

Fourth Quarter 2022 Chartbook

Data as of September 30, 2022

Economy – Increased Risk of Fed Policy Error

- The Fed remains on an aggressive path, but the labor market is resilient thus far. There may be a lagged impact.
- Inflation remains at a high level. The Fed is focused on slowing inflation, even if economic growth suffers.
- Strength in the service economy is offsetting stagnation in the goods economy.

Equities – Fed Uncertainty Driving Volatility

- Volatility remains in markets. Stocks have steep losses this year, but valuations are normalizing.
- Earnings expectations have fallen, providing some upside surprise potential for stocks.
- Market volatility might persist until there are clear signs inflation is slowing. The Fed will continue to tighten until that happens.

Fixed Income – Fed Indicating Higher for Longer Rates

- The bond market is on pace for its worst year since the inception of the aggregate index in 1976.
- The Fed is indicating higher for longer interest rates. The Fed could pause at year-end after front loading hikes.
- Bond yields were pressed higher because of rising inflation and aggressive rate hikes but slowing inflation and a Fed pause after December could be a developing tailwind for bonds.

U.S. Economic Risk Overview

Indicator	Recession Risk	Trend Signal	Trend										Latest	
			60.8	60.6	58.8	57.6	58.6	57.1	55.4	56.1	53.0	52.8		52.8
ISM Manufacturing PMI	LOW	↓	66.7	68.4	62.3	59.9	56.5	58.3	57.1	55.9	55.3	56.7	56.9	56.7
ISM Services PMI	LOW	↑	4.7%	5.0%	3.7%	2.9%	6.9%	4.8%	5.3%	4.4%	3.9%	3.9%	3.9%	5.3%
Industrial Production - YoY Change	LOW	↑	7.4%	3.0%	6.2%	4.0%	5.2%	4.1%	5.3%	3.2%	1.9%	1.4%	-3.2%	-5.0%
Building Permits - YoY Change (3 Mo. Avg.)	MODERATE	↓	4.6%	4.2%	3.9%	4.0%	3.8%	3.6%	3.6%	3.6%	3.6%	3.5%	3.7%	3.5%
Unemployment Rate	LOW	→	15.6%	12.4%	10.9%	9.7%	9.2%	8.6%	12.7%	11.9%	10.8%	10.4%	10.7%	11.3%
Temporary Help Employment - YoY Change	LOW	→	9.4%	9.8%	9.9%	8.6%	8.0%	4.3%	2.2%	-0.5%	-0.1%	0.5%	0.8%	0.8%
Real Retail Sales - YoY Change (3 Mo. Avg.)	LOW	↑	71.7	67.4	70.6	67.2	62.8	59.4	65.2	58.4	50.0	51.5	58.2	58.6
U. of Michigan Consumer Sentiment	MODERATE	↑	8.3%	8.1%	7.9%	7.7%	6.3%	7.2%	6.0%	4.3%	2.7%	1.4%	-0.1%	-1.0%
Leading Economic Index (LEI) - YoY Change	HIGH	↓	1.07%	0.91%	0.79%	0.61%	0.39%	0.04%	0.19%	0.32%	0.06%	-0.22%	-0.30%	-0.39%
Treasury Yield Curve (10yr - 2yr)	HIGH	↓												

Recession Riskometer

Economic Trend Signal

Commentary



MODERATE



STABLE

The dials on the left show our combined estimate of near-term recession risk and direction of economic growth, based on the average reading of ten economic indicators. The Recession Riskometer focuses on producer sentiment, output and manufacturing growth, employment, consumer strength and leading economic indicators.

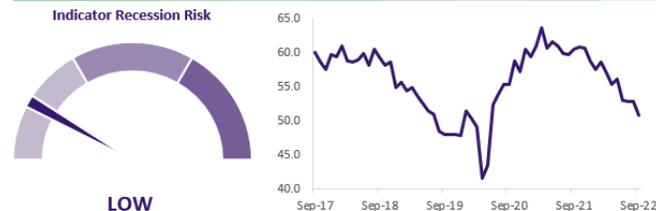
- Economic growth stalled in the first half of the year and early signs point to weak growth through year-end. Despite weakness in the economy, the labor market and service sector are bright spots. At present, the risk of a near-term recession rose to a moderate risk. Six of ten indicators in our Recession Riskometer are still signaling a low recession risk. Consumer sentiment and building permits are signaling a moderate recession risk. The yield curve and leading economic index are signaling a high recession risk.
- The economic trend signal is stable. Four indicators have a negative trend, four have a positive trend, and two have a stable trend.

Sources are listed on pages 35-36.

U.S. Economic Risk Indicators

ISM Manufacturing PMI

Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
60.8	60.6	58.8	57.6	58.6	57.1	55.4	56.1	53.0	52.8	52.8	50.9



20 Yr. Percentile



ISM Services PMI

Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
66.7	68.4	62.3	59.9	56.5	58.3	57.1	55.9	55.3	56.7	56.9	56.7



20 Yr. Percentile



The ISM Manufacturing PMI slowed to 50.9 in September. The manufacturing PMI remains in expansion territory, but the pace of expansion is slowing fast. This index is in the 25th percentile over the last 20 years.

The ISM Services PMI edged lower to 56.7 in September. This indicator remains in expansion territory and is in the 62nd percentile over the last 20 years.

A reading over 50 indicates expansion, below 50 signals contraction, and in the mid 40's suggests recession.

A reading over 50 indicates expansion, below 50 signals contraction, and in the mid 40's suggests recession.

U.S. Economic Risk Indicators

Industrial Production - YoY Change



Industrial Production growth rose to 5.3% YoY in September. Industrial production is at a high level and this indicator is in the 94th percentile over the past 20 years.

Industrial Production Index measures real output for manufacturing, mining, and utilities. The YoY change in Industrial Production signals a high risk of recession when it falls into negative territory. There is a low recessionary risk when greater than 1%.

Building Permits - YoY Change (3 Mo. Avg.)



The 3-month average of building permits fell to -5.0% YoY through September, signaling a moderate recession risk. The surge in interest rates is slowing housing demand. The current permits reading is in the 23rd percentile over the past 20 years.

Building Permits are a measure of the issuance of permits to build new housing units. Building permit growth is a measure of the total year-over-year percentage change in building permits (3-month average). This indicator signals a high recession risk when growth falls below -15% YoY.

U3 Unemployment Rate



The unemployment rate edged lower to 3.5% in September, matching the 52-year low. The current reading is in the 100th percentile over the last 20 years.

The U3 Unemployment Rate measures the percentage of people without jobs who are actively seeking work. This is often the officially quoted unemployment rate.

Temporary Help Employment - YoY Change



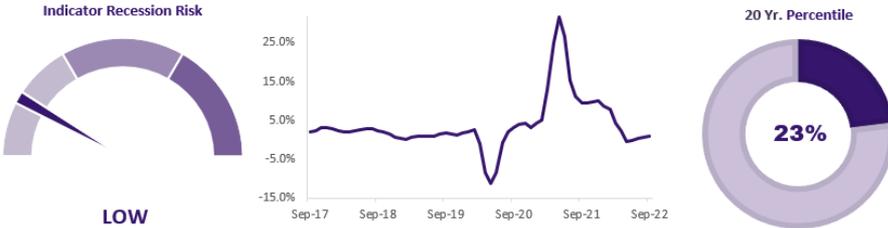
Temporary help employment increased 11.3% year-over-year in September and remains at a high level. The current reading is in the 90th percentile over the last 20 years.

Temporary help employment figures are viewed favorably if they are positive and trending higher. Changes in temporary help numbers are often used as a predictor of changes in future employment.

U.S. Economic Risk Indicators

Real Retail Sales (3 Mo. Avg.) - YoY Change

Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
9.4%	9.8%	9.9%	8.6%	8.0%	4.3%	2.2%	-0.5%	-0.1%	0.5%	0.8%	0.8%

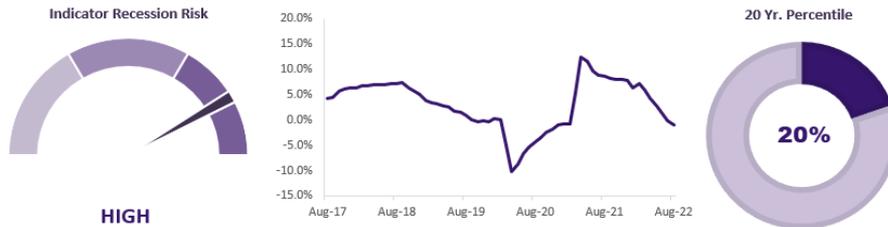


The 3-month average of Real Retail Sales remained at 0.8% YoY in September. Inflation adjusted retail sales are in the 23rd percentile over the last 20 years. Consumer spending is stalling when adjusted for inflation.

Real retail sales growth is a measure of the total year-over-year change in retail and food sales adjusted for inflation using the Consumer Price Index. Real retail sales typically decline heading into a recession, and a weaker reading is a concern for the economy.

Leading Economic Index (LEI) - YoY Change

Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
8.3%	8.1%	7.9%	7.7%	6.3%	7.2%	6.0%	4.3%	2.7%	1.4%	-0.1%	-1.0%



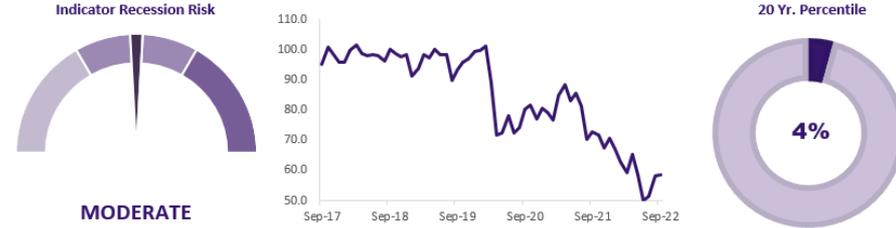
The Leading Economic Index (LEI) fell to -1.0% growth year-over-year in August, signaling an elevated risk of recession. The LEI is in the 20th percentile over the last 20 years. The LEI signals a weakening outlook for the economy when it drops into negative territory.

The Conference Board Leading Economic Index (LEI) is a composite index of several U.S. economic indicators that lead the economy. This indicator historically has declined in recessions and rises back into positive territory in expansions.

Sources are listed on pages 35-36.

U. of Michigan Consumer Sentiment

Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
71.7	67.4	70.6	67.2	62.8	59.4	65.2	58.4	50.0	51.5	58.2	58.6

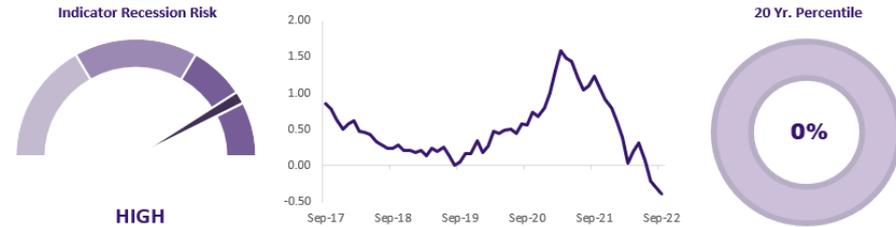


The University of Michigan Consumer Sentiment index increased narrowly to 58.6 in September. Consumer sentiment is at a low level but is slightly improving. The current consumer sentiment reading is in the 4th percentile over the last 20 years.

Strong consumer confidence is a positive signal for future consumer spending, but it is a concern if this indicator is trending lower. The index uses surveys to gather information on consumer expectations regarding the economy.

Treasury Yield Curve (10 Yr. Minus 2 Yr.)

Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
1.07%	0.91%	0.79%	0.61%	0.39%	0.04%	0.19%	0.32%	0.06%	-0.22%	-0.30%	-0.39%

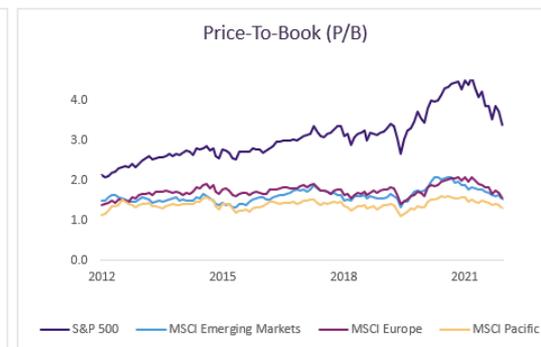
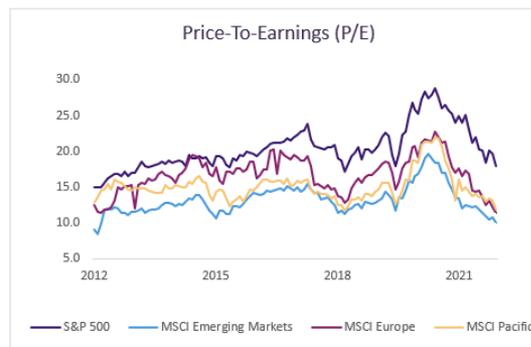


The 2-10 yield curve spread contracted to -0.39% at the end of September. An inverted yield curve signals an elevated risk of recession over the next 12 to 24 months.

The difference (spread) between the yields of the 10-Year and 2-Year maturity Treasury bonds is one of the early and reliable predictors of a recession. Under normal conditions the 10-Year/2-Year spread is positive, and as recession nears the spread flattens and turns negative. This indicator will shift to high recession risk when the spread is below zero.

Equity Valuation Overview

Price/Earnings (P/E)					
Index	Current	15 Yr. Avg.	St. Dev. From		Percentile (15 Yrs.)
			15 Yr. Mean		
S&P 500	18.0	18.6	-0.2		45%
S&P 500 Growth	21.0	21.8	-0.1		46%
S&P 500 Value	15.8	15.9	-0.1		45%
S&P MidCap 400	11.7	19.0	-2.4		3%
S&P MidCap 400 Growth	13.3	22.2	-2.0		4%
S&P MidCap 400 Value	10.4	16.5	-2.5		1%
S&P SmallCap 600	10.6	18.8	-2.7		1%
S&P SmallCap 600 Growth	11.0	21.0	-2.6		1%
S&P SmallCap 600 Value	10.2	17.0	-2.5		1%
MSCI EAFE	11.5	14.7	-1.1		13%
MSCI EAFE Growth	18.8	19.1	-0.1		46%
MSCI EAFE Value	8.3	11.9	-1.7		4%
MSCI Emerging Markets	10.0	12.8	-1.3		11%
MSCI Europe	11.4	14.9	-1.0		17%
MSCI Pacific	12.0	14.7	-1.2		6%
MSCI ACWI	14.5	16.2	-0.5		30%



Commentary

- As measured by Price-to-Earnings, U.S. large cap stocks were slightly below their 15-year mean at month-end, higher than 45% of the time over that span. Large cap value and growth indices were both below their 15-year average. Small and mid-cap indices are around 2 st. dev below their 15-year average P/E ratios.
- Most international equity categories are below their 15-year average based on price-to-earnings. International developed and emerging markets continue to trade at a valuation discount versus U.S. large cap equities.
- Based on Price-to-Book, U.S. large cap stocks have valuations above their 15-year average, but valuations are falling. Small and mid-cap stocks are below their 15-year average.
- The P/B ratio for International Developed and Emerging Markets (MSCI Emerging Markets) are slightly below their 15-year average. International growth stocks are above their historical average.

The two charts above show equity valuations based on the average Price-to-Earnings (P/E) and Price-to-Book (P/B) ratios for commonly used equity benchmarks. The P/E ratio is based on trailing 12-months earnings. To the left, current valuations are compared to their 15-year average, and we show how far (as measured by standard deviation) the current valuation is from the average. Valuations within 0.5 standard deviations are close to historic norms, a reading around 1.5 indicates high valuation, and figures above 2 are near historic highs. The percentile figure shown next provides a ranking of each index valuation relative to its 15-year history. As an example, if the percentile is 80%, valuation is higher than 80% of all other observations for that index over the past 15-years and lower than 20% of the observations.

Sector Valuation Overview

Price/Earnings (P/E)				
Index	Current	15 Yr. Avg.	St. Dev. From	
			15 Yr. Mean	Percentile (15 Yrs.)
S&P 500	18.0	18.6	-0.2	45%
S&P 500 Consumer Discretionary	24.5	21.1	0.6	78%
S&P 500 Consumer Staples	22.1	20.3	0.5	64%
S&P 500 Energy	9.1	16.1	-1.1	6%
S&P 500 Financials	12.2	14.2	-0.8	22%
S&P 500 Health Care	19.8	20.9	-0.2	36%
S&P 500 Industrials	18.8	18.7	0.0	57%
S&P 500 Information Technology	21.9	21.4	0.1	61%
S&P 500 Materials	13.8	19.5	-1.2	8%
S&P 500 Real Estate*	27.2	N/A	N/A	N/A
S&P 500 Utilities	23.0	18.3	1.1	85%
S&P 500 Communication Services	14.4	20.0	-0.6	35%

Price/Book Value (P/B)				
Index	Current	15 Yr. Avg.	St. Dev. From	
			15 Yr. Mean	Percentile (15 Yrs.)
S&P 500	3.4	2.8	0.9	85%
S&P 500 Consumer Discretionary	6.4	4.5	1.0	85%
S&P 500 Consumer Staples	5.0	4.3	0.9	81%
S&P 500 Energy	2.1	1.9	0.6	84%
S&P 500 Financials	1.4	1.3	0.5	70%
S&P 500 Health Care	4.3	3.6	0.9	83%
S&P 500 Industrials	3.9	3.5	0.4	61%
S&P 500 Information Technology	7.0	5.2	0.8	79%
S&P 500 Materials	2.5	2.9	-0.7	25%
S&P 500 Real Estate*	2.7	N/A	N/A	N/A
S&P 500 Utilities	2.1	1.8	1.0	78%
S&P 500 Communication Services	2.6	2.7	-0.1	45%

Commentary

Cyclical sectors:

- Valuations for consumer discretionary stocks are above the 15-year average based on P/E (0.6 st. dev's above the 15-year mean) and P/B (1.0 st. dev's above the 15-year mean). Financial stocks trade at a discount versus their historical P/E ratio (0.8 st. dev's below the 15-year mean) and are slightly above their historical P/B ratio. The Materials sector is trading at a discount versus its historical average P/E ratio.

Economically-sensitive sectors:

- Energy stocks are 1 st. dev. below their 15-year average P/E ratio. The technology sector is priced at near its historical mean based on P/E (0.1 st. dev's above the historical mean) and slightly less than 1 st. dev above the P/B average. Industrial stocks are in-line with their 15-year average P/E ratio.

Defensive sectors:

- Consumer Staples and Utilities continue to trade at a premium versus historical valuation levels. Health Care is at a slight valuation discount based on P/E.

These charts show sector valuations based on the average Price-to-Earnings (P/E) and Price-to-Book (P/B) ratios for the sectors within the S&P 500 index. Valuations are compared to 15-year averages, and we show by how many standard deviations the current is from the average. The percentile figure shown next provides a ranking of each index valuation relative to its 15-year history. As an example, if the percentile is 80%, it is greater than 80% of all other observations over the past 15 years and lower than 20% of observations.

*S&P 500 Real Estate Index does not have 15 years of historical data

Source: Cetera Investment Management, Morningstar, and Standard & Poor's. Data as of 9/30/2022.

Fixed Income Overview

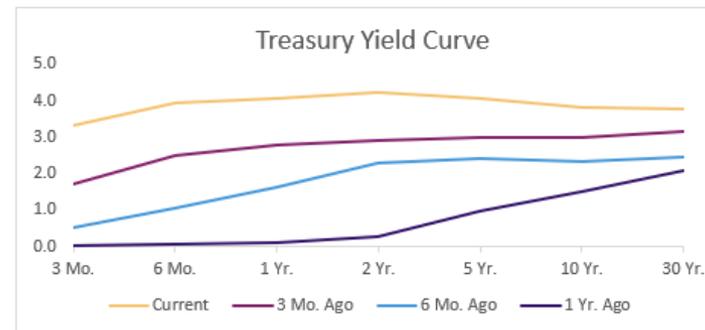
Yield					
Index	Yield		St. Dev. From		Percentile (15 Yrs.)
	Current	15 Yr. Avg.	15 Yr. Mean		
BofAML US Treasury Bill 3 Mon.	3.17	0.62	-2.9	1%	
Bloomberg Treasury 1-3 Yr.	4.30	1.06	-3.6	0%	
Bloomberg US Treasury 7-10 Yr.	3.83	2.27	-1.9	4%	
Bloomberg US Treasury US TIPS	4.30	2.29	-1.4	7%	
Bloomberg Municipal	4.04	2.61	-1.6	8%	
Bloomberg GNMA	4.88	2.99	-1.7	8%	
Bloomberg US Corp IG	5.69	3.70	-1.5	11%	
Bloomberg US Corporate High Yield	9.68	7.42	-0.8	13%	
Bloomberg US Aggregate 1-3 Yr.	4.57	1.52	-2.9	0%	
Bloomberg US Agg Bond	4.75	2.68	-2.1	6%	
Bloomberg Global Treasury Ex. US	2.32	1.40	-1.1	15%	
JPM EMBI Global Diversified USD	9.57	6.00	-3.1	2%	

Treasury Spreads					
Index	Treasury Spreads		St. Dev. From		Percentile (15 Yrs.)
	Current	15 Yr. Avg.	15 Yr. Mean		
Bloomberg Municipal	-0.09	0.89	1.4	95%	
Bloomberg GNMA	0.75	1.26	0.8	74%	
Bloomberg US Corp IG	1.56	1.97	0.4	60%	
Bloomberg US Corporate High Yield	5.55	5.69	0.1	41%	
Bloomberg US Agg Bond	0.62	0.95	0.7	72%	
Bloomberg Global Treasury Ex. US	-1.81	-0.32	1.8	94%	
JPM EMBI Global Diversified USD	5.44	4.27	-1.3	6%	

Commentary

- The spread between the 2 and 10-year Treasury yield continues to widen because shorter date Treasuries are rising quickly as fed rate hike expectations increase. That could change if market expectations shift as 2023 approaches.
- We continue to recommend an overweight allocation to short-term bonds because of lower duration risk compared to intermediate and long-term bonds, though the risk-reward setup is improving for intermediate-term bonds.

The Yield chart above shows current yields for several commonly used fixed income benchmarks, compared to their 15-year average. The Treasury Spreads chart shows spreads of credit-sensitive bond sectors relative to Treasury bonds. We also show by how many standard deviations the current yield is from its average, and how often has it been as high or as low for the past 15 years.



