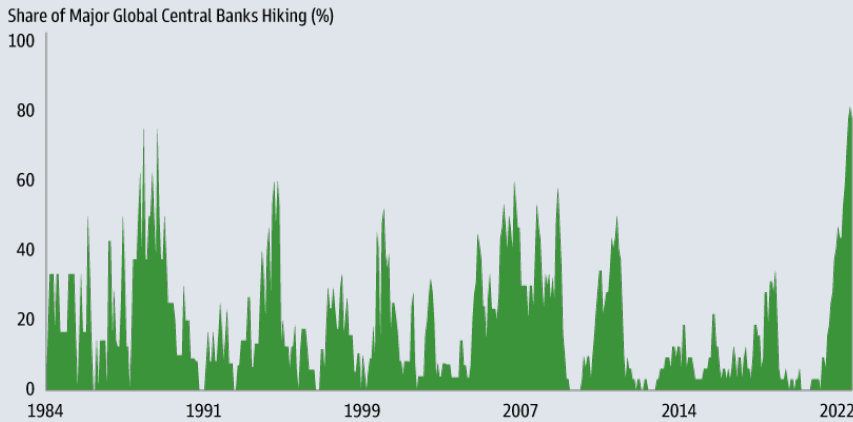


MARKET MONITOR

Chart of the Week: Hike it Like That



Source: Haver Analytics, Goldman Sachs Global Investment Research.

MONETARY POLICY

Inflation has remained elevated across many of the major developed markets suggesting that central bank policy could be more hawkish than expected in the near term. The share of global central banks that are currently raising their respective interest rates is at a record high; nearly 80% of major central banks are hiking. This proportion could remain elevated for an extended period if inflation prints continue to be above respective targets.

MARKET SUMMARY

GLOBAL EQUITIES: Equities dropped last week as interest rates rose and concerns regarding recessions in major economies persisted. In the US, the S&P 500 fell -4.63% on the back of the Fed's 75 bps rate hike and heightened expectations for steeper near-term monetary policy tightening. In Europe, the FTSE 100 and STOXX 600 declined -3.01% and -4.34%, respectively, following the BoE's greater-than-expected interest rate hike as well as an escalation in rhetoric in eastern Europe.

COMMODITIES: Oil prices slid last week to their lowest level since January despite somewhat more limited supply as demand continued to weaken and global interest rates largely rose. Ultimately, WTI and Brent closed at \$78.74 and \$86.15 per barrel, respectively. Gold prices ended lower last week at \$1668.80 per ounce on the back of a strong US dollar.

FIXED INCOME: Global sovereign yields largely rose last week as the Fed's 75 bps rate hike sparked a day that saw many central banks raising rates by larger-than-expected margins. The US 2-Year and 10-Year yields notched 11-year highs, finishing at 4.21% and 3.70%, respectively, as the Fed remains committed to curbing inflation. The 10-Year German Bund yield hit a 9-year high last week, closing at 2.02% following hawkish comments from the ECB governing council.

FX: The US dollar index notched another 20-year high against a basket of currencies, appreciating 2.76% as the Fed keeps outpacing other central banks in rate hikes. The euro fell to \$0.9672 as Russian announcements to send more troops generated more uncertainty around Europe's economic outlook. The pound sterling dropped to \$1.0849 with the BoE's more cautious 50 bps rate hike. The Japanese yen reached a high of 145.90 before closing at 143.37 following the government's decision to intervene in FX markets.

ECONOMIC SUMMARY

MONETARY POLICY: In the US, the Federal Open Market Committee hiked 75 bps to 3.125%, as largely expected. Throughout much of this year, the Fed's messaging has been clear and consistent, but comments from last week's meeting underscore that the Fed is eager to curb inflation even if it means further economic deceleration. Goldman Sachs Global Investment Research (GIR) now predicts 75/50/25 bps rate hikes in November/December/February, respectively, leading to a 4.375% rate at the end of this year and a terminal rate of 4.625% sometime in 2023. In the UK, the BoE raised its key interest rate by 50 bps to 2%. There was a hawkish tone shift with three MPC members voting for a larger 75 bps increment. Considering this split, a tighter labor market, and possible upgrades to growth, GIR now looks for 75 bps hikes at the next two MPC meetings (November and December) and expects a terminal rate of 4.5%, up from 4.0% previously.

