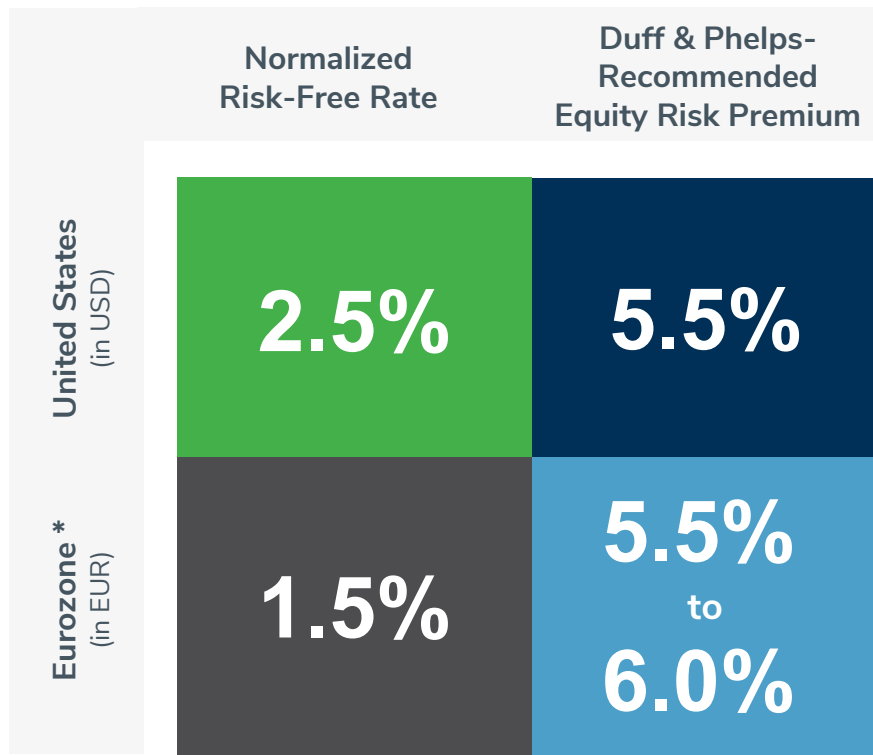


# Cost of Capital in the Current Environment

COVID-19 Update – December 2021

## Global Cost of Capital Inputs

Data as of November 30, 2021

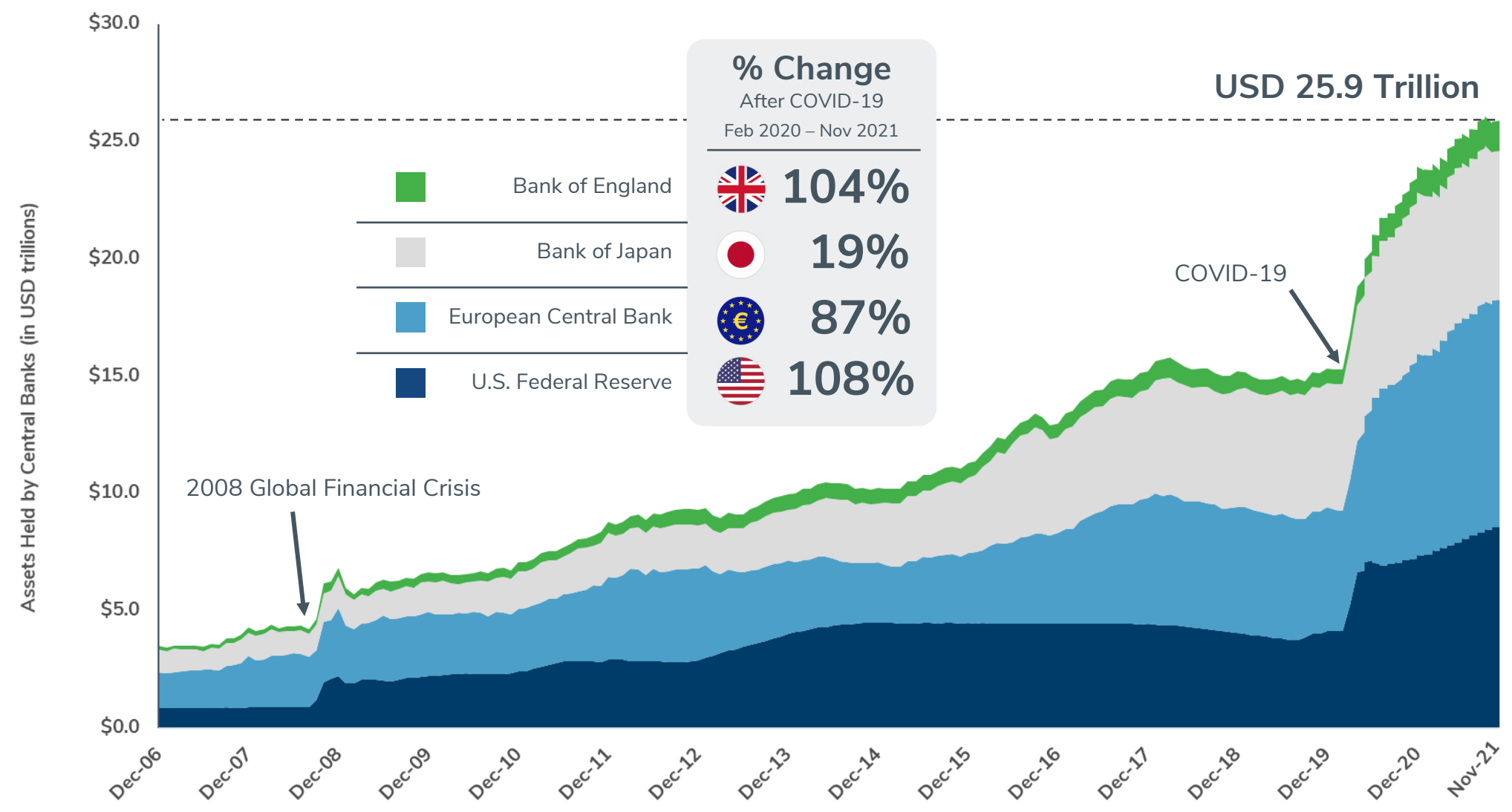


\* German normalized risk-free rate and Eurozone equity risk premium (ERP) for use in EUR-denominated discount rates from a German investor perspective. Additional country risk adjustments may be warranted when estimating discount rates for other countries in the Eurozone.

