

Cost of Capital in the Current Environment

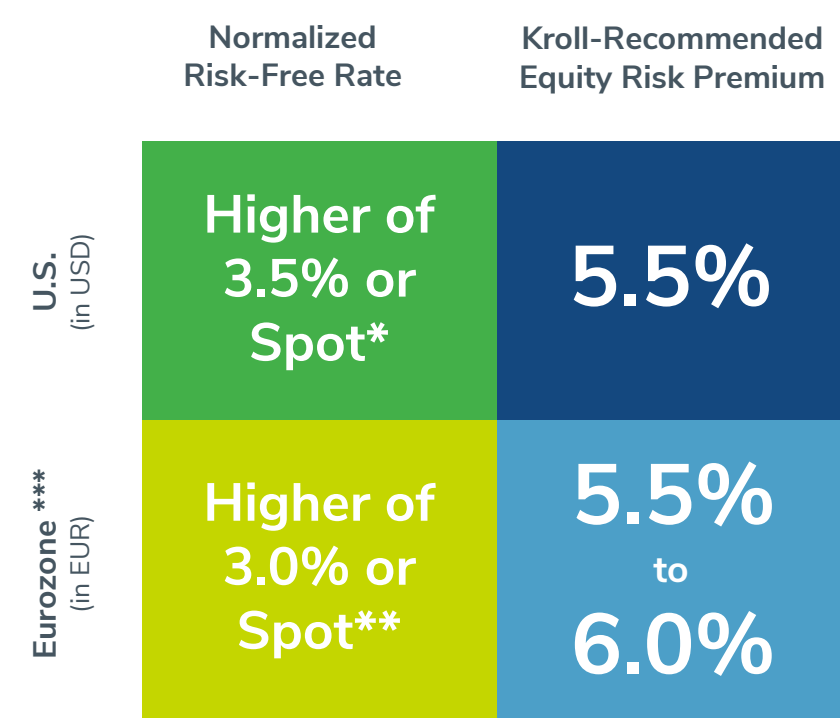
June 2023 Update

Although at a slower pace, major central banks are continuing to hike interest rates to tame high inflation. Headline inflation appears to have peaked, but core inflation (i.e., excluding the volatile energy and food prices) continues to be stubbornly high. Economists have upgraded real growth expectations for 2023 relative to the beginning of the year, partly due to China's reopening (after ending its zero-COVID-19 policy) and warmer weather that helped lower energy prices. Nevertheless, several countries are still expected to fall into recession in 2023 or in early 2024. In fact, Germany and the Eurozone are already in technical recession (i.e., two consecutive quarters of contraction). However, global financial markets are generally pricing a soft landing rather than a deep and prolonged recessionary period. Amidst this uncertain environment, cost of capital estimates are now similar to levels observed around the Global Financial Crisis of 2008-2009.

Carla S. Nunes, CFA – Managing Director, Kroll

Kroll Cost of Capital Inputs

Data as of June 14, 2023



* We recommend using the spot 20-year U.S. Treasury yield as the proxy for the risk-free rate, if the prevailing yield as of the valuation date is higher than our recommended U.S. normalized risk-free rate of 3.5%. This guidance is effective when developing USD-denominated discount rates as of June 16, 2022, and thereafter.

