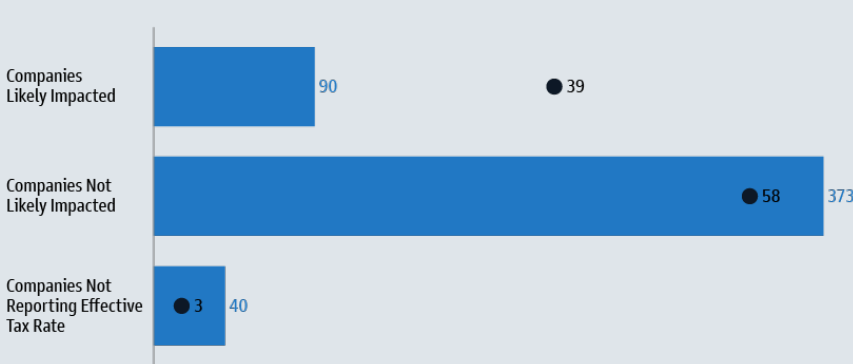


MARKET MONITOR

Chart of the Week: Talking Taxes

S&P 500 Companies Impacted by 15% Corporate Tax Provision in Inflation Reduction Act



TAXES

The Inflation Reduction Act includes a 15% minimum effective tax rate for companies with over \$1 billion in profit. While most S&P 500 companies may not see a direct impact, those with larger market caps tend to see greater risks. On the whole, Goldman Sachs GIR estimates the provision to marginally lower 2023 S&P 500 earnings per share by roughly -1%, with aggregate earnings still set to grow even after accounting for the entire suite of proposed tax increases.

Source: Bloomberg, GS Global Investment Research, and GS Asset Management.

MARKET SUMMARY

GLOBAL EQUITIES: Equities broadly moved higher last week as US inflation data came in below consensus expectations, providing potential that the Fed may moderate its pace of monetary policy tightening. Ultimately, the S&P 500 closed up 3.31%. European stocks also found support as earnings remain resilient. Overall, the STOXX 600 and FTSE 100 finished up 1.29% and 1.18%, respectively.

COMMODITIES: Oil prices surged amid the broader move up in risk assets, though they still sit below levels reached earlier in the year. The IEA's forecasted demand hike of 380k bbl/day, bringing the total forecasted demand increase to 2.1 million bbl/day this year, gave the market confidence on fundamental tailwinds. WTI and Brent closed at \$92.09/bbl and \$98.15/bbl, respectively. Gold prices also moved up 1.36% as bond yields largely moved off of recent highs.

FIXED INCOME: Sovereign bond yields mostly held within their recent range, despite falling following the softer-than-expected inflation print in the US. Fed officials indicated continued hawkishness as inflation remains well above trend, lifting yields late last week. The US 10-Year Treasury yield closed the week up 1 bp at 2.85%. In the UK, the 10-Year Gilt yield rose 6 bps as 2Q GDP revealed a slight contraction, in line with expectations.

FX: The US dollar continued fading off of recent highs against a basket of currencies as risk-off sentiment waned. Overall, it ended the week -0.91% lower. The euro hit its highest level in the past month against the US dollar, with the ECB set to continue accelerating policy tightening. The pair ultimately ended at \$1.0266.

ECONOMIC SUMMARY

INFLATION: US headline CPI increased 8.5% in July YoY, a welcome decline from the 9.1% high set in June, despite still being well above trend. The index was flat MoM, as falling energy and transportation prices balanced with higher food prices. It was the first time headline inflation printed below consensus expectations since January 2021. US core CPI grew at 5.9% YoY in July, with a MoM increase of 0.3% registering as the slowest pace of increase since September 2021. In China, both CPI and PPI inflation surprised to the downside in July on the back of lower commodity prices. China's CPI rose 2.7% YoY, still above 2.5% the month prior, as food prices increased. We expect inflation in China to stay high in the coming months due to base effects.

