

# Wells Fargo Investment Institute (WFII) forecasts and guidance

## Global economic forecast

Economic Targets	Latest	2023 YE target	2024 YE target
U.S. GDP Growth	2.4%	2.2%	0.7%
U.S. Inflation	3.7%	3.6%	2.5%
U.S. Unemployment Rate	3.8%	3.9%	5.6%
Eurozone GDP Growth	0.5%	0.4%	0.6%
Eurozone Inflation	4.3%	2.1%	2.0%

Other Economic Targets	Latest	2023 YE target	2024 YE target
Global GDP Growth	3.8%	2.4%	2.3%
Global Inflation	4.0%	4.4%	3.3%
Developed-Market GDP Growth	1.7%	1.5%	0.8%
Developed-Market Inflation	5.3%	3.6%	2.4%
Emerging-Market GDP Growth	5.3%	2.6%	3.3%
Emerging-Market Inflation	3.1%	4.8%	4.0%

Global Equities	Latest	2023 YE target	2024 YE target
S&P 500 Index	4187	4000 - 4200	4600 - 4800
S&P 500 earnings per share	\$222	\$205	\$220
Russell Midcap Index	2623	2700 - 2900	3200 - 3400
Russell Midcap earnings per share	\$151	\$145	\$160
Russell 2000 Index	1651	1650 - 1850	2000 - 2200
Russell 2000 earnings per share	\$74	\$70	\$80
MSCI EAFE	1964	2000 - 2200	2300 - 2500
MSCI EAFE earnings per share	\$153	\$145	\$160
MSCI EM	921	850 - 1050	1000 - 1200
MSCI EM earnings per share	\$90	\$75	\$80

Global Fixed Income	Latest	2023 YE target	2024 YE target
10-Year Treasury	4.95%	4.00% - 4.50%	3.75-4.25%
30-Year Treasury	5.09%	4.00% - 4.50%	4.00-4.50%
Fed Funds Rate	5.50%	5.50% - 5.75%	3.75-4.00%

Global Real Assets	Latest	2023 YE target	2024 YE target
West Texas Crude	\$85	\$80-\$90	\$90-\$110
Brent Crude	\$90	\$85-\$95	\$95-\$115
Gold Price	\$1,980	\$2100 - \$2200	\$2300 - \$2400
Bloomberg Commodity Index (TR)	239	235-255	255-275

Currency Guidance	Latest	2023 YE target	2024 YE target
Dollar/Euro Exchange Rate	\$1.06	\$1.03-\$1.11	\$1.12-\$1.20
Yen/Dollar Exchange Rate	¥150	¥130-¥140	¥120-¥130

Sources: Bureau of Statistics, Wells Fargo Investment Institute, Bloomberg, as of October 25, 2023. Forecasts are not guaranteed and based on certain assumptions and on views of market and economic conditions which are subject to change. Latest economic numbers are year-over-year and as of most recent quarter-end unless noted otherwise. The unemployment rate is a level, not a year-over-year change figure. Latest economic data as of June 30, 2023. U.S. inflation is as of August 31, 2023. U.S. unemployment rate, eurozone inflation, and developed market inflation are as of September 30, 2023. Earnings per share are as of December 31, 2022. Year-end (YE) targets are based on forecasts by Wells Fargo Investment Institute as of October 26, 2023.

## WFII guidance

Fixed Income	Guidance
Cash Alternatives	Neutral
U.S. Taxable Investment Grade Fixed Income	Favorable
U.S. Short Term Taxable Fixed Income	Most Favorable
U.S. Intermediate Term Taxable Fixed Income	Unfavorable
U.S. Long Term Taxable Fixed Income	Most Favorable
High Yield Taxable Fixed Income	Unfavorable
U.S. Municipal Bonds	Favorable
Developed Market Ex-U.S. Fixed Income	Neutral
Emerging Market Fixed Income	Neutral

Equities	Guidance
U.S. Large Cap Equities	Favorable
U.S. Mid Cap Equities	Neutral
U.S. Small Cap Equities	Most Unfavorable
Developed Market Ex-U.S. Equities	Neutral
Emerging Market Equities	Unfavorable

Real Assets	Guidance
Commodities	Favorable
Private Real Estate	Neutral

Alternative Investments	Guidance
Hedge Funds—Relative Value	Favorable
Hedge Funds—Macro	Favorable
Hedge Funds—Event Driven	Neutral
Hedge Funds—Equity Hedge	Neutral
Private Equity	Neutral
Private Debt	Neutral

Equity Sectors	Guidance
Communication Services	Neutral
Consumer Discretionary	Unfavorable
Consumer Staples	Neutral
Energy	Neutral
Financials	Neutral
Health Care	Favorable
Industrials	Favorable
Information Technology	Neutral
Materials	Favorable
Real Estate	Unfavorable
Utilities	Neutral

Sources: Bureau of Statistics, Wells Fargo Investment Institute, Wells Fargo Securities' Economic Group, as of October 25, 2023. Please see page 5 for important definitions regarding guidance.