Appendix

U.S. Economic Overview

Employment	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend	Latest
US Nonfarm Monthly Payrolls ('000)	Sep-22	263	315	424	372	474	-52	-161	60%				263
US Total Nonfarm Payrolls - YoY Change	Sep-22	3.9%	4.0%	4.0%	4.0%	4.3%	-0.1%	-0.2%	86%				3.9%
U3 Unemployment Rate	Sep-22	3.5%	3.7%	4.7%	3.6%	3.8%	-0.2%	-1.2%	100%				3.5%
U6 Unemployment Rate	Sep-22	6.7%	7.0%	8.5%	6.8%	7.1%	-0.3%	-1.8%	100%				6.7%
Quit Rate	Aug-22	2.7%	2.7%	2.8%	2.7%	2.9%	0.0%	-0.1%	87%				2.7%
Job Openings: Total Nonfarm ('000)	Aug-22	10,053	11,170	10,629	10,754	11,156	-1,117	-576	89%				10,053
Initial Jobless Claims ('000) 4 Wk. MA - Month End	Sep-22	206	241	370	231	225	-34	-164	93%				206
KC Fed LMCI Momentum Indicator	Sep-22	0.4	0.4	0.8	0.3	0.6	0.0	-0.4	22%				0.4
Labor Force Participation Rate	Sep-22	62.3%	62.4%	61.7%	62.3%	62.2%	-0.1%	0.6%	21%				62.3%
Employment to Population Ratio	Sep-22	60.1	60.1	58.8	60.1	59.8	0.0	1.3	67%				60.1
Consumer	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend	Latest
Retail Sales - YoY Change	Sep-22	8.2%	9.4%	14.5%	9.2%	12.0%	-1.2%	-6.3%	86%				8.2%
Vehicle Sales (Mil. Units, annualized)	Sep-22	13.5	13.1	12.3	13.3	13.4	0.4	1.2	11%				13.5
Personal Savings Rate	Aug-22	3.5%	3.5%	9.5%	3.3%	5.0%	0.0%	-6.0%	1%				3.5%
Production	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend	Latest
Industrial Production - YoY Change	Sep-22	5.3%	3.9%	3.9%	4.4%	4.6%	1.4%	1.4%	96%				5.3%
Capacity Utilization	Sep-22	80.3%	80.1%	77.4%	80.3%	79.6%	0.2%	2.9%	100%				80.3%
Core Capital Goods Orders - YoY Change	Aug-22	8.9%	8.8%	14.6%	8.9%	10.5%	0.1%	-5.7%	87%				8.9%
Housing & Construction	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend	Latest
Building Permits ('000)	Sep-22	1,564	1,542	1,615	1,597	1,742	22	-51	81%				1,564
Housing Starts ('000)	Sep-22	1,439	1,566	1,559	1,461	1,627	-127	-120	78%				1,439
New Home Sales ('000)	Aug-22	685	532	686	600	698	153	-1	72%				685
S&P/Case-Shiller Home Price Index (20 city) - YoY Change	Jul-22	16.1%	18.7%	20.1%	18.4%	19.3%	-2.6%	-4.0%	88%				16.1%
Total Construction Spending - YoY Change	Aug-22	8.5%	9.5%	10.4%	9.6%	9.4%	-1.0%	-1.9%	61%				8.5%
Survey Data	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend	Latest
ISM Manufacturing PMI Composite	Sep-22	50.9	52.8	60.5	52.2	56.2	-1.9	-9.6	18%				50.9
ISM Manufacturing PMI New Orders	Sep-22	47.1	51.3	64.4	48.8	55.1	-4.2	-17.3	3%				47.1
ISM Services PMI Composite	Sep-22	56.7	56.9	62.6	56.8	59.2	-0.2	-5.9	54%				56.7
ISM Services PMI New Orders	Sep-22	60.6	61.8	64.2	60.8	60.6	-1.2	-3.6	70%				60.6
U. of Michigan Consumer Sentiment	Sep-22	58.6	58.2	72.8	56.1	61.8	0.4	-14.2	3%				58.6
Inflation	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend	Latest
Consumer Price Index (CPI) - YoY Change	Sep-22	8.2%	8.3%	5.4%	8.3%	7.9%	-0.1%	2.8%	95%				8.2%
Personal Consumption Expenditure (PCE) - YoY Change	Aug-22	6.2%	6.4%	4.5%	6.5%	6.1%	-0.1%	1.7%	95%				6.2%
Producer Price Index (PPI) - YoY Change	Sep-22	8.5%	8.6%	8.8%	9.0%	10.1%	-0.1%	-0.3%	89%				8.5%
Average Hourly Earnings - YoY Change	Sep-22	5.0%	5.2%	4.8%	5.1%	5.3%	-0.2%	0.2%	87%				5.0%
GDP	As of	Latest	Previous	1 Yr. Ago	2 Qtr. Avg.	4 Qtr. Avg.	1 Qtr. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend	Latest
Real GDP - QoQ (SAAR)	Q2-22	-0.6%	-1.6%	7.0%	-1.1%	1.9%	1.1%	-7.6%	10%				-0.6%
Real GDP - YoY Change	Q2-22	1.8%	3.7%	12.5%	2.7%	4.0%	-1.9%	-10.7%	31%				1.8%
Other	As of	Latest	Previous	1 Yr. Ago	3 Mo. Avg.	12 Mo. Avg.	1 Mo. Diff.	1 Yr. Diff.	Percentile (10 Yrs.)	1 Yr. Trend	5 Yr. Trend	Trend	Latest
Treasury Yield Curve (10 Yr. Minus 2 Yr.) - Month End	Sep-22	-0.39%	-0.30%	1.24%	-0.30%	0.29%	-0.09%	-1.63%	0%				-0.39%
Leading Economic Index (LEI) - YoY Change	Aug-22	-1.0%	-0.1%	8.7%	0.1%	4.9%	-0.9%	-9.7%	8%				-1.0%

Percent of Active Managers Beating Category Benchmark

Category	Performance						Standard Deviation	
	3 Mo.	YTD	1 Yr.	3 Yr.	2021	2020	1 Yr.	3 Yr.
Large-Cap Blend	34%	65%	64%	29%	54%	16%	32%	26%
Large-Cap Growth	30%	41%	34%	12%	16%	35%	34%	40%
Large-Cap Value	48%	64%	68%	68%	62%	54%	39%	44%
Mid-Cap Blend	46%	73%	76%	59%	67%	25%	61%	56%
Mid-Cap Growth	31%	54%	55%	59%	51%	42%	54%	47%
Mid-Cap Value	52%	78%	73%	60%	53%	38%	75%	49%
Small-Cap Blend	17%	70%	86%	59%	90%	17%	76%	68%
Small-Cap Growth	26%	40%	53%	76%	82%	60%	55%	56%
Small-Cap Value	46%	67%	83%	66%	64%	38%	62%	46%
Foreign Large Blend	30%	23%	32%	42%	71%	47%	18%	20%
Foreign Large Growth	50%	27%	34%	57%	74%	53%	14%	10%
Foreign Large Value	37%	20%	27%	63%	67%	77%	15%	46%
Global Equity	38%	57%	59%	35%	55%	28%	49%	48%
Emerging Markets	63%	37%	39%	48%	62%	47%	25%	19%
Intermediate Core Bond	58%	46%	35%	53%	49%	56%	62%	38%
World Bond	96%	96%	96%	100%	96%	21%	90%	74%
Municipal - Short Term	86%	64%	64%	44%	33%	31%	76%	59%
Municipal - Intermediate	19%	40%	38%	20%	70%	9%	82%	62%
Municipal - Long Term	75%	69%	69%	45%	50%	17%	77%	57%
Municipal - High Yield	11%	8%	9%	12%	100%	19%	15%	4%
High Yield Bond	47%	59%	58%	46%	41%	33%	74%	56%
Bank Loan	25%	7%	7%	2%	26%	15%	31%	65%
Short Govt/Corp	88%	72%	75%	75%	85%	27%	71%	24%
Emerging Markets Bond	45%	51%	41%	47%	28%	47%	49%	21%
TIPS	58%	58%	44%	52%	27%	34%	56%	50%
Multisector Bond	96%	80%	79%	89%	98%	30%	60%	6%
Real Estate	29%	29%	19%	66%	33%	80%	29%	75%
Global Real Estate	11%	15%	4%	42%	9%	71%	87%	87%
Natural Resources	7%	30%	41%	56%	81%	74%	56%	44%
Equity Long/Short	65%	90%	82%	8%	11%	23%	93%	90%
Market Neutral	36%	57%	54%	69%	85%	38%	0%	0%
Managed Futures	13%	27%	36%	48%	29%	71%	59%	48%
Multialternative	98%	94%	96%	53%	32%	7%	91%	89%



Commentary

- In recent months, there has been solid outperformance for active managers in Mid-Cap Value, World Bond, Municipal – Short Term, Municipal Long Term, Short Govt/Corp, Multisector Bond, and Multialternative.
- Asset classes where managers struggled to outperform in the last three months include Large Cap Growth, Mid Cap Growth, Small Cap Blend, Small Cap Growth, Foreign Large Blend, Municipal Intermediate, Bank Loan, Real Estate, Global Real Estate, Natural Resources, and Managed Futures.

This chart shows the percentage of active managers beating their category benchmark in each of the Morningstar categories listed. We also show the percentage of active managers that have lower risk, or standard deviation, relative to their Morningstar category benchmark.

A darker background color indicates that actively managed funds are outperforming, with over 67% of non-index funds beating the category benchmark. The lightest color indicates that active management is lagging, with 33% or lower of active managers beating the category benchmark. The middle shade indicates close to average results. For risk, as measured by standard deviation, a darker color indicates risk lower than 67% of the peer group average risk, and the lightest color indicates risk higher than 33% of the peer group benchmark risk.