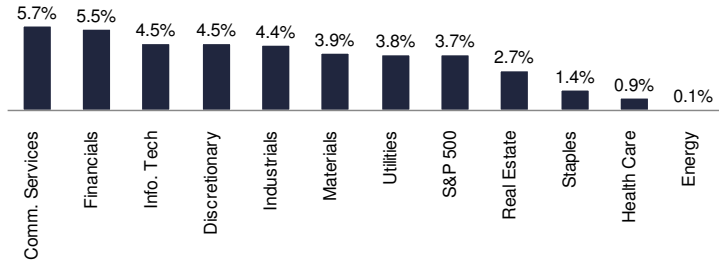
UK GROWTH: UK GDP contracted by -0.1% QoQ in the second quarter, marginally above consensus expectations of -0.2%. The contraction was primarily driven by weaker household consumption and government spending. Looking ahead, we expect 3Q GDP to come in at 0.4%, in line with guidance from the BoE, but slightly stronger than consensus expectations of 0.2%.

SENTIMENT: The University of Michigan Consumer Sentiment Index released at 55.1, continuing to move off of the lows set in June. The print came in well above consensus expectations of 52.5 as falling gas prices and a strong month for asset prices provided support.

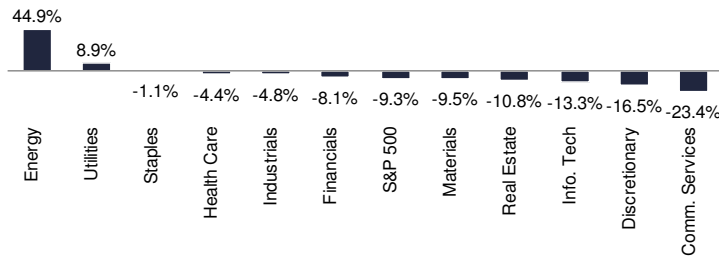
MARKET WATCH

S&P 500 INDEX SECTOR RETURNS

MONTH-TO-DATE, AS OF 08/12/22

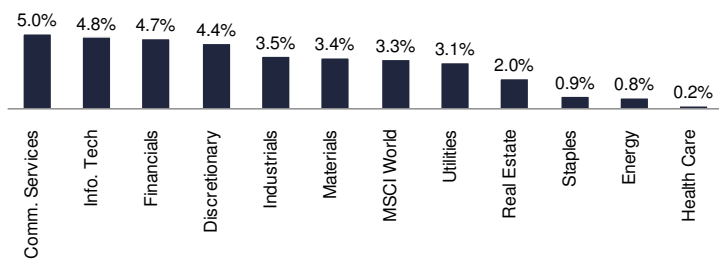


YEAR-TO-DATE, AS OF 08/12/22

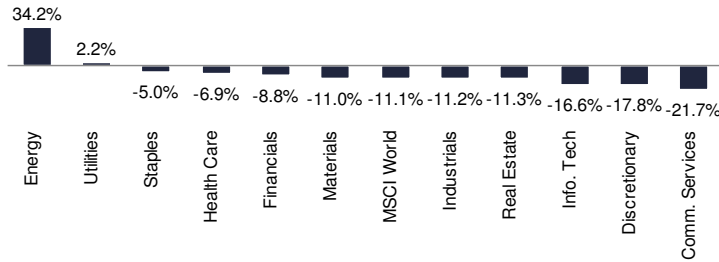


MSCI WORLD INDEX SECTOR RETURNS

MONTH-TO-DATE, AS OF 08/12/22



YEAR-TO-DATE, AS OF 08/12/22



ECONOMIC WATCH

Monday, August 15	Tuesday, August 16	Wednesday, August 17	Thursday, August 18	Friday, August 19	Critical Future Events
	United States Housing Starts (Cons: 1530k, Prior: 1559k)	Euro area GDP QoQ (Cons: 0.7%, Prior: 0.7%) UK CPIH YoY (Cons: 8.6%, Prior: 8.2%)	Japan New Core CPI YoY (Cons: 1.0%, Prior: 1.1%) US Initial Jobless Claims (Cons: 265k, Prior: 262k) Philadelphia Fed Business Outlook Survey (Cons: -5.0, Prior: -12.3)	United Kingdom Retail Sales, Month-over-Month (Cons: -0.3%, Prior: 0.4%)	ECB Meeting – Sep 8 BoE Meeting – Sep 15 FOMC Meeting – Sep 20-21