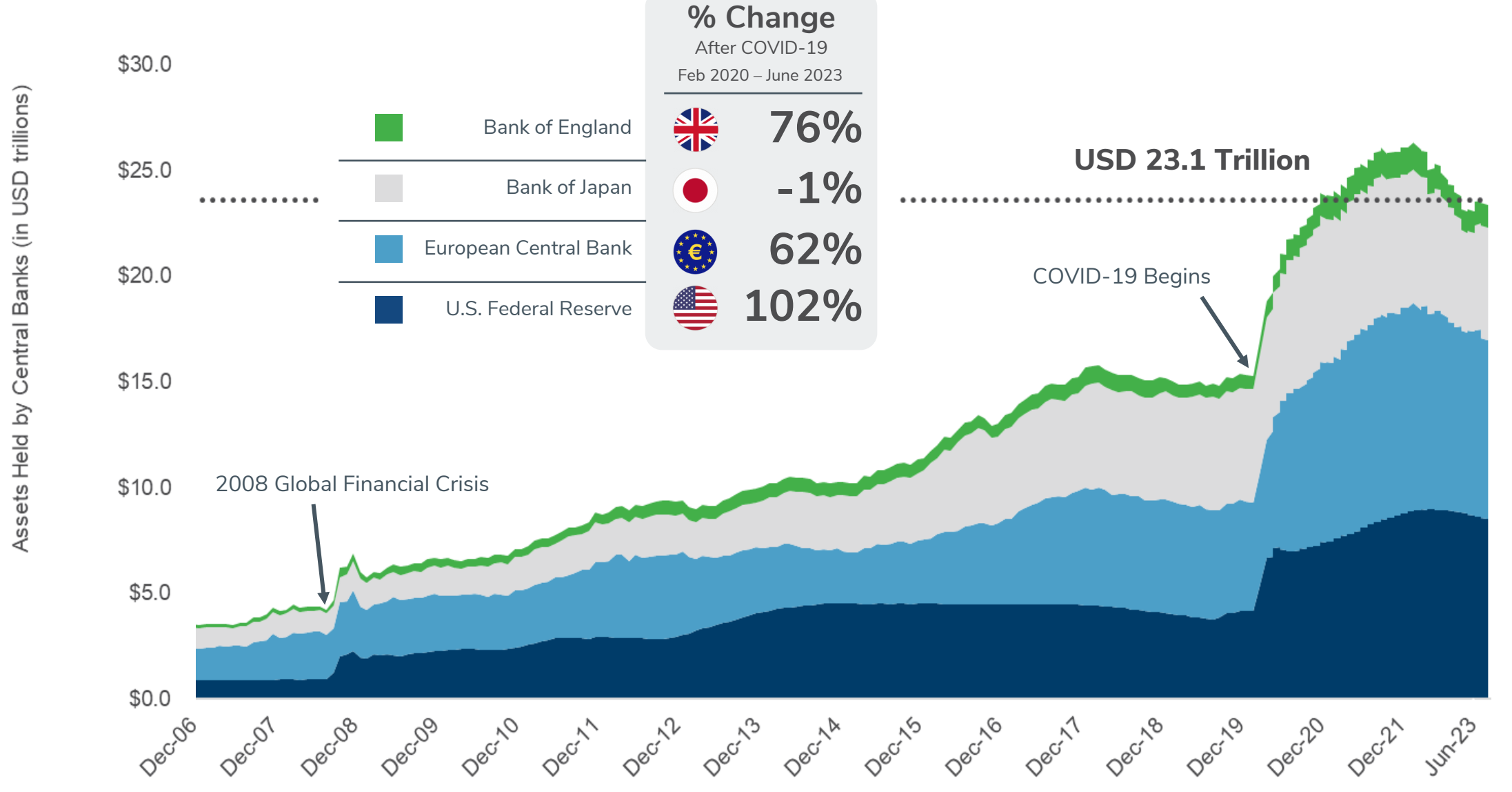
** We recommend using the spot 15-year German government bond yield as the proxy for the risk-free rate, if the prevailing yield as of the valuation date is higher than our recommended German normalized risk-free rate of 3.0%. This guidance is effective when developing EUR-denominated discount rates as of October 18, 2022, and thereafter.

*** German normalized risk-free rate and Eurozone equity risk premium (ERP) for use in EUR-denominated discount rates from a German investor perspective. Our current ERP recommendation is at the top of the range. Additional country risk adjustments may be warranted when estimating discount rates for other countries in the Eurozone.

