MARKET PULSE

MACRO VIEWS

RECESSION RISK: US recession risk has risen. We believe the path to a soft landing remains possible, though it has narrowed. While commodity prices, inflation expectations, and shelter inflation have all continued to increase, we also see signs of necessary activity deceleration, moderating labor demand, and improving supply chains. Should a recession occur, strong private sector balances and an absence of financial imbalances may lessen the severity and duration of any economic contraction.

INFLATION: We believe US core PCE has peaked, as goods inflation has moderated on materially improving supply chains. However, we expect concerns over long-term inflation expectations to remain top of mind, especially as services will likely keep overall inflation elevated and broad-based.

MONETARY POLICY: We expect the Fed to hike by 75bps in July and ultimately arrive at a terminal rate of 3.25-3.50% by year end, in line with current market pricing. Still, risks are to the upside as the Fed's conviction in combating inflation suggests no upper limit to the policy rate. The ECB, BoE, and RBA are all likely to echo the Fed in stance but vary in pace.

CHINA GROWTH: Following the economic slowdown earlier this year, China's 5.5% GDP target requires 7.2% annualized growth in 2H 2022, which is well above consensus forecasts. However, new COVID-19 waves and a weak consumption outlook skew risks to the downside. Fiscal and monetary policy support may act as key drivers of growth in the remainder of the year.

MARKET VIEWS

EQUITIES: The S&P 500 dipped into bear market territory last month, reflecting market realization of more front-loaded monetary policy tightening. Prices now indicate greater likelihood of a recession in the medium-term, nearing the historical average for shallower recessionary pullbacks. As such, we think prices may grind higher over the next year, albeit with elevated volatility near-term.

CREDIT: We think corporate credit risk is not only driven by the cost of financing, but also by the access to it. With just 4% of US high yield bonds maturing in 2022 or 2023, we do not see significant threats from a near-term maturity wall. Within the universe, we now prefer high yield bonds over bank loans due to stronger credit trends among high yield issuers and greater re-rating pressure for bank loan debtors.

MUNIS: Past instances of muni yield and spread surges have seen strong subsequent performance, with returns frequently benefiting from higher starting yields and price appreciation. With an improving technical backdrop and tax-equivalent spreads relative to taxable bonds above long-term averages, we believe now is a favorable entry point for munis across the credit spectrum.

COMMODITIES: We raised our YE 2022 WTI and Brent forecasts to $125 and $130, respectively. While OPEC+ raised near-term production targets, many members have yet to reach existing targets, making any additional supply commitments less likely to be realized. We now hold a neutral view on gold as slowing Chinese growth and rising rates may provide headwinds to a fear- and inflation-fueled price breakout.

ASSET CLASS OUTLOOK[1]

Less Favorable — More Favorable

EQUITY	Shorter Term	Longer Term
US Equity		
European Equity		
Japanese Equity		
Emerging Market (EM) Equity		
RATES		
US Government Fixed Income		
DM Government Fixed Income		
EM Debt Local		
Municipal Bonds		
CREDIT		
US Investment Grade		
US High Yield		
Euro Area Corporates		
EM Corporates		
EM Debt Hard		
REAL ASSETS		
Oil		
Copper		
Gold		
Global Real Estate		
CURRENCIES		
US Dollar		
Euro		
British Pound		
Japanese Yen		
Chinese Renminbi		

ASSET CLASS FORECASTS[2]

	Current	3m	12m	% Δ to 12m
S&P 500 ($)	3825	4000	4500	17.6
STOXX Europe (€)	407	390	460	13.0
MSCI Asia-Pacific Ex-Japan ($)	519	550	610	17.5
TOPIX (¥)	1845	1900	2100	13.8
10-Year Treasury	2.9	3.3	3.2	30 Bp
10-Year Bund	1.2	2.0	2.0	77 Bp
10-Year JGB	0.2	0.3	0.3	3 bp
Euro (€/$)	1.04	1.05	1.15	10.5
Pound (£/$)	1.20	1.19	1.25	3.8
Yen ($/¥)	135	125	123	(8.9)
Brent Crude Oil ($/bbl)	112.6	140.0	130.0	15.5
London Gold ($/troy oz)	1808	2100	2500	38.3

Source: Goldman Sachs Global Investment Research (GIR) and Goldman Sachs Asset Management as of June 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.**

Bearing the bear

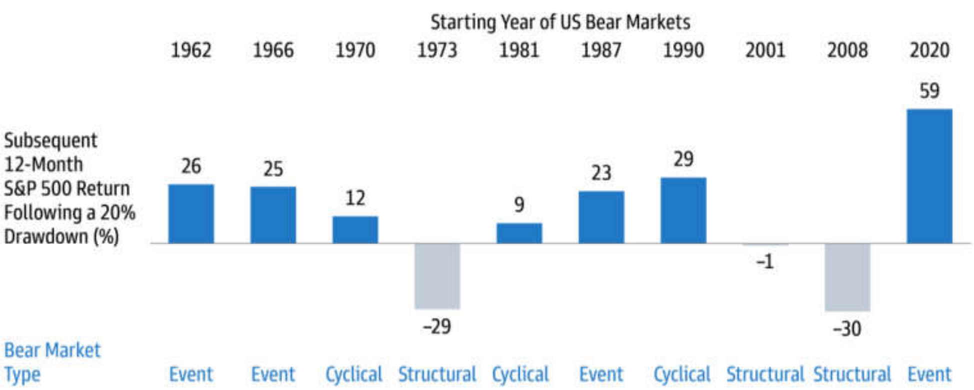
The S&P 500 has contracted -19% to date, nearly commensurate with the median peak-to-trough decline during previous US recessions. Markets may continue to search for the bottom. But, we find comfort in knowing that past periods of deep contractions featuring high inflation have also displayed elements of financial overheating, which we believe are absent today. The significant valuation compression seen so far have similarities to past cyclical bear markets, driven mostly by shifting rate and inflation dynamics. Consequently, we expect any spillover economic impact will likely be short and shallow.

