

MARKET PULSE

10 FOR 2023

1. ECONOMIC GROWTH: On the heels of an aggressive tightening in financial conditions and restrictive monetary policy in 2022, GIR expects global growth to move below trend to 1.8% in 2023. Investors may be underestimating the resilience of the US economy, which contrasts with a mild recession in Europe and a bumpy reopening in China.

2. INFLATION: Prices will likely slowly cool, with notable improvement in the policy-critical areas of shelter and wages. Supply chains have functioned better, with further improvements likely if China implements a more flexible COVID-19 strategy. Still, wage growth and long-term inflation expectations are likely key factors in forward monetary policy.

3. MONETARY POLICY: Sticky inflation remains the preeminent global concern, locking central banks (CB) into a pause-over-pivot bias in 2023. Consequently, CBs are eager to nudge growth below potential. In the US, GIR expects a terminal rate of 5-5.25% and no cuts in 2023. In the Euro area and UK, terminal rates may reach 3.00% and 4.50%, respectively.

4. GEOPOLITICS: Acute geopolitical dynamics remain present as ever, hallmarked by conflict in Ukraine, territorial flexing by China, and entrenched societal polarization. On the latter, we expect increasing uncertainty in government composition and policy.

5. DM EQUITY: Rising cost of capital should accelerate the transition from highly bifurcated macro to deeply idiosyncratic drivers of return. To compete with compelling cross-asset opportunities, we believe a focus on profits over revenue, quality over capitalization, and company over country, is warranted. As current macro risks remain unresolved, a US equity tilt appears warranted, but the attractive cyclical and potential FX tailwinds of non-US equities may emerge in 2023.

6. EM EQUITY: EM equities face a challenging composition of subpar growth and a sharp tightening in financial conditions. However, we believe pockets of value may exist in EMs that are closer to relief from inflation and rates, including Brazil, Chile, and Korea.

7. RATES: Global yields will likely move in tandem with CB policy paths, with potential differentiation due to regional energy exposure. GIR forecasts rates to top out in 1H 2023, though acknowledge the risk to the upside given policymakers' willingness to overshoot. Globally, we believe the deepest level of curve inversion is behind us.

8. CREDIT: Credit fundamentals have peaked but remain on solid footing. US corporates have room for additional spread widening, but disciplined capital management, a low wall of debt maturity, and cash-rich balance sheets may act as buffers. In Europe, uncertainty around policy and energy pose headwinds despite attractive valuations.

9. CURRENCY: Near-term US dollar strength may persist as global growth risk is to the downside. Over the longer term, the US dollar looks vulnerable to high valuation and global recovery. Should the global growth-inflation mix improve, the USD is likely to rebate recent gains.

10. COMMODITIES: Supply challenges are structural, based on years of underinvestment. While weakness may persist from factors such as higher real rates, USD strength, and recessionary concerns, longer-term physical tightness will not be easily resolved.

ASSET CLASS VIEWS¹

ASSET CLASS	Less Favorable More Favorable	
	Shorter Term	Longer Term
EQUITY		
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		
Asia High Yield		
EM Debt Hard		
REAL ASSETS		
Oil		
Copper		
Gold		
Global Real Estate		
CURRENCIES		
US Dollar		
Euro		
British Pound		
Japanese Yen		
Chinese Renminbi		

ASSET CLASS FORECASTS²

	Current	3m	12m	% Δ to 12m
S&P 500 (\$)	4026	3600	4000	-0.6
STOXX Europe (€)	441	390	450	2.1
MSCI Asia-Pacific Ex-Japan (\$)	494	510	550	11.3
TOPIX (¥)	2018	2000	2200	9.0
10-Year Treasury	3.7	4.2	4.3	64 bp
10-Year Bund	2.0	2.6	2.8	78 bp
10-Year JGB	0.3	0.3	0.3	0 bp
Euro (€/\$)	1.04	0.94	1.05	0.9
Pound (£/\$)	1.21	1.07	1.22	0.9
Yen (\$/¥)	139	155	140	0.6
Brent Crude Oil (\$/bbl)	83.6	115	110	31.5
London Gold (\$/troy oz)	1750	1850	1950	11.4

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

Point Break

We expect 2023 to be a year filled with macro inflection points as inflation and monetary policy pressures start to diminish. Alongside this transition, we believe investor prioritization of profitability over revenue and sticky income over the uncertainty of capital appreciation will be paramount. Market opportunities have already reset and investing next year may feature more of 1) stocks with durable cash flows, 2) quality bonds with significant coupons, and 3) alternatives with volatility-reducing attributes.



ACTIVITY

SUPPLY TIMELINES: The share of manufacturing companies reporting faster supplier delivery times has increased 171% since the beginning of 2022¹.

