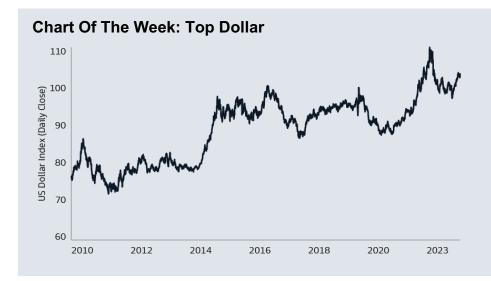
# MARKET MONITOR



### **CURRENCY**

Surging interest rates and geopolitical tensions have driven the US dollar to an eleven-month high earlier this month, serving to tighten financial conditions further by disincentivizing demand for US exports. While a stronger dollar may be a challenge for some, it seems to be a welcome sign for the Fed in their effort to lower inflation. This is another input that may suggest the FOMC will hold its policy rate at 5.25-5.50% in their November meeting, in our view.

Source: GS GIR and GS Asset Management. As of October 26, 2023.

#### **MARKET SUMMARY**

**GLOBAL EQUITIES:** US equities fell last week as earnings reports were mixed and still-high Treasury yields drove risk-off sentiment. The S&P 500 fell below 4200 for the first time since May, ultimately ending –2.52% lower as Core PCE printed in line with consensus expectations. In the Euro area, the STOXX 600 and FTSE 100 closed –0.95% and –1.50% lower, respectively.

**COMMODITIES:** Oil prices decreased for the first time in three weeks amid continued geopolitical tensions. WTI and Brent crude finished lower at \$85.54 and \$90.48/bbl, respectively, as weakening US demand offset lower OPEC+ exports to the US. Meanwhile, gold prices rose slightly last week to \$2018.70/troy oz.

**FIXED INCOME:** US Treasury yields retreated from their decade highs as the market digested growth and inflation data. The 2-Year and 10-Year US Treasury yields fell to 5.01% and 4.85%, respectively, as initial estimates of US 3Q real GDP printed above consensus expectations, stoking investors' fears that the Fed may need to do more to cool the economy. In Europe, the 10-Year German Bund yield fell to 2.83% as the ECB held interest rates steady at 4%, breaking a streak of 10 consecutive rate hikes.

**FX:** The greenback appreciated to a three-week high against a basket of currencies on the back of mixed economic data. The US dollar index ended last week 0.19% higher on above consensus durable goods orders and manufacturing PMIs which outweighed a jobless claims number that surprised to the upside. Outside the US, the Japanese yen notched a three-decade low, ultimately ending last week at ¥149.51.

#### **ECONOMIC SUMMARY**

**GROWTH:** Real GDP rose 4.9% annualized in the third quarter, four tenths above consensus expectations and at the fastest pace since the reopening boom of 2021. The details of the report were slightly less rosy, as inventories accounted for a large portion of the print and may weigh on fourth-quarter growth. Still, we expect economic growth to slow in the fourth quarter to 1.6% on the back of a resumption of student loan payments and recently ended labor strikes.

**INFLATION:** September core PCE declined to 3.7% year-over-year, in line with consensus expectations. Services prices ex-housing rose 0.42% month-over-month, largely driven by a 5.3% month-over-month increase in airfares. Ultimately, GIR forecasts core PCE to decline to 3.4% at year-end, leaving ample room for downside surprise relative to the Fed's 3.7% year-end forecast.

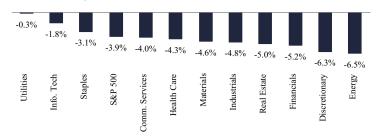
**MONETARY POLICY:** In Europe, the ECB left key policy rates on hold, in line with our forecast of the terminal rate being reached. The policy language was unchanged from September, and President Lagarde affirmed it is too soon to discuss rate cuts, reinforcing the "higher for longer" narrative.

**LABOR:** In the US, initial jobless claims increased by 10k to 210k in the week ended October 21. The print came above consensus expectations for 208k claims and marked the first month-over-month increase since August. Accordingly, we remain in anticipation of a healthy ease in labor demand despite solid GDP and jobs growth. In the UK, the unemployment rate came in at 4.2%, below consensus expectations.

