



2023 OUTLOOK

Introduction

2022 has been a difficult year for investors. Equity and bond markets have experienced double-digit declines amid stubbornly high inflation, slowing economic growth, and the war in Ukraine. Recessions in the United States and euro area look increasingly likely in 2023, while the United Kingdom appears to already be in recession and China's economy has stalled. Risk assets and bonds may still have some downside given these challenging conditions. Yet as we say good riddance to 2022, we recognize that at least this past year left us with better valuations that may eventually lead to good long-term returns.

In periods of market stress, many investors may be best served by focusing on three core activities. First, investors should understand what they own and stress test portfolios to ensure adequate liquidity to meet liabilities, capital calls, and other obligations. Second, investors should consider opportunities to better diversify portfolios. 2022 showed the importance of diversification beyond traditional equities and bonds. Many investments, including sovereign bonds, now offer reasonable return and diversification potential—a rare combination in recent years. Finally, investors should look for investment opportunities in markets that have seen significant stress. These markets may also provide opportunities to upgrade manager rosters.

In the next pages, we highlight our expectations for 2023. While events will undoubtedly diverge from these expectations to some extent, we are sure of one reality. Thoughtful decisions—not rash actions—during chaotic environments are what separate top-performing investors from everyone else.

AN OVERVIEW OF OUR 2023 VIEWS

Our investment views are rooted in an expectation that the cyclical backdrop will remain challenging in 2023. We believe global economic growth will be weak, with risks skewed to missing the current consensus expectation of 2%. And, while we expect inflation rates will trend downwards in general across those developed countries that experienced pandemic-related surges, we suspect risks are skewed to either match or exceed current consensus expectations, which for the euro area and United States are 6% and 4%, respectively.

PORTFOLIO WIDE

We expect most investors should maintain equity allocations in line with policy targets. Consistent with this idea, we believe investors with portfolios that are more diversified across risk exposures will tend to fare better than investors holding more correlated investments.

SUSTAINABILITY & IMPACT

We expect meaningful shifts in net zero and other sustainable and impact strategies toward more impactful implementation approaches. In line with this, we expect allocations to diverse managers to rise, as greater numbers of investors embrace stated investment policy objectives.

INTEREST RATES

We expect interest rates will increase in many developed markets, as implied by market pricing. But we think the Fed will hold rates in restrictive territory for longer than expected. We don't believe any increases will prompt another European sovereign debt crisis.

EQUITIES

We expect global earnings growth will be below average next year, as prior interest rate hikes increasingly bite. With this backdrop, we expect value equities will outperform, Chinese equity underperformance will correct, and Healthcare may present an overweight opportunity.

CREDITS

We expect most liquid credits will generate higher returns in 2023 relative to 2022, given the better

yields on offer. We also see private credit as offering opportunities, particularly in secondary trading.

PRIVATE INVESTMENTS

We expect the cyclical backdrop to impact private equity and venture capital returns, ultimately influencing recently invested vintages the most. That said, we think the 2023 vintage could perform well.

HEDGE FUNDS

We expect macro hedge funds to perform well, given our expectations that market volatilities will remain elevated and our view that inflation risks are skewed to exceeding expectations. We expect long/short managers will benefit from positive short rebates.

REAL ASSETS

We expect energy equities will be resilient due to underinvestment in recent years. So, we don't think investors should underweight this economic sector in the near term despite some long-term headwinds from decarbonization efforts. In real estate, we think offices may finally offer some attractive opportunities for the discerning investor.

CURRENCIES

We expect the US dollar to remain firm but with limited appreciation relative to 2022, given our view that it is near the end of its incredible multi-year run. We believe gold's performance will improve and digital assets, in general, will not surpass prior highs, many of which were set in 2021.



Kevin Rosenbaum
Global Head of
Capital Markets
Research

Investors Following Rebalancing Plans Will Be Rewarded in 2023

We expect economic growth will be below trend, and while inflation rates will trend lower across major developed markets, with the United States leading Europe, we think inflation rates will remain uncomfortably high relative to central bank targets in 2023. This backdrop has typically been associated with elevated market volatilities and weak investment performances. Despite this reality, we don't think most investors will be well served by underweighting equity risk relative to policy portfolios. Attempting to time markets can easily lead to long-term underperformance.

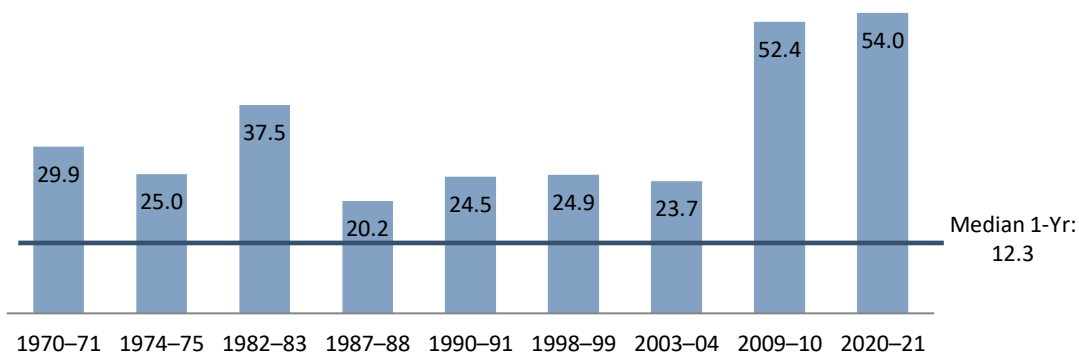
A key reason why we suggest sticking close to equity policy weights, rather than trying to time when you rebalance with when markets bottom, is the difficult nature of identifying equity market bottoms in real time. Consider March 2009, when equity markets bottomed during the Global Financial Crisis—US real GDP was contracting 5% annualized, US monthly retail sales were contracting 13% versus the prior year, and newspapers were highlighting financial system risks. Neither that backdrop nor the backdrops of any other major equity market bottom offered compelling evidence that equity markets were set to rally, meaning investors under-allocated to equities would not fully participate.

Relatedly, when markets move violently in one direction, they tend to correct violently in the other direction. Looking back at the nine major global equity market downturns that have occurred since 1970, equity returns in the 12 months after the downturn ranged from 20% to 54%. These returns stand in stark contrast to the median one-year return across the ~50-year period of 12%. Theory also supports this pattern. Collectively, investors suffer from behavioral biases, such as loss aversion, which tend to generate additional selling in down markets. This results in a disconnect between equity price levels and rational expectations, which eventually unwinds. So, investors that wrongly time rebalancing decisions during downturns may not fully participate in the rare chunky returns that tend to follow.

But stepping back, stressful situations also tend to impact decision-making processes negatively. The best way to mitigate this challenge is to stick with decision-making frameworks and plans.

EQUITY MARKET RECOVERIES TEND TO DELIVER ABNORMAL RETURNS

December 31, 1970 – March 31, 2021 • MSCI World Total Return Index • 1-Yr Returns Following Major Downturns (%) • US Dollars



Sources: MSCI Inc. and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.



Thomas O'Mahony
Investment Director,
Capital Markets
Research

Portfolios Will Benefit from Diversification in 2023

Subdued inflation, sustained growth, and relative peace provided a goldilocks environment for the balanced portfolio in recent decades. With concerns surrounding all three factors to various extents, tail risks for portfolios have not been as simultaneously elevated for some time. Therefore, thoughtful portfolio construction with regard to macro drivers and risk exposures should be a key concern in 2023.

Inflation is slowing from its recent peak, but we doubt it will quickly settle at the low levels that we have become accustomed. Though equities do a good job of outperforming inflation over long horizons, their performance can be challenged over shorter horizons when inflation exceeds expectations. Allocations to inflation-linked bonds or gold can play a partial role in mitigating such inflation exposure, albeit with interest rate risk. Other complementary methods include real assets investments, which range from direct commodity exposure in the form of commodity futures, to investments in real estate, natural resources equities, and infrastructure.

At the same time, the lagged impact of the highest inflation rate in over 40 years—combined with concerted global monetary tightening—has the potential to drive a material slowing of growth and, subsequently, dampen inflation. Despite their recent subpar performance, US Treasuries remain best placed to thrive in the event of such an outcome, with the ten-year yield at 3.68%.

Alternative fund structures, such as hedge funds, present further diversification possibilities. For example, macro regime shifts have proven to be fruitful periods for global macro funds. Trend following strategies can also help to cushion portfolio returns during prolonged bear markets, while allowing for participation in extended rallies. More esoteric strategies, inside and outside of the hedge fund umbrella, can also provide less correlated returns, such as the insurance-linked strategies discussed elsewhere.

ASSET CLASS LEADERS VARY AS THE MACRO LANDSCAPE SHIFTS

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Asset Class
BEST	PE	PE	C	B	E	PE	RE	E	E	RE	RE	C	E	PE	E	PE	C	C	Commodities
	C	E	PE	RE	PE	E	PE	PE	PE	PE	PE	PE	PE	RE	C	E	PE	RE	Real Estate
	RE	RE	RE	HF	C	RE	B	RE	RE	E	HF	E	B	B	PE	HF	E	HF	Hedge Funds
	E	HF	E	PE	HF	C	C	HF	HF	HF	E	RE	RE	HF	HF	B	RE	PE	Private Equity
	HF	B	HF	E	B	B	HF	B	C	B	B	B	HF	E	B	RE	HF	E	Global Equity
WORST	B	C	B	C	RE	HF	E	C	B	C	C	HF	C	C	RE	C	B	B	Global Bonds

Sources: Bloomberg Index Services Limited, Cambridge Associates LLC, Hedge Fund Research, Inc., MSCI Inc., National Council of Real Estate Investment Fiduciaries, and Standard & Poor's. MSCI data provided "as is" without any express or implied warranties.

Over long horizons, more diversified portfolios have delivered higher returns with lower volatility than the classic balanced portfolio. The combination of diversifiers that is most suitable for a portfolio depends on an investor's specific goals and circumstances. But as we move forward into 2023, likely a period of continued macro uncertainty, we believe it is prudent to build resiliency into portfolios by using the diversity of investment opportunities available.



Simon Hallett
Head of Climate
Strategy

Approaches to Climate & Net Zero Shift from Window Dressing to Real Change in 2023

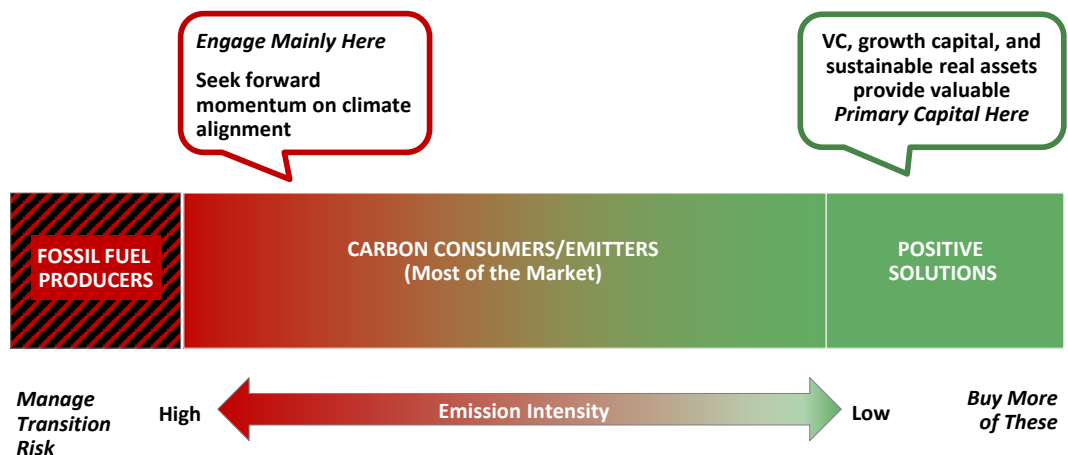
Since the 2015 Paris Agreement, global attention has increased on limiting the global temperature rise to 1.5 degrees Celsius by achieving “net-zero” greenhouse gas emissions by 2050. Glasgow’s COP26 climate conference triggered greater scrutiny of targets set by the increasing number of investors making net-zero commitments. This has focused attention on what net zero should mean for an investment portfolio.

At first, the common interpretation was to reduce “portfolio emissions” by selling high emission companies. This is called portfolio decarbonization. Since most emissions are concentrated among a small number of companies and sectors, it proved surprisingly easy. But it led to accusations of window dressing and greenwashing. While selling high carbon companies does tend to increase those companies’ costs of capital, it made little difference in the emissions those companies contributed.

