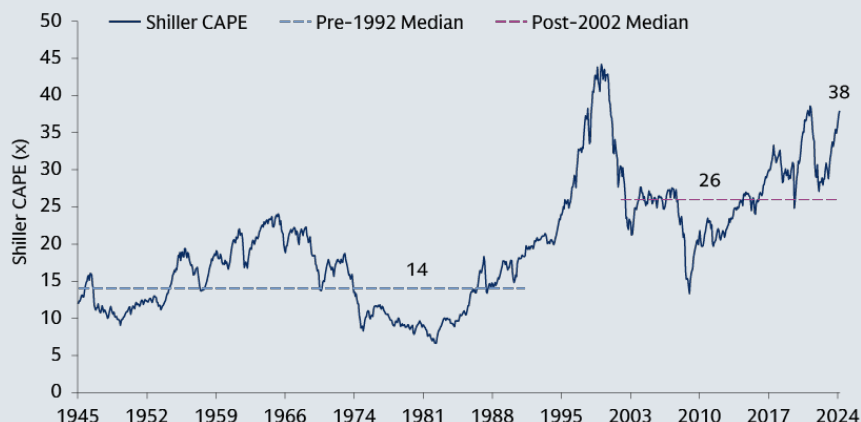


MARKET MONITOR

Chart Of The Week: Expensive Taste



Source: GS ISG and GS Asset Management. As of December 31, 2024.

EQUITY

Today's US equity market is notorious for elevated valuations, raising investor concerns for drawdown risk and limited upside. However, we may also find ourselves in a period of structurally higher valuations, as the market seems to be willing to pay a higher multiple for the more reliable profits that companies are demonstrating today. In absence of a material shift in the macro or earnings environment, these high valuation levels may be set to hold for quite some time.

MARKET SUMMARY

GLOBAL EQUITIES: Global equities broadly rose last week on the back of a busy week for inflation data. In the US, the S&P 500 rose 2.93% over the week as core inflation data came in lower than expected, potentially raising hopes for more Fed cuts this year. Elsewhere, the STOXX 600 and FTSE 100 ended the week up 2.38% and 3.14% respectively, with the latter hitting an all-time high on Friday as softer inflation data also raised anticipation for interest rate cuts from the BoE.

COMMODITIES: Oil prices rose last week after the US Energy Information Administration reported that inventories fell by -1.96M barrels over the second week of the year. WTI and Brent Crude ultimately ended the week at \$77.88 and \$80.79/bbl, respectively, on the back of investor expectations that Chinese demand could increase. Gold rose to \$2775.00/troy oz., as anticipation increased for rate cuts and elevated trade tensions.

FIXED INCOME: US Treasury yields were down last week as core inflation slowed by more than had been expected, easing investor concerns for a more hawkish stance from the FOMC. The 2-Year and 10-Year US Treasury yields ended the week at 4.27% and 4.61%, respectively. European sovereign bond yields followed suit, with the 10-Year German Bund yield ending the week down at 2.54%.

FX: The US dollar weakened against a basket of currencies last week on the back of below-consensus retail sales data. The US dollar index ended the week -0.40% lower. Despite the dollar weakening against most other currencies, it ended the week slightly stronger against the pound sterling, which itself was weak due to disappointing retail sales figures in the United Kingdom. The pound ultimately ended the week at \$1.2168.

ECONOMIC SUMMARY

INFLATION: Core inflation data in the US came in below consensus expectations, with core CPI falling to 3.2% year-over-year in December from 3.3% the month prior. Headline CPI printed in line with consensus expectations at 2.9%, rising from the prior month mainly due to a spike in energy prices. Meanwhile, the PPI increased by 0.2% month-over-month in December, below consensus expectations. Across the pond, UK headline and core CPI inflation came in at 2.5% and 3.2% year-over-year for December, respectively, both below consensus expectations. Euro area consumer inflation rose to 2.4% year-over-year in December, its highest level since July.

MONETARY POLICY: Fed governor Christopher Waller suggested that the Federal Reserve may cut rates three or four times this year depending on the data in response to the inflation releases during the week. He stated that it was "reasonable" to expect cuts in the first half of the year and did not rule out a potential cut in March.