Asset Class Historical Return Heat Map

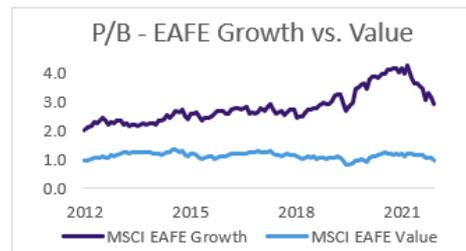
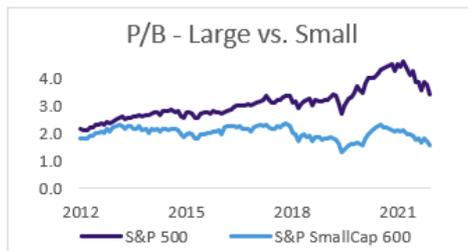
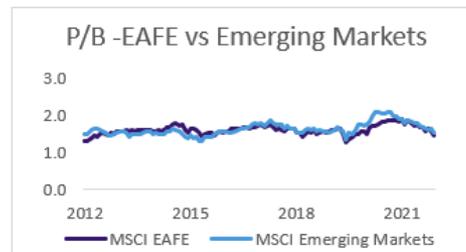
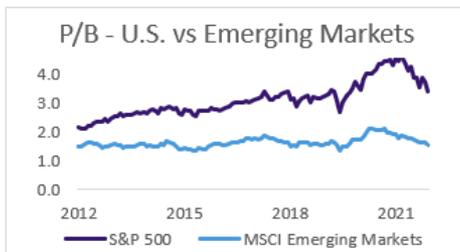
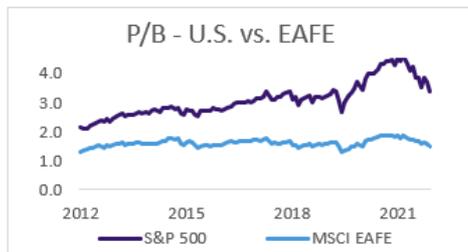
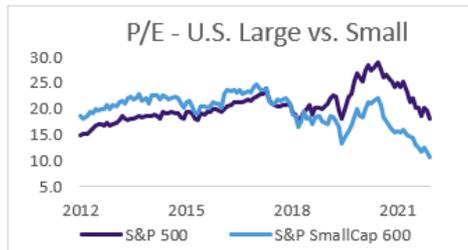
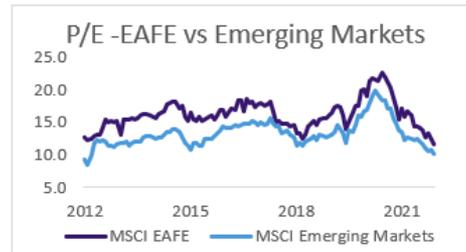
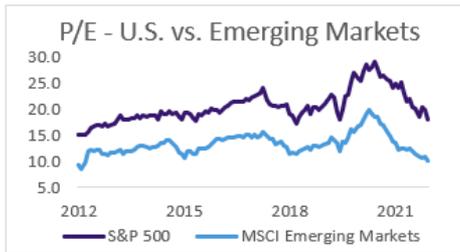
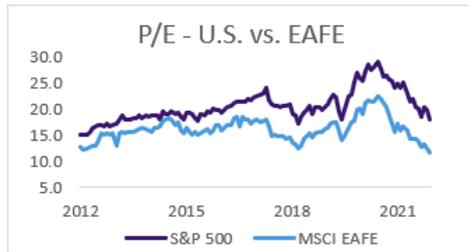
Asset Class	YTD	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
US Large Cap	-23.87	28.71	18.40	31.49	-4.38	21.83	11.96	1.38	13.69	32.39	16.00
US Large Cap Growth	-30.41	32.01	33.47	31.13	-0.01	27.44	6.89	5.52	14.89	32.75	14.61
US Large Cap Value	-16.56	24.90	1.36	31.93	-8.95	15.36	17.40	-3.13	12.36	31.99	17.68
US Mid Cap	-21.52	24.76	13.66	26.20	-11.08	16.24	20.74	-2.18	9.77	33.50	17.88
US Small Cap	-23.16	26.82	11.29	22.78	-8.48	13.23	26.56	-1.97	5.76	41.31	16.33
International Developed	-26.76	11.78	8.28	22.66	-13.36	25.62	1.51	-0.39	-4.48	23.29	17.90
Emerging Market Equities	-26.89	-2.22	18.69	18.90	-14.25	37.75	11.60	-14.60	-1.82	-2.27	18.63
REITs	-29.32	45.91	-11.20	23.10	-4.22	3.76	6.68	4.48	32.00	1.22	17.12
Commodities	13.57	27.11	-3.12	7.69	-11.25	1.70	11.77	-24.66	-17.01	-9.52	-1.06
Gold	-9.31	-4.28	20.95	18.03	-2.81	12.79	7.75	-10.88	-1.75	-28.65	6.08
Intermediate-Term Treasurys	-15.71	-3.07	9.98	8.50	0.90	2.55	1.05	1.63	9.00	-6.04	4.16
Long-Term Treasurys	-30.14	-4.37	18.10	15.11	-2.00	8.98	1.43	-1.59	27.48	-13.88	3.36
TIPS	-13.61	5.96	10.99	8.43	-1.26	3.01	4.68	-1.44	3.64	-8.61	6.98
Mortgage-Backed Securities	-12.60	-1.45	3.68	5.85	1.02	1.86	1.56	1.39	5.97	-2.12	2.42
Corporate IG Bonds	-18.72	-1.04	9.89	14.54	-2.51	6.42	6.11	-0.68	7.46	-1.53	9.82
High Yield Corporate Bonds	-14.74	5.28	7.11	14.32	-2.08	7.50	17.13	-4.47	2.45	7.44	15.81
Emerging Market Debt	-22.24	-1.51	5.88	14.42	-4.61	9.32	10.19	1.23	5.53	-6.58	18.54
US Aggregate Bonds	-14.61	-1.54	7.51	8.72	0.01	3.54	2.65	0.55	5.97	-2.02	4.21
60-40 Allocation	-20.16	16.61	14.04	22.38	-2.63	14.52	8.23	1.05	10.60	18.62	11.29

For each time frame, the heat map colors range from green (stronger relative performance) to red (weaker relative performance). There is a box around the return of the best performing asset class in each time period.

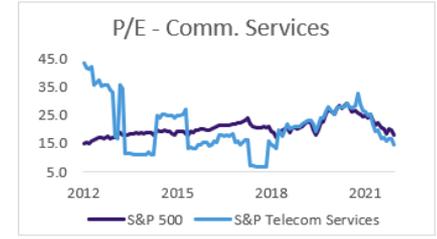
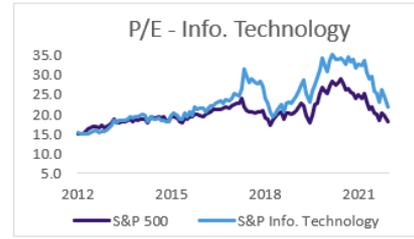
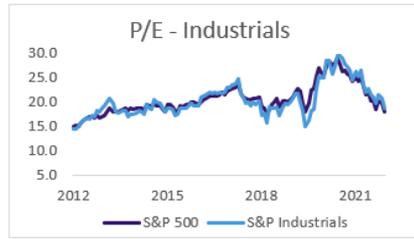
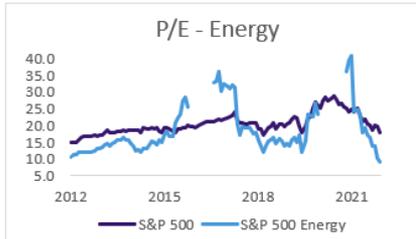
S&P 500 Historical Returns

	January	February	March	April	May	June	July	August	September	October	November	December	Annual		
YTD	-5.17	-2.99	3.71	-8.72	0.18	-8.25	9.22	-4.08	-9.21					-23.87	YTD
2021	-1.01	2.76	4.38	5.34	0.70	2.33	2.38	3.04	-4.65	7.01	-0.69	4.48	28.71	2021	
2020	-0.04	-8.23	-12.35	12.82	4.76	1.99	5.64	7.19	-3.80	-2.66	10.95	3.84	18.40	2020	
2019	8.01	3.21	1.94	4.05	-6.35	7.05	1.44	-1.58	1.87	2.17	3.63	3.02	31.49	2019	
2018	5.72	-3.69	-2.54	0.38	2.41	0.62	3.72	3.26	0.57	-6.84	2.04	-9.03	-4.38	2018	
2017	1.90	3.97	0.12	1.03	1.41	0.62	2.06	0.31	2.06	2.33	3.07	1.11	21.83	2017	
2016	-4.96	-0.13	6.78	0.39	1.80	0.26	3.69	0.14	0.02	-1.82	3.70	1.98	11.96	2016	
2015	-3.00	5.75	-1.58	0.96	1.29	-1.94	2.10	-6.03	-2.47	8.44	0.30	-1.58	1.38	2015	
2014	-3.46	4.57	0.84	0.74	2.35	2.07	-1.38	4.00	-1.40	2.44	2.69	-0.25	13.69	2014	
2013	5.18	1.36	3.75	1.93	2.34	-1.34	5.09	-2.90	3.14	4.60	3.05	2.53	32.39	2013	
2012	4.48	4.32	3.29	-0.63	-6.01	4.12	1.39	2.25	2.58	-1.85	0.58	0.91	16.00	2012	
2011	2.37	3.43	0.04	2.96	-1.13	-1.67	-2.03	-5.43	-7.03	10.93	-0.22	1.02	2.11	2011	
2010	-3.60	3.10	6.03	1.58	-7.99	-5.23	7.01	-4.51	8.92	3.80	0.01	6.68	15.06	2010	
2009	-8.43	-10.65	8.76	9.57	5.59	0.20	7.56	3.61	3.73	-1.86	6.00	1.93	26.46	2009	
2008	-6.00	-3.25	-0.43	4.87	1.30	-8.43	-0.84	1.45	-8.91	-16.79	-7.18	1.06	-37.00	2008	
2007	1.51	-1.96	1.12	4.43	3.49	-1.66	-3.10	1.50	3.74	1.59	-4.18	-0.69	5.49	2007	
2006	2.65	0.27	1.24	1.34	-2.88	0.14	0.62	2.38	2.58	3.26	1.90	1.40	15.79	2006	
2005	-2.44	2.10	-1.77	-1.90	3.18	0.14	3.72	-0.91	0.81	-1.67	3.78	0.03	4.91	2005	
2004	1.84	1.39	-1.51	-1.57	1.37	1.94	-3.31	0.40	1.08	1.53	4.05	3.40	10.88	2004	
2003	-2.62	-1.50	0.97	8.24	5.27	1.28	1.76	1.95	-1.06	5.66	0.88	5.24	28.68	2003	
2002	-1.46	-1.93	3.76	-6.06	-0.74	-7.12	-7.80	0.66	-10.87	8.80	5.89	-5.87	-22.10	2002	
10 Yr. Avg.	0.32	0.66	0.50	1.89	1.09	0.34	3.39	0.33	-1.39	1.38	2.93	0.70	13.16		
25 Yr. Avg.	-0.19	-0.20	1.57	2.06	0.27	-0.13	1.29	-0.33	-1.12	1.67	2.11	1.44	9.06		
40 Yr. Avg.	1.10	0.56	1.33	1.86	1.22	0.34	1.35	0.23	-0.74	1.24	1.82	1.80	12.49		
% Positive (10 Yrs.)	40%	60%	70%	90%	90%	70%	90%	60%	50%	60%	90%	70%	80%		
% Positive (25 Yrs.)	48%	52%	72%	76%	64%	64%	60%	60%	52%	64%	80%	80%	76%		
% Positive (40 Yrs.)	60%	63%	73%	73%	73%	65%	55%	63%	50%	65%	73%	80%	83%		

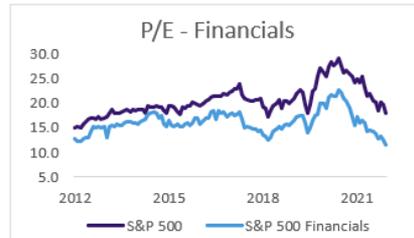
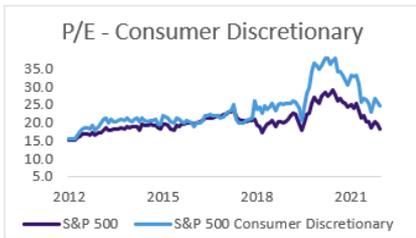
Equity Valuation Charts



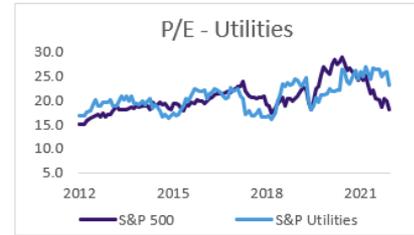
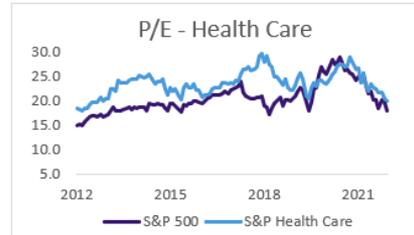
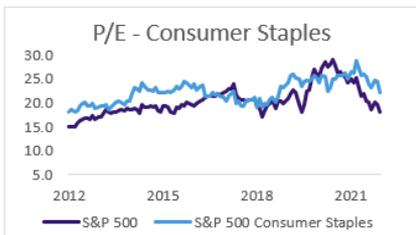
Economically Sensitive Sectors



