WELLS FARGO Investment Institute

Asset Allocation Strategy

August 15, 2024

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Is the bull running out of steam?

After a mostly quiet summer, equity markets have turned lower in recent weeks. Through August 13, the S&P 500 has declined 4.0% from the July 16 peak, and NASDAQ is down by 6.8% over the same period, while experiencing a correction, defined as a 10% selloff. A rotation out of U.S. large-cap technology stocks into small caps and cyclicals, followed by a weak July employment report, and a spike in the Japanese yen were potential catalysts for the recent market volatility.

Seasonality is another possible factor to explain the equity market pullback. Historically, the period between August through September has been the worst two-month stretch for U.S. equity markets.¹ In addition, during U.S. presidential election years, the S&P 500 Index has tended to decline in September.²

The potential for near-term volatility

In our view, today's macro and geopolitical environment offers an additional set of factors that could trigger further episodes of volatility in the coming months. These include:

Slowing economy – Although second quarter real gross domestic product (GDP) was higher than expected at a 2.8% annualized rate, we're expecting a gradual slowdown during the second half of this year as weakening household finances and slower jobs growth hinder consumer spending, the largest component of the U.S. economy.

Sticky inflation – The headline July CPI (consumer price index) and June PCE (personal consumption expenditures) continued trending downward on a year-over-year basis, while super-core inflation (services ex-housing and energy) was flat in July but remains elevated at a 12-month annualized rate of over 4%.

Federal Reserve policy uncertainty – Although Federal Reserve (Fed) Chair Jerome Powell did not commit to reducing short-term rates at the July Federal Open Market Committee (FOMC) meeting, fed fund futures indicate four 0.25% interest rate cuts in 2024 with another four cuts in 2025 – which is double the amount for each year from just two months ago. This is significant as aggressive Fed easing may portend a weaker-than-expected economy.

Corporate earnings – Second-quarter reporting season to date has shown a broadening of earnings for the S&P 500 Index. Yet, the recent sell-off of technology stocks sparked by disappointing earnings from certain tech conglomerates poses another concern for investors — the elevated bar for mega-cap technology companies and the fact that they must exceed earnings estimates, not just meet expectations. Meanwhile, the Bloomberg consensus earnings estimates for the Russell 2000 Index small-cap benchmark continues to drop, with over 40% of companies registering negative earnings.

Market breadth – Despite the recent rebound in small-cap stocks, market breadth remains narrow with a handful of large-cap tech companies accounting for the bulk of the S&P 500 Index's 14.9% year-to-date gain through August 13. After closing the performance gap near the end of 2023, the equal-weighted S&P 500 Index is once again trailing the market-cap index.

Rich valuations – The price-to-earnings (P/E) multiple for the S&P 500 Index based on forward 12-month earnings estimates is 22.7x, well above its 10-year moving average, mainly due to expensive technology behemoths. The Information Technology sector's forward multiple has swelled to 32.7x. Finally, the equity risk premium, a measure of the relative valuation of between stocks and bonds, has hovered near zero, indicating bonds are more attractive than stocks.

Geopolitical risks – The attack on Israel by the militant group Hezbollah, and the violent death of a Hamas leader in Iran threaten to further escalate tensions in the Middle East. This clash coincides with conflicts in Russia-Ukraine, along with uncertainties about China's economic resilience and its relations with Taiwan.

1. Ned Davis, "Seasons, cycles, and rising correction risk," July 15, 2024.

2. Ned Davis, "Do investors have a 'SKEWed' view of the election?" June 26, 2024.

(Continued on the next page.)

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Is the bull running out of steam? (continued)

Cracks in the U.S. labor market – Nonfarm payrolls rose by 114,000 in July — one of the weakest prints since the pandemic — and job growth was revised lower for the prior two months. The unemployment rate unexpectedly climbed for a fourth consecutive month to 4.3%. Meanwhile, initial applications for U.S. unemployment benefits jumped to the highest level in almost a year.

Rising skepticism of Artificial Intelligence (AI) - There is growing concern among investors that the current build-out phase of AI could slow down quickly as end-user companies become more cost conscious and start demanding concrete results. Indeed, some analysts have highlighted the dichotomy between Wall Street estimates for AI-related capital expenditures and the additional revenues that these investments are expected to help generate.

Could U.S. equity prices rebound quickly?

Past performance is no guarantee of future returns. Yet, in our analysis, history has shown that stock market corrections may rebound quickly absent a recession. We see certain factors suggesting equity markets may be poised to bounce back in the near term:

- Fiscal stimulus In our view, Washington is likely to take an aggressive approach to stimulating the economy in an election year. Possible examples include more student loan forgiveness and a restart of the employee retention tax credit.
- Attractive valuations beyond big tech The S&P 500 Index has a forward P/E ratio of just 20x, excluding the "Magnificent 7" large technology companies.³ This suggests the economy will likely continue to gradually expand after a period of near-term weakness.
- *Declining bond yields* Unlike a year ago when bond yields were rising in response to the Fed's rate-hike campaign, yields have declined and the Fed is expected to ease in September.

Investment implications

As a result of the recent market pullback, we are utilizing this opportunity to reallocate from U.S. Short Term Taxable Fixed Income and U.S. Long Term Taxable Fixed Income into U.S. Large Cap Equities and U.S. Small Cap Equities. Balanced portfolios will now be stock/bond neutral versus a previous overweight to fixed income.⁴

We view U.S. Large Cap Equities as the highest-quality major equity class, due to strong company balance sheets compared to other equity classes. While U.S. Small Cap Equities have underperformed, their fundamentals have improved and warrant an upgrade to neutral.

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Global economic summary

United States

The U.S. economy is joining a global economic-growth slowdown already underway in Europe and China. We believe the risk of heightened financial volatility from varying policy responses by the Fed and foreign central banks likely will be contained by more uniformly accommodative policies (outside Japan) as the slowdown works its way through labor markets and inflation. Recession worries in the U.S. have been built on disappointing top-tier employment and manufacturing activity early in the third quarter, abruptly reversing optimism responding to surprisingly strong second-quarter GDP growth of 2.8%. We believe expansion-like job growth and a historically low unemployment rate in July more likely signaled an end to post-COVID catch-up hiring than an approaching recession.

The outlook is being clouded by unevenness between manufacturing and services activity, upper- and lower-income household finances and spending, and varying liquidity conditions facing consumers and small businesses compared with other parts of the economy. Any near-term rebalancing likely will come from cascading economic weakness, undercutting pockets of strength. Economic imbalances have extended to CPI inflation, down to a March 2021 low of 2.9% in July on continued deflation in parts of the index reinforced by slowing inflation in some of the benchmark's previous hot spots, like medical care. Slowing inflation or price declines in discretionary goods and services (like home furnishings, autos, and travel) since early this year have added to evidence of softening economic activity. The PCE deflator, the Fed's preferred inflation gauge, was even lower at 2.5% mid-year, within shouting distance of the central bank's 2% target and supporting imminent rate-cutting by the Fed.

Services inflation still hot, goods not



Sources: Wells Fargo Investment Institute and Bureau of Labor Statistics. Data as of August 14, 2024.

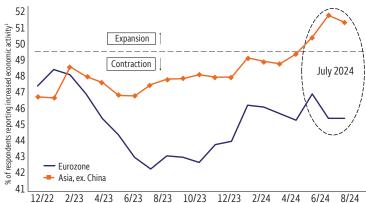
Europe

The global growth slowdown has hit parts of trade-dependent Europe particularly hard, contributing to unbalanced growth between manufacturing declines and modest growth in services activity in the region. Eurozone growth lost a step in the second quarter on an unexpected contraction in top-ranked Germany. The manufacturingservices imbalance has reflected a split personality between the industrial north and more services-oriented south, powered by the boom in global tourism propelling household income growth and the area's property market. Political turbulence has subsided, but needed fiscal restraint to contain outsized deficits is hampering growth. Moreover, weak or weakening demand in key export markets in China and, more recently, the U.S., is affecting overseas sales and local production in Europe's manufacturing centers. Weighed against these headwinds is support from inflation's gradual decline. supporting interest-rate cuts by the European Central Bank and gains in household purchasing power from relatively strong wage increases.

Asia

Emerging Asia continues to struggle with modest economic growth into the third quarter, restrained by virtually flat manufacturing and services activity in China along with slowing growth in the U.S. and other key export markets. Taiwan has had greater success than South Korea in supporting growth through semiconductor and other tech exports, though both economies are bracing for stricter U.S. rules governing chip exports to China. Vietnam and Thailand are leading modest economic growth in Southeast Asia as manufacturing gradually stabilizes. Japanese growth mirrors Europe, as services industries propelled by a global boom in tourism mask declines in manufacturing hurt by tepid global trade. Elsewhere, India remains the star performer in the more broadly defined Asia region, supported by near boomlike conditions in services and manufacturing.





Sources: Wells Fargo Investment Institute and S&P Global, Inc. Data as of August 1, 2024. ¹Based on the purchasing managers' manufacturing activity index.

Key economic statistics

Global growth rates ¹	2Q24	1Q24	4Q23
U.S. real economic growth (%)	2.8	1.4	3.4
Eurozone real economic growth (%)	1.2	1.2	0.0
Japanese real economic growth (%)	-	-2.9	0.1
Chinese real economic growth (%)	2.8	6.1	4.9
U.S. economic data	7/24	6/24	7/23
Unemployment rate (%)	4.3	4.1	3.5
ISM Manufacturing PMI	46.8	48.5	46.5
ISM Services PMI	51.4	48.8	52.8
Retail sales (%)	-	0.0	0.3
Consumer confidence (1985 = 100)	100.3	97.8	114.0
Housing starts (millions; annualized)	-	1.35	1.47
U.S. Dollar Index ²	104.1	105.9	101.9
U.S. Consumer Price Index (CPI) (%)	2.9	3.0	3.2
U.S. core CPI (%)	3.2	3.3	4.7
Personal consumption expenditures (PCE) deflator (%)	-	2.5	3.3

Sources: Bloomberg, Wells Fargo Investment Institute, August 14, 2024. ¹Annualized gross domestic product quarter-to-quarter percent change. ²End of period. An index is unmanaged and not available for direct investment. 1Q = first quarter. 2Q = second quarter. 3Q = third quarter. 4Q = fourth quarter. **Past performance is no guarantee of future results.** See pages 27-32 for important definitions and disclosures.

Wells Fargo Investment Institute forecasts

Gross domestic product (GDP) growth: Disappointing economic data early in the third quarter has rekindled the debate over a hard versus soft landing as second-half activity loses momentum. The outlook has been obscured by highly unbalanced growth. However, we believe the odds still favor a mild or moderate economic slowdown skirting a recession. Forecasting economic turning points is more art than science. However, our view is that post-COVID supports, notably inflation's early decline and rate-cutting by the Fed, will cushion the slowdown enough to forestall a recession.

Recent economic data in the aggregate — including the July jobs report — have yet to reach recession levels. Early warning indicators of an approaching recession either have been flashing false signals for years or are still to be tested by unusual features of this economic cycle. Nonetheless, we are lowering our 2024 U.S. growth target to 2.2% to account for recent economic weakness but nudging our 2025 target to 2.3% — as this year's steeper second-half slowdown we expect supports modestly greater cleansing of household finances and a slightly stronger rebound next year.

CPI Inflation: The increased probability of a noticeable economic slowdown in the coming months has prompted us to lower our 12-month inflation target for year-end 2024 to 2.5%, from 3.0% previously, driven by disinflation (or deflation, in some cases) in economically sensitive goods and services. Modest relief from elevated rental-price increases should add to inflation's glidepath lower in the back half of this year, in a delayed response to increased apartment supply in 2023 and housing affordability pressures boosting rental demand. However, we believe firmer 2025 economic growth bolsters the case for inflation's unusually early re-acceleration next year.

Avoiding a bona fide recession should buoy more cyclically sensitive prices, adding to less economically sensitive hot spots in the CPI, like medical care and insurance costs, as well as renewed rental inflation tied to a more recent pullback in apartment construction. We also expect secular forces to restrain inflation less than in the decades preceding the pandemic. In our view, offsetting productivity gains from AI and other tech-related investment will be the shift to a less efficient, more fragmented global trade system and wage pressures from slower labor-force supply growth in an aging workforce.

Labor market conditions: Gathering evidence of an economic slowdown early in the third quarter has prompted an increase in our forecasted U.S. unemployment in the fourth quarters of 2024 and 2025 to 4.4% and 4.8%, respectively. However, our view is that a higher unemployment rate will be more a function of increased labor supply exceeding the pace of hiring. We still expect employment declines to be limited by a shallow economic slowdown and by catch-up hiring in health care and other industries that grappled with post-pandemic labor shortages. We believe increases in labor supply (the unemployment rate's denominator) will play a larger-than-usual role this cycle, restrained only by an aging workforce and to a lesser extent, by discouraged workers dropping out of the labor force as economic conditions soften. For these reasons, we anticipate the peak unemployment rate this cycle to fall well short of the mild recessions in 1970 and 2001.

Global economy

	Latest (%) ¹	2024 target (%) ¹	2025 target (%) ¹
U.S. GDP growth	3.0 (Q2)	▼ 2.2	▲ 2.3
U.S. inflation ²	2.9 (Jul.)	▼ 2.5 (Dec.)	3.0 (Dec.)
U.S. unemployment rate ³	4.1 (Jul.)	🔺 4.4 (Dec.)	🔺 4.8 (Dec.)
Global GDP growth ⁴	3.5 (Q1)	2.5	2.6
Global inflation ⁴	5.8 (Q2)	3.3	▼ 3.2
Developed-market GDP growth ⁵	1.6 (Q1)	1.5	1.9
Developed-market inflation ⁵	4.5 (Q2)	2.5	▼ 2.3
Emerging market GDP growth	4.9 (Q1)	3.3	3.1
Emerging market inflation	6.8 (Q2)	4.0	3.8
Eurozone GDP growth	0.3 (Q2)	▲ 0.9	2.2
Eurozone inflation ²	2.6 (Jul.)	🔺 2.5 (Dec.)	2.0 (Dec.)

Sources: Bloomberg, Wells Fargo Investment Institute (WFII). All latest numbers from Bloomberg as of August 14, 2024. Targets are based on forecasts by Wells Fargo Investment Institute as of August 15, 2024 and provide a forecast direction over a tactical horizon. The closer the current date is to the year-end, the more WFII guidance focuses on the following year's target. Q1 = first quarter, Q2 = second quarter. \bigstar T: recent change.

¹Average % change in the latest four quarters from the same year-ago period, unless otherwise noted. ²Latest month percent change from a year ago. ³Three-month average as of the date indicated, percent of labor force. ⁴Weighted average of developed country and emerging-market forecasts. ⁵Weighted average of U.S. and other developed-country forecasts.

Forecasts are not guaranteed and based on certain assumptions and on views of market and economic conditions which are subject to change.

Wells Fargo Investment Institute forecasts (continued)

Interest rates: The Fed is a dual mandate bank focused on both price stability (inflation) and full employment. Recent CPI readings have allowed the Fed to gain more confidence that inflation is trending lower toward its stated goal of 2% inflation, and we believe that additional data points in the upcoming months will continue that trend. The economy has been operating near full employment, allowing the Fed to delay implementing rate cuts. Recent employment data, however, has shown more weakness, suggesting that the Fed may be behind the curve in cutting rates and suggests to us that a new rate cut cycle is imminent.

We recently reduced our year-end 2024 federal funds target rate to 4.25%–4.50%. We are expecting 100 basis points (1%) of rate cuts this year with the Fed starting the rate cut cycle in September with a 50-basis point (0.50%) cut. We look for three additional rate cuts in 2025 to bring the federal funds rate down to between 3.50%–3.75% by the end of 2025.

We believe that the near-term path of long-term interest rates is highly dependent on the state of the economy. We expect shortterm U.S. Treasury rates to move lower in tandem with the decline in the Fed's policy interest rate. Also, given our expectation that economic growth and inflation levels will begin to reaccelerate in the second half of 2025, we think it will be difficult for long-term rates to stay meaningfully below the 3.75% level for an extended period of time. Given our expectation for near-term economic weakness however, we recently adjusted our year-end 2024 10-year and 30-year U.S. Treasury yield target is now 3.75%–4.25%, and the 30-year U.S. Treasury yield target is 4.00%–4.50%. Our year-end 2025 10-year target remains unchanged at 4.00–4.50% while our year-end 2025 30-year target remains at 4.25%–4.75%.

Equities: Our expectation is that equity markets may struggle to advance meaningfully past recent highs in the near term as uncertainty surrounding the path of inflation and the timing and magnitude of Fed rate cuts persist. We would view any periods of near-term weakness in equity markets as potential opportunities given our improved 2025 outlook, which forecasts a broadbased recovery that supports improved revenue growth and expanding margins.

Our view is that the incipient earnings recovery we expect this year will accelerate in 2025 and our new targets reflect this. We expect S&P 500 Index earnings per share (EPS) to go from \$245 in 2024 to \$270 in 2025, as opposed to our previous targets of \$240 and \$260. We believe an accelerating earnings recovery in 2025 will allow the potential stock rally to continue without further multiple expansion. Our new forecast is for the S&P 500 Index to end 2024 between 5300–5500 before resuming the trend higher to end 2025 between 5900–6100. The table to the right details our earnings and price targets for the remaining equity asset classes.

