Cost of Capital in the Current Environment

Global Economic and Financial Market Trends

July 2022

Foreword

Carla S. Nunes, CFA

Managing Director
Kroll, LLC

Dear Readers,

We are pleased to launch the inaugural *Cost of Capital in the Current Environment – Global Economic and Financial Market Trends Report*. This report provides valuable insights into the current trends in global financial markets and economic indicators that impact valuations. They are used to support Kroll's guidance on global cost of capital inputs, which include our Recommended Equity Risk Premium and accompanying Normalized Risk-free Rate for the United States and the Eurozone (from a German investor perspective).

"In December 2021, the global economy appeared to be on a strong path to recovery from COVID-19, although with some unevenness across regions. **Since January 2022, global equity markets have become more volatile as investors try to ascertain the magnitude and speed at which central banks will raise interest rates, as they attempt to fight a surge in inflation that continues to surprise—reaching 30- to 40-year-highs in some countries.** Russia's recent war on Ukraine has placed further pressure on an already strained global supply chain, adding to inflationary pressures."

This report contains valuable insights such as trends on long-term inflation expectations, the balance sheet size of major central banks, stock market performance, along with related volatility measures, credit spreads, real GDP growth estimates for six regions, unemployment rates, and consumer and business confidence indicators.

We hope you find this report helpful in understanding how Kroll arrives at its cost of capital guidance. If you would like to receive further information or discuss any of the findings, please contact us.

Sincerely,
Carla Nunes

Global Cost of Capital Inputs

Data as of June 16, 2022

	Normalized Risk-Free Rate	Kroll-Recommended Equity Risk Premium
U.S. (in USD)	Higher of 3.5% or spot*	5.5%
Eurozone** (in EUR)	2.0%	5.5% to 6.0%

These are our latest equity risk premium recommendations for the U.S. and the Eurozone (from a German investor perspective), along with accompanying normalized risk-free rates.

- Normalized risk-free rates have increased for the U.S. (April 7, June 16) and Germany (May 17), as long-term inflation expectations keep rising due to a variety of factors (see next page).
- Equity risk premiums are still higher relative to our recommendations prior to the outbreak of COVID-19 in March 2020.

* 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.

** German normalized risk-free rate and Kroll Eurozone Equity Risk Premium 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: kroll.com/costofcapitalnavigator

Long-Term Inflation Expectations (Median)

Data as of May 17, 2022

Global supply chain disruptions and labor supply shortages stemming from the recovery from COVID-19, as well as pent-up consumer demand supported by generous fiscal stimulus programs, are all factors contributing to a rise in current inflation levels to 40-year highs in many countries. The Russia-Ukraine war has placed stress on an already strained global supply chain, adding further pressure to food and energy prices, with Germany and certain European countries being particularly vulnerable. Economists are also starting to raise their long-term inflation expectations, as a result.

U.S.

2.6%

Inflation estimates over the long term rose from 2.0% in June 2020 to 2.6% in May 2022.

Germany

2.6%

Long term inflation expectations have surged from 1.6% in June 2020 to 2.6% in May 2022.