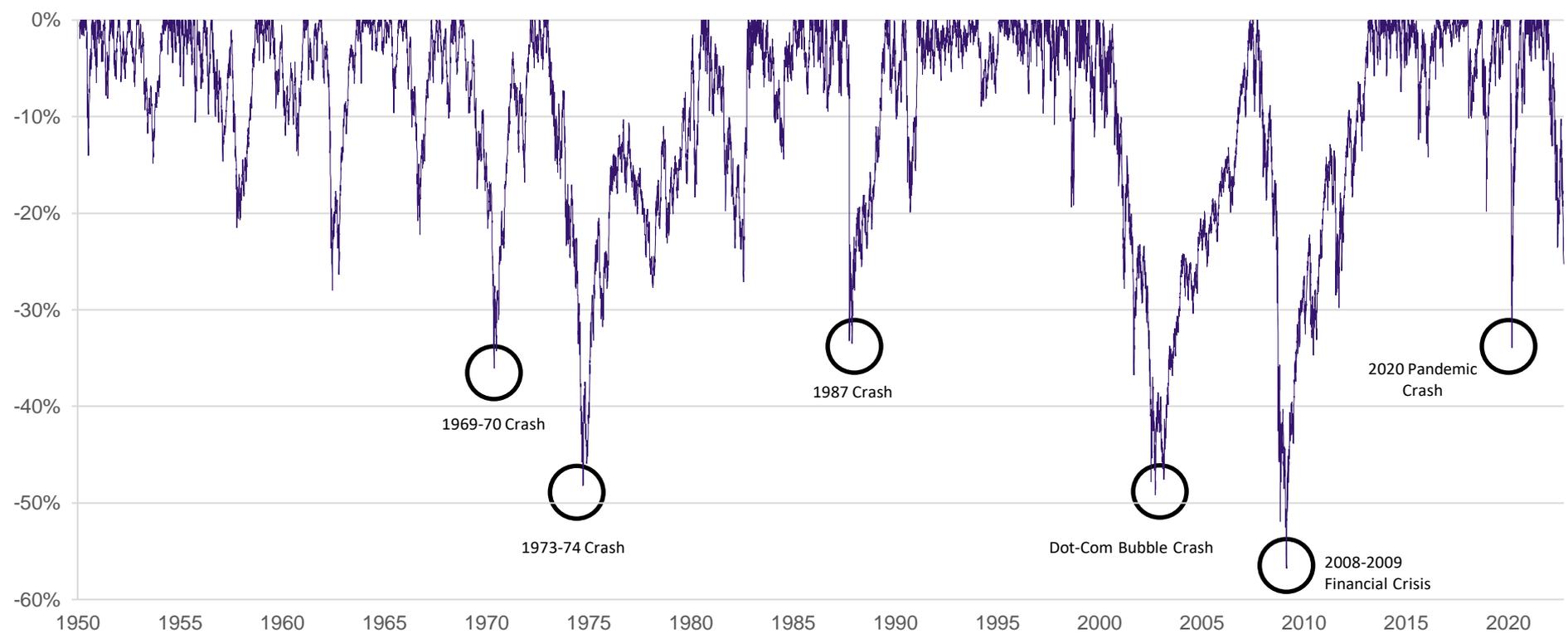
Cyclical Sectors



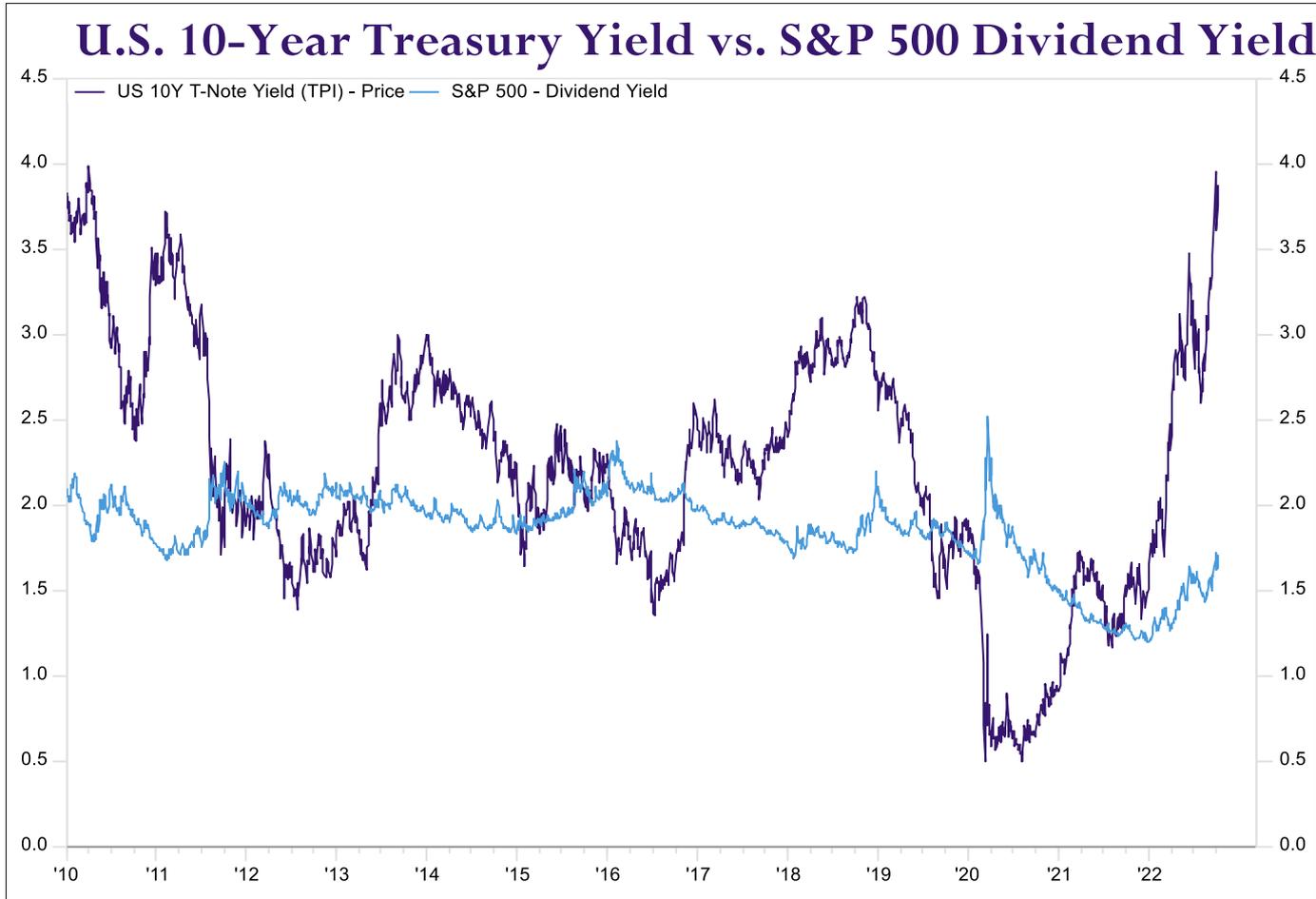
Defensive Sectors



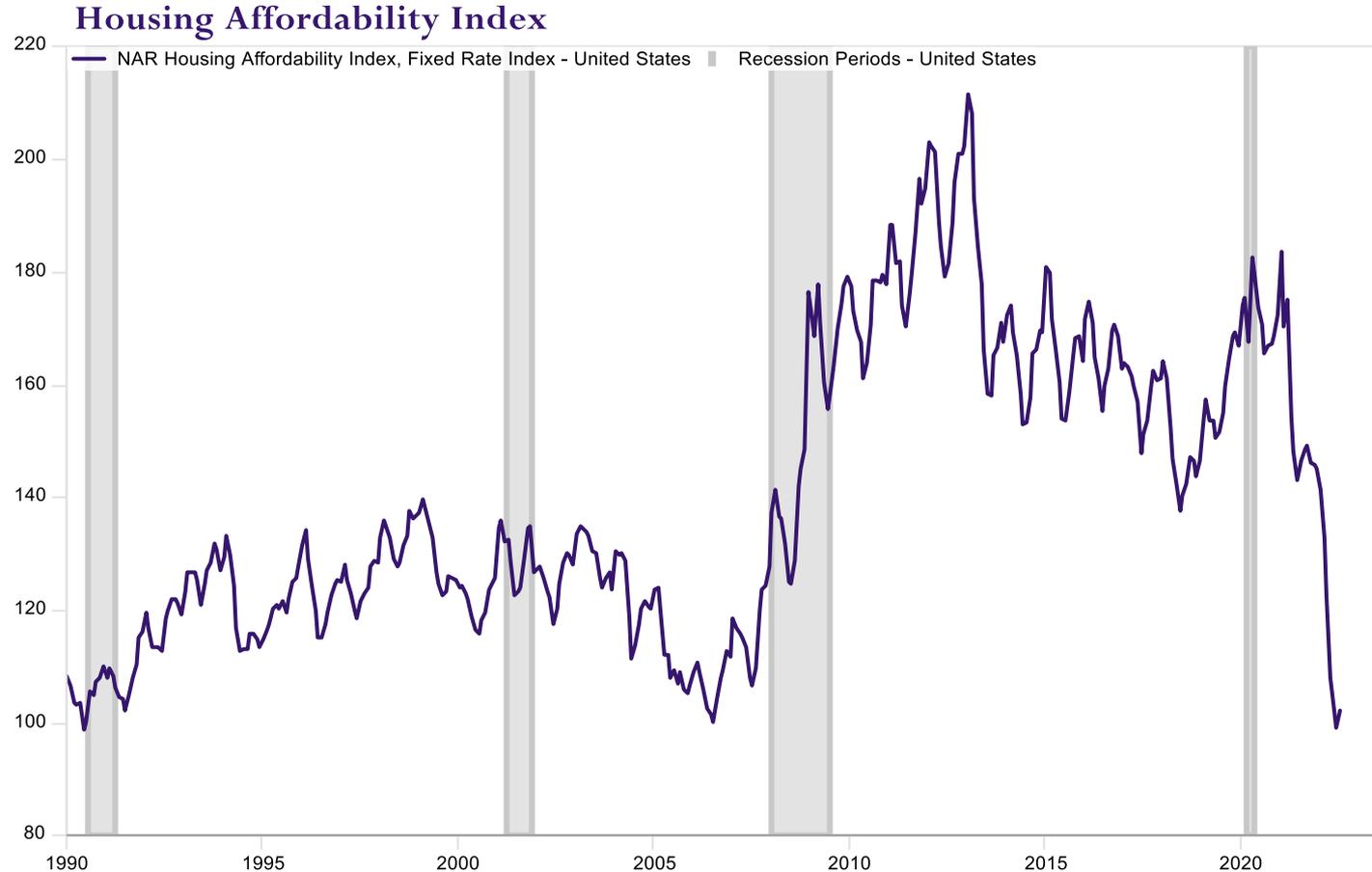
S&P 500 Drawdowns (1950-2022)



