Principal Global Investors

Morley Capital Management

Economic and market review

Principal Global Asset Allocation Viewpoints

As of March 31, 2022

Morley Capital Management (Morley), a n investment management team within Principal Global Fixed Income.

Key themes for Q2 2022

- **Global economic activity to be challenged, but recession unlikely in 2022.**
  Soaring commodity prices are inflicting a worrying stagflationary shock, with Europe appearing as the most exposed. The strong labor market, excess savings cushions and solid balance sheets should limit the downside impact on activity.

- **Price pressures are building and broadening, U.S. inflation peak still several months away.**
  Inflation pressures are spreading to stickier items, raising concerns about a potential wage/price spiral and risking a de-anchoring in inflation expectations. The Federal Reserve (Fed) has rarely waited so long before hiking rates.

- **The Fed will tighten policy aggressively, rates will move into restrictive territory in 2023.**
  Policy rates are set to rise to above 2% by year-end, while balance sheet reduction will be equivalent to another hike this year. While the economy can digest these hikes, next year will be more challenging. Rising recession risk will put downward pressure on the long end of the yield curve.

- **The yield curve bear flattened significantly leading to the worst fixed income returns in decades.**
  Negative total returns portend outflows from retail investors in bond funds.

Bonds recorded their worst quarter in 41 years

The S&P 500 Index returned -4.6% for Q1 2022, but still outperformed the Bloomberg U.S. Agg. Index by 1.33%

	3-months	YTD/1-year	3-year	5-year	10-year
Fixed Income					
ICE BofA U.S. Treasury Bill 3-month Index	0.0%	0.1%	0.8%	1.1%	0.6%
Bloomberg Aggregate Bond Index	-5.9%	-4.2%	1.7%	2.1%	2.2%
Bloomberg U.S. Corp High Yld 2% Issuer Capped Index	-4.8%	-0.7%	4.6%	4.7%	5.7%
Bloomberg Long-Term Govt/Credit Index	-6.3%	-3.9%	2.1%	2.4%	2.5%
U.S. Equities					
Russell 1000 Value Index	-0.7%	11.7%	13.0%	10.3%	11.7%
S&P 500 Index	-4.6%	15.6%	18.9%	16.0%	14.6%
Russell 1000 Growth Index	-9.0%	15.0%	23.6%	20.9%	17.0%
Russell Midcap Index	-5.7%	6.9%	14.9%	12.6%	12.9%
Russell 2000 Index	-7.5%	-5.8%	11.7%	9.7%	11.0%
Non-U.S. Equities					
MSCI EAFE NTR Index	-5.9%	1.2%	7.8%	6.7%	6.3%
MSCI ACWI ex-USA Index	-5.4%	-1.5%	7.5%	6.8%	5.6%
MSCI Emerging Markets Index	-7.0%	-11.4%	4.9%	6.0%	3.4%
Other					
MSCI U.S. REIT Index	-4.3%	25.0%	9.9%	8.4%	8.4%
S&P GSCI® Index	33.1%	64.6%	13.4%	10.0%	-3.3%
U.S. Dollar Index	1.6%	3.4%	-0.2%	-0.5%	2.0%

As of 3/31/2022
Source: FactSet. Returns are annualized. **Past performance does not guarantee future results**. Index performance information reflects no deduction for fees, expenses, or taxes. Indices are unmanaged and individuals cannot invest directly in an index. See Important Information for index descriptions.

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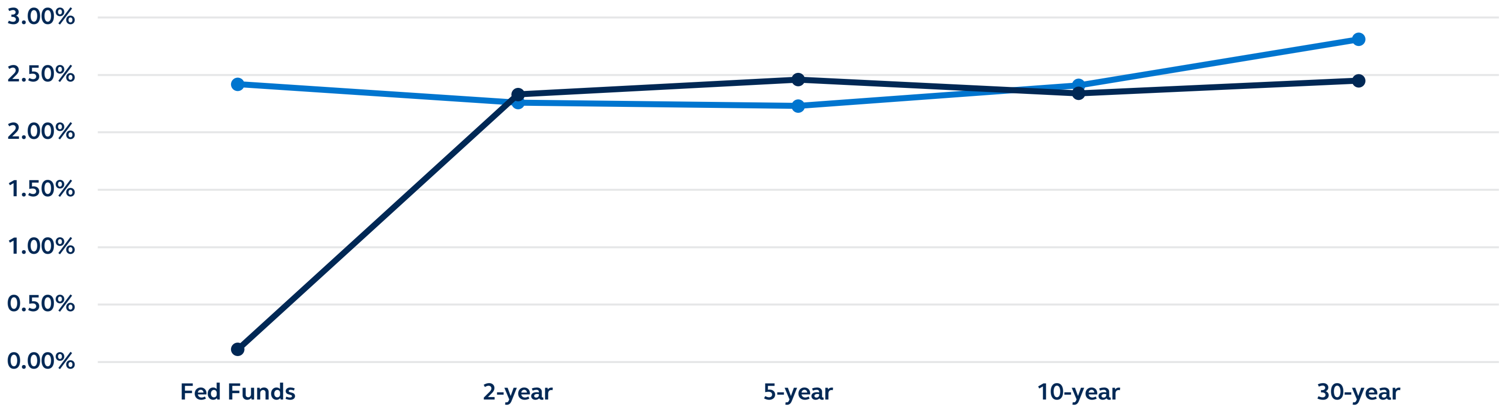
The history of interest rates

How have interest rates changed in recent years?

