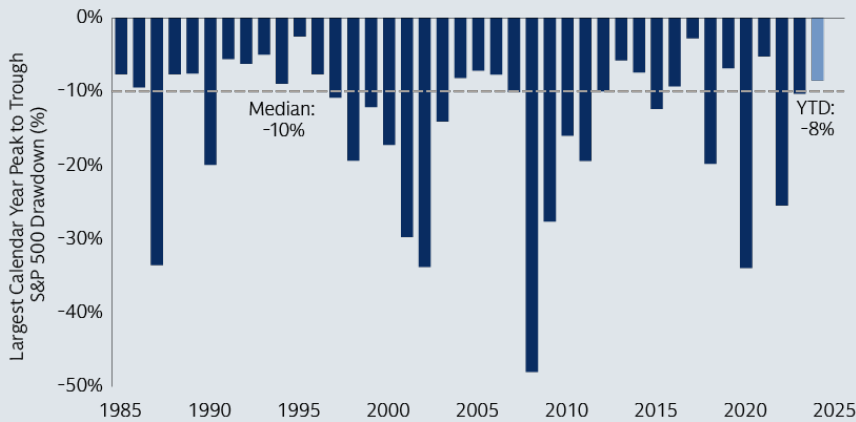


MARKET MONITOR

Chart Of The Week: Trough Day



US EQUITIES

Last Monday saw the S&P 500's largest one-day decline since September 2022. While the selloff occurred quickly, we find that it was not out of the ordinary, as calendar years since 1985 have experienced a median peak-to-trough drawdown of -10%. Additionally, we find that -5% pullbacks have historically been good entry points, as the index has gone on to provide a median 6% return over the subsequent 3 months with positive returns in 84% of episodes.

Source: GS GIR and Goldman Sachs Asset Management. As of August 5, 2024.

MARKET SUMMARY

GLOBAL EQUITIES: US equities were volatile last week, with 3 of 5 trading days finishing at least 1% higher or lower. The S&P 500 ultimately ended the week down -0.02%, despite an end-of-week rally on the back of initial jobless claims decreasing by more than expected. Indices outside the US experienced similar volatility but mixed performance on the week's close, with the STOXX 600 and TOPIX closing 0.34% higher and -2.14% lower, respectively.

COMMODITIES: Commodity prices rose last week as tensions in the Middle East remain elevated and crude oil inventories decreased by more than expected. WTI and Brent Crude closed the week at \$76.84 and \$79.66/bbl, respectively, following the Energy Information Administration reporting that crude oil inventories decreased by -3.728M, as opposed to consensus expectations for a -3.436M decline. Meanwhile, gold prices rose to \$2473.40/troy oz.

FIXED INCOME: Global sovereign yields broadly rose last week on the back of above-consensus services activity. In the US, the 2-Year and 10-Year US Treasury yields closed the week higher at 4.06% and 3.94%, despite FOMC speaker Daly indicating that she expects interest rates to lower later this year. Outside the US, the 10-Year German Bund and 10-Year UK Gilt yields followed suit, rising to 2.23% and 3.94%, respectively.

FX: The US dollar weakened against a basket of currencies last week as futures markets implied a more dovish policy path, pricing 4 cuts by the end of 2024 relative to 2 cuts 1 month ago. Ultimately, the US dollar index closed the week -0.16% lower. In Japan, the yen saw a sharp strengthening against the dollar midweek but ended flat at ¥146.62, as BoJ meeting minutes revealed hawkish sentiment reflecting its original intention to hike rates in order to counteract the yen's prior bout of depreciation.

ECONOMIC SUMMARY

ELECTIONS: At a Philadelphia rally, Vice President Kamala Harris announced Minnesota Gov. Tim Walz as her running mate. National polls from FiveThirtyEight now indicate that VP Harris is ahead of former President Trump by 2.1pp, whereas Trump was ahead by 3.2pp before President Biden had dropped out of the race. While Harris has certainly built momentum since entering the race, early swing state polls reflect tight races with Trump still leading in several key states.

ACTIVITY: The US ISM Services index printed above consensus expectations at 51.4 for July, a modest increase from 48.8 in June. The composition was strong, as the business activity, new orders, and employment components all increased back into expansionary territory. Across the pond, the UK services PMI rose to 52.5 in July, marginally above consensus expectations. Meanwhile, the final reading on the Euro area composite PMI was revised 0.1 points higher to 50.2 in July but still marked a five-month low and a decline from the prior reading of 50.9.