For more information, visit: <https://www.duffandphelps.com/costofcapital>

## Total Assets Held by Major Central Banks Over Time

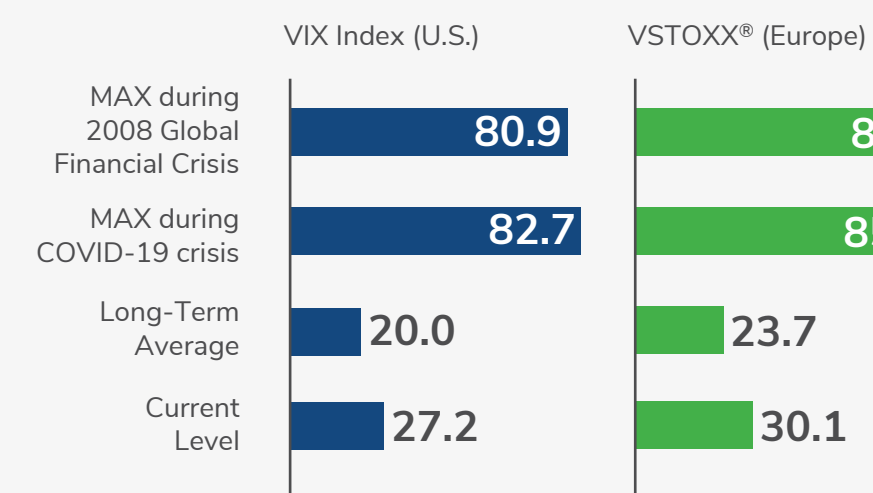
Data as of November 30, 2021



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

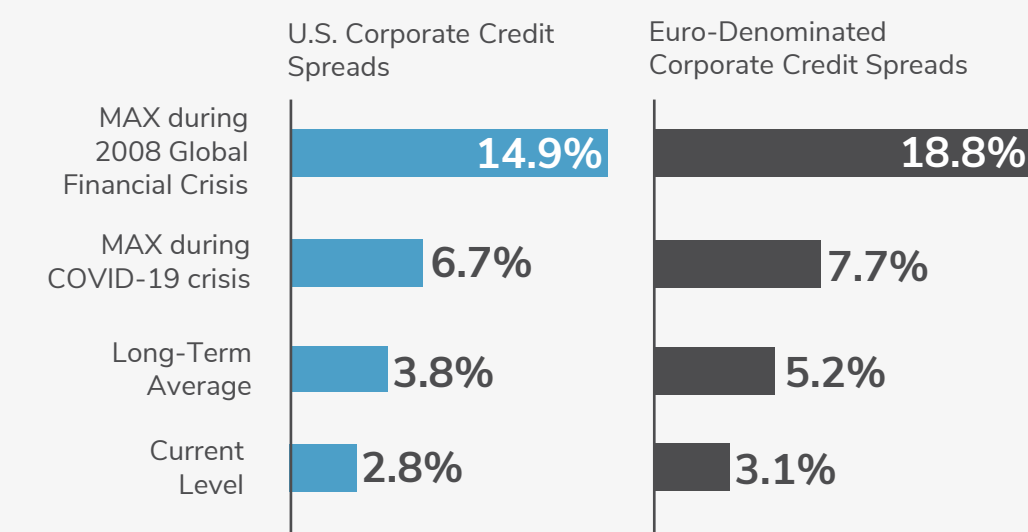
## Global Market Volatility

Data as of November 30, 2021



## Global Credit Spreads

Data as of November 30, 2021



Sources: Capital IQ, FRED® Economic Data, Morningstar Direct

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 US Corporate Index. Euro-Denominated Corporate Credit Spreads based on the difference in effective yields between the Bloomberg Barclays Pan-European High Yield Index (EUR) and the Bloomberg Barclays Euro Aggregate Corporate Bond Index. Long-term averages 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.