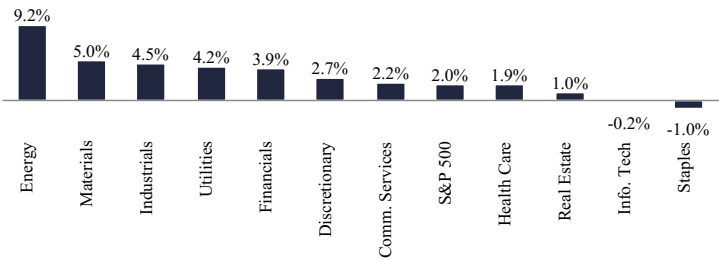
CONSUMER: Core retail sales in the US rose by 0.4% month-over-month in December, slightly below consensus expectations for 0.5%. Meanwhile, UK retail sales were sharply down to 3.6% year-over-year in December, well below consensus expectations of 4.2%. The print came on top of weak GDP data, reinforcing GIR's view that the BoE will cut its policy rate in February.

CHINA: Real GDP growth rose to 5.4% year-over-year in 4Q 2024, resulting in an annual growth of 5.0% for 2024, in line with the government's target. The increase was mainly driven by policy easing and export frontloading due to concerns about potential US tariff hikes.

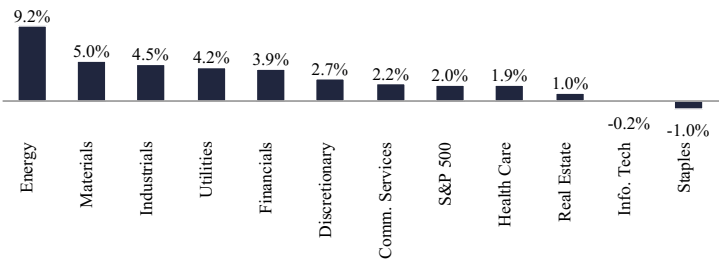
MARKET WATCH

S&P 500 INDEX SECTOR RETURNS

MONTH-TO-DATE, AS OF 01/17/25

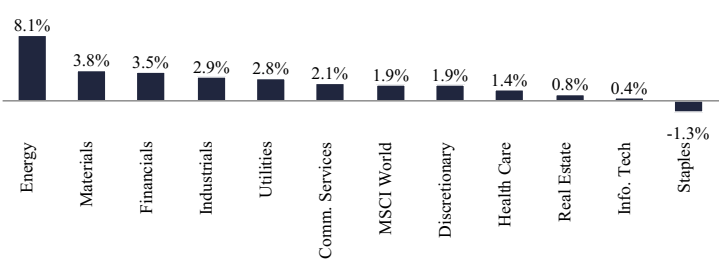


YEAR-TO-DATE, AS OF 01/17/25

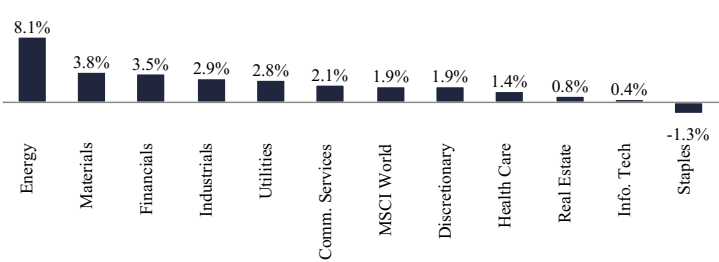


MSCI WORLD INDEX SECTOR RETURNS

MONTH-TO-DATE, AS OF 01/17/25



YEAR-TO-DATE, AS OF 01/17/25



ECONOMIC WATCH

Monday, January 20	Tuesday, January 21	Wednesday, January 22	Thursday, January 23	Friday, January 24	Critical Future Events
US Martin Luther King Jr Day	UK Unemployment Rate (Cons: 4.3%, Prior: 4.3%)		US Initial Jobless Claims (Cons: 220K, Prior: 217K) US Crude Oil Inventories (Prior: -1.962M)	US Manufacturing PMI (Prior: 49.4) US Services PMI (Prior: 56.8) EUR Manufacturing PMI (Cons: 45.6, Prior: 45.1) EUR Services PMI (Cons: 51.4, Prior: 51.6)	BoJ Meeting – Jan 24 FOMC Meeting – Jan 29 ECB Meeting – Jan 30 BoE Meeting – Feb 6

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 01/17/25)	Year-to-Date		
Value	Core	Growth		Value	Core	Growth
3.46%	2.31%	1.36%	Large	3.46%	2.31%	1.36%
3.37%	3.65%	4.48%	Medium	3.37%	3.65%	4.48%
1.71%	2.08%	2.42%	Small	1.71%	2.08%	2.42%