For more information, visit: <https://www.kroll.com/costofcapitalnavigator>

Total Assets Held by Major Central Banks Over Time

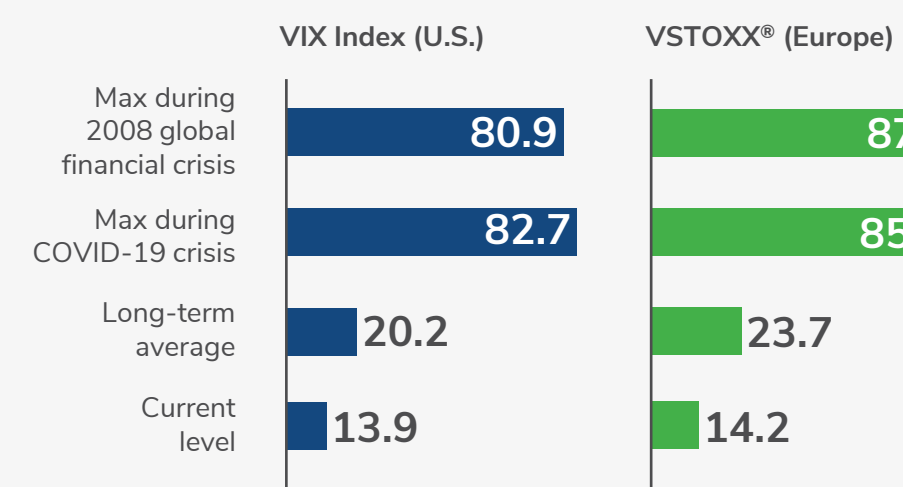
Data as of June 14, 2023



Sources: Capital IQ, FRED® Economic Data, Bank of England, Bank of Japan and European Central Bank

