Daily Trends in Yields, Equity Returns, FX

10-Yr US Government Yield (%)

Equity Return (%)

Cumulative MSCI Equity Return in USD (%)

10-Yr Government Yield: Cumulative Change (bps)

Strength of USD

*See Appendix for data sources
Monthly Trends in Yields, Equity Returns, FX

Cumulative MSCI Equity Return in USD (%)

10-Yr US Government Yield (%)

Equity Return (%)

10-Yr Government Yield: Cumulative Change (bps)

Strength of USD

MSCI USA

Nominal Yield

MSCI USA

USA

World ex USA

Emerging Markets

US

Germany

UK

Japan

vs EUR

vs GBP

vs JPY

vs CNY

*As of November 3

**See Appendix for data sources
Daily & Monthly US Corporate Spreads vs Equities

10-Yr BBB OAS (bps)

-15
-10
-5
0
5
10
15
Thu Oct 20
Fri Mon Tue Wed Thu Oct 27
Fri Mon Tue Wed Thu Oct 3
Thu Nov 3

Option Adjusted Spread
MSCI USA

10-Yr Corporate OAS: Cumulative Change (bps)

-15
-10
-5
0
5
10
15
Thu Oct 20
Fri Mon Tue Wed Thu Oct 27
Fri Mon Tue Wed Thu Oct 3
Thu Nov 3

BBB
A
AA

10-Yr BBB OAS (bps)

-10
0
10
20
30
40
50
60
70
80
90
100
Apr 2022
May
Jun
Jul
Aug
Sep
Oct
Nov*

Option Adjusted Spread
MSCI USA

10-Yr Corporate OAS: Cumulative Change (bps)

-10
0
10
20
30
40
50
60
70
80
90
100
Apr 2022
May
Jun
Jul
Aug
Sep
Oct
Nov*

BBB
A
AA

*As of November 3
**See Appendix for data sources
Euro Corporate and Sovereign Spreads vs Equities

10-Yr BBB OAS (bps)*

10-Yr Sovereign OAS (bps)*

10-Yr Corporate OAS: Cumulative Change (bps)

10-Yr Sovereign OAS: Cumulative Change (bps)

*Option Adjusted Spread in basis points to German government curve. Equity return expressed in USD

**As of November 3

***See Appendix for data sources
Drilldown: G4 Government Bonds and Rates
Government Nominal Yield Curves

**US Government Yield Curve (%)**

**Germany Government Yield Curve (%)**

**UK Government Yield Curve (%)**

**Japan Government Yield Curve (%)**

*See Appendix for data sources*
Government Yields: 1-Day Changes (Nominal)*

<table>
<thead>
<tr>
<th>Maturity</th>
<th>US Change (bps)</th>
<th>Germany Change (bps)</th>
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<td>-5</td>
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*Change from Nov 02 to Nov 03

**See Appendix for data sources.
Government Yields: 1-Week Changes (Nominal)*

*Change from Oct 27 to Nov 03

**See Appendix for data sources
**Government Yields: 1-Month Changes (Nominal)**

*Change from Oct 03 to Nov 03

*See Appendix for data sources
1-Month Forward Rates on Futures and Overnight Index Swaps

**USD SOFR Futures (%)**

- Nov 2022 to May '24
- Nov 3 Yield Curve: Blue
- Oct 3 Yield Curve: Orange

**EUR ESTR OIS (%)**

- Nov 2022 to May '24
- Nov 3 Yield Curve: Blue
- Oct 3 Yield Curve: Orange

**GBP SONIA OIS (%)**

- Nov 2022 to May '24
- Nov 3 Yield Curve: Blue
- Oct 3 Yield Curve: Orange

**USD Fed Funds OIS (%)**

- Nov 2022 to May '24
- Nov 3 Yield Curve: Blue
- Oct 3 Yield Curve: Orange

*See Appendix for data sources*
US Breakeven Inflation and Real Yields

**See Appendix for data sources**
US Government Yields: Nominal, Real and BEI

10-Yr US Government Yields (%)

- US Nominal
- US BEI
- US Real

10-Yr Yields: Cumulative Change (bps)

- US Nominal
- US BEI
- US Real

*See Appendix for data sources
4-Year Trends in Government Yields and Inflation

10-Yr Government Nominal Yields (%)

10-Yr Government Breakeven Inflation Yields (%)

Realized Inflation (12-Month, in %)

10-Yr Government Real Yields (%)

*US: PCE ex Food/Energy; Eurozone: HICP ex Food/Energy/Alcohol/Tobacco
UK: CPIH ex Food/Energy/Alcohol/Tobacco; Japan: CPI ex Food/Energy

*UK breakeven inflation and real yields are adjusted to reflect historical differences between the Retail Price Index (RPI) and the Consumer Price Index (CPI)

**See Appendix for data sources
Long-Run Trends in Yields and Inflation

10-Yr Government Nominal Yields (%)

Realized Inflation (12-Month, in %)

10-Yr Government Breakeven Inflation Yields (%)

10-Yr Government Real Yields (%)

*UK breakeven inflation and real yields are adjusted to reflect historical differences between the Retail Price Index (RPI) and the Consumer Price Index (CPI)