## Recent WFII Reports

**Savings and spending – 10/25/23**

**Distressed credit and rising interest rates – 10/24/23**

**Europe's second winter without Russian gas - 10/23/23**

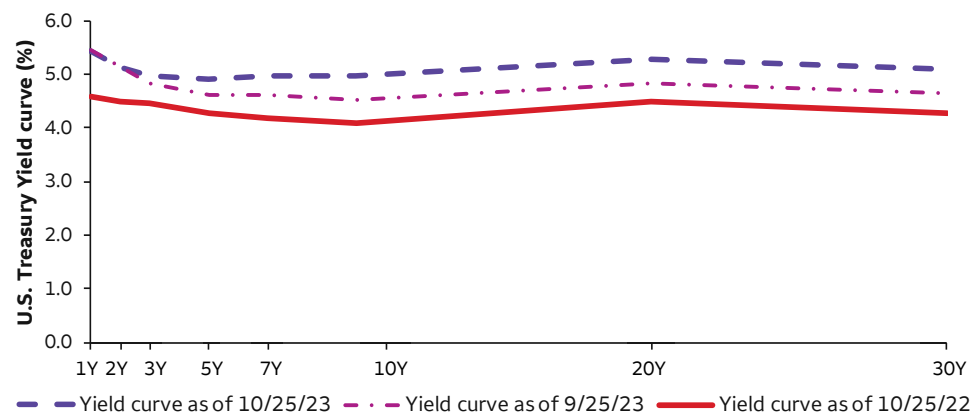
**Investment and Insurance Products: ➤ NOT FDIC Insured ➤ NO Bank Guarantee ➤ MAY Lose Value**

## Economic calendar

Date	Index	Actual/Consensus	Last
23-Oct	Chicago Fed National Activity Index	Actual: 0.0	Last: -0.2
23-Oct	---	---	---
23-Oct	Nikkei Japan Manufacturing PMI	Actual: 48.5	Last: 48.5
24-Oct	S&P Global U.S. Manufacturing PMI	Actual: 50.0	Last: 49.8
24-Oct	S&P Global U.S. Services PMI	Actual: 50.9	Last: 50.1
24-Oct	S&P Global Eurozone Manufacturing PMI	Actual: 43.0	Last: 43.4
25-Oct	U.S. MBA Mortgage Apps.	Actual: -1.0%	Last: -6.9%
25-Oct	U.S. New Home Sales	Actual: 759.0k	Last: 676.0k
25-Oct	Bank of Canada Rate Decision	Actual: 5.0%	Last: 5.0%
26-Oct	U.S. Durable Goods New Orders (MoM)	Consensus: 1.8%	Last: 0.1%
26-Oct	U.S. Pending Homes Sales (MoM)	Consensus: -2.0%	Last: -7.1%
26-Oct	Japan CPI - Tokyo (YoY)	Consensus: 2.8%	Last: 2.8%
27-Oct	U.S. Personal Income	Consensus: 0.4%	Last: 0.4%
27-Oct	U.S. Personal Spending	Consensus: 0.5%	Last: 0.4%
27-Oct	France Consumer Confidence	Consensus: 82.0	Last: 83.0

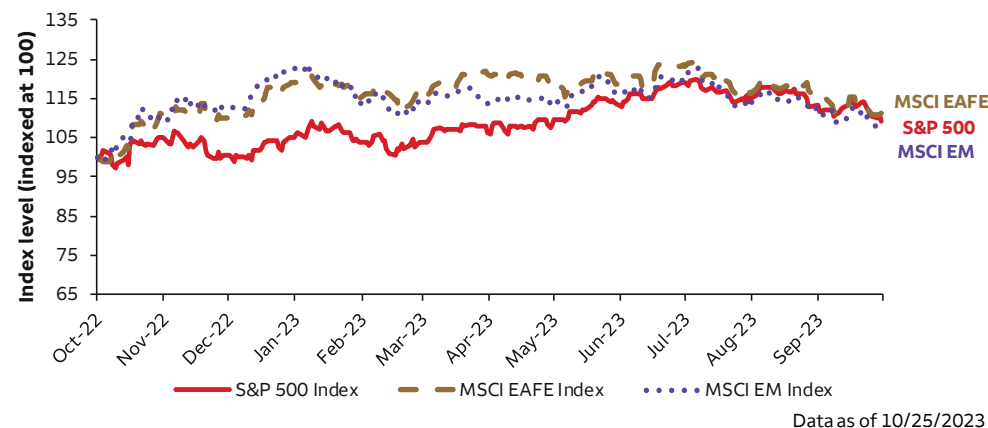
YoY = year over year. MoM = month over month.