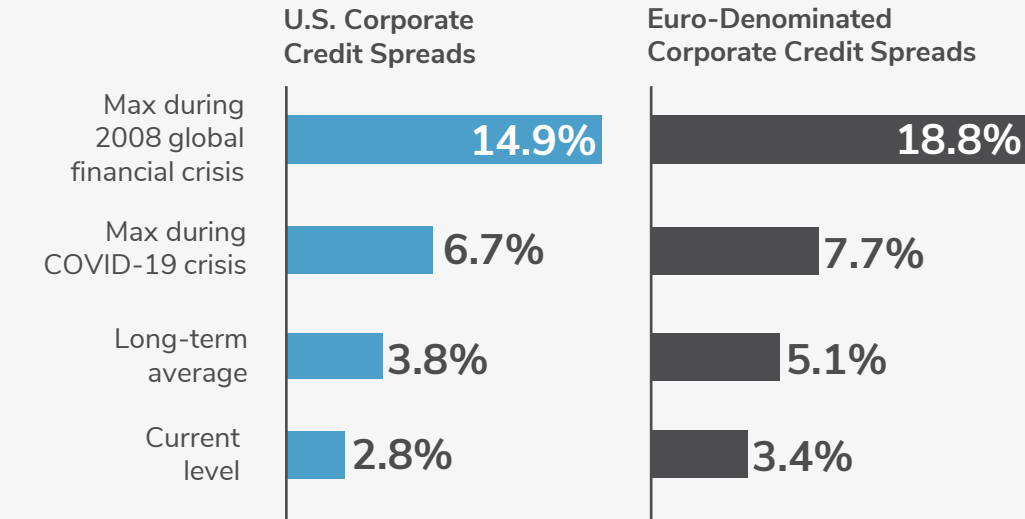
Global Market Volatility

Data as of June 14, 2023



Global Credit Spreads

Data as of June 14, 2023

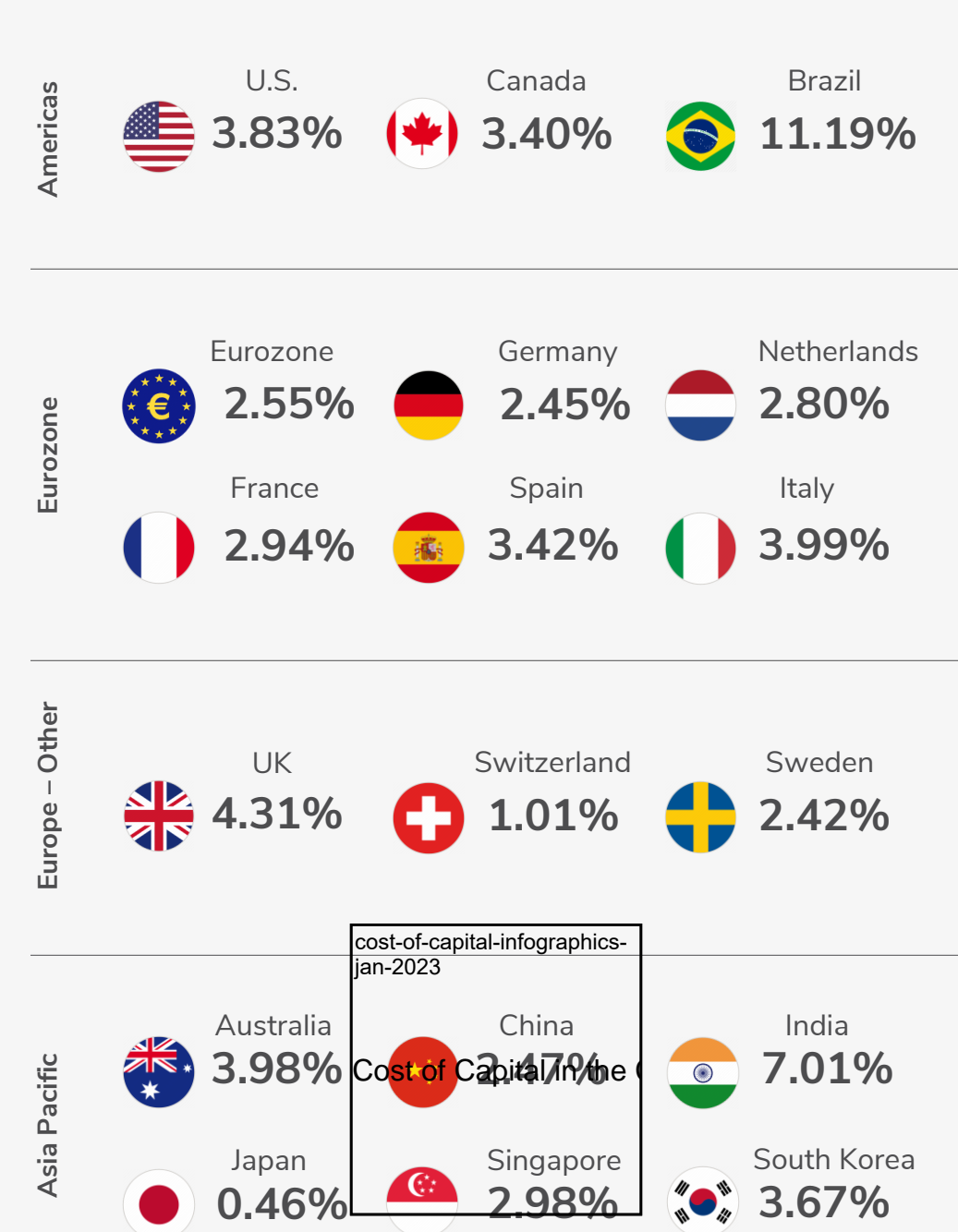


Sources: Capital IQ, FRED® Economic Data, Bloomberg

U.S. corporate credit spreads are based on the difference in effective yields between the ICE BofA U.S. High Yield Index and the ICE BofA U.S. Corporate Index. Euro-denominated corporate credit spreads are based on the difference in effective yields between the Bloomberg Pan-European High Yield Index (EUR) and the Bloomberg Euro Aggregate Corporate Bond Index. Long-term averages are based on 1995 to present for VIX daily series, 1999 to present for VSTOXX daily series, 1996 to present for U.S. credit spread daily series, and 1998 to present for EUR-denominated credit spread monthly series.