The focus is now shifting toward driving “real world change” rather than portfolio optics. The main lever is to encourage more portfolio companies—especially the high emission ones—to adopt “Paris-aligned” decarbonization plans with third-party verification. This can be achieved through active ownership—voting and engagement. It needn’t imply portfolio changes, but it must have genuine bite, with investors and their managers prepared to challenge and vote against company management if necessary. It can even be followed by passive investors, though the sanction of divestment adds teeth to any engagement. Private fund general partners can often directly drive better climate performance than small public shareholders, as large or even controlling owners, so they should be held especially accountable.

Voting and engagement works with established self-funding businesses that are hard to influence by public equity capital allocation. Elsewhere, credit strategies and private investments are more likely to provide net new financing to business; in this case, capital allocation does matter since it could fund new climate positive or negative activity. As an extension of this idea, investors increasingly seek opportunities among climate solutions—businesses that are rapidly decarbonizing or enabling others to do so.

PRAGMATIC PROGRESS OVER TIME MUST BE DRIVEN BY ACTIVITY IN THE REAL WORLD AND NOT JUST REBALANCING



Source: Cambridge Associates LLC.



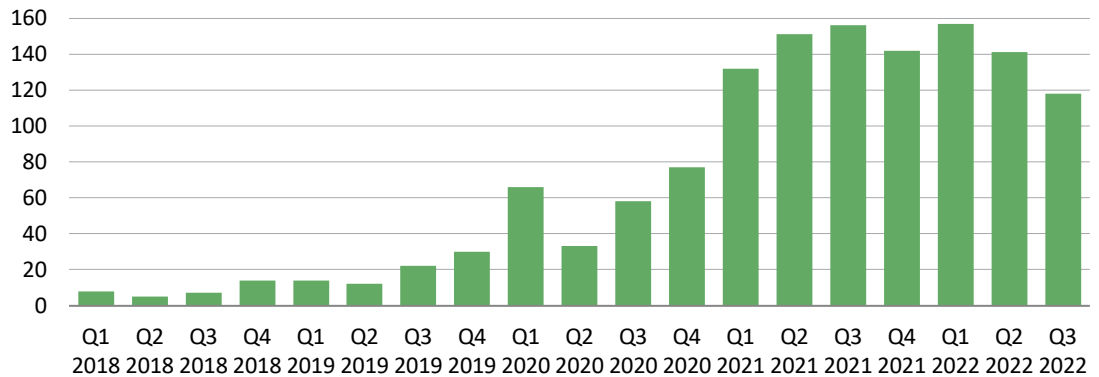
Chavon Sutton
Senior Investment
Director, Sustainable
& Impact Investing

Sustainable and Impact Investors Will Prune the Weeds in 2023

If there was a season of abundance in sustainable and impact investments (SII), it was the past three years. The letters “ESG” (environmental, social, and governance) became a calling cry, sprouting up on earnings calls in what appeared to be a seismic shift in companies wanting to approach business more sustainably. ESG and sustainable exchange-traded fund inflows exploded, reflecting a heightened desire to use capital to right environmental and societal wrongs. The first net outflows since 2017 from the SII investment universe were seen in 2022, as investors began pruning the weeds in their portfolios. In other words, they trimmed sustainable investment allocations that suffered relative underperformance or missed the mark on alignment with sustainability goals.

US COMPANIES CITING “ESG” ON EARNINGS CALLS HAS INCREASED

First Quarter 2018 – Third Quarter 2022



Source: FactSet Research Systems.

Investors turned their backs against a swell of so-called green-, blue-, and social-washed products—designed to attract assets rather than achieving genuine social and financial returns. And Russia’s invasion of Ukraine exacerbated this trend by amplifying an already extraordinary run-up in energy prices that hampered the relative performance of sustainability funds that often exclude such companies.

As risk assets struggle with elevated inflation and below-trend economic growth, 2023 will usher in a new—more cautious and demanding—era of SII. A rebound in the pace of SII investing will be propelled by the application of more robust frameworks,* which refocus values, reframe risk, widen the investment opportunity set, and produce positive real-world outcomes. Global reporting and measurement standards should continue to converge, giving investors greater clarity around how best to set, measure, and track ESG and impact metrics. Investors will be more discerning in their manager selection, seeking those with greater intentionality around sustainability and impact themes, traceable through lines between intent and execution in their portfolios, and a penchant for risk management.

A turbulent year will compel rigor, which we think is the right kind of fertilizer for newly planted SII seeds.

* Cambridge Associates’ Social and Environmental Equity investing framework seeks to induce investment in SII themes through the application of a more systems-focused lens, breaking down cognitive bias in investment processes and reclassifying investment managers with stronger alignment to investable social and environmental equity themes.

US Federal Reserve Pauses, but Does Not Pivot in 2023



Celia Dallas,
Chief Investment
Strategist

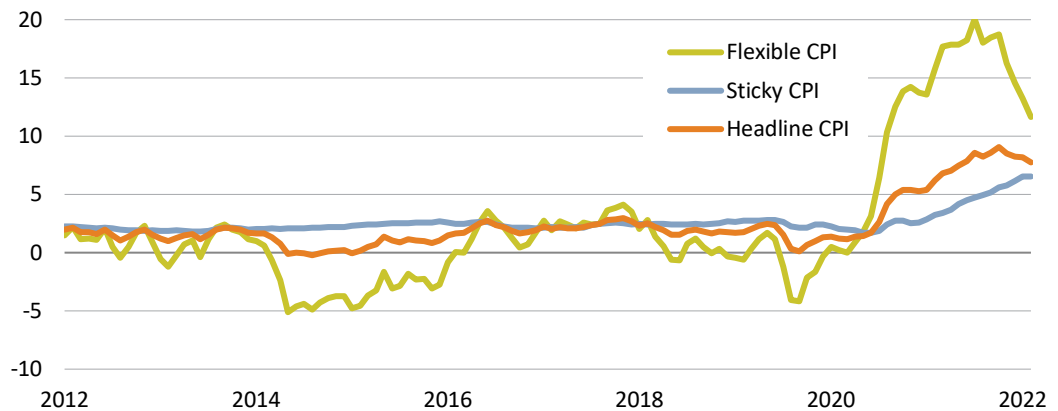
The US Federal Reserve has sent clear signals that inflation is enemy number one and that defeating inflation requires further monetary policy tightening even if this results in recession. We see a pause in tightening as more likely than a pivot to easing in 2023 because inflation will be slow to decelerate, causing the Fed to hold rates in restrictive territory* for longer than many other cycles.

Inflation is starting to decelerate in some segments of the economy; however, “sticky inflation” sources (e.g., housing, services) continue to accelerate. Wages are supported by persistent labor market strength and will only ease as the economy softens.

Unemployment remains near recent lows of 3.5% amid lower, but still robust, job growth. The number of job openings is down by more than 10% from its March peak, so the labor market is starting to soften, but it remains tight.

PRICES ARE MIXED WITH SLOWER MOVING ITEMS (E.G., RENTS) STILL INCREASING

September 30, 2012 – October 31, 2022 • Year-Over-Year Percent Change (%)



Sources: Federal Reserve Bank of Atlanta and Thomson Reuters Datastream.

With inflation decelerating slowly and labor markets showing resilience, the Fed will see little reason to pivot in 2023. At the end of November, the market is pricing in that the Fed will stop tightening in May 2023 with a terminal rate of 4.9%. This would imply an average degree of tightening based on tightening cycles since 1965 despite an above-average level of inflation. Still, markets will be far less vulnerable to rising rate risk in 2023 given the degree of tightening priced into the market.

* Restrictive territory refers to keeping policy rates above the neutral rate, or R^* . R^* is the equilibrium real rate of interest that balances between full capacity utilization of resources and low and stable inflation. R^* can be estimated but is not an observable rate.



TJ Scavone
Investment Director,
Capital Markets
Research

Developed Markets Government Bonds will Rebound in 2023

Global bonds are on pace to suffer their worst year on record in 2022, with the FTSE® World Government Bond Index returning -18.1% through November 30 in USD terms. Unlike today, yields offered on government bonds were near their all-time lows heading into 2022, which left them vulnerable to the sharp rise in yields that occurred as central banks tightened policies.

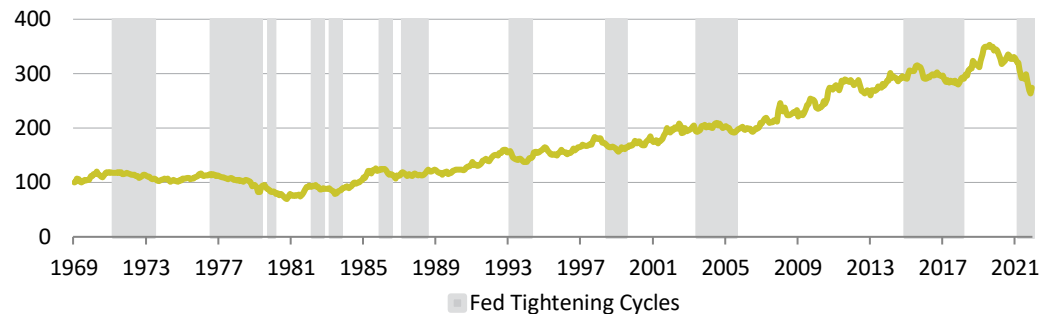
Monetary policymakers have aggressively tightened policy in 2022 to bring down elevated inflation. Out of the 37 central banks tracked by the Bank for International Settlements, 33 have raised policy rates so far in 2022, with the median central bank increasing rates by 275 basis points (bps). However, we expect most central banks to dial back (or pause) tightening efforts in 2023, which should support government bonds.

There are several other reasons to suggest government bonds will perform better in 2023. For one, negative return years are rare. Ten-year US Treasuries have only experienced 11 negative return years out of 63 since 1960, and only once experienced back-to-back years of negative performance, in 2021 and 2022. Second, 2022’s sell-off was extreme. For example, on a rolling 12-month basis, ten-year UK gilt yields at one point had increased as much as 307 bps this year, which is the 13th largest increase since 1901, and the benchmark suffered its third worst 12-month performance on record over this period. Lastly, at some point, we expect the market will see stronger demand from buyers looking to lock in higher yields, such as pension funds.

Government bonds could continue to struggle if inflation remains sticky and central banks tighten more than expected. However, investors are being fairly compensated for duration risk at current yields based on long-term trends in economic fundamentals. In the short term, growth is slowing, which should help limit any further rise in yields. If yields do overshoot, government bonds have less downside, as index yields have increased and duration has fallen, whereas if the aggressive tightening by global central banks does cause a recession next year, government bonds are better positioned to support portfolios.

10-YR US TREASURY EXCESS RETURN VS CASH TYPICALLY BOTTOMS WHEN THE FED STOPS TIGHTENING

December 31, 1969 – November 30, 2022 • December 31, 1969 = 100



Sources: Federal Reserve, Global Financial Data, Inc., Intercontinental Exchange, Inc., and Thomson Reuters Datastream.



Wade O'Brien
 Managing Director,
 Capital Markets
 Research

Liquid Credit Markets Should Generate Higher Returns in 2023

For many credit assets, 2022 will likely go down as one of the worst on record, but the flipside of poor performance is higher yields, which will eventually generate higher returns. The path to these returns could be bumpy, however, and investors should plan accordingly. Current potential headwinds include higher interest rates than anticipated and decreased debt affordability.

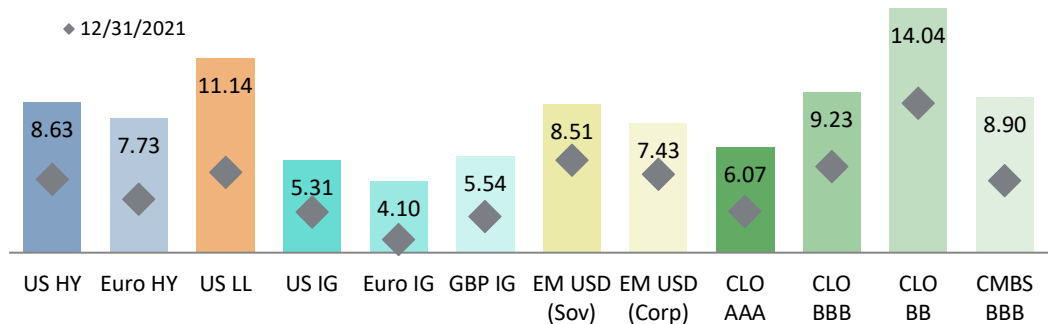
Many high-yield (HY) borrowers are prepared for a downturn, as gross leverage is nearly the lowest in a decade and refinancing needs over the next 12 months are limited. More importantly, prices offer investors cushion for future stress. B-rated HY bonds trade around \$0.88, and CCC-rated bonds trade around \$0.76—pricing last seen during the COVID-related depths of March 2020 and before that, early 2016. So, while HY defaults will almost certainly rise from current depressed levels (1.5% on a trailing 12-month basis), even if they soar past current rating agency forecasts (around 3% to 4% over the next 12 months) and recoveries are in line with historical averages, investors buying bonds at these prices could still see reasonable returns over a three-year period.