### U.S. Treasury yields



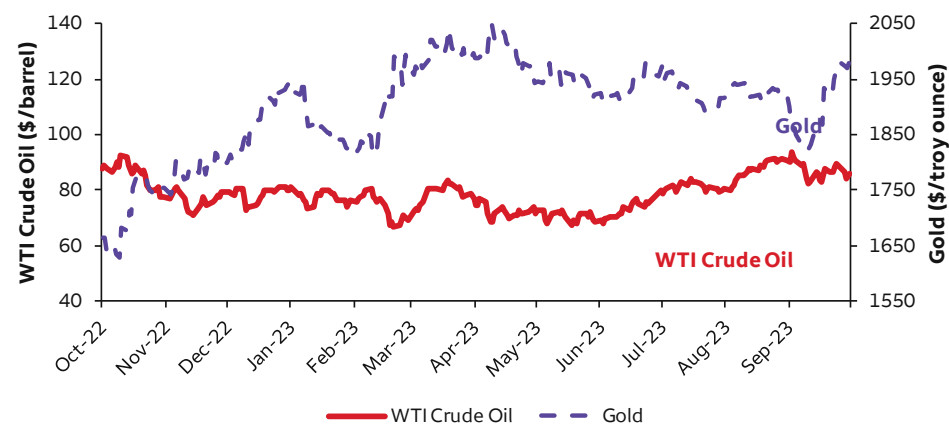
**Past performance is no guarantee of future results.** Current performance may be higher or lower than the performance quoted above. Yields and returns will fluctuate as market conditions change.

### Global equities



Data as of 10/25/2023

### West Texas Intermediate (WTI) Crude Oil and gold price



Data as of 10/25/2023

Source: Bloomberg; Index returns do not reflect the deduction of fees, expenses or taxes. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.**

# Market Performance

## Index Returns

Fixed Income	Prior Close	1 Week	YTD	1 Year
Bloomberg Multiverse	199	0.1	-3.2	2.3
Bloomberg U.S. Aggregate	1985	-0.1	-3.1	0.4
Bloomberg U.S. Treasury	2123	-0.1	-3.0	-0.7
Bloomberg U.S. Corporate	2908	-0.1	-2.0	3.1
Bloomberg U.S. High Yield	2281	0.1	4.3	7.2
Bloomberg Municipal Bond	1214	-0.4	-2.3	2.5
Bloomberg Municipal Bond High Yield	388	-0.6	-1.6	3.9
JP Morgan GBI Global Ex U.S.	360	0.2	-6.4	0.1
JP Morgan EMBI Global	764	0.3	-0.8	7.8

Equity	Prior Close	1 Week	YTD	1 Year
MSCI AC World (USD)	638	-2.7	7.4	11.7
S&P 500	4187	-2.9	10.5	10.3
NASDAQ Composite Index	12821	-3.7	23.3	15.5
DJ Industrial Average	33036	-1.8	1.4	6.0
Russell 1000 Growth	2637	-3.2	23.1	17.6
Russell 1000 Value	1437	-3.0	-2.2	1.6
Russell Mid Cap	2623	-4.2	-1.6	0.5
Russell 2000	1651	-4.5	-5.1	-6.6
MSCI EAFE (USD)	1964	-1.9	4.1	16.5
MSCI EAFE (Local)	1290	-2.0	7.8	12.3
MSCI EM (Emerging Markets) (USD)	921	-2.3	-1.2	12.4
MSCI EM (Emerging Markets) (Local)	56721	-2.4	1.3	11.2
MSCI FM Frontier Markets (USD)	2047	-0.2	4.8	9.2
MSCI FM Frontier Markets (Local)	2989	-0.2	10.2	11.6
CBOE Market Volatility Index	20	5.0	-6.8	-29.1

Real Assets	Prior Close	1 Week	YTD	1 Year
FTSE EPRA Nareit Developed	1738	-4.4	-9.9	-4.7
Alerian MLP Index	249	-1.1	21.7	21.8
S&P Global Infrastructure	2389	-1.3	-8.8	-4.1
Bloomberg Commodities	105	-0.7	-2.9	-2.1

Alternative Strategies	Prior Close	1 Month	YTD	1 Year
HFRI Fund Weighted Composite	18145	-0.6	3.9	6.3
HFRI Relative Value	14580	0.2	4.1	5.6
HFRI Macro	19025	1.3	0.6	-0.7
HFRI Event Driven	20809	-0.3	4.9	8.2
HFRI Equity Hedge	27800	-1.8	4.7	9.1

Alternative Strategies are as of 8/31/2023.

## MSCI Country Returns

Developed	Prior Close	1 Week	YTD	1 Year
MSCI Australia	776	-3.2	-4.4	6.0
MSCI Canada	1886	-3.2	-0.4	2.4
MSCI France	2169	-0.2	7.1	19.2
MSCI Germany	1854	-1.0	5.6	20.3
MSCI Italy	299	-1.6	19.9	38.6
MSCI Japan	3314	-2.7	7.3	21.1
MSCI Netherlands	3900	-1.9	3.6	20.1
MSCI Spain	406	-1.8	12.9	28.6
MSCI Sweden	7471	-3.9	-2.9	6.7
MSCI Switzerland	6497	-2.2	3.1	10.1
MSCI United Kingdom	1077	-2.3	3.8	16.5

Emerging	Prior Close	1 Week	YTD	1 Year
MSCI Brazil	1509	-0.2	9.7	5.5
MSCI Chile	944	-3.7	-9.1	-3.7
MSCI China	55	-4.5	-12.4	16.8
MSCI India	800	-2.9	5.1	6.7
MSCI Korea	431	-4.0	3.5	17.0
MSCI Mexico	5497	-1.2	9.1	11.4
MSCI South Africa	360	-4.6	-10.8	7.5
MSCI Taiwan	549	-0.8	12.6	34.3
MSCI Turkey	265	-2.9	0.0	29.8