MSCI WORLD SIZE & STYLE RETURNS

Month-to-Date			(as of 01/17/25)	Year-to-Date		
Value	Core	Growth		Value	Core	Growth
2.62%	1.81%	1.17%	Large	2.62%	1.81%	1.17%
2.44%	2.59%	2.91%	Medium	2.44%	2.59%	2.91%
1.65%	1.91%	2.17%	Small	1.65%	1.91%	2.17%

US FIXED INCOME MATURITY AND QUALITY RETURNS

Month-to-Date			(as of 01/17/25)	Year-to-Date		
Short	Intermed.	Long		Short	Intermed.	Long
0.12%	0.09%	-0.54%	Government	0.12%	0.09%	-0.54%
0.16%	0.08%	-0.29%	Corporate	0.16%	0.08%	-0.29%
0.79%	0.83%	1.01%	High Yield	0.79%	0.83%	1.01%

EUROPEAN FIXED INCOME MATURITY AND QUALITY RETURNS

Month-to-Date			(as of 01/17/25)	Year-to-Date		
Short	Intermed.	Long		Short	Intermed.	Long
-0.14%	-0.65%	-1.84%	Government	-0.14%	-0.65%	-1.84%
-0.06%	-0.48%	-0.92%	Corporate	-0.06%	-0.48%	-0.92%
-0.09%			High Yield	-0.09%		

WEEKLY MARKET RECAP

INDEX RETURNS				
	1 WEEK	MTD	QTD	YTD
EQUITIES				
S&P 500	2.93%	2.01%	2.01%	2.01%
DJ Industrial Average	3.69%	2.26%	2.26%	2.26%
Russell 2000	3.97%	2.08%	2.08%	2.08%
Russell Midcap	4.52%	3.65%	3.65%	3.65%
STOXX Europe 50 (€)	3.44%	5.26%	5.26%	5.26%
STOXX Europe 600 (€)†	2.38%	3.20%	3.20%	3.20%
MSCI EAFE Small Cap	1.98%	-0.27%	-0.27%	-0.27%
FTSE 100 (£)	3.14%	4.13%	4.13%	4.13%
FTSE MIB (€)	3.36%	6.09%	6.09%	6.09%
CAC 40 (€)†	3.76%	4.55%	4.55%	4.55%
SWISS MKT (CHF)	1.68%	3.36%	3.36%	3.36%
TOPIX (¥)	-1.28%	-3.79%	-3.79%	-3.79%
Hang Seng (HKD)	2.82%	-2.01%	-2.01%	-2.01%
MSCI World	2.72%	1.94%	1.94%	1.94%
MSCI China Free†	3.29%	-2.69%	-2.69%	-2.69%
MSCI EAFE	1.95%	1.22%	1.22%	1.22%
MSCI EM	1.27%	-0.38%	-0.38%	-0.38%
MSCI Brazil (BRL)	3.31%	2.86%	2.86%	2.86%
MSCI India (INR)	-0.63%	-2.55%	-2.55%	-2.55%
FIXED INCOME				
Bloomberg Aggregate	0.99%	-0.02%	-0.02%	-0.02%
Bloomberg Euro Aggregate	1.10%	-1.20%	-1.20%	-1.20%
Bloomberg US High Yield	0.80%	0.84%	0.84%	0.84%
Bloomberg Euro High Yield (€)	0.30%	-0.09%	-0.09%	-0.09%
Bloomberg Muni Aggregate	0.35%	-0.31%	-0.31%	-0.31%
Bloomberg TIPS	0.92%	0.44%	0.44%	0.44%
JPM EMBI Gbl. Divers.	0.83%	0.40%	0.40%	0.40%
JPM GBI-EM Gbl. Divers.	0.38%	-0.01%	-0.01%	-0.01%
OTHER				
DJ US Real Estate	4.89%	0.95%	0.95%	0.95%
FTSE EPRA/NAREIT Dvlpd. Ex-US	2.37%	0.19%	0.19%	0.19%
S&P GSCI	1.65%	6.09%	6.09%	6.09%
Alerian MLP	6.38%	9.06%	9.06%	9.06%
US Dollar Index	-0.40%	0.68%	0.68%	0.68%
VIX	-18.27%	-7.95%	-7.95%	-7.95%