10-Year Treasury Yield vs. S&P 500 Dividend Yield

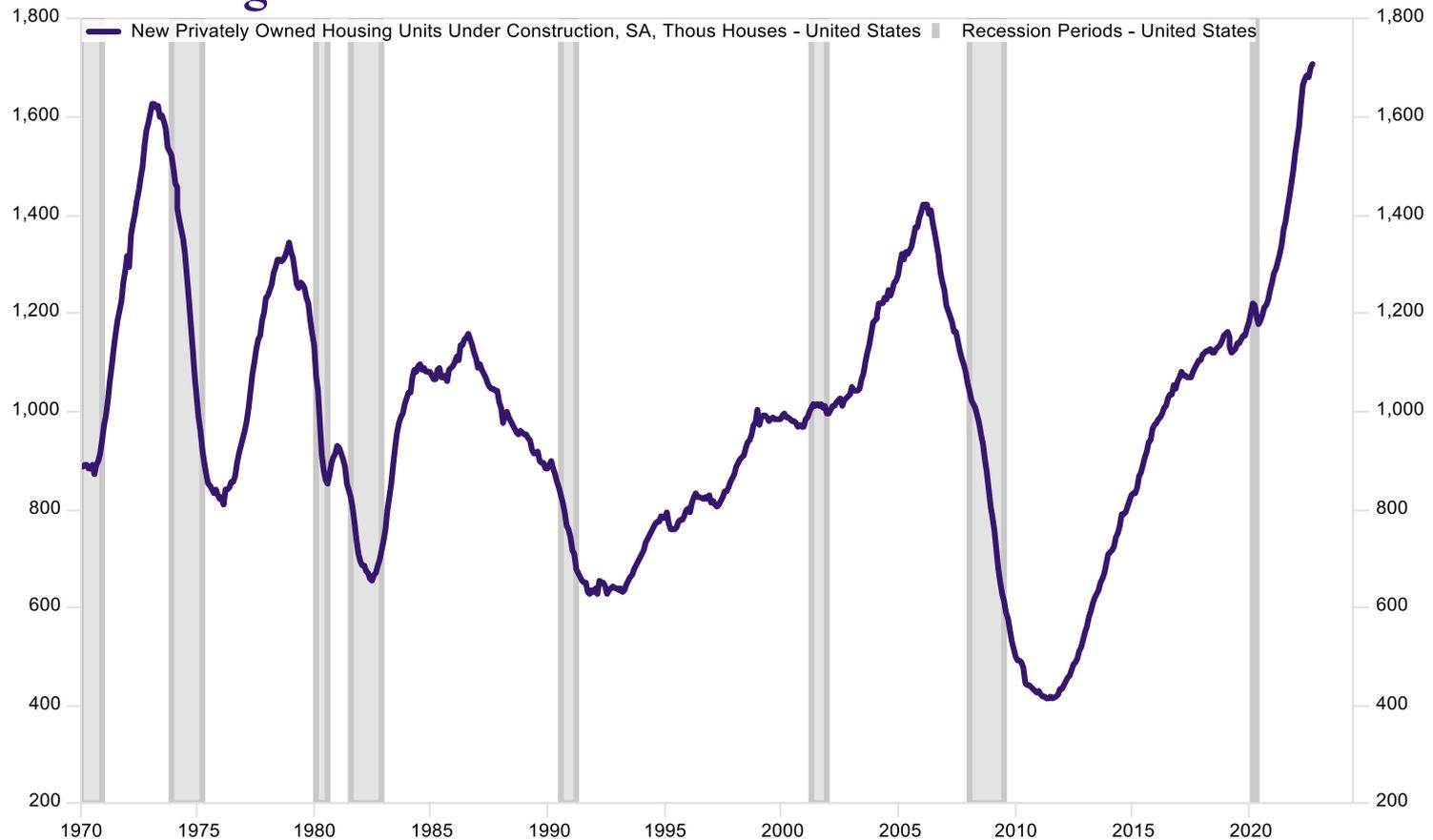


The S&P 500 had a higher yield than 10-year treasury bonds as recently as August 2021. Bond yields have surged since that point and the 10-year treasury note yields around 4%, or more than double the yield for the S&P 500 (1.7%). There has been a lot of pain for bondholders to get this point, but bonds have strong relative yields again.

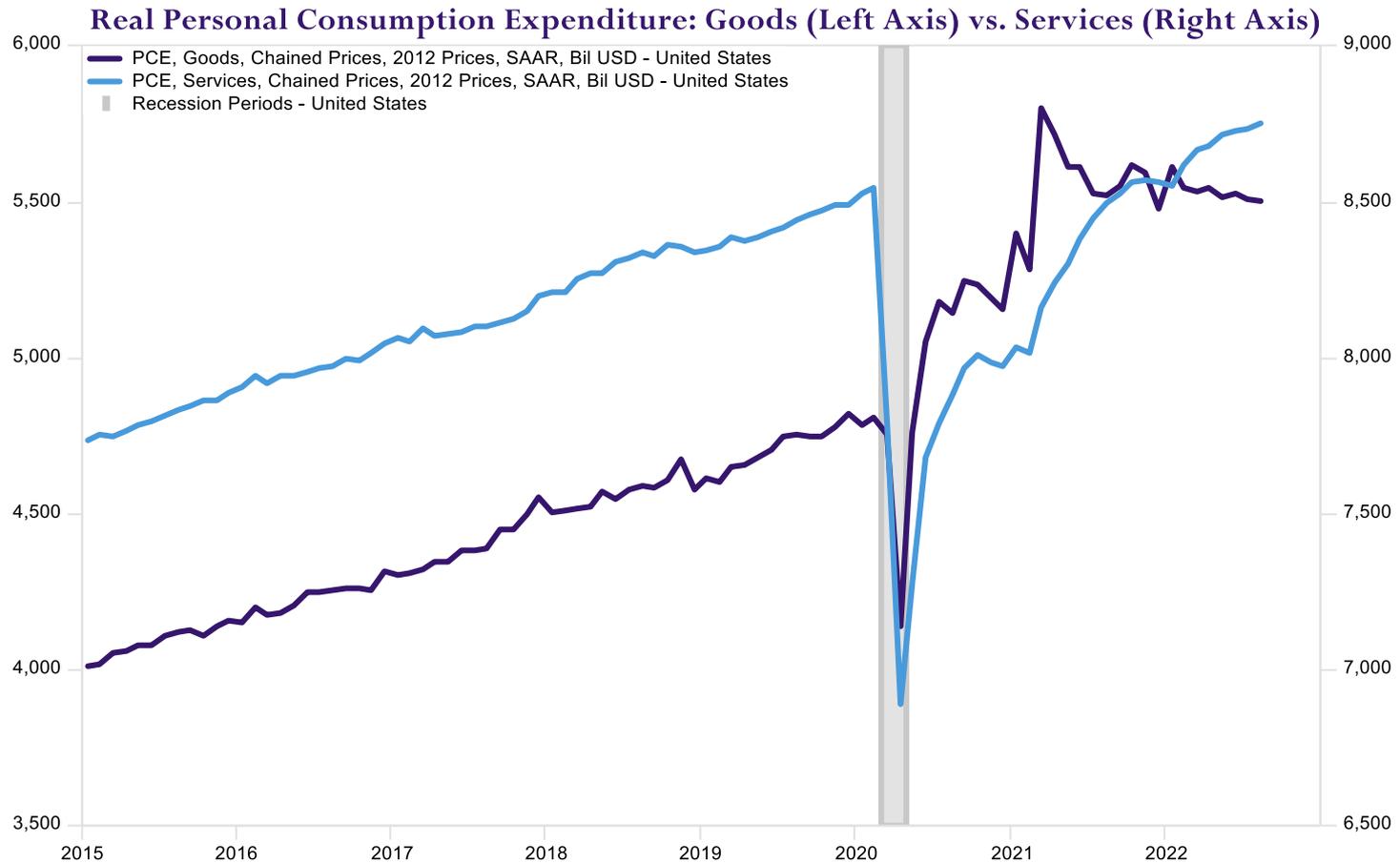


The NAR housing affordability index plummeted this year because of the simultaneous surge in mortgage rates and home prices. Housing affordability hit the lowest level since 1989 in June and settled slightly above that level in late summer. Housing activity is slowing fast, and we likely entered a recession in the housing sector.

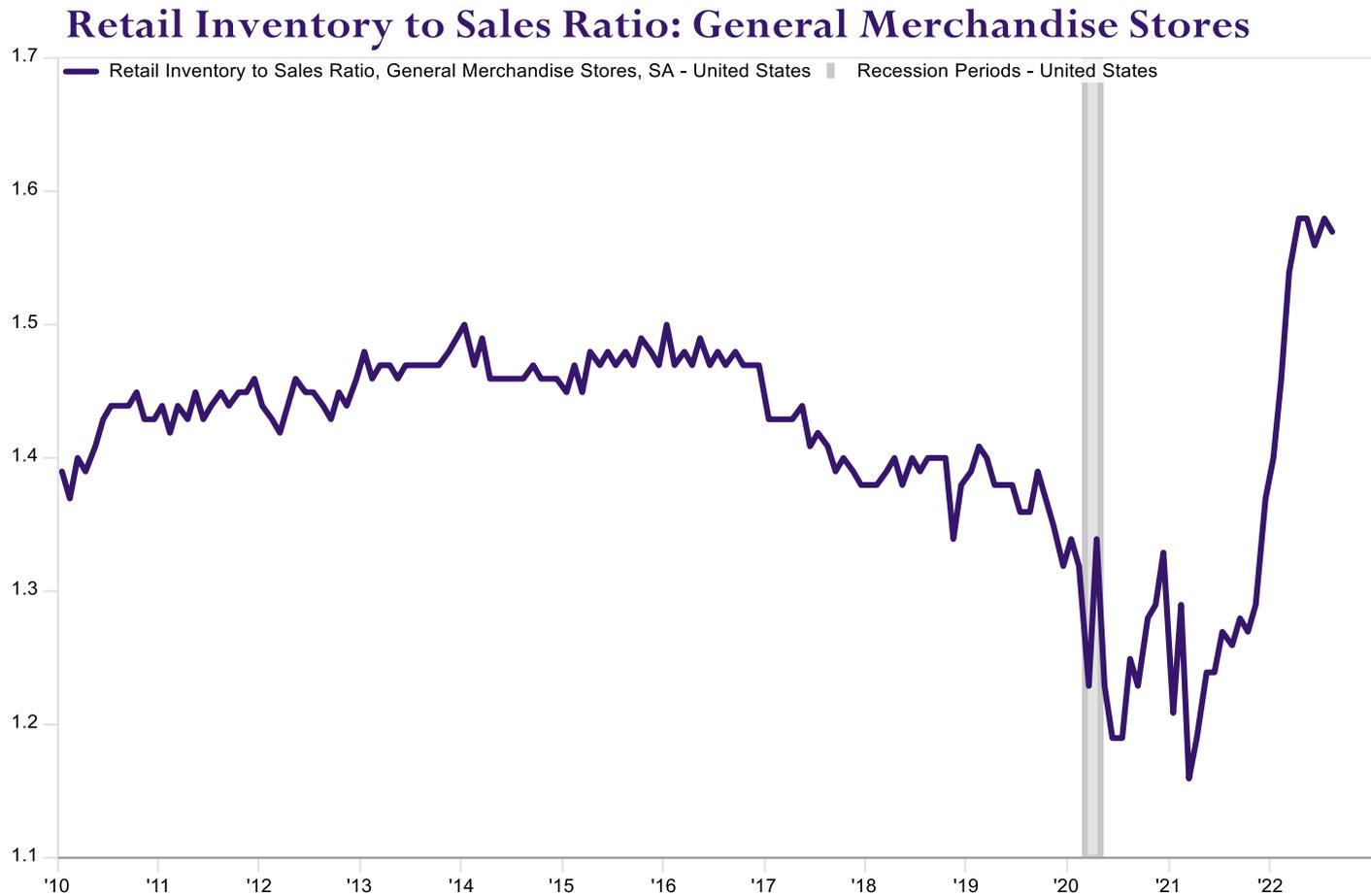
Housing Units Under Construction



Housing affordability is at a multi-decade low and rent price growth remains high, but more supply is coming to help meet housing demand. The total number of housing units under construction is at a record level. Supply chain delays have slowed progress, but the market will absorb a significant number of new houses and multi-family units in the next 12 to 18 months. More supply will help improve housing affordability and slow the pace of rent price growth.



Consumer spending growth is trending back towards services over goods, following the initial surge in goods spending during the first year of the pandemic. Adjusted for inflation, spending on goods has trended lower since the spring of 2021, while service spending is trending higher.



A lot of retailers have the opposite problem compared to a year ago. Retailers dealt with supply chain issues and too little inventory. Now they are dealing with too much inventory. The inventory to sales ratio for general merchandise retailers skyrocketed above pre-pandemic levels. Expect more holiday deals this year.

About Cetera® Investment Management

Cetera Investment Management LLC is an SEC registered investment adviser owned by Cetera Financial Group®. Cetera Investment Management provides market perspectives, portfolio guidance, model management, and other investment advice to its affiliated broker-dealers, dually registered broker-dealers and registered investment advisers.

About Cetera Financial Group®

Cetera Financial Group (Cetera) is a leading financial advice firm. It empowers the delivery of an Advice-Centric Experience® to individuals, families and businesses across the country through independent financial advisors as well as trusted tax professionals and banks and credit unions. Located at 655 W. Broadway, 11th Floor, San Diego, CA 92101.

Comprehensive services include: wealth management solutions, retirement plan solutions, advisory services, practice management support, innovative technology, marketing guidance, regulatory support, and market research.

“Cetera Financial Group” refers to the network of independent retail firms encompassing, among others, Cetera Advisors LLC, Cetera Advisor Networks LLC, Cetera Investment Services LLC (marketed as Cetera Financial Institutions or Cetera Investors), Cetera Financial Specialists LLC, and First Allied Securities, Inc. All firms are members FINRA / SIPC.