Global 10-Year Government Bond Yields

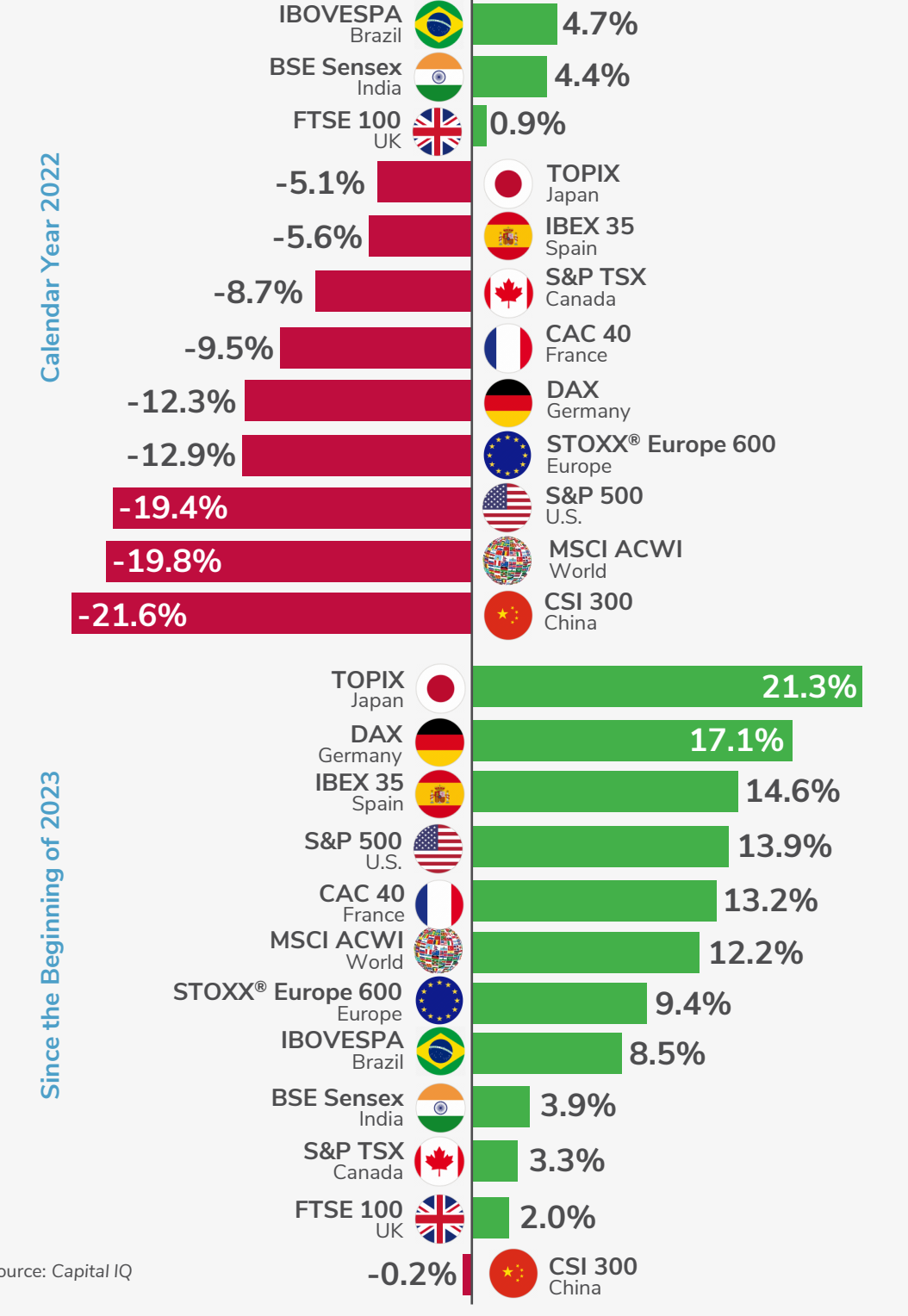
Data as of June 14, 2023



Sources: Refinitiv (Brazil, India), European Central Bank (Eurozone aggregate yield) and Capital IQ (other countries)