Higher-quality credit investors should not ignore their own expanding opportunity set. Rising interest rates and credit spreads mean yields of assets such as AAA-related CLO debt (now over 6%) and US investment-grade corporate bonds (now over 5%) have more than doubled over the course of 2022. Given extremely limited historical default rates, the main risk to investors is marking-to-market from higher base rates. European investment-grade buyers also should relish the opportunity. Investment-grade sterling corporate bonds now yield 5.5% thanks to the recent LDI-driven volatility in the gilt market. This is more than sterling HY bonds were yielding as recently as February!

Although we expect liquid credit performance will improve in 2023, investors should understand the markets are likely to be volatile and may get worse early in the year before improving. The near closure of new issue markets in recent weeks is an ominous sign. Still, those willing to weather volatility are likely to see attractive returns, given today's depressed valuations.

CREDIT YIELDS HAVE RETRACED HIGHER IN 2022

As of November 30, 2022



Sources: Bloomberg Index Services Limited, Credit Suisse, and J.P. Morgan Securities.



Kevin Rosenbaum
Global Head of
Capital Markets
Research

Global Earnings Growth Will Be Below Average in 2023

Corporate earnings proved resilient in 2022, with nominal earnings expected to grow 10% and inflation to rise 8% globally. This resiliency came even as several central banks raised their policy rates by large margins to address broadening inflationary pressures. We believe this tightening will further weaken the global economy, which is already struggling with the consequences of the war in Ukraine and China’s slowdown. As a result, we expect below-average earnings growth among companies in 2023.

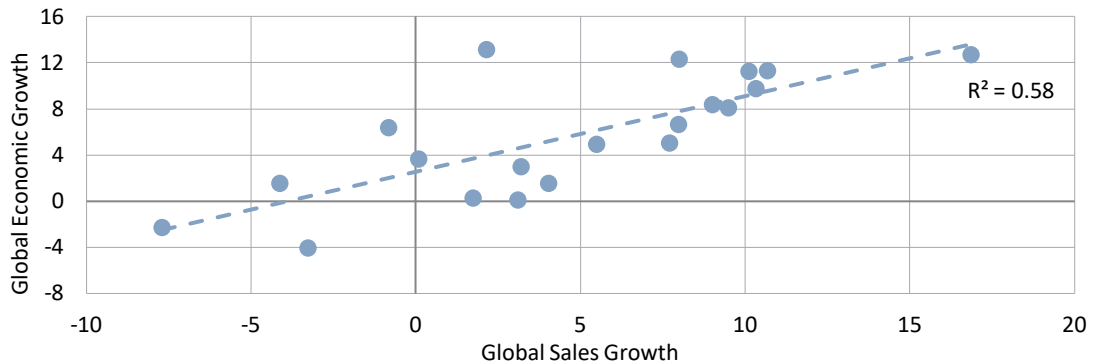
Earnings growth has averaged 10.4% across the last 20-year period. Sales growth contributed roughly half of that growth and is strongly linked to the direction of the economy. As it stands, global real GDP is expected to grow by 2% in 2023. We suspect the risks to that view are skewed to the downside, given the difficulty in knowing the impact of higher interest rates on economic activity in real time and our expectation that the Federal Reserve will not quickly pivot to cutting interest rates. More cyclical areas of the economy, which tend to be leading indicators of the broader economy’s direction, highlight our concern. For instance, Australian, Canadian, and US home prices have all started to contract, and key export bellwethers—Germany and Korea—have seen new order activity fall.

Profit margin expansion has contributed the balance of earnings growth. Across the past two decades, margins increased from 4.6% to most recently 10.8%, which was a calendar-year high. Despite the large change in interest rates and current inflationary pressures, which impacts everything from wages to input prices, analysts expect margins to stay near record levels at 10.7% across full-year 2023. We suspect that expectation is optimistic. Margins typically come under pressure as economic growth weakens, and while we do think inflation will trend down next year with the United States leading Europe, we believe it will remain uncomfortably above central bank targets and a challenge for companies to confront.

While we believe corporate earnings growth will be below average, equity price levels have tended to bottom before earnings in past downturns. Ultimately, we think most investors will be best served by sticking close to their policy equity allocation weight, as we detail elsewhere in this outlook.

GLOBAL CORPORATE SALES GROWTH IS LINKED TO GLOBAL ECONOMIC GROWTH

20-Yr Period Ended 2021 • Percent (%)



Sources: I/B/E/S, MSCI Inc., Oxford Economics, and Thomson Reuters Datastream. MSCI data provided “as is” without any express or implied warranties.



Sean Duffin
Investment Director,
Capital Markets
Research

Developed Markets Value Stocks Should Outperform Broader Equities in 2023

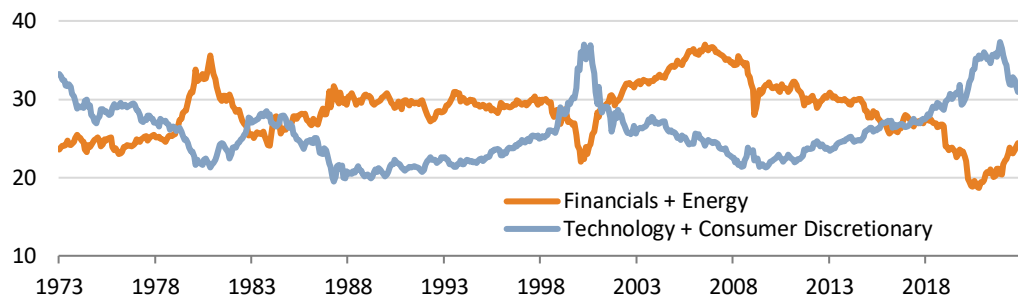
Value investors have not had much to cheer about since the end of the Global Financial Crisis. In fact, developed markets value stocks’ annual return was nearly 3 percentage points (ppts) lower than that of broader equities from 2010 through 2021. But value held up better in 2022, besting the broader market by more than 10 ppts, even as volatility permeated financial markets.

Surging real interest rates have taken a toll on growth-oriented equities, which tend to have longer equity duration. As liquidity continues to get drained from the market, more speculative equities are likely to continue to feel pressure. High-flying technology companies have been hit particularly hard; the Goldman Sachs Non-Profitable Tech Index lost nearly 60% so far in 2022. Even after that decline, the index price still trades near pre-COVID levels, when financial conditions were much looser.

While the end of the rate hike cycle may be in sight, we believe value’s outperformance will persist. Financials and energy—two sectors that are more heavily weighted in developed markets value indexes—have historically benefited from elevated real interest rates and inflation. History also suggests that the recent leadership of growth-oriented sectors will not last, given value-oriented sectors have reclaimed market share from growth counterparts multiple times in the past 50 years as macro conditions changed. Even after richly valued technology stocks lost some of their froth in 2022, many still command high valuations and could decline further.

SECTOR DOMINANCE DOES NOT LAST

January 31, 1973 – November 30, 2022 • Global Equity Sector Weights (%)



Source: Thomson Reuters Datastream.

Much depends on the future path of inflation as central banks are attempting to thread a needle to reduce price pressures while also avoiding a severe recession. An economic hard landing could create a challenging environment for value, which is heavily weighted in some more cyclically sensitive sectors. But favorable starting valuations could help mitigate expected downside for value. Developed markets value trades at a normalized price-earnings multiple that is 0.68 that of broader equities, which ranks in just the 8th percentile of its history dating back to 1984.

Thus, as we enter 2023, we favor equities that look better positioned to hold their value in an environment of elevated real interest rates and have attractive valuations to boot.



Celia Dallas,
Chief Investment
Strategist

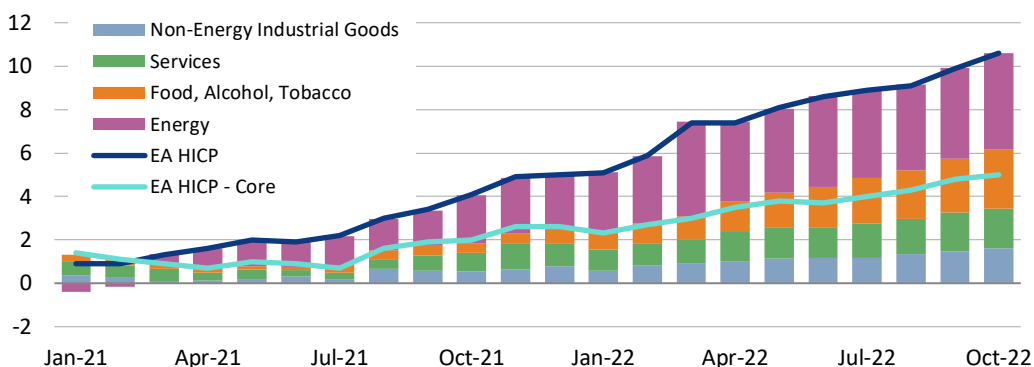
The Euro Area Risks Stagflation in 2023

We expect euro area inflation to remain high in an environment of constrained energy supply. At the same time, high energy prices, reduced industrial production, and potential energy rationing will hit economic growth, raising the risk of stagflation. Despite this outlook, relatively cheap euro area equity valuations reflect the outsized risk European equities are facing, and we remain neutral on the equity market.

Nearly half of the EU’s gas and a quarter of its oil were sourced from Russia. In an effort to offset the elimination of Russian gas—along with the loss of hydro power and nuclear production—European countries are importing gas from other sources to the degree that their infrastructure allows, building more liquified natural gas terminals to increase import capacity, accelerating renewables investments, and seeking to reduce consumption. These efforts have resulted in a high energy price tag that is pressuring inflation beyond just energy and food prices. Looking beyond this winter, Europe will need to source gas and refill storage, likely without any Russian gas, putting continued pressure on gas prices and economic growth.

EUROZONE INFLATION IS BROADENING OUT

January 31, 2019 – October 31, 2022 • Percent (Year-Over-Year)



Sources: Eurostat and Thomson Reuters Datastream.

Some corporations have cut back on production, and involuntary rationing may be necessary to get through the winter with limited energy supplies. Since March 2022, the consensus 2023 real GDP growth forecast for the Eurozone has fallen 260 basis points to 0.1%. At the same time, Europe’s central banks are likely to maintain a tightening bias. Meanwhile, governments are engaged in large-scale fiscal interventions aimed at easing the pain of rising energy prices.

These challenging conditions are priced into the market to some degree. On a normalized basis, the price-to-cash earnings ratio of Europe ex UK equities is close to its median historical level, compared to US and other developed equities that continue to trade at a considerable premium. Further, the euro has been the primary relief valve for stress in the euro area, falling 14% versus the US dollar over the first three quarters.



TJ Scavone
Investment Director,
Capital Markets
Research

A European Sovereign Debt Crisis Will Not Occur in 2023

European policymakers face a difficult challenge as the energy shock has increased the risk of stagflation, as we detail elsewhere in this outlook. The resulting mix of tight monetary and loose fiscal policies has heightened concerns about debt sustainability and put upward pressure on euro area (EA) government bond yields.

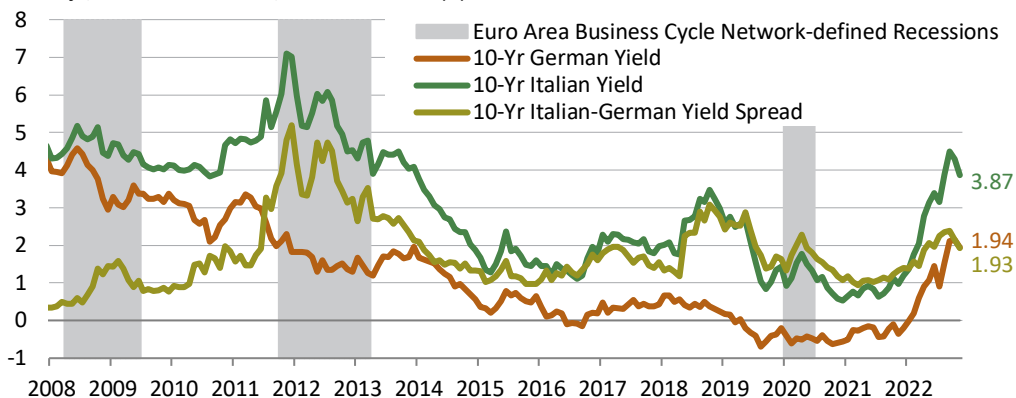
However, while ten-year Italian government bond yields, for example, are the highest they've been since the 2009–12 European Sovereign Debt Crisis, unlike previous “debt scares,” the rise in yields in 2022 has been driven by higher core EA country yields. The spread between ten-year Italian-German yields, while elevated, remains below its 2018 high and well below the heights reached in 2011. EA periphery yields may move higher as the European Central Bank (ECB) continues to tighten, or if the economic outlook deteriorates. But we do not expect spreads to blow out as they did in 2011–12.

