonds.

**Duration** – Duration is a measure of the sensitivity of the price -- the value of principal -- of a fixed-income investment to a change in interest rates. Duration is expressed as a number of years.

**Standard Deviation** – Standard deviation is a measure of the dispersion of a set of data from its mean. It is calculated as the square root of variance by determining the variation between each data point relative to the mean. If the data points are further from the mean, there is higher deviation within the data set.

**International and Emerging Markets** – There are special considerations associated with international investing, including the risk of currency fluctuations and political and economic events. Investing in emerging markets may involve greater risk and volatility than investing in more developed countries.

**Private Equity** – *Private equity funds are not appropriate for all investors. Investors should be aware that private equity funds may contain speculative investment practices that can lead to a loss of the entire investment. Private equity funds may invest in entities in which no secondary market exists and, as such, may be highly illiquid. The funds are not required to provide periodic pricing or valuation information to investors and often charge high fees that can erode performance. Additionally, they may involve complex tax structures and delays in distributing tax information.*

**Short Positions** – The investor should note that when a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker will demand more collateral and the manager might have to close out that short position at an inopportune time to limit any further losses.

**Small Company Securities** – Small company securities are typically more volatile and carry additional risks, since smaller companies generally are not as well established as larger companies.

**Bloomberg U.S. Treasury Bills 1-3 Months Index** includes all publicly issued zero-coupon U.S. Treasury Bills that have a remaining maturity of less than three months and more than one month, are rated investment grade, and have \$250 million or more of outstanding face value.

**Bloomberg U.S. Corporate IG Index** is an unmanaged index considered representative of fixed-rate investment-grade taxable bond debt.

**Bloomberg U.S. Aggregate Corporate Index** is an unmanaged index considered representative of fixed-rate investment-grade taxable bond debt.

**Bloomberg U.S. Corporate High Yield** is an unmanaged index considered representative of fixed-rate, noninvestment-grade debt.

**Bloomberg U.S. Government Bond Index** is an unmanaged index considered representative of fixed-rate, investment-grade US Government debt.

**Bloomberg Global Aggregate** This index provides a broad-based measure of the global investment-grade, fixed-rate debt market.

**DXY Index** is a measure of the value of the U.S. dollar relative to the value of a basket of currencies of the majority of the U.S.'s most significant trading partners.

**S&P 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.

**Russell 1000 Index** represents approximately 1,000 of the largest companies in the U.S. equity markets, the Russell 1000 is a subset of the Russell 3000 Index. The Russell 1000 (maintained by the Russell Investment Group) comprises over 90% of the total market capitalization of all listed U.S. stocks and is considered a bellwether index for large cap investing.

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

**MSCI EAFE Index** captures large and mid cap representation across Developed Markets countries around the world, excluding the U.S. and Canada. With 914 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI Emerging Markets (EM) Index** captures large and mid cap representation across 23 Emerging Markets (EM) countries. With 837 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

**Morgan Stanley Market implied pace of hikes index (MSPOKE)** is the number of Fed rate hikes in the 12 months following the first rate hike implied by the Eurodollar interest rate futures market.

The **MSCI World Index** is a free float-adjusted market capitalization-weighted index that is designed to measure the equity market performance of developed markets.

**Wilshire 5000 Index** is a market-capitalization-weighted index of the market value of all stocks actively traded in the United States.

**VIX Index** shows the market's expectation of 30-day volatility. It is constructed using the implied volatilities of a wide range of S&P 500 index options.

**EURO STOXX 50** is a stock index of Eurozone stocks designed by STOXX, an index provider owned by Deutsche Börse Group. According to STOXX, its goal is "to provide a blue-chip representation of Supersector leaders in the Eurozone

**Cash & Cash Equivalent** is represented by the Bloomberg U.S. Treasury 3-6 months Bill Index, comprised of treasury bills issued by the U.S. government with less than one year to maturity.

**U.S. Government Bonds** is represented by the Bloomberg U.S. Government Bond Index, comprised of the U.S. Treasury and U.S. Agency indexes.

**U.S. Corp IG Bonds** is represented by the Bloomberg U.S. Corporate Bond Index, comprised of the investment grade, fixed-rate, taxable corporate bond market.

**High-Yield Bonds** is represented by the Bloomberg U.S. Corporate High Yield Bond Index, comprised of U.S. Dollar denominated, high-yield, fixed-rate corporate bond market securities.

**U.S. LC (Large Cap)** equities is represented by Russell 1000 Index, comprised of 1,000 of the largest U.S. securities based on a combination of their market cap and current index membership.

**U.S. SC (Small Cap)** equities is represented by the Russell 2000 Index, comprised of 2,000 of the smallest U.S. securities based on a combination of their market cap and current index membership.

**Developed International Equities** is represented by the MSCI EAFE Index, comprised of equity securities that belong to markets outside of the U.S. and Canada.

**Emerging Markets Equities** is represented by the MSCI EM Index, comprised of equity securities that belong to emerging markets.

**Moderate Bench** stands for moderate benchmark portfolio return which is a blended portfolio of stocks (60% weight, represented by MSCI AC World Index) and bonds (40% weight, represented by Bloomberg U.S. Agg Gov/Credit).

**MSCI AC World Index** is comprised of equity securities belonging to 23 developed markets and 24 emerging markets countries.

**Bloomberg U.S. Government/Credit Bond Index** is comprised investment grade, dollar-denominated, fixed-rate Treasuries, government-related and corporate securities.

**KBW Restoration Index** is composed of 13 high-frequency economic indicators. These indicators include those with longer histories (initial jobless claims, MBA mortgage applications, and steel production) along with newly developed gauges tracking mobility, dining reservations, and airport traffic, among others. KBW set each of the 13 indicators to 100 as of the end of February 2020, the official end of the longest economic cycle in U.S. history, and update the Index each week.

**NYSE FANG+ Index** is an equal-dollar weighted index designed to track the performance of highly-traded growth stocks of technology and tech-enabled companies in the technology, media & communications and consumer discretionary sectors such as Facebook, Apple, Amazon, Netflix, and Alphabet's Google.