### MARKET WATCH

## **S&P 500 INDEX SECTOR RETURNS**

#### **MONTH-TO-DATE, AS OF 10/27/23**

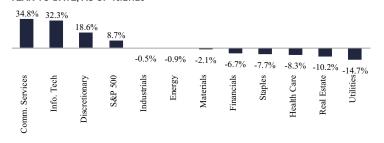


#### **Style Performance**

## US EQUITY SIZE & STYLE RETURNS

Month-to-Date		(as of 10/27/23)	Year-to-Date			
Value	Core	Growth		Value	Core	Growth
-5.36%	-4.21%	-3.17%	Large	-3.66%	8.26%	21.01%
-6.40%	-6.35%	-6.23%	Medium	-5.89%	-2.69%	3.03%
-7.47%	-8.25%	-9.06%	Small	-7.96%	-5.91%	-4.29%

#### YEAR-TO-DATE, AS OF 10/27/23

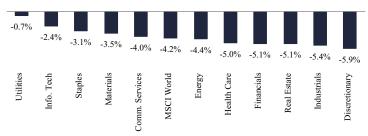


#### **MSCI WORLD SIZE & STYLE RETURNS**

Month-to-Date		(as of 10/27/23)	Year-to-Date			
Value	Core	Growth		Value	Core	Growth
-4.36%	-3.84%	-3.38%	Large	-2.25%	8.19%	19.03%
-5.67%	-6.29%	-7.13%	Medium	-4.64%	-3.11%	-1.31%
-6.46%	-7.19%	-7.93%	Small	-5.42%	-4.47%	-3.55%

#### **MSCI WORLD INDEX SECTOR RETURNS**

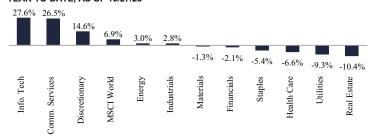
#### **MONTH-TO-DATE, AS OF 10/27/23**



### US FIXED INCOME MATURITY AND QUALITY RETURNS

Month-to-Date		(as of 10/27/23)	Year-to-Date			
Short	Intermed.	Long		Short	Intermed.	Long
0.22%	-0.13%	-4.11%	Government	1.35%	0.15%	-12.32%
0.03%	-0.52%	-3.55%	Corporate	2.04%	0.82%	-6.16%
-1.09%	-1.41%	-3.38%	High Yield	5.03%	4.44%	-0.03%

# YEAR-TO-DATE, AS OF 10/27/23



# EUROPEAN FIXED INCOME MATURITY AND QUALITY RETURNS

Month-to-Date		(as of 10/27/23)	Year-to-Date			
Short	Intermed.	Long		Short	Intermed.	Long
0.42%	0.48%	-0.96%	Government	1.50%	1.46%	-3.73%
0.30%	0.04%	-0.69%	Corporate	2.69%	3.00%	0.46%
-0.75%		High Yield		5.50%		

# **ECONOMIC WATCH**

Monday, October 30	Tuesday, October 31
	US CB Cons. Confidence
	(Cons: 100.0, Prior: 103.0)
	Euro Area CPI YoY
	(Cons: 3.4%, Prior: 4.3%)
	Euro Area GDP QoQ
	(Cons: -0.1%, Prior:
	0.1%)
	BoJ Meeting

Wednesday, November 1
US ISM Manuf. PMI
(Cons: 49.0, Prior: 49.0)
US JOLTS (Cons: N/A,
Prior: 9.610M)
FOMC Rate Decision
(Cons: 5.50%, Prior:
5.50%)

Thursday, November 2
Euro Area Manuf. PMI
(Cons: 43.0, Prior: 43.4)
BoE Rate Decision
(Cons: 5.25%, Prior:
5.25%)
US Initial Jobless Claims
(Cons: N/A, Prior: 210K)

Friday, November 3
US Nonfarm Payrolls
(Cons: 172K, Prior: 336K)
US Unemployment Rate
(Cons: 3.8%, Prior: 3.8%)
US Services PMI
(Cons: 50.9, Prior: 50.1)

FOMC Meeting – Dec 14
BoE Meeting – Dec 14
ECB Meeting – Dec 14
BOJ Meeting – Dec 19

**Critical Future Events** 

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.