Italy likely represents the biggest risk to this view. With a debt-to-GDP ratio of 150%, Italy is one of the most indebted EA countries. The combination of higher borrowing costs, looser fiscal spending, and weaker growth threatens to further strain Italy's fiscal position. Further complicating matters is the far-right coalition's recent election victory. However, high inflation and the low average cost and longer average maturity of outstanding Italian debt should mitigate the impact of higher borrowing costs and increased fiscal deficits. Italy also has less incentive to take a hardline stance toward the EU, as it did in 2018, given stronger support for the EU within Italy and the fact that Italy has grown increasingly dependent on the bloc.

Quantitative tightening is also a risk, but the ECB is incentivized to prevent a periphery spread widening, as it would reduce its ability to address inflation via tightening. As such, it has added tools (e.g., flexible pandemic emergency purchase programme reinvestments and the Transmission Protection Instrument) to strengthen the credibility of its backstop. If there was a large move in Italian-German spreads above their 2018 highs, we would likely view it as a buying opportunity.

CORE EURO AREA GOVERNMENT BOND YIELDS HAVE DRIVEN THE RISE IN PERIPHERY COUNTRY YIELDS

January 31, 2008 – November 30, 2022 • Percent (%)



Sources: Euro Area Business Cycle Network and Global Financial Data, Inc.

Chinese Equities Should Outperform Global Equities in 2023



Aaron Costello
Regional Head
for Asia

The Chinese economy and equity markets have been pummeled over the past two years due to self-inflicted policy actions, starting with the regulatory crackdown on the technology sector, a tightening of credit to the real estate sector, and the ongoing zero-COVID policy. From its peak in February 2021, the MSCI China All Shares Index declined more than 40% through the end of November, underperforming global equities by a wide margin.

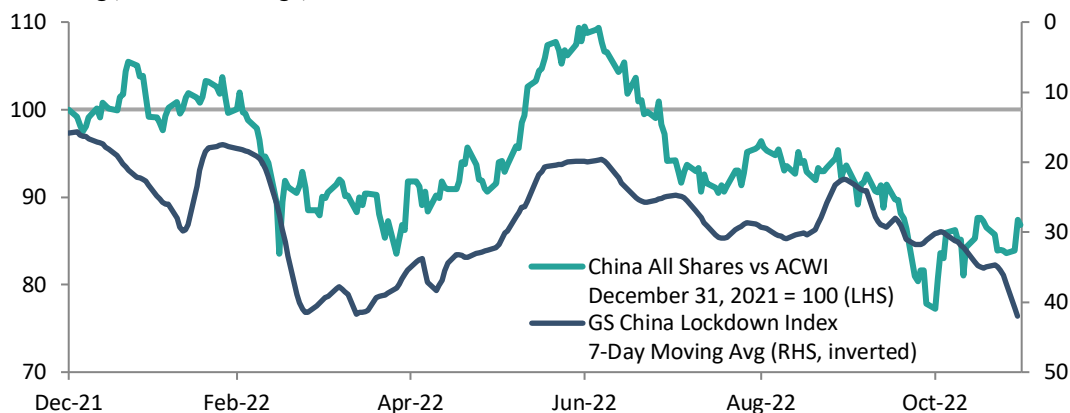
With Xi Jinping further consolidating power and giving no clear signal of a change in policies, investors have capitulated on any near-term recovery in the Chinese economy and dumped Chinese equities following the Party Congress in October. Yet, amid the investor gloom, China will likely surprise to the upside in 2023, both by unveiling new pro-growth policies and by moving away from the zero-COVID policy sooner than expected.

The Politburo meetings and Central Economic Work Conference held in December will give more clarity on economic policy and spending plans, while rumors of a change in the zero-COVID policy propelled Chinese equities higher in early November. Although the official stance remains that zero-COVID is the appropriate policy for China, a subtle shift in government rhetoric seems to be underway, particularly regarding the virus’s lethality and local governments’ lockdown procedures. Our view is that small policy tweaks will set the stage for a larger shift, given the negative economic impact of current policies. However, meaningful policy change may not occur until after first quarter 2023, given the required tilt in government rhetoric, and because major policies are formally approved and adopted at the National People’s Congress in March. There may also be a desire to wait until any winter surge in global COVID-19 cases passes.

Thus, while we shouldn’t expect China to abandon its zero-COVID policy in the near-term, investors should watch what the government does, rather than what it says. Given depressed valuations and high skepticism, Chinese equities face a low bar heading into 2023.

EASING OF LOCKDOWNS SHOULD SEE CHINESE EQUITIES OUTPERFORM

December 31, 2021 – November 30, 2022



Sources: Goldman Sachs Global Investment Research, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.



Stuart Brown
Investment Director,
Capital Markets
Research

EM ex China Equity Performance Will Be Unremarkable in 2023

Emerging markets (EM) excluding China equities are on track to underperform developed markets (DM) in 2022 in USD terms. While elevated external pressures and a late business cycle environment temper our enthusiasm for EM ex China in 2023, this backdrop has largely been priced in by markets. The balanced outlook suggests performance could be unremarkable, and we think investors should hold EM ex China allocations in line with their policy.

A continuation of dollar strength and restrictive Federal Reserve policy will weigh on EM ex China equities. In 2022, our EM external vulnerability gauge fell to its weakest level in 20 years, and capital outflows intensified. EM countries drew down foreign exchange reserves to shore up depreciating currencies and cover rising import bills, which adversely impacted current account balances. Although we expect the Fed will eventually pause its rate hiking cycle next year, EM stocks have typically underperformed DM peers in the six and 12 months following the Fed’s final rate hike.

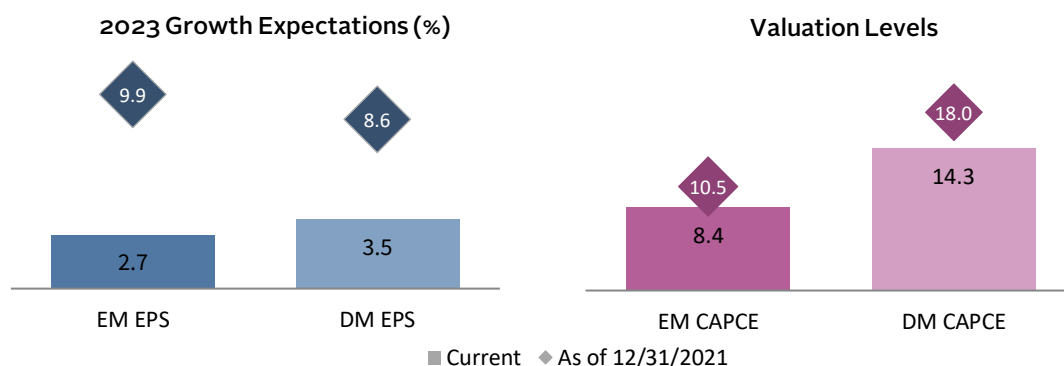
Slowing economic activity poses another headwind. EM tends to lag DM during the latter stages of the business cycle. Weak economic activity will stifle export activity, with the World Trade Organization now expecting trade volume growth of just 1% in 2023. Resource-exporting EMs may be insulated if commodity prices remain elevated, but tech-heavy Asia faces the risk of waning semiconductor demand and heightened geopolitical tensions surrounding the sector.

Still, these dynamics are already baked into markets. Analysts expect EM earnings growth will lag DM in 2023, even after EM earnings growth was downgraded by a larger degree than DM so far in 2022. And EM valuations are low by virtually any measure. The market’s low expectations for EM limit the potential for excessive performance downside.

EM ex China will likely rally when China ultimately relaxes its zero-COVID policy. Although a major policy shift by China may support EM equity performance, we suspect it may also benefit DM shares. In other words, we doubt EM ex China performance will meaningfully diverge from DM equities when China abandons its zero-COVID policy.

EM EARNINGS EXPECTATIONS AND VALUATIONS ARE LOW

As of November 30, 2022



Sources: I/B/E/S, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.



Stuart Brown
Investment Director,
Capital Markets
Research

An Attractive Healthcare Equity Entry Point Lurks in 2023

US healthcare stocks were a mixed bag in 2022. Large and mid caps declined but proved defensive amid the broader equity market drawdown. Small caps fared decidedly worse, especially in the biotech and life sciences industries. Performance may again be difficult next year, as the earnings outlook appears weak and economic challenges seem poised to persist. We expect this may present an attractive opportunity to overweight the sector, given its appealing long-term prospects.

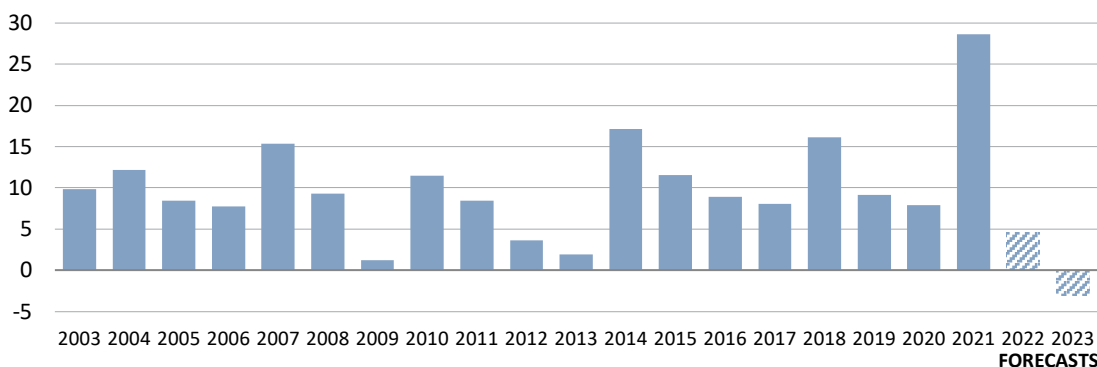
Earnings are expected to decline next year, which would be the only earnings contraction on record based on available data beginning in 1993. There are two primary reasons for the diminished outlook. First, the one-time impact from COVID-19 is set to fade after the sector reported record profit growth in 2021. Second, inflation will bite in 2023. Since healthcare inflation tends to lag overall economy-wide inflation, it only started catching up to broader inflation in the second half of 2022 and looks set to continue accelerating. This may impact spending by way of reduced insurance benefits and higher out-of-pocket costs for consumers. At the same time, the industry faces headwinds from labor shortages and rising input costs.

The macro environment will likely also weigh on the sector, particularly smaller companies. These entities tend to have little to no current earnings, with the lion’s share of their value based on future growth. This makes them highly sensitive to elevated inflation and interest rate changes. Merger & acquisition activity—a key driver of performance—is also likely to remain weak, given the higher cost of capital environment.

There may be an opportunity to overweight the sector next year. An attractive entry point might emerge if performance meaningfully lags broader equities, valuations derate, and the earnings outlook rebounds. We also like the sector’s longer-term prospects, given its compelling secular trends. These include the large demographic shifts in many developed countries, convergence of healthcare and technology, and innovation in drug development, among others, all of which have the potential to drive earnings and outperformance. Given the highly specialized nature of the industry, we suggest implementing allocations through active management.

ANALYSTS EXPECT S&P 500 HEALTHCARE EARNINGS TO CONTRACT NEXT YEAR

2003–23 • Calendar Year Earnings Growth (%)



Sources: I/B/E/S, Standard & Poor’s, and Thomson Reuters Datastream.



Wade O'Brien
 Managing Director,
 Capital Markets
 Research

Energy Equities at Benchmark Weights Will Benefit Investors in 2023

Energy equities have massively outperformed in 2022, with the MSCI World Energy Index beating the broader MSCI World Index by around 70 percentage points through the end of November. Energy sector profits have rebounded as underlying commodity prices were boosted by the tragic events in Ukraine and related supply disruptions. Given this strong performance, investors may be tempted to underweight the sector, assuming weak growth or the long-term decarbonization and net-zero efforts of the global economy will trigger underperformance. But, in the short-term, we recommend benchmark weights, as energy equities remain inexpensively priced and could again surprise in 2023 under several scenarios.