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 08/12/22)			Year-to-Date			
Value	Core	Growth		Value	Core	Growth
3.69%	4.08%	4.45%	Large	-3.65%	-10.05%	-15.85%
4.37%	4.91%	5.88%	Medium	-5.04%	-9.60%	-18.00%
6.19%	7.03%	7.87%	Small	-3.69%	-9.48%	-15.38%

MSCI WORLD SIZE & STYLE RETURNS

Month-to-Date (as of 08/12/22)			Year-to-Date			
Value	Core	Growth		Value	Core	Growth
2.51%	3.15%	3.77%	Large	-5.05%	-11.08%	-17.26%
3.81%	4.02%	4.27%	Medium	-8.36%	-12.92%	-19.18%
3.96%	4.45%	4.95%	Small	-6.26%	-11.75%	-17.49%

US FIXED INCOME MATURITY AND QUALITY RETURNS

Month-to-Date (as of 08/12/22)			Year-to-Date			
Short	Intermed.	Long		Short	Intermed.	Long
-0.74%	-0.89%	-1.39%	Government	-4.14%	-5.39%	-20.28%
-0.34%	-0.32%	-0.24%	Corporate	-4.49%	-7.11%	-19.22%
1.50%	1.58%	2.22%	High Yield	-4.29%	-7.06%	-17.30%

EUROPEAN FIXED INCOME MATURITY AND QUALITY RETURNS

Month-to-Date (as of 08/12/22)			Year-to-Date			
Short	Intermed.	Long		Short	Intermed.	Long
-0.29%	-0.85%	-2.11%	Government	-1.94%	-6.66%	-18.20%
-0.23%	-0.53%	-1.72%	Corporate	-2.48%	-9.57%	-17.87%
1.66%			High Yield	-8.59%		

WEEKLY MARKET RECAP

INDEX RETURNS				
	1 WEEK	MTD	QTD	YTD
EQUITIES				
S&P 500	3.31%	3.71%	13.27%	-9.34%
DJ Industrial Average	2.99%	2.87%	9.89%	-5.98%
Russell 2000	4.97%	7.03%	18.21%	-9.48%
Russell Midcap	4.19%	4.91%	15.26%	-9.60%
STOXX Europe 50 (€)	1.42%	1.92%	9.53%	-9.58%
STOXX Europe 600 (€)†	1.29%	0.74%	8.54%	-7.71%
MSCI EAFE Small Cap	2.99%	2.47%	9.25%	-17.47%
FTSE 100 (£)	1.18%	1.54%	5.27%	4.25%
DAX (€)	1.63%	2.31%	7.92%	-13.15%
FTSE MIB (€)	1.70%	2.52%	8.35%	-12.89%
CAC 40 (€)†	1.26%	1.63%	10.76%	-6.45%
SWISS MKT (CHF)	0.05%	-0.16%	3.60%	-11.22%
TOPIX (¥)	1.34%	1.69%	5.48%	0.44%
Hang Seng (HKD)	-0.11%	0.13%	-7.20%	-11.67%
MSCI World	3.06%	3.30%	11.54%	-11.09%
MSCI China Free†	-0.38%	-0.01%	-8.93%	-15.12%
MSCI EAFE	2.17%	1.51%	6.58%	-13.95%
MSCI EM	1.66%	2.65%	2.49%	-15.42%
MSCI Brazil (BRL)	6.16%	9.11%	14.45%	10.53%
MSCI India (INR)	1.69%	3.48%	13.60%	2.48%
MSCI Russia (RUB)	0.00%	0.00%	0.00%	-100.00%
FIXED INCOME				
Bloomberg Aggregate	0.24%	-0.80%	1.63%	-8.89%
Bloomberg Euro Aggregate	0.32%	-0.51%	1.05%	-18.37%
Bloomberg US High Yield	0.94%	1.60%	7.60%	-7.67%
Bloomberg Euro High Yield (€)	0.75%	1.66%	6.83%	-8.59%
Bloomberg Muni Aggregate	-0.08%	-0.19%	2.44%	-6.76%
Bloomberg TIPS	0.18%	-1.41%	3.06%	-6.90%
JPM EMBI Gbl. Divers.	1.51%	2.43%	5.39%	-16.01%
JPM GBI-EM Gbl. Divers.	2.34%	3.09%	3.40%	-11.63%
OTHER				
DJ US Real Estate	4.28%	2.66%	11.77%	-10.61%
FTSE EPRA/NAREIT Dvlpd. Ex-US	2.89%	0.83%	7.21%	-14.36%
S&P GSCI	4.45%	-1.83%	-1.87%	33.26%
Alerian MLP *	4.95%	2.14%	14.90%	26.43%
US Dollar Index	-0.91%	-0.25%	0.90%	10.59%
VIX	-7.66%	-8.44%	-31.97%	13.41%