## Stock Market Performance Since the Wuhan Lockdown\*

Data as of November 30, 2021

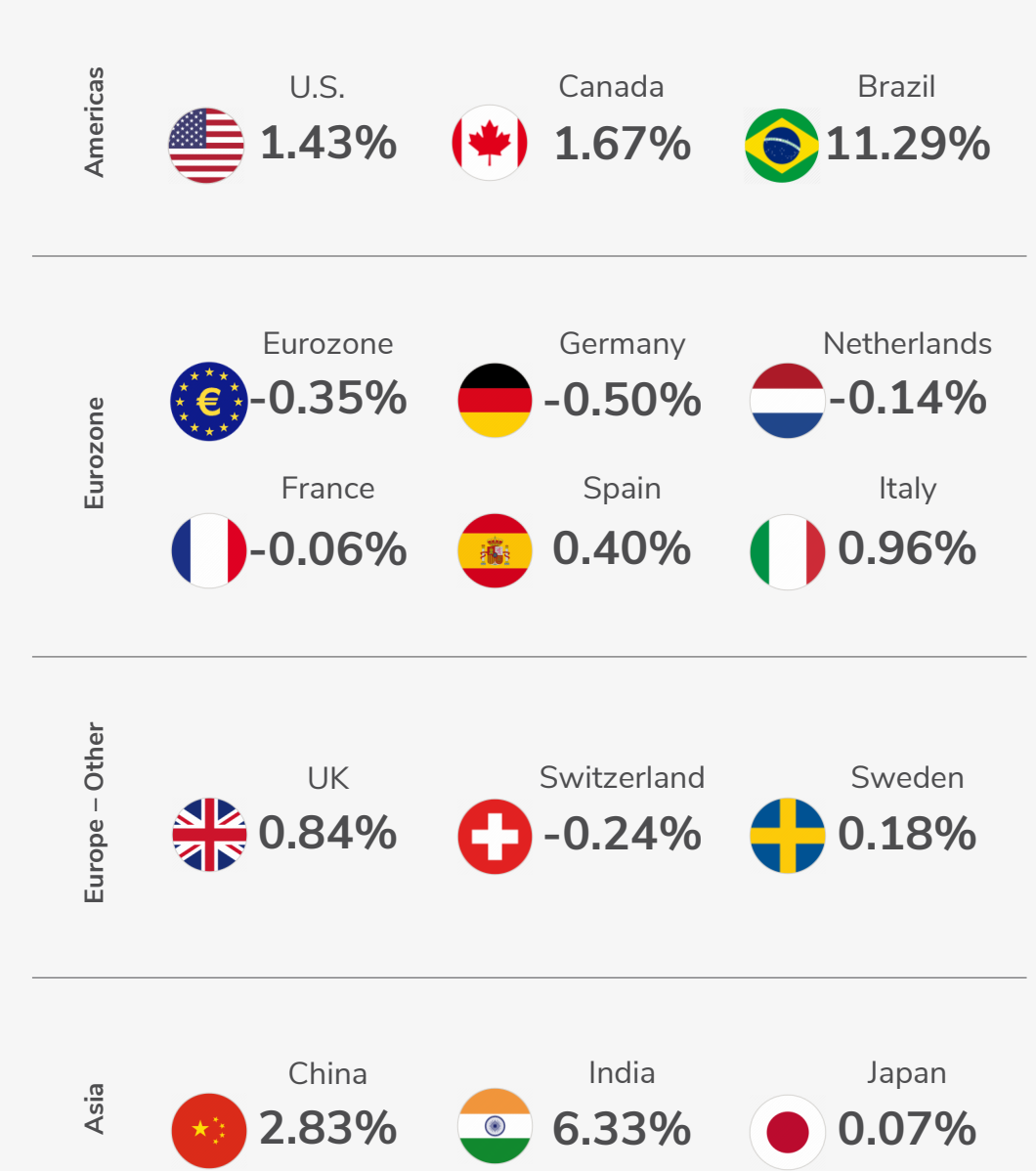


Source: Capital IQ

\*The first lockdown due to COVID-19 began on January 23, 2020, in Wuhan, China.