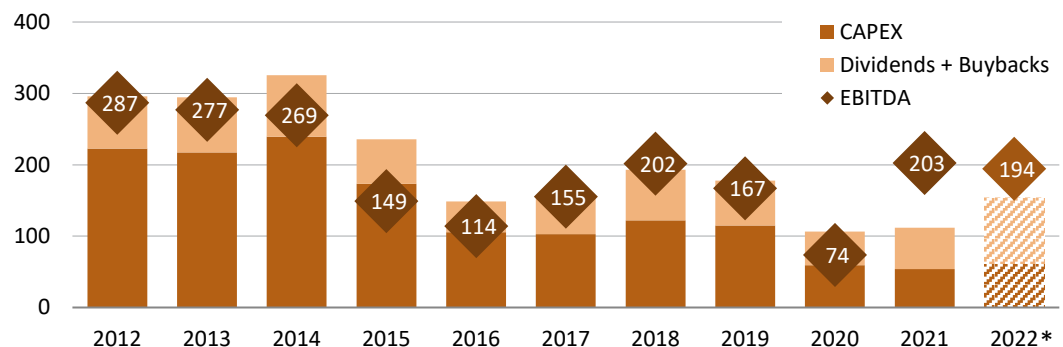
Depressed valuations suggest energy equities are almost universally unloved, despite rebounding profits and strengthening balance sheets. Forward earnings multiples for European and US energy stocks of 5.5x and 9.8x, respectively, are both in the bottom decile of historical observations. Volatile earnings are a consideration and sector earnings are expected to decline 11% next year (versus a 4% increase for the broad index). Risks are likely skewed to the downside if a recession occurs.

Still, there is a more constructive case for energy equities. The sector has been disciplined with capex in recent years and instead paid down debt, reducing the likelihood of a supply gut if global growth continues to slow. Energy companies also should continue to generate robust, if slightly reduced, free cash flow, offering ample cushion for dividends and buybacks. Even with reduced earnings in 2023, large US energy companies will generate enough cash flow to cover their expected dividend more than three times. Finally, there is a sad possibility that the war in Ukraine will escalate, likely putting a floor under commodity prices even amid a global slowdown.

Many questions hang over energy equities heading into 2023. The slowly unfolding energy transition presents both a long-term threat and competing opportunity set, which investors should also be pursuing. However, with valuations depressed and cash flow generation high, investors should maintain neutral positions to public energy companies in the near term. Those doing so should consider active managers that are engaged with corporate management teams and working to accelerate the transition to a low carbon economy.

ENERGY COMPANIES ARE WELL PLACED TO BOOST SHAREHOLDER RETURNS IN 2023

2012–22 • US Dollar (Billions)



* Data for 2022 are through third quarter.

Sources: FactSet Research Systems and MSCI Inc. MSCI data provided "as is" without any express or implied warranties.



Christine Farquhar
Global Co-Head of
Credit Investment
Group



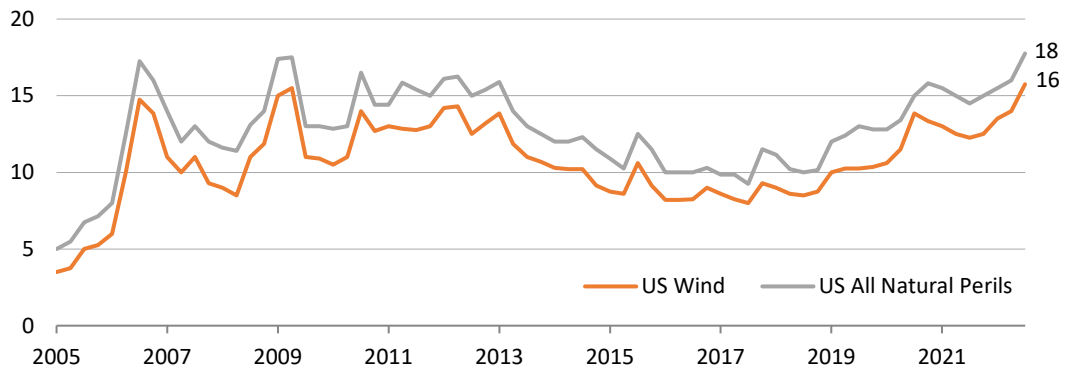
Joseph Tolen
Investment Director,
Credit Investments

Returns of Insurance-Linked Securities Will Improve, Benefiting From Better Pricing in 2023

Insurance-linked securities (ILS) provide a capital markets alternative to traditional reinsurance. Investors receive interest (insurance premiums) and repayment of principal, net of any claims. Over the last 15 years, these assets have been weakly correlated with equities and bonds. Yields rose through 2022, in response to regulatory pressures and a lack of underwriting discipline in Florida. We expect this back-up in yields will translate into great performance next year. Pricing on industry-loss warranties,* which allow investors to trade insurance risk on the basis of parametric industry loss triggers, has been offering yields not seen in more than a decade.

INDUSTRY-LOSS WARRANTY PRICING IS NOW MORE CONSERVATIVE

First Quarter 2005 – Third Quarter 2022 • Percent (%) • \$50B Industry Loss Attachments Threshold



Source: Artemis.bm.

ILS strategies can be complex, as portfolios need to be carefully constructed to limit the tail risk from major events. A combination of liquid catastrophe bonds (CAT bonds) and collateralized reinsurance contracts is best placed to deliver optimal reward for well-managed risk. Experienced managers with transparent track records and limited conflicts with parent company balance sheets are best positioned. The standard benchmark is the Swiss Re Cat Bond Index, reflecting the more liquid end of the \$97 billion ILS market (as of June 2022), but it is not directly investable.

We believe the yields on offer provide a good return opportunity relative to risk next year, but investors clearly need to review the asset class on a regular basis, as it back-stops property against the risks of climate change and global warming. More frequent weather events and more severe loss outcomes have already put upward pressure on yields to compensate investors. Managers are factoring these developments (along with increased general claims inflation) into security selection. They are more careful selecting insurance counterparties in Florida and limiting exposure to aggregate contracts, which are more exposed to higher frequency events such as wildfires, hailstorms, and tornadoes. Explicit meteorological modelling and disciplined underwriting of insured risk increase our confidence in manager selection.

Man-made risks, such as cyber, shipping, and aviation losses, are generally not as well rewarded for less transparent risk. In short, 2023 represents a market dislocation and opportunity to invest in a diversifying asset on attractive historic yields.

* An industry loss-warranty is a reinsurance contract that pays out when the financial losses experienced exceed a specified threshold.



Eric Costa
Global Head of
Hedge Funds



Stephen Mancini
Senior Investment
Director, Hedge
Fund Research

Positive Short Rebates Will Help Long/Short Equity Performance Improve in 2023

We expect the short rebate available to long/short managers will remain positive next year, given our view that the Federal Reserve will not pivot to cutting interest rates. This rebate, which short sellers receive when they borrow stock, has ranged between -50 basis points (bps) and 0 bps for much of the last 15 years. The recent shift of the short rebate into positive territory removes a clear hurdle for long/short equity funds, and we expect it will help performances in this space improve next year.

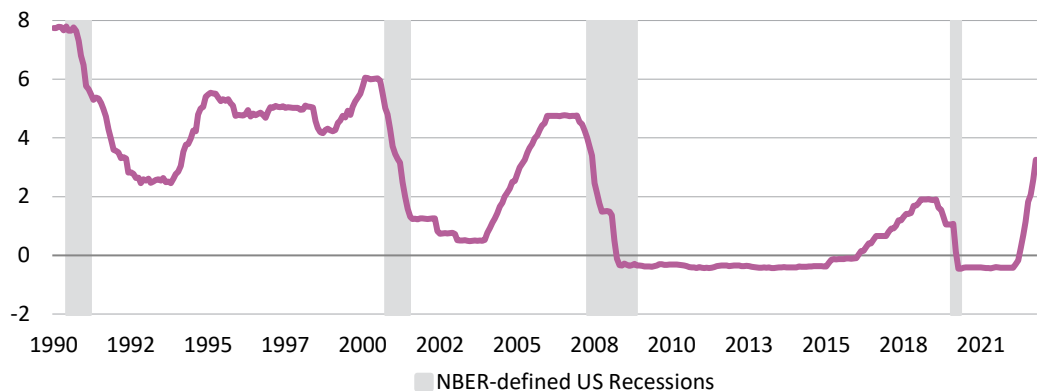
In addition to the short rebate, the return components of long/short equity strategies include the long alpha, short alpha, beta, and fees. Skilled long/short equity managers typically generate long alpha on a consistent basis over time. Generating short alpha is challenging and often lumpy, while creating absolute dollar profits from the short portfolio is even more difficult. In fact, absolute short profits have been essentially non-existent since the Global Financial Crisis.

A large, short rebate acts as a return floor, reduces performance volatility, and helps to cover management fees. Simply put, the short rebate is the current Fed funds rate minus a spread (typically 25 bps to 50 bps) multiplied by the total gross short exposure of the manager. Long/short equity managers with robust short portfolios of individual equities will benefit more than managers with small, short portfolios. This being said, the short rebate should not drive investment decisions. The ability to generate long and short alpha remains most critical.

While directional, growth-oriented long/short equity managers benefited the most from the zero interest rate policy and quantitative easing regimes, the current economic environment should result in more obvious winners and losers as companies must now compete for capital. High-quality businesses should trade at a premium, while low-quality, cash-burning businesses should trade at a discount. Dispersion within equity markets is increasing as is volatility. This is an excellent backdrop for alpha creation on longs and shorts as long/short strategies tend to do well relative to equities during periods of heightened volatility.

SHORT REBATE HAS RETURNED TO POSITIVE TERRITORY

January 31, 1990 – November 30, 2022 • Percent (%)



Sources: Federal Reserve, National Bureau of Economic Research, and Thomson Reuters Datastream.



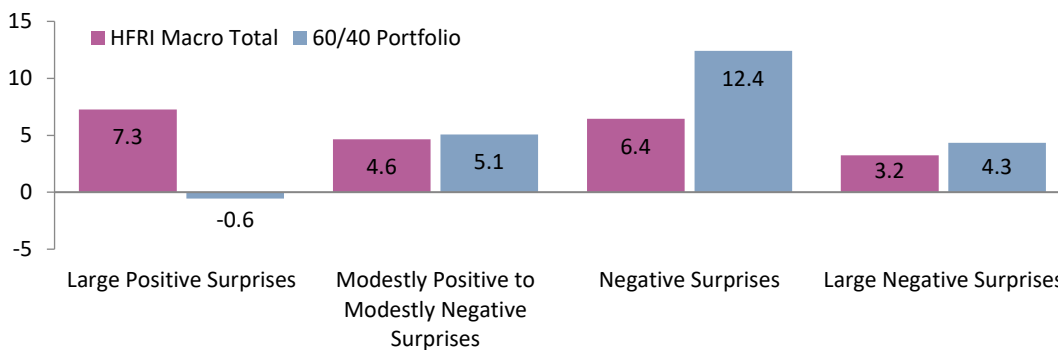
Meisan Lim
 Managing Director,
 Hedge Fund
 Research

Continued Inflation Uncertainties Underpin Our Optimism in Macro Hedge Funds in 2023

More than at any time in recent history, both equities and bonds have been very sensitive to macro events, particularly to inflation prints. During periods of large positive US inflation surprises, macro hedge funds have tended to do better than a typical 60/40 portfolio. Conversely, when inflation has surprised materially to the downside, these managers have underperformed 60/40, though still managed to generate positive returns.

MACRO HEDGE FUNDS TEND TO DO BETTER THAN 60/40 IN LARGE POSITIVE INFLATION SURPRISES

First Quarter 1999 – Third Quarter 2022 • Percent (%)



Sources: Bloomberg Index Services Limited, Citigroup, Hedge Fund Research, Inc., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

After the high inflation experienced in 2022, is the case for macro hedge funds still intact? We believe so. First, we suspect risks are skewed to either matching or exceeding current inflation expectations in 2023, which for the United States and euro area are 4% and 6%, respectively, according to Bloomberg. As a group, macro funds have a wide range of resources to identify mispricing and can choose from a variety of instruments to maximize their payout.

Other tailwinds support our thesis that macro strategy will do well in an environment susceptible to inflation surprises. Rather than focusing on promoting maximum employment as it did in the low-inflation era, the Federal Reserve is now forced to favor combating inflation by raising the Fed funds rate. The market is pricing in that the Fed will stop tightening in May 2023 with a terminal rate of 4.9%, and, as written elsewhere, we believe a pause in tightening after May is more likely than a pivot to easing policy rates. This will impact discount rates, making stocks and bonds vulnerable, and provide good short-selling opportunities for macro managers.