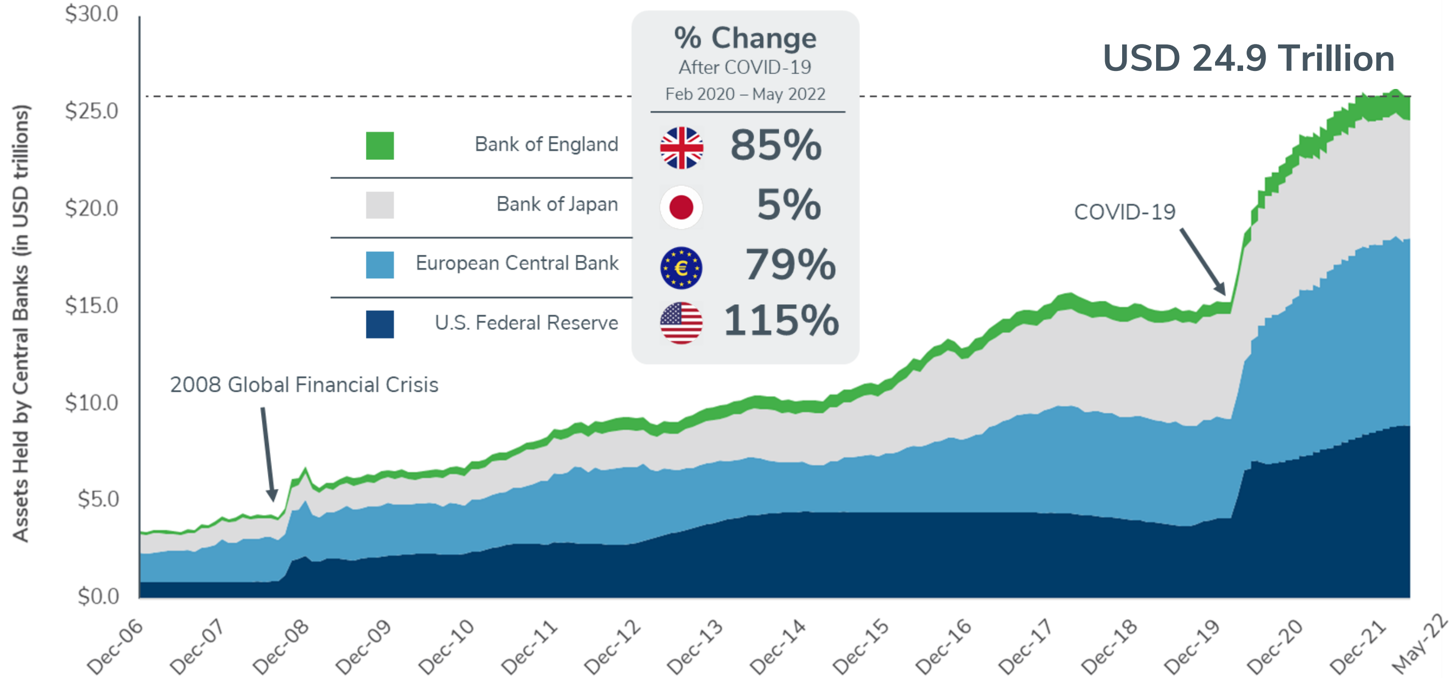
Sources of underlying U.S. data: *Blue Chip Economic Indicators; Blue Chip Financial Forecasts, Consensus Economics, IHS Markit, Federal Reserve Bank of Cleveland, Federal Reserve Bank of Philadelphia (Aruoba Term Structure of Inflation Expectations, Livingston Survey and Survey of Professional Forecasters),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

Sources of underlying German data: *Consensus Economics, Economist Intelligence Unit, IHS Markit, International Monetary Fund, Oxford Economics and PwC*

Total Assets Held by Major Central Banks Over Time

Data as of May 13, 2022

After COVID-19 was declared a pandemic, major central banks implemented quantitative easing (QE) policies that entailed massive purchases of securities at an unprecedented pace. The swelling size of their balance sheets, which primarily comprised of government debt securities, contributed to keeping interest rates at historically low levels in most developed markets. Recent inflationary pressures have finally led some central banks to raise policy interest rates and to begin discussions on how to unwind asset purchase programs and reduce the size of their balance sheets.



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

Global 10-Year Government Bond Yields

Data as of May 20, 2022

Long-term interest rates are still at relatively low levels in developed markets, as central banks' policies continue to exert some downward pressure on yields. However, the recent surge in inflation is starting to impact short- and long-term interest rates. German and Dutch 10-year yields are no longer negative as the European Central Bank discusses raising policy interest rates for the first time in 11 years and ending purchases under QE programs. Central banks in the U.S., Canada, Sweden and the UK have already begun their interest rate normalization process.