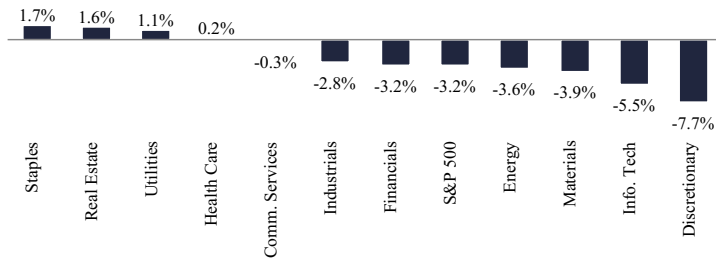
LABOR: US labor data last week countered some recessionary fears stemming from the previous week's data. US initial jobless claims decreased to 233k, below consensus expectations in the week ended August 3.

MONETARY POLICY: BoJ meeting minutes demonstrated the Board's desire to "raise the Japanese policy interest rate in a timely and gradual manner". However, in light of market moves over the past week, Deputy Governor Uchida sounded a more cautious tone this week, citing the latest volatility in domestic and global markets as grounds to "maintain current levels of monetary easing for the time being". Meanwhile, FOMC speaker Daly said she expects that interest rates will be cut later this year and did not have concerns about the July unemployment and jobs data.

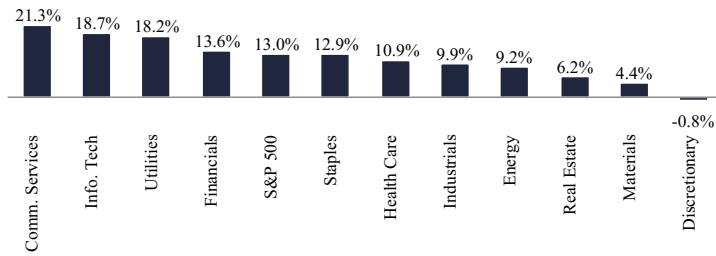
MARKET WATCH

S&P 500 INDEX SECTOR RETURNS

MONTH-TO-DATE, AS OF 08/09/24

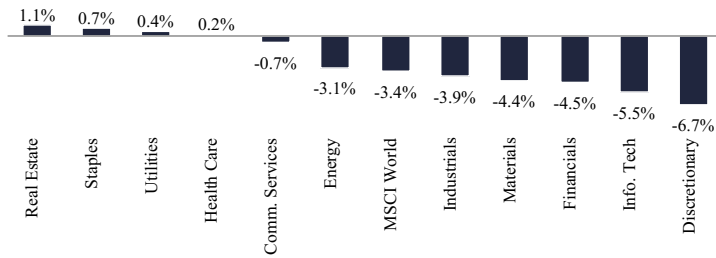


YEAR-TO-DATE, AS OF 08/09/24

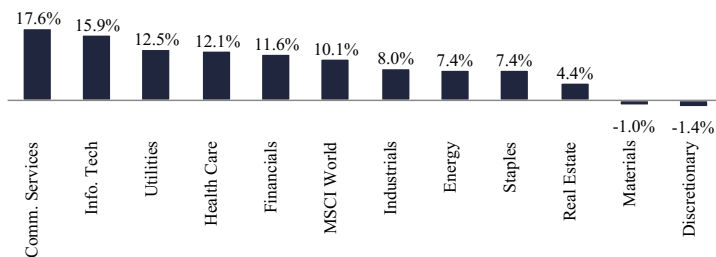


MSCI WORLD INDEX SECTOR RETURNS

MONTH-TO-DATE, AS OF 08/09/24



YEAR-TO-DATE, AS OF 08/09/24



ECONOMIC WATCH

Monday, August 12	Tuesday, August 13	Wednesday, August 14	Thursday, August 15	Friday, August 16	Critical Future Events
	US PPI MoM (Cons: 0.2%, Prior: 0.2%) UK Unemployment Rate (Cons: 4.5%, Prior: 4.4%)	UK CPI YoY (Cons: 2.3%, Prior: 2.0%) US CPI YoY (Cons: 3.0%, Prior: 3.0%)	UK GDP QoQ (Cons: 0.6%, Prior: 0.7%) US Core Retail Sales (Cons: 0.1%, Prior: 0.4%) Philadelphia Fed Manuf. Index (Cons: 5.6, Prior: 13.9)	UK Retail Sales MoM (Cons: 0.6%, Prior: -1.2%) US Housing Starts (Cons: 1.340M, Prior: 1.353M) US Mich. Cons. Sentiment (Cons: 66.7, Prior: 66.4)	ECB Meeting – Sep 12 FOMC Meeting – Sep 18 BoE Meeting – Sep 19 BoJ Meeting – Sep 20