We remain tilted toward high-quality assets and believe investors should continue to favor U.S. Large Cap Equities (favorable) over Mid Cap (neutral) and Small Cap Equities (neutral) as well as DM ex. U.S. (neutral) over EM (unfavorable).

Commodities: Commodities underperformed U.S. equities and U.S. bonds as the Bloomberg Commodity Total Return Index (BCOMTR) ended July with a -4% total return. We expect positive economic growth, tight global supply, and interest-rate cuts by the Fed to support higher commodity prices over the tactical horizon. Our year-end 2024 targets are \$80-\$90 per barrel for West Texas Intermediate (WTI), and \$85-\$95 per barrel for Brent crude. For 2025, our year-end targets are higher to reflect our expectation for stronger demand as positive economic growth carries through 2025.

Our 2025 year-end targets are 250–270 for the BCOMTR, \$85–\$95 per barrel for WTI, and \$90–\$100 per barrel for Brent crude. While we are maintaining most of our targets, we recently raised our year-end gold targets to \$2,400–\$2,500 per troy ounce for 2024, and \$2,500–\$2,600 per troy ounce for 2025.

Global fixed income (%)	Latest	2024 YE target	2025 YE target
10-year U.S. Treasury yield	4.03	▼ 3.75-4.25	4.00-4.50
30-year U.S. Treasury yield	4.30	▼ 4.00-4.50	4.25-4.75
	5.25-5.50	▼ 4.25-4.50	▼ 3.50-3.75
Fed funds rate	5.25-5.50	¥ 4.23 4.30	* 5.50 5.75
Fed funds rate Currencies	Latest	2024 YE target	2025 YE target
Currencies	Latest	2024 YE target	2025 YE target

The Intercontinental Exchange (ICE) U.S. Dollar Index is a weighted average of the value of the U.S. dollar relative to a basket of U.S. trade partner currencies, comprised of the euro, Japanese yen, pound sterling, Canadian dollar, Swedish krona, and Swiss franc. A higher index value indicates dollar appreciation.

Global equities	Latest	2024 YE target	2025 YE target
S&P 500 Index	5522	▲ 5300-5500	▲ 5900-6100
S&P 500 earnings per share	\$225	▲ \$245	▲ \$270
Russell Midcap Index	3392	3300-3500	3700-3900
Russell Midcap earnings per share	\$145	▲ \$170	▲ \$195
Russell 2000 Index	2254	2100-2300	2500-2700
Russell 2000 earnings per share	\$59	▼\$65	▼ \$85
MSCI EAFE Index	2381	2200-2400	2400-2600
MSCI EAFE earnings per share	\$154	\$160	\$170
MSCI Emerging Markets (EM) Index	1085	950-1150	1100-1300
MSCI EM earnings per share	\$71	\$75	\$85

Latest EPS (earnings per share) figures are 2023 year-end figures according to Bloomberg as of August 6, 2024.

Global real assets	Latest	2024 YE target	2025 YE target
WTI crude oil price (\$ per barrel)	\$78	\$80-\$90	\$85-\$95
Brent crude oil price (\$ per barrel)	\$81	\$85-\$95	\$90-\$100
Gold price (\$ per troy ounce)	\$2,448	▲ \$2,400-\$2,500	▲ \$2,500-\$2,600
Commodities	228	235-255	250-270

Sources: Bloomberg, Wells Fargo Investment Institute, as of July 31, 2024. Targets are Wells Fargo Investment Institute forecasts, as of August 15, 2024 and provide a forecast direction over a tactical horizon. The closer the current date is to the year-end, the more WFII guidance focuses on the following year's target. YE = year end. An index is unmanaged and not available for direct investment. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See pages 27-32 for important definitions and disclosures. WTI is a grade of crude oil used as a benchmark in oil pricing.

Forecasts, targets, and estimates are not guaranteed and are based on certain assumptions and on our views of market and economic conditions which are subject to change.

Fixed income

Market observations

Most major U.S. fixed-income asset class indexes displayed positive returns in July as yields declined across the curve. U.S. Treasury Bills (+0.4%) underperformed other major U.S. fixed income asset classes, while U.S. long-term taxable fixed income performed best (+3.3%) during the month. Local currency and unhedged international bond market performance was strong in July. Leveraged loans have overtaken preferred stock as one of the best fixed-income major asset classes year-to-date at 5.1% through July 31.

The Fed remained on pause in July for an eighth straight meeting, with Fed Chair Powell setting the stage for a rate-cutting cycle, at their September meeting. Market expectations for policy interest rate cuts rose considerably in July.⁵ The Fed continues unwinding its balance sheet, already shedding more than \$1.5 trillion in securities over the past two years. The monthly pace of quantitative tightening has slowed, down from \$95 billion to \$60 billion beginning in June.

U.S. fixed income: Inflation remained on a lower trend while some economic softening became apparent, which helped U.S. Treasury yields move lower. Investor optimism toward Fed rate cuts increased notably, with market expectations of a rate cut at the Fed's next three meetings. The U.S. Treasury yield curve remains inverted, and last May it broke the previous continuous period of inversion record set in the late 1970s (624 days).

Investor appetite for credit exposure was moderate in July. U.S. investment-grade (IG) corporate fixed income (+2.4%) outperformed high-yield (HY) taxable fixed income (+1.9%) as HY tends to be less interest-rate sensitive. Credit spreads for both HY and IG rose during the month. Still, both spreads continued to trade below long-term averages. We recommend maintaining a neutral position on IG corporates, particularly for investors seeking income potential; we also recently increased our guidance on HY to neutral.

Municipal bond yields fell across the curve over the month. Overall municipal bond performance was positive (+0.9%) as a result. The municipal yield curve remains inverted (10-year minus 1-year) following the inversion of the U.S. Treasury yield curve. We remain favorable on municipal bonds, both essential revenue and general obligation bonds, as they have historically been resilient during periods of economic uncertainty. For investors in higher effective tax brackets, we believe municipal securities are an important part of fixed-income positioning. We also recently increased our guidance on municipal high yield to neutral.

Developed markets (DM): Unhedged DM bond returns (+4.2%) rose as the yen and euro rose against the U.S. dollar in July. Hedged DM bonds rose (+1.6%) but were impacted by the lack of currency returns. Japanese bonds saw the highest return, driven by favorable movements in the yen, while Italian and Spanish bonds saw the largest gains in local currency.

Emerging markets (EM): Stronger EM foreign exchange rates against the U.S. dollar impacted local-currency-denominated EM bonds, which rose in July. Dollar-denominated EM bonds benefited from falling U.S. yields and ended the month higher by 1.8%. Performance was strong for most EM countries, with Saudi Arabia and Mexico being the largest contributors. Argentina saw a very slight rebound following a poor June.

Wells Fargo Investment Institute perspective

We believe the U.S. central bank will pivot to easing at its September meeting now that some economic softening has become apparent. Given the recent decline in long-term yields, we recently decreased our guidance on U.S. Long Term Taxable Fixed Income to unfavorable while reallocating to U.S. Intermediate Term Taxable Fixed Income, 5. Source: Bloomberg, June 30, 2024

Fixed income index total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
U.S. Taxable Inv Grade Fixed Income	2.3	2.3	1.6	5.1	-2.6	0.2
U.S. Short Term Taxable	1.2	1.2	2.6	5.7	0.9	1.4
U.S. Intermediate Term Taxable	2.4	2.4	2.2	5.9	-1.8	0.6
U.S. Long Term Taxable	3.3	3.3	-0.9	2.3	-8.6	-1.9
U.S. Treasury Bills	0.4	0.4	3.1	5.5	3.3	2.2
U.S. Inv Grade Corporate	2.4	2.4	1.9	6.8	-2.7	1.0
U.S. Municipal Bonds	0.9	0.9	0.5	3.7	-0.9	1.2
High Yield Taxable Fixed Income	1.9	1.9	4.6	11.1	2.2	4.2
DM ExU.S. Fixed Income (Unhedged)	4.2	4.2	-4.3	-1.3	-9.8	-4.8
DM ExU.S. Fixed Income (Hedged)	1.6	1.6	0.7	5.1	-2.1	-0.5
EM Fixed Income (U.S. dollar)	1.8	1.8	3.7	8.6	-1.8	0.4
EM Fixed Income (Local currency) ¹	2.3	2.3	-1.5	0.1	-2.4	-1.0

Sources: Bloomberg, J.P. Morgan, Wells Fargo Investment Institute, July 31, 2024. MTD = month to date. QTD = quarter to date. YTD = year to date. Inv Grade indicates Investment Grade; DM indicates Developed Market; EM indicates Emerging Market. Returns over one year are annualized. ¹Returns are converted to dollars for U.S. investors. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.** See pages 27-32 for important definitions and disclosures.

which we upgraded to favorable. We also now have in place unfavorable guidance exposure in U.S. Short Term Taxable Fixed Income, as we anticipate the Fed to begin lowering short-term rates soon. We believe intermediate fixed income sectors strike the best balance for investors between yield generation and price volatility.

We believe the eurozone may see an improving economic environment into 2025, but persistent fiscal policy challenges and interest-rate differentials with the U.S. may impact returns. Japanese yields should remain relatively low despite the recent change in policy from the Bank of Japan. Furthermore, we expect the U.S. dollar should remain relatively strong through year-end 2025. With yields generally below those available in the U.S. and currency returns seen as negative, we continue to have no strategic or tactical allocations to DM ex-U.S. bonds.

We reiterate our view that EM sovereign bonds, both U.S.-dollar-and local-currency-denominated, should continue to display positive performance in 2024. However, it is important to point out that most of the support may come on the back of interest-rate cuts by the Fed, and a strong U.S. dollar relative to key EM currencies may soften this. Still, the relatively attractive yield differential of EM bonds provides greater currency resilience and a larger cushion against capital losses in the event that interest rates rise further or credit spreads widen.

Fixed income tactical guidance*

	Guidance
Cash Alternatives	Neutral
U.S. Taxable Investment Grade Fixed Income	Favorable
U.S. Short Term Taxable	 Unfavorable
U.S. Intermediate Term Taxable	Favorable
U.S. Long Term Taxable	 Unfavorable
High Yield Taxable Fixed Income	▲ Neutral
DM ExU.S. Fixed Income	Neutral
EM Fixed Income	Neutral

Source: Wells Fargo Investment Institute, August 15, 2024. *Tactical horizon is 6-18 months. ▲/▼: recent change.

Fixed income

Sector strategy: U.S. investment-grade securities

Sector tactical guidance* and total returns (%)

Sector	Guidance	1 month	Year to date
Duration	Neutral	-	-
U.S. Government	Neutral	2.2	1.3
Treasury Securities	Neutral	2.2	1.3
Agencies	Neutral	1.5	2.3
Inflation-Linked Fixed Income	Neutral	1.8	2.5
Credit	Neutral	2.3	1.9
Corporate Securities	Neutral	2.4	1.9
Preferred Securities	Neutral	0.3	4.7
Leveraged Loans	Unfavorable	0.7	5.1
Securitized	Favorable	2.6	1.8
Residential MBS	Favorable	2.6	1.6
Commercial MBS	Neutral	2.1	3.6
Asset Backed Securities	Neutral	1.4	3.0
U.S. Municipal Bonds	Favorable	0.9	0.5
Taxable Municipal	Neutral	2.6	2.5
State and Local General Obligation	Favorable	0.9	-0.1
Essential Service Revenue	Favorable	0.9	0.7
Pre-refunded	Neutral	0.7	1.2
High Yield Municipal	A Neutral	1.1	5.3

Sources: Total returns: Bloomberg as of July 31, 2024. Guidance: Wells Fargo Investment Institute, as of August 15, 2024. *Tactical horizon is 6-18 months. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.** MBS = mortgage-backed securities. Duration is a measure of a bond's interest rate sensitivity. See pages 27-32 for important definitions and disclosures. A: recent change.

Duration (Neutral): We believe long-term rates have peaked for this cycle, in line with historical patterns as long-term rates have tended to peak before the end of a Fed tightening cycle. We also believe that the terminal federal funds policy rate⁶ for this cycle has been reached and that the Fed will begin cutting rates soon. Our duration guidance is neutral for both taxable and tax-exempt (municipal) bond sectors. We believe interest rates are likely to remain around current levels for 2024 as an economic slowdown continues to develop with the potential to consolidate slightly in 2025 as a recovery develops and inflation firms. While we maintain a neutral duration stance, we do favor the intermediate part of the yield curve.

U.S. Government (Neutral): We are now neutral on government securities as their historical resilience during economic slowdowns⁷ has faded in importance. We view holdings of Treasury securities as a high-credit-quality hedge during volatile economic environments, which we no longer expect in the coming quarters. We believe that investor appetite for credit risk will tend to flourish over securities perceived as safe havens, which may cause U.S. Treasuries to lag.

Investment-Grade Credit (Neutral): We have a neutral view of IG credit (and IG corporate bonds). High-quality IG credit may allow portfolios to generate excess yield (also known as carry) through spread premium that is meant to compensate investors for perceived

issuer credit risk. IG credit spreads remain relatively narrow, and the attractiveness of IG corporates has diminished; we believe widening may occur as economic concerns arise. Still, the higher yields available in these sectors relative to many other IG fixed-income options support our neutral guidance. We reiterate our bias toward selectivity.

Preferred Stock (Neutral): We maintain a neutral position on preferred securities, especially as we see the potential for a minor economic slowdown. A neutral allocation still implies a full allocation to preferred securities. Income-oriented investors with a longer-term perspective could continue to accumulate preferred securities. The current market highlights that preferred securities come with heightened risks relative to high-quality, traditional fixed-income sectors. More specifically, given that preferred securities have an innate long-dated (perpetual) nature, issues with low coupons can experience greater losses than those with higher coupons during a relatively high-interest-rate environment. Investors participating in this income-oriented sector should understand the risks and complexities inherent in many preferred securities.

Investment-Grade Securitized (Favorable): We are now favorable on the securitized sector given that a large portion of the securitized sector is in the residential mortgage-backed securities (RMBS) sub-sector, which we are also favorable on. We believe that the securitized sector may be positioned to offer value relative to other fixed-income asset classes while still providing favorable credit quality and liquidity. Furthermore, we believe the advantage of RMBS over IG corporates remains visible in creditspread differentials as RMBS spreads have the capacity to narrow further relative to IG bonds. We have moved to a neutral stance on commercial mortgage-backed securities (CMBS). Although there is still distress in CMBS, we believe it should be less severe than previously feared. Still, we favor staying in the highest credit qualities that may provide more reliable cash flows.

U.S. Municipal Bonds (Favorable): Municipal markets recovered in July as yields declined across the curve. We maintain a favorable view of municipal bonds and believe that investors view this asset class as a perceived safe haven of general credit stability. This favorability extends to both essential revenue and general obligation bonds. In early July, municipal-to-Treasury yield ratios (MTYR) stood near 68% for 10-year issues and at 85% for 30-year bonds, higher from the previous month. From a historical valuation perspective using MTYR, both 10-year and 30-year municipal bonds still appear to be somewhat rich as they are both below long-term averages.

We currently favor the 12- to 17-year maturity range, where investors can potentially pick up incremental yield, with a bias toward the longer end of this range. We favor a premium coupon structure and find value in the additional spread pickup offered in 4% coupons over 5% coupons. Bonds with lower coupon structures will have longer duration, and the yield-spread pickup is reflective of that. Municipal credit spreads had been tight in the past 12 months due to limited supply. However, in May, spreads widened noticeably as supply increased, and we did not see a reversal in spreads during June or July. We believe that an emphasis on quality and selectivity remains essential. Municipal investors should also undertake meticulous credit research or access professional management.

6. Terminal policy rate: highest level that the policy rate will reach. 7. Source: Bloomberg, July 31, 2024

Equities

Market observations

U.S. equities: Stocks rallied in July with U.S. small caps (+10.2%) besting U.S. mid caps (+4.7%) and U.S. large caps (+1.2%). This is the largest monthly performance disparity of small caps over large caps since the year 2000. Small caps were spurred on by better-than-expected CPI data and dovish comments from Fed Chair Jerome Powell, suggesting rate cuts in the near-term. Mixed earnings outlooks and political events also played a role in large-cap underperformance.

In a sharp reversal from previous months, the S&P 500 Index heavily underperformed as many of the large-cap behemoths that drove recent outperformance turned lower on the month. The Information Technology (-2.1%) and Communication Services (-4.0%) sectors lagged, while the Utilities (+6.8%) and Real Estate (+7.2%) sectors led as interest rates declined.

All the sectors in the Russell 2000 Index posted positive returns with the Financials (+16.6%) and Telecommunications (+23.0%) sectors leading, while the Energy (+5.7%) and Technology (+3.9%) sectors lagged. Within the Russell Midcap Index, the Financials (+7.9%) and Telecommunications (+14.8%) sectors led, while the Consumer Discretionary (+2.5%), Energy (+2.4%), and Technology (0.0%) sectors lagged.

International equities⁸: U.S. dollar-denominated DM equities (+2.9%) outperformed EM equities (+0.4%) last month. The currency conversion into U.S. dollars boosted DM returns as the dollar broadly weakened relative to other developed market currencies.

Within DM, the Pacific region (+4.5%), continued to outperform the Europe region (+2.2%). In the Pacific, Singapore (+3.0%) and Japan (+5.8%) outperformed while Hong Kong (+0.4%) underperformed. In Europe, Ireland (+10.5%) and Belgium (+6.9%) outperformed while Denmark (-4.1%) and the Netherlands (-4.9%) underperformed.