## Sector Returns

S&P Sector Returns	Prior Close	1 Week	YTD	1 Year
S&P 500 Communications Services	218	-4.7	38.3	25.9
S&P 500 Consumer Discretionary	1182	-4.9	18.5	3.3
S&P 500 Consumer Staples	718	0.0	-5.8	-0.4
S&P 500 Energy	669	-5.0	2.2	3.5
S&P 500 Financial	534	-3.1	-4.8	-0.6
S&P 500 Healthcare	1474	-2.6	-5.7	-1.0
S&P 500 Industrials	827	-2.9	0.8	9.2
S&P 500 Information Technology	2900	-2.2	34.5	30.1
S&P 500 Material	469	-3.4	-2.7	3.2
S&P 500 Real Estate	202	-4.7	-10.7	-7.3
S&P 500 Utilities	301	0.2	-13.8	-5.9

## Commodity & Currency Returns

Commodities & Currencies	Prior Close	1 Week	YTD	1 Year
CRB Total Return	283	-1.0	1.9	3.3
Baltic Dry Index Freight	1832	-13.0	20.9	4.4
Gold (\$/oz)	1980	1.7	8.5	19.8
Copper (\$/lb)	3.59	0.1	-5.8	5.7
WTI Crude Oil (\$/bbl)	85	-2.2	10.5	12.3
Brent Crude Oil (\$/bbl)	90	-1.5	4.9	-3.6
Natural Gas (\$/btu)	3.01	-1.5	-32.7	-46.4
Gasoline (\$/gal)	2.28	-2.9	-7.1	-21.7
U.S. Dollar per Euro	1.06	0.3	-1.3	6.0
U.S. Dollar per British Pound	1.21	-0.2	0.2	5.6
Japanese Yen per U.S. Dollar	150	0.2	14.6	1.6
United States Dollar Index	107	0.0	2.9	-4.0

## Strategic Asset Allocation Performance

Liquid (no rebalance)	MTD	QTD	YTD	1 Year
Conservative Income	-1.93	-1.93	-1.01	2.03
Moderate Income	-2.20	-2.20	-0.05	3.16
Aggressive Income	-2.31	-2.31	0.82	4.30
Conservative Growth & Income	-2.52	-2.52	0.92	4.40
Moderate Growth & Income	-2.68	-2.68	1.57	5.02
Aggressive Growth & Income	-2.78	-2.78	2.33	5.85
Conservative Growth	-3.04	-3.04	2.56	6.33
Moderate Growth	-3.24	-3.24	2.80	6.82
Aggressive Growth	-3.57	-3.57	2.82	7.25

Sources: Bloomberg, Wells Fargo Investment Institute; as of October 25, 2023. See pages 5-6 for Investment Objectives Definition and Composition. For illustrative purposes only. Returns do not the results of actual trading. Index returns reflect general market results, assume the reinvestment of dividends and other distributions, and do not reflect deduction for fees, expenses, or taxes applicable to an actual investment.

**Strategic Asset Allocation:** An investor’s return objectives, risk tolerances, and investment constraints are integrated with long-term return assumptions to establish exposure to permissible asset classes. Performance results for the strategic asset allocations are calculated using blended index returns. An index is unmanaged and not available for direct investment. Index returns do not reflect the deduction of fees, expenses, or taxes. Returns are U.S. dollar based unless indicated otherwise. Performance reflects total returns.

Source: Bloomberg; as of October 25, 2023. **Past performance is no guarantee of future results.** HFRI data is monthly at the sixth business day; all other indexes are daily.

# Bond Market Data

## Cross-Sector Yield Curves

			Corporate	Municipal	Taxable Equivalent Yield, 37% Tax Rate <sup>2</sup>	Taxable Equivalent Yield, 35% Tax Rate <sup>2</sup>	Taxable Equivalent Yield, 32% Tax Rate <sup>2</sup>
Maturity	Treasury	Agency	A	AAA			
1-Yr	5.43	5.50	5.79	3.82	6.07	5.88	5.62
2-Yr	5.12	5.21	5.63	3.76	5.97	5.79	5.53
3-Yr	4.98	5.06	5.62	3.64	5.78	5.60	5.35
4-Yr	4.96	5.00	5.62	3.58	5.68	5.51	5.26
5-Yr	4.91	5.01	5.68	3.55	5.64	5.47	5.23
7-Yr	4.98	5.15	5.86	3.57	5.66	5.49	5.25
10-Yr	4.95	5.26	6.07	3.65	5.79	5.61	5.36
15-Yr	5.11	5.35	6.30	4.21	6.68	6.48	6.19
20-Yr	5.29	5.56	6.40	4.40	6.99	6.77	6.47
30-Yr	5.09	NA	6.24	4.65	7.38	7.15	6.84