Source: MSCI, Bloomberg, and Goldman Sachs Asset Management. For style performance, Large, Mid, and Small for US Equity refer to the Russell 1000, Russell Midcap, and Russell 2000 indices, respectively. Value refers to companies with lower price-to-book ratios and lower expected growth values, and Growth refers to higher price-to-book ratios and higher forecasted growth values. For US Fixed Income, Government, Corporate, and High Yield refer to the Bloomberg Treasury, Bloomberg Corporate Credit, and Bloomberg High Yield indices, respectively. Short, Intermediate, and Long refer to the Short, Intermediate, and Long segments of their respective curves. For European Fixed Income, Government, Corporate, and High Yield refer to the Bloomberg Euro Treasury Index, the Bloomberg Euro Corporate Index, and the Bloomberg Euro High Yield Index, respectively. Quality returns refers to the credit quality of asset classes ranging from Government, highest quality, to High Yield, lowest quality. Since August 24, 2021, the Barclays indices are branded "Bloomberg indices". Please see end disclosures for footnotes. **Past performance does not guarantee future results, which may vary.**

Style Performance

US EQUITY SIZE & STYLE RETURNS

	Month-to-Date (as of 08/09/24)			Year-to-Date		
	Value	Core	Growth	Value	Core	Growth
Large	-2.99%	-3.29%	-3.57%	8.72%	12.08%	14.41%
Medium	-3.47%	-3.30%	-2.74%	7.02%	6.29%	3.70%
Small	-8.16%	-7.67%	-7.16%	2.15%	3.48%	4.90%

MSCI WORLD SIZE & STYLE RETURNS

	Month-to-Date (as of 08/09/24)			Year-to-Date		
	Value	Core	Growth	Value	Core	Growth
Large	-3.14%	-3.40%	-3.64%	8.25%	10.81%	13.12%
Medium	-3.63%	-3.63%	-3.63%	5.18%	4.21%	2.73%
Small	-5.77%	-5.78%	-5.79%	2.13%	2.17%	2.21%

US FIXED INCOME MATURITY AND QUALITY RETURNS

	Month-to-Date (as of 08/09/24)			Year-to-Date		
	Short	Intermed.	Long	Short	Intermed.	Long
Government	0.55%	0.63%	1.73%	2.80%	2.70%	0.08%
Corporate	0.34%	0.38%	0.53%	3.50%	3.41%	0.20%
High Yield	-0.05%	-0.06%	0.24%	4.59%	4.57%	2.28%

EUROPEAN FIXED INCOME MATURITY AND QUALITY RETURNS

	Month-to-Date (as of 08/09/24)			Year-to-Date		
	Short	Intermed.	Long	Short	Intermed.	Long
Government	0.30%	0.44%	0.58%	1.50%	0.87%	-0.25%
Corporate	0.20%	0.07%	-0.32%	2.60%	2.48%	0.59%
High Yield	-0.03%			4.07%		