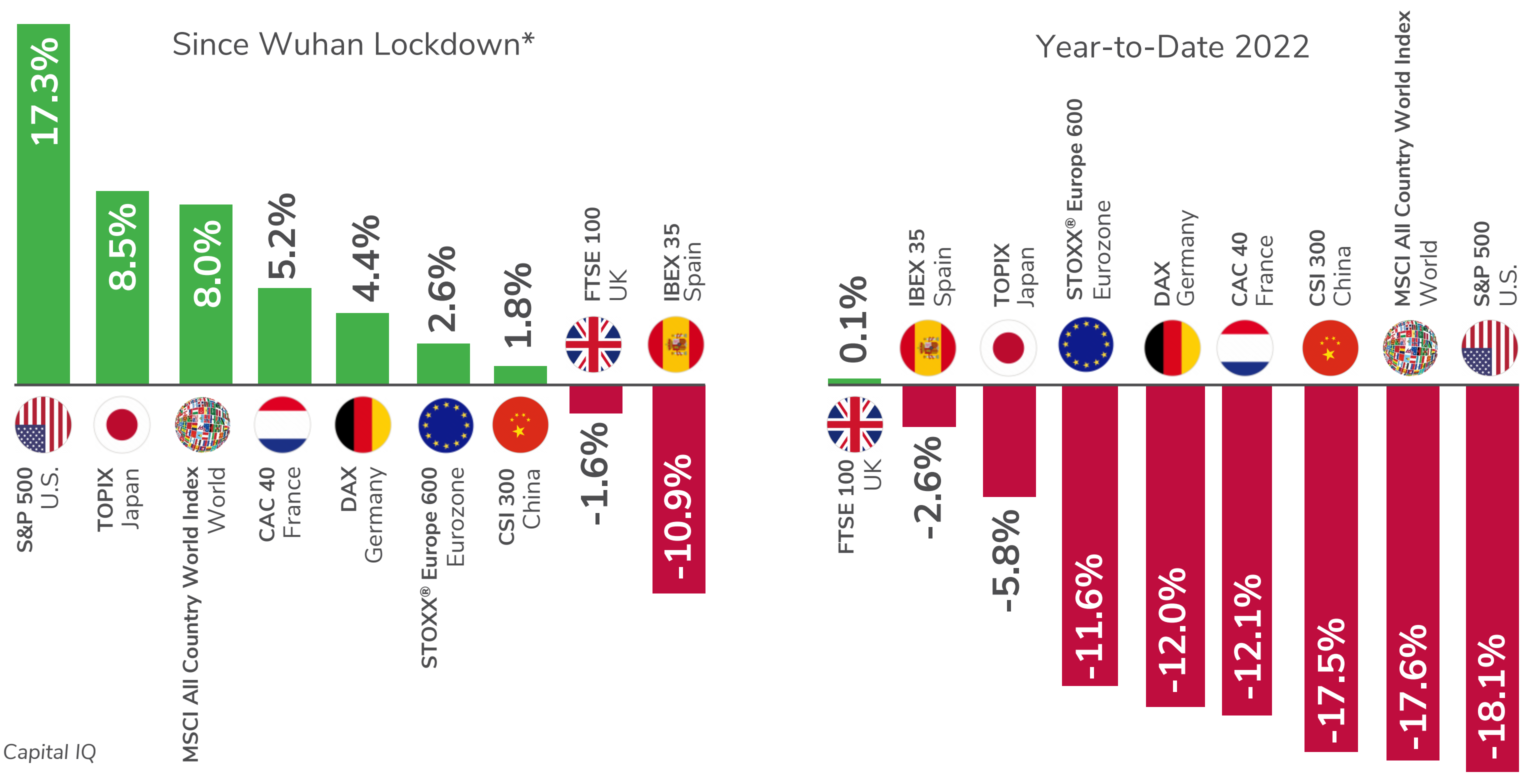
Americas	U.S. 2.78%	Canada 2.84%	Brazil 12.27%
Eurozone	Eurozone 1.03%	Germany 0.84%	Netherlands 1.24%
	France 1.44%	Spain 2.08%	Italy 2.96%
Europe – Other	UK 1.89%	Switzerland 0.69%	Sweden 1.69%
Asia	China 2.82%	India 7.36%	Japan 0.25%

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

Stock Market Performance

Data through May 20, 2022

The United States has emerged as the market with the best performance during and fastest recovery from the pandemic, relative to other major stock markets across the globe. However, the S&P 500 has been the worst-performing index since 2022 began, as investors try to ascertain the impact of rising interest rates on company (equity) values. The FTSE-100 in the UK is the only index not in negative territory YTD 2022, but the index has yet to recover to its pre-COVID-19 levels.