## Global 10-Year Government Bond Yields

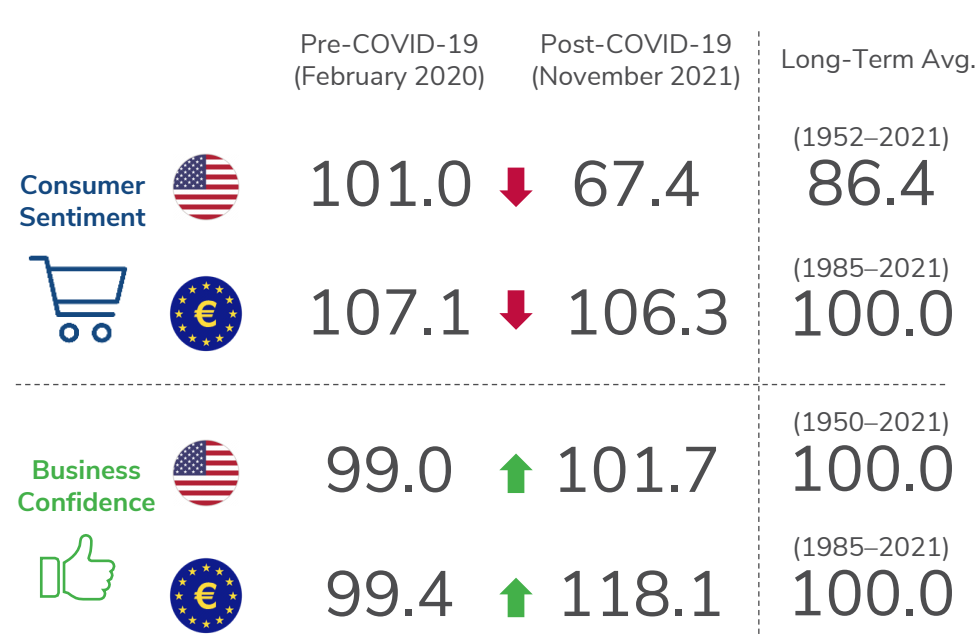
Data as of November 30, 2021



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

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

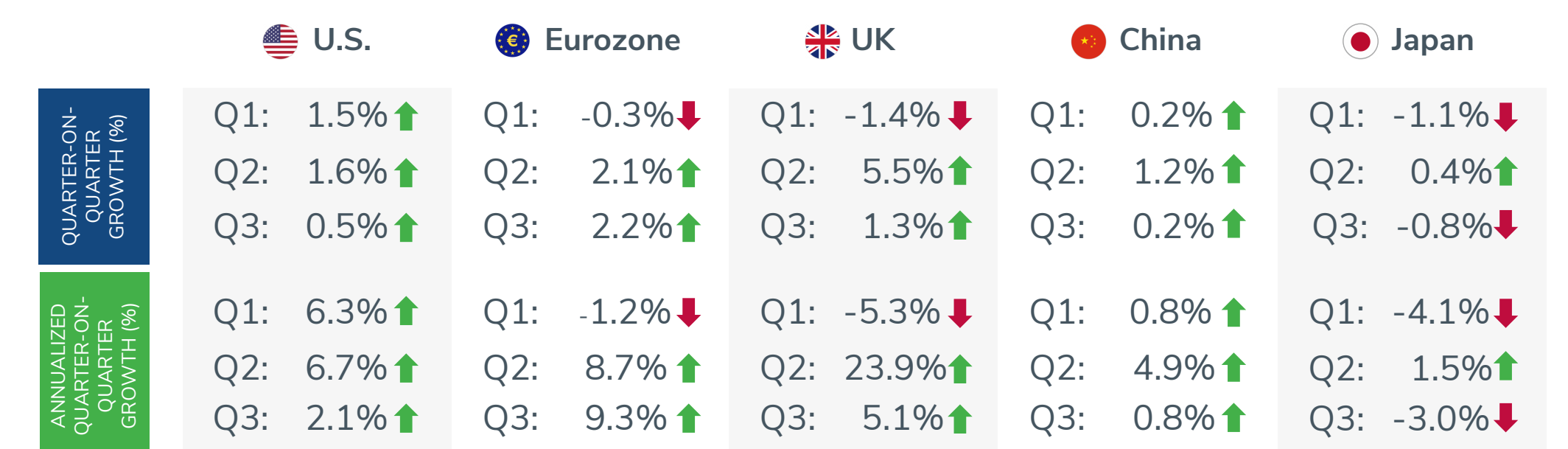
Data as of November 30, 2021



Sources: Michigan University's Index of Consumer Sentiment, OECD's Business Confidence Index, 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.]