Stock Market Performance

Data as of June 14, 2023

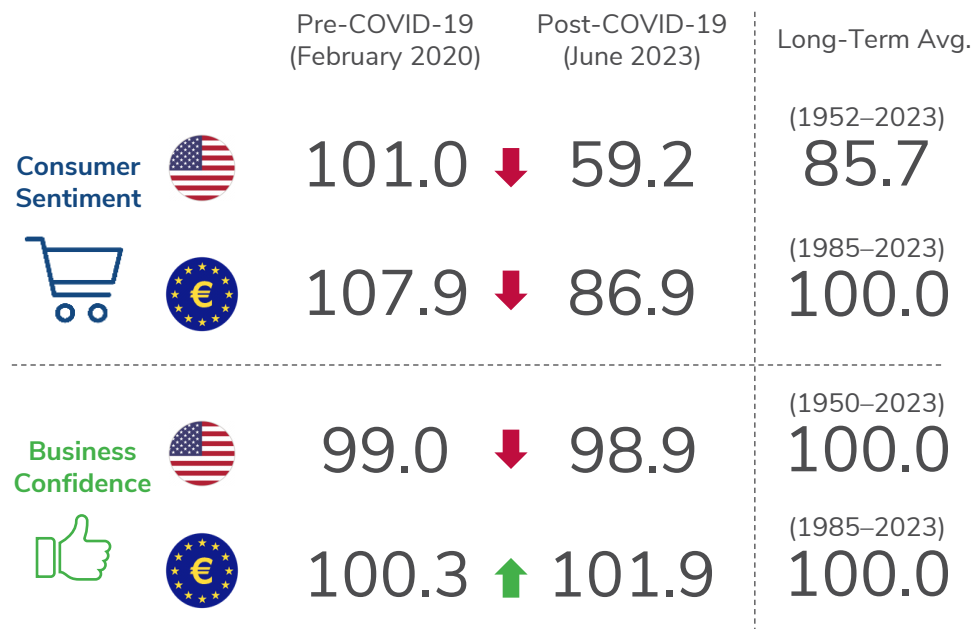


Calendar Year 2022
Since the Beginning of 2023

Source: Capital IQ

U.S. and Eurozone Consumer Sentiment vs. Business Confidence

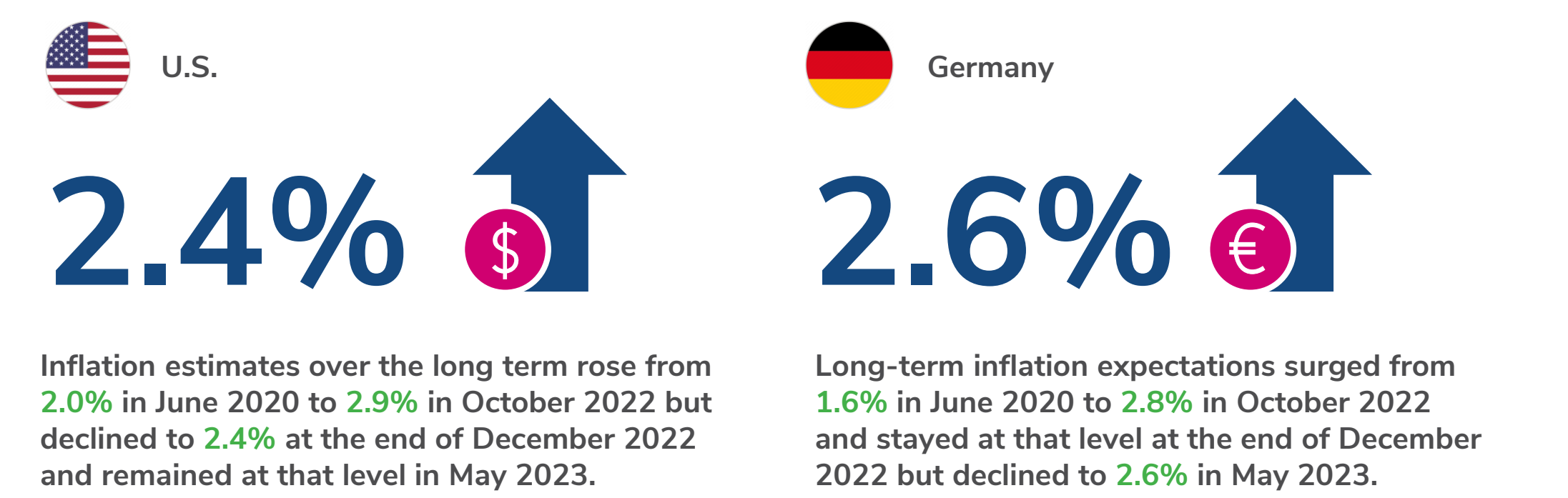
Data as of June 14, 2023



Sources: Michigan University's Index of Consumer Sentiment, OECD's Business Confidence Index and European Commission business and consumer surveys [The same methodology that the European Commission uses to standardize its Economic Sentiment Indicator (ESI) was applied to the Eurozone Consumer Confidence and Business Climate Indicator series.]