## Corporate Bond Yield Curves and Spreads

Maturity	AA**	AA Spread	A**	A Spread	BBB**	BBB Spread	BB**	BB Spread <sup>1</sup>
1-Yr	5.63	20	5.79	36	6.22	79	7.47	204
2-Yr	5.43	31	5.63	51	6.12	100	7.49	237
3-Yr	5.35	37	5.62	64	6.16	118	7.55	257
4-Yr	5.34	39	5.62	67	6.18	123	7.62	266
5-Yr	5.38	47	5.68	77	6.25	134	7.71	280
7-Yr	5.51	53	5.86	88	6.45	147	7.92	294
10-Yr	5.69	73	6.07	111	6.62	167	8.15	320
15-Yr	5.91	80	6.30	119	6.81	170	8.43	332
20-Yr	6.03	74	6.40	110	6.86	156	8.43	314
30-Yr	6.01	92	6.24	116	6.67	158	8.20	311

## Short-Term Discount Rates

Maturity	Treasury Bills	Agency Discount Notes	Commercial Paper	SOFR
1-month	5.28	NA	5.31	5.33
3-month	5.31	5.50	5.47	5.39
6-month	5.32	5.56	5.56	5.46
12-month	5.15	5.50	NA	5.40

## Short-Term Yield Curves

Maturity	Treasury Bills	Maturity	Treasury Bills
1-month	5.38	6-month	5.56
3-month	5.46	12-month	5.43

## International Yield Curves

Maturity	Canada	France	Germany	Japan	United Kingdom
2-Year	4.72	3.46	3.11	0.07	4.82
5-Year	4.23	3.21	2.76	0.35	4.56
10-Year	4.12	3.51	2.89	0.85	4.61
30-Year	3.88	4.04	3.11	1.83	5.06

## Mortgage Backed Securities

Term	Yield
MBS Conventional -3YR	6.0
GNMA - Aggregate Term	6.0

## Municipal Yield Curves

Maturity	AAA	AA	A	BBB	Pre- Refunded
1-Yr	3.82	3.97	4.08	4.91	3.88
2-Yr	3.76	3.93	4.03	4.85	3.81
3-Yr	3.64	3.84	3.93	4.74	3.70
4-Yr	3.58	3.82	3.89	4.70	3.61
5-Yr	3.55	3.82	3.90	4.70	3.55
7-Yr	3.57	3.86	3.95	4.81	3.56
10-Yr	3.65	3.93	4.05	5.00	3.64
15-Yr	4.21	4.50	4.64	5.66	NA
20-Yr	4.40	4.73	4.85	5.88	NA
30-Yr	4.65	4.98	5.05	6.14	NA

## Constant Maturity Swap Rates

Maturity	Swaps
2-Year	5.01
5-Year	4.65
10-Year	4.61
30-Year	4.38

## Short-Term Discount Rates

Government Repo	
Overnight	5.33
1-week	5.39
1-month	5.42
3-month	5.49

## Other Rates

Money Rates	
U.S. Secured Overnight Financing Rate	5.30
Fed Funds Target Rates	5.50
Prime Rate	8.50

<sup>1</sup> Spread is the difference between the yield on a bond and that of a comparable U.S. Treasury security.

<sup>2</sup> Taxable Equivalent yield (TEY) assumes the tax bracket shown. Income may be subject to state and/or local taxes and/or the alternative minimum tax (AMT).

NA: Not Available

\*\*Standard & Poor's (S&P) Corporate Bond Ratings: AA means high quality and subject to very low credit risk. A means upper-medium grade and subject to low credit risk. BBB means subject to moderate credit risk; these obligations are considered medium-grade and as such may possess certain speculative characteristics. BB is judged to have speculative elements, subject to substantial credit risk.

GNMA yields are bond equivalent yields based on generic issues for varying coupons. They do not represent Consensus GNMA issues. Average life is a means to measure the time until all principal is returned for securities that return principal over time vs. in one lump sum. The yield and average life are calculated using a prepayment assumption that may or may not be met. The assumption used for the calculations is the median of 12 mortgage brokers' estimated prepayment speeds. Spread represents the implied risk premium an investor will receive over an equivalent investment in a U.S. Treasury security. For GNMA's, this spread is an option-adjusted spread as it factors in the series of embedded options inherent in mortgage-backed securities. Pre-refunded municipal bond is a bond that the issuer decided to redeem from the bondholder before its maturity date. After the issuer distributes the new bonds, it will then often purchase Treasury securities that mature around the same time as the original bonds. The interest accumulated from the Treasury securities pays off the interest from the pre-refunded bond. For municipal yield curves, there is no "constant Treasury" in the 4-, 15-, or 20-year maturity segment to facilitate this calculation.

Notes on Index Returns: Index Returns reflect previous business day's closing value, with the exception of Hedge Fund Index returns which have a one-day lag. Three-year returns are annualized.

Source: Bloomberg; as of October 25, 2023.

## WFII guidance legend

**Most favorable:** WFII's highest conviction guidance that indicates a strong desire to overweight an asset class (or sector) within a portfolio. It also communicates that, over a tactical time frame, WFII views the asset class (or sector) as offering investors a very attractive risk/reward opportunity.

**Favorable:** Guidance that indicates a desire to overweight an asset class within a portfolio. It also communicates that, over a tactical time frame, WFII views the asset class (or sector) as providing investors with an attractive risk/reward opportunity.