## Real GDP Growth – Q1, Q2 and Q3 2021

Data as of November 30, 2021

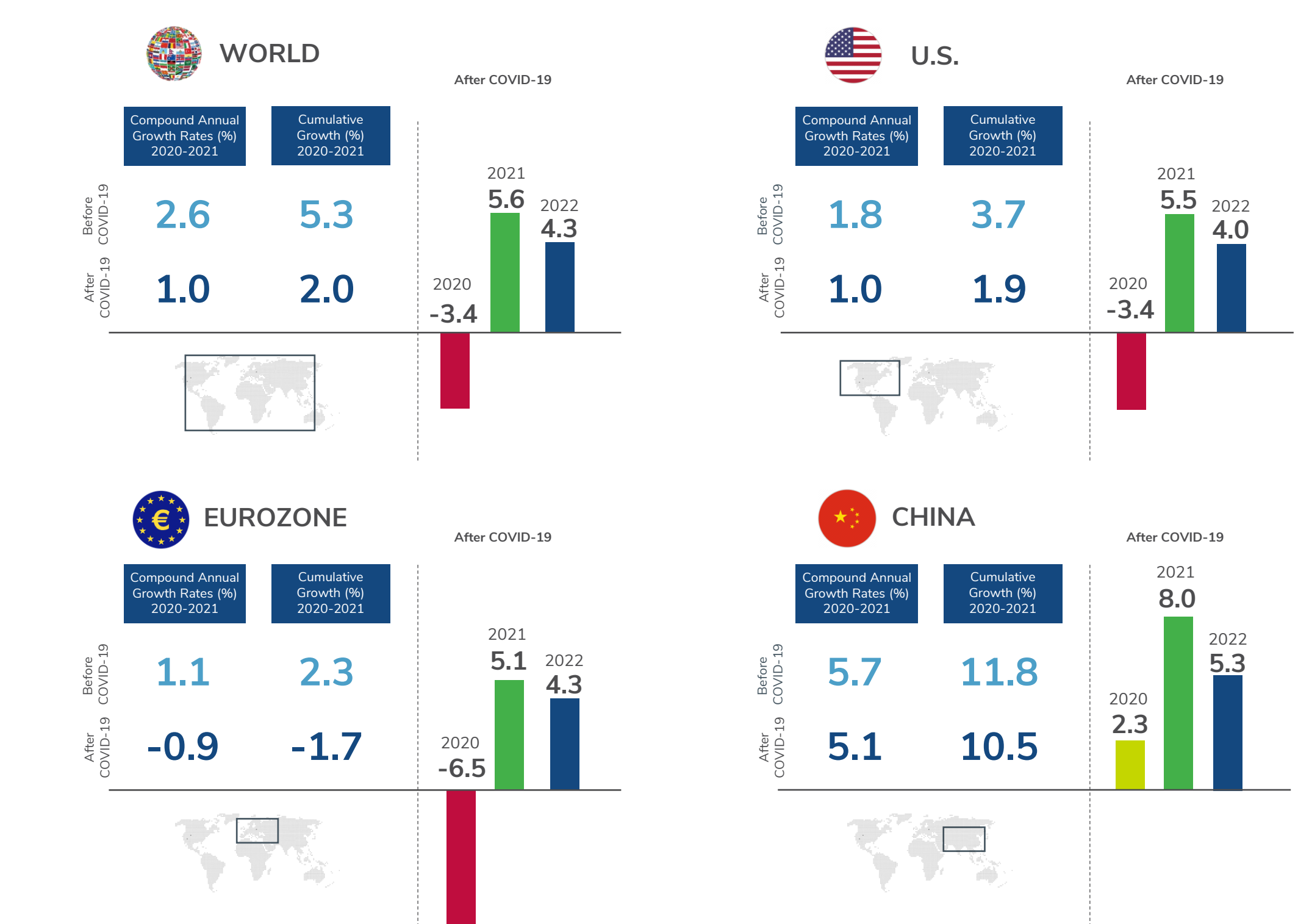


Sources: FRED® Economic Data (Eurozone, Japan, U.S.), National Bureau of Statistics of China, UK's Office for National Statistics

Quarter-on-quarter growth based on the growth rate from Q4 2020 to Q1 2021, Q1 2021 to Q2 2021, and Q2 2021 to Q3 2021. This rate is annualized by computing the compounded growth rate for four quarters as follows:  $(1 + \text{Real GDP Q/Q Growth Rate})^4$ . The annualized rate shows what the quarterly change would be if it lasted a full year.