Regarding EM, the Europe, Middle East, and Africa (+3.7%) region outperformed both the Latin America (+1.1%) and Asia (-0.2%) regions. Strong returns in the United Arab Emirates (+6.8%) and South Africa (+5.2%) drove Europe, Middle East, and Africa outperformance. The poor Asia returns were primarily driven by Taiwan (-4.1%), China (-1.2%), and South Korea (-0.5%). In the Latin America region, Brazil (+1.3%) outperformed, while Chile (-0.5%) was a major detractor.

Wells Fargo Investment Institute perspective

Our solid economic growth forecast likely will flow directly to equities' top line and is a heavy consideration in our outlook. We also expect firms' ability to convert those sales into earnings to improve as we expect corporations to remain committed to cost cutting and improved efficiencies. To reflect this view, we recently raised our 2024 S&P 500 EPS target from \$240 to \$245 and our 2025 S&P 500 EPS target from \$260 to \$270. This EPS increase drives our higher 2024 and 2025 S&P 500 Index year-end price target ranges of 5300-5500 and 5900-6100, respectively.

We prefer U.S. Large Cap (favorable) over Mid Cap (neutral) and Small Cap Equities (neutral). We view U.S. Large Cap Equities as the highest-quality major equity class, with strong company balance sheets compared to other equity classes, durable pricing power, and resilient growth potential. We believe the equity asset class is well positioned to withstand further downside volatility, while our 2025 outlook suggests attractive upside potential. Our preference for quality extends to our view of international equities, where we prefer DM ex U.S. (neutral) over EM Equities (unfavorable).

8. Regional and country returns are measured using the total U.S. dollar returns of their respective MSCI Index. Please see the end of the report for the definitions of the representative indexes.

Equity index total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
U.S. Large Cap Equities	1.2	1.2	16.7	22.1	9.6	15.0
U.S. Large Cap (Growth)	-1.7	-1.7	18.6	26.9	9.5	18.4
U.S. Large Cap (Value)	5.1	5.1	12.1	14.8	7.0	9.9
U.S. Mid Cap Equities	4.7	4.7	9.9	13.7	3.7	10.2
U.S. Mid Cap (Growth)	0.6	0.6	6.6	12.3	-0.2	9.6
U.S. Mid Cap (Value)	6.0	6.0	10.9	13.8	5.5	9.6
U.S. Small Cap Equities	10.2	10.2	12.1	14.3	1.9	8.9
U.S. Small Cap (Growth)	8.2	8.2	13.0	12.8	-1.1	7.6
U.S. Small Cap (Value)	12.2	12.2	11.2	15.7	4.6	9.5
DM Equities Ex-U.S. (USD)	2.9	2.9	8.9	11.8	4.2	7.9
DM Equities Ex-U.S. (Local) ¹	0.8	0.8	12.4	14.6	8.8	9.5
EM Equities (USD)	0.4	0.4	8.1	6.7	-2.3	3.8
EM Equities (Local) ¹	0.7	0.7	11.9	10.8	1.1	6.3

Sources: Bloomberg, Standard & Poor's, Russell Indexes, MSCI Inc., Wells Fargo Investment Institute, July 31, 2024. MTD = month to date. QTD = quarter to date. YTD = year to date. DM indicates Developed Market; EM indicates Emerging Market; USD indicates U.S. dollar. Returns over one year are annualized.¹ Returns are in local currencies as experienced by local investors. U.S. investors would experience gains or losses on currency conversion. An index is unmanaged and not available for direct investment. Past performance is no guarantee of future results. See pages 27-32 for important definitions and disclosures.

Equity tactical guidance*

	Guidance
U.S. Large Cap Equities	Favorable
U.S. Mid Cap Equities	Neutral
U.S. Small Cap Equities	🔺 Neutral
DM Equities Ex-U.S.	Neutral
EM Equities	Unfavorable

Source: Wells Fargo Investment Institute, August 15, 2024. ▲: recent change. *Tactical horizon is 6-18 months.

International equity tactical guidance* by region

Region	Benchmark weight (%)**	Guidance
DM Equities ExU.S.		Neutral
Europe	66	Neutral
Pacific	34	Favorable
EM Equities		Unfavorable
Asia	80	Neutral
Europe, Middle East, and Africa	13	Most unfavorable
Latin America	7	Neutral

Sources: Bloomberg, Wells Fargo Investment Institute (WFII). *Tactical horizon is 6-18 months. Weightings are as of July 31, 2024. WFII guidance is as of August 15, 2024. **Benchmarks are MSCI EAFE Index for DM and MSCI Emerging Markets Index for EM. Weightings may not add to 100% due to rounding. An index is unmanaged and not available for direct investment.

Equities

U.S. equity sector strategy

S&P 500 Index sector tactical guidance* and total returns (%)

Sector	S&P 500 Index weight (%)**	Guidance***	MTD	QTD	YTD	1 year	3 year	5 year
Communication Services	8.9	▲ Favorable	-4.0	-4.0	21.6	30.0	3.8	13.0
Consumer Discretionary	10.0	Unfavorable	1.7	1.7	7.4	12.2	2.6	10.7
Consumer Staples	5.8	Unfavorable	1.9	1.9	11.1	7.9	6.9	9.3
Energy	3.7	Most Favorable	2.1	2.1	13.3	10.1	28.9	13.8
Financials	13.1	Favorable	6.5	6.5	17.3	26.1	8.3	11.4
Health Care	11.9	Neutral	2.7	2.7	10.7	13.5	6.0	12.5
Industrials	8.4	Favorable	4.9	4.9	13.0	17.8	9.2	12.4
Information Technology	31.4	Neutral	-2.1	-2.1	25.6	35.2	17.5	25.8
Materials	2.2	Favorable	4.4	4.4	8.6	9.7	5.3	11.9
Real Estate	2.3	Unfavorable	7.2	7.2	4.6	11.8	-0.5	5.5
Utilities	2.4	Unfavorable	6.8	6.8	16.9	12.4	6.7	7.6
Total	100.0							

Sources: S&P 500 Index weight and total returns: Bloomberg, as of July 31, 2024. Guidance: Wells Fargo Investment Institute, as of August 15, 2024. *Tactical horizon is 6-18 months. MTD = month to date. QTD = quarter to date. YTD = year to date. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.** /V: recent change. **Sector weightings may not add to 100% due to rounding.

***To reposition allocations for consistency with our quidance, add two percentage points of exposure to market weight for favorables, subtract two for unfavorables, and hold market weight for neutrals.

Communication Services (Favorable, was Neutral): The Communication Services sector has multiple secular earnings drivers: search, social media, delivery of live and at-home content, and most recently the development of AI. With the sector trading at a below-market P/E multiple, we believe the opportunity has arrived to upgrade the sector from neutral to favorable.

Consumer Discretionary (Unfavorable): AI optimism has been a near-term tailwind, which we believe has stretched valuations and left the sector more vulnerable to disappointment. A worsening consumer outlook is a headwind.

Consumer Staples (Unfavorable): We expect this defensive and rate-sensitive sector to struggle as the economy stages a modest rebound, while long-term interest rates stay elevated. Stubborn input cost inflation and a lack of pricing power should be headwinds.

Energy (Most Favorable): The fundamental case for the sector is attractive as oil supply remains tight, and OPEC+⁹ seemingly is committed to keeping it that way, while U.S. oil producers' capital discipline and preference for shareholder returns versus production growth is likely to aid in that mission. Valuations are attractive, and oil prices moving into our targets should provide a sizeable tailwind.

Financials (Favorable): Tailwinds include the anticipated start of the Fed easing cycle and the 2025 economic upturn we expect, which should coincide with improved confidence, loan growth, and activity. Increased efficiencies and a potentially more favorable than feared regulatory environment should also benefit the sector.

Health Care (Neutral, was Favorable): This typically defensive sector is likely to struggle should the economy stage a modest rebound through year end 2025 and the more cyclical areas of the market benefit as we expect. On the other hand, the sector does enjoy cyclical and secular tailwinds such as the increased use and effectiveness of weight loss drugs and an aging population that could generate investor interest especially during a slowdown.

Industrials (Favorable): Tailwinds for the sector include multiple stimulus programs, the energy transition, reshoring, data-center expansion, easing input-cost pressures, and continued supply-chain normalization. Sector valuations are fair in our view, and the underperformance during the growth rally provided an attractive opportunity to upgrade Industrials to favorable.

Information Technology (Neutral): We still believe that Information Technology's quality characteristics should serve it well. However, the sector's AI-driven outperformance has lifted valuations to levels that we find unattractive at present.

Materials (Favorable): Outside of the Energy sector, Materials is the most levered sector to the overarching trends that we expect, including higher commodity prices and China's ongoing reopening.

Real Estate (Unfavorable): Higher-for-longer interest rates suggest that the interest-rate-sensitive Real Estate sector will face headwinds over the tactical time horizon. Tight credit conditions after the mini banking crisis should continue to weigh on this credit-hungry sector as well, supporting our unfavorable rating.

Utilities (Unfavorable): The recent Utilities rally, driven by AI power demand optimism and a response to deeply oversold levels, is likely to prove fleeting in our view. Further, our expectation for elevated interest rates likely poses multiple headwinds, including heightened competition for yield flows from fixed income investments as well as elevated interest costs for the highly levered sector.

Growth versus Value (Balanced): In our view, the value-growth descriptors are too blunt and broad, and instead we prefer to pick sectors in an effort to enhance equity returns. There is not a straightforward way to sort sector preferences into growth or value styles, but our current sector preferences tilt toward value (we hold a most favorable rating on the Energy sector, a favorable rating on the Financials, Industrials, Materials, and Communication Services sectors, and an unfavorable rating on the Consumer Discretionary, Consumer Staples, Real Estate, and Utilities sectors).

9. Organization of the Petroleum Exporting Countries and their allies

Equities

Equity sector and sub-sector preferences

Sector	Sector tactical guidance*	Favorable sub-sectors	Unfavorable sub-sectors
Energy	Most Favorable	Integrated Oil; Midstream Energy	Refining
Communication Services		Interactive Home Entertainment; Interactive Media & Services	Alternative Carriers; Publishing
Financials	Favorable	Capital Markets; Diversified Banks; Insurance Broker; Multi- Sector Holdings; Property & Casualty Insurance; Transaction & Payment Processing Services	Business Development Companies; Life & Health Insurance; Mortgage Real Estate Investment Trusts (REITs); Regional Banks
Industrials		Aerospace & Defense; Commercial & Professional Services; Multi-Industrials**	Cargo Ground Transportation; Passenger Airlines
Materials		Construction Materials; Industrial Gases; Specialty Chemicals	Containers & Packaging
Health Care	Neutral	Life Sciences Tools & Services; Managed Health Care; Health Care Equipment & Supplies	Health Care Services
Information Technology		Semiconductors; Semiconductor Materials & Equipment; Software	Communications Equipment
Consumer Discretionary		Broadline Retail; Hotels, Restaurants & Leisure; Specialty Retail	Leisure Products
Consumer Staples	Pioducts		Tobacco
Real Estate	Unfavorable Data Center REITs; Industrial REITs; Self-Storage REITs; Telecommunications REITs		Diversified REITs; Lodging/Resort REITs; Office REITs; Specialty REITs; Timberland REITs
Utilities	Electric Utilities; Multi-Utilities; Renewable Electricity		Independent Power Producers & Energy Traders

Source: Wells Fargo Investment Institute; favored sub-sectors by Global Securities Research (GSR) group and favored sectors by Global Investment Strategy. As of August 15, 2024. REITs = real estate investment trust.

*Tactical horizon is 6-18 months.

**Multi-industrials includes the Industrial Conglomerates, Electrical Components & Equipment, Industrial Machinery & Supplies & Components, and Trading Companies & Distributors sub-industries.

Real assets

Master limited partnerships (MLPs)

Market observations

MLPs slightly underperformed the broader market in July, with a +0.6% total return (as measured by the Alerian MLP Index) versus a +1.2% return for the S&P 500 Index. WTI crude oil prices fell 4.5% during the month. We note that MLPs typically have low direct business exposure to energy commodity prices as business models are primarily fee based.

We believe investor sentiment toward MLPs has significantly improved as recent geopolitical events have emphasized the importance of energy security (which, in turn, has improved the perceived value of energy infrastructure), and an evolving domestic energy industry has opened up growth opportunities in select verticals. MLPs have generally become more disciplined on capital expenditures, and many high-quality MLPs now have stronger balance sheets and potential for sustainable payouts, in our view.

Wells Fargo Investment Institute perspective

We prefer high-quality midstream energy companies that have had stable operating results and solid distribution coverage. These companies tend to be relatively large and well diversified. We also believe that midstream C-corporations¹⁰ typically have stronger corporate governance and a wider institutional investor base relative to midstream companies structured as MLPs.

Commodities

Market observations

Energy: The Bloomberg Commodity Energy Subindex's performance was down 7.6% in July, underperforming the BCOMTR. WTI and Brent crude prices weakened by 4.5% and 6.6%, respectively.

Concerns over China's economy, and OPEC+'s plan to unwind a portion of its production cuts later this year weighed on oil's performance. We believe demand strength from the U.S. driving season, and emerging market demand growth will help offset some weakness, and support prices. While OPEC+'s commitment to maintaining relatively high oil prices should further support the global supply and demand balance. OPEC+ members have stated that their production policy is conditional, and if they proceed, the group plans to take a cautious approach to slowly raise production incrementally. These factors should help support prices and underscore why we remain favorable on energy.

Metals: Precious metals outperformed the BCOMTR with a 2.7% return in July, while gold prices rose 3.7% and silver prices fell by 1%. Gold's performance in 2024 has been driven by robust purchases from central banks, consumer demand, and geopolitical tensions. In addition to already strong fundamentals, we suspect that Fed interest rate cuts later this year will further support demand. Therefore, we remain favorable on precious metals and raised our gold price targets to \$2,400–\$2,500 for 2024 and \$2,500–\$2,600 for 2025.

Industrial metals were down by 6.8% in July, underperforming the BCOMTR. Prices appear to be consolidating after rallying earlier this year, driven by supply constraints and expectations for improvements in China's economy. In our view, though, China's economy still faces a fragile property sector along with weak manufacturing activity, which will be headwinds for prices. We are neutral on industrial metals and expect to remain so until we begin to see material improvements to stimulate China's property sector.

Agriculture: Agricultural commodity prices were down by 4.8% in July, underperforming the BCOMTR, with a majority of the index showing negative returns. Coffee was the top performer (+0.1%), while

Real assets index total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
Public Real Estate	6.1	6.1	2.7	8.0	-3.2	1.4
U.S. REITs	7.2	7.2	4.8	11.1	-0.8	4.5
International REITs	5.8	5.8	-1.7	4.1	-8.0	-2.4
Master Limited Partnerships	0.6	0.6	18.4	29.0	25.7	12.4
Global Infrastructure	4.4	4.4	8.6	9.5	6.8	5.7
Commodities (BCOMTR)	-4.0	-4.0	0.9	-5.2	3.6	6.5
Agriculture	-4.8	-4.8	-10.8	-16.1	1.5	9.0
Energy	-7.6	-7.6	-0.3	-12.8	2.6	-1.3
Industrial Metals	-6.8	-6.8	1.6	-1.5	-1.3	6.6
Precious Metals	2.7	2.7	18.1	20.9	8.4	10.3
Commodities (S&P GSCI)	-3.5	-3.5	7.2	0.2	10.8	7.6
Commodities (RICI)	-4.2	-4.2	3.1	-2.1	8.3	9.9

Sources: Bloomberg, Wells Fargo Investment Institute, July 31, 2024. MTD = month to date. QTD = quarter to date. YTD = year to date. REITs = real estate investment trusts. Returns over one year are annualized. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.** See pages 27-32 for important definitions and disclosures.

soybean (-10.6%) was the worst. We caution that adequate supply growth and an easing of supply-chain disruptions appear to be strong headwinds for prices.

Wells Fargo Investment Institute perspective

Overall, commodities (measured by the BCOMTR) were down by 4.0% in July. Over the past 12 months, many individual commodities have seen significant corrections, driven by concerns of weak economic conditions. We view recent weakness as an opportunity for investors. Therefore, we remain favorable on a broad basket of commodities as we believe long-term supply imbalances and a commodity bull super-cycle will continue to support positive performance.¹¹

Private Real Estate: Private Real Estate continues to navigate headwinds. Higher interest rates, an economic slowdown, and tighter credit conditions pose challenges across many property types. Market signals remain mixed in the multifamily residential sectors as an oversupply issue unfolds, yet housing affordability recently reached multi-decade lows. Demand for offices remains weak as a tight labor market creates a headwind for the return-to-office movement — NCREIF Office Property Index fell by another 2.3% during the second quarter of 2024. Since the 2023 banking crisis, lending standards in the commercial real estate market have remained tight. Although longer-term trends in the Industrials sector remain positive given the shift to online retail and the accompanying need for warehouse space, the uncertainties in interest-rate policy and the economy have tempered our outlook in the near term.

Real asset tactical guidance*

Guidance

Commodities	Favorable		Private Real Estate	Neutral	
Energy	Favorable		Core	Neutral	
Precious Metals	Favorable		Value-Add	Neutral	
Agriculture	Neutral		Opportunistic	Neutral	
Industrial Metals	Neutral				

Source: Wells Fargo Investment Institute, August 15, 2024. *Tactical horizon is 6-18 months.