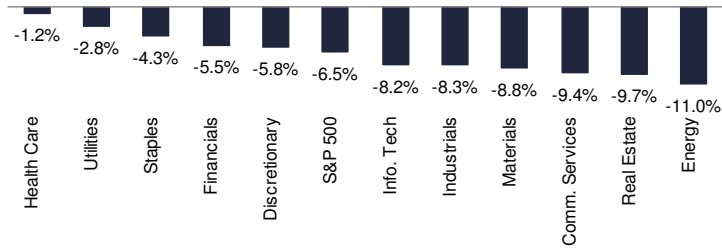
ACTIVITY: US Manufacturing PMI for September rose to 51.8 from 51.5 previously, and US Services PMI for September rose to 49.2 from 43.7 previously. Both metrics come in higher than consensus expectations as a hawkish Fed has telegraphed that to control inflation, activity needs to cool. In Europe, September flash PMIs indicated further slowdown in the private sector with Euro area and UK Composite PMIs falling to 48.2 and 48.4, respectively. The rate of decline accelerated in both regions as higher costs and a weaker economic outlook continued to weigh on consumer spending.

LABOR: US initial jobless claims rose to 213K last week for the week ending September 17, stopping a 5-week streak of declines. The US labor market remains tight despite the Fed's attempt to cool demand with its third straight 75 bps rate hike.

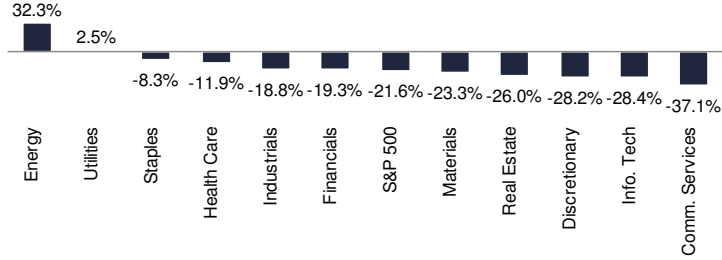
MARKET WATCH

S&P 500 INDEX SECTOR RETURNS

MONTH-TO-DATE, AS OF 09/23/22

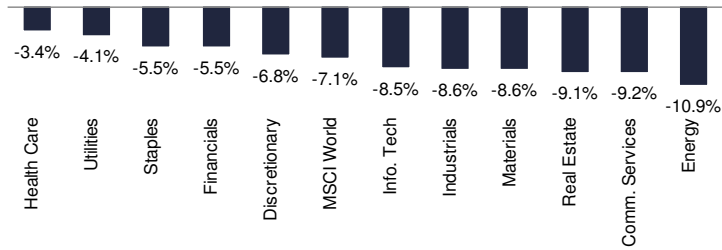


YEAR-TO-DATE, AS OF 09/23/22

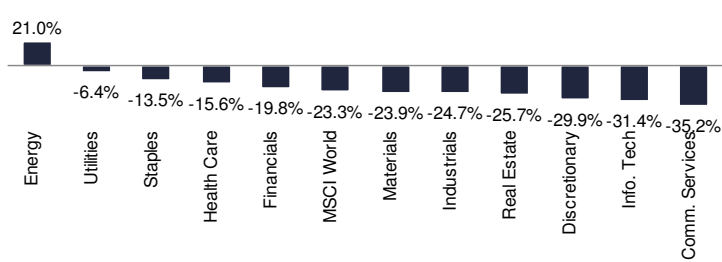


MSCI WORLD INDEX SECTOR RETURNS

MONTH-TO-DATE, AS OF 09/23/22



YEAR-TO-DATE, AS OF 09/23/22



ECONOMIC WATCH

Monday, September 26	Tuesday, September 27	Wednesday, September 28	Thursday, September 29	Friday, September 30	Critical Future Events
German GDP (QoQ) (Cons: 0.1%, Prior: 0.1%)	US New Home Sales (Cons: 500K, Prior: 511K) US Cons. Confidence (Cons: 104.0, Prior: 103.2)	US Pending Home Sales (Cons: -4.0%, Prior: -1.0%)	German CPI (YoY) (Cons: 8.8%, Prior: 7.9%)	Euro Area CPI (YoY) (Cons: 9.4%, Prior: 9.1%) US Core PCE (YoY) (Cons: 4.7%, Prior: 4.6%) UMich Cons. Sentiment (Cons: 59.5, Prior: 59.5)	ECB Meeting – Oct 27 FOMC Meeting – Nov 2 BoE Meeting – Nov 3