COMMODITIES				
	01/17/25	12/31/24	09/30/24	12/31/23
WTI Oil (\$/barrel)	\$77.88	\$71.72	\$68.17	\$71.65
Brent Oil (\$/barrel)	\$80.79	\$74.64	\$71.77	\$77.04
Gold (\$/oz)	\$2775.00	\$2666.00	\$2681.30	\$2091.80
Natural Gas (\$/mmBtu)	\$3.95	\$3.63	\$2.92	\$2.51

CURRENCIES				
	01/17/25	12/31/24	09/30/24	12/31/23
Euro (\$/€)	1.0276	1.0354	1.1133	1.1041
Pound (\$/£)	1.2168	1.2510	1.3376	1.2746
Japanese Yen (¥/\$)	156.14	157.31	143.68	141.02
Swiss Franc (CHF/€)	0.9402	0.9401	0.9426	0.9289
Chinese Yuan Renminbi (CNY/\$)	7.1888	7.1874	7.0206	7.0842

RATES & SPREADS				
	01/17/25	12/31/24	09/30/24	12/31/23
RATES				
Secured Overnight Financing Rate *	4.29%	4.49%	4.96%	5.38%
US Treasuries 2-Year	4.27%	4.25%	3.65%	4.25%
ECB Depo Rate	4.00%	3.75%	3.50%	2.00%
US Treasuries 10-Year	4.61%	4.58%	3.80%	3.86%
US Treasury 2-10 Slope	0.33%	0.33%	0.15%	-0.39%
German Bunds 2-Year	2.23%	2.08%	2.07%	2.40%
German Bunds 10-Year	2.54%	2.37%	2.12%	2.02%
Japanese Govt Bonds 10-Year	1.20%	1.10%	0.86%	0.61%
UK Gilts 10-Year	4.66%	4.57%	4.00%	3.54%
Swiss Govt Bonds 10-Year	0.42%	0.33%	0.41%	0.70%
French OATs 10-Year	3.31%	3.19%	2.92%	2.56%
Italian BTPs 10-Year	3.65%	3.52%	3.45%	3.70%
Spanish Bonos 10-Year	3.17%	3.06%	2.93%	2.99%
SPREADS				
HY Corp. Spread (bps)	263	287	300	323
IG Corp. Spread (bps)	79	80	88	98
EMD Spread (bps)	377	384	420	438

Global Equity Valuations

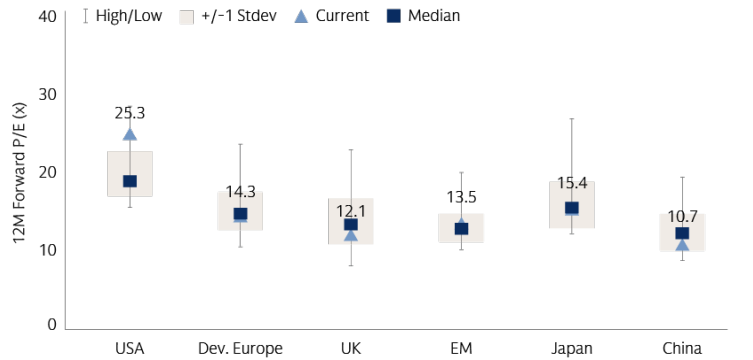


Chart Source: Goldman Sachs Asset Management and Bloomberg as of close of trading on December 31, 2024. Chart data shows next 12-month P/E ratio from January 2015 to the current period. 12m forward P/E(x) refers to price-to-earnings ratio for the next 12 months, which is a valuation measure applied to 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 Investment Strategy Group and Goldman Sachs Asset Management. As of December 31, 2024. Chart shows the Shiller CAPE Ratio since 1945, the median before 1992, and the median after 2002. "CAPE" refers to Cyclically-Adjusted Price to Earnings Ratio, calculated by dividing a company's stock price by the average of the company's earnings for the last ten years, adjusted for inflation. **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: "BoE" refers to Bank of England. "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.

Page 1 Economic Summary Notes: "CPI" refers to Consumer Price Index. "PPI" refers to Producer Price Index. "GDP" refers to Gross Domestic Product. "GIR" refers to Goldman Sachs Global Investment Research. "BoE" refers to Bank of England.

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: "PMI" refers to Purchasing Manager's Index. "BoJ" refers to Bank of Japan. "FOMC" refers to Federal Open Market Committee. "ECB" refers to European Central Bank. "BoE" refers to Bank of England.

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 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. **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. 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 **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 a 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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