10. A C-corporation is a legal structure for a corporation in which the owners, or shareholders, are taxed separately from the entity. 11. If you look at commodity prices over the very long term (hundreds of years), it becomes evident that they tend to move in overall bull and bear cycles, some lasting decades. These are super-cycles.

Alternative investments*

Market observations

In July, moderating inflation, employment, and consumer data combined with actual and anticipated rate cuts globally led to declines in U.S. Treasury yields and a weakening U.S. dollar. As a result, global fixed income markets registered low-to-mid single digit returns. The dovish monetary policy outlook also underpinned the global equity indexes' flat-to-positive performance. Small cap stocks and rate-sensitive sectors, including Financials, Real Estate, and Utilities, made strong comebacks. However, a sell-off occurred among largecap Technology companies as the AI trade weakened significantly. The BCOMTR retreated 4.0% for July. Energy, especially natural gas, and industrial metals led the way down, whereas gold and select agricultural commodities generated flat to mid-single digit returns.

Relative Value strategies registered a gain of 0.8% for the month, with positive contributions from Structured Credit, Long/Short Credit, and Arbitrage strategies. Elevated security dispersion continued to benefit many Relative Value managers. As compared to Equity Hedge and Event Driven strategies, Relative Value strategies recorded more modest returns owing to their defensive characteristics.

Macro strategies retreated by 1.0% in July. Systematic strategies declined by 1.5% for the month, driven by losses across currency, fixed income, and energy holdings. Short positions in fixed income and long dollar holdings were unprofitable, owing to interest rate declines and a depreciating U.S. dollar. Long crude oil holdings were negatively impacted by weak economic growth in China and moderating manufacturing and consumption data globally. However, long equity positions and short agricultural commodity holdings helped offset part of the losses. During the month, the strategies increased long positions in equities and re-established long fixed income holdings. Systematic strategies also maintained short agricultural commodities positions and scaled back long holdings in the U.S. dollar, energy, and metals. For the month, Discretionary strategies posted a gain of 1.1%.

Event Driven registered a 2.5% return for July. All strategies, including Activist, Merger Arbitrage, and Distressed Credit recorded gains. Deal completions and tightening spreads underpinned Merger Arbitrage's accretive performance, and equity market gains supported Activist strategies. For Distressed Credit, we continue to expect elevated levels of distressed situations as businesses with over-leveraged balance sheets become increasingly stressed under the weight of higher debt-service levels and slower growth.

Equity Hedge strategies posted a 1.4% gain in July and performed similarly to the MSCI All Country World Index. The accretive return was driven by both broad equity market exposure and security selection gains. Throughout the month, the strategies paired back exposures to the U.S. and Emerging Markets. Equity Hedge strategies also rebalanced into Consumer Discretionary and Communication Services sectors from Technology, cyclical, and defensive sectors. Equity Market Neutral strategies registered a loss of 0.5% for the month. As dispersion among stocks remains elevated and market sentiment grows, we expect the environment for Directional Equity strategies to turn more constructive.

Wells Fargo Investment Institute perspective

Relative Value (Favorable): We believe Long/Short Credit and Arbitrage strategies should likely benefit from their defensive characteristics during economic slowdowns and market volatilities. Moreover, we expect credit dispersion to remain elevated given the uncertainties in interest-rate policy and economic growth, which we believe should bode well for Relative Value strategies.

Alternative investments index/strategy total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
Global Hedge Funds	0.8	0.8	6.0	8.9	3.5	6.8
Relative Value	0.8	0.8	4.9	8.4	4.1	4.7
Arbitrage	0.8	0.8	3.8	8.1	3.4	4.9
Long/Short Credit	1.1	1.1	6.1	10.1	3.0	5.0
Struct. Credit/Asset-Backed	0.8	0.8	5.3	8.9	4.8	4.3
Macro	-1.0	-1.0	4.4	4.2	4.3	5.2
Systematic	-1.5	-1.5	5.2	3.8	4.1	4.5
Discretionary	1.1	1.1	4.2	7.9	2.9	5.9
Event Driven	2.5	2.5	5.4	11.1	4.1	6.7
Activist	7.1	7.1	7.9	11.1	3.1	7.6
Distressed Credit	1.8	1.8	5.7	11.9	4.6	6.9
Merger Arbitrage	2.5	2.5	2.8	8.7	4.7	5.9
Equity Hedge	1.4	1.4	7.6	10.7	2.8	8.1
Directional Equity	1.5	1.5	7.7	10.7	2.6	8.4
Equity Market Neutral	-0.5	-0.5	5.7	10.4	4.9	4.0

Source: Hedge Fund Research, Inc. (HFR), July 31, 2024. (Preliminary numbers released by HFR on August 7, 2024.) MTD = month to date. QTD = quarter to date. YTD = year to date. Returns over one year are annualized. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.** See pages 27-32 for important definitions and disclosures.

Macro (Favorable): We consider more persistent trends in commodities and currencies and elevated cross-asset volatility to be tailwinds for Macro strategies. Additionally, Macro strategies have historically been the least correlated to global risk assets, which we believe can be additive to portfolios as the cycle matures.

Event Driven (Neutral): We maintain our neutral guidance in Event Driven and continue our favorable view in the Distressed Credit subcategory. As higher interest rates flow through the economy, we believe higher debt-service levels and slower growth will meaningfully impact many small and midsized businesses. We expect the opportunity set to expand as interest rates stay higher for longer, and distressed strategies should likely benefit as businesses recapitalize, restructure, and reemerge to a more favorable market.

Equity Hedge (Neutral): We expect muted but potentially improving returns from Equity Hedge strategies compared with recent years. As managers shift from a defensive bias, we expect the performance to improve in upward-trending equity markets.

Private Equity (Neutral): While we are neutral on Private Equity, we have high conviction in certain strategies and geographies where we believe valuations are more attractive and capital-market funding is less of a headwind. We believe that opportunities do exist — especially in secondaries, middle market, growth equity, and infrastructure investments.

Private Debt (Neutral): We maintain a favorable view on Distressed and Special Situations. The number of distressed opportunities is expected to remain elevated as the effects of elevated interest rates, slower economic growth, and tight lending standards continue to weigh on small- and middle-market businesses. We maintain our neutral rating on Direct Lending based on growing risks for middle-market lending and an ongoing recalibration of private-equity valuations.

Alternative investments*

Private placements

Alternative investment strategies outlook*

Private placements	Tactical guidance**
Relative Value	Favorable
Arbitrage	Favorable
Long/Short Credit	Favorable
Structured Credit/Asset-Backed	Neutral
Macro	Favorable
Systematic	Favorable
Discretionary	Favorable
Event Driven	Neutral
Activist	Unfavorable
Distressed Credit	Favorable
Merger Arbitrage	Unfavorable
Equity Hedge	Neutral
Directional	Neutral
Equity Market Neutral	Neutral
Deinste Fruitu	Maudual
Private Equity	Neutral
Large Cap Buyout	Neutral
Small / Mid Cap Buyout	Favorable
Growth Equity	Favorable
Venture	Neutral
Private Debt	Neutral
Direct Lending	Neutral
Distressed / Special Situations	Favorable

Sources: Wells Fargo Investment Institute, August 15, 2024.

*Alternative investments are not appropriate for all investors. They are speculative and involve a high degree of risk that is appropriate 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. Please see pages 27-32 for important definitions and disclosures.

**Tactical horizon is 6-18 months.

Notes on alternative investment structures

The core differences between our quidance for private placements versus liquid alternative mutual funds centers on the expected illiquidity premium and the expected complexity premium often associated with private placements. The illiquidity premium refers to the potential for incremental return or yield generated by owning securities that cannot be sold guickly without affecting the price. Certain securities may be illiquid for one month, guarter, several years or longer. This illiquidity may provide investment managers enhanced flexibility which may result in higher long-term returns. Illiquidity may be experienced in public and private credit securities that can include loans, securitized credit, and stressed and distressed corporate credit. However, equity strategies may also be illiquid for periods of time, especially after a corporate restructuring when debt is converted to equity or within strategies that require significant equity ownership such as Activism. A complexity premium may also be associated with illiquid securities as they often require specialized origination, underwriting and investing strategies. Because private placements do not offer daily liquidity to their investors, they potentially provide greater flexibility to invest in securities that may offer an illiquidity premium. Furthermore, private placements can have a larger concentration in illiquid securities.

The complexity premium potentially offered with private placements results from several structural limitations associated with mutual funds, including provisions of the Investment Company Act of 1940, as amended (1940 Act), that apply at the fund level and not the individual strategy level. The 1940 Act requires, among others, the following:

- Regular liquidity Redemptions must be paid within seven calendar days
- Regular transparency
- Limits on leverage 300% asset coverage limits leverage to 33%; making loans; or investing in real estate or commodities
- Limits on concentration 75% of the value of its total assets cannot be invested more than 5% in any one issuer, 25% in one industry or 10% of the outstanding voting securities of the issuer
- Limits on illiquidity No more than 15% can be invested in illiquid assets

In addition, under the Investment Advisers Act of 1940, performance-based fees must be symmetric.

As a result of the illiquidity and complexity premiums, performance returns and characteristics are expected to vary between liquid alternative mutual funds and private placements. In our view, when implementing liquid alternatives in a diversified portfolio, they should not be considered a one-to-one substitute for traditional hedge funds. Our new guidance will reflect these differences in product types.

It is important to remember that only "accredited investors" or "qualified purchasers" within the meaning of U.S. securities laws can invest in private placements. This means investors must have a minimum level of income, assets, or net worth to be eligible. They may also need to meet other qualification requirements. Like all mutual funds, liquid alternative funds are regulated under the 1940 Act, and are open to all investors. As such, they are regulated in their use of leverage and have required levels of liquidity and diversification. Mutual funds must value their portfolios and price their securities daily using fair value guidelines. Hedge funds, on the other hand, face less regulation and are not required to provide investors with periodic pricing or valuation. This allows them a great deal of flexibility but may increase the risks for investors.

Because of the illiquid and complex nature of private placement hedge funds, Wells Fargo Investment Institute will no longer provide tactical percentage guidance for these asset classes. We will instead provide guidance that may be incorporated into portfolios over a longer period of time.

Currency guidance

The U.S. dollar versus developed market currencies

Market observations and outlook

The dollar moved lower in July with the U.S. Dollar Index (DXY) falling by 1.7% to end the month at 104.1. Expectations of a Fed pivot toward interest rate cuts in 2024 rose significantly over the month,¹² while expectations of rate cuts from the European Central Bank (ECB) also rose and prevented more significant strength in the euro. Fed policy actions, in comparison to other major central banks over the next few months, will likely remain a key factor for the dollar's near-term levels in addition to potential political risks both in the U.S and abroad. Overall, DM currencies rose versus the dollar on the back of rate expectations from the Fed, with the euro rising by 0.8% versus the dollar and ending the month slightly above the 1.08 level. The yen rose considerably over the month, rising 7.11%. Increasing optimism of notable rate hikes from the Bank of Japan, combined with a somewhat earlier-than-expected hike at the end of July, drove the yen significantly higher versus the dollar. The pound also ended the month higher, up by 1.63%.

We expect the dollar to trade in a range, through the end of 2024 and into 2025, supported by still-elevated U.S. interest rates and a somewhat resilient U.S. economy in comparison to Europe. Current U.S. dollar valuations remain moderately high, especially when compared to longer-term historical averages. The dollar may experience continued support as we anticipate the Fed and ECB are both likely to cut rates, which would keep interest rate differentials between the two central banks relatively high. We expect this trend of dollar strength to continue into 2025. For year-end 2024, we see ranges of \$1.08–\$1.12 per euro and 146–150 yen per dollar. For year-end 2025, we see ranges of \$1.08–\$1.12 per euro and 150–154 yen per dollar.

Year-end currency targets

	Latest	YE24 targets	YE25 targets
Dollars per euro	\$1.08	▲ \$1.08-\$1.12	▲ \$1.08-\$1.12
Yen per dollar	¥150	▼¥146-¥150	▼¥150-¥154
ICE U.S. Dollar Index	104	▼ 101-105	▼ 102-106

Source: Bloomberg, as of July 31, 2024. Targets are Wells Fargo Investment Institute forecasts, as of August 15, 2024 and provide a forecast direction over a tactical horizon. The closer the current date is to the year-end, the more WFII guidance focuses on the following year's target. YE = year end. \bigstar/∇ : recent change.

The ICE U.S. Dollar Index is a weighted average of the value of the U.S. dollar relative to a basket of U.S. trade partner currencies, comprised of the euro, Japanese yen, pound sterling, Canadian dollar, Swedish krona, and Swiss franc. A higher index value indicates dollar appreciation.

Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See pages 27-32 for important definitions and disclosures.

The U.S. dollar versus emerging market currencies

Market observations and outlook

The dollar's weakness in July was positive for EM currencies, with the MSCI Emerging Markets Currency Index (an index of currencies mirroring the weighting of the more manufacturing-based MSCI Emerging Markets Index, heavily weighted toward Asia) ending the month up by only 0.39%. The strength of the yen was a weight on some EM currencies, as the global carry trade unwound. The Chinese yuan was up slightly, following the yen higher. The Thai baht also rose significantly on strong economic data and the perceived benefit of Fed rate cuts to exchange rates. Other major Asian currencies were mixed. In Latin America, the Peruvian sol was the best performer for the month bouncing back from significant losses in June. The Mexican peso fell considerably following the yen's rise, as the yen was a popular funding currency for peso investments. We believe that sustained stronger performance in EM currencies may not be seen until we move past the current period of dollar strength, which we are forecasting through year-end 2025.

Currency hedging

Based on our views on the direction of the U.S. dollar, we provide our currency-hedging guidance in the matrix below. We have revised our view on DM bonds from unfavorable to neutral, but because we no longer recommend strategic allocations to DM fixed income in local currency, we still do not favor taking tactical positions at this time. For those investors with exposure to these bonds, we have revised our hedging guidance from "hedge" to "no hedge"; since we see limited dollar upside from current levels through year-end 2025, we do not expect large currency losses to be a long-term drag on returns. For EM fixed income, the strategic benchmark consists exclusively of dollar-denominated sovereign EM bonds, so we currently believe hedging is unnecessary.

Hedging matrix

Asset class	Strategic benchmark	Currency advice
Developed Market Ex-U.S. Fixed Income	Local currency*	No hedge
Developed Market Ex-U.S. Equities	Local currency	No hedge
Emerging Market Fixed Income	U.S. dollar	N/A
Emerging Market Equities	Local currency	No hedge

Source: Wells Fargo Investment Institute, August 15, 2024. The table above provides guidance for investors who want and are able to hedge against currency losses, or to take advantage of the dollar's move in either direction. Please note that implementation may vary according to the hedging instruments available to investors.

*We no longer recommend strategic allocations and do not favor tactical allocations at this time to Developed Market Ex-U.S. Fixed Income. Hedging guidance applies to those who wish to hold these assets.

We do not favor hedging currency risk for equities at this time. We think the hurdle to hedging currency risk is higher for equities than for bonds because in equity markets, currency movements have had a smaller influence on total return than for fixed income. Further, the cost and complexity of currency hedging for equities may be greater. It is important to consider that many actively managed mutual funds already may incorporate an element of currency hedging. In addition, the cost of hedging against losses from EM currencies is far higher than for those of DMs, and the availability of efficient hedging instruments is limited.

Tactical guidance

Recommended tactical guidance

U.S. Short Term Taxable Fixed Income downgraded from most favorable to unfavorable. U.S. Intermediate Term Taxable Fixed Income upgraded from neutral to favorable. U.S. Long Term Taxable Fixed Income downgraded from neutral to unfavorable. High Yield Taxable Fixed Income upgraded from unfavorable to neutral. U.S. Small Cap Equities upgraded from most unfavorable to neutral.

The strategic (neutral) asset allocations are based on long-term strategies. However, capital markets tend to move in cycles, and there may be short-term opportunities to enhance the risk/return relationship within a portfolio by temporarily adjusting the strategic allocations. The tactical asset allocation adjustments are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio. The minimum position of any asset class is zero, meaning that no short selling is permitted. The maximum position of all asset classes together is 100%, meaning that no leverage is permitted. The actual extent of the recommended tactical adjustments is a judgment call. It should be enough to make a difference without crowding out other assets or creating a vacuum. Also, all the tactical recommendations have to be considered together. It would not be mathematically possible to underallocate two asset groups while maintaining over-allocations in the other two. Adjustments must be made to bring all the broad asset classes into a proper relationship. These are guidelines to be used prudently for investors with temperaments that agree with a more aggressive, tactical investment style.

Additional asset class guidance

Consider L/S equity strategies: These strategies can provide diversification in an equity portfolio by utilizing both long and short exposures to the asset class. While they can provide diversification, investors should expect higher tracking error (extent to which the strategy's returns have differed from its benchmark) to traditional benchmarks from these strategies. Prudent use through controlled allocations is recommended.

