

MARKET PULSE

MACRO VIEWS

GLOBAL GROWTH: We estimate that a full recovery in Chinese domestic demand should raise global GDP by 1pp through 2023. In our view, reopening will impact global growth via three channels: 1) increased goods exports from other countries, especially those in the Asia-Pacific, 2) greater demand for foreign services such as travel, and 3) higher oil demand. We think any inflation impulses from renewed goods and oil demand will be mostly offset by supply chain improvements.

US LABOR: We believe corporate layoff headlines do not necessarily translate into a weak demand picture. Both the layoff rate and unemployment rate remain below pre-pandemic levels. Despite elevated tech layoffs, the job finding rate across tech and non-tech sectors is above historical trend. Meanwhile, businesses have seen improvement in labor availability: references to labor shortages on Russell 3000 companies' earnings calls fell from 16.5% in 3Q21 to 4.9% in 4Q22.

INFLATION: US shelter inflation remains sticky, but some explanation lies in the methodology. CPI captures rent on both new and continuing leases. As such, continuing leases must catch up to market rates, lifting overall prints despite rents on new leases already decelerating. We expect PCE shelter inflation to peak at 8% before slowing to 5.5% by YE.

MONETARY POLICY: GIR now expects the Fed to hike in three 25bp increments to bring the terminal rate to 5.25%-5.50% following strong growth and inflation prints. They upgraded their ECB policy tightening expectations to 50bps in March and May, and 25bps in June, bringing the terminal rate to 3.75%. For the BoJ, GIR expects Kazuo Ueda to move policy incrementally, adjusting YCC by targeting shorter maturities.

MARKET VIEWS

US ACTIVE MANAGEMENT: US equities have been increasingly driven by micro factors, supporting our belief in selectivity. Even if market volatility fades, we believe lower stock correlations would heighten return dispersion and active management opportunities.





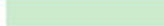
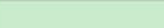
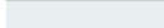
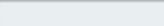
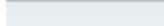
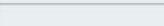
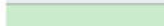
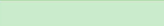
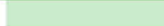


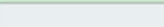
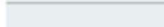
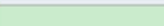
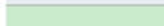
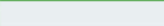
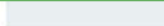
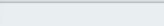
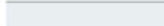
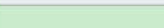
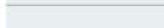

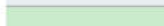
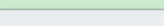
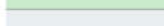
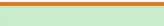

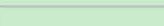
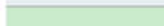
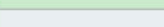
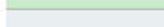
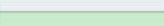
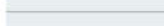


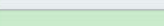
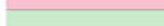


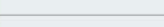
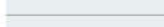
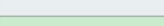
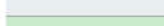
EX-US EQUITIES: We are beginning to see green shoots in non-US equities, with greater potential upside in EM. Recent high-frequency data show activity normalization in China, which makes for a more durable, earnings-driven recovery compared to the valuation-driven rally of late. In DM, our colleagues in GIR recently upgraded their price targets for European equities.

DURATION: The recent rise in rates and hiking cycle extension risk has led some bond investors to fear 2023 will look like 2022. However, significantly higher starting yields may offset material risks of rate increases. Risk-adjusted yields remain most favorable at the front-end of the curve, but we believe reinvestment risk is best addressed with a barbelled structure that includes intermediate-maturity bonds.

MUNIS: We expect municipal bonds to outperform US Treasuries, with reduced issuance aiding the technical set-up. We believe relative strength can continue, though with more potential in the HY space. Specifically, pricing dislocations leave opportunities for active selection.

MOMENTUM: This year's rally has been driven by short covering, fueling a liquidity comeback. We anticipate momentum and technical factors to further elevate market volatility. In this environment, we believe managed futures may be able to exploit such opportunities.

ASSET CLASS OUTLOOK¹

	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 (\$)	4046	4000	4000	-1.1
STOXX Europe (€)	464	465	475	2.3
MSCI Asia-Pacific Ex-Japan (\$)	523	580	620	18.4
TOPIX (¥)	2020	2000	2200	8.9
10-Year Treasury	4.0	4.0	4.1	17 bp
10-Year Bund	2.7	2.8	2.6	-7 Bp
10-Year JGB	0.5	0.7	0.9	36 bp
Euro (€/\$)	1.06	1.02	1.10	3.6
Pound (£/\$)	1.20	1.15	1.22	1.9
Yen (\$/¥)	136	132	125	-8.1
Brent Crude Oil (\$/bbl)	85.8	90	100	16.5
London Gold (\$/troy oz)	1846	1850	1950	5.6