	Mar. 31, 2019	Mar. 31, 2020	Mar. 31, 2021	Mar. 31, 2022
2-year	2.26	0.25	0.16	2.33
5-year	2.23	0.38	0.94	2.46
10-year	2.41	0.67	1.74	2.34
2- to 10-year spread	0.15	0.42	1.58	0.00
30-year	2.81	1.32	2.41	2.45



	Fed Funds	2-year	5-year	10-year	30-year
Mar. 31, 2022	0.11%	2.33%	2.46%	2.34%	2.45%
Mar. 29, 2019	2.42%	2.26%	2.23%	2.41%	2.81%

Source: FactSet. **Past performance does not guarantee future results.**

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ASSET CLASS RETURNS AS OF MARCH 31, 2022

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD
Best	Government Treasury 29.93%	Emerging Markets 18.23%	Small Cap 38.82%	Real Estate 31.78%	Real Estate 4.23%	Small Cap 21.31%	Emerging Markets 37.28%	Cash 1.86%	Large Cap 31.49%	Small Cap 19.96%	Real Estate 46.18%	Commodities 25.55%
	Real Estate 9.24%	Mid Cap 17.88%	Mid Cap 33.50%	Government Treasury 25.07%	Large Cap 1.38%	Mid Cap 20.74%	Intl Stocks 25.03%	Intermediate Bond 0.01%	Mid Cap 26.20%	Large Cap 18.40%	Large Cap 28.71%	Cash 0.03%
	Intermediate Bond 7.84%	Real Estate 17.59%	Large Cap 32.39%	Large Cap 13.69%	Asset Allocation 1.28%	High Yield 17.34%	Large Cap 21.83%	Intl Bonds -1.66%	Real Estate 25.76%	Emerging Markets 18.31 %	Commodities 27.11%	Real Estate -3.87%
	Intl Bonds 5.93%	Intl Stocks 17.32%	Intl Stocks 22.78%	Asset Allocation 10.62%	Intermediate Bond 0.55%	Large Cap 11.96%	Mid Cap 16.24%	Government Treasury -1.84%	Small Cap 25.53%	Government Treasury 17.70%	Mid Cap 24.76%	High Yield -4.53%
	Asset Allocation 4.69%	Small Cap 16.35%	Asset Allocation 17.56%	Mid Cap 9.77%	Cash 0.03%	Commodities 11.77%	Small Cap 14.65%	High Yield -2.26%	Asset Allocation 22.18%	Asset Allocation 14.73%	Asset Allocation 15.86%	Large Cap -4.60%
	High Yield 4.50%	Large Cap 16.00%	High Yield 7.38%	Intermediate Bond 5.97%	Intl Stocks -0.81%	Emerging Markets 11.19%	Asset Allocation 14.21%	Asset Allocation -2.35%	Intl Stocks 22.01%	Mid Cap 13.66%	Small Cap 14.82%	Mid Cap -4.88%
	Large Cap 2.11%	High Yield 15.44%	Real Estate 1.86%	Small Cap 4.89%	Government Treasury -1.21%	Asset Allocation 8.31%	Intl Bonds 9.92%	Large Cap -4.38%	Emerging Markets 18.44 %	Intl Bonds 10.52%	Intl Stocks 11.26%	Asset Allocation -5.07%
	Cash 0.06%	Asset Allocation 11.31%	Cash 0.06%	High Yield 2.44%	Mid Cap -2.18%	Real Estate 7.24%	Government Treasury 8.53%	Real Estate -4.84%	Government Treasury 14.83%	Intl Stocks 7.82%	High Yield 5.29%	Intl Stocks -5.91%
	Mid Cap -1.73%	Intermediate Bond 4.21%	Intermediate Bond -2.02%	Cash 0.02%	Small Cap -4.41%	Intermediate Bond 2.65%	High Yield 7.48%	Small Cap -11.01%	High Yield 14.40%	Intermediate Bond 7.51%	Cash 0.05%	Intermediate Bond -5.93%
	Small Cap -4.18%	Government Treasury 3.56%	Emerging Markets -2.60%	Emerging Markets -2.19%	High Yield -4.55%	Intl Bonds 1.86%	Real Estate 4.18%	Mid Cap -11.08%	Intermediate Bond 8.72%	High Yield 6.20%	Intermediate Bond -1.54%	Emerging Markets -6.97%
	Intl Stocks -12.14%	Intl Bonds 0.85%	Intl Bonds -5.06%	Intl Bonds -2.53%	Intl Bonds -4.84%	Government Treasury 1.33%	Intermediate Bond 3.54%	Commodities -11.25%	Commodities 7.69%	Cash 0.58%	Emerging Markets -2.54%	Intl Bonds -7.13%
	Commodities -13.32%	Cash 0.09%	Commodities -9.52%	Intl Stocks -4.90%	Emerging Markets -14.92%	Intl Stocks 1.00%	Commodities 1.70%	Intl Stocks -13.79%	Intl Bonds 5.23%	Commodities -3.12%	Government Treasury -4.65%	Small Cap -7.53%
Worst	Emerging Markets -18.42%	Commodities -1.06%	Government Treasury -12.66%	Commodities -17.01%	Commodities -24.66%	Cash 0.27%	Cash 0.84%	Emerging Markets -14.58%	Cash 2.25%	Real Estate -7.90%	Intl Bonds -9.51%	Government Treasury -10.58%

The returns above reflect performance of certain indexes as defined below. This information is general in nature and is not intended to be reflective of any specific plan. Cash- FTSE 3 month T-bill ,Government Treasury-Bloomberg Long Treasury, Commodities-Bloomberg Commodity Idx, Intermediate Bond-Bloomberg US Agg Bond Idx, High Yield Bond-ICE BofAML High Yield Idx, Intl Bonds-JPMorgan GBI Global ex U.S., Asset Allocation-portfolio assumes the following weights: 60% S&P 500 and 40% Bloomberg US Agg, Large Cap-S&P 500, Mid Cap - S&P Midcap 400, Small Cap-Russell 2000, Intl Stocks-MSCI EAFE (net), Emerging Markets-MSCI EM (net), Real Estate-Wilshire U.S. REIT.