Cash Alternatives and Fixed Income

Most Unfavorable	Unfavorable	Neutral	Favorable	Most Favorable				
	U.S. Long Term Taxable Fixed Income** U.S. Short Term Taxable Fixed Income**	Cash Alternatives Developed Market ExU.S. Fixed Income Emerging Market Fixed Income High Yield Taxable Fixed Income**	U.S. Taxable Investment Grade Fixed Income U.S. Intermediate Term Taxable Fixed Income**					
Equities								
Most Unfavorable	Unfavorable	Neutral	Favorable	Most Favorable				
	Emerging Market Equities	Developed Market ExU.S. Equities	U.S. Large Cap Equities					
		U.S. Mid Cap Equities U.S. Small Cap Equities**						
Real Assets	leal Assets							
Most Unfavorable	Unfavorable	Neutral	Favorable	Most Favorable				

Alternative Investments*

Most Unfavorable	Unfavorable	Neutral	Favorable	Most Favorable
		Hedge Funds–Equity Hedge	Hedge Funds–Macro	
		Hedge Funds-Event Driven	Hedge Funds-Relative Value	
		Private Debt		
		Private Equity		

Commodities

Private Real Estate

*Alternative investments are not appropriate for all investors. They are speculative and involve a high degree of risk that is appropriate 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. Please see pages 27-32 for important definitions and disclosures.

**Changed this month.

Tactical guidance*

Tactical guidance summary

U.S. Taxable	Favorable	A slowing economy should alleviate some inflation pressure in the coming months. Still, we favor a more balanced approach between
Investment Grade		risk-oriented asset classes (equities) and U.S. Taxable IG Fixed Income. As we move capital between short-, intermediate-, and long- term fixed income, we believe a favorable view of U.S. Taxable IG Fixed Income is warranted.
U.S. Short Term Taxable	▼ Unfavorable	Short-term fixed income should provide investors an attractive yield even if the Fed begins to cut rates in 2024, as we anticipate. Additionally, we believe short-term fixed income remains attractive given its low volatility and potential capacity to hold stable in most macro environments.
U.S. Intermediate Term Taxable	Favorable	We reallocated from long-term fixed income into intermediate-term fixed income and upgraded U.S. Intermediate Term Taxable Fixed Income to neutral. Intermediate-term fixed income also provides an attractive yield and is less rate sensitive should interest rates increase further above the upper range of our target.
U.S. Long Term Taxable	▼ Unfavorable	We believe long-term yields have peaked for this cycle. We are now neutral on longer-duration bonds. We view the risk-return trade off in long-term fixed income as neutral, given our view that yields will remain mostly range-bound with a bias to the upside.
High Yield Taxable	▲ Neutral	While yields on these bonds should exceed those on more traditional fixed-income asset classes, the spreads on HY bonds historicall have tended to widen; these bonds have typically underperformed IG bonds when a slowdown has approached and financial conditions have tightened. Of course, past performance is not a guarantee of future results.
Developed Market Ex-U.S.	Neutral	Currency losses are still weighing on returns while political risks add further pressure on yields despite the move from the ECB to cut rates in June with more expected throughout the year. We remain neutral on this fixed-income class.
Emerging Market	Neutral	Dollar-denominated debt is a small portion of sovereign borrowing and is insulated from EM currency volatility, although it is vulnerable to rises in U.S. yields given its longer duration.
U.S. Large Cap U.S. Mid Cap	Favorable	We view U.S. Large Cap Equities as the highest-quality major equity class, with strong company balance sheets compared to other equity classes. We believe the equity class is well positioned to withstand potential volatility as the cycle matures.
U.S. Mid Cap	Neutral	U.S. Mid Cap Equities offer investors higher quality compared to small-cap equities and a reasonable amount of exposure to many economically sensitive sectors that may allow investors to participate in cyclical rallies.
U.S. Small Cap	Neutral	U.S. Small Cap Equities have underperformed considerably since peaking in 2021. Given that the most extreme operating difficulties are likely behind small caps the era of significant small-cap underperformance is likely behind as well.
Developed Market (DM) ExU.S.	Neutral	The export-sensitive region is constrained by tepid global trade, fiscal restraint, and elevated fuel costs, but we suspect sentiment has passed its nadir and that the upturn should support higher valuations.
Emerging Market	Unfavorable	Ongoing political risks from Chinese regulatory reform, U.SChina diplomatic and economic strains, China's shift to emphasize domestic consumption, and our desire for quality keep us unfavorable on EM equities.
Commodities Commodities Private Real	Favorable	We expect commodity performance to improve through 2025 as demand strengthens from an improved outlook, a recovery in economic growth, and interest-rate cuts by the Fed. Over the past year, most individual commodities have seen significant corrections, driven by demand concerns of weak economic conditions. We view this weakness as an opportunity for investors as we expect these headwinds to ease and revert. We remain favorable on commodities and believe the bull super-cycle is intact.
Private Real Estate**	Neutral	We maintain our neutral guidance on Core, Value-Add, and Opportunistic due to higher rates and slower growth. In addition, we maintain a neutral view on Private Real Estate overall, remaining cautious as higher interest rates impact financing costs and further downside in valuations remains.
Hedge Funds– Relative Value**	Favorable	We remain favorable on the Long/Short Credit and Arbitrage strategies given their defensive attributes as we expect greater market volatility and weak growth in the near term.
Hedge Funds- Macro**	Favorable	We maintain our favorable guidance on Macro strategies as we anticipate that longer-term price trends driven largely by interest rates, commodities, and foreign exchange markets will likely reestablish.
Hedge Funds- Macro** Hedge Funds- Event Driven** Hedge Funds- Equity Hedge**	Neutral	We continue to see signals of a constructive environment for Distressed Credit strategies. Higher rates are impacting small- and middle-market businesses as debt service levels grow, wage pressures persist, and consumer demand slows. Conversely, we maintair our unfavorable rating on Merger Arbitrage as deal activity slows, time to closings lengthen, and the regulatory environment remain restrictive.
Hedge Funds– Equity Hedge**	Neutral	We remain neutral in Equity Hedge and may look to shift our guidance once the economy recovers and stock markets inflect, while the security selection environment remains constructive.
Private Equity**	Neutral	We maintain our neutral cyclical guidance for Private Equity. Valuations have declined from 2021 highs and deal activity has slowed. As the anticipated economic slowdown evolves and valuations reach a bottom, we expect the opportunity to invest new money will improve.
Private Debt**	Neutral	We maintain a favorable view on Distressed and Special Situations in an effort to capitalize on our expectations for credit market stress and dislocations. We remain neutral on Direct Lending considering the growing risks in lower-quality middle-market borrowers.

*Tactical horizon is 6-18 months.

Capital market assumptions

Fixed income, equities, real assets, and alternative investments

Annual update; as of July 2024

Capital market and asset class assumptions are estimates of how asset classes may perform over the long term, covering multiple economic and market cycles. For example, **downside risk** is based on our assumptions about average returns and the variability of returns. It represents the minimum return that would be statistically likely in 95% of annual returns. In other words, in 19 out of 20 years, performance would likely be better than this figure and in the twentieth year it would likely be worse. There is no guarantee that any particular 20-year period would follow this pattern. **Expected returns** represent our estimate of likely average returns over the next several market cycles. They do not represent the returns that an investor should expect in any particular year. **Geometric return** is the compounded annual growth rate of an investment (asset class or portfolio) over a specified period of time longer than one year. **Standard deviation** is a measure of volatility. It reflects the degree of variability surrounding the outcome of an investment decision; the higher the standard deviation, the greater the risk. **Yield** on a bond assumes constant maturity. **Dividend yield** on an equity or real-asset investment represents the projected dividend as a percentage of the purchase price. The assumptions are not designed to predict actual performance, and there are no assurances that any estimates used will be achieved. The information given has been provided as a guide to help with investment planning and does not represent the maximum loss a portfolio could experience.

Capital market assumptions (%)

Capit	al market assumptions (%) Asset class	Expected arithmetic return	Expected geometric return	Expected standard deviation or risk	Yield or dividend yield	Downside risk
	Inflation	2.5				
	Taxable Cash Alternatives	2.5	2.5	0.5	2.5	1.7
	Tax Exempt Cash Alternatives	2.1	2.1	0.5	2.1	1.3
Щ	U.S. Taxable Investment Grade Fixed Income	3.9	3.9	3.8	3.9	-2.1
FIXED INCOME	U.S. Short Term Taxable Fixed Income	3.1	3.1	1.5	3.1	0.7
NI	U.S. Intermediate Term Taxable Fixed Income	3.9	3.9	3.5	3.9	-1.7
KED	U.S. Long Term Taxable Fixed Income	5.4	5.0	9.0	5.0	-8.7
Ē	High Yield Taxable Fixed Income	7.2	6.8	9.0	6.8	-7.0
	U.S. Tax Exempt Investment Grade Fixed Income	3.4	3.3	4.3	3.3	-3.5
	U.S. Short Term Tax Exempt Fixed Income	2.7	2.6	1.8	2.6	-0.2
	U.S. Intermediate Term Tax Exempt Fixed Income	3.4	3.3	4.0	3.3	-3.1
	U.S. Long Term Tax Exempt Fixed Income	4.6	4.5	5.3	4.5	-3.8
	High Yield Tax Exempt Fixed Income	6.1	5.8	7.5	5.8	-5.8
	Developed Market ex-U.S. Fixed Income	3.0	2.7	8.0	2.7	-9.6
	Emerging Market Fixed Income	7.0	6.5	9.5	6.5	-7.9
	Inflation-Linked Fixed Income	3.8	3.5	7.5	3.5	-8.1
	Preferred Stock	5.1	4.4	11.5	4.4	-12.7
ES	U.S. Large Cap Equities	8.9	7.8	16.0	1.9	-15.2
equities	U.S. Mid Cap Equities	9.6	8.3	17.0	1.7	-16.0
EQL	U.S. Small Cap Equities	9.8	8.0	20.0	1.4	-19.8
	Developed Market ex-U.S. Equities	8.3	7.0	17.0	2.9	-17.2
	Emerging Market Equities	9.7	7.8	21.0	2.7	-21.1
AL	Private Real Estate	8.9	8.1	13.0	5.0	-11.1
REAL SSETS	Private Infrastructure	8.8	8.2	12.0	4.3	-9.7
A	Master Limited Partnerships (MLPs)	10.0	8.5	18.0	7.5	-16.9
	Commodities	8.7	7.5	16.0	0.0	-15.5
S* [F	Global Hedge Funds	6.2	6.0	6.3	0.0	-3.9
FERNATIVE STMENTS*	Hedge Funds – Relative Value	6.5	6.3	7.0	0.0	-4.6
T M	Hedge Funds – Macro	5.5	5.2	8.0	0.0	-7.1
ALTE IVES	Hedge Funds – Event Driven	6.9	6.7	7.5	0.0	-4.9
	Hedge Funds – Equity Hedge	6.6	6.2	8.5	0.0	-6.8
	Global Liquid Alternatives	3.5	3.4	4.0	0.0	-3.0
	Private Equity	14.2	12.6	19.0	0.0	-14.2
	Private Debt	9.3	8.7	11.5	7.0	-8.5

Strategic asset allocation

Client goals	oals INCOME		GROWTH & INCOME			GROWTH			
Risk Tolerance	Conservative	Moderate	Aggressive	Conservative	Moderate	Aggressive	Conservative	Moderate	Aggressive

Efficient frontier

An efficient frontier represents the theoretical set of diversified portfolios that attempt to maximize return given a specific level of risk.

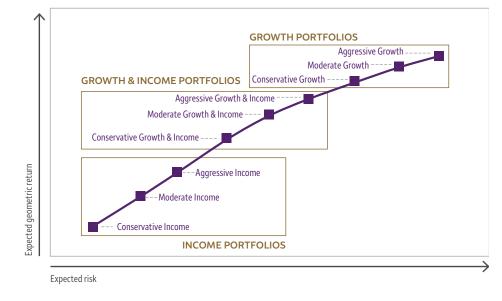


Chart is conceptual and is not meant to reflect any actual returns or represent any specific asset classifications. Source: Wells Fargo Investment Institute, July 2024

Investment objectives definitions

INCOME

Income portfolios 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.

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.

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.

GROWTH & INCOME

Growth & Income portfolios 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.

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.

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.

GROWTH

Growth portfolios 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.

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.

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.

Strategic and tactical asset allocation: Liquid

May include fixed income, equities, and real assets

		CONSERVATIVE		MODERATE			AGGRESSIVE			
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
ΑE	TAXABLE CASH ALTERNATIVES	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
INCOME	TOTAL GLOBAL FIXED INCOME	82.0	80.0	-2.0	69.0	68.0	-1.0	61.0	59.0	-2.0
Ň	U.S. Taxable Investment Grade Fixed Income	76.0	74.0	-2.0	60.0	59.0	-1.0	47.0	45.0	-2.0
	Short Term Taxable*	17.0	15.0	-2.0	13.0	12.0	-1.0	11.0	9.0	-2.0
	Intermediate Term Taxable*	45.0	48.0	3.0	36.0	39.0	3.0	27.0	30.0	3.0
	Long Term Taxable*	14.0	11.0	-3.0	11.0	8.0	-3.0	9.0	6.0	-3.0
	High Yield Taxable Fixed Income	3.0	3.0	0.0	4.0	4.0	0.0	6.0	6.0	0.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	3.0	3.0	0.0	5.0	5.0	0.0	8.0	8.0	0.0
	TOTAL GLOBAL EQUITIES	14.0	14.0	0.0	27.0	27.0	0.0	35.0	35.0	0.0
	U.S. Large Cap Equities	12.0	12.0	0.0	18.0	18.0	0.0	21.0	21.0	0.0
	U.S. Mid Cap Equities	2.0	2.0	0.0	5.0	5.0	0.0	7.0	7.0	0.0
	U.S. Small Cap Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Developed Market Ex-U.S. Equities	0.0	0.0	0.0	4.0	4.0	0.0	7.0	7.0	0.0
	Emerging Market Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL GLOBAL REAL ASSETS	2.0	4.0	2.0	2.0	3.0	1.0	2.0	4.0	2.0
	Commodities	2.0	4.0	2.0	2.0	3.0	1.0	2.0	4.0	2.0
Щ	TAXABLE CASH ALTERNATIVES	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
GROWTH AND INCOME	TOTAL GLOBAL FIXED INCOME	50.0	48.0	-2.0	41.0	38.0	-3.0	33.0	30.0	-3.0
N	U.S. Taxable Investment Grade Fixed Income	39.0	37.0	-2.0	30.0	27.0	-3.0	20.0	17.0	-3.0
ΔN	Short Term Taxable*	9.0	7.0	-2.0	7.0	4.0	-3.0	4.0	2.0	-2.0
ΗA	Intermediate Term Taxable*	23.0	26.0	3.0	17.0	20.0	3.0	12.0	15.0	3.0
MT	Long Term Taxable*	7.0	4.0	-3.0	6.0	3.0	-3.0	4.0	0.0	-4.0
RO	High Yield Taxable Fixed Income	6.0	6.0	0.0	6.0	6.0	0.0	7.0	7.0	0.0
9	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	5.0	5.0	0.0	5.0	5.0	0.0	6.0	6.0	0.0
	TOTAL GLOBAL EQUITIES	44.0	44.0	0.0	53.0	53.0	0.0	61.0	62.0	1.0
	U.S. Large Cap Equities	23.0	28.0	5.0	27.0	31.0	4.0	31.0	36.0	5.0
	U.S. Mid Cap Equities	8.0	7.0	-1.0	10.0	11.0	1.0	12.0	12.0	0.0
	U.S. Small Cap Equities	2.0	2.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Developed Market Ex-U.S. Equities	7.0	7.0	0.0	8.0	8.0	0.0	9.0	9.0	0.0
	Emerging Market Equities	4.0	0.0	-4.0	5.0	0.0	-5.0	6.0	2.0	-4.0
	TOTAL GLOBAL REAL ASSETS	4.0	6.0	2.0	4.0	7.0	3.0	4.0	6.0	2.0
	Commodities	4.0	6.0	2.0	4.0	7.0	3.0	4.0	6.0	2.0
폰	TAXABLE CASH ALTERNATIVES	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
GROWTH	TOTAL GLOBAL FIXED INCOME	19.0	17.0	-2.0	11.0	9.0	-2.0	0.0	0.0	0.0
GRC	U.S. Taxable Investment Grade Fixed Income	16.0	14.0	-2.0	8.0	6.0	-2.0	0.0	0.0	0.0
	Short Term Taxable*	4.0	2.0	-2.0	2.0	0.0	-2.0	0.0	0.0	0.0
	Intermediate Term Taxable*	9.0	12.0	3.0	6.0	6.0	0.0	0.0	0.0	0.0
	Long Term Taxable*	3.0	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	0.0
	High Yield Taxable Fixed Income	3.0	3.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL GLOBAL EQUITIES	74.0	74.0	0.0	82.0	82.0	0.0	93.0	91.0	-2.0
	U.S. Large Cap Equities	33.0	37.0	4.0	35.0	39.0	4.0	37.0	41.0	4.0
	U.S. Mid Cap Equities	13.0	13.0	0.0	14.0	14.0	0.0	16.0	16.0	0.0
	U.S. Small Cap Equities	5.0	5.0	0.0	6.0	6.0	0.0	7.0	7.0	0.0
	Developed Market Ex-U.S. Equities	14.0	14.0	0.0	15.0	15.0	0.0	18.0	18.0	0.0
	Emerging Market Equities	9.0	5.0	-4.0	12.0	8.0	-4.0	15.0	9.0	-6.0
	TOTAL GLOBAL REAL ASSETS	5.0	7.0	2.0	5.0	7.0	2.0	5.0	7.0	2.0
	Commodities	5.0	7.0	2.0	5.0	7.0	2.0	5.0	7.0	2.0

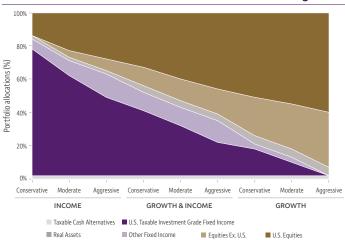
Strategic allocations are updated annually; last update was July 16, 2024. Tactical allocations are updated periodically; last update was August 6, 2024. The U.S. Taxable Investment Grade Fixed Income encompasses the allocations to Short Term, Intermediate Term, and Long Term. *Wells Fargo Advisors only. See next page for Portfolio allocations across the efficient frontier, strategic and tactical.