Long-Term Inflation Expectations (Median)

Data as of May 31, 2023

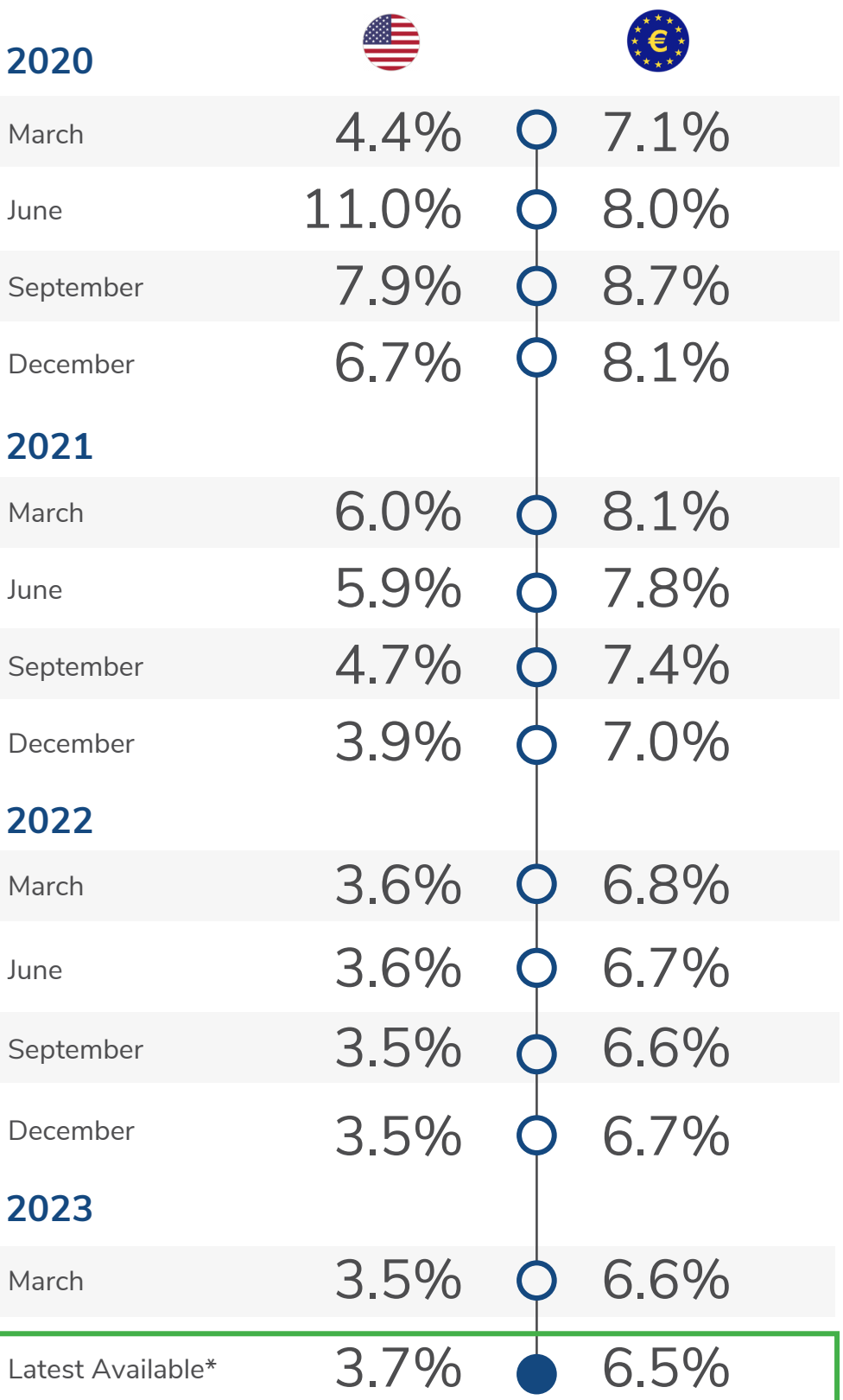


Sources of underlying U.S. data: Blue Chip Economic Indicators; Blue Chip Financial Forecasts, Consensus Economics, IHS Markit (S&P Global Market Intelligence), Federal Reserve Bank of Cleveland, Federal Reserve Bank of Philadelphia (Aruoba Term Structure of Inflation Expectations, Livingston Survey, and Survey of Professional Forecasters), Oxford Economics and the University of Michigan's Surveys of Consumers Inflation Expectations.

Sources of underlying German data: Consensus Economics, Economist Intelligence Unit, IHS Markit (S&P Global Market Intelligence), International Monetary Fund, Oxford Economics and PwC.