Past performance does not guarantee future results

One growth headwind ends as another begins

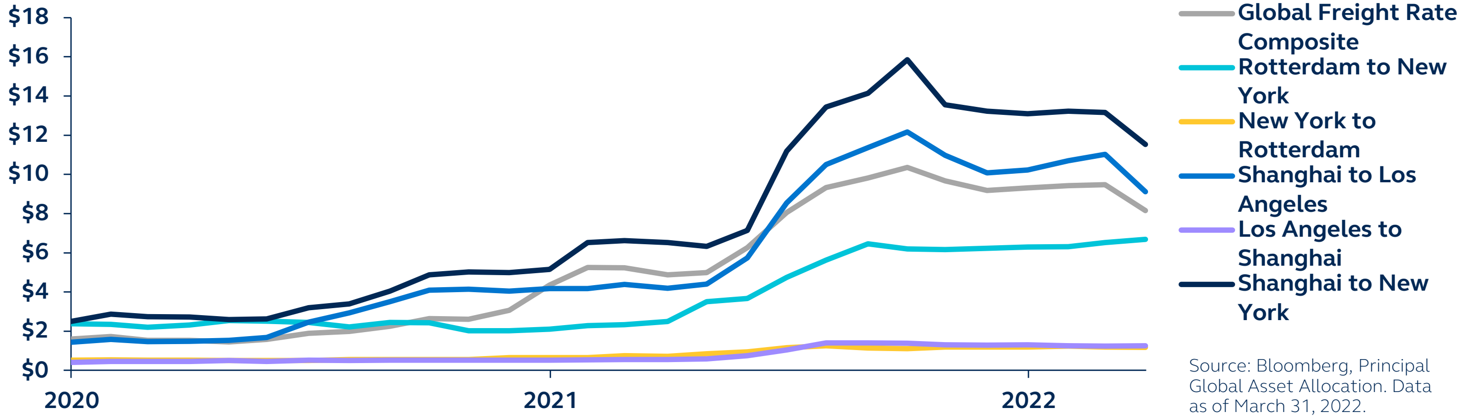
Pandemic headwinds have faded. Except for some Asian nations which have maintained their "zero-COVID" policies and are struggling with rising case counts, most countries have eased restrictions. In turn, this has eased supply chain bottlenecks, enabling a rise in inventories and production. After re-intensifying through the Omicron wave, freight rates finally show signs of topping, and ISM input price and delivery times have been on a downward trajectory.

While global economic activity numbers in the first half of Q1 show robust underlying growth as Omicron drags faded, a new headwind has formed. The Russia-Ukraine conflict has not only impacted sentiment but has sent global commodity prices soaring. Higher oil prices will likely introduce a drag on real disposable income that will weigh on spending in 2022, while there could be additional downside risks to economic growth if shortages of key metals once again constrain global production. Nonetheless, excess savings cushions and potential government intervention to shield consumers from the energy spike mean that recession is unlikely in 2022.

The Russia-Ukraine conflict has driven up commodity prices, threatening a renewed slowdown in global growth. Yet, excess savings and government support should ward off recession this year.

Global freight rates

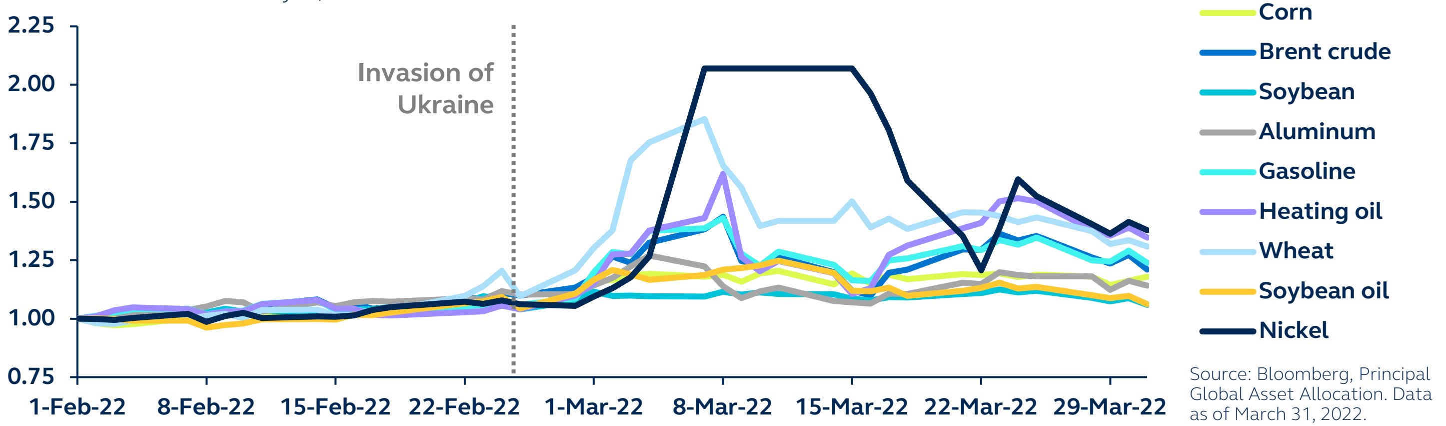
Rates per 40-foot box, thousands, January 2020 – present



Source: Bloomberg, Principal Global Asset Allocation. Data as of March 31, 2022.

Commodity futures

Rebased to 1 at February 1, 2022



Source: Bloomberg, Principal Global Asset Allocation. Data as of March 31, 2022.

Energy shock: U.S. less exposed than Europe

Although the trade impact on both the U.S. and Europe will be limited (Russia accounts for less than 1% of their exports), Europe is significantly more exposed to the conflict in Ukraine. As a net energy exporter and given declining oil intensity, the U.S. is less vulnerable to a rise in oil and gas prices. Europe, by contrast, is a net energy importer and, what's more, over 40% of EU gas and 20% of EU oil originates from Russia. Elevated energy prices significantly disrupt Europe's growth outlook.

