MARKET PULSE

MACRO VIEWS

GROWTH: US financial conditions have tightened 180 bps since the start of the year, suggesting an equivalent ~2pp drag on US GDP growth in the year ahead. While positive tailwinds from normalizing imports and continued service sector reopening may partially cushion the impact, Goldman Sachs Global Investment Research (GIR) expects US GDP growth to decelerate to 2.4% in 2022. Meanwhile, in China, policymakers must carefully balance their growth objective with their zero-COVID-19 policy amid ongoing housing and external demand weaknesses. GIR now expects 2022 Chinese GDP growth to slow to 4.0%.

INFLATION: GIR forecasts US Core PCE of 3.9% by 2022YE based on three potential drivers: 1) supply-constrained durable goods inflation falls to zero on net, 2) shelter inflation peaks, and 3) service inflation lessens via firm, but sustainable, wage growth. Still, the range of outcomes likely remains wide. In the Euro area, GIR now expects core HICP inflation to end at 3.3% on high energy prices, wage pressures, and euro weakness.

MONETARY POLICY: GIR expects the Fed to deliver on current market pricing of Fed rate hikes to restore labor market balance and temper wage-price pressures. The Euro area inflation path is increasing pressure on the ECB to accelerate rate hikes despite weaker growth. GIR forecasts the first ECB rate hike to be delivered in July.

LABOR: US job openings have continued to outpace unemployed workers at ~2:1. US growth deceleration may reduce openings, especially in cyclically-sensitive industries. Still, a sharp rise in the unemployment rate may be avoided given strength of both household and corporate balance sheets. GIR's year-end US unemployment forecast is 3.5%.

MARKET VIEWS

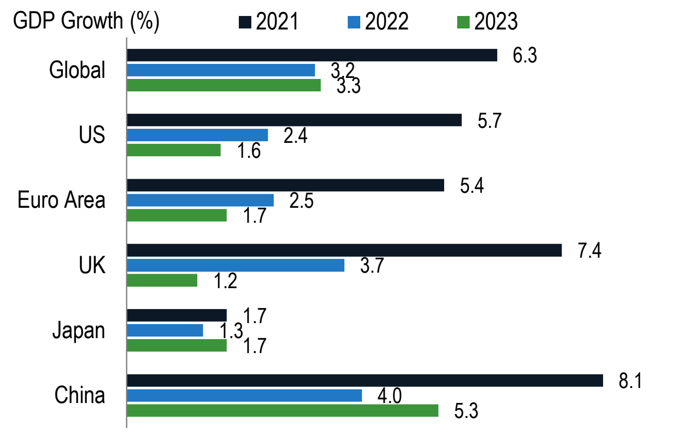
EQUITIES: We expect equity prices to move higher, though further rate upside and even slower growth have led GIR to revise their S&P 500 year-end price target down to 4300. Still, we think earnings strength will continue as companies navigate tighter financial conditions and defend margins, informing GIR's upgraded 2022 EPS growth forecast to 8%.

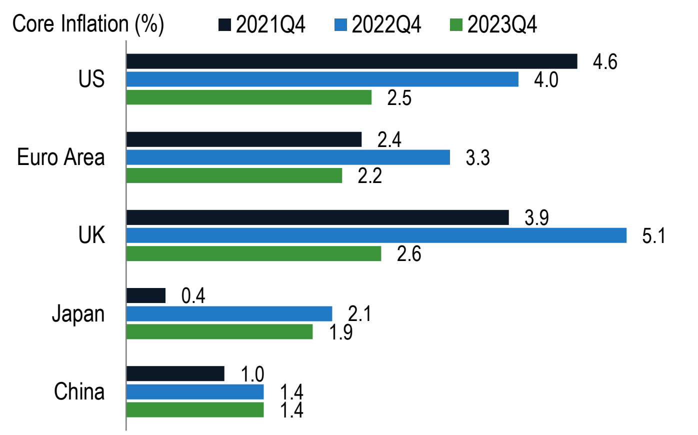
RATES: GIR raised their YE 2022 forecast for the US 10-Year Treasury yield to 3.3%, reflecting more front-loaded hikes, higher terminal rates, and reemergence of risk premia. Still, we think the tail risks remain wide with continued macro uncertainty. We find increasing comfort with duration as the hurdle remains high for additional outsized surges in yields. Meanwhile, the short-end of the curve may offer attractive yield per unit of risk while also providing a sizeable buffer to more rate hikes.