WEEKLY MARKET RECAP

INDEX RETURNS				
	1 WEEK	MTD	QTD	YTD
EQUITIES				
S&P 500	-0.02%	-3.20%	-2.02%	12.96%
DJ Industrial Average	-0.56%	-3.26%	1.11%	5.95%
Russell 2000	-1.32%	-7.67%	1.71%	3.48%
Russell Midcap	0.15%	-3.30%	1.26%	6.29%
STOXX Europe 50 (€)	0.84%	-4.01%	-4.28%	6.37%
STOXX Europe 600 (€)†	0.34%	-3.58%	-2.22%	6.44%
MSCI EAFE Small Cap	-0.93%	-4.87%	0.57%	1.42%
FTSE 100 (£)	0.15%	-2.08%	0.39%	8.31%
DAX (€)	0.35%	-4.25%	-2.81%	5.80%
FTSE MIB (€)	-0.74%	-5.87%	-3.82%	9.10%
CAC 40 (€)†	0.25%	-3.48%	-2.75%	-1.56%
SWISS MKT (CHF)	-0.08%	-3.67%	-1.07%	9.86%
TOPIX (¥)	-2.14%	-11.13%	-11.61%	6.19%
Hang Seng (HKD)	0.85%	-1.46%	-2.47%	3.60%
MSCI World	-0.00%	-3.43%	-1.71%	10.12%
MSCI China Free†	1.09%	-1.25%	-3.09%	3.99%
MSCI EAFE	-0.29%	-4.04%	-1.21%	4.46%
MSCI EM	0.28%	-1.87%	-1.51%	6.05%
MSCI Brazil (BRL)	3.81%	2.33%	5.48%	-1.79%
MSCI India (INR)	-1.29%	-2.50%	1.82%	19.49%
FIXED INCOME				
Bloomberg Aggregate	-0.82%	0.74%	3.09%	2.36%
Bloomberg Euro Aggregate	-0.12%	1.34%	4.41%	0.07%
Bloomberg US High Yield	0.25%	-0.05%	1.89%	4.52%
Bloomberg Euro High Yield (€)	0.12%	-0.03%	1.20%	4.07%
Bloomberg Muni Aggregate	-0.44%	0.51%	1.42%	1.01%
Bloomberg TIPS	-0.48%	0.14%	1.95%	2.62%
JPM EMBI Gbl. Divers.	-0.03%	0.45%	2.33%	4.73%
JPM GBI-EM Gbl. Divers.	1.07%	1.75%	4.06%	0.20%
OTHER				
DJ US Real Estate	-0.05%	1.23%	8.82%	5.69%
FTSE EPRA/NAREIT Dvlpd. Ex-US	0.21%	-0.21%	5.62%	-1.92%
S&P GSCI	2.09%	-1.29%	-4.76%	5.79%
Alerian MLP	-1.56%	-4.02%	-3.42%	13.68%
US Dollar Index	-0.16%	-1.02%	-2.64%	1.88%
VIX	-12.91%	24.51%	63.75%	63.61%

COMMODITIES				
	08/09/24	07/31/24	06/30/24	12/31/23
WTI Oil (\$/barrel)	\$76.84	\$77.91	\$81.54	\$71.65
Brent Oil (\$/barrel)	\$79.66	\$80.72	\$86.41	\$77.04
Gold (\$/oz)	\$2473.40	\$2473.00	\$2385.60	\$2091.80
Natural Gas (\$/mmBtu)	\$2.14	\$2.04	\$2.60	\$2.51

CURRENCIES				
	08/09/24	07/31/24	06/30/24	12/31/23
Euro (\$/€)	1.0920	1.0826	1.0712	1.1041
Pound (\$/£)	1.2757	1.2855	1.2642	1.2746
Japanese Yen (¥/\$)	146.62	150.48	160.81	141.02
Swiss Franc (CHF/€)	0.9443	0.9520	0.9626	0.9289
Chinese Yuan Renminbi (CNY/\$)	7.1476	7.1353	7.1321	7.0842

RATES & SPREADS				
	08/09/24	07/31/24	06/30/24	12/31/23
RATES				
Fed Funds Target	5.50%	5.50%	5.50%	4.50%
Secured Overnight Financing Rate *	5.34%	5.38%	5.33%	5.38%
ECB Depo Rate	4.00%	3.75%	3.50%	2.00%
3-Month US Dollar Libor	5.37%	5.50%	5.59%	5.59%
US Treasuries 2-Year	4.06%	4.34%	4.72%	4.25%
US Treasuries 10-Year	3.94%	4.11%	4.34%	3.86%
US Treasury 2-10 Slope	-0.12%	-0.23%	-0.38%	-0.39%
German Bunds 2-Year	2.39%	2.53%	2.83%	2.40%
German Bunds 10-Year	2.23%	2.30%	2.50%	2.02%
Japanese Govt Bonds 10-Year	0.85%	1.06%	1.06%	0.61%
UK Gilts 10-Year	3.94%	3.97%	4.17%	3.54%
Swiss Govt Bonds 10-Year	0.44%	0.45%	0.60%	0.70%
French OATs 10-Year	2.97%	3.01%	3.30%	2.56%
Italian BTPs 10-Year	3.64%	3.65%	4.07%	3.70%
Spanish Bonos 10-Year	3.08%	3.12%	3.42%	2.99%
SPREADS				
HY Corp. Spread (bps)	339	314	311	323
Bank Loan Spread (bps) *	507	500	507	528
IG Corp. Spread (bps)	102	93	93	98
EMD Spread (bps)	466	454	444	438