# **WEEKLY MARKET RECAP**

INDEX RETURNS				
	1 WEEK	MTD	QTD	YTD
EQUITIES				
S&P 500	-2.52%	-3.90%	-3.90%	8.66%
DJ Industrial Average	-2.14%	-3.16%	-3.16%	-0.51%
Russell 2000	-2.60%	-8.25%	-8.25%	-5.91%
Russell Midcap	-2.67%	-6.35%	-6.35%	-2.69%
STOXX Europe 50 (€)	-0.25%	-3.80%	-3.80%	9.09%
STOXX Europe 600 (€)†	-0.95%	-4.54%	-4.54%	3.60%
MSCI EAFE Small Cap	-0.51%	-6.28%	-6.28%	-4.16%
FTSE 100 (£)	-1.50%	-4.09%	-4.09%	1.18%
DAX (€)	-0.75%	-4.54%	-4.54%	5.49%
FTSE MIB (€)	-0.25%	-3.38%	-3.38%	19.80%
CAC 40 (€)†	-0.31%	-4.76%	-4.76%	7.28%
SWISS MKT (CHF)	-0.24%	-5.84%	-5.84%	-0.74%
TOPIX (¥)	-0.04%	-2.96%	-2.96%	21.98%
Hang Seng (HKD)	1.32%	-2.30%	-2.30%	-8.96%
MSCI World	-2.11%	-4.18%	-4.18%	6.89%
MSCI China Free†	2.52%	-2.70%	-2.70%	-5.22%
MSCI EAFE	-0.76%	-4.19%	-4.19%	3.09%
MSCI EM	-0.61%	-3.40%	-3.40%	-1.31%
MSCI Brazil (BRL)	-0.44%	-2.76%	-2.76%	4.15%
MSCI India (INR)	-2.30%	-2.88%	-2.88%	5.59%
FIXED INCOME				
Bloomberg Aggregate	0.68%	-1.28%	-1.28%	-2.48%
Bloomberg Euro Aggregate	0.36%	0.02%	0.02%	-0.20%
Bloomberg US High Yield	0.40%	-1.46%	-1.46%	4.32%
Bloomberg Euro High Yield (€)	0.43%	-0.75%	-0.75%	5.50%
Bloomberg Muni Aggregate	-0.04%	-0.89%	-0.89%	-2.26%
Bloomberg TIPS	0.37%	-0.36%	-0.36%	-1.23%
JPM EMBI Glbl. Divers.	0.89%	-1.66%	-1.66%	0.08%
JPM GBI-EM Glbl. Divers.	0.92%	-0.62%	-0.62%	3.63%
OTHER				
DJ US Real Estate	-1.52%	-5.81%	-5.81%	-10.39%
FTSE EPRA/NAREIT Dvlpd. Ex-US	-0.87%	-5.56%	-5.56%	-12.11%
S&P GSCI	-1.46%	-1.85%	-1.85%	5.26%
Alerian MLP	-2.05%	-0.51%	-0.51%	19.95%
US Dollar Index	0.19%	0.30%	0.30%	2.68%
VIX	-2.03%	21.40%	21.40%	-1.85%

COMMODITIES				
	10/27/23	09/30/23	06/30/23	12/31/22
WTI Oil (\$/barrel)	\$85.54	\$90.79	\$70.64	\$80.26
Brent Oil (\$/barrel)	\$90.48	\$95.31	\$74.90	\$85.91
Gold (\$/oz)	\$2018.70	\$1885.40	\$1968.00	\$1842.20
Natural Gas (\$/mmBtu)	\$3.16	\$2.93	\$2.80	\$4.47

CURRENCIES								
	10/27/23	09/30/23	06/30/23	12/31/22				
Euro (\$/€)	1.0568	1.0577	1.0911	1.0701				
Pound (\$/£)	1.2113	1.2205	1.2696	1.2063				
Japanese Yen (¥/\$)	149.51	149.40	144.31	130.97				
Swiss Franc (CHF/€)	0.9526	0.9682	0.9765	0.9890				
Chinese Yuan Renminbi (CNY/\$)	7.1840	7.1746	7.2230	6.9225				