COMMODITIES: Commodity markets have been on a hot streak since the start of the year, despite weak demand from China as a result of its zero-COVID-19 policy. Still, GIR thinks the rally in commodities has further to run as refiners and manufacturers begin to hoard the spare stocks as a hedge against future scarcity. This creates backwardated markets and signals a strong set up for the next leg higher in prices.

SENTIMENT: Risk-off sentiment has captured financial markets, leaving few asset classes unscathed. Volatility is likely to continue given macro uncertainty and diminished liquidity—S&P 500 futures top-of-book depth is in the 3rd percentile since 2016. While the S&P 500 briefly entered bear market territory, history suggests that 69% of the index's best days have come when the market was below its 200-day moving average.

ECONOMIC FORECASTS[1]





ASSET CLASS FORECASTS[2]

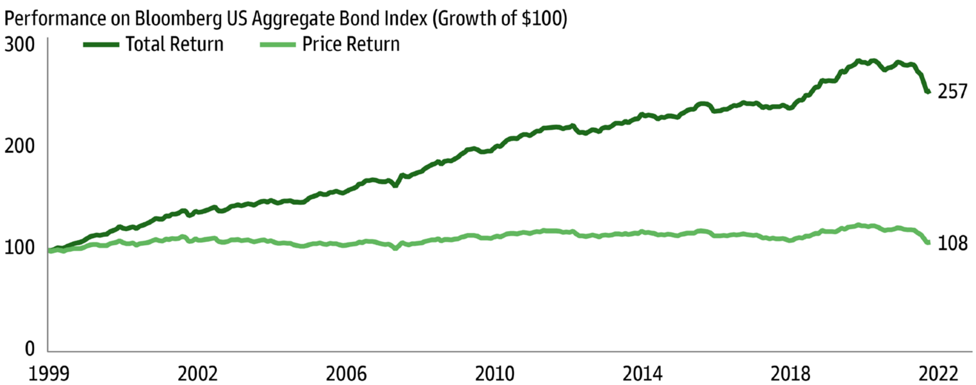
	Current	3m	12m	% Δ to 12m
S&P 500 ($)	4109	4000	4500	9.5
STOXX Europe (€)	440	440	470	6.8
MSCI Asia-Pacific Ex-Japan ($)	554	550	630	13.8
TOPIX (¥)	1933	1900	2100	8.6
10-Year Treasury	3.0	3.2	3.3	25 Bp
10-Year Bund	1.3	1.2	1.3	7 Bp
10-Year JGB	0.2	0.3	0.3	2 bp
Euro (€/$)	1.07	1.05	1.15	7.3
Pound (£/$)	1.25	1.19	1.25	0.1
Yen ($/¥)	131	128	123	(5.9)
Brent Crude Oil ($/bbl)	112.6	125.0	115.0	2.2
London Gold ($/troy oz)	1857	2300	2500	34.6

Source: Goldman Sachs Global Investment Research (GIR) and Goldman Sachs Asset Management as of May 2022. GDP growth forecasts reflect year-over-year figures. "YE" refers to year-end. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Goldman Sachs does not provide accounting, tax or legal advice. Please see additional disclosures at the end of this presentation. **Past performance does not guarantee future results, which may vary.**

TINA Turning

The last market cycle was characterized by trend growth, low rates, and yield scarcity, conditions that led investors to believe that favorable risk-adjusted returns could only be found in equities. While risk assets remain instrumental to delivering forward returns, we believe market characteristics today—reflation, high valuation, rising rates—support the case for broadening opportunities to fixed income. Across the bond complex, risk symmetry has improved, yields have risen by nearly two-fold, and coupons have reset to normal levels, enhancing the relative value of bonds to equities.