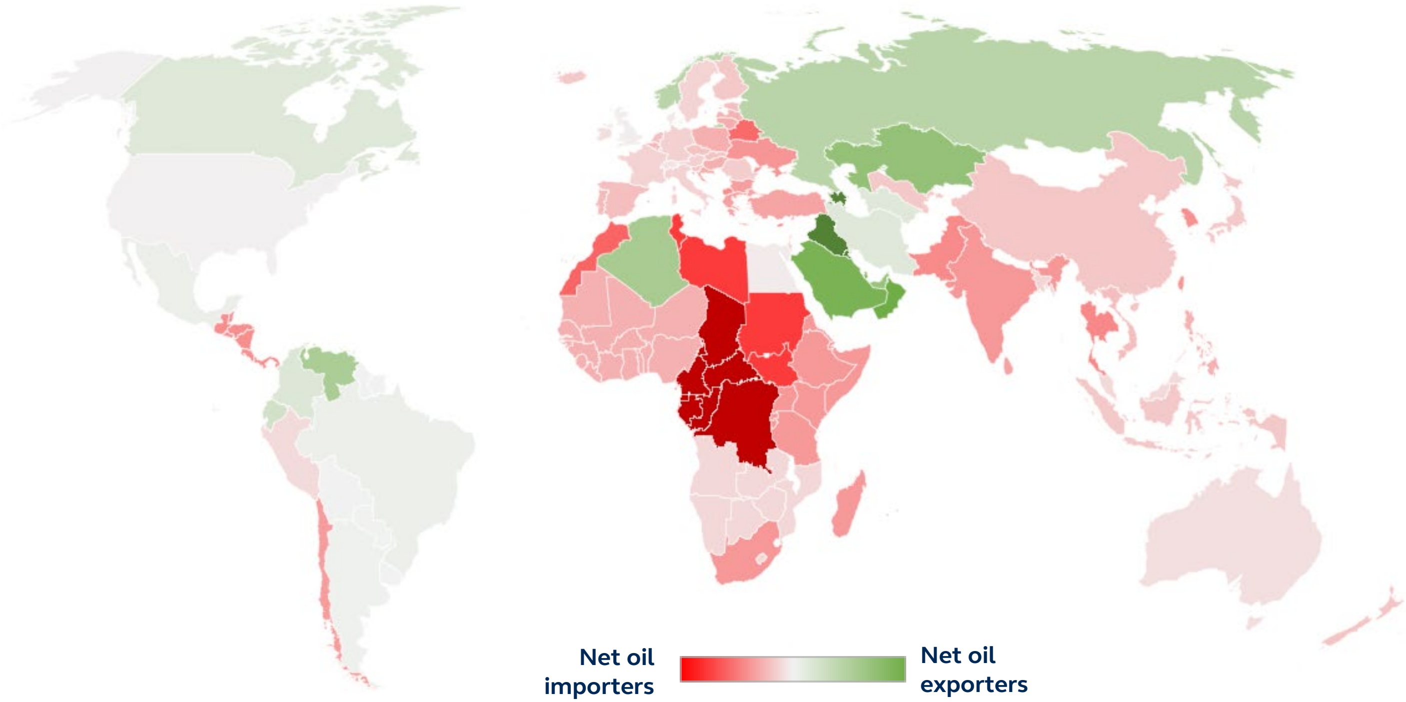
A cut in Russia's energy supply could also hamper Europe's prospects. In that scenario, Europe would need to cut its energy consumption in return, likely involving industry rationing and therefore, a potentially crippling blow to the European economy.

Europe's exposure to, and reliance on, Russian energy makes for a potentially very negative economic backdrop for the region. In the U.S., as energy producers will benefit from an increase in prices, inspiring a rise in capex, the overall economic impact is relatively minor.

Europe is significantly more vulnerable to the Russia-Ukraine conflict than the U.S. Globally, however, safeguarding portfolio value against this energy shock will be imperative.

Net oil importers and exporters

Oil production minus consumption as a percentage of latest GDP



Source: BP, International Monetary Fund, World Bank, Principal Global Asset Allocation. Countries without data are omitted. Data as of March 31, 2022.

Timeline for elevated inflation keeps extending

There's growing recognition that global inflation will remain elevated throughout 2022. While last year's move higher largely reflected supply chain constraints, inflation pressures have now broadened and, importantly, to typically stickier items. Furthermore, higher energy prices and upward pressures on food prices look set to generate a material further inflation shock.

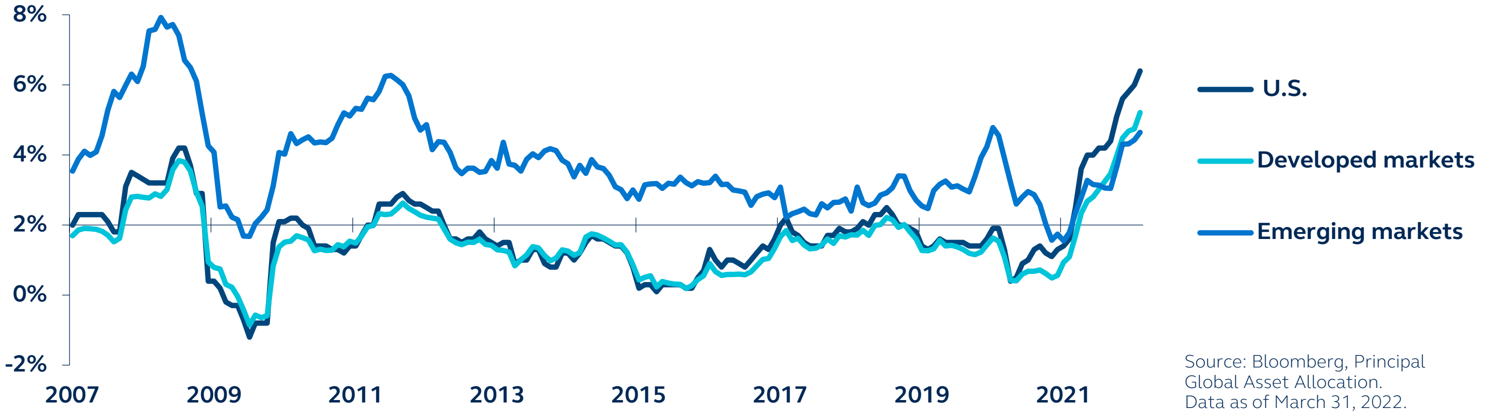
For central banks, the key concern lies in the risk of a wage/price spiral. In the U.S. and parts of Europe, while labor demand is strong, labor participation has been depressed. The move toward historically tight labor markets risks a more significant resurgence in labor bargaining power.