**See Appendix for data sources
Drilldown: Credit
Spread Term Structure: BBB Corporates & Sovereigns

**US BBB OAS (bps)**

03-Nov 2022, 31-May 2022, 30-Nov 2021

**Euro BBB OAS (bps)**

03-Nov 2022, 31-May 2022, 30-Nov 2021

*Spread to German government curve

**Euro Sovereign OAS (bps)**

Italy, Spain, France

*Spread to German government curve as of November 03

**Italy Sovereign OAS (bps)**

03-Nov 2022, 31-May 2022, 30-Nov 2021

*Spread to German government curve

---

**See Appendix for data sources**
4-Year Spread Trends on Corporates & Euro / EM Sovereigns

10-Yr US Corporate OAS (bps)

10-Yr Euro Sovereign OAS (bps)*

*Spread to German government curve

10-Yr Euro OAS (bps)*

10-Yr Emerging Markets Sovereign OAS (bps)*

*Spread to US Treasury curve

**See Appendix for data sources
Long-Run Trends in Spreads

10-Yr US Corporate OAS (bps)

10-Yr Euro Sovereign OAS (bps)*

10-Yr Euro OAS (bps)*

10-Yr Emerging Markets Sovereign OAS (bps)*

*Spread to German government curve
**See Appendix for data sources

*Spread to US Treasury curve

BBB | A | AA
Italy | France | Spain
Mexico | Brazil | Turkey | Indonesia
China Government Bond Drilldown

**China Sovereign (CNY) Yield Curve (%)**
- Maturity (years): 1.50, 2.00, 2.50, 3.00, 3.50, 4.00
- 03-Nov 2022, 31-May 2022, 30-Nov 2021

**10-Yr China Sovereign Yield (%)**
- 2.69, 2.74, 2.78, 2.83, 2.88, 2.92, 2.97
- Apr 2022 to Nov*
- Yield (CNY), MSCI China

**Equity Return (%)**
- *As of November 3. Equity return in USD

**Realized Inflation (%)**
- **China inflation (yoy)** 2.8% as of Sep 2022
- Inflation measured by All Items CPI includes food and energy prices

**MSCI China Equity Return (%)*
- Apr 2022 to Nov*

**10-Yr Yields (%)**
- China Sovereign (CNY), US AA Corporate (USD), US Treasury (USD), China Sovereign (USD)

***See Appendix for data sources

**China inflation (yoy) 2.8% as of Sep 2022
Inflation measured by All Items CPI includes food and energy prices**
Volatilities, Correlations, FX
Trends in Yield and Return Volatilities

10-Yr Government Nominal Yield Volatility (bps)*

US Nominal Yield Volatility Curve (bps)*

10-Yr US Yield Volatility (bps)*

Equity and 10-Yr US Government Return Volatility (%)*

*Realized volatility using exponential time decay with half life of 18-weeks
**See Appendix for data sources
Trends in Correlations and Yield Curve Slope

Return Correlations: Equities & 10-Yr US Government*

Return Correlations: US Equity & 10-Yr US Real, BEI*

Yield Correlations: 10-Yr US Government*

Yield Curve Slope: 10-Yr less 3-Month (bps)

*Realized correlation using exponential time decay with half life of 2-years
**See Appendix for data sources
FX Trends

**Strength of US Dollar**
- vs EUR
- vs GBP
- vs JPY
- vs CNY

**FX Forward Curve: Strength of US Dollar***
- vs EUR
- vs GBP
- vs JPY

**FX Volatility (%)**
- USD/EUR
- USD/GBP
- USD/JPY
- USD/CNY

*As of November 03
***See Appendix for data sources

**Realized volatility using exponential time decay with half life of 18-weeks
Historical Inflation and GDP
US Inflation: Annual and Monthly (CPI and PCE)

**CPI 1-Year (%)**
- *As of Sep 2022: 6.7 for ex Food/Energy and 8.2 for All Items

**CPI 1-Month (%)**
- *As of Sep 2022: 0.6 for ex Food/Energy and 0.4 for All Items
- **See Appendix for data sources**

**PCE 1-Year (%)**
- *As of Sep 2022: 5.1 for ex Food/Energy and 6.2 for All Items

**PCE 1-Month (%)**
- *As of Sep 2022: 0.5 for ex Food/Energy and 0.3 for All Items
- **See Appendix for data sources**
Global Inflation: Annual

- **US CPI (%)**
- **Eurozone HICP (%)**
- **China CPI (%)**
- **Japan CPI (%)**
- **UK CPIH (%)**
- **Germany HICP (%)**

*Also excludes Alcohol and Tobacco

**See Appendix for data sources**
US GDP (%)

**Most recent quarterly GDP: 0.6**

Eurozone GDP (%)

**Most recent quarterly GDP: 0.2**

China GDP (%)

**Most recent quarterly GDP: 3.9**

Japan GDP (%)

**Most recent quarterly GDP: 0.9**

**See Appendix for data sources**

UK GDP (%)

**Most recent quarterly GDP: 0.2**

Germany GDP (%)

**Most recent quarterly GDP: 0.3**
Data Sources

Yields and Spreads
MSCI zero coupon yield and spread curves

Indexes
MSCI USA Index, MSCI World ex USA Index, MSCI Europe Index, MSCI China, MSCI Emerging Market Index

Relative Strength of Currencies
MSCI

Inflation and GDP
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<th>ASIA PACIFIC</th>
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<td>Americas</td>
<td>+ 1 888 588 4567 *</td>
<td>China North</td>
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<td>Atlanta</td>
<td>+ 1 404 551 3212</td>
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