WORKING HOURS: Global labor supply remains squeezed. The ILO estimates total work hours to stay 1.5% below pre-pandemic levels, equating to a deficit of 40mm full-time jobs².

TRAVEL SURGE: The daily number of passengers screened at TSA checkpoints has jumped by 17x relative to the pandemic low in 2020³.



CONSUMERS

HOME EQUITY: Only 2% of US mortgages have negative equity today versus 25% in 2011⁴. Home prices would need to fall by 30% from 2021 levels to meaningfully erode loan-to-value ratios and increase strategic defaults.

CREDIT TRENDS: While US loan delinquencies remain subdued, spending has rotated from discretionary to essential; top areas of credit acceleration—automotive parts, gas, and materials—have discouraged borrowing for recreation, clothing, and food services⁵.

BAD MOOD: The UMichigan Consumer Sentiment Index printed below 60 in seven consecutive months, the longest stretch since inception as sticky costs diminish morale⁶.



EQUITIES

SINGLE STOCK: As of 3Q, 80% of S&P 500 companies have seen their equity prices fall at least 10% at some point this year, providing a large base for tax-loss harvesting⁷.

UP DOWN: Performance swings have been more volatile this year relative to the long-term average. Positive days in 2022 have returned a daily average of 1.31% while negative days have posted an average drag of -1.14%, much wider than the historical bounds of $\pm 0.75\%$ ⁷.

TECH BREAK: The market value loss for mega tech stocks this year is equivalent to the annual GDP of UK or France⁸.



FIXED INCOME

YIELD LAGGARD: A year ago, ~25% of global government debt offered negative nominal yields. Today, Japan is the last remaining sovereign borrower with negative-yielding debt, comprising <5% of all government debt⁸.

COST BENEFIT: Rate volatility has exceeded the 90th percentile relative to the past ten years. Still, US Treasuries are yielding 5.5x more per unit of volatility than US stocks⁸.

DURATION LIMITS: The risk and cost of a rate shock are lower and less punitive today relative to earlier this year. While a 100 bp rate shock may drag the Bloomberg US Aggregate Bond Index by -6.2%, a coupon offset of 2.7% may ultimately limit left-tail risks⁹.

Section Notes: ¹Federal Reserve Bank of Philadelphia, ²International Labor Organization (ILO), ³Transportation Security Administration (TSA), ⁴Mortgage Bankers Association, ⁵Bureau of Economic Analysis, ⁶University of Michigan Survey of Consumers, ^{7,9}Goldman Sachs Asset Management, ⁸Goldman Sachs Global Investment Research, and ⁹Bloomberg. As of November 21, 2022, latest data available. Goldman Sachs does not provide accounting, tax or legal advice. The economic and market forecasts presented herein are for informational purposes as of the date of this document. There can be no assurance that the forecasts will be achieved. **Past performance does not guarantee future results, which may vary.**

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2. Price targets of major asset classes are provided by Goldman Sachs Global Investment Research. Source: "Global equities gained 1.5%; Defensives outperformed" – 11/28/2022.

Page 1 Definitions:

Bp refers to basis point.

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

Central bank pivot refers to the shift in monetary policy stance from tightening to easing or vice versa.

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

Curve inversion refers to the difference in yield between the 10-year maturity and 2-year maturity of government bonds.

DM refers to developed markets.

Duration is a measure of the sensitivity of the price of a bond or other debt instrument to a change in interest rates.

ECB refers to the European Central Bank.

EM refers to emerging markets.

EPS refers to earnings per share.

Fed refers to the Federal Reserve.

FX refers to currencies.

GDP refers to gross domestic product.

Inflation expectations refer to the rate at which consumers, businesses, and investors expect prices to rise in the future.

Loan-to-value ratio is a measure of the mortgage balance to the appraised value of the property. The ratio is used to assess the lending risk that financial institutions assume before approving a mortgage.

Terminal rate refers to the peak central bank policy rate at the end of a hiking cycle.

YE refers to year-end.

Page 2 Notes:

WORKING HOURS: Data as of October 31, 2022, latest available.

TRAVEL SURGE: Data is based on a 20-day moving average comparing TSA checkpoint volume on November 20, 2022 relative to May 1, 2020.

SINGLE STOCK: S&P 500 Index constituent data as of September 30, 2022.

UP DOWN: Performance swings are based on the daily total returns for the S&P 500 Index. The long-term average refers to daily total returns since index inception in 1932.

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 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 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.

The University of Michigan Consumer Sentiment Index is a monthly survey of personal consumer confidence in economic activity. The index assesses how consumers view their own financial situation, the general economy over the near term, and their view of the economy over the long term.

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

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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For more information contact your Goldman Sachs sales representative:

ICG: 800-312-GSAM Bank: 888-444-1151 Retirement: 800-559-9778

IAC: 866-473-8637 Global Liquidity Management: 800-621-2550

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