Furthermore, when quantitative easing flushed the markets with liquidity and drove investors to reach for yields higher up the risk curve, concentrated beta-driven portfolios were more attractive than a diversified portfolio with many alpha sources. Now that monetary tightening is in effect and interest rates have risen, macro managers are in an opportune position to benefit from greater alpha opportunities and diversification of assets and geographies.

With loose monetary conditions and unusually low inflation in the rear-view mirror, macro funds that are uncorrelated to traditional portfolios of stocks and bonds will prove useful diversifiers.



Vijay Padmanabhan
Managing Director,
Credit Investments



Frank Fama
Global Co-Head of
Credit Investment
Group

Credit Opportunity Strategies Should Deliver Above-Average Returns in 2023

We believe that the macro environment will continue to cause stress in the economy and create an attractive investment environment across a number of strategies. Primary market yields are attractive due to increased rates and credit spreads. Secondary trading opportunities are attractive, as supply chain issues and inflation are pressuring margins, creating the opportunity to buy the securities of good companies at discounted prices. While the opportunity is global, Europe is particularly attractive due to the geopolitical headwinds. As a result, we expect returns of private credit opportunity strategies to be above their long-term average of 10% in 2023.

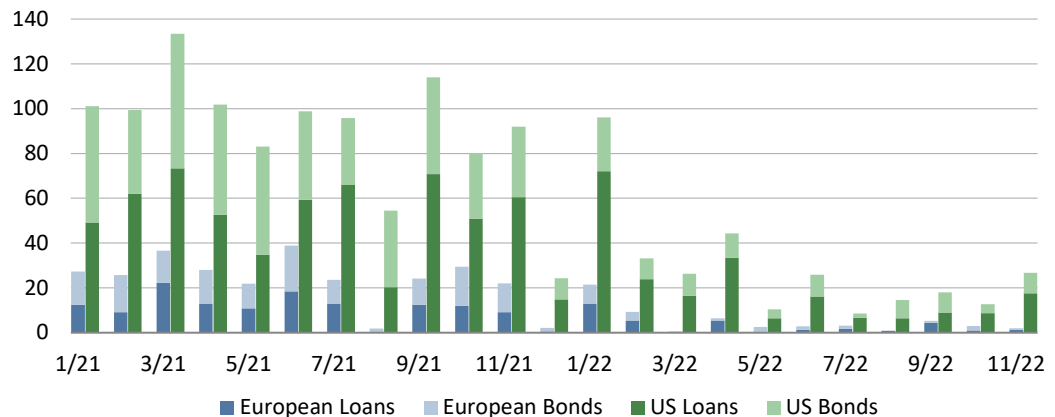
Shortly after the war in Ukraine began, European banks pulled away from lending and the public broadly syndicated loan and high-yield markets largely shut down. As a result, private credit managers have become the main liquidity providers, which has allowed them to demand good terms and pricing. Banks are saddled with underwritten deals they cannot syndicate, and they are desperate to get them off their balance sheets. Loans and bonds have traded lower, making the secondary market attractive. Inflation is driving down margins of otherwise good companies and creating opportunities to buy securities in the 70s that are likely to recover to par.

We expect to see continued pressure on companies and anticipate default rates to rise from low levels. Historically, it takes a recession to bring inflation off its peak, and the central banks have made clear that they are willing to take that risk. While spreads have widened and defaults have increased, they are not near the levels of past economic downturns. Managers are patiently waiting for what is likely to be a prolonged distressed cycle across a range of industries.

Credit opportunities managers normally have flexible mandates that allow them to generate double-digit returns deploying capital in performing credit and early-stage stress situations. In contrast, specialized managers—including distressed managers—may not always find the environment conducive for investing. Performance of managers will vary, and managers with strong portfolio monitoring teams and experienced workout teams are likely to fair better.

SHARP DECLINE IN PUBLIC MARKETS NEW ISSUANCE

January 30, 2021 – November 30, 2022 • US\$ Billions



Sources: Morningstar, Inc. LCD and PitchBook.



Jasmine Richards
Head of Diverse
Manager Research



Carolina Gómez
Associate
Investment Director,
Diverse Manager
Research

Diverse Manager Net Flows Will Remain Positive, Supported by Governance Structures in 2023

US public pension plans have long been investors with diverse fund managers. In recent years, this focus has expanded to family offices, corporate pensions, endowments, and foundations. While allocators’ journeys have varied, many have created diverse investing objectives, codified these in investment policies, and begun implementation. With structural changes in place, we expect allocators to continue driving capital to diverse managers in 2023.

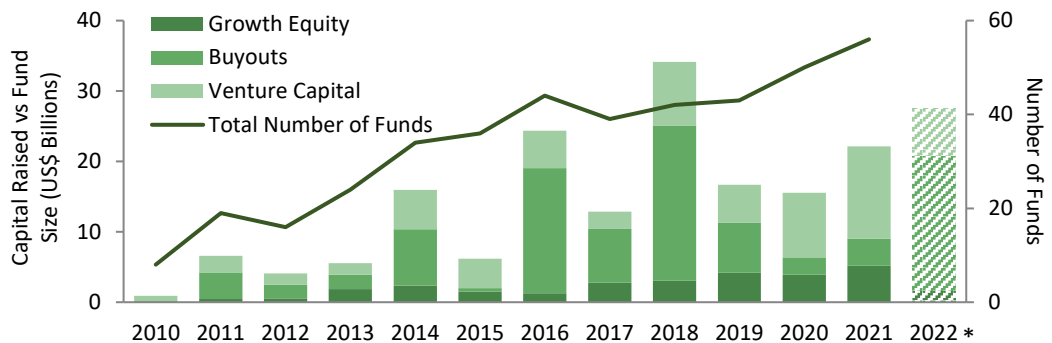
In the wake of increased social unrest due to global inequality, many asset owners have begun to examine diversity within their portfolios. Understanding that less than 2% of global assets are invested with women or people of color,* many asset owners are seeking to be more intentional about their investment with diverse managers. With this interest, diverse fund managers are on pace to raise historic levels of assets in 2022, which is even more notable given the challenging fundraising environment.

Historically, allocations to diverse managers have waned during periods of market stress. During these periods, new manager relationships can be perceived as risky particularly with firms that are younger or have lower assets under management (AUM). Given that many asset owners are currently over-allocated to private investments—the area of highest new fund starts for diverse managers—the market could pose specific challenges for sustained AUM growth for diverse fund managers. Despite these headwinds, data indicates that governance revisions instituted in recent years will support continued commitment to increasing diversity among manager lineups of asset owners.

Data from a recent CA client survey** show that 15% of survey respondents have codified their diversity, equity, and inclusion objectives in investment policy statements, an increase of more than 10 times since 2020. Of the respondents who have implemented diverse manager strategies, 95% indicated that they have increased allocations over the last five years. Additionally, 92% anticipate increasing their allocations even further over the next five years. While market headwinds create higher bars for new commitments, the structural policies and programs that have been implemented in the recent past will support continued commitment to investments in diverse fund managers.

CAPITAL RAISED BY US PRIVATE DIVERSE MANAGERS HAS INCREASED OVER TIME

2010–22



* Diverse-owned firms are defined as those that are over 50% women- or minority-owned.

** For more on this topic see Madeline Clark, “Sustainable and Impact Investing: Insights and Perspectives,” Cambridge Associates LLC, 2022.

* Data for 2022 are as of October 10.

Source: Cambridge Associates LLC.

Private Equity Will Sail in Stormy Seas in 2023



Keirsten Lawton
Co-Head of US
Private Equity
Research



Caryn Slotsky
Senior Investment
Director, Private
Investment Strategy
Research

We expect continued headwinds for private equity (PE). Weak economic activity, difficult political environments, and tight credit markets will pressure current valuations and slow investment and realization activity. While public equities quickly reflected these concerns in 2022, private markets reacted more slowly. Multiples are trending lower but strong earnings growth has mitigated the mark-to-market impact thus far.

In 2022, we saw a drop in activity. Heading into 2023, transaction activity should continue to be slower as valuations settle and lending costs increase, and this lull should favor buyers. General partners (GPs) with mature assets to sell may delay exits given volatile markets pressured by uncertainty. Investors should expect longer holds, and perhaps more GP-sponsored continuation vehicles.

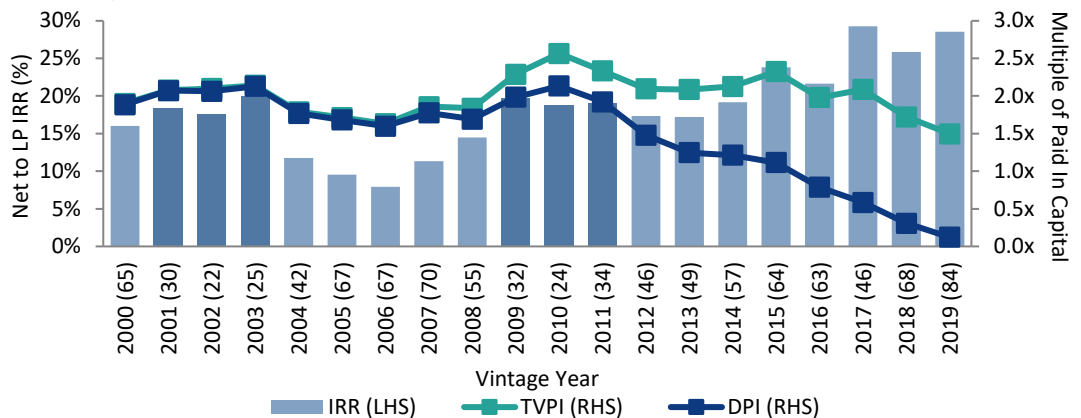
Fewer realizations will result in fewer limited partner (LP) distributions, which since the beginning of 2011 have averaged \$1.49 for every PE dollar drawn, enabling new PE commitments. However, in 2023 we do expect capital calls to pick up given GPs have near-record dry powder. We believe new investment activity, while slower than recent years, will precede a return to robust realizations. The potential of fewer distributions raises the specter of liquidity concerns for LPs as they might need to fund their PE commitments from other sources for the first time in years.

In the current market, GPs are focusing on company-specific actions, risks, and opportunities. From a value creation perspective, revenue growth and EBITDA margins are primary levers of returns, but amid a tight labor market, GPs are also seeking to pull the talent management lever. On the risk side, GPs are revisiting recession scenarios, managing expenses, and monitoring sales. They have raised prices to compensate for higher inflation, which might not be a sustainable strategy.

COVID-era PE returns were strong but largely unrealized and not likely to be sustained in the current market. History has shown that funds deployed at high valuations based on high growth expectations (such as the pre-GFC vintages) posted below-average net internal rates of return, and it is likely that recent vintages will suffer the same fate. Conversely, recession-era vintages, invested at more moderate valuations, have historically outperformed growth expectations and achieved multiple expansion at exit. So, while today's environment could hurt current portfolios, the 2023 vintage could benefit from the valuation reset.

RECESSION ERA VINTAGES HAVE SHOWN RESILIENCE

As of June 30, 2022 • Net to Limited Partners



Source: Cambridge Associates LLC.



Vish Ramaswami
 Managing Director,
 Head of Asia PE/VC
 Research

Venture Capital Interest in India and Southeast Asia will Continue to Increase in 2023

Geopolitical dynamics and the uncertainty generated by China’s zero-COVID policy have dampened investor activity in China venture capital (VC). Concurrently, interest has increased in India and Southeast Asia as potential alternative growth and venture markets, which we expect will continue next year.

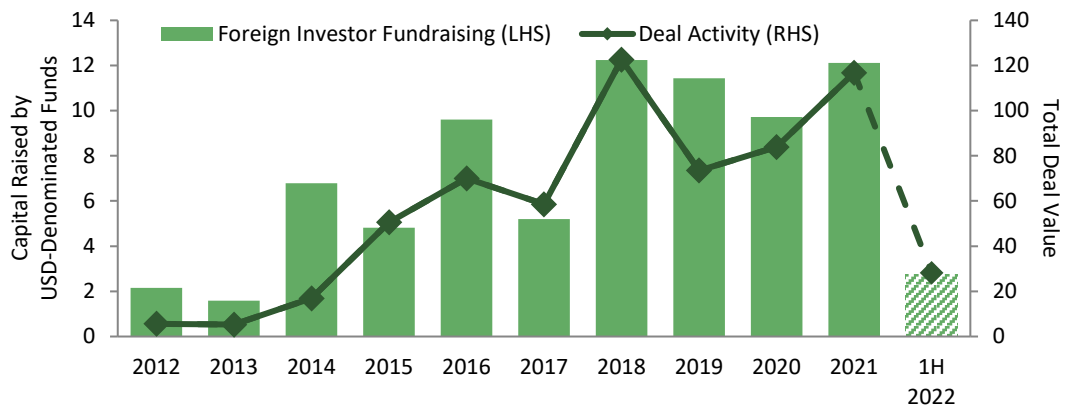
In India, the entrepreneur ecosystem is maturing and there has been a buildup of strong domestic and foreign VC presence. Government and private-sector initiatives introduced over the past decade have facilitated the development of financial and digital infrastructure, creating a fertile opportunity set for start-ups operating in the domestic consumer and enterprise space. Consumer technology, fintech, and software-as-a-service (SaaS) deals have dominated investment activity, leading to a rise in the number of India unicorns in recent years. While the India VC market is looking more proven and attractive vis-à-vis a decade ago, investors should be mindful that the market depth and track record of managers will continue to take time to build.