**Neutral:** Guidance that indicates a desire to maintain an asset class near the long-term (strategic) allocation guidance within a portfolio. It also communicates that, over a tactical time frame, WFII views the asset class (or sector) as providing investors with an acceptable risk/reward opportunity.

**Unfavorable:** This WFII guidance level indicates a desire to underweight an asset class (or sector) within a portfolio. It also communicates that, over a tactical time frame, WFII does not view the asset class (or sector) as providing investors with an attractive risk/reward opportunity.

**Most unfavorable:** WFII's highest conviction guidance indicating a strong belief in underweighting an asset class within a portfolio. This also communicates that, over a tactical time frame, WFII views the asset class (or sector) as offering investors a very unattractive risk/reward opportunity.

## Investment objectives definitions

### Income

Income investment objectives emphasize current income with minimal consideration for capital appreciation and usually have less exposure to more volatile growth assets but can still experience losses.

Conservative Income investors generally assume lower risk but may still experience losses or have lower expected income returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 76% Bloomberg U.S. Aggregate Bond Index, 3% Bloomberg U.S. Corporate High Yield Bond Index, 3% JPM EMBI Global Index, 12% S&P 500 Index, 2% Russell Midcap Index, 2% Bloomberg Commodity Index.

Moderate Income investors are willing to accept a modest level of risk that may result in increased losses in exchange for the potential to receive modest income returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 60% Bloomberg U.S. Aggregate Bond Index, 4% Bloomberg U.S. Corporate High Yield Bond Index, 5% JPM EMBI Global Index, 16% S&P 500 Index, 5% Russell Midcap Index, 2% Russell 2000 Index, 4% MSCI EAFE Index, 2% Bloomberg Commodity Index.

Aggressive Income investors seek a higher level of returns and are willing to accept a higher level of risk that may result in greater losses. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 47% Bloomberg U.S. Aggregate Bond Index, 6% Bloomberg U.S. Corporate High Yield Bond Index, 8% JPM EMBI Global Index, 19% S&P 500 Index, 7% Russell Midcap Index, 2% Russell 2000 Index, 7% MSCI EAFE Index, 2% Bloomberg Commodity Index.

### Growth & income

Growth & Income investment objectives emphasize a blend of current income and capital appreciation and usually have some exposure to more volatile growth assets.

Conservative Growth & Income investors generally assume a lower amount of risk but may still experience losses or have lower expected returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 39% Bloomberg U.S. Aggregate Bond Index, 6% Bloomberg U.S. Corporate High Yield Bond Index, 5% JPM EMBI Global Index, 20% S&P 500 Index, 8% Russell Midcap Index, 5% Russell 2000 Index, 7% MSCI EAFE Index, 4% MSCI Emerging Markets Index, 4% Bloomberg Commodity Index.

Moderate Growth & Income investors are willing to accept a modest level of risk that may result in increased losses in exchange for the potential to receive modest returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 30% Bloomberg U.S. Aggregate Bond Index, 6% Bloomberg U.S. Corporate High Yield Bond Index, 5% JPM EMBI Global Index, 24% S&P 500 Index, 10% Russell Midcap Index, 6% Russell 2000 Index, 8% MSCI EAFE Index, 5% MSCI Emerging Markets Index, 4% Bloomberg Commodity Index.

Aggressive Growth & Income investors seek a higher level of returns and are willing to accept a higher level of risk that may result in greater losses. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 20% Bloomberg U.S. Aggregate Bond Index, 7% Bloomberg U.S. Corporate High Yield Bond Index, 6% JPM EMBI Global Index, 28% S&P 500 Index, 12% Russell Midcap Index, 6% Russell 2000 Index, 9% MSCI EAFE Index, 6% MSCI Emerging Markets Index, 4% Bloomberg Commodity Index.

### Growth

Growth investment objectives emphasize capital appreciation with minimal consideration for current income and usually have significant exposure to more volatile growth assets.

Conservative Growth investors generally assume a lower amount of risk but may still experience increased losses or have lower expected growth returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 16% Bloomberg U.S. Aggregate Bond Index, 3% Bloomberg U.S. Corporate High Yield Bond Index, 30% S&P 500 Index, 13% Russell Midcap Index, 8% Russell 2000 Index, 14% MSCI EAFE Index, 9% MSCI Emerging Markets Index, 5% Bloomberg Commodity Index.

Moderate Growth investors are willing to accept a modest level of risk that may result in significant losses in exchange for the potential to receive higher returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 8% Bloomberg U.S. Aggregate Bond Index, 3% Bloomberg U.S. Corporate High Yield Bond Index, 31% S&P 500 Index, 14% Russell Midcap Index, 10% Russell 2000 Index, 15% MSCI EAFE Index, 12% MSCI Emerging Markets Index, 5% Bloomberg Commodity Index.

Aggressive Growth investors seek a higher level of returns and are willing to accept a higher level of risk that may result in more significant losses. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 31% S&P 500 Index, 16% Russell Midcap Index, 13% Russell 2000 Index, 18% MSCI EAFE Index, 15% MSCI Emerging Markets Index, 5% Bloomberg Commodity Index.