However, labor participation should rise over the coming months, relieving some wage pressure. While the poorest cohort of households received a cash influx in 2020, as time and inflation have eroded that savings buffer, their real cash holdings are almost back to pre-pandemic levels. Since household budget constraints will force much of that demographic back into the labor force, headline wage growth has likely peaked.

U.S. inflation should fall from current peak levels by end-2022. A wage/price spiral is a key risk, but rising labor participation as excess savings dry up, should cap wage growth.

PGAA GDP-weighted inflation

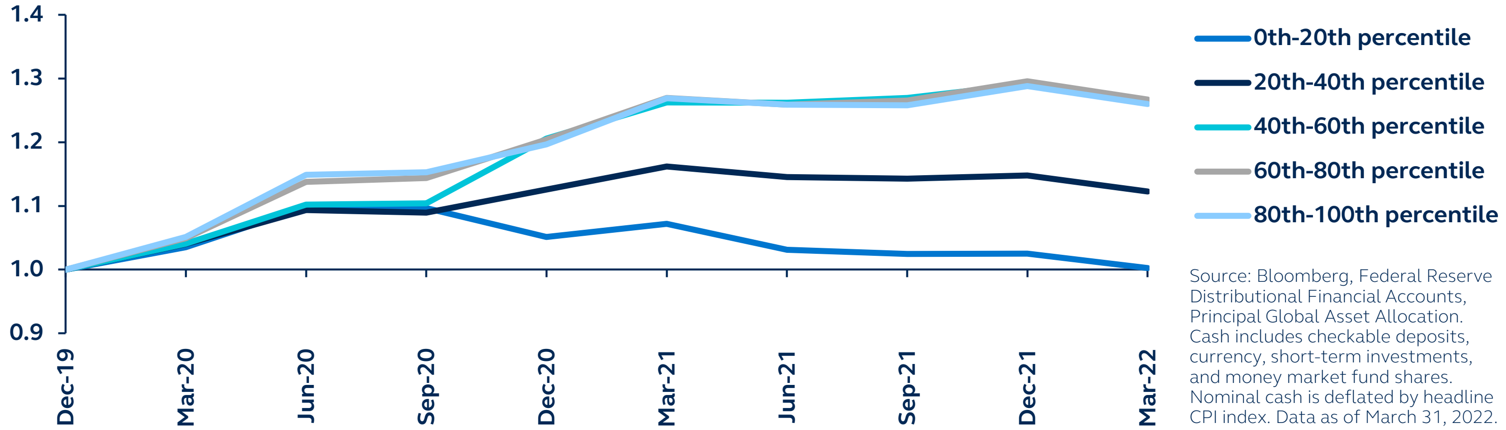
January 2007 – present



Source: Bloomberg, Principal Global Asset Allocation. Data as of March 31, 2022.

Real cash holdings by household net worth

Level, rebased to 1 at December 31, 2019



Source: Bloomberg, Federal Reserve Distributional Financial Accounts, Principal Global Asset Allocation. Cash includes checkable deposits, currency, short-term investments, and money market fund shares. Nominal cash is deflated by headline CPI index. Data as of March 31, 2022.

Central bank tightening: Sprinting to save credibility

Global growth is slowing, meanwhile, inflation is near record highs and rising. Central banks have a tightrope to walk. For the Fed, though, the priority is clear: With inflation almost quadruple the 2% target, they're desperately behind the inflation curve and need to tighten aggressively. Except for 1980, inflation has never been so high at the point of Fed lift-off as it is now—and in the 1980-episode, policy rates rose 600 basis points in the first year alone.

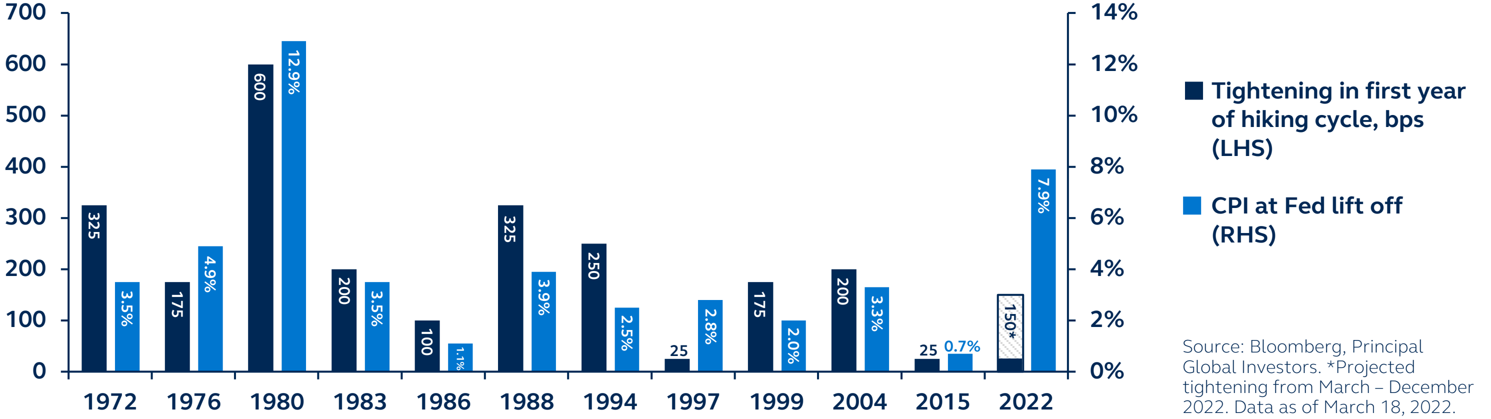
The Fed's dot plot sees seven hikes this year, equivalent to 175 basis points. However, markets have rapidly moved to price an even sharper tightening cycle, expecting rate hikes at each of the six remaining policy meetings this year—two of which could be 50 basis point moves. That would take Fed policy rates above 2% by year-end.