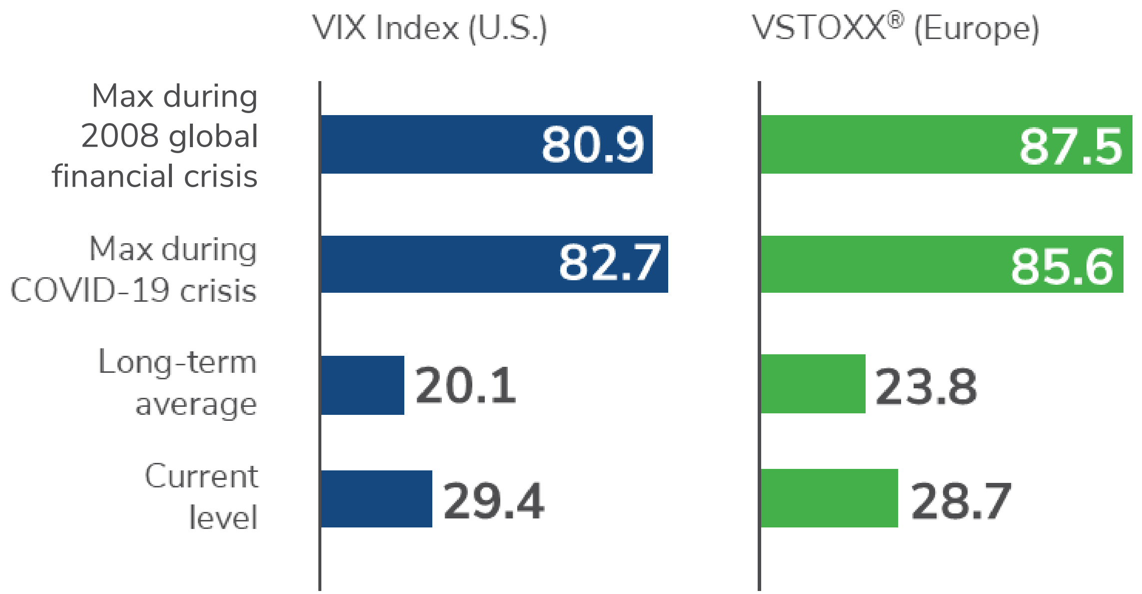
Source: *Capital IQ*

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

Global Market Volatility

Data as of May 20, 2022

U.S. and European financial markets have experienced volatility since the beginning of 2022, as increased uncertainty related to the impact of inflationary pressures on central banks' plans to raise interest rates and the Russia-Ukraine war lead to fears of stagflation.



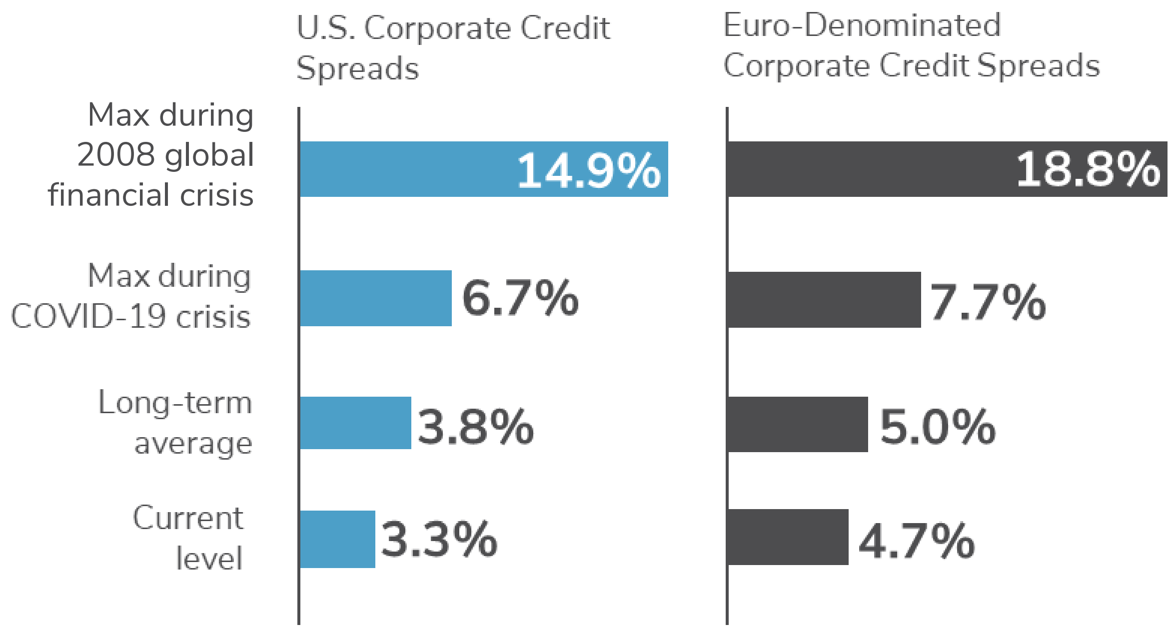
Sources: *Capital IQ, FRED® Economic Data, Morningstar Direct*

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 U.S. Corporate Index. Euro-denominated corporate credit spreads are 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 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 Credit Spreads

Data as of May 20, 2022

Thanks to the inclusion of corporate debt in the Federal Reserve Bank (Fed) and European Central Bank (ECB) asset purchase programs, as well as investor perception that these central banks will act as a lender of last resort, U.S. and European corporate debt spreads between high-yield and investment-grade bonds have stayed at historical lows, although that may soon change as interest rates begin to rise.