Source: 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 09/23/22)			Year-to-Date			
Value	Core	Growth		Value	Core	Growth
-6.37%	-6.73%	-7.08%	Large	-15.59%	-22.49%	-28.63%
-7.38%	-7.55%	-7.86%	Medium	-18.32%	-22.84%	-30.98%
-8.10%	-8.83%	-9.54%	Small	-19.29%	-24.48%	-29.70%

MSCI WORLD SIZE & STYLE RETURNS

Month-to-Date (as of 09/23/22)			Year-to-Date			
Value	Core	Growth		Value	Core	Growth
-5.60%	-6.82%	-8.02%	Large	-15.29%	-23.14%	-30.67%
-7.83%	-8.50%	-9.32%	Medium	-20.97%	-26.07%	-32.68%
-8.08%	-8.88%	-9.71%	Small	-19.67%	-25.52%	-31.46%

US FIXED INCOME MATURITY AND QUALITY RETURNS

Month-to-Date (as of 09/23/22)			Year-to-Date			
Short	Intermed.	Long		Short	Intermed.	Long
-1.63%	-2.16%	-5.26%	Government	-6.30%	-8.49%	-26.80%
-1.72%	-2.47%	-5.21%	Corporate	-7.00%	-10.99%	-26.70%
-1.72%	-2.56%	-4.85%	High Yield	-8.44%	-12.93%	-24.12%

EUROPEAN FIXED INCOME MATURITY AND QUALITY RETURNS

Month-to-Date (as of 09/23/22)			Year-to-Date			
Short	Intermed.	Long		Short	Intermed.	Long
-1.26%	-3.09%	-3.95%	Government	-4.28%	-12.74%	-27.13%
-1.24%	-2.98%	-3.89%	Corporate	-5.04%	-16.24%	-27.23%
	-2.04%		High Yield		-13.00%	

WEEKLY MARKET RECAP

INDEX RETURNS				
	1 WEEK	MTD	QTD	YTD
EQUITIES				
S&P 500	-4.63%	-6.51%	-2.06%	-21.61%
DJ Industrial Average	-4.00%	-6.01%	-3.34%	-17.30%
Russell 2000	-6.58%	-8.83%	-1.38%	-24.48%
Russell Midcap	-6.08%	-7.55%	-1.62%	-22.84%
STOXX Europe 50 (€)	-4.25%	-4.68%	-2.77%	-19.73%
STOXX Europe 600 (€)†	-4.34%	-5.89%	-3.73%	-18.14%
MSCI EAFE Small Cap	-5.81%	-9.28%	-7.54%	-30.15%
FTSE 100 (£)	-3.01%	-3.54%	-1.05%	-2.01%
DAX (€)	-3.59%	-4.29%	-3.91%	-22.67%
FTSE MIB (€)	-4.57%	-2.13%	-0.47%	-19.98%
CAC 40 (€)†	-4.74%	-5.49%	-2.17%	-17.37%
SWISS MKT (CHF)	-4.35%	-6.50%	-5.51%	-19.03%
TOPIX (¥) *	-1.16%	-2.39%	2.46%	-2.43%
Hang Seng (HKD)	-4.35%	-9.56%	-16.84%	-20.84%
MSCI World	-5.07%	-7.06%	-3.81%	-23.33%
MSCI China Free†	-4.42%	-9.48%	-15.45%	-21.19%
MSCI EAFE	-5.59%	-8.10%	-8.09%	-25.78%
MSCI EM	-4.02%	-8.71%	-8.44%	-24.44%
MSCI Brazil (BRL)	2.10%	1.89%	13.47%	9.59%
MSCI India (INR)	-1.00%	-2.62%	11.62%	0.70%
MSCI Russia (RUB)	0.00%	0.00%	0.00%	-100.00%
FIXED INCOME				
Bloomberg Aggregate	-1.56%	-3.36%	-3.80%	-13.75%
Bloomberg Euro Aggregate	-4.78%	-6.13%	-10.56%	-27.75%
Bloomberg US High Yield	-1.75%	-2.64%	0.73%	-13.57%
Bloomberg Euro High Yield (€)	-1.36%	-2.04%	1.68%	-13.00%
Bloomberg Muni Aggregate	-1.35%	-2.91%	-2.53%	-11.28%
Bloomberg TIPS	-1.91%	-4.44%	-2.80%	-12.19%
JPM EMBI Gbl. Divers.	-1.98%	-3.36%	-1.51%	-21.51%
JPM GBI-EM Gbl. Divers.	-2.04%	-3.34%	-3.19%	-17.26%
OTHER				
DJ US Real Estate	-6.22%	-8.96%	-6.61%	-25.31%
FTSE EPRA/NAREIT Dvlpd. Ex-US	-7.14%	-9.83%	-10.78%	-28.74%
S&P GSCI	-3.94%	-8.08%	-10.58%	21.43%
Alerian MLP *	-3.14%	-3.66%	12.68%	23.99%
US Dollar Index	2.76%	3.89%	7.57%	17.90%
VIX	13.76%	15.66%	4.21%	73.75%