Global Equity Valuations

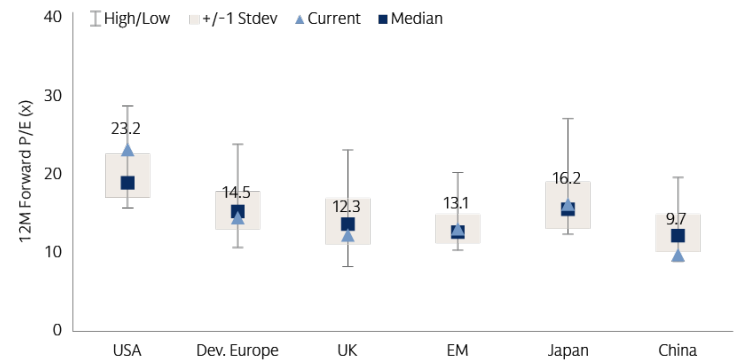


Chart Source: Goldman Sachs Asset Management and Bloomberg as of close of trading on July 31, 2024. Chart data shows next 12-month P/E ratio from August 2014 to the current period. 12m forward P/E(x) refers to price-to-earnings ratio for the next 12 months, which is a valuation measure applied to respective broad equity indices. Please see additional disclosures at the end of this presentation.

Weekly Market Recap Notes:

All data is denominated in USD unless noted otherwise.

† Data is released weekly, as of Monday.

If data displays an asterisk:

* Data is lagged by 1 day.

** Data is lagged by 2 days.

Source: MSCI and Goldman Sachs Asset Management. **Past performance does not guarantee future results, which may vary. Please see end disclosures for footnotes.**

IMPORTANT INFORMATION

Page 1 Chart of the Week Notes: Source: Goldman Sachs Global Investment Research and GS Asset Management. As of August 5, 2024. Chart shows the largest peak to trough S&P 500 drawdown for each calendar year tracing back to 1985. **Past performance does not predict future returns and does not guarantee future results, which may vary.** For illustrative purposes only.

Page 1 Market Summary Notes: "WTI" refers to West Texas Intermediate crude oil, a common US benchmark for oil prices. "Brent" refers to a global benchmark for oil prices worldwide. "Bbl" refers to barrel. "Oz" refers to ounce. "FOMC" refers to Federal Open Market Committee. "BoJ" refers to Bank of Japan. "Dovish" refers to a central bank stance that prioritizes stimulating growth over controlling inflation, typically achieved through lower interest rates. "Hawkish" refers to a central bank stance that prioritizes controlling inflation often at the expense of economic growth, typically achieved through higher interest rates.

Page 1 Economic Summary Notes: "ISM" refers to the Institute for Supply Management. "VP" refers to vice President. "pp" refers to percentage points. "BoJ" refers to Bank of Japan. "FOMC" refers to Federal Open Market Committee.

Page 2 Style Performance Notes: For US Fixed Income, Government, Corporate, and High Yield refer to the Bloomberg US Treasury, the Bloomberg US Corporate Credit, and the Bloomberg US High Yield indices, respectively. For European Fixed Income, Government, Corporate, and High Yield refer to the Bloomberg Euro Treasury Index, the Bloomberg Euro Corporate Index, and the Bloomberg Euro High Yield Index, respectively. Short, Intermediate, and Long refer to the Short, Intermediate, and Long segments of their respective curves. Quality returns refers to the credit quality of asset classes ranging from Government, highest quality, to High Yield, lowest quality. Since August 24, 2016, the Barclays indices are co-branded "Bloomberg Barclays indices".

Page 2 Economic Watch Notes: "PPI" refers to Producer Price Index. "CPI" refers to Consumer Price Index. "Core CPI" refers to the Consumer Price Index, excluding food and energy. "YoY" refers to year-over-year. "GDP" refers to Gross Domestic Product. "QoQ" refers to quarter-over-quarter. "MoM" refers to month-over-month. "ECB" refers to European Central Bank. "FOMC" refers to Federal Open Market Committee. "BoE" refers to Bank of England, "BoJ" refers to Bank of Japan.