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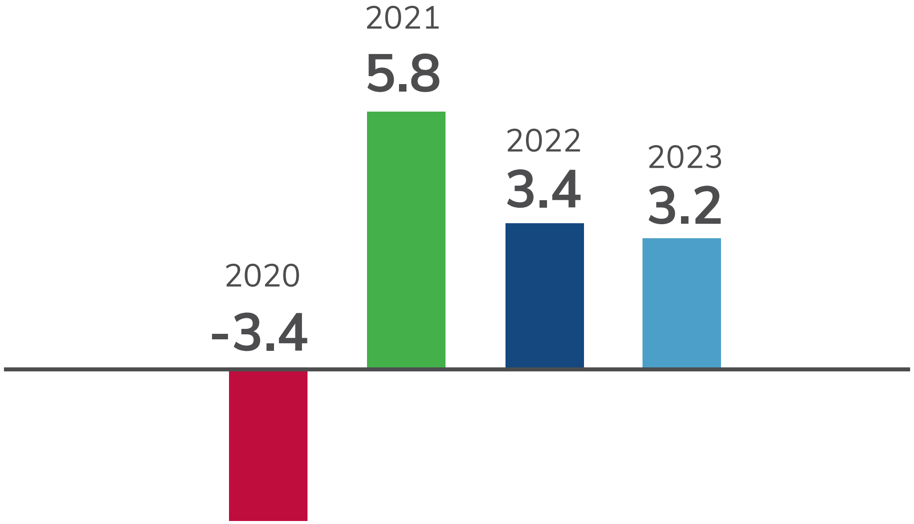
Real GDP Growth (%) Estimates (Median)

Data as of May 20, 2022

Global economic recovery from the pandemic is stalling. Economic growth projections for 2022 and 2023 have been significantly downgraded relative to December. The Russia-Ukraine war, global supply chain disruptions, inflationary pressures and a zero-COVID-19 policy in China are raising the specter of stagflation in some countries and regions.

WORLD



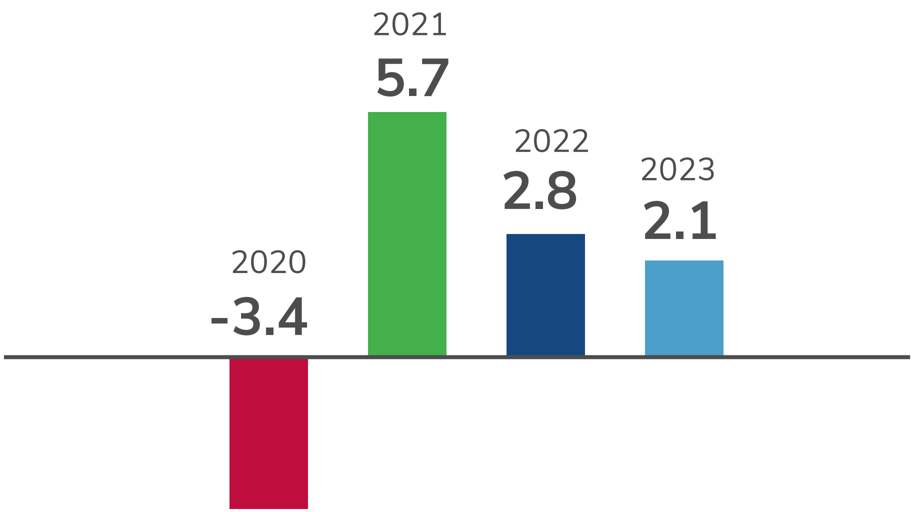
Sources: *OECD, International Monetary Fund, World Bank, Blue Chip Economic Indicators, Consensus Economics, Economist Intelligence Unit, Fitch Ratings, IHS Markit, Moody's Analytics, Oxford Economics and S&P Global Ratings*

Real GDP Growth (%) Estimates (Median)

Data as of May 20, 2022

U.S. economic growth projections for 2022 and 2023 have been revised down relative to December. While the labor market continues to be tight, global supply chain disruptions and inflationary pressures are weighing down the outlook. The Fed is embarking on an aggressive path of interest rate hikes in an attempt to tame inflation and cool down the economy. The Fed is attempting to achieve a soft landing, but an overshoot could potentially lead to a recession.

U.S.



