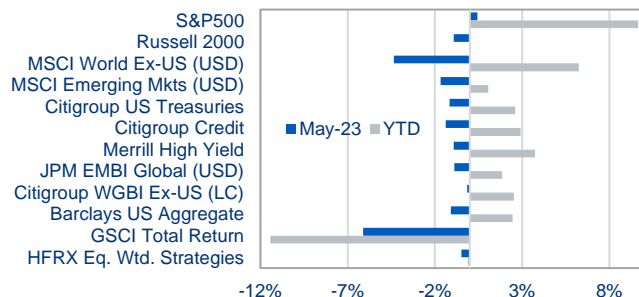


Global Market Review

The narrowly based U.S. equity market rally continued in May. The S&P 500 generated a small gain for the month. A handful of large tech firms, especially those thought likely to reap the benefits of artificial intelligence (AI), accounted for virtually all of the market's rise. Outside of the U.S., advanced economy equity markets fell sharply, weighed down by concerns over slowing economic growth and the prospect of continued monetary tightening to fight inflation. Emerging market equities also declined in May, but more moderately, notwithstanding the nearly 9% plunge in Chinese equities. U.S. and non-U.S. bond markets also lost ground as yields rose and credit spreads widened. The increase in U.S. Treasury yields was led by the front end of the yield curve, leading to its deepening inversion. The U.S. dollar appreciated against most major advanced and emerging economy currencies. Signs of slowing global economic growth sent commodity prices, and especially crude oil prices, sharply lower.

Performance of Major Market Indices

Sources: S&P, MSCI, FTSE Russell, Barclays, Citigroup, Bank of America Merrill Lynch, J.P. Morgan, HFR, Bloomberg.



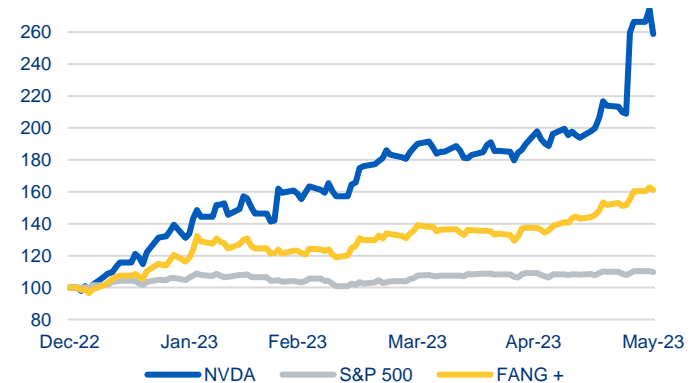
Most equity and bond markets fall.

Artificial Intelligence, Artificial Rally?

After much sound and fury, the debt ceiling "crisis" was averted. The market shrugged, focusing instead on the prospects for economic growth, inflation, and the transformative potential of AI. The S&P 500 gained 0.4% in May, bringing its return so far this year to 9.6%. The foundation of the S&P 500's advance has been especially narrow, and largely driven by feverish speculation over AI. The large cap tech stocks comprising the FANG+ index outperformed the broader market by a wide margin and accounted for the bulk of the market's gains (Exhibit 1). The share price of Nvidia (NVDA), a firm seen as a leader in the development of AI applications, has increased by a factor of 2.6 times since the beginning of the year. This dynamic has contributed to further market concentration. The market cap of the 10 largest firms in the S&P 500 relative to the total is at high levels, well above those seen during the 2000-01 tech bubble.

Exhibit 1. Large Cap Tech Shares Dominate Market Gains

Source: Bloomberg. Index. January 1, 2023 = 100.



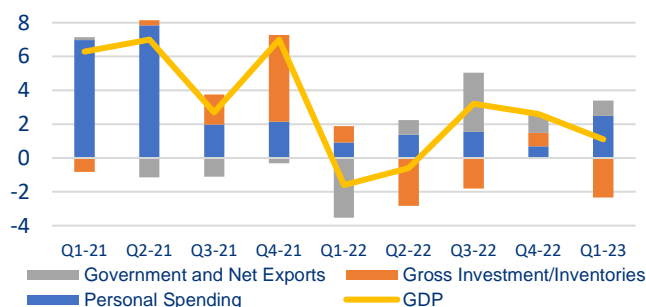
Waning Global Economic Growth

Economic growth is slowing across advanced and emerging economies. In the U.S., first quarter GDP growth slowed to an annualized rate of 1.1%, from 2.6% in the fourth quarter of 2022. Household consumption was the main driver of GDP growth, while other components of GDP were weaker (Exhibit 2). There are mounting signs that the main factors supporting economic activity and especially consumption are starting to falter. Real income growth has slowed significantly, reducing the wherewithal of households to spend. Compounding this

effect, the large stock of excess savings built during the pandemic is rapidly being depleted and is forecast by the Fed to be completely exhausted in the fourth quarter. The U.S. banking mini-crisis has led to tighter lending standards, declining bank deposits, and a fall in the money supply. The demand for loans has also declined as firms scale back investments and commercial real estate activity falls. In the financial markets, interest rate volatility is high and the path for monetary policy highly uncertain, further discouraging spending by firms and households.

Exhibit 2. Consumption Drives U.S. GDP Growth

Source: FRED. Growth rates in percent.