## **Asset class risks**

Asset allocation and diversification are investment methods used to help manage risk. They do not ensure a profit or protect against a loss. All investing involves risks, including the possible loss of principal. There can be no assurance that any investment strategy will be successful. Investments fluctuate with changes in market and economic conditions and in different environments due to numerous factors some of which may be unpredictable. Each asset class has its own risk and return characteristics. The risks associated with the representative index asset classes include:

Alternative Investments, such as hedge funds, are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Hedge funds trade in diverse complex strategies that are affected in different ways and at different times by changing market conditions. They employ aggressive investment techniques, including short sales, leverage, swaps, futures contracts, options, forward contracts, and other derivatives. Strategies may, at times, be out of market favor for considerable periods which can result in adverse consequences for the investor.

Commodities: The commodities markets are considered speculative, carry substantial risks, and have experienced periods of extreme volatility. Commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or other factors affecting a particular industry or commodity.

Equity Securities: Stocks are subject to market risk which means their value may fluctuate in response to general economic and market conditions, the prospects of individual companies, and industry sectors. The prices of small/mid-company stocks are generally more volatile than large company stocks. They often involve higher risks because of smaller and mid-sized companies may lack the management expertise, financial resources, product diversification and competitive strengths to endure adverse economic conditions.

Technology and internet-related stocks, especially of smaller, less-seasoned companies, tend to be more volatile than the overall market.

Fixed Income: Investments in fixed-income securities are subject to interest rate and credit risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond's price. Credit risk is the risk that an issuer will default on payments of interest and principal. High yield fixed income securities are considered speculative, involve greater risk of default, and tend to be more volatile than investment grade fixed income securities. All fixed income investments may be worth less than their original cost upon redemption or maturity. U.S. government securities are backed by the full faith and credit of the federal government as to payment of principal and interest if held to maturity. Although free from credit risk, they are subject to interest rate risk.

Foreign/Emerging Markets: Investing in foreign securities presents certain risks not associated with domestic investments, such as currency fluctuation, political and economic instability, and different accounting standards. This may result in greater share price volatility. These risks are heightened in emerging markets.

Real Estate: Investing in real estate investment trusts (REITs) have special risks, including possible illiquidity of the underlying properties, credit risk, interest rate fluctuations, and the impact of varied economic conditions.

## Definitions

Ifo Business Climate Index is a closely followed leading indicator for economic activity in Germany.

The personal consumption expenditure (PCE) measure is the component statistic for consumption in gross domestic product (GDP). It is essentially a measure of goods and services targeted towards individuals and consumed by individuals.

Bloomberg Multiverse Index provides a broad-based measure of the global fixed-income bond market. The index represents the union of the Global Aggregate Index and the Global High Yield Index and captures investment grade and high yield securities in all eligible currencies. Standalone indexes such as the Euro Floating-Rate ABS Index and the Chinese Aggregate Index are excluded. The Multiverse Index family includes a wide range of standard and customized sub-indexes by sector, quality, maturity, and country.

Bloomberg Municipal Bond Index (from Lehman Brothers Municipal Bond Index) represents municipal bonds with a minimum credit rating of at least Baa, an outstanding par value of at least \$3 million, and a remaining maturity of at least one year. The Index excludes taxable municipal bonds, bonds with floating rates, derivatives, and certificates of participation. The Bloomberg 10-Year Municipal Index is the 10 Year (8-12) component of the Municipal Bond Index.

Bloomberg Municipal High Yield Bond Index is composed of non-investment grade U.S. municipal securities with a remaining maturity of one year or more.

Bloomberg U.S. Aggregate Bond Index is composed of the Bloomberg Capital U.S. Government/Credit Index and the Bloomberg Capital U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities.

Bloomberg U.S. Aggregate 1-3 Year Bond Index is composed of the Bloomberg U.S. Government/Credit Index and the Bloomberg U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 1-3 years.

Bloomberg U.S. Aggregate 5-7 Year Bond Index is composed of the Bloomberg U.S. Government/Credit Index and the Bloomberg U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 5-7 years.

Bloomberg U.S. Aggregate 10+ Year Bond Index is composed of the Bloomberg U.S. Government/Credit Index and the Bloomberg U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 10 years or more.

Bloomberg US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

Bloomberg U.S. Corporate High Yield Index covers the universe of fixed-rate, noninvestment-grade debt.

Bloomberg 1-3 Month U.S. Treasury Bill Index includes all publicly issued zero-coupon U.S. Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non-convertible.

Bloomberg US Treasury Index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint but are part of a separate Short Treasury Index. STRIPS are excluded from the index because their inclusion would result in double-counting. The US Treasury Index is a component of the US Aggregate, US Universal, Global Aggregate and Global Treasury Indexes. The US Treasury Index was launched on January 1, 1973.

Bloomberg Commodity Index is designed to be a highly liquid and diversified benchmark for commodities as an asset class. The index is composed of futures contracts on physical commodities. No related group of commodities (e.g., energy, precious metals, livestock, and grains) may constitute more than 33% of the index as of the annual re-weightings of the components. No single commodity may constitute less than 2% of the index.

CBOE Market Volatility Index (VIX) is a key measure of market expectations of near-term volatility conveyed by S&P 500 stock index option prices.