COMMODITIES				
	09/23/22	08/31/22	06/30/22	12/31/21
WTI Oil (\$/barrel)	\$78.74	\$89.55	\$105.76	\$75.21
Brent Oil (\$/barrel)	\$86.15	\$96.49	\$114.81	\$77.78
Gold (\$/oz)	\$1668.80	\$1738.90	\$1827.50	\$1831.00
Natural Gas (\$/mmBtu)	\$6.83	\$9.13	\$5.42	\$3.73

CURRENCIES				
	09/23/22	08/31/22	06/30/22	12/31/21
Euro (\$/€)	0.9672	1.0045	1.0481	1.1386
Pound (\$/£)	1.0849	1.1615	1.2182	1.3535
Japanese Yen (¥/\$)	143.37	138.72	135.57	115.03
Swiss Franc (CHF/€)	0.9511	0.9807	0.9995	1.0378
Chinese Yuan Renminbi (CNY/\$)	7.0050	6.8904	6.6993	6.3797

RATES & SPREADS				
	09/23/22	08/31/22	06/30/22	12/31/21
RATES				
Fed Funds Target	3.25%	2.50%	1.75%	0.25%
Secured Overnight Financing Rate *	2.99%	2.29%	1.50%	0.05%
ECB Depo Rate	-0.75%	-0.00%	-0.50%	-0.50%
3-Month US Dollar Libor	3.63%	3.10%	2.29%	0.21%
US Treasuries 2-Year	4.21%	3.45%	2.92%	0.73%
US Treasuries 10-Year	3.70%	3.13%	2.97%	1.50%
US Treasury 2-10 Slope	-0.51%	-0.32%	0.05%	0.77%
German Bunds 2-Year	1.92%	1.20%	0.65%	-0.62%
German Bunds 10-Year	2.02%	1.54%	1.34%	-0.18%
Japanese Govt Bonds 10-Year	0.24%	0.23%	0.23%	0.07%
UK Gilts 10-Year	3.83%	2.80%	2.23%	0.97%
Swiss Govt Bonds 10-Year	1.36%	0.84%	1.07%	-0.14%
French OATs 10-Year	2.60%	2.15%	1.92%	0.20%
Italian BTPs 10-Year	4.34%	3.89%	3.26%	1.17%
Spanish Bonos 10-Year	3.18%	2.74%	2.42%	0.56%
SPREADS				
HY Corp. Spread (bps)	510	482	569	283
Bank Loan Spread (bps) *	606	564	658	439
IG Corp. Spread (bps)	145	140	156	92
EMD Spread (bps)	531	515	554	376