Can the U.S. economy withstand such tightening? For 2022, yes. Households today have excess savings to cushion them, the labor market is strong, and corporate balance sheets are also looking healthy. However, further tightening in 2023 will see policy rates becoming restrictive, raising the risk of recession. While the Fed is aiming for a soft landing, there is only a very narrow margin for error.

The Fed funds rate will likely rise above 2% this year as the Fed plays inflation catch-up. Something will need to give before the Fed stops tightening: Growth or inflation.

Federal Reserve policy rate tightening and Consumer Price Index

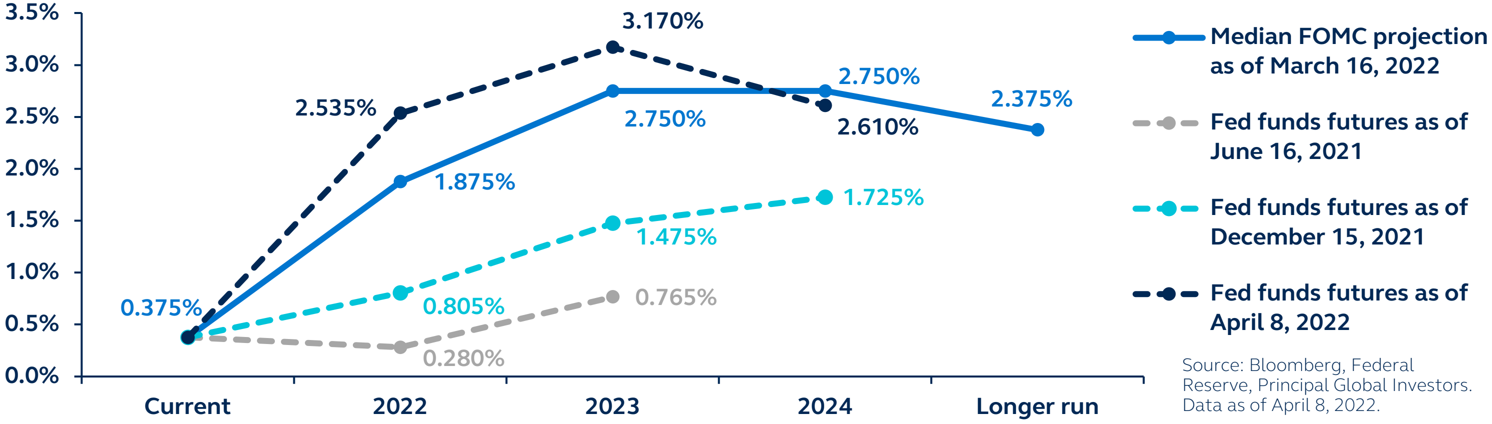
Years during which Fed increased policy rates, 1972 – present



Source: Bloomberg, Principal Global Investors. *Projected tightening from March – December 2022. Data as of March 18, 2022.

Implied fed funds target rate and market expectations

FOMC member projections & fed funds futures



Source: Bloomberg, Federal Reserve, Principal Global Investors. Data as of April 8, 2022.

Financial conditions have the deciding vote on growth

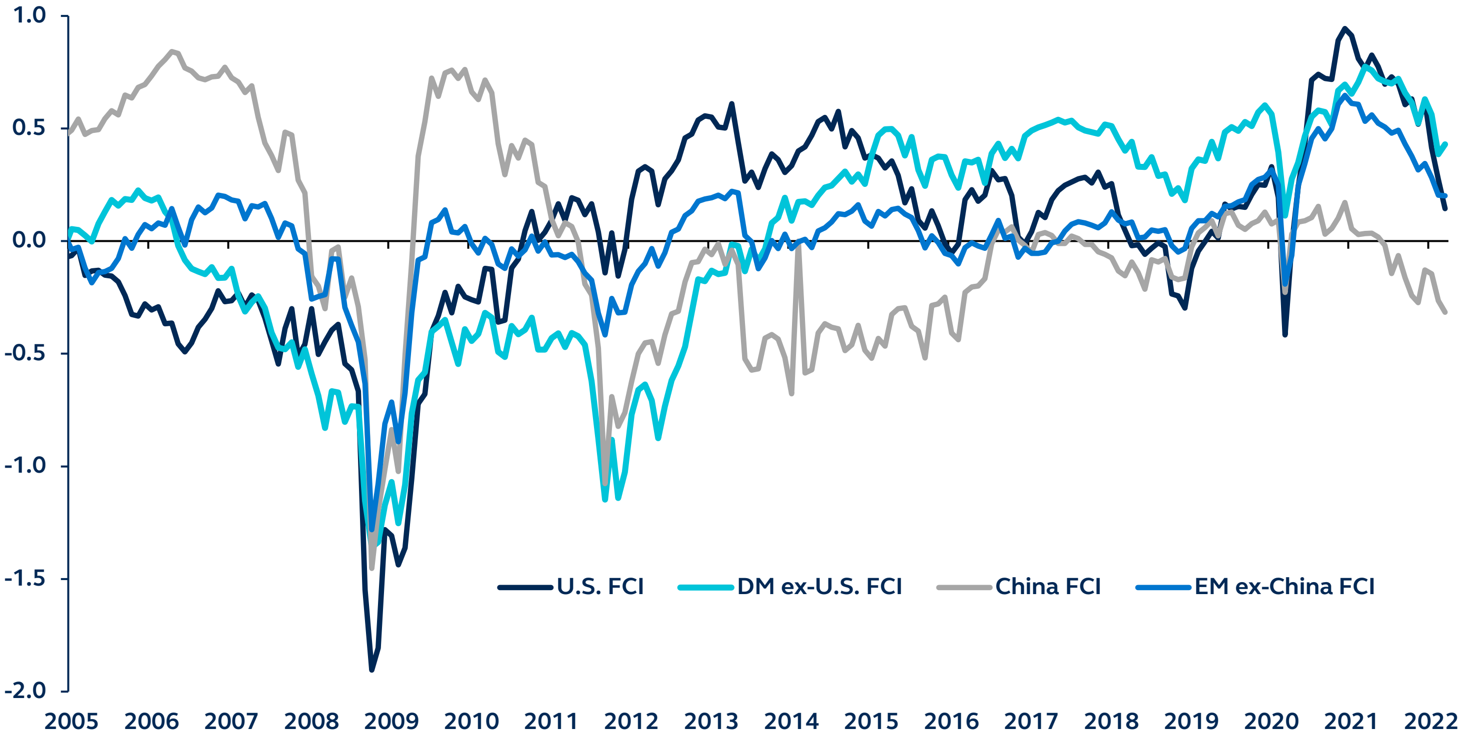
Global financial conditions have tightened in recent months, reflecting expectations for tighter monetary policy and, more recently, geopolitically driven market turmoil. Still, financial conditions are only slightly higher than average, indicating only a very modest restraint on economic activity. It would take a very meaningful further tightening in financial conditions—perhaps due to a significant ratcheting up of geopolitical tensions or a sharp deterioration in macro fundamentals—to compel the Fed to hit the brakes on rate hikes.