The same investment themes apply in Southeast Asia, given the rise of internet penetration in markets such as Indonesia and Vietnam. The region likely boasts the second-largest slate of VC managers in Asia after China. However, the market is fragmented across many countries with varied levels of infrastructure development and talent pools, posing unique challenges to scaling and growing businesses. As a result, Southeast Asia VC still lags China or India VC and requires more validation.

In China, the story is mixed. Consumer technology themes have plateaued, given market developments and regulatory headwinds. But China’s increased emphasis on self-sufficiency and innovation in the clean energy and “deep technology” sectors (e.g., semiconductors, automation), supported by the already well-developed supply chain and advanced manufacturing capabilities, presents a secular growth opportunity for companies in these areas. A core challenge is whether the US or Chinese government will place restrictions on investing in these sectors. Meanwhile, any clarity on the lifting of China’s zero-COVID policy could trigger a rebound in China’s growth prospects and its financial markets, leading to a renewed surge in China VC deal activity and fundraising.

CHINA VC FUNDRAISING AND DEAL ACTIVITY COOLED IN 2022

2012–22 • US\$ Billions



Source: PitchBook.



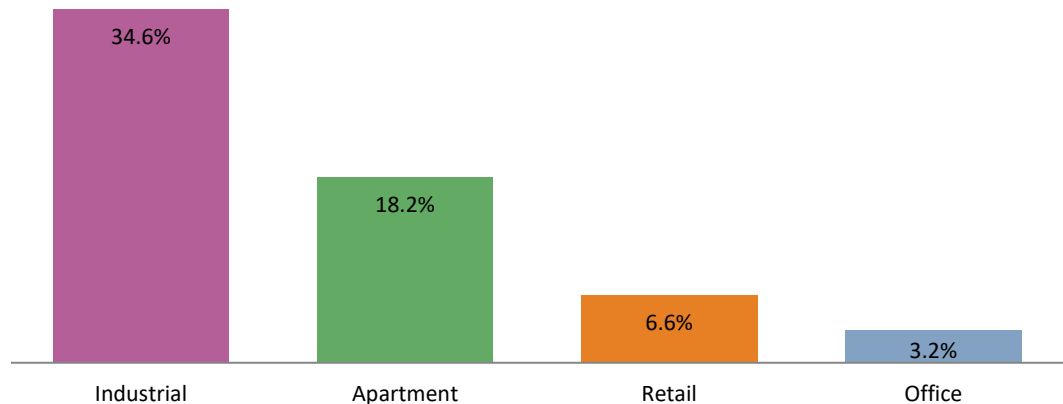
Marc Cardillo
Global Head of
Real Assets

The Office Sector Will Finally Present Attractive Investment Opportunities in 2023

Although it has been nearly three years since the pandemic began, considerable uncertainty remains regarding the future of the office sector. Performance has severely lagged other property types. MetLife estimates that remote work has contributed 400 basis points to the current elevated 16.8% US vacancy rate, although the impact on office cash flows has been limited, given the sector’s long-term lease structures. However, this dynamic has begun to evolve as leases executed prior to COVID-19 begin to expire. Many office owners with looming debt maturities will be faced with the challenge of trying to refinance properties with declining cash flows in a higher interest rate and more restrictive lending environment. These pressures should lead to rising loan defaults and create opportunities for discerning investors to acquire high-quality office properties at attractive valuations.

OFFICE RETURNS HAVE LAGGED OTHER PROPERTY TYPES

As of September 30, 2022 • Cumulative Trailing 12-Month Total Return



Source: National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index.

However, investors will need to be highly selective, as value traps abound. The quality of physical space and a property’s amenities have grown in importance as tenants have more choices available to them and companies need to give their employees a compelling reason to come to the office. The building attributes with the greatest demand include flexible open space, shared meeting areas, sustainable building features, onsite food options, outdoor amenities, and even concierge services. Many of these requirements are best met by modern office properties. As a result, the office sector has become increasingly bifurcated into a world of “haves” and “have nots,” with the newest, best amenitized properties garnering the lion’s share of leasing activity relative to older, class B products. JLL estimates that over the past two years, the office sector has experienced over 153 million square feet of negative net absorption. However, properties built after 2014 experienced positive net absorption of over 61 million square feet.

The growing emphasis on sustainability will only accelerate the bifurcation in office markets. Opportunities will emerge to renovate and transform certain office buildings to meet the various green certification standards that tenants increasingly seek, particularly in several European cities, which have more aggressive carbon reduction goals.



Sean Duffin
Investment Director,
Capital Markets
Research

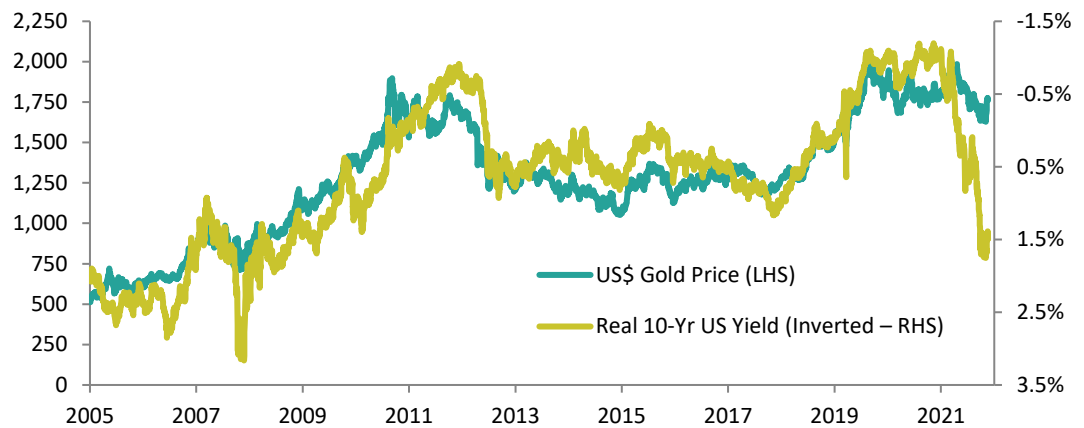
Gold Bullion’s Performance Should Improve in 2023

Ever since the gold price soared during the great inflation of the 1970s, many investors believed that gold would rally again whenever high inflation resurfaced. That inflation reckoning finally happened in 2022, and yet, gold declined in USD terms. The sharp rise in real yields and broad-based dollar strength were two key factors that drove this performance, but there are reasons to believe that these factors could lose potency in 2023. We expect gold’s performance will improve after declining 3.9% in 2022, which ranked near the bottom quartile of its annual returns since 1970.

Gold has historically been sensitive to changes in real interest rates. The yield of the ten-year inflation-linked bond rose more than 250 basis points so far in 2022, but gold prices didn’t decline as sharply as might be expected. This suggests that gold’s price was supported by demand linked to heightened geopolitical risks and inflationary concerns. We also shouldn’t expect the same trajectory of steep yield increases in 2023. The forward market implies ten-year real yields will end 2023 at the same level as today.

GOLD PRICES HAVE BEEN CLOSELY LINKED TO MOVEMENTS IN REAL YIELDS

December 31, 2005 – November 30, 2022



Sources: Intercontinental Exchange, Inc. and Thomson Reuters Datastream.

The dollar’s strength is another key reason the price of gold stumbled in 2022. Non-USD based investors have benefited from the currency gap, as the yellow metal posted positive returns in most major currencies. While the dollar is likely to remain supported in the near term, it is richly valued and has enjoyed a lengthy period of cyclical strength. This suggests the additional pressure the dollar will put on gold next year will likely be smaller than in 2022.

Finally, given the uncertainty surrounding central banks' efforts to rein in inflation, we expect economic growth will be weak. That could be another support for gold, as it has tended to be historically. Still, gold is speculative, and it is more difficult to own when fixed income securities offer better yields than a year ago.



Joseph Marena
Head of Digital
Assets Investing

Digital Assets Will Not Eclipse Prior Highs in 2023

Economic and interest rate headwinds, as well as simple math, will make it difficult for many digital assets to surpass prior highs in 2023. On the latter, digital assets that are down 50% would need to return 100% to reach prior highs, and those down 80% would need to return 500%! While bitcoin, ether, and altcoins have posted gains on this order of magnitude or greater, historically these gains were in the context of strong macro tailwinds.*

Still, our long-term view of the blockchain as a positive new technology remains unchanged. To be sure, it is still developing use cases and building its user base, which will contribute to the asset class’s volatility. But prior crypto winters have been periods of significant technological progress, and major innovations launched following those winters. Given the pace of venture investment during this winter, technological progress will likely again blossom.

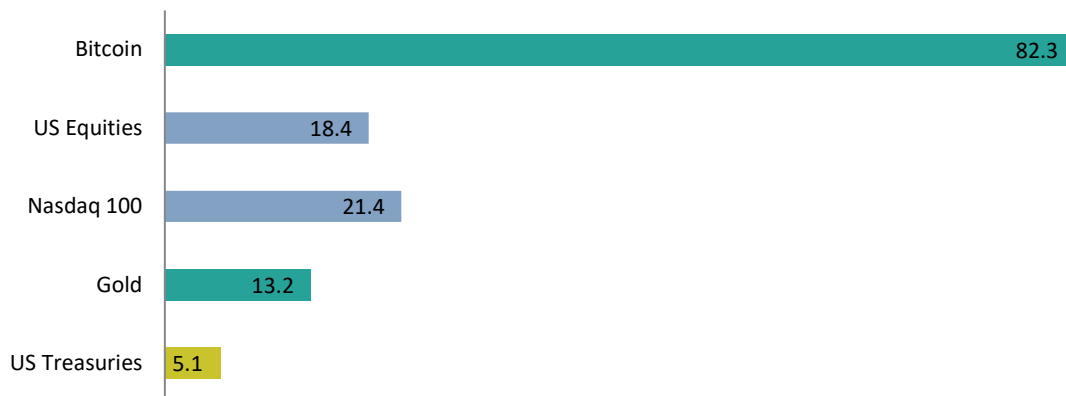
A difficult macro environment may set up an opportunity for some patient investors to enter the digital asset space. Historically, buying risk assets that have sold off heavily has typically been a good strategy. And while valuing digital assets is difficult, venture capital (VC) valuations in late 2022 are down materially, which suggests the ecosystem, broadly speaking, is more attractively priced today than a year ago.

Investors typically enter the space via three main channels: buying digital assets, such as bitcoin, directly; VC funds; and hedge funds. We tend to prefer seed and early-stage venture, given valuations and the strong alignment between investor and founder. But hedge funds are also a possibility, as trading inefficiencies and information asymmetries abound. Allocation size is highly portfolio specific, especially for investors with mature VC allocations, which most likely have exposure already.

In 2023, other downside risks include (1) distress among bitcoin miners, which could force miners to sell their balance sheet bitcoin, driving down other tokens, (2) follow-on failures due to FTX’s collapse, and (3) more FTX-like collapses linked to weak governance and poor business practices.

DIGITAL ASSETS VOLATILITY IS HIGH

As of November 30, 2022 • Percent (%) • Trailing Five Years



* Bitcoin’s largest calendar-year gain since 2015 was in 2017 when it was up 1,394%. In 2020, Ethereum’s best year, it returned 473%.

Sources: Bitstamp LTD., Bloomberg Index Services Limited, Intercontinental Exchange, Inc., NASDAQ, Standard & Poor’s, and Thomson Reuters Datastream.