RATES & SPREADS				
	10/27/23	09/30/23	06/30/23	12/31/22
RATES				
Fed Funds Target	5.50%	5.50%	5.25%	4.50%
Secured Overnight Financing Rate *	5.31%	5.31%	5.09%	4.30%
ECB Depo Rate	4.00%	3.75%	3.50%	2.00%
3-Month US Dollar Libor	5.64%	5.66%	5.55%	4.77%
US Treasuries 2-Year	5.01%	5.05%	4.88%	4.41%
US Treasuries 10-Year	4.85%	4.57%	3.82%	3.84%
US Treasury 2-10 Slope	-0.16%	-0.47%	-1.06%	-0.57%
German Bunds 2-Year	3.04%	3.20%	3.20%	2.76%
German Bunds 10-Year	2.83%	2.84%	2.39%	2.57%
Japanese Govt Bonds 10-Year	0.88%	0.76%	0.40%	0.42%
UK Gilts 10-Year	4.54%	4.44%	4.39%	3.67%
Swiss Govt Bonds 10-Year	1.13%	1.10%	0.96%	1.62%
French OATs 10-Year	3.45%	3.40%	2.93%	3.12%
Italian BTPs 10-Year	4.80%	4.78%	4.07%	4.71%
Spanish Bonos 10-Year	3.93%	3.93%	3.38%	3.66%
SPREADS				
HY Corp. Spread (bps)	436	395	392	468
Bank Loan Spread (bps) *	573	551	581	652
IG Corp. Spread (bps)	127	120	122	130
EMD Spread (bps)	498	478	475	500

# **Global Equity Valuations**

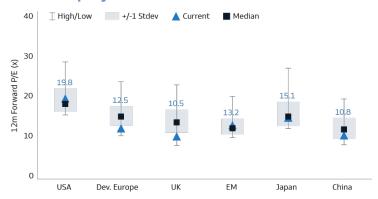


Chart Source: Goldman Sachs Asset Management and Bloomberg as of close of trading on September 30, 2023. Chart data shows next 12-month P/E ratio from September 2013 to the current period. 12m forward P/E(x) refers to price-to-earnings ratio for the next 12 months, which is a valuation measure applied 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: GS Global Investment Research and GS Asset Management. Data as of October 26, 2023. Chart shows the daily close of US Dollar Index (DXY) since January 2010. The Index measures the value of the United States dollar relative to a basket of foreign currencies, of which include the Euro, Swiss franc, Japanese yen, Canadian dollar, British pound, and Swedish krona. Past performance does not predict future returns and does not guarantee future results, which may vary.

Page 1 Market Summary Notes: "PCE" refers to Personal Consumption Expenditures Index. "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. "OPEC+" refers to the 13 members of the Organization of Petroleum Exporting Countries and 11 other non-OPEC members. "Oz" refers to ounce. "GDP" refers to gross domestic product. "Fed" refers to the Federal Reserve. "ECB" refers to European Central Bank. "PMI" refers to a price manufacturing index.

Page 1 Economic Summary Notes: "GDP" refers to gross domestic product. "Reopening boom of 2021" refers to the uptick in economic activity as the US economy emerged from the COVID-19 Pandemic. "PCE" refers to Personal Consumption Expenditures Index. "GIR" refers to Goldman Sachs Global Investment Research. "Fed" refers to the Federal Reserve. "ECB" refers to European Central Bank.

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: "CB" refers to Conference Board. "Cons." refers to consumer. "CPI" refers to a consumer price index. "YoY" refers to year-over-year. "GDP" refers to gross domestic product. "QoQ" refers to quarter-over-quarter. "BoJ" refers to the Bank of Japan. "ISM" refers to Institute for Supply Management. "Manuf." refers to manufacturing. "PMI" refers to a price manufacturing index. 'US JOLTS" refers to the US Job Openings and Labor Turnover Survey. "FOMC" refers to Federal Open Market Committee. "BoE" refers to the Bank of England. "ECB" refers to the European Central Bank.

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.

USA is represented by the MSCI USA Index, Dev. Europe is represented by MSCI Europe Index, Germany is represented by MSCI Germany Index, France is represented by MSCI France Index, UK is represented by MSCI UK Index, EM is represented by MSCI EM Index, Japan is represented by MSCI Japan Index, Hong Kong is represented by MSCI Hong Kong Index, China is represented by MSCI China Index, Global Dev. is represented by MSCI World Index. Neither MSCI nor any other party involved in or related to compiling, computing, or creating the MSCI data makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability, or fitness for a particular purpose with respect to any of such data. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in or related to compiling, computing or creating the data have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. No further distribution or dissemination of the MSCI data is permitted without MSCI's express written consent.

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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 priceweighted 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 floatadjusted 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 floatadjusted 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 mortgagebacked 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 noninvestment 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 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

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the J.P. Morgan EMBI Global Diversified Sovereign curve.

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