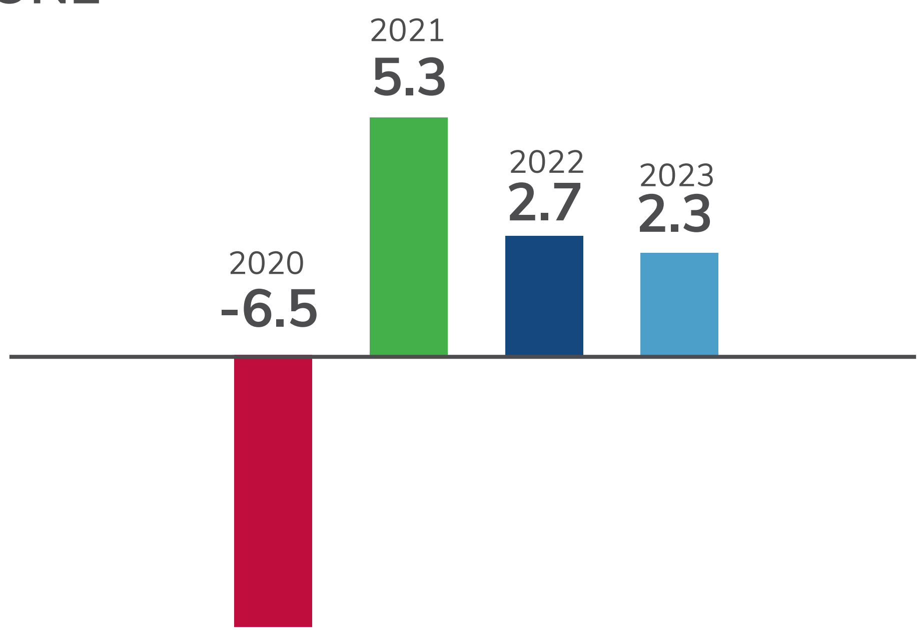
Sources: *OECD, International Monetary Fund, World Bank, Blue Chip Economic Indicators, Consensus Economics, Economist Intelligence Unit, Fitch Ratings, IHS Markit, Moody's Analytics, Oxford Economics and S&P Global Ratings*

Real GDP Growth (%) Estimates (Median)

Data as of May 20, 2022

After a strong recovery in 2021, the eurozone is now seeing a dramatic downward revision in growth expectations for 2022 and 2023, thanks in good part to the uncertainty created by the Russia-Ukraine war. Commodity price increases since the war began and the eurozone's significant energy dependence on Russia have led to record high inflation for the common-currency area, while weighing down on growth prospects.

EUROZONE



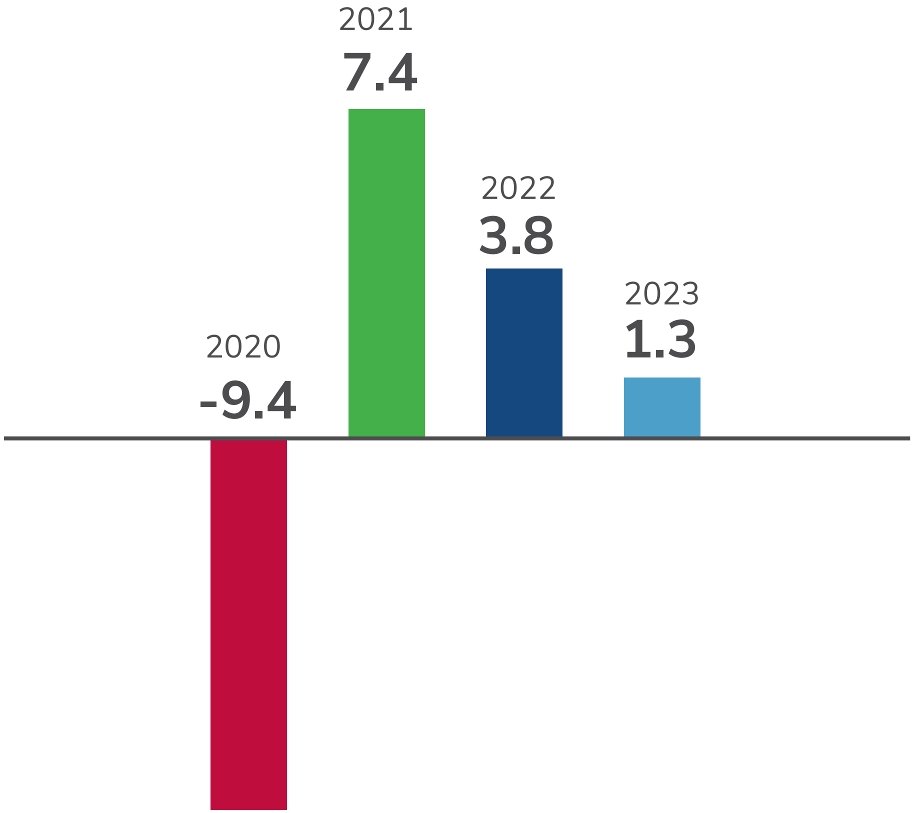
Sources: *OECD, International Monetary Fund, World Bank, Blue Chip Economic Indicators, Consensus Economics, Economist Intelligence Unit, Fitch Ratings, IHS Markit, Moody's Analytics, Oxford Economics and S&P Global Ratings*