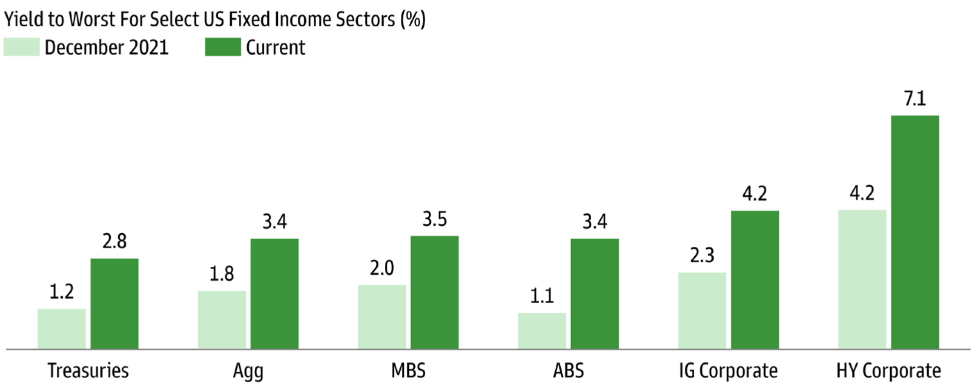
COUPON DRIVES BOND RETURNS, NOT PRICES



Recent re-rating has challenged bond returns and renewed focus on duration and price. However, for long-term investors, bond returns have historically been driven by coupons, not prices. With most of the re-pricing likely behind us, we believe yields now offer a healthy offset to rate volatility. In fact, at current yields, rates would need to rise by another 52 bps on the US Agg before generating negative returns in the next 12 months.

Source: Bloomberg and Goldman Sachs Global Investment Research.

FROM YIELD SCARCITY TO YIELD SURPLUS



Absolute yields across credit sectors have also reset to higher levels, lowering the hurdle for the global search for yield. We believe this presents a catalyst for investors to rotate back into income. For corporate bonds, attractive yields have also been met with a sturdy foundation to navigate macro uncertainty through healthy revenues, liquid balance sheets, and low defaults.

Source: Bloomberg and Goldman Sachs Asset Management.

INCOME ENHANCED BY CURRENCY TAILWINDS

Clipping coupons on non-US assets may be further enriched by our expectations for a weaker US dollar in the medium term. We expect FX volatility to settle and US dollar strength against DM peers to unwind once Euro area monetary policy catches up and geopolitical risk stabilizes. With some growth downside priced in, we believe income delivered by international assets may become even more valuable when converted to US dollars.

Source: Goldman Sachs Global Investment Research.

Top Section Notes: As of May 31, 2022. "TINA" refers to "there is no alternatives," a phrase indicating preference for equities. "US Agg" refers to the Bloomberg US Aggregate Bond Index. Middle Section Notes: "Current" refers to data as of May 31, 2022. Bottom Section Notes: As of May 17, 2022. "FX" refers to foreign exchange or currency. Chart shows the relative value of the US dollar versus a broad equal-weighted basket of G9 and EM currencies. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. **Past performance does not guarantee future results, which may vary.**

Important Information

1. Economic forecasts are from Goldman Sachs Global Investment Research as of June 6, 2022. “US Core Inflation” refers to Core PCE, “Euro area Core Inflation” refers to HICP ex food, energy, alcohol and tobacco, “UK Core Inflation” refers to CPI ex food, energy, alcohol and tobacco, “Japan Core Inflation” refers to CPI ex fresh food, and “China Core Inflation” refers to CPI ex food and energy. “Q4” refers to the average for Q4 of that year.
2. Price targets of major asset classes are provided by Goldman Sachs Global Investment Research. Source: “Global equities lost -0.6%; EM outperformed” – June 6, 2022.

Page 1 Definitions:

Bbl refers to per barrel.

Bps refers to basis points.

Brent crude oil is a common international benchmark for oil prices.

Core HICP inflation refers to harmonized index of consumer prices, excluding food and energy, a preferred measure of consumer price inflation and price stability across EU countries and used by the European Central Bank.

DM refers to developed markets.

Duration refers to the sensitivity of the price of a bond to a change in interest rate.

ECB refers to the European Central Bank.

EPS refers to earnings per share.

EM refers to emerging markets.

Fed refers to the Federal Reserve.

GDP refers to gross domestic product.

Pp refers to percentage point.

Risk premia refers to the investment return an asset is expected to yield in excess of the risk-free rate of return.

Terminal rates refer to the neutral interest rate, or the rate that is consistent with full employment, capacity utilization, and growth.

Top-of-Book depth measures the supply and demand for liquid, tradeable assets based on the open buy and sell orders for a given asset.

US Core PCE refers to the US core personal consumption expenditure price index, excluding food and energy.