Page 3 Global Equity Valuations Chart Notes: Earnings are forward looking Bloomberg estimates of operating earnings per share over the next four quarters, which may exclude one-time extraordinary gains and losses. Please see index disclosures for additional definitions on the indices.

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Index Benchmarks: Equities: The **S&P 500 Index** is the Standard & Poor's 500 Composite Stock Prices Index of 500 stocks, an unmanaged index of common stock prices. The Dow Jones Industrial Average Index is a price-weighted average of 30 actively traded blue-chip stocks. The **Russell 1000 Index** is a market-cap weighted index that measures the performance of the 1,000 largest companies in the Russell 3000 Index. The **Russell Mid Cap Index** measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 30% of the total market capitalization of the Russell 1000 Index. The **Russell 2000 Index** is an unmanaged index of common stock prices that measures the performance of the 2000 smallest companies in the Russell 3000 Index. The **MSCI EAFE Index** is a free-float weighted equity index, which covers developed markets countries in Europe, Australasia, Israel, and the Far East. The **MSCI Emerging Markets (EM) Index** is a free float-adjusted market capitalization index that captures large and mid-cap representation across 24 Emerging Markets (EM) countries. The **STOXX Europe 600 Index** is derived from the STOXX Europe Total Market Index (TMI) and is a subset of the STOXX Global 1800 Index. With a fixed number of 600 components, the STOXX Europe 600 Index represents large, mid and small capitalization companies across 18 countries of the European region. The **Japan TOPIX Index** is a capitalization-weighted index of the largest companies and corporations that are found in the First Section of the Tokyo Stock Exchange. The **German DAX** is a capitalization-weighted blue chip stock market index consisting of the 30 major German companies trading on the Frankfurt Stock Exchange. The **Shanghai Composite** is a market capitalization weighted index of all A-shares and B-shares that trade on the Shanghai Stock Exchange. **Euro Stoxx 50 Index**, Europe's leading Blue-chip index for the Eurozone, provides a Blue-chip representation of supersector leaders in the Eurozone. The **Financial Times Stock Exchange (FTSE) 100 Index** is an index of the 100 companies listed on the London Stock Exchange with the highest market capitalization. **FTSE MIB Index** is composed of 40 Italian equities and seeks to replicate the broad sector weights of the Italian stock market. **CAC 40 Index** is composed of the 40 largest equities listed in France. **SWISS Market Index** is composed of the largest and most liquid stocks traded on the Geneva, Zurich, and Basel Stock Exchanges. **Hang Seng Composite Index** covers about 95% of the total market capitalization of companies listed on the Main Board of the Hong Kong Stock Exchange. The **MSCI World Index** is a broad global equity index that represents large and mid-cap equity performance across 23 developed markets countries. It covers approximately 85% of the free float-adjusted market capitalization in each country. The **MSCI China Index** captures large and mid cap representation across China H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs). With 461 constituents, the index covers about 85% of this China equity universe. Currently, the index also includes Large Cap A shares represented at 5% of their free float adjusted market capitalization. **MSCI Brazil Index** covers about 85% of the total market capitalization of the Brazilian equity universe. **MSCI India Index** covers about 85% of the total market capitalization of the Indian equity universe. **MSCI Russia Index** covers about 85% of the free float-adjusted market capitalization in Russia. The **CBOE Volatility Index (VIX)** is a leading measure of market expectations of near-term volatility conveyed by S&P 500 Index option prices. **Fixed Income:** The **Bloomberg US Aggregate Bond Index** represents an unmanaged diversified portfolio of fixed-income securities, including US Treasuries, investment-grade corporate bonds, and mortgage-backed and asset-backed securities. The **Bloomberg US High-Yield Index** covers the USD-denominated, non-investment grade, fixed-rate, taxable corporate bond market.

The **Bloomberg US Aggregate Municipal Bond Index** is an unmanaged broad-based total return index composed of approximately 8,000 investment grade, fixed rate, and tax-exempt issues, with a remaining maturity of at least one year. The **J.P. Morgan Emerging Markets Bond Index (EMBI Global Index)** is an unmanaged market capitalization Index that tracks total returns for USD-denominated debt instruments issued by emerging market sovereign and quasi-sovereign issuers.