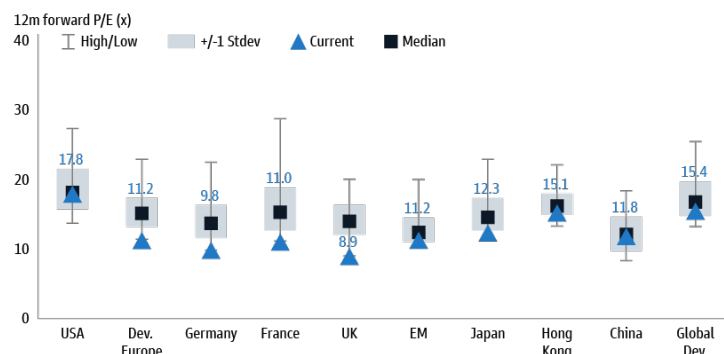
Global Equity Valuations


Chart Source: Goldman Sachs Asset Management and Bloomberg as of close of trading on August 31, 2022. Chart data shows next 12 month P/E ratio from September 2012 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: 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: Haver Analytics, Goldman Sachs Global Investment Research. As of August 31, 2022. Chart shows the percentage of 32 central banks that are hiking rates. Central banks used are from the following territories: Australia, Brazil, Canada, Chile, China, Colombia, Czech Republic, Euro Area, Hong Kong, Hungary, India, Indonesia, Israel, Japan, Malaysia, Mexico, New Zealand, Norway, Peru, Philippines, Poland, Romania, Russia, South Africa, South Korea, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Kingdom, and the United States.

Page 1 Market Summary Notes:

"Fed" refers to the Federal Reserve. "bps" refers to basis point. "BoE" refers to the Bank of England. "WTI" stands for West Texas Intermediate crude oil, a common US benchmark for oil prices. "Brent" is a global benchmark for oil prices worldwide. "ECB" refers to the European Central Bank. "FX" stands for foreign exchange. "Hawkish" refers to a state of less accommodative monetary policy.

Page 1 Economic Summary Notes:

"Bps" refers to basis points. "Terminal rate" refers to the peak spot where the federal funds rate will land before the central bank begins trimming it back. "MPC" refers to the Bank of England's Monetary Policy Committee. "PMI" refers to a purchasing manufacturers index.

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:

"German GDP (QoQ)" refers to the quarter-over-quarter change in Gross Domestic Product in Germany. "US New Home Sales" refers to the annualized number of new single-family homes that were sold during the prior month. "US Cons. Confidence" refers to the Conference Board's measure of the level of confidence consumers have in the economy. "US Pending Home Sales" refers to the National Association of Realtors measurement of the change in the number of homes under contract to be sold but still awaiting the closing transaction, excluding new construction. "CPI" refers to a consumer price index and is a measure of inflation. "YoY" refers to year-over-year. "Core PCE" refers to the personal consumption expenditures excluding food and energy prices. "UMich. Consumer Sentiment" refers to the University of Michigan's composition of survey results comparing the relative level of both current and future economic conditions.

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.

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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 five EM countries in Latin America. 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. **CSI 300 Index** covers 300 stocks traded in the Shanghai and Shenzhen stock exchanges. 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 **Bloomberg US High Yield Municipal Bond Index** (formerly the Lehman Brothers High Yield Municipal Bond Index) is an unmanaged index made up of bonds that are noninvestment grade, unrated, or rated below Ba1 by Moody's Investors Service 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 **S&P 500 Utilities Sector** comprises those companies included in the S&P 500 that are classified as members of the GICS® utilities sector. 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. The **S&P 500 Consumer Staples Index** comprises those companies included in the S&P 500 that are classified as members of the GICS® consumer staples sector. The **USD Index** tracks the value of the USD relative to 6 major foreign currencies. The **Housing Starts** refers to US Housing Starts.

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. **OPEC** refers to the Organization of the Petroleum Exporting Countries. The **Gold Spot** price is quoted as US Dollars per Troy Ounce.

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 to 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 **Core-Periphery** spreads refers to the spread between sovereign debt yields of core European countries and peripheral European countries. 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.

Although certain information has been obtained from sources believed to be reliable, we do not guarantee its accuracy, completeness or fairness. We have relied upon and assumed without independent verification, the accuracy and completeness of all information available from public sources.

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