Economies outside of the U.S. are also slumping. The German economy fell into recession in the first quarter as households cut spending in the face of high prices for food and energy. Other countries in the EU are also showing signs of contraction, with the manufacturing sector hard hit by declining new orders. The U.K. economy remains hobbled by particularly high inflation and the morass of Brexit. Coincident indicators for Chinese economic activity also signal slowing growth across the manufacturing and service sectors. China's weak and heavily indebted property market and overexposed financial sector are adding to these contractionary forces.

Global Equity Markets Fall

The MSCI World ex-U.S. index of advanced equity markets fell 4.4% in May but remains up 6.2% in the year to date. European markets suffered especially large losses, falling 5.9% for the month. Emerging equity markets lost 1.7% in May, reducing their gain for the year to about 1%. Chinese equities lost nearly 9% in May and are down 9.1% so far this year, reflecting concerns over slowing output and excessive leverage in the property market and financial sector (Exhibit 3).

Exhibit 3. Chinese Equity Market Plunge Weighs on EM

Source: Bloomberg. Index. January 1, 2023 = 100.



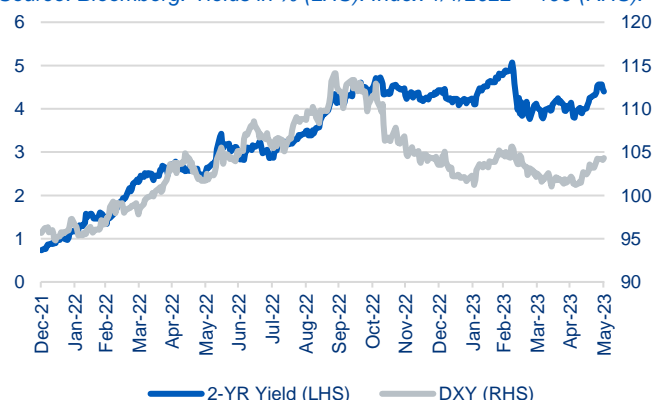
Central Banks Continue to Tighten

Monetary conditions tightened in May. Major central banks, including the Fed, the ECB, and the Bank of England raised rates in May as inflation, though slowing, remained well above policy targets. The Fed raised the Fed Funds rates for the 10th time in succession, bringing it to a range of 5-5¼%, a 16-year high. U.S. Treasury yields rose across the curve, with the largest increases concentrated at the short end. The yield curve inversion deepened and continued to signal an impending recession. The increase in Treasury yields reflected higher real yields as inflation expectations remained stable. With these moves, the broad U.S. Treasury index fell by 1.2% in May but remains up 2.6% so far this year. Credit spreads widened, contributing to price declines on bonds in the investment grade and high yield sectors.

The 2-year U.S. Treasury yield has traditionally been particularly sensitive to changes in Fed policy, making it a closely watched market indicator. It rose steadily last year and has moved sideways so far in 2023. The widening yield differential between the U.S. and other advanced economies since the Fed began tightening has contributed to a tendency for the U.S. dollar to appreciate against most other currencies, closely tracking movements in the 2-year yield (Exhibit 4).

Exhibit 4. U.S. 2Y Yield and Dollar Move Together

Source: Bloomberg. Yields in % (LHS). Index 1/1/2022 = 100 (RHS).



Outside of the U.S., the WGBI ex-U.S. index of advanced sovereign bonds lost 2.9% in May, reducing its return for the year to 1%. The EMBI index of emerging market sovereign bonds fell 0.9% in May but remains up 1.8% year to date.

Performance of Major Market Indices through 5-31-2023

Sources: MSCI, FTSE, Barclays, Citigroup, Bank of America Merrill Lynch, J.P. Morgan, S&P GSCI, HFR, Bloomberg.

	1-Month	QTD	YTD	1-Year	3-Year	5-Year
S&P500	0.4%	2.0%	9.6%	2.9%	12.9%	11.0%
Russell 2000	-0.9%	-2.7%	0.0%	-4.7%	9.2%	2.7%
MSCI World Ex-US (USD)	-4.4%	-1.6%	6.2%	1.5%	8.8%	3.4%
MSCI Emerging Mkts (USD)	-1.7%	-2.8%	1.1%	-8.5%	3.5%	-0.7%
Citigroup US Treasuries	-1.2%	-0.6%	2.6%	-2.3%	-4.5%	0.6%
Citigroup Credit	-1.4%	-0.5%	2.9%	-1.5%	-2.9%	1.5%
Merrill High Yield	-0.9%	0.0%	3.7%	-0.2%	3.0%	2.9%
JPM EMBI Global (USD)	-0.9%	-0.4%	1.8%	-1.0%	-2.4%	0.2%
Citigroup WGBI Ex-US (LC)	-0.1%	-0.1%	2.5%	-4.6%	-4.6%	-1.3%
Barclays US Aggregate	-1.1%	-0.5%	2.5%	-2.1%	-3.6%	0.8%
GSCI Total Return	-6.1%	-6.8%	-11.4%	-24.1%	25.4%	2.2%
HFRX Eq. Wtd. Strategies	-0.5%	-0.3%	-0.1%	-0.8%	2.4%	1.0%