The **J.P. Morgan Government Bond Index-Emerging Markets Global Diversified (GBI-EM Global Index)** is a market capitalization Index that tracks the performance of local currency debt issued by emerging market governments. **Bloomberg Euro Aggregate Index** refers to the Bloomberg EuroAgg Index. The index measures the market of investment grade, euro-denominated, fixed-rate bond market, including treasuries, government-related, corporate and securitized issues. Inclusion is based on currency denomination of a bond and not country of risk of the issuer. **Bloomberg Euro High Yield Index** refers to the Bloomberg Euro High Yield 3% Issuer Capped Index. The index measures the of non-investment grade, fixed-rate corporate bonds denominated in USD. Inclusion is based on the currency of issue, and not the domicile of the issuer. The index excludes emerging market debt. **Other:** The **FTSE EPRA/NAREIT Developed ex US Index** is a subset of the FTSE EPRA/NAREIT Developed Index and is designed to track the performance of listed real estate companies and REITs. The **S&P GSCI Commodity Index** is a composite index of commodity sector returns, representing an unleveraged, long-only investment in commodity futures that is broadly diversified across the spectrum of commodities. It is not possible to invest in an unmanaged index. **Commodities:** **WTI Oil** refers to West Texas Intermediate (WTI) Crude Oil, a land-locked crude, delivered via pipeline into Cushing, Oklahoma. **Brent Oil** refers to Brent crude oil, a waterborne crude oil produced in the North Sea. **Currencies:** **Euro (\$/€)** refers to the Euro's exchange rate with the Dollar. **Pound (\$/£)** refers to the British Pound's exchange rate with the US Dollar. **Japanese Yen (¥/\$)** refers to the US Dollar's exchange rate with the Japanese Yen. **Swiss Franc (CHF/€)** refers the Euro's exchange rate with the Swiss Franc. **Chinese Yuan Renminbi (CNY/\$)** refers to the US Dollar's exchange rate with the Chinese Yuan Renminbi. **Rates:** The **federal funds rate** is the interest rate at which depository institutions lend balances at the Federal Reserve to other depository institutions overnight. The **LIBOR** is the USD-denominated London Interbank Offered Rate, and is the average of interest rates estimated by each of the leading banks in London that it would be charged were it to borrow from other banks. The **2-Year Treasury** is a US Treasury debt obligation that has a maturity of 2 years. The **10-Year Treasury** is a US Treasury debt obligation that has a maturity of 10 years. The **2-10 Treasury Slope** is the difference between the 10-Year Treasury and the 2-Year Treasury. The **German Bunds 2-Year** is a German debt obligation that has a maturity of 2 years. The **German Bunds 10-Year** is a German debt obligation that has a maturity of 10 years. The **Japanese Govt Bonds 2-Year** is a Japanese debt obligation that has a maturity of 2 years. The **Japanese Govt Bonds 10-Year** is a Japanese debt obligation that has a maturity of 10 years. The **UK Gilts 10-Year** is a UK debt obligation that has a maturity of 10 years. The **Swiss Govt Bonds 10-Year** is a Swiss debt obligation that has a maturity of 10 years. The **French OATs 10-Year** is a French debt obligation that has a maturity of 10 years. The **Italian BTPs 10-Year** is an Italian debt obligation that has a maturity of 10 years. The **Spanish Bonos 10-Year** is a Spanish debt obligation that has a maturity of 10 years. **Spreads:** **High Yield (HY) Corporate Spread** is the Bloomberg US Corporate High Yield Average Option Adjusted Spread (OAS), which measures the spread between the US Treasury yield curve and the Bloomberg US Corporate High Yield curve. The **Bank Loan Spread** is the daily discount margin (3-year life) of the Credit Suisse Leveraged Loan Index, which is designed to mirror the investable universe of the USD-denominated leveraged loan market. The **Investment Grade (IG) Corporate Spread** is the Bloomberg US Aggregate Corporate Average OAS, which measures the spread between the US Treasury yield curve and the Bloomberg US Corporate Average curve. The **EMD Spread** is the J.P. Morgan EMBI Global Diversified Sovereign Spread, which measures the spread between the US Treasury yield curve and the J.P. Morgan EMBI Global Diversified Sovereign curve.

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