Strategic and tactical asset allocation: Liquid

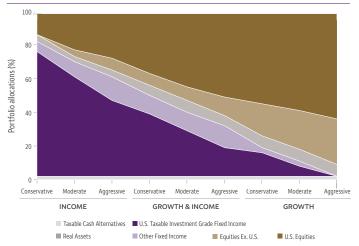
May include fixed income, equities, and real assets (continued)

These allocations span the set of liquid investments available to investors, utilizing broad diversification to help manage portfolio risk. Special issues such as liquidity, cash flow, and taxability would be taken into consideration in the choice of investment vehicles for certain asset classes. Depending on their tax circumstances, investors may wish to utilize the tax-efficient asset allocation guidance. The tactical asset allocation overweights and underweights are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio.

Portfolio allocations across the efficient frontier-strategic



Portfolio allocations across the efficient frontier-tactical



Strategic and tactical asset allocation: Illiquid

May include fixed income, equities, real assets, and alternative investments

		CC	NSERVAT	IVE		MODERAT	E	A	GGRESSI	/E
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
ΥE	TAXABLE CASH ALTERNATIVES	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
INCOME	TOTAL GLOBAL FIXED INCOME	68.0	66.0	-2.0	55.0	53.0	-2.0	47.0	45.0	-2.0
Ĕ	U.S. Taxable Investment Grade Fixed Income	63.0	61.0	-2.0	48.0	46.0	-2.0	35.0	33.0	-2.0
	Short Term Taxable*	14.0	12.0	-2.0	11.0	9.0	-2.0	8.0	5.0	-3.0
	Intermediate Term Taxable*	37.0	40.0	3.0	28.0	31.0	3.0	21.0	24.0	3.0
	Long Term Taxable*	12.0	9.0	-3.0	9.0	6.0	-3.0	6.0	4.0	-2.0
	High Yield Taxable Fixed Income Developed Market Ex-U.S. Fixed Income	2.0	2.0	0.0	2.0	2.0	0.0	4.0	4.0	0.0
	Emerging Market Fixed Income	0.0 3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL GLOBAL EQUITIES	8.0	8.0	0.0	20.0	20.0	0.0	25.0	25.0	0.0
	U.S. Large Cap Equities U.S. Mid Cap Equities	8.0 0.0	8.0	0.0	12.0 4.0	12.0 4.0	0.0	15.0 6.0	15.0 6.0	0.0
	U.S. Small Cap Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Developed Market Ex-U.S. Equities	0.0	0.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
	Emerging Market Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL GLOBAL REAL ASSETS	7.0	9.0	2.0	8.0	10.0	2.0	9.0	11.0	2.0
	Private Real Estate**	5.0	5.0	0.0	6.0	6.0	0.0	7.0	7.0	0.0
	Commodities	2.0	4.0	2.0	2.0	4.0	2.0	2.0	4.0	2.0
	TOTAL ALTERNATIVE INVESTMENTS**	15.0	15.0	0.0	15.0	15.0	0.0	17.0	17.0	0.0
	Global Hedge Funds	11.0	11.0	0.0	11.0	11.0	0.0	11.0	11.0	0.0
	Private Equity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Private Debt	4.0	4.0	0.0	4.0	4.0	0.0	6.0	6.0	0.0
٨E	TAXABLE CASH ALTERNATIVES	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
GROWTH AND INCOME	TOTAL GLOBAL FIXED INCOME	36.0	34.0	-2.0	27.0	25.0	-2.0	21.0	19.0	-2.0
Ž	U.S. Taxable Investment Grade Fixed Income	29.0	27.0	-2.0	19.0	17.0	-2.0	12.0	10.0	-2.0
ND	Short Term Taxable*	7.0	5.0	-2.0	4.0	2.0	-2.0	3.0	0.0	-3.0
Ε	Intermediate Term Taxable*	17.0	20.0	3.0	11.0	13.0	2.0	7.0	10.0	3.0
N	Long Term Taxable*	5.0	2.0	-3.0	4.0	2.0	-2.0	2.0	0.0	-2.0
GR(High Yield Taxable Fixed Income Developed Market Ex-U.S. Fixed Income	4.0 0.0	4.0	0.0	4.0	4.0	0.0	3.0 0.0	3.0	0.0
	Emerging Market Fixed Income	3.0	3.0	0.0	4.0	4.0	0.0	6.0	6.0	0.0
		32.0	32.0	0.0	38.0	38.0	0.0	46.0	46.0	0.0
	TOTAL GLOBAL EQUITIES U.S. Large Cap Equities	32.0 18.0	21.0	3.0	20.0	24.0	4.0	46.0 24.0	46.0 26.0	2.0
	U.S. Mid Cap Equities	6.0	6.0	0.0	8.0	8.0	0.0	8.0	8.0	0.0
	U.S. Small Cap Equities	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0
	Developed Market Ex-U.S. Equities	5.0	5.0	0.0	6.0	6.0	0.0	7.0	7.0	0.0
	Emerging Market Equities	3.0	0.0	-3.0	4.0	0.0	-4.0	5.0	3.0	-2.0
	TOTAL GLOBAL REAL ASSETS	9.0	11.0	2.0	10.0	12.0	2.0	10.0	12.0	2.0
	Private Real Estate**	5.0	5.0	0.0	6.0	6.0	0.0	6.0	6.0	0.0
	Commodities	4.0	6.0	2.0	4.0	6.0	2.0	4.0	6.0	2.0
	TOTAL ALTERNATIVE INVESTMENTS**	21.0	21.0	0.0	23.0	23.0	0.0	21.0	21.0	0.0
	Global Hedge Funds	10.0	10.0	0.0	10.0	10.0	0.0	7.0	7.0	0.0
	Private Equity	8.0	8.0	0.0	10.0	10.0	0.0	11.0	11.0	0.0
	Private Debt	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0

Strategic allocations are updated annually; last update was July 16, 2024. Tactical allocations are updated periodically; last update was August 6, 2024. The U.S. Taxable Investment Grade Fixed Income encompasses the allocations to Short Term, Intermediate Term, and Long Term. Hedge fund allocations are based on private hedge fund capital market assumptions. *Wells Fargo Advisors only.

See next page for Growth data and Portfolio allocations across the efficient frontier, strategic and tactical.

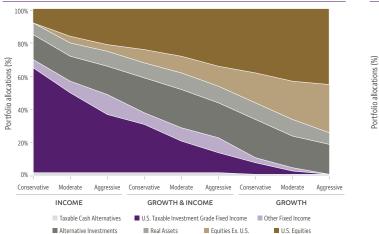
Strategic and tactical asset allocation: Illiquid

May include fixed income, equities, real assets, and alternative investments (continued)

		CO	NSERVAT	IVE		MODERAT	E	A	GGRESSIV	Έ
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
폰	TAXABLE CASH ALTERNATIVES	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
GROWTH	TOTAL GLOBAL FIXED INCOME	10.0	8.0	-2.0	4.0	4.0	0.0	0.0	0.0	0.0
3R(U.S. Taxable Investment Grade Fixed Income	7.0	5.0	-2.0	2.0	2.0	0.0	0.0	0.0	0.0
	Short Term Taxable*	2.0	0.0	-2.0	0.0	0.0	0.0	0.0	0.0	0.0
	Intermediate Term Taxable*	5.0	5.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
	Long Term Taxable*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	High Yield Taxable Fixed Income	3.0	3.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL GLOBAL EQUITIES	56.0	56.0	0.0	66.0	64.0	-2.0	74.0	72.0	-2.0
	U.S. Large Cap Equities	26.0	29.0	3.0	26.0	29.0	3.0	24.0	27.0	3.0
	U.S. Mid Cap Equities	9.0	10.0	1.0	13.0	13.0	0.0	15.0	15.0	0.0
	U.S. Small Cap Equities	3.0	3.0	0.0	4.0	4.0	0.0	6.0	6.0	0.0
	Developed Market Ex-U.S. Equities	12.0	12.0	0.0	14.0	13.0	-1.0	17.0	17.0	0.0
	Emerging Market Equities	6.0	2.0	-4.0	9.0	5.0	-4.0	12.0	7.0	-5.0
	TOTAL GLOBAL REAL ASSETS	10.0	12.0	2.0	10.0	12.0	2.0	7.0	9.0	2.0
	Private Real Estate**	5.0	5.0	0.0	5.0	5.0	0.0	2.0	2.0	0.0
	Commodities	5.0	7.0	2.0	5.0	7.0	2.0	5.0	7.0	2.0
	TOTAL ALTERNATIVE INVESTMENTS**	23.0	23.0	0.0	19.0	19.0	0.0	18.0	18.0	0.0
	Global Hedge Funds	7.0	7.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
	Private Equity	13.0	13.0	0.0	14.0	14.0	0.0	18.0	18.0	0.0
	Private Debt	3.0	3.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0

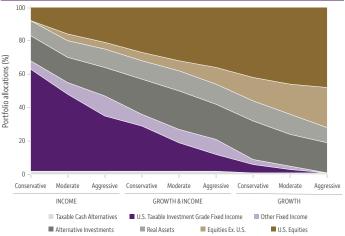
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These allocations span the set of investments available to investors, utilizing broad diversification to help manage portfolio risk. Special issues such as liquidity, cash flow, and taxability would be taken into consideration in the choice of investment vehicles for certain asset classes. Depending on their tax circumstances, investors may wish to utilize the liquid tax-efficient asset allocation guidance. The tactical asset allocation overweights and underweights are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio.



Portfolio allocations across the efficient frontier-strategic

Portfolio allocations across the efficient frontier-tactical



Strategic asset allocation: Tax-efficient illiquid

May include fixed income, equities, real assets, and alternative investments

	, , ,	CONSERVATIVE	MODERATE	AGGRESSIVE
		Strategic	Strategic	Strategic
		(%)	(%)	(%)
МЕ	TAX EXEMPT CASH ALTERNATIVES	2.0	2.0	2.0
INCOME	TOTAL GLOBAL FIXED INCOME	80.0	65.0	57.0
Z	U.S. Tax Exempt Investment Grade FI	80.0	58.0	43.0
	Short Term Tax Exempt*	10.0	7.0	5.0
	Intermediate Term Tax Exempt*	54.0	39.0	29.0
	Long Term Tax Exempt*	16.0	12.0	9.0
	High Yield Tax Exempt Fixed Income	0.0	7.0	14.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0
	Emerging Market Fixed Income	0.0	0.0	0.0
	TOTAL GLOBAL EQUITIES	6.0	21.0	30.0
	U.S. Large Cap Equities	6.0	16.0	19.0
	U.S. Mid Cap Equities	0.0	5.0	6.0
	U.S. Small Cap Equities	0.0	0.0	0.0
	Developed Market Ex-U.S. Equities	0.0	0.0	5.0
	Emerging Market Equities	0.0	0.0	0.0
	TOTAL GLOBAL REAL ASSETS	7.0	7.0	7.0
	Private Real Estate**	7.0	7.0	7.0
	Commodities	0.0	0.0	0.0
	TOTAL ALTERNATIVE INVESTMENTS**	5.0	5.0	4.0
	Global Hedge Funds	5.0	5.0	4.0
	Private Equity	0.0	0.0	0.0
	Private Debt	0.0	0.0	0.0
ΛE	TAX EXEMPT CASH ALTERNATIVES	2.0	1.0	1.0
GROWTH AND INCOME	TOTAL GLOBAL FIXED INCOME	45.0	35.0	29.0
Ž	U.S. Tax Exempt Investment Grade FI	38.0	30.0	23.0
ND	Short Term Tax Exempt*	5.0	4.0	3.0
H H	Intermediate Term Tax Exempt*	25.0	20.0	15.0
M	Long Term Tax Exempt*	8.0	6.0	5.0
RO	High Yield Tax Exempt Fixed Income	7.0	5.0	6.0
Ċ	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0
	Emerging Market Fixed Income	0.0	0.0	0.0
	TOTAL GLOBAL EQUITIES	34.0	42.0	49.0
	U.S. Large Cap Equities	19.0	22.0	25.0
	U.S. Mid Cap Equities	6.0	7.0	9.0
	U.S. Small Cap Equities	2.0	2.0	2.0
	Developed Market Ex-U.S. Equities	7.0	9.0	10.0
	Emerging Market Equities	0.0	2.0	3.0
	TOTAL GLOBAL REAL ASSETS	7.0	7.0	7.0
	Private Real Estate**	7.0	7.0	7.0
	Commodities	0.0	0.0	0.0
	TOTAL ALTERNATIVE INVESTMENTS**	12.0	15.0	14.0
	Global Hedge Funds	4.0	4.0	0.0
	Private Equity	8.0	11.0	14.0
	Private Debt	0.0	0.0	0.0

Tax-efficient strategic allocations are updated annually; last update was July 16, 2024. Tactical allocations are updated periodically. The U.S. Tax Exempt Investment Grade Fixed Income encompasses the allocations to Short Term, Intermediate Term, and Long Term. Hedge fund allocations are based on private hedge fund capital market assumptions. *Wells Farqo Advisors only.

See next page for Growth data and portfolio allocations across the efficient frontier, strategic.

Strategic asset allocation: Tax-efficient illiquid

May include fixed income, equities, real assets, and alternative investments (continued)

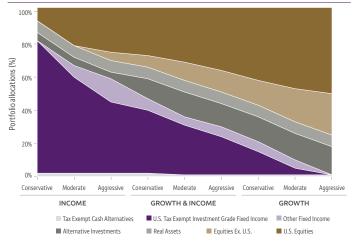
		CONSERVATIVE	MODERATE	AGGRESSIVE
		Strategic (%)	Strategic (%)	Strategic (%)
Ξ	TAX EXEMPT CASH ALTERNATIVES	1.0	1.0	1.0
growth	TOTAL GLOBAL FIXED INCOME	20.0	9.0	0.0
ЗRС	U.S. Tax Exempt Investment Grade FI	14.0	4.0	0.0
	Short Term Tax Exempt*	2.0	0.0	0.0
	Intermediate Term Tax Exempt*	9.0	4.0	0.0
	Long Term Tax Exempt*	3.0	0.0	0.0
	High Yield Tax Exempt Fixed Income	6.0	5.0	0.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0
	Emerging Market Fixed Income	0.0	0.0	0.0
	TOTAL GLOBAL EQUITIES	57.0	67.0	75.0
	U.S. Large Cap Equities	28.0	32.0	33.0
	U.S. Mid Cap Equities	11.0	11.0	13.0
	U.S. Small Cap Equities	3.0	4.0	4.0
	Developed Market Ex-U.S. Equities	11.0	12.0	12.0
	Emerging Market Equities	4.0	8.0	13.0
	TOTAL GLOBAL REAL ASSETS	7.0	7.0	7.0
	Private Real Estate**	7.0	7.0	7.0
	Commodities	0.0	0.0	0.0
	TOTAL ALTERNATIVE INVESTMENTS**	15.0	16.0	17.0
	Global Hedge Funds	0.0	0.0	0.0
	Private Equity	15.0	16.0	17.0
	Private Debt	0.0	0.0	0.0

Tax-efficient strategic allocations are updated annually; last update was July 16, 2024. Tactical allocations are updated periodically. The U.S. Tax Exempt Investment Grade Fixed Income encompasses the allocations to Short Term, Intermediate Term, and Long Term. Hedge fund allocations are based on private hedge fund capital market assumptions. The tactical asset allocation overweights and underweights are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio.

*Wells Fargo Advisors only.

These allocations span the set of investments available to investors, utilizing broad diversification to help manage portfolio risk. Special consideration is given to the taxable implications of investing in various asset classes. Taxability may also be taken into consideration in determining the choice of investment vehicles for certain asset classes. Liquidity and cash flow preferences may also be reflected in the choice of investment vehicles for certain asset classes. We suggest that investors who are highly tax-sensitive generally should elect municipal bonds to implement their fixed income allocation. The tactical asset allocation overweights and underweights are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio and also take taxation into consideration, therefore, some tactical ideas may not be implemented in these allocations.