HISTORICAL CONTEXT ON TIGHTENING CYCLES

Recent US inflation prints have expedited the Fed's plan to raise policy rates to neutral, potentially increasing the odds of an economic contraction. While engineering a soft landing has historically been difficult alongside high inflation, credible and transparent policy measures have lessened the risk of a severe Fed-induced downturn. Consequently, any recession due to Fed overtightening will likely be short and shallow.

Source: FRED and Goldman Sachs Asset Management.

BARELY A BEAR



The depth and scale of equity pullbacks are influenced by the type of bear market. Structural bears feature financial imbalances that take nearly eight months to rebound from bear territory and a decade to fully unwind. Event-driven bears are catalyzed by exogenous shocks with equities recovering in a year. And, cyclical bears—led by evolving inflation and rate dynamics as seen today—have found market bottom within 100 days from the initial 20% decline.

Source: GS Global Investment Research.

NOT ALL BEAR MARKETS ARE CREATED EQUAL

Select US Bear Markets	Similarities to 2022 Bear Market	Differences from 2022 Bear Market
November 1973	• Elevated inflation • Rising rates • Supply-side oil shocks	Past fiscal spending expansion drove unusual strength in GDP. Today, GDP growth has been normalizing toward trend. Loose monetary policy led to insufficient policy tightening in the '70s. Today, despite a slow tightening start, the Fed delivered swift and steep rate hikes with greater credibility and transparency.
July 2008	• Elevated inflation • Contractionary monetary policy • Tighter financial conditions	Housing market speculation drove excessive borrowing during the Global Financial Crisis. Today, credit quality has improved among borrowers and household debt service capacity has expanded.

Still, making a call on market bottom is an imprecise science. History suggests that past moments of severe equity declines (1973 and 2008) were exacerbated by structural weaknesses. While high prices were apparent, those periods also saw explosive growth in fiscal spending and household borrowing, driving entrenched downturns that necessitated fiscal and monetary policy intervention. We believe those conditions are less reflective today.

Source: Goldman Sachs Asset Management.

Top Section Notes: As of June 30, 2022. "Effective fed funds rate" refers to the interest rate banks charge each other for overnight loans to meet reserve requirements. Middle Section Notes: Chart highlights three type of bear markets: Structural, Event, and Cyclical. As of June 30, 2022. Bottom Section Notes: As of June 30, 2022. 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. Asset Class Outlook for equities, credits, sovereigns, real assets, and currencies are informed by Goldman Sachs Asset Management, Goldman Sachs Global Investment Research, and Goldman Sachs Investment Strategy Group views. The views expressed herein are as of July 2022 and subject to change in the future. “Shorter Term” view refers to less than 1 year. “Longer Term” view refers to 1-5 years. Views within asset classes are ranked by the short-term outlook in the order of most favored to least favored. Individual portfolio management teams for Goldman Sachs Asset Management may have views and opinions and/or make investment decisions that, in certain instances, may not always be consistent with the views and opinions expressed herein.
2. Price targets of major asset classes are provided by Goldman Sachs Global Investment Research. Source: “Global equities lost 2.2%; Cyclicals underperform as market pricing recession risk” – 07/04/2022.

Page 1 Definitions:

Bear markets refer to sustained periods of downward trending equity markets with at least 20% decline in prices from near-term highs.

Bbl refers to per barrel.

BoE refers to the Bank of England.

Bps refers to basis points.

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

DM refers to developed markets.

ECB refers to the European Central Bank.

Fed refers to the Federal Reserve.

GDP refers to gross domestic product.

OPEC+ refers to the Organization of the Petroleum Exporting Countries, an intergovernmental organization to coordinate and unify the petroleum policies of its Member Countries and ensure the stabilization of oil markets. OPEC+ includes 13 member countries and 10 non-member countries.

Pp refers to percentage point.

RBA refers to the Reserve Bank of Australia.

Shelter inflation refers to the increase in housing costs based on rent.

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

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

WTI crude oil refers to West Texas Intermediate crude oil, a common benchmark for oil prices representing oil produced in the US.

Page 2 Notes:

Top Chart: FRED refers to the Federal Reserve Economic Data.

Middle Chart: Structural bear markets are often triggered by structural imbalances and financial bubbles. Event bear markets are triggered by one-off shocks that do not generally lead to domestic recessions. Cyclical bear markets are typically triggered by rising rates, impending recession, and falling profits. A 20% drawdown refers to a peak-to-trough equity decline of 20% over a specific time period.

Glossary

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 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.

Income from municipal securities is generally free from federal taxes and state taxes for residents of the issuing state. While the interest income is tax-free, capital gains, if any, will be subject to taxes. Income for some investors may be subject to the federal Alternative Minimum Tax (AMT).

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.

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