Page 2 Notes:

Top Chart: GROWTH OF $100: A graphical measurement of a portfolio's gross return that simulates the performance of an initial investment of $100 from January 2000 to April 2022. The example provided does not reflect the deduction of investment advisory fees and expenses which would reduce an investor's return. Please be advised that since this example is calculated gross of fees and expenses the compounding effect of an investment manager's fees are not taken into consideration and the deduction of such fees would have a significant impact on the returns the greater the time period and as such the value of the $100 if calculated on a net basis, would be significantly lower than shown in this example.

Middle Chart: “Yield to Worst” refers to the minimum yield that can be received on a bond, assuming the issuer does not default on any of its payments. “Treasuries” refer to the US Treasury component the Bloomberg US Aggregate Bond Index. “Agg” refers to the Bloomberg US Aggregate Bond Index. “MBS” refers to the Mortgage-Backed Securities component of the Bloomberg US Aggregate Bond Index. “ABS” refers to the Asset-Backed Securities component of the Bloomberg US Aggregate Bond Index. “IG Corporate” refers to the Bloomberg US Corporate Investment Grade Index. “HY Corporate” refers to the Bloomberg US High Yield Corporate Index. “IG Municipal” refers to the Bloomberg Municipal Bond Index. “HY Municipal” refers to the Bloomberg Municipal High Yield Index.

Bottom Chart: “G9” refers to a group of nine countries including Austria, Belgium, Bulgaria, Denmark, Finland, Hungary, Netherlands, Romania, Sweden, and Yugoslavia.

Glossary

The Bloomberg Corporate Investment Grade Bond Index measures the investment grade, fixed-rate, taxable corporate bond market, including USD denominated securities publicly issued by industrial, utility, and financial issuers.

The Bloomberg Municipal Bond Index covers the USD-denominated long-term tax-exempted bond market, including state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds.

The Bloomberg US Aggregate Bond Index represents an unmanaged diversified portfolio of fixed income securities, including US Treasuries, investment grade corporate bonds, and mortgage backed and asset-backed securities.

The Bloomberg US High Yield Corporate Index covers the universe of fixed rate, non-investment grade debt.

The Dow Jones Equal Weight US Issued Corporate Bond Index is designed to track the total returns of 100 large and liquid investment-grade bonds issued by companies in the US corporate bond market.

The MSCI AC Asia Pacific ex Japan Index captures large and mid cap representation across 4 of 5 Developed Markets countries and 8 Emerging Markets countries in the Asia Pacific region.

The MSCI Emerging Markets Equity Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets.

The S&P 500 Index is the Standard & Poor’s 500 Composite Stock Prices Index of 500 stocks, an unmanaged index of common stock prices. The index figures do not reflect any deduction for fees, expenses or taxes. It is not possible to invest directly in an unmanaged index.

The STOXX Europe 600 Index is derived from the STOXX Europe Total Market Index (TMI) and is a subset of the STOXX Global 1800 Index.

The Tokyo Price Index (TOPIX) is a metric for stock prices on the Tokyo Stock Exchange (TSE). A capitalization-weighted index, TOPIX lists all firms that have been determined to be part of the "first section" of the TSE.

The 10-Year US Treasury Bond is a US Treasury debt obligation that has a maturity of 10 years.

Indices are unmanaged. The figures for the index reflect the reinvestment of all income or dividends, but do not reflect the deduction of any fees or expenses which would reduce returns. Investors cannot invest directly in indices.

Risk Considerations

Equity securities are more volatile than bonds and subject to greater risks. Foreign and emerging markets investments may be more volatile and less liquid than investments in US securities and are subject to the risks of currency fluctuations and adverse economic or political developments. Investments in commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity. The currency market affords investors a substantial degree of leverage. This leverage presents the potential for substantial profits but also entails a high degree of risk including the risk that losses may be similarly substantial. Currency fluctuations will also affect the value of an investment.

Investments in fixed income securities are subject to the risks associated with debt securities generally, including credit, liquidity, interest rate, call and extension risk.

High yield fixed income securities are considered speculative, involve greater risk of default, and tend to be more volatile than investment grade fixed income securities.

A 10-Year Treasury is a debt obligation backed by the United States government and its interest payments are exempt from state and local taxes. However, interest payments are not exempt from federal taxes.

The above are not an exhaustive list of potential risks. There may be additional risks that should be considered before any investment decision.

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