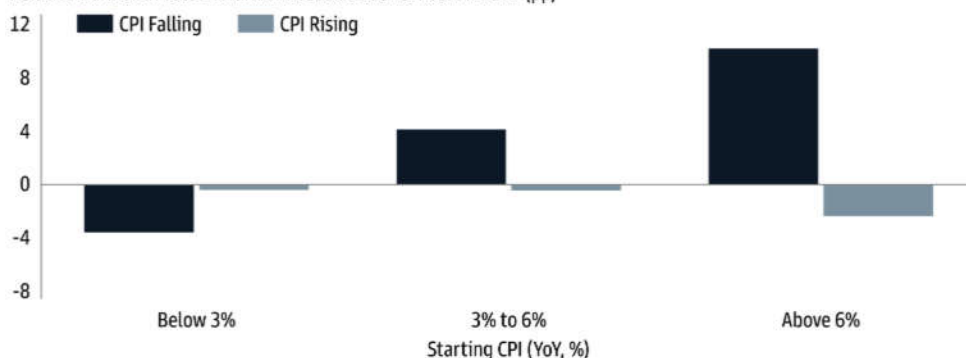
Source: Goldman Sachs Global Investment Research (GIR) and Goldman Sachs Asset Management as of March 2023. "US GDP growth" refers to US real gross domestic product growth, year-on-year. The economic and market forecasts presented herein are for informational purposes as of the date of this document. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. **Past performance does not guarantee future results, which may vary.**

Small Caps, Big Splash

Fading inflation, resilient growth, and a return of cyclical growth has finally led US small cap equities to make a big splash on its year-to-date performance. We think this clearer US macro backdrop has presented a path for earnings and valuation to recover more swiftly for smaller US companies relative to larger ones. Still, with recession risk unresolved, we believe active selectivity remains paramount for investors re-establishing strategic weights while going down-in-cap.

MACRO RATE OF CHANGE

Relative 12-Month Total Return of Russell 2000 vs. Russell 1000 (pp)

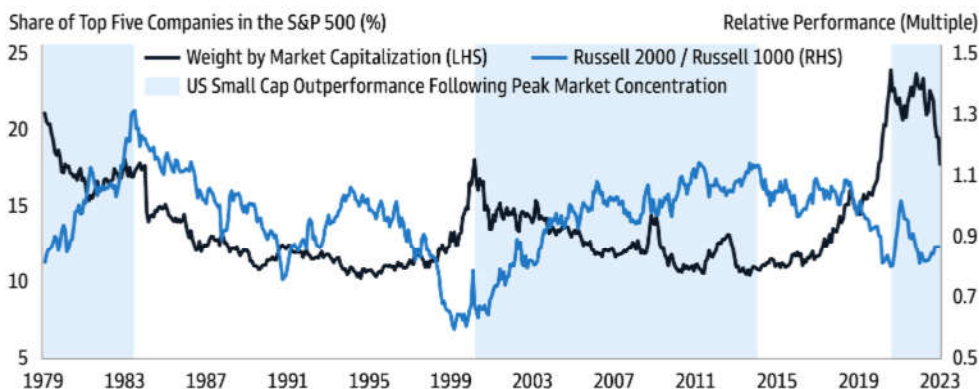


The fog of inflation has started to fade, boding well for small companies. Prior periods of high and falling inflation have delivered a 5pp return boost to US small caps relative to US large caps, leading us to believe that this move down-in-cap may further extend. Even so, micro features may usurp macro conditions as key drivers of performance, potentially benefiting small companies with big brands, durable business models, and distinct growth engines.

Source: Bloomberg and Goldman Sachs Asset Management.

CREAM OF THE CROP CANNOT STAY AT THE TOP

Share of Top Five Companies in the S&P 500 (%)