In the Euro area, a more drastic tightening in financial conditions has likely pushed the European Central Bank's (ECB) first rate hike into 2023. By contrast, in most parts of Latin America, the end of policy normalization is already nearing. Much of EM Asia have been relatively shielded from the inflation scare, allowing them to continue normalization in a gradual manner. Different to all the rest, timid inflation pressures and a high GDP growth target this year means that China is moving in the other direction, easing financial conditions to stabilize and strengthen growth.

Global financial conditions are tightening, but remain at historically loose levels. It will take a considerably greater tightening to bring inflation back to target.

Developing market and emerging market financial conditions

PGAA Financial Conditions Index (FCI), Z-score, January 2005 – present



Source: Bloomberg, Principal Global Asset Allocation. Data as of March 31, 2022.

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U.S. bonds suffer largest quarterly loss since 1980

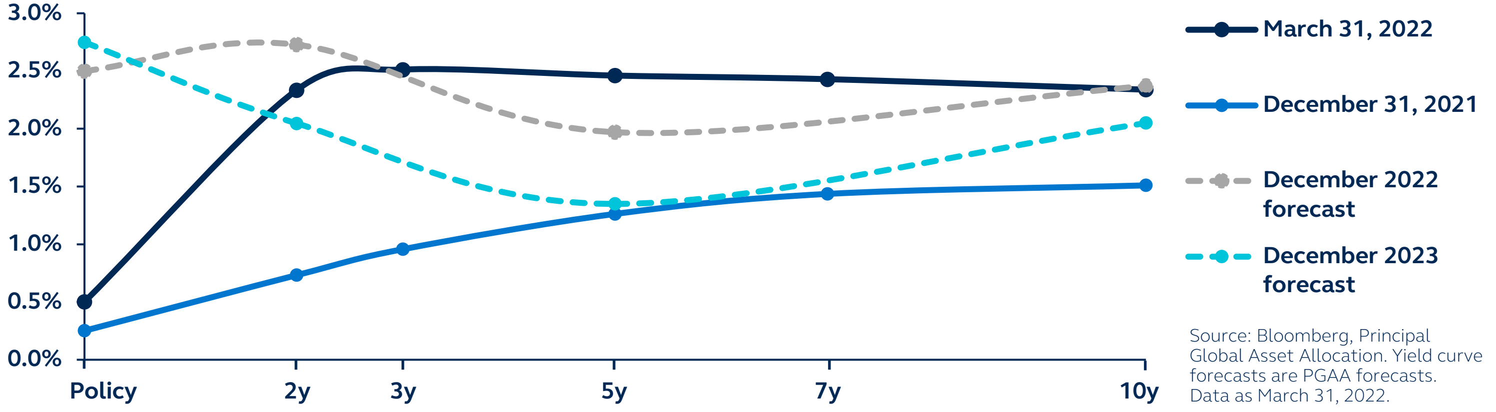
Although the geopolitical conflict has led to substantial volatility in bond yields, the recent spike higher in UST yields has been the result of markets pricing in greater inflation risk and significant Fed policy hikes. Bond yields are likely to stay elevated as the Fed continues with its rapid policy normalization. The front-loaded Fed tightening path will maintain upward pressure on the front-end of the yield curve.

The U.S. Treasury yield curve (the difference between the yields on 2-year and 10-year U.S. government debt) has inverted ahead of every U.S. recession since the 1950s. The lead time between curve inversion and recession tends to be long and variable, but on average is 12 to 18 months. However, the huge quantities of government bonds owned by central banks in recent years are suppressing long-term yields. As a result of its expected quantitative tightening program, the signals from an inversion may be distorted.

Sharp repricing of Fed hikes has driven a drastic bond market sell-off and front-end yields are soaring. Yield curve inversion is signaling potential recession in 2023/4.

U.S. 10-year treasury yield curve

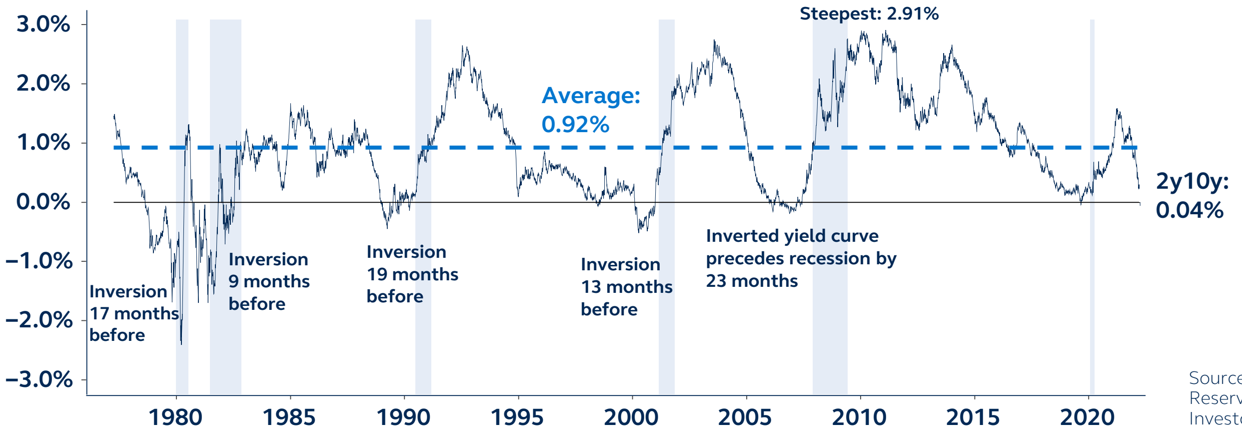
Current yield curve vs. forecasts



Source: Bloomberg, Principal Global Asset Allocation. Yield curve forecasts are PGAA forecasts. Data as March 31, 2022.