U.S. vs. Eurozone Unemployment Rate

Data as of June 14, 2023

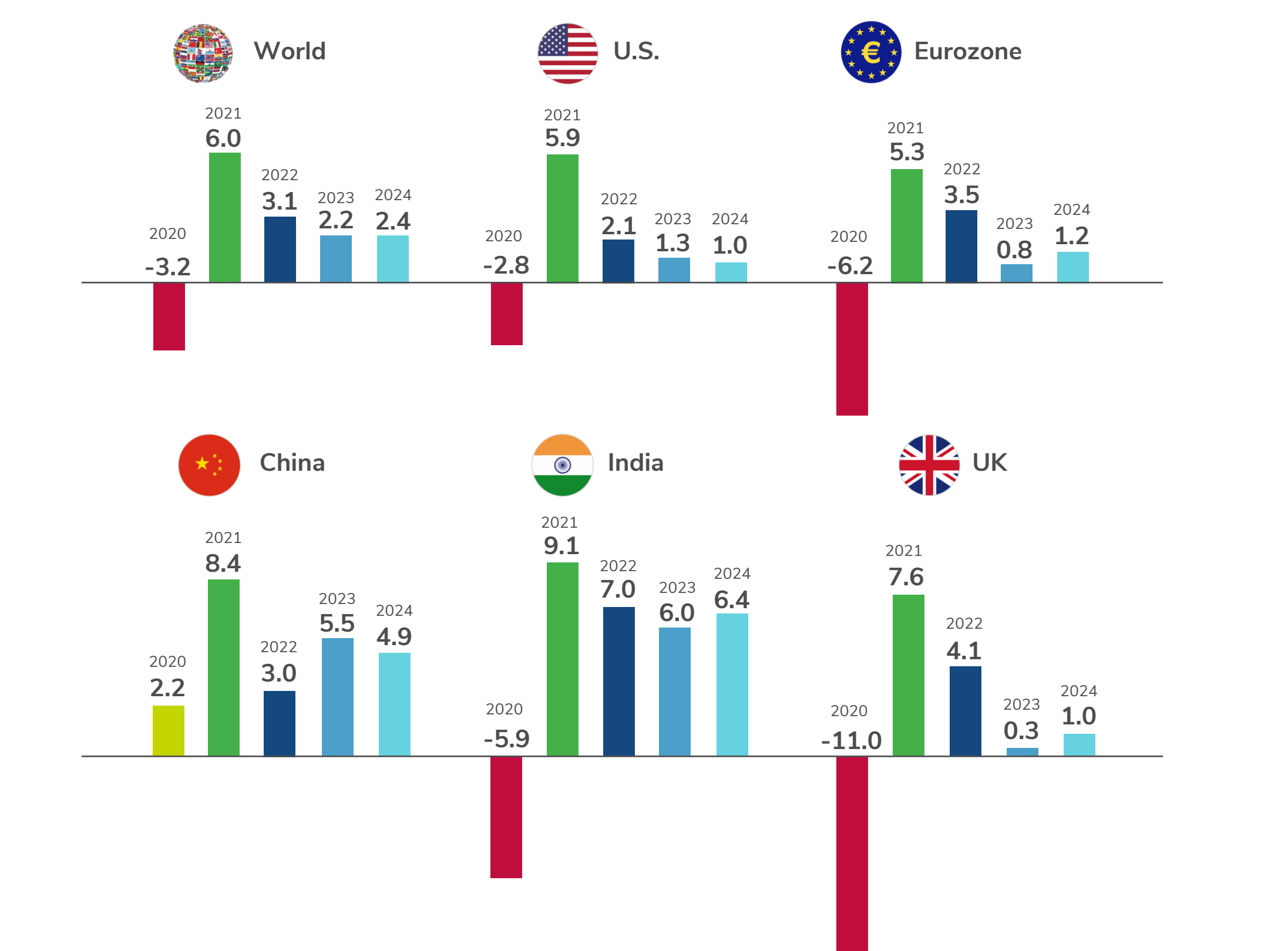


Source: U.S. Bureau of Labor Statistics and Eurostat

* Data through May 2023 for the U.S. and April 2023 for the Eurozone.

Real GDP Growth (%) Estimates (Median)

Data as of June 15, 2023



Sources: OECD, International Monetary Fund, World Bank, Blue Chip Economic Indicators, Consensus Economics, Economist Intelligence Unit, Fitch Ratings, IHS Markit (S&P Global Market Intelligence), Moody's Analytics, Oxford Economics and S&P Global Ratings.

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