Real GDP Growth (%) Estimates (Median)

Data as of May 20, 2022

Growth expectations for 2022 and 2023 have been downgraded as a surge in inflation lowers consumer purchasing power and dims the outlook for growth. The UK economy is vulnerable to spill-over effects from the Russia-Ukraine war, particularly due to rising energy prices and supply chain disruptions.

UK



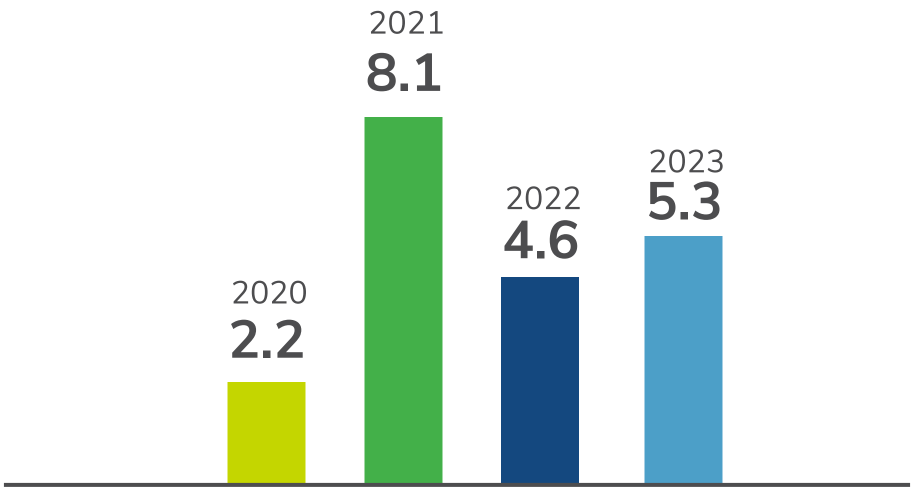
Sources: OECD, International Monetary Fund, World Bank, Blue Chip Economic Indicators, Consensus Economics, Economist Intelligence Unit, Fitch Ratings, IHS Markit, Moody's Analytics, Oxford Economics and S&P Global Ratings

Real GDP Growth (%) Estimates (Median)

Data as of May 20, 2022

Growth expectations for 2022 have been downgraded as a resurgence of COVID-19 cases and China's zero-COVID-19 policy have translated into lockdowns in many cities and ports. These measures have weighed on economic activity and have contributed to further bottlenecks in global supply chains.