Portfolio allocations across the efficient frontier-strategic



Strategic asset allocation: Tax-efficient liquid

May include fixed income, equities, and real assets

		CONSERVATIVE	MODERATE	AGGRESSIVE
		Strategic	Strategic	Strategic
		(%) 3.0	(%) 3.0	(%) 2.0
INCOME	TAX EXEMPT CASH ALTERNATIVES			
<u>S</u>	TOTAL GLOBAL FIXED INCOME	91.0	74.0	66.0
≤	U.S. Tax Exempt Investment Grade FI	91.0	68.0	50.0
	Short Term Tax Exempt*	11.0	8.0	6.0
	Intermediate Term Tax Exempt*	62.0	47.0	34.0
	Long Term Tax Exempt*	18.0	13.0	10.0
	High Yield Tax Exempt Fixed Income	0.0	6.0	16.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0
	Emerging Market Fixed Income	0.0	0.0	0.0
	TOTAL GLOBAL EQUITIES	6.0	23.0	32.0
	U.S. Large Cap Equities	6.0	14.0	17.0
	U.S. Mid Cap Equities	0.0	5.0	7.0
	U.S. Small Cap Equities	0.0	0.0	0.0
	Developed Market Ex-U.S. Equities	0.0	4.0	8.0
	Emerging Market Equities	0.0	0.0	0.0
	TOTAL GLOBAL REAL ASSETS	0.0	0.0	0.0
	Commodities	0.0	0.0	0.0
ΛE	TAX EXEMPT CASH ALTERNATIVES	2.0	2.0	2.0
GROWTH AND INCOME	TOTAL GLOBAL FIXED INCOME	53.0	43.0	32.0
Ň	U.S. Tax Exempt Investment Grade FI	45.0	35.0	25.0
ND	Short Term Tax Exempt*	6.0	4.0	3.0
ΗA	Intermediate Term Tax Exempt*	30.0	24.0	17.0
ΝT	Long Term Tax Exempt*	9.0	7.0	5.0
RO	High Yield Tax Exempt Fixed Income	8.0	8.0	7.0
Ð	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0
	Emerging Market Fixed Income	0.0	0.0	0.0
	TOTAL GLOBAL EQUITIES	45.0	55.0	66.0
	U.S. Large Cap Equities	21.0	26.0	30.0
	U.S. Mid Cap Equities	10.0	12.0	14.0
	U.S. Small Cap Equities	2.0	3.0	3.0
	Developed Market Ex-U.S. Equities	8.0	9.0	13.0
	Emerging Market Equities	4.0	5.0	6.0
	TOTAL GLOBAL REAL ASSETS	0.0	0.0	0.0
	Commodities	0.0	0.0	0.0

Tax-efficient strategic allocations are updated annually; last update was July 16, 2024. Tactical allocations are updated periodically. The U.S. Tax Exempt Investment Grade Fixed Income encompasses the allocations to Short Term, Intermediate Term, and Long Term.

*Wells Fargo Advisors only.

See next page for Growth data and portfolio allocations across the efficient frontier, strategic.

Strategic asset allocation: Tax-efficient liquid

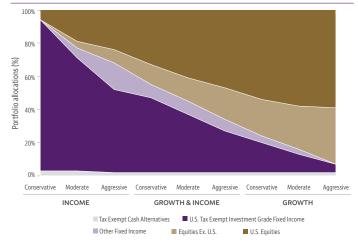
May include fixed income, equities, and real assets (continued)

		CONSERVATIVE	MODERATE	AGGRESSIVE
		Strategic (%)	Strategic (%)	Strategic (%)
Ξ	TAX EXEMPT CASH ALTERNATIVES	2.0	2.0	2.0
GROWTH	TOTAL GLOBAL FIXED INCOME	22.0	14.0	5.0
3RC	U.S. Tax Exempt Investment Grade FI	18.0	11.0	5.0
	Short Term Tax Exempt*	2.0	0.0	0.0
	Intermediate Term Tax Exempt*	12.0	8.0	5.0
	Long Term Tax Exempt*	4.0	3.0	0.0
	High Yield Tax Exempt Fixed Income	4.0	3.0	0.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0
	Emerging Market Fixed Income	0.0	0.0	0.0
	TOTAL GLOBAL EQUITIES	76.0	84.0	93.0
	U.S. Large Cap Equities	34.0	36.0	33.0
	U.S. Mid Cap Equities	15.0	16.0	18.0
	U.S. Small Cap Equities	5.0	6.0	8.0
	Developed Market Ex-U.S. Equities	14.0	13.0	18.0
	Emerging Market Equities	8.0	13.0	16.0
	TOTAL GLOBAL REAL ASSETS	0.0	0.0	0.0
	Commodities	0.0	0.0	0.0

Tax-efficient strategic allocations are updated annually; last update was July 16, 2024. Tactical allocations are updated periodically. The U.S. Tax Exempt Investment Grade Fixed Income encompasses the allocations to Short Term, Intermediate Term, and Long Term. The tactical asset allocation overweights and underweights are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio.

*Wells Fargo Advisors only.

These allocations span the set of liquid investments available to investors, utilizing broad diversification to help manage portfolio risk. Special consideration is given to the taxable implications of investing in various asset classes. Taxability may also be taken into consideration in determining the choice of investment vehicles for certain asset classes. Liquidity and cash flow preferences may also be reflected in the choice of investment vehicles for certain asset classes. We suggest that investors who are highly tax-sensitive generally should elect municipal bonds to implement their fixed income allocation. The tactical asset allocation overweights and underweights are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio and also take taxation into consideration, therefore, some tactical ideas may not be implemented in these allocations.



Portfolio allocations across the efficient frontier-strategic

Disclosures

Forecasts, targets, and estimates are not guaranteed and are based on certain assumptions and on our views of market and economic conditions which are subject to change.

Risk considerations

Past performance does not indicate future results. The value or income associated with a security or an investment may fluctuate. There is always the potential for loss as well as gain. Investments discussed in this report may be inappropriate for some investors depending on their specific investment objectives and financial position.

Asset allocation and diversification are investment methods used to manage risk. They do not assure or guarantee better performance and cannot eliminate the risk of investment losses. Your individual allocation may be different than the strategic long-term allocation above due to your unique individual circumstances, but is targeted to be in the allocation ranges detailed. The asset allocation reflected above may fluctuate based on asset values, portfolio decisions, and account needs.

Cash alternatives typically offer lower rates of return than longer-term equity or fixed-income securities and provide a level of liquidity and price stability generally not available to these investments. Some examples of cash alternatives include: Bank certificates of deposit; bank money market accounts; bankers' acceptances, federal agency short-term securities, money market mutual funds, Treasury bills, ultra-short bond mutual funds or exchange-traded funds and variable rate demand notes. Each type of cash alternatives has advantages and disadvantages which should be discussed with your financial advisor before investing.

Alternative investments, such as hedge funds, private capital funds, and private real estate funds, carry specific investor qualifications and involve the risk of investment loss, including the loss of the entire amount invested. While investors may potentially benefit from the ability of alternative investments to potentially improve the risk-reward profiles of their portfolios, the investments themselves can carry significant risks. Government regulation and monitoring of these types of investments may be minimal or nonexistent. There may be no secondary market for alternative investment interests and transferability may be limited or even prohibited.

Private debt strategies seek to actively improve the capital structure of a company often through debt restructuring and deleveraging measures. Such investments are subject to potential default, limited liquidity, the creditworthiness of the private company, and the infrequent availability of independent credit ratings for private companies.

Private debt refers to loans to companies which are not provided by banks or public markets, and instead are provided by private investors and private markets.

The use of **alternative investment strategies**, such as Equity Hedge, Event Driven, Macro and Relative Value, are speculative and involve a high degree of risk. These strategies may expose investors to risks such as short selling, leverage risk, counterparty risk, liquidity risk, volatility risk, the use of derivatives and other significant risks. Distressed credit strategies invest in, and might sell short, the securities of companies where the security's price has been, or is expected to be, affected by a distressed situation. This may involve reorganizations, bankruptcies, distressed sales, and other corporate restructurings. Investing in distressed companies is speculative and involves a high degree of risk. Because of their distressed situation, these securities may be illiquid, have low trading volumes, and be subject to substantial interest rate and credit risks. Structured credit strategies aim to generate returns via positions in the credit sensitive area of the fixed income markets. The strategy generally involves the purchase of corporate bonds with hedging of interest rate exposure. The use of alternative investment strategies may require a manager's skill in assessing corporate events, the anticipation of future movements in securities prices, interest rates, or other economic factors. No assurance can be given that a manager's view of the economy will be correct which may result in lower investment returns or higher return volatility. Long/short credit strategies seek to mitigate interest rate and credit risks regardless of market environment through investment in credit-related and structured debt vehicles. These strategies involve the use of market hedges and involve risks associated with the use of derivatives, fixed income, foreign investment, currency, hedging, leverage, liquidity, short sales, loss of principal and other material risks.

Equity sector risks: Communication services companies are vulnerable to their products and services becoming outdated because of technological advancement and the innovation of competitors. Companies in the communication services sector may also be affected by rapid technology changes, pricing competition, large equipment upgrades, substantial capital requirements, and government regulation and approval of products and services. In addition, companies within the industry may invest heavily in research and development which is not guaranteed to lead to successful implementation of the proposed product. Risks associated with the *Consumer Discretionary sector* include,

among others, apparel price deflation due to low-cost entries, high inventory levels and pressure from e-commerce players, reduction in traditional advertising dollars, and increasing household debt levels that could limit consumer appetite for discretionary purchases. Consumer Staples industries can be significantly affected by competitive pricing particularly with respect to the growth of low-cost emerging market production, government regulation, the performance of overall economy, interest rates, and consumer confidence. The *Energy sector* may be adversely affected by changes in worldwide energy prices, exploration, production spending, government regulation, and changes in exchange rates, depletion of natural resources, and risks that arise from extreme weather conditions. Investing in Financial Services companies will subject a portfolio to adverse economic or regulatory occurrences affecting the sector. Some of the risks associated with investment in the Health Care sector include competition on branded products, sales erosion due to cheaper alternatives, research & development risk, government regulations, and government approval of products anticipated to enter the market. Risks associated with investing in the Industrials sector include the possibility of a worsening in the global economy, acquisition integration risk, operational issues, failure to introduce to market new and innovative products, further weakening in the oil market, potential price wars due to any excesses industry capacity, and a sustained rise in the dollar relative to other currencies. Materials industries can be significantly affected by the volatility of commodity prices, the exchange rate between foreign currency and the dollar, export/import concerns, worldwide competition, procurement, and manufacturing and cost containment issues. Technology and Internet-related stocks, especially of smaller, less-seasoned companies, tend to be more volatile than the overall market. Real estate has special risks including the possible illiquidity of underlying properties, credit risk, interest rate fluctuations, and the impact of varied economic conditions. Utilities are sensitive to changes in interest rates and the securities within the sector can be volatile and may underperform in a slow economy.

Investing in **commodities** is not appropriate for all investors. Exposure to the commodities markets may subject an investment to greater share price volatility than an investment in traditional equity or debt securities. Investments in commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity. Products that invest in commodities may employ more complex strategies which may expose investors to additional risks.

Investments in **fixed-income securities** are subject to market, interest rate, credit/default, liquidity, inflation and other 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. **Municipal bonds** offer interest payments exempt from federal taxes, and potentially state and local income taxes. Municipal source are usolved to credit risk and potentially the Alternative Minimum Tax (AMT). Municipal securities are also subject to legislative and regulatory risk which is the risk that a change in the tax code could affect the value of taxable or tax-exempt interest income. Although **Treasuries** are considered free from credit risk they are subject to other types of risks. These risks include interest rate risk, which may cause the underlying value of the bond to fluctuate.

Leveraged loans are generally below investment grade quality ("high-yield" securities or "junk" bonds). Investing in such securities should be viewed as speculative and investors should review their ability to assume the risks associated with investments which utilize such securities.

Mortgage-related and asset-backed securities are subject to the risks associated with investment in debt securities. In addition, they are subject to prepayment and call risks. Changes in prepayments may significantly affect yield, average life and expected maturity. If called prior to maturity, similar yielding investments may not be available for the Fund to purchase. These risks may be heightened for longer maturity and duration securities.

Currency hedging is a technique used to seek to reduce the risk arising from the change in price of one currency against another. The use of hedging to manage currency exchange rate movements may not be successful and could produce disproportionate gains or losses in a portfolio and may increase volatility and costs.

Equity securities are subject to market risk which means their value may fluctuate in response to general economic and market conditions and the perception of individual issuers. Investments in equity securities are generally more volatile than other types of securities.

There is no guarantee that **dividend-paying stocks** will return more than the overall stock market. Dividends are not guaranteed and are subject to change or elimination.

There are no guarantees that **growth** or **value** stocks will increase in value or that their intrinsic values will eventually be recognized by the overall market. The return and principal value of stocks fluctuate with changes in market conditions. The growth and value type of investing tends to shift in and out of favor. The prices of **small and mid-size company** stocks are generally more volatile than large company stocks. They often involve higher risks because smaller companies may lack the management expertise, financial resources, product diversification and competitive strengths to endure adverse economic conditions.

Investing in **foreign securities** presents certain risks that may not be present in domestic securities. For example, investments in foreign, emerging and frontier markets present special risks, including currency fluctuation, the potential for diplomatic and potential instability, regulatory and liquidity risks, foreign taxation and differences in auditing and other financial standards.

Investing in **gold**, **silver** or other precious metals involves special risk considerations such as severe price fluctuations and adverse economic and regulatory developments affecting the sector or industry.

Investing in long/short strategies is not appropriate for all investors. **Short** selling involves sophisticated investment techniques that can add additional risk, and involves the risk of potentially unlimited increase in the market value of the security sold short, which could result in potentially unlimited loss for the Fund.

Master Limited Partnerships (MLPs) involves certain risks which differ from an investment in the securities of a corporation. MLPs may be sensitive to price changes in oil, natural gas, etc., regulatory risk, and rising interest rates. A change in the current tax law regarding MLPs could result in the MLP being treated as a corporation for federal income tax purposes which would reduce the amount of cash flows distributed by the MLP. Other risks include the volatility associated with the use of leverage; volatility of the commodities markets; market risks; supply and demand; natural and man-made catastrophes; competition; liquidity; market price discount from Net Asset Value and other material risks.

Merger arbitrage involves investing in event driven situations such as reorganizations, spin-offs, mergers, and bankruptcies, and involves the risks that the proposed opportunities in which the fund may invest may not materialized as planned or may be renegotiated or terminated which can result in losses to the fund.

There are special risks associated with investing in **preferred securities**. Preferred securities are subject to interest rate and credit risks and are generally subordinated to bonds or other debt instruments in an issuer's capital structure, subjecting them to a greater risk of non-payment than more senior securities. In addition, the issue may be callable which may negatively impact the return of the security. Preferred dividends are not guaranteed and are subject to deferral or elimination.

Investing in **real estate** involves special risks, including the possible illiquidity of the underlying property, credit risk, interest rate fluctuations and the impact of varied economic conditions. Other risks associated with investing in listed **REITs** include the use of leverage, unexpected reductions in common dividends, increases in property taxes, and the impact to listed REITs from new property development.

Privately offered **real estate** funds are speculative and involve a high degree of risk. Investments in real estate and real estate investments trusts have special risks, including the possible illiquidity of the underlying properties, credit risk, interest rate fluctuations, and the impact of varied economic conditions. There can be no assurance a secondary market will exist and there may be restrictions on transferring interests.

Sovereign debt are bonds issued by a national government in a foreign currency and are used to finance a country's growth. In addition to the risks associated with investing in international and emerging markets, sovereign debt involves the risk that the issuing entity may not be able or willing to repay principal and/or interest when due in accordance with the terms of the debt agreement.

Treasury Inflation-Protected Securities (TIPS) are subject to interest rate risk, especially when real interest rates rise. This may cause the underlying value of the bond to fluctuate more than other fixed income securities. TIPS have special tax consequences, generating phantom income on the "inflation compensation" component of the principal. A holder of TIPS may be required to report this income annually although no income related to "inflation compensation" is received until maturity.

Economic index definitions

An index is unmanaged and not available for direct investment.

Inflation is the change in the **Consumer Price Index (CPI)**. The CPI measures the price of a fixed basket of goods and services purchased by an average consumer.

Core inflation is the change in the core **Consumer Price Index (CPI)**. The core CPI measures the price of a fixed basket of goods and services — excluding the volatile food and energy components — purchased by an average consumer.

Consumer Confidence Index measures and details consumer confidence, which is the degree of optimism or pessimism toward the state of the economy.

JPMorgan Emerging Markets Currency Index tracks the performance of emerging-market currencies relative to the U.S. dollar.

MSCI Emerging Markets Currency Index is an index of emerging market currencies versus the dollar, where the weight of each currency within the index matches the relevant country weight within the Morgan Stanley Capital International (MSCI) Emerging Markets Equity Index.

MSCI All Country World Index (MSCI ACWI) is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of 23 developed and 26 emerging markets.

Purchasing Managers' Index (PMI) is an indicator of the economic health of the manufacturing sector. The PMI index is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment.

Institute of Supply Management (ISM) Purchasing Manager's Index

gauges internal demand for raw materials/goods that go into end-production. An Index value over 50 indicates expansion; below 50 indicates contraction. The values for the index can be between 0 and 100.

U.S. Dollar Index (USDX, DXY) is an index (or measure) of the value of the United States dollar relative to a basket of foreign currencies, often referred to as a basket of U.S. trade partners' currencies.

Institute for Supply Management (ISM) Manufacturing Index is based on surveys of more than 300 manufacturing firms by the Institute of Supply Management. The ISM Manufacturing Index monitors employment, production inventories, new orders and supplier deliveries.

Institute of Supply Management (ISM) Non-manufacturing Index (ISM Services Survey) measures the rate and direction of change in activity in the nonmanufacturing industries. An index with a score over 50 indicates that the industry is expanding, and a score below 50 shows a contraction. The values for the index can be between 0 and 100.

Personal consumption expenditures (PCE) is the primary measure of consumer spending on goods and services in the U.S. economy. It accounts for about two-thirds of domestic final spending, and thus it is the primary engine that drives future economic growth.