Individuals affiliated with Cetera firms are either Registered Representatives who offer only brokerage services and receive transaction-based compensation (commissions), Investment Adviser Representatives who offer only investment advisory services and receive fees based on assets, or both Registered Representatives and Investment Adviser Representatives, who can offer both types of services.

Disclosures (cont.)

The material contained in this document was authored by and is the property of Cetera Investment Management LLC. Cetera Investment Management provides investment management and advisory services to a number of programs sponsored by affiliated and non-affiliated registered investment advisers. Your registered representative or investment adviser representative is not registered with Cetera Investment Management and did not take part in the creation of this material. He or she may not be able to offer Cetera Investment Management portfolio management services.

Nothing in this presentation should be construed as offering or disseminating specific investment, tax, or legal advice to any individual without the benefit of direct and specific consultation with an investment adviser representative authorized to offer Cetera Investment Management services. Information contained herein shall not constitute an offer or a solicitation of any services. Past performance is not a guarantee of future results.

For more information about Cetera Investment Management strategies and available advisory programs, please reference the Cetera Investment Management LLC Form ADV disclosure brochure and the disclosure brochure for the registered investment adviser your adviser is registered with. Please consult with your adviser for his or her specific firm registrations and programs available.

No independent analysis has been performed and the material should not be construed as investment advice. Investment decisions should not be based on this material since the information contained here is a singular update, and prudent investment decisions require the analysis of a much broader collection of facts and context. All information is believed to be from reliable sources; however, we make no representation as to its completeness or accuracy. The opinions expressed are as of the date published and may change without notice. Any forward-looking statements are based on assumptions, may not materialize, and are subject to revision.

All economic and performance information is historical and not indicative of future results. The market indices discussed are not actively managed. Investors cannot directly invest in unmanaged indices. Please consult your financial advisor for more information.

Additional risks are associated with international investing, such as currency fluctuations, political and economic instability, and differences in accounting standards. Emerging markets involve heightened risks related to the same factors as well as increased volatility and lower trading volume.

The **Recession Riskometer** is the average reading of ten economic indicators – Unemployment, ISM Manufacturing and Non-Manufacturing Indexes, Industrial Production Growth, Building Permits Growth, Temporary Staffing Employment Growth, Real Retail Sales Growth, Consumer Confidence as measured by the University of Michigan, Philadelphia Federal Reserve's Leading Indicator for the U.S. Index, as well as the difference between 10- and 2-year Treasury rates.

The Economic Trend Signal measures the average of whether each of the ten indicators in the **Recession Riskometer** are improving, neutral or declining in their most recent reading as compared to historical data.

The U3 Unemployment Rate measures the percentage of people without jobs who are actively seeking work. This is often the officially quoted unemployment rate. The U6 Unemployment Rate expands the definition of U3 by including "discouraged workers", or those who have stopped looking for work because current economic conditions make them believe that no work is available for them, other "marginally attached workers", or those who would like and are able to work, but have not looked for work recently, as well as part-time workers who want to work full-time, but cannot due to economic reasons.

The ISM Manufacturing Index is based on surveys of over 400 manufacturing firms across 20 industries by the Institute of Supply Management. Equal weight is given to responses in five areas - new orders, production, supplier deliveries, employment and inventories. Generally, a reading over 50 indicates expansion, and a reading in the low 40's suggests recessionary conditions. Changes in the index are also helpful in gauging the direction of economic growth.

The ISM Services Index is based on surveys of over 350 non-manufacturing firms in 17 industries representing over 80% of the U.S. economy by the Institute of Supply Management. The survey shows the percentage of managers reporting higher activity, lower activity or no change in the following areas: business activity, new orders, employment, supplier deliveries, backlog of orders, new export orders, inventory change, inventory sentiment, imports, and prices.

Industrial Production and Capacity Utilization is measured monthly by the United States Federal Reserve, based on hours worked by industrial-sector employees. The report shows total amount of US industrial production as a percentage compared to a baseline year. It also offers percentage changes from month to month and year to year, and a breakdown of production by industry grouping.

Building Permits are a measure of the issuance of permits to build new housing units (single and multi-family units). Building Permits Growth is a measure of the total year-over-year percentage change of the 3-month average of building permits. This indicator leads housing construction and provides a signal for potential weakness in the housing sector when it is declining.

Definitions (cont.)

The US Bureau of Labor Statistics surveys the temporary staffing industry is surveyed in its Professional and Business Services. They produce a report on Temporary Help Employment - changes in this figure are often used as a predictor of changes in future employment. Changes in Temporary Help Employment is a coincident economic indicator.

Real Retail Sales Growth is a measure of the total year-over-year change in retail and food sales adjusted for inflation using the Consumer Price Index. Real Retail Sales figures provided are the year-over-year change of the 3-month average. By neutralizing the impact of inflation, the year-over-year change in retail and food sales provides a better view into consumer spending strength because growth in this figure indicates stronger demand without the impact of rising prices. Real Retail and Food Sales typically decline heading into recession, and a weaker read is a concern for the economy.

The University of Michigan Consumer Sentiment Index is survey of consumer confidence conducted via telephone surveys to gather information on consumer expectations regarding the overall economy.

The Leading Economic Index (LEI) is a composite index of several U.S. economic indicators that lead the economy including building permits, manufacturers' new orders, and consumer expectations. This index is often used as a proxy to gauge where the economy is heading over the next several months because it measures the strength of leading indicators. The Leading Economic Index historically has declined ahead of recessions and trends higher during expansions.

The difference (spread) between the yields of the 10-Year and 2-Year maturity Treasury bonds. Often referred to as the 10-Year/2-Year spread, this metric is one of the early and reliable predictors of recession. Under normal conditions the 10-Year/2-Year spread is positive, as investors demand higher risk premium for longer -term bonds. Spreads are usually wider early in an economic recovery and narrow as growth sets in. As recession becomes more likely, spreads tend to move toward zero or turn negative - this occurs because in periods when economic growth slows inflation decreases and demand for credit declines, pushing long term rates lower.

A Price/Earnings (P/E) ratio is a measure for equity analysis. It is calculated by dividing the current market price of a stock by its earning per share.

A Price/Book (P/B) ratio is a measure for equity analysis. It is calculated by dividing the current market price of a stock by the most recent book value per share.

The yield curve is a graphical representation of several yields or interest rates across different bond maturities. Typical maturities include 3-month, 6-month, 1-year, 2-year, 5-year, 10-year and 30-year.

The High-Yield - US Treasury spread is the percentage difference in current yields of various classes of high-yield bonds compared against U.S. Treasury bonds.

Definitions (cont.)

Percentile is a method of ranking a metric versus its history by measuring the percentage of group observations equal to or lower than it. As an example, if a metric scores in the 80th percentile, it is greater than 80% of all other group observations over the stated time period and lower than 20% of the group observations.

Standard deviation is a statistical method used to gauge asset risk based on measuring the dispersion in returns relative to the average over a specified period of time.

The Global Industry Classification Standard (GICS) is a classification system for equities, it is used by various equity indexes to classify domestic and international stocks and breaks equities down to 11 sectors, which Morningstar breaks down into three groups as described below. Stocks in Energy, Industrials, Information Technology and Telecommunication Services are classified as Sensitive. Consumer Discretionary, Financials and Materials are defined as Cyclical, and Consumer Staples, Health Care and Utilities are classified as Defensive.

Sensitive - The sensitive super sector includes industries which ebb and flow with the overall economy, but not severely so. Sensitive industries fall between the defensive and cyclical industries as they are not immune to a poor economy but they also may not be as severely impacted by a poor economy as industries in the cyclical super sector. In general, the stocks in these industries move closely to the direction of the economy.

Cyclical - The cyclical super sector includes industries significantly impacted by economic shifts. When the economy is prosperous these industries tend to expand and when the economy is in a downturn these industries tend to shrink. In general, the stocks in these industries expand faster when the economy is growing and also contract faster in a recession.

Defensive - The defensive super sector includes industries that are relatively immune to economic cycles. These industries provide services that consumers require in both good and bad times, such as healthcare and utilities. In general, the stocks in these industries are not very sensitive to the direction of the economy.

A drawdown is a measure of the decline from a peak point for an investment or an index. It is typically quoted for a specified period of time, and measured as the percentage between the peak and the subsequent trough in value. The duration of a drawdown indicates the time elapsed before the investment returns to the starting peak value.

A simple moving average of an investment or an index calculates its average price for a set period to the most recent price. The moving average is updated each successive period by deleting the price from the earliest date and adding the newly available most recent price. The result is a trend line for price movements, which may be an indicator of market sentiment. Generally, if the moving average is trending higher and the investment or index price rises above the moving average, sentiment is considered to be bullish, as prices are likely to continue higher, and it may be a good time to buy. If the moving average trend slopes downward, and the investment price is below the moving average, this may be a bearish, or sell signal, as prices may continue to move down.

Index Definitions

The S&P 500 is an index of 500 stocks chosen for market size, liquidity and industry grouping (among other factors) designed to be a leading indicator of U.S. equities and is meant to reflect the risk/return characteristics of the large cap universe.

The S&P Growth Index is a float adjusted, market capitalization weighted index of 317 stocks drawn from the S&P 500 Index that exhibit strong growth characteristics. S&P Dow Jones Indexes uses three factors to measure growth: sales growth, the ratio of earnings change to price, and momentum.

The S&P Value Index is a float adjusted, market capitalization weighted index of 364 stocks drawn from the S&P 500 Index that exhibit strong value characteristics. S&P Dow Jones Indexes uses three factors to measure value: the ratios of book value, earnings and the sales to price sales metric.

The S&P MidCap 400 provides investors with a benchmark for mid-sized companies. The index, which is distinct from the large-cap S&P 500®, measures the performance of 400 mid-sized companies, representing more than 7% of available market cap.

The S&P MidCap 400 Growth Index represents the growth companies of the S&P MidCap 400 Index which itself is composed of mid-cap stocks from the broad U.S. equity market. Growth companies are identified by three factors: book value to price ratio, earnings to price ratio, and sales to price ratio.

The S&P MidCap 400 Value Index represents the value companies of the S&P MidCap 400 Index which itself is composed of mid-cap stocks from the broad U.S. equity market. Value companies are identified by three factors: book value to price ratio, earnings to price ratio, and sales to price ratio.

The S&P SmallCap 600 measures the small-cap segment of the U.S. equity market. Introduced in 1994, the index is designed to track the performance of 600 small-size companies in the U.S, reflecting this market segment's distinctive risk and return characteristics. The index measures a segment of the market that is typically known for less liquidity and potentially less financial stability than large-caps, the index was constructed to be an efficient benchmark composed of small-cap companies that meet investability and financial viability criteria.

Index Definitions (cont.)

The S&P SmallCap 600 Growth Index represents the growth companies of the S&P S&P SmallCap 600 Index which itself is composed of small cap stocks from the broad U.S. equity market. Growth companies are identified by three factors: book value to price ratio, earnings to price ratio, and sales to price ratio.

The S&P SmallCap 600 Value Index represents the value companies of the S&P SmallCap 600 Index which itself is composed of small-cap stocks from the broad U.S. equity market. Value companies are identified by three factors: book value to price ratio, earnings to price ratio, and sales to price ratio.

The MSCI EAFE is designed to measure the equity market performance of developed markets (Europe, Australasia, Far East) excluding the U.S. and Canada. The Index is market-capitalization weighted.

The MSCI EAFE Growth index represents large and mid-cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the U.S. and Canada.

The MSCI EAFE Value index represents large and mid cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the U.S. and Canada.

The MSCI Emerging Markets is designed to measure equity market performance in global emerging markets. It is a float-adjusted market capitalization index.

The MSCI Europe Index is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe.

The MSCI Pacific Index captures large and mid-cap representation across five Developed Markets (DM) countries in the Pacific region. With 470 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

Index Definitions (cont.)