CHINA

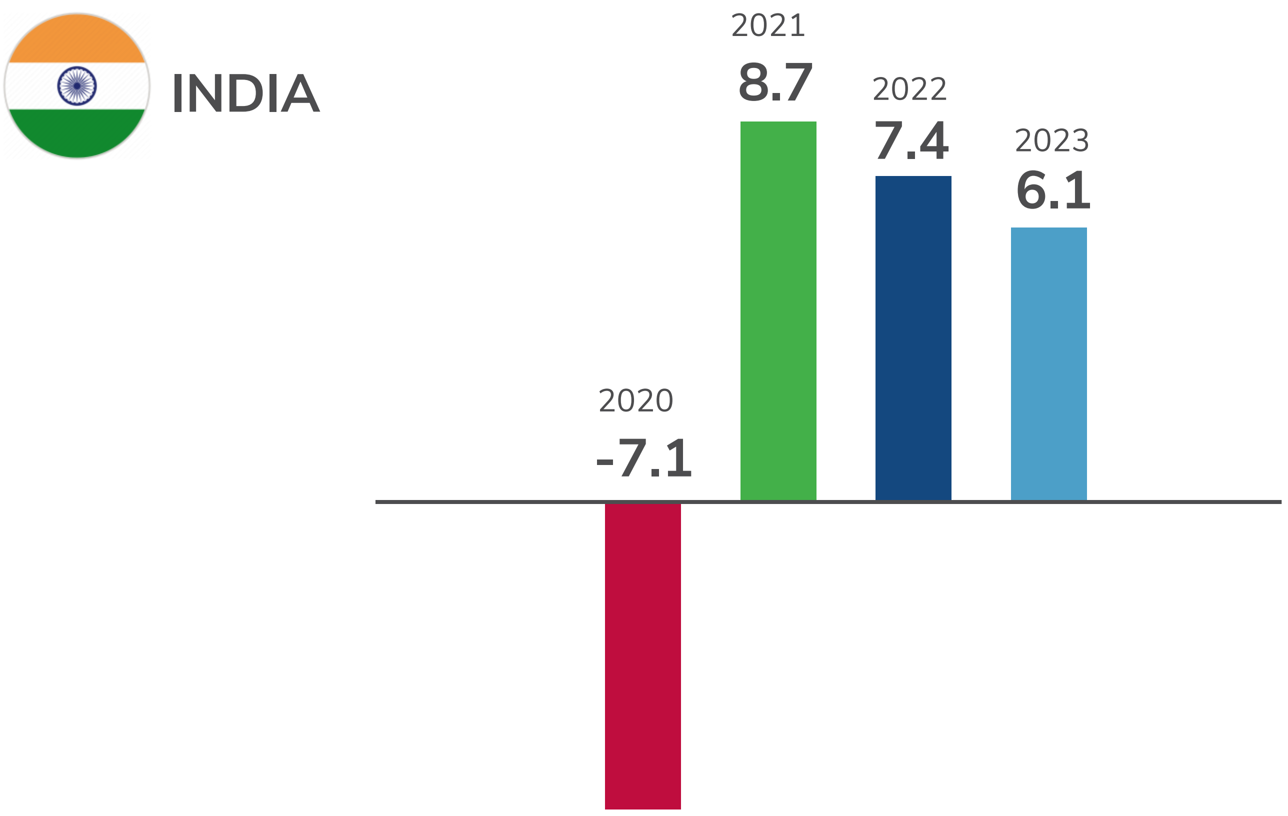


Sources: *OECD, International Monetary Fund, World Bank, Blue Chip Economic Indicators, Consensus Economics, Economist Intelligence Unit, Fitch Ratings, IHS Markit, Moody's Analytics, Oxford Economics and S&P Global Ratings*

Real GDP Growth (%) Estimates (Median)

Data as of May 20, 2022

India saw an impressive rebound from the pandemic in 2021. However, growth expectations for 2022 have been downgraded from earlier in the year as rising global food and energy prices impact the India economy negatively.



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

U.S. vs. Eurozone Unemployment Rate

Data as of April 2022

The U.S. unemployment rate is now lower than in March 2020, the time when COVID-19 was declared a pandemic. The U.S. is still seeing pockets of labor shortages in a variety of industries. The eurozone's unemployment rate is now lower than the level registered in March 2020.

2020	U.S.	Eurozone
March	4.4%	7.1%
June	11.0%	8.0%
September	7.9%	8.7%
December	6.7%	8.1%
2021		
March	6.0%	8.1%
June	5.9%	7.8%
September	5.2%	7.6%
December	4.2%	7.0%
2022		
March	3.6%	6.8%
Latest available*	3.6%	6.8%

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

* Data through April 2022 for the U.S. and March 2022 for the eurozone.

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

Data as of May 2022

Consumer sentiment declined dramatically in the U.S. and eurozone, with a rise in inflation creating some anxiety about the future. U.S. consumer confidence is now lower than at the height of the COVID-19 crisis, while in the eurozone confidence is at its lowest level since April 2020. In contrast, business confidence in the U.S. and eurozone is now higher than it was prior to the pandemic, but the outlook may soon darken.

		Pre-COVID-19 (February 2020)		Post-COVID-19 (April 2022)	Long-Term Avg.
Consumer Sentiment		101.0	↓	59.1	(1952–2022) 86.2
		107.4	↓	75.9	(1985–2022) 100.0
Business Confidence		99.0	↑	100.5	(1950–2022) 100.0
		99.4	↑	119.9	(1985–2022) 100.0

Sources: *Michigan University's Index of Consumer Sentiment (updated through May 2022), 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 was applied to the Eurozone Consumer Confidence and Business Climate Indicator series.]

For more information, please contact:

Carla S. Nunes, CFA
Managing Director
Kroll, LLC

carla.nunes@kroll.com

Kevin Madden
Director
Kroll, LLC

kevin.madden@kroll.com

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