Yield curve steepness

10-year minus 2-year yields, recessions are shaded, 1975 – present



Source: Clearnomics, Federal Reserve, NBER, Principal Global Investors. Data as March 31, 2022.

INDEX DESCRIPTIONS

Bloomberg EM Hard Currency Aggregate Index is a hard currency Emerging Markets debt benchmark that includes USD denominated debt from sovereign, quasi-sovereign, and corporate EM issuers.

The Bloomberg Pan-European Aggregate Index tracks fixed-rate, investment-grade securities issued in the following European currencies: Euro, British pounds, Norwegian krone, Danish krone, Swedish krona, Czech koruna, Hungarian forint, Polish zloty, and Slovakian koruna.

Bloomberg U.S. Aggregate Bond Index is the most widely followed broad market U.S. bond index. It measures the investment grade, US dollar-denominated, fixed-rate taxable bond market.

Bloomberg U.S. Corp High Yield 2% Issuer Capped Index is an unmanaged index comprised of fixed rate, non-investment grade debt securities that are dollar denominated. The index limits the maximum exposure to any one issuer to 2%.

Bloomberg U.S. Corporate Investment Grade Index includes publicly issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity and quality requirements. To qualify, bonds must be SEC-registered. The corporate sectors are industrial, utility and finance, which include both U.S. and non-U.S. corporations.

FTSE Nareit All Equity REITs Index is a free-float adjusted, market capitalization-weighted index of U.S. equity REITs. Constituents of the index include all tax-qualified REITs with more than 50 percent of total assets in qualifying real estate assets other than mortgages secured by real property.

ICE BofA Fixed Rate Preferred Securities Index tracks the performance of fixed-rate U.S. dollar denominated preferred securities issued in the U.S. domestic market. All holdings are investment-grade rated.

MSCI AC Asia ex Japan Index captures large and mid cap representation across 2 of 3 Developed Markets (DM) countries (excluding Japan) and 9 Emerging Markets (EM) countries in Asia.

MSCI AC Asia Pacific Index captures large and mid cap representation across 5 Developed Markets countries and 9 Emerging Markets countries in the Asia Pacific region.

MSCI ACWI Index includes large and mid cap stocks across developed and emerging market countries.

MSCI Brazil Index is designed to measure the performance of the large and mid cap segments of the Brazilian market.

MSCI China Index captures large and mid cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs).

MSCI EAFE Index is listed for foreign stock funds (EAFE refers to Europe, Australasia, and Far East). Widely accepted as a benchmark for international stock performance, the EAFE Index is an aggregate of 21 individual country indexes.

MSCI Emerging Markets Index consists of large and mid cap companies across 24 countries and represents 10% of the world market capitalization. The index covers approximately 85% of the free float-adjusted market capitalization in each country in each of the 24 countries.

MSCI Europe Index captures large and mid cap representation across 15 Developed Markets (DM) countries in Europe.

MSCI Germany Index is designed to measure the performance of the large and mid cap segments of the German market.

MSCI India Index is designed to measure the performance of the large and mid cap segments of the Indian market.

MSCI Japan Index is designed to measure the performance of the large and mid cap segments of the Japanese market.

MSCI Russia Index is designed to measure the performance of the large and mid cap segments of the Russian market.

MSCI United Kingdom Index is designed to measure the performance of the large and mid cap segments of the UK market.

MSCI USA Growth Index captures large and mid cap securities exhibiting overall growth style characteristics in the U.S. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

MSCI USA Index is a market capitalization weighted index designed to measure the performance of equity securities in the top 85% by market capitalization of equity securities listed on stock exchanges in the United States.

MSCI USA Large Cap Index is designed to measure the performance of the large cap segments of the U.S. market.

MSCI USA Mid Cap Index is designed to measure the performance of the mid cap segments of the U.S. market.

MSCI USA Quality Index aims to capture the performance of quality growth stocks by identifying stocks with high quality scores based on three main fundamental variables: high return on equity (ROE), stable year-over-year earnings growth and low financial leverage. The MSCI Quality Indexes complement existing MSCI Factor Indexes and can provide an effective diversification role in a portfolio of factor strategies.

MSCI USA Small Cap Index is designed to measure the performance of the small cap segment of the U.S. equity market.

MSCI USA Value Index captures large and mid cap U.S. securities exhibiting overall value style characteristics. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

Standard & Poor's 500 Index is a market capitalization-weighted index of 500 widely held stocks often used as a proxy for the stock market.

Market indices have been provided for comparison purposes only. They are unmanaged and do not reflect any fees or expenses. Individuals cannot invest directly in an index.

IMPORTANT INFORMATION

Risk considerations

Investing involves risk, including possible loss of principal. Past performance is no guarantee of future results. Asset allocation and diversification do not ensure a profit or protect against a loss. Equity investments involve greater risk, including higher volatility, than fixed-income investments. Fixed-income investments are subject to interest rate risk; as interest rates rise their value will decline. International and global investing involves greater risks such as currency fluctuations, political/social instability and differing accounting standards. Potential investors should be aware of the risks inherent to owning and investing in real estate, including value fluctuations, capital market pricing volatility, liquidity risks, leverage, credit risk, occupancy risk and legal risk.

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