COMMODITIES				
	08/12/22	07/31/22	06/30/22	12/31/21
WTI Oil (\$/barrel)	\$92.09	\$98.62	\$105.76	\$75.21
Brent Oil (\$/barrel)	\$98.15	\$110.01	\$114.81	\$77.78
Gold (\$/oz)	\$1815.50	\$1781.80	\$1827.50	\$1831.00
Natural Gas (\$/mmBtu)	\$8.77	\$8.23	\$5.42	\$3.73

CURRENCIES				
	08/12/22	07/31/22	06/30/22	12/31/21
Euro (\$/€)	1.0266	1.0220	1.0481	1.1386
Pound (\$/£)	1.2140	1.2175	1.2182	1.3535
Japanese Yen (¥/\$)	133.49	133.34	135.57	115.03
Swiss Franc (CHF/€)	0.9666	0.9729	0.9995	1.0378
Chinese Yuan Renminbi (CNY/\$)	6.7428	6.7442	6.6993	6.3797

RATES & SPREADS				
	08/12/22	07/31/22	06/30/22	12/31/21
RATES				
Fed Funds Target	2.50%	2.50%	1.75%	0.25%
Secured Overnight Financing Rate *	2.28%	2.27%	1.50%	0.05%
ECB Depo Rate	-0.00%	-0.50%	-0.50%	-0.50%
3-Month US Dollar Libor	2.92%	2.79%	2.29%	0.21%
US Treasuries 2-Year	3.26%	2.90%	2.92%	0.73%
US Treasuries 10-Year	2.85%	2.64%	2.97%	1.50%
US Treasury 2-10 Slope	-0.41%	-0.26%	0.05%	0.77%
German Bunds 2-Year	0.61%	0.28%	0.65%	-0.62%
German Bunds 10-Year	0.99%	0.82%	1.34%	-0.18%
Japanese Govt Bonds 10-Year	0.19%	0.18%	0.23%	0.07%
UK Gilts 10-Year	2.11%	1.86%	2.23%	0.97%
Swiss Govt Bonds 10-Year	0.50%	0.44%	1.07%	-0.14%
French OATs 10-Year	1.55%	1.38%	1.92%	0.20%
Italian BTPs 10-Year	3.07%	3.02%	3.26%	1.17%
Spanish Bonos 10-Year	2.10%	1.92%	2.42%	0.56%
SPREADS				
HY Corp. Spread (bps)	408	465	569	283
Bank Loan Spread (bps) *	541	602	658	439
IG Corp. Spread (bps)	131	143	156	92
EMD Spread (bps)	496	548	554	376