## Real GDP Growth (%) Estimates (Median)

Data as of December 1, 2021



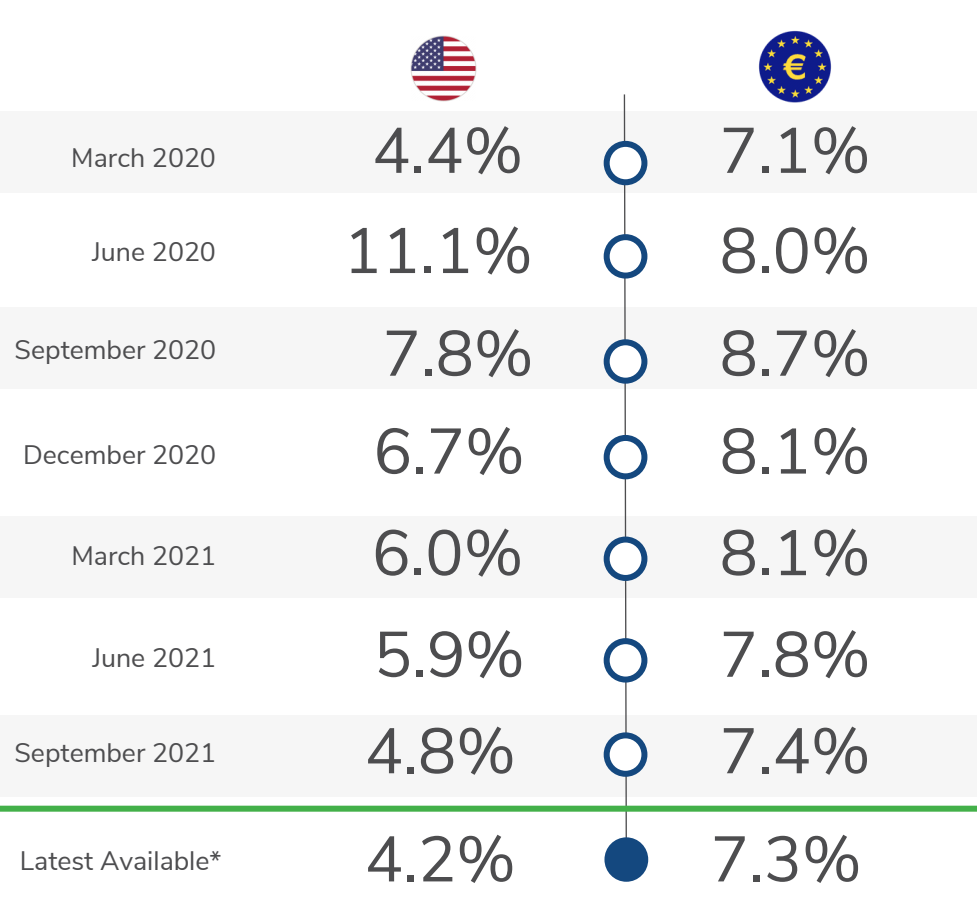
Sources: OECD, International Monetary Fund, World Bank, Blue Chip Economic Indicators, Consensus Economics, Economic Intelligence Unit, Fitch Ratings, IHS Markit, Moody's Analytics, Oxford Economics, S&P Global Ratings

Before COVID-19 median estimates are based on data released in December 2019 and early January of 2020. After COVID-19 median estimates are based on data available as of the date noted above.

COVID-19 median estimates (CAGR) is calculated as the annualized rate of return of median real GDP growth rate estimates from the end of 2019 through the end of 2021:  $[(1 + 2020 \text{ Real GDP Growth Rate}) * (1 + 2021 \text{ Real GDP Growth Rate})]^{1/2} - 1$ . Cumulative growth is calculated as the total (cumulative) growth rates of median real GDP estimates from the end of 2019 through the end of 2021:  $(1 + 2020 \text{ Real GDP Growth Rate}) * (1 + 2021 \text{ Real GDP Growth Rate}) - 1$ . These metrics show the annualized and cumulative real GDP growth rates that were expected at the end of 2019 (Before COVID-19) for the 2020-2021 period vs. what the expectations are currently (After COVID-19).

## U.S. vs. Eurozone Unemployment Rate

Data as of November 30, 2021



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

\* Data through November 2021 for the United States and October 2021 for the Eurozone.

“ Global economic recovery is continuing at a robust, but uneven pace. Global supply disruptions and regional labor shortages are creating significant inflationary pressures, which combined with a resurgence in COVID-19 cases are contributing to further downward revisions in real GDP growth. Financial market risk has risen recently due to a new COVID-19 variant, but the longer-term impact of Omicron is still a wild card.

Carla S. Nunes, CFA – Managing Director, Kroll

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