Alternative investments — strategy definitions

Private Equity. **The Burgiss Private Equity Index** is based on the pool of private equity funds sourced by Burgiss and is asset weighted. The index is calculated using cash flow and valuation histories of the underlying funds within Burgiss manager universe. The underlying funds are classified by Burgiss private capital classification system and the cash flow data is sourced from institutional investors around the world.

Global Hedge Funds. **HFRI Fund Weighted Composite Index.** 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.

Relative Value. **HFRI Relative Value (Total) Index.** Strategy 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. Relative Value (RV) position may be involved in corporate transactions also, but as opposed to Event Driven (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.

Arbitrage. **HFRI RV: Multi-Strategy Index:** multi-strategies employ an investment thesis predicated on realization of a spread between related yield instruments in which one or multiple components of the spread contains a fixed income, derivative, equity,

real estate, MLP or combination of these or other instruments. 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.

Long/Short Credit. HFRI RV: Fixed Income — Corporate Index. Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a corporate fixed-income instrument. Strategies are designed to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple corporate bonds or between a corporate and risk free government bond. They typically involve arbitrage positions with little or no net credit market exposure, but are predicated on specific, anticipated idiosyncratic developments.

Structured Credit/Asset Backed. **HFRI RV: Fixed Income** — **Asset Backed Index.** Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a fixed-income instrument backed by physical collateral or other financial obligations (loans, credit cards) other than those of a specific corporation. Strategies are designed to isolate attractive opportunities between a variety of fixed income instruments specifically securitized by collateral commitments, which frequently include loans, pools and portfolios of loans, receivables, real estate, machinery or other tangible financial commitments. Investment thesis may be predicated on an attractive spread given the nature and quality of the collateral, the liquidity characteristics of the underlying instruments and on issuance and trends in collateralized fixed-income instruments, broadly speaking. In many cases, investment managers hedge, limit, or offset interest-rate exposure in the interest of isolating the risk of the position to strictly the disparity between the yield of the instrument and that of the lower-risk instruments.

Macro. HFRI Macro (Total) Index. Encompass a broad range of strategies 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 on 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 opposed to Equity Hedge (EH), in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

Systematic Macro. HFRI Trend Following Directional Index is a global, equal-weighted index of single-manager funds that report to the HFR Database. The HFRI Trend Following Directional Index is comprised of funds that employ trend following strategies such as Macro: Currency – Systematic, Macro: Systematic Diversified, certain Macro: Multi-Strategy funds and other Macro funds that utilize, to some degree, trend following.

Discretionary Macro. **HFRI Macro: Discretionary Thematic Index.** Strategies primarily rely on the evaluation of market data, relationships and influences, as interpreted by individuals who make decisions on portfolio positions; strategies employ an investment process most heavily influenced by top-down analysis of macroeconomic variables. Investment Managers may trade actively in developed and emerging markets, focusing on both absolute and relative levels on equity markets, interest rates/fixed income markets, currency and commodity markets; they frequently employ spread trades to isolate a differential between instrument identified by the Investment Manager as being inconsistent with expected value. Portfolio positions typically are predicated on the evolution of investment themes the Manager expects to develop over a relevant time frame, which in many cases contain contrarian or volatility-focused components.

Event Driven. **HFRI Event Driven (Total) Index.** Maintains positions in companies currently or prospectively involved in corporate transactions of a wide variety including 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. Exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company-specific developments. Investment theses are typically predicated on fundamental (as opposed to quantitative) characteristics, with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

Activist. **HFRI ED: Activist Index.** Strategies may obtain or attempt to obtain representation on the company's board of directors in an effort to impact the firm's policies or strategic direction and in some cases may advocate activities such as division or asset sales, partial or complete corporate divestiture, dividends or share buybacks, and changes in management. Strategies employ an investment process primarily focused on opportunities in equity and equity-related instruments of companies that are currently or prospectively engaged in a corporate transaction, security issuance/repurchase, asset sales, division spin-off or other catalyst-oriented situation. These involve both announced transactions and situations in which no formal announcement is expected to occur. Activist strategies would expect to have greater than 50% of the portfolio in activist positions, as described.

Distressed Credit. **HFRI Event Driven Directional Index** is a global, equal-weighted index of single-manager funds that report to the HFR Database. The HFRI Event Driven Directional Index is comprised of Event Driven Funds that are classified as Special Situations, Credit Arbitrage and Distressed funds..

Merger Arbitrage. HFRI ED: Merger Arbitrage Index. Strategies primarily focus on opportunities in equity and equity-related instruments of companies that are currently engaged in a corporate transaction. Merger Arbitrage involves primarily announced transactions, typically with limited or no exposure to situations in which no formal announcement is expected to occur. Opportunities are frequently presented in cross-border, collared, and international transactions that incorporate multiple geographic regulatory institutions, typically with minimal exposure to corporate credits. Strategies typically have over 75% of positions in announced transactions over a given market cycle.

Equity Hedge. **HFRI Equity Hedge (Total) Index.** 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% exposure to, and may in some cases be entirely invested in, equities, both long and short.

Directional Equity. HFRI EH: Long/Short Directional Index is a global, equal-weighted index of single-manager funds that report to the HFR Database. The HFRI EH: Long/Short Directional Index is comprised of Equity Hedge funds that are not considered Equity Market Neutral. The HFRI EH: Long/Short Directional Index includes funds that are classified as Fundamental Growth, Fundamental Value, Multi-Strategy, Quantitative Directional and sector-focused (i.e., Energy/Basic Materials, Healthcare and Technology).

Equity Market Neutral. **HFRI EH: Equity Market Neutral Index.** Strategies employ sophisticated quantitative techniques to analyze price data to ascertain information about future price movement and relationships between securities. These can include both Factor-based and Statistical Arbitrage/Trading strategies. Factor-based investment strategies include strategies predicated on the systematic analysis of common relationships between securities. In many cases, portfolios are constructed to be neutral to one or multiple variables, such as broader equity markets in dollar or beta terms, and leverage is frequently employed to enhance the return profile of the positions identified. Statistical Arbitrage/Trading strategies consist of strategies predicated on exploiting pricing anomalies which may occur as a function of expected mean reversion inherent in security prices; high-frequency techniques may be employed; trading strategies may also be based on technical analysis or designed opportunistically to exploit new information that the investment manager believes has not been fully, completely, or accurately discounted into current security prices. Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Note: While the HFRI Indices are frequently used, they have limitations (some of which are typical of other widely used indexes). These limitations include survivorship bias (the returns of the indexes may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indexes, and, therefore, the index may omit funds, the inclusion of which might significantly affect the performance shown. The HFRI Indices are based on information hedge fund managers 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. 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. Returns of the underlying hedge funds are net of fees and are denominated in USD.

Asset class index definitions

Fixed income representative indexes

U.S. Taxable Investment Grade Fixed Income. **Bloomberg U.S. Aggregate Bond Index** is a broad-based measure of the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market.

Short Term Taxable Fixed Income. Bloomberg U.S. Aggregate 1-3 Year Bond Index is the one to three year component of the Bloomberg U.S. Aggregate Bond Index, which represents fixed-income securities that are SEC-registered, taxable, dollar-denominated, and investment-grade.

Intermediate Term Taxable Fixed Income. 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.

Long Term Taxable Fixed Income. **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.

Cash Alternatives/Treasury Bills. Bloomberg U.S. Treasury Bills (1–3M) Index is representative of money markets.

U.S. Treasury. **Bloomberg U.S. Treasury Index** includes public obligations of the U.S. Treasury with a remaining maturity of one year or more.

U.S. Municipal Bond. **Bloomberg Municipal Index** is considered representative of the broad market for investment grade, tax-exempt bonds with a maturity of at least one year.

U.S. Commercial Mortgage Backed Securities. **Bloomberg U.S. CMBS** Index measures the investment-grade market of US Agency and US Non-Agency conduit and fusion CMBS deals.

U.S. Investment Grade Corporate Fixed Income. **Bloomberg U.S. 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.

U.S. TIPS. **Bloomberg U.S. TIPS Index** represents Inflation-Protection securities issued by the U.S. Treasury.

U.S. Government Agencies. **Bloomberg U.S. Agency Index** includes native currency agency debentures from issuers such as Fannie Mae, Freddie Mac, and Federal Home Loan Bank.

U.S. Government. **Bloomberg U.S. Government Bond Index** includes U.S.-dollar-denominated, fixed-rate, nominal U.S. Treasury securities and U.S. agency debentures.

Credit. Bloomberg U.S. Credit Index includes investment-grade, U.S.-dollardenominated, fixed-rate, taxable corporate- and government-related bonds.

Securitized. **Bloomberg U.S. Mortgage Backed Securities (MBS) Index** includes agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

High Yield Taxable Fixed Income. **Bloomberg U.S. Corporate High-Yield Index** covers the universe of fixed-rate, non-investment-grade debt.

Developed Market Ex-U.S. Fixed Income (Unhedged). J.P. Morgan GBI Global ex-U.S. Index (Unhedged) in USD is an unmanaged index market representative of the total return performance in U.S. dollars on an unhedged basis of major non-U.S. bond markets.

Developed Market Ex-U.S. Fixed Income (Hedged). J.P. Morgan Non-U.S. Global Government Bond Index (Hedged) is an unmanaged market index representative of the total return performance, on a hedged basis, of major non-U.S. bond markets. It is calculated in U.S. dollars.

Emerging Market Fixed Income (U.S. dollar). J.P. Morgan Emerging Markets Bond Index (EMBI Global) currently covers more than 60 emerging market countries. Included in the EMBI Global are U.S.-dollar-denominated Brady bonds, Eurobonds, traded loans, and local market debt instruments issued by sovereign and quasi-sovereign entities.

Emerging Market Fixed Income (Local Currency). J.P. Morgan Government Bond Index-Emerging Markets Global Diversified tracks the performance of bonds issued by emerging market governments and denominated in the local currency of the issuer.

Preferred Stock. ICE BofA Fixed Rate Preferred Securities Index tracks the performance of fixed rate US dollar denominated preferred securities issued in the U.S. domestic market.

Leveraged Loans. **S&P/LSTA Leveraged Loan Index** is a market value-weighted index designed to measure the performance of the U.S. leveraged loan market based upon market weightings, spreads and interest payments.

Asset-Backed Securities. Bloomberg U.S. ABS Index measures the investment-grade market of US Credit Card, Auto and Student Loan asset backed securities deals.

Equity representative indexes

U.S. Large Cap Equities. **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.

U.S. Large Cap Equities (Growth). Russell 1000 Growth Index measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

U.S. Large Cap Equities (Value). Russell 1000 Value Index measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower expected growth values.

U.S. Mid Cap Equities. Midcap Index measures the performance of the mid-cap segment of the U.S. equity universe.

U.S. Mid Cap Equities (Growth). Russell Midcap Growth Index measures the performance of the mid-cap growth segment of the U.S. equity universe. It includes those Russell Midcap Index companies with higher price-to-book ratios and higher forecasted growth values.

U.S. Mid Cap Equities (Value). **Russell Midcap Value Index** measures the performance of the mid-cap value segment of the U.S. equity universe. It includes those Russell Midcap Index companies with lower price-to-book ratios and lower forecasted growth values.

Communication Services Index (Comm Svc): The Communication Services Index comprises those companies included in the S&P 500 that are classified as members of the GICS[®] communication services sector.

Consumer Discretionary Index (Cons Disc): The Consumer Discretionary Index comprises those companies included in the index that are classified as members of the GICS[®] consumer discretionary sector.

Consumer Staples Index (Cons Stap): The Consumer Staples Index comprises those companies included in the index that are classified as members of the GICS[®] consumer staples sector.

Energy Index: The Energy Index comprises those companies included in the index that are classified as members of the GICS[®] energy sector.

Financials Index (Fncls): The Financials Index comprises those companies included in the index that are classified as members of the GICS[®] financials sector.

Health Care Index (HC): The Health Care Index comprises those companies included in the index that are classified as members of the GICS[®] health care sector.

Industrials Index (Indust): The Industrials Index comprises those companies included in the index that are classified as members of the GICS[®] industrials sector.

Information Technology Index (IT): The Information Technology Index comprises those companies included in the index that are classified as members of the GICS[®] information technology sector.

Materials Index (Matris): The Materials Index comprises those companies included in the index that are classified as members of the GICS® materials sector.

Utilities Index (Utils): The Utilities Index comprises those companies included in the index that are classified as members of the GICS[®] utilities sector.

Real Estate Index: The Real Estate Index comprises those companies included in the index that are classified as members of the GICS[®] real estate sector.

U.S. Small Cap Equities. **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 Index.

U.S. Small Cap Equities (Growth). Russell 2000 Growth Index measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 companies with higher price-to-value ratios and higher forecasted growth values.

U.S. Small Cap Equities (Value). **Russell 2000 Value Index** measures the performance of the small-cap value segment of the U.S. equity universe. It includes those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

Developed Market Ex-U.S. Equities (U.S. dollar)/(Local). **MSCI EAFE Index** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of 21 developed markets, excluding the U.S. and Canada.

Developed Market Small Cap Equity (U.S. Dollar). MSCI EAFE Small Cap Gross Total Return USD (M2EASC Index) is an equity index which captures small cap representation across developed markets countries around the world, excluding the U.S. and Canada. With 2,358 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country. Returns measured in U.S. Dollars.

Developed Market Small Cap Equity (Local Currency). MSCI EAFE Small Cap Gross Total Return Local Index (GCLDEAFE Index) is an equity index which captures small cap representation across developed markets countries around the world, excluding the U.S. and Canada. With 2,358 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country. Priced in MSCI LCL Currency.

Emerging Market Equities (U.S. dollar)/(Local). **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance of 23 emerging markets.

Frontier Market Equities (U.S. dollar)/(Local). **MSCI Frontier Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance of 24 frontier (least developed) markets.

MSCI Singapore Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the Singapore market.

MSCI Japan Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the Japan market.

MSCI Hong Kong Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the Hong Kong market.

MSCI Ireland Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the Ireland market.

MSCI Belgium Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the Belgium market.

MSCI Denmark Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the Denmark market.

MSCI Netherlands Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the Netherlands market.

MSCI United Arab Emirates Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the United Arab Emirates market.

MSCI South Africa Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the South Africa market.

MSCI Taiwan Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the Taiwan market.

MSCI China Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the China market.

MSCI Korea Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the South Korea market.

MSCI Brazil Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the Brazil market.

MSCI Chile Index is a capitalization-weighted stock index designed to measure the performance of the large and mid cap segments of the Chile market.

Real assets representative indexes

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

Private Real Estate. The **NCREIF Property Index** is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only.

NCREIF Office Property Index is a sub-index of NCREIF Property Index. It only contains office properties.

Domestic REITs. **FTSE NAREIT U.S. All Equity REITs Index** is designed to track the performance of REITs representing equity interests in (as opposed to mortgages on) properties. It represents all tax-qualified REITs with more than 50% of total assets in qualifying real estate assets, other than mortgages secured by real property that also meet minimum size and liquidity criteria.

International REITs. **FTSE EPRA/NAREIT Developed ex U.S. Index** is designed to track the performance of listed real estate companies in developed countries worldwide other than the United States.

Infrastructure. The **S&P Global Infrastructure Index** is designed to track 75 companies from around the world chosen to represent the listed infrastructure industry while maintaining liquidity and tradability. To create diversified exposure, the index includes three distinct infrastructure clusters: energy, transportation, and utilities.

MLPs. **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for this emerging asset class. The index, which is calculated using a float-adjusted, capitalization-weighted methodology, is disseminated real-time on a price-return basis and on a total-return basis.

Commodities (BCOMTR). Bloomberg Commodity Total Return Index (BCOMTR) is composed of future contracts and reflects the returns on a fully collateralized investment in the BCOM. This combines the returns of the BCOM with the returns on cash collateral invested in 13 week (3 month) U.S. Treasury Bills. **Bloomberg Commodity Index (BCOM)** is comprised of 23 exchange-traded futures on physical commodities weighted to account for economic significance and market liquidity.

Bloomberg Agriculture Subindex is a commodity group subindex of the Bloomberg Commodity Index. It is composed of futures contracts on coffee, corn, cotton, soybeans, soybean oil, soybean meal, sugar and wheat. It reflects the return of the underlying commodity futures and is quoted in USD.

Bloomberg Energy Subindex is a commodity group subindex of the Bloomberg Commodity Index. It is composed of futures contracts on crude oil, ultra-low sulfur diesel, unleaded gasoline, low sulphur gasoil, and natural gas. It reflects the return of the underlying commodity futures and is quoted in USD.

Bloomberg Industrial Metals Subindex is a commodity group subindex of the Bloomberg Commodity Index. It is composed of futures contracts on aluminum, copper, nickel and zinc. It reflects the return of the underlying commodity futures and is quoted in USD.

Bloomberg Precious Metals Subindex is a commodity group subindex of the Bloomberg Commodity Index. It is composed of futures contracts on gold and silver. It reflects the return of the underlying commodity futures and is quoted in USD.

Commodities (S&P GSCI). **S&P Goldman Sachs Commodity Index** serves as a benchmark for investment in the commodity markets and as a measure of commodity performance over time. It is a tradable index that is readily available to market participants of the Chicago Mercantile Exchange. The index was originally developed by Goldman Sachs.

Commodities (RICI). Rogers International Commodity Index is a U.S. dollar based index representing the value of a basket of commodities consumed in the global economy. Representing futures contracts on 37 physical commodities, it is designed to track prices of raw materials not just in the U.S. but around the world.

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