Global Equity Valuations

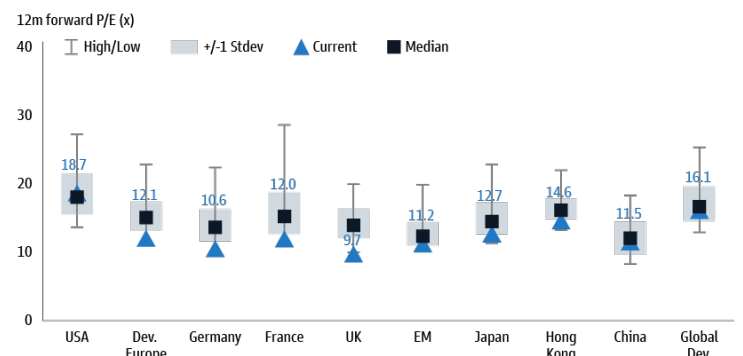


Chart Source: Goldman Sachs Asset Management and Bloomberg as of close of trading on July 29, 2022. Chart data shows next 12 month P/E ratio from August 2012 to the current period. 12m forward P/E(x) refers to price-to-earnings ratio for the next 12 months, which is a valuation measure applied to respective 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:**

As of August 10, 2022. "Companies Likely Impacted" refers to companies that reported over \$1 billion in net income and have an effective tax rate of less than 15% in the latest year. "Companies Not Likely Impacted" refers to companies that either reported less than or equal to \$1 billion in net income or have an effective tax rate of at least 15% in the latest year. Goldman Sachs does not provide accounting, tax or legal advice. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this page.

Page 1 Market Summary Notes:

"Fed" refers to the Federal Reserve. "IEA" refers to International Energy Agency. "Bbl" refers to barrel. "WTI" stands for West Texas Intermediate crude oil, a common US benchmark for oil prices. "Brent" is a global benchmark for oil prices worldwide. "Hawkishness" refers to a state of less accommodative monetary policy. "GDP" refers to Gross Domestic Product. "ECB" refers to the European Central Bank.

Page 1 Economic Summary Notes:

"US Headline CPI YoY" refers to the change in the US Consumer Price Index, year-over-year. "MoM" refers to month-over-month. "US Core CPI YoY" refers to the change in the US Consumer Price Index excluding food and energy, year-over-year. "China CPI YoY" refers to the change in the China Consumer Price Index, year-over-year. "China PPI YoY" refers to the change in the China Producer Price Index, year-over-year. "UK GDP QoQ" refers to the change in the United Kingdom Consumer Price Index, year-over-year. "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:

"Euro area GDP QoQ" refers to the Euro Area's Gross Domestic Product, quarter-over-quarter. "Japan New Core CPI" refers to Japan's Consumer Price Index (ex- Fresh Food, Energy), year-over-year. "UK CPIH YoY" refers to the United Kingdom's Harmonized Consumer Price Index, year-over-year. "US Initial Jobless Claims" refers to the number of people filing to receive unemployment insurance benefits for the week ending August 12, 2022. "ECB Meeting" refers to the European Central Bank's meeting. "BoE Meeting" refers to the Bank of England's Monetary Policy Committee meeting. "FOMC Meeting" refers to the Federal Reserve's Federal Open Market Committee meeting.

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.

Risk Considerations

Equity securities are more volatile than bonds and subject to greater risks. Small and mid-sized company stocks involve greater risks than those customarily associated with larger companies. Bonds are subject to interest rate, price and credit risks. Prices tend to be inversely affected by changes in interest rates. Unlike stocks and bonds, U.S. Treasuries securities are guaranteed as to payment of principal and interest if held to maturity. High yield fixed income securities are considered speculative, involve greater risk of default, and tend to be more volatile than investment grade fixed income securities. Income from municipal securities is generally free from federal taxes and state taxes for residents of the issuing state. While the interest income is tax-free, capital gains, if any, will be subject to taxes. Income for some investors may be subject to the federal Alternative Minimum Tax (AMT). Investments in foreign securities entail special risks such as currency, political, economic, and market risks. These risks are heightened in emerging markets. Investments in commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity.

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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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