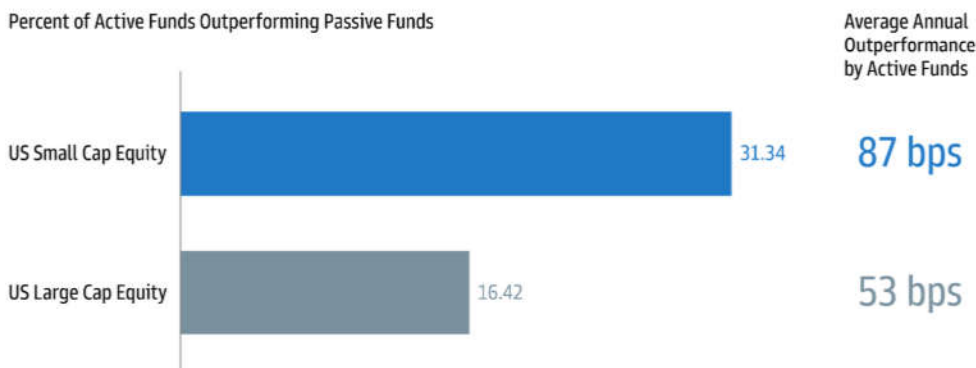


A peak in US large cap market concentration has historically been followed by sustained small cap outperformance. Small cap equities are less vulnerable to a top-heavy market, reducing the index's sensitivity to individual company performance. Importantly, a cyclical-, services-, and innovation-tilt in this universe creates room for earnings and discounted valuations to potentially unlock further upside for investors.

Source: Furey, Bloomberg, and Goldman Sachs Asset Management.

LIGHTWEIGHT IN SIZE, HEAVYWEIGHT IN ALPHA

Percent of Active Funds Outperforming Passive Funds



Higher rates have also distorted the value proposition of passive equity ownership. We believe this cycle of greater return dispersion and lower stock correlation will likely drive investors down-in-cap and into active management. Historically, stock selectivity has rewarded US small cap managers 1.6x more in annual average excess returns relative to active large cap peers.

Source: Morningstar and Goldman Sachs Asset Management.

Top Section Notes: As of January 31, 2023. Middle Section Notes: As of January 31, 2023. Shading shows periods of relative outperformance of Russell 2000 versus Russell 1000 following a peak in S&P 500 market concentration. Market concentration is measured by the market cap of the top five largest companies in the S&P 500 index as a share of the total index. Bottom Section Notes: As of January 31, 2023. Analysis shows Morningstar funds categorized as US small cap blend and US large cap blend. Average annual outperformance by active funds is based on annual returns on a rolling monthly basis from January 2011 to January 2023. Analysis takes the average outperformance during periods where median returns for active funds exceeded those of passive funds. Goldman Sachs does not provide accounting, tax or legal advice. Please see additional disclosures at the end of this document. 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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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 February 2023 and subject to change in the future. "Shorter Term" view refers to less than 6 months. "Longer Term" view refers to 1–5 years. 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 gained 2%, Commodities outperformed" – 03/06/2023.

Page 1 Definitions

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

Bbl refers to per barrel.

BOJ refers to the Bank of Japan.

Bp refers to basis points.

Correlation is a statistical measure demonstrating the extent to which two or more variables fluctuate in relation to each other.

Dispersion measures the range of returns for a group of stocks.

DM refers to developed markets.

GDP refers to Gross Domestic Product.

Green shoots refer to signs of economic recovery or positive data.

ECB refers to European Central Bank.

EM refers to emerging markets.

EPS refers to earnings per share.

Extension risk refers to the potential risk of central banks elongating their policy rate hiking cycles.

Fed refers to the Federal Reserve.

HY refers to high yield.

PCE refers to Personal Consumption Expenditures Price Index, a measure of the prices that people living the US, or those buying on their behalf, pay for goods and services.

Pp refers to percentage point.

Reinvestment risk refers to the possibility that an investor will be unable to reinvest cash flows received from an investment, such as coupon payments or interest, at a rate comparable to the current rate of return.

Short covering refers to buying back borrowed securities in order to close out an open short position at a profit or loss.

US CPI refers to US Consumer Price Index, a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.

YCC refers to yield curve control.

YE refers to year end.

Page 2 Definitions

Top Section Notes: Down-in-cap refers to small- and mid-cap equities.

Bottom Section Notes: Alpha refers to returns in excess of the benchmark return.

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 EAFE Index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada. The Index represents approximately 85% of the free float-adjusted market capitalization in each of the 21 countries.

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 Russell 1000 Index is a subset of the Russell 3000 Index that includes ~1,000 of the largest companies in the US equity universe.

The Russell 2000 Index measures the performance of the small-cap segment of the US equity universe. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.

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.

Gold is a specialized, concentrated asset that comes with unique risks. All investing is subject to risk, including the possible loss of the money you invest. Investments that concentrate on a relatively narrow market sector face the risk of higher share-price volatility.

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Past performance does not guarantee future results, which may vary. The value of investments and the income derived from investments will fluctuate and can go down as well as up. A loss of principal may occur.

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