The MSCI ACWI is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 46 country indexes comprising 23 developed and 23 emerging market country indexes. The developed market country indexes included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The emerging market country indexes included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

The S&P 500® Consumer Discretionary Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Consumer Discretionary sector.

The S&P 500® Consumer Staples Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Consumer Staples sector.

The S&P 500® Energy Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Energy sector.

The S&P 500® Financials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Financials sector.

The S&P 500® Health Care Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Health Care sector.

The S&P 500® Industrials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Industrials sector.

The S&P 500® Information Technology Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Information Technology sector.

Index Definitions (cont.)

The S&P 500® Materials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Materials sector.

The S&P 500® Real Estate Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Real Estate sector.

The S&P 500® Telecommunication Services Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Telecommunication Services sector.

The S&P 500® Utilities Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Utilities sector.

The Bank of America Merrill Lynch U.S. Treasury Bill 3 Month index measures the performance of a single issue of outstanding treasury bill which matures closest to, but not beyond, three months from the rebalancing date. The issue is purchased at the beginning of the month and held for a full month; at the end of the month that issue is sold and rolled into a newly selected issue.

The Bloomberg U.S. Treasury: 1-3 Year Index measures the performance of U.S. Treasury securities with remaining maturities of one to three years.

The Bloomberg U.S. Treasury: 7-10 Year Index measures the performance of U.S. Treasury securities that have a remaining maturity of at least seven years and less than 10 years.

The Bloomberg U.S. Treasury: U.S. TIPS Index includes all publicly issued, U.S. Treasury inflation-protected securities that have at least one year remaining to maturity, are rated investment grade, and have \$250 million or more of outstanding face value.

The Bloomberg U.S. Municipal Bond Index is an unmanaged, market-value-weighted index of investment-grade municipal bonds with maturities of one year or more.

The Bloomberg GNMA Index measures the performance of Government National Mortgage Association (GNMA or “Ginnie Mae”) bonds. It is a subset of the Bloomberg Barclays U.S. Aggregate index.

Index Definitions (cont.)

The Bloomberg U.S. Corporate (Investment Grade) Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by U.S. and non-US private-sector industrial, utility and financial issuers. Certificates of deposit are also included. Launched in July 1973, securities included must be rated investment grade (Baa3/BBB-/BBB- or higher). Eligible senior and subordinated corporate securities must have at least one year until final maturity, but in practice the index holdings has a fluctuating average life of around 10.75 years. The index is unhedged and rebalances monthly.

The Bloomberg U.S. Corporate High-Yield Index measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. Securities are classified as high-yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt.

The Bloomberg U.S. Aggregate 1-3 Years Index consists of publicly issued investment grade corporate, US Treasury and government agency securities with remaining maturities of one to three years.

The Bloomberg Capital U.S. Aggregate Bond Index, which was originally called the Lehman Aggregate Bond Index, is a broad based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate debt securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency) debt securities that are rated at least Baa3 by Moody's and BBB- by S&P. Taxable municipals, including Build America bonds and a small amount of foreign bonds traded in U.S. markets are also included. Eligible bonds must have at least one year until final maturity, but in practice the index holdings has a fluctuating average life of around 8.25 years. This total return index, created in 1986 with history backfilled to January 1, 1976, is unhedged and rebalances monthly.

The Bloomberg Global Treasury ex U.S. Bond Index consists of those securities included in the Barclays Global Aggregate Bond Index that are Treasury securities, with the U.S. excluded. The Barclays Global Aggregate Bond Index is comprised of several other Barclays indexes that measure fixed income performance of regions around the world.

The JP Morgan Emerging Markets Bond Index (EMBI) Global Diversified measures the performance of fix-rate for external-currency denominated debt instruments including Brady bonds, loans, Eurobonds in emerging markets. Countries covered are Argentina, Brazil, Bulgaria, Mexico, Morocco, Nigeria, the Philippines, Poland, Russia, and South Africa. It covers more of the eligible instruments than the EMBI+ by relaxing somewhat the strict EMBI+ limits on secondary market trading liquidity.

Index Definitions (cont.)

The Bloomberg Commodity Index is a broadly diversified index that measures 22 exchange-traded futures on physical commodities in five groups (energy, agriculture, industrial metals, precious metals, and livestock), which are weighted to account for economic significance and market liquidity. No single commodity can comprise less than 2% or more than 15% of the index; and no group can represent more than 33% of the index. However, between rebalancings, group weightings may fluctuate to levels outside the limits. The index rebalances annually, weighted 2/3 by trading volume and 1/3 by world production.

The Bloomberg US Treasury 20+ Year index represents the 20+ Year component of the Barclays US Treasury Index. Included securities must have at least 20 years to final maturity regardless of call features, and least \$250 million par amount outstanding. They must be rated investment grade (Baa3/BBB- or higher) by at least two of the following ratings agencies: Moody's, S&P, Fitch.

The Dow Jones U.S. Select REIT Index tracks the performance of publicly traded REITs and REIT-like securities and is designed to serve as a proxy for direct real estate investment, in part by excluding companies whose performance may be driven by factors other than the value of real estate. The index is a subset of the Dow Jones U.S. Select Real Estate Securities Index (RESI), which represents equity real estate investment trusts (REITs) and real estate operating companies (REOCs) traded in the U.S.

The S&P GSCI Gold Index, a sub-index of the S&P GSCI, provides investors with a reliable and publicly available benchmark tracking the COMEX gold future. The index is designed to be tradable, readily accessible to market participants, and cost efficient to implement. The more widely tracked S&P GSCI index is recognized as a leading measure of general price movements and inflation in the world economy. The index represents commodity market beta is world-production weighted and is designed to be investable by including the most liquid commodity futures.

Federal funds rate is the interest banks charge one another when lending reserve balances on an overnight basis. Typically banks with reserve capital above the minimum required to be held at the Federal Reserve will lend the excess to banks who need to meet minimums.

Treasury yield is the return on investment of U.S. government's debt obligations. Short-term Treasury bills offer no interest payments and are issued at discount from face value. The yield of the three-month Treasury bill is the difference between the discount price and face value, expressed as an annualized percentage rate.

Longer-term Treasury notes are issued for maturities from 1-10 years and offer an interest (or coupon) payment. They may be purchased at premium or discount from face value. The yield on 1- and 2- year Treasury notes is based on their coupon payment and face value, adjusted upward if the note was purchased at discount, and downward if the note was purchased at a premium. It is also expressed as an annualized percentage rate.

Index Definitions (cont.)

Factor Indices are designed to reflect the performance of stocks representing a specific set of factor characteristics. Factor-specific indexes are calculated based on Russell and FTSE index universes. The cut-off date for the calculation of all factor data is the close of business on the last business day of the month prior to the review month. Detail on the calculation of each individual factor follow:

Momentum is defined as the cumulative total local return, calculated over the period that starts twelve months prior to the effective date, and ends the Monday following the third Friday of the previous month. A full period history is required to calculate Momentum. Country Relative Momentum is calculated in excess of the country median stock level of Momentum.

Quality is defined as a composite of Profitability and Leverage. Indexes derived from each eligible universe consider three individual measures of Profitability and a single measure of Leverage. Annual reported financial statement items are sourced from a third-party data provider.

Size is calculated as the natural logarithm of each company's full market capitalization in USD. Shares in issue as of the review effective date and price and foreign exchange rates as of the data cut-off date are used to calculate each company's full market capitalization.

Value is represented by a composite of three common valuation measures: • Cash-flow Yield = Latest Annual Cash-Flow / Full Market Capitalization • Earnings Yield = Latest Annual Net Income / Full Market Capitalization • Sales to Price = Latest Annual Sales / Full Market Capitalization Sales to Price is calculated in excess of the country median stock level. Annual measures of cashflow, net income and sales are sourced from a third-party data provider.

Volatility is defined as the standard deviation of five years of weekly (Wednesday to Wednesday) total local returns prior to the rebalance month. A minimum of 52 weekly return observations are required to calculate volatility. Country Relative Volatility is calculated in excess of the country median stock level of Volatility.

Yield is calculated as the natural logarithm of each company's twelve-month trailing dividend yield. Companies whose trailing dividend yield is zero are assigned a negative normalized score (Z-Score).

Asset Class Indexes

Asset Class

US Large Cap
US Large Cap Growth
US Large Cap Value
US Mid Cap
US Small Cap
International Developed
Emerging Market Equities
REITs
Commodities
Gold
Intermediate-Term Treasurys
Long-Term Treasurys
TIPS
Mortgage-Backed Securities
Corporate IG Bonds
High Yield Corporate Bonds
Emerging Market Debt
US Aggregate Bonds
60-40 Allocation

Index

S&P 500
S&P 500 Growth
S&P 500 Value
S&P Midcap 400
S&P SmallCap 600
MSCI EAFE
MSCI Emerging Markets
DJ US Select REIT
Bloomberg Commodities
S&P GSCI Gold
Bloomberg US Treasury 7-10 Yr
Bloomberg US Treasury 20+ Yr
Bloomberg US Treasury US TIPS
Bloomberg GNMA
Bloomberg US Corporate IG
Bloomberg US Corporate High Yield
JPM EMBI Global
Bloomberg US Aggregate Bond
60% S&P 500, 40% Bloomberg US Aggregate Bond

Data Sources

Economic Indicator

Nonfarm Monthly Payrolls ('000)
Total Nonfarm Payrolls - YoY Change
U3 Unemployment Rate
U6 Unemployment Rate
Quit Rate
Job Openings: Total Nonfarm Payroll
Initial Jobless Claims ('000) 4 Wk. MA - Month End
KC Fed LMCI Momentum Indicator
Labor Force Participation Rate
Employment to Population Ratio
Temporary Help Employment
Retail Sales - YoY Change
Vehicle Sales (Mil. Units, annualized)
Personal Savings Rate
Real Retail Sales (3MMA) - YoY Change
Industrial Production - YoY Change
Capacity Utilization
Core Capital Goods Orders - YoY Change
Building Permits ('000)
Housing Starts ('000)

Source

U.S. Bureau of Labor Statistics
U.S. Employment and Training Administration
Federal Reserve Bank of Kansas City
U.S. Bureau of Labor Statistics
U.S. Bureau of Labor Statistics
U.S. Bureau of Labor Statistics
U.S. Bureau of the Census
U.S. Bureau of Economic Analysis
U.S. Bureau of Economic Analysis
Federal Reserve Bank of St. Louis
Board of Governors of the Federal Reserve System (US)
Board of Governors of the Federal Reserve System (US)
U.S. Bureau of the Census
U.S. Bureau of the Census
U.S. Bureau of the Census

Data Sources (cont.)

Economic Indicator

New Home Sales

S&P/Case-Shiller Home Price Index (20 city) - YoY Change

Total Construction Spending - YoY Change

ISM Manufacturing Composite PMI

ISM Manufacturing New Orders

ISM Services Composite PMI

ISM Services New Orders

U. of Michigan Consumer Sentiment

Consumer Price Index (CPI) - YoY Change

Personal Consumption Expenditure (PCE) - YoY Change

Producer Price Index (PPI) - YoY Change

Average Hourly Earnings - YoY Change

Real GDP – QoQ (SAAR)

Real GDP – YoY Change

Treasury Yield Curve (10-Yr. Minus 2-Yr.)

Leading Economic Index (LEI) – YoY Change

Source

U.S. Bureau of the Census

S&P Dow Jones Indices LLC

U.S. Bureau of the Census

Institute for Supply Management

Institute for Supply Management

Institute for Supply Management

Institute for Supply Management

University of Michigan

U.S. Bureau of Labor Statistics

U.S. Bureau of Economic Analysis

U.S. Bureau of Labor Statistics

U.S. Bureau of Labor Statistics

U.S. Bureau of Economic Analysis

U.S. Bureau of Economic Analysis

Federal Reserve Bank of St. Louis

The Conference Board