Chicago Fed National Activity Index (CFNAI) is a monthly index designed to gauge overall economic activity and related inflationary pressure.

Conference Board Consumer Confidence Index<sup>®</sup> (CCI) is a barometer of the health of the U.S. economy from the perspective of the consumer. The index is based on consumers' perceptions of current business and employment conditions, as well as their expectations for six months hence regarding business conditions, employment, and income.

DAX German Stock Index represents 30 of the largest and most liquid German companies traded on the Frankfurt Stock Exchange.

Dow Jones Industrial Average is an unweighted index of 30 "blue-chip" industrial U.S. stocks.

FTSE EPRA/NAREIT Developed Index is designed to track the performance of listed real-estate companies and REITs in developed countries worldwide.

FTSE NAREIT Global Real Estate Index measures the performance of listed real estate companies and REITs worldwide, the series acts as a performance measure of the overall market.

Import Price Index is created by compiling the prices of goods purchased in the U.S. but produced out of country (imports).

JP Morgan Emerging Markets Bond Index Global (EMBI Global), which currently covers 27 emerging market countries. Included in the EMBI.

JP Morgan Global Ex United States Bond Index is a total return, market capitalization weighted index, rebalanced monthly consisting of the following countries: Australia, Germany, Spain, Belgium, Italy, Sweden, Canada, Japan, United Kingdom, Denmark, Netherlands, and France.

## ***Daily Market Update | October 26, 2023 | page 8***

JP Morgan Government Bond Index (GBI) Global Ex-United States, which is a total return, market capitalization weighted index, rebalanced monthly consisting of the following countries: Australia, Germany, Spain, Belgium, Italy, Sweden, Canada, Japan, United Kingdom, Denmark, Netherlands, and France.

MSCI China Index captures large and mid-cap representation across China H shares, B shares, Red Chips and P Chips. With 140 constituents, the index covers about 85% of the China equity universe.

MSCI Developed and Emerging Market Country Indexes are designed to measure the performance of the large and mid-cap segments of the individual country markets and cover approximately 85% of the free-float-adjusted or equity universe in each country.

MSCI EAFE Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada. The Index consists of the following 21 developed market country indexes: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.

MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. The index consists of approximately 23 emerging markets.

MSCI Frontier Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of frontier markets. The MSCI Frontier Markets Index consists of the following 24 frontier market country indexes: Argentina, Bahrain, Bangladesh, Bulgaria, Croatia, Estonia, Jordan, Kenya, Kuwait, Lebanon, Lithuania, Morocco, Kazakhstan, Mauritius, Nigeria, Oman, Pakistan, Romania, Serbia, Slovenia, Sri Lanka, Tunisia, Ukraine, and Vietnam.

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NASDAQ Composite Index measures the market value of all domestic and foreign common stocks, representing a wide array of more than 5,000 companies, listed on the NASDAQ Stock Market.

Purchasing Managers Indexes (PMI) are indicators of the economic health of the manufacturing sector of the countries or regions noted. The PMI index is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment. A PMI of more than 50 represents expansion when compared to the previous month. A PMI reading under 50 represents a contraction, and a reading at 50 indicates no change.

Russell 1000® Growth Index represents the large-cap growth segment of the U.S. equity universe.

Russell 1000® Value index represents the large cap value segment of the U.S. equity universe.

Russell Midcap Index measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 25% of the total market capitalization of the Russell 1000 Index.

Russell 2000® Index measures the performance of the 2,000 smallest companies in the Russell 3000® Index, which represents approximately 8% of the total market capitalization of the Russell 3000®.

Russell 3000® Index measures the performance of the 3,000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market

S&P 500 Index is a capitalization-weighted index calculated on a total-return basis with dividends reinvested. The index includes 500 widely held U.S. market industrial, utility, transportation, and financial companies.

S&P CoreLogic Case-Shiller Home Price Indexes measures U.S. residential real estate prices, tracking changes in the value of residential real estate across the U.S. as well as in 20 metropolitan areas.

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

U.S. Dollar Index (DXY) measures the value of the U.S. dollar relative to majority of its most significant trading partners. This index is similar to other trade-weighted indexes, which also use the exchange rates from the same major currencies.

The HFRI Fund Weighted Composite Index is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net-of-all-fees performance in U.S. dollars and have a minimum of \$50 million under management or a 12-month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

The HFRI Relative Value Index: maintains positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. RV position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

The HFRI Macro Index: Macro: Investment Managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top-down and bottom-up theses, quantitative and fundamental approaches and long and short term holding periods. Although some strategies employ RV techniques, Macro strategies are distinct from RV strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposes to EH, in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

HFRI Event Driven Index: Event-Driven: Investment Managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional

derivative securities. Event Driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

Equity Hedge: Investment Managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. EH managers would typically maintain at least 50 percent exposure to, and may in some cases be entirely invested in, equities, both long and short.

Note: The HFRI Indexes are based on information self-reported by hedge fund managers that decide, on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. ("HFR"). Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indexes may not be complete or accurate representations of the hedge fund universe and may be biased in several ways.

## **Disclosures**

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