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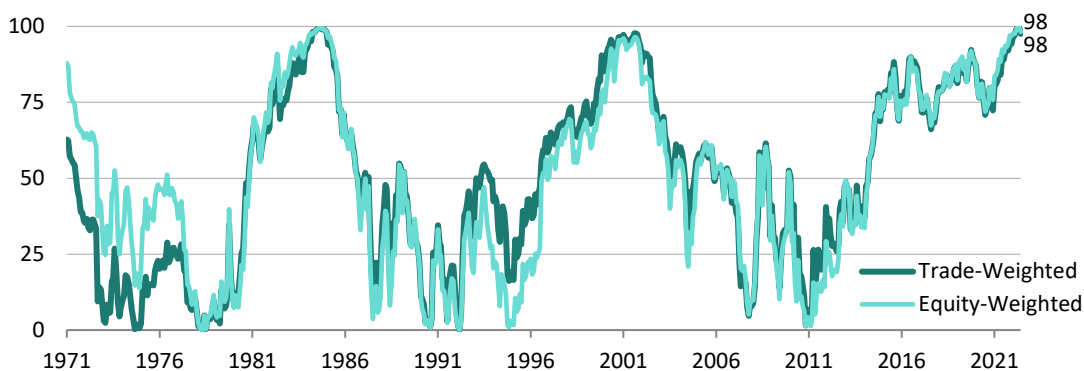
2023 Will Not be a Repeat of the Dollar's Annus Mirabilis

The US dollar experienced a rapid appreciation during 2022. Based on our developed markets (DM) trade-weighted index, which keeps current weights constant, its year-to-date rise of 10.8% is on track to be the sixth largest calendar-year gain for the greenback based on data going back to 1972.

Various factors drove this performance. It began with a widening of interest rate differentials, as the Federal Reserve became more hawkish. This was followed by a widening in expected growth differentials, as the implications of the war in Ukraine for activity in Europe started to become clear. The dollar also benefited all the while from its role as a risk-off currency and broader safe haven, as equity markets declined. The performance challenges facing other traditional safe havens, such as Treasuries and gold, helped its standing in this regard.

THE DOLLAR'S REAL VALUATION IS HISTORICALLY ELEVATED

June 30, 1971 – November 30, 2022



Sources: Eurostat, Federal Reserve, MSCI Inc., OECD, Refinitiv, and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

This rally leaves the dollar looking expensive from a long-term perspective. Its real effective exchange rate reached the 100th percentile of our DM basket in October and now sits at the 98th percentile. In addition, the maximum real appreciation this cycle, at 62%, is comparable to the average of 68% seen in the two prior dollar cycles. In recent decades, peaks in the US dollar have typically been associated with troughs in global activity, alongside an easing Fed. Growing recessionary fears and the softer-than-anticipated US CPI data for October saw the dollar weaken in November, as the odds of these conditions being satisfied in 2023 rose.

While it is possible that we have seen the peak in the dollar for this cycle, we see several factors continuing to act as supports for the greenback in 2023 even if further upside is limited. First, given we believe that inflation risks are skewed to either matching or exceeding current above-target expectations, we doubt the market will price in a deep rate-cutting cycle, keeping interest rate differentials extended. Second, additional rate hikes in Europe, even as a recession there seems likely, is a further headwind to growth beyond that of the direct impact of the energy crisis. Finally, were a meaningful US recession to take hold, further investor de-risking would likely see the dollar benefit from safe-haven seeking flows.

FIGURE NOTES

Equity Market Recoveries Tend to Deliver Abnormal Returns

Data are monthly and reflect the one-year performance following each of the nine equity market downturns since 1970. The median one-year return in based on the entire index history, or 1970 to present. Bear markets are based on a peak-to-trough change in the MSCI World Price Index in USD terms of at least 20%.

Asset Class Leaders Vary as the Macro Landscape Shifts

Private indexes are one-year pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest. The timing and magnitude of fund cash flows are integral to the IRR performance calculation. Public indexes are average annual compounded return (AACR) calculations which are time weighted measures over the specified time horizon, and are shown for reference and directional purposes only. Due to the fundamental differences between the two calculations, direct comparison of IRRs to AACRs is not recommended. Hedge Fund Research, Inc. data revise prior five month's data. Data for 2022 are as of June 30 for Private Equity, September 30 for Real Estate, October 31 for Hedge Funds, and November 30 for all others.

US Companies Citing "ESG" on Earnings Calls Has Increased

Data represent S&P 500 constituents. Data are based on the calendar quarter in which each earnings call took place.

Prices Are Mixed With Slower Moving Items (e.g., Rents) Still Increasing

Flexible CPI and Sticky CPI are calculated by the Atlanta Fed and represent weighted baskets of CPI components, which tend to change quickly and slowly, respectively. According to the Atlanta Fed, Flexible CPI tends to respond more powerfully to economic conditions, whereas Sticky CPI is more associated with expectations about future inflation.

10-Yr Us Treasury Excess Return vs Cash Typically Bottoms When the Fed Stops Tightening

Data are monthly.

Credit Yields Have Retraced Higher in 2022

Asset classes represented by: Bloomberg US Corporate High Yield Index (US HY), Bloomberg Pan-European High Yield Index (Euro HY), Credit Suisse Leveraged Loan Index (US LL), Bloomberg US Corporate Investment Grade Index (US IG), Bloomberg Pan-European Aggregate Corporate Index (Euro IG), Bloomberg Sterling Aggregate Corporate Index (GBP IG), J.P. Morgan EMBI Global Diversified Index (EM USD (Sov)), J.P. Morgan CEMBI Diversified Index (EM USD (Corp)), J.P. Morgan CLOIE AAA Index (CLO AAA), J.P. Morgan CLOIE BBB Index (CLO BBB), J.P. Morgan CLOIE BB Index (CLO BB), and Bloomberg US CMBS Baa Index (CMBS BBB).

Global Corporate Sales Growth Is Linked to Global Economic Growth

All data reflect nominal calendar year growth rates. The MSCI ACWI is used to determine global sales growth.

Sector Dominance Does Not Last

Graph represents sector weightings in the Datastream World equity index.

Eurozone Inflation Is Broadening Out

Eurozone core inflation excludes energy, food, alcohol, and tobacco.

Core Euro Area Government Bond Yields Have Driven the Rise in Periphery Country Yields

Data are monthly.

Easing of Lockdowns Should See Chinese Equities Outperform

GS China Effective Lockdown Index data are through November 29.

EM Earnings Expectations and Valuations Are Low

EPS growth numbers are based on I/B/E/S estimates. The cyclically adjusted price-to-cash earnings (CAPCE) ratio is calculated by dividing the inflation-adjusted index price by trailing ten-year average inflation-adjusted cash earnings. Cash earnings are defined as net income from continuing operations plus depreciation and amortization expense. MSCI does not publish cash earnings for banks and insurance companies and therefore excludes these two industry groups from index-level cash earnings. EM is cyclically adjusted by trailing five-year data.

Industry-Loss Warranty Pricing Is Now More Conservative

An industry loss warranty is a reinsurance contract that pays out when the financial losses experienced exceed a specified threshold.

Short Rebate Has Returned to Positive Territory

The short rebate is represented by the effective federal funds rate minus a 50-bp spread.

Macro Hedge Funds Tend to Do Better Than 60/40 in Large Positive Inflation Surprises

The 60/40 portfolio is composed of MSCI ACWI (gross returns) and Bloomberg Aggregate Bond Index. Inflation surprises represented by the US Citigroup Economic Surprise Index and are divided into four separate quartiles, ranging from first quartile which represents large negative inflation surprises to fourth quartile which represents large positive inflation surprises. There have been 24 large positive inflation surprises, 23 modestly positive to modestly negative inflation surprises, 24 negative inflation surprises, and 24 large negative inflation surprises.

Sharp Decline in Public Markets New Issuance

Recent months' data may revise.

Capital Raised by US Private Diverse Managers Has Increased Over Time

Figures represent capital raised by funds based in the United States. Vintage year is defined as expected year of first closing. Fund size is represented by fundraising target. "Diverse" classification is based on information provided by managers who reported a 33% diversity level on a Cambridge Associates survey. Minority groups include gender and race. Data are continuously updated and thus subject to change.

Recession Era Vintages Have Shown Resilience

Internal rates of return are net of fees, expenses, and carried interest. Private equity includes buyout and growth equity funds. Numbers in parentheses represent fund count in each vintage year. Sample size for each cohort is shown in parentheses. Vintage year is based on first cash flow. Funds less than three years old are considered too young to have produced meaningful returns; those vintages have been excluded from this analysis. Data are continuously updated and thus subject to change.

China VC Fundraising and Deal Activity Cooled in 2022

Foreign investor fundraising reflects capital raised by USD-denominated funds. Deal activity reflects capital invested by both USD- and RMB-denominated funds.

Digital Assets Volatility Is High

Standard deviation based on monthly returns.

The Dollar's Real Valuation Is Historically Elevated

Australian inflation data are quarterly and as of September 30, 2022. Eurozone inflation data are as of November 30, 2022, and are preliminary. All other inflation data are as of October 31, 2022.

INDEX DESCRIPTIONS

Bloomberg US Aggregate Bond Index

The Bloomberg US Aggregate Bond Index is market capitalization-weighted and includes Treasury securities, government agency bonds, mortgage-backed bonds, and corporate bonds. It excludes municipal bonds and Treasury inflation-protected securities because of tax treatment.

Bloomberg Pan-European Aggregate Corporate Index

The Bloomberg Pan-European Aggregate Bond Index is a broad-based flagship benchmark that measures fixed-rate, investment grade securities in the following European currencies: Swiss Franc, Czech Koruna, Danish Krone, Euro, British Pound, Hungarian Forint, Norwegian Krone, Polish Zloty, Romanian Leu, Russian Ruble, and Swedish Krona. The principal asset classes are treasuries, government-related, corporate, and securitized, which include Pfandbriefe, other covered bonds and asset-backed securities. Inclusion is based on currency denomination of a bond and not country of risk of the issuer. The Pan-European Aggregate is a component of other flagship indexes, such as the multi-currency Global Aggregate Index.

Bloomberg Pan-European High Yield Index

The Bloomberg Pan-European High Yield Index measures the market of non-investment-grade, fixed-rate corporate bonds denominated in the following currencies: euro, pound sterling, Danish krone, Norwegian krone, Swedish krona, and Swiss franc. Inclusion is based on the currency of issue, and not the domicile of the issuer.

Bloomberg Sterling Aggregate Corporate Index

The Bloomberg Sterling Aggregate Bond Index is a flagship benchmark that measures the investment grade, sterling-denominated, fixed-rate bond market, including treasuries, government-related, corporate, and securitized issues. Inclusion is based on the currency denomination of a bond, not country of risk of the issuer. The Sterling Aggregate is a component of other Bloomberg Barclays flagship indices such as the multi-currency Global Aggregate and Pan-European Aggregate Indexes.

Bloomberg Barclays US CMBS Baa Index

The Bloomberg Barclays CMBS Index has been designed to measure the performance of investment-grade commercial mortgage-backed securities (CMBS) market. This index is the Baa component of the Investment Grade CMBS index. For investment-grade sectors, securities must be rated investment grade (Baa3/BBB- or higher) by at least two of the following ratings agencies: Moody's, S&P, and Fitch. If only two of the three agencies rate the security, the lower rating is used to determine index eligibility. If only one of the three agencies rates a security, the rating must be investment grade.

Bloomberg US Corporate High Yield Index

The Bloomberg US Corporate High Yield Index measures the US corporate market of non-investment grade, fixed-rate corporate bonds. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below.

Bloomberg US Corporate Investment Grade Bond Index

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

Credit Suisse Leveraged Loan Index

Credit Suisse Leveraged Loan Index is a market-weighted index that tracks the performance of institutional leveraged loans.

Goldman Sachs China Effective Lockdown Index (ELI)

The GS China Effective Lockdown Index is a combination of official restrictions and actual mobility data.

J.P. Morgan CEMBI Diversified Index

The J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI Broad Diversified) is an expansion of the J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI). The CEMBI is a market capitalization weighted index consisting of USD-denominated emerging markets corporate bonds.

J.P. Morgan Collateralized Loan Obligation Index (CLOIE)

CLOIE offers total returns and analytics based on observable pricings of a representative pool of bonds following a stated methodology and is published daily. The index holistically captures the USD-denominated CLO market, representing more than 3,000 instruments at a total par value of US \$236.1 billion. Market participants can track securitized loan market valuations. CLOIE tracks floating-rate CLO securities in 2004-present vintages. Additional sub-indices are divided by ratings AAA through BB, and further divided between pre- and post-crisis vintages. CLO 2.0, or post-crisis vintages, consists of deals issued in 2010 and later. CLOIE utilizes a market-value weighted methodology.

J.P. Morgan EMBI Global Diversified Index

The J.P. Morgan EMBI Global Diversified Index is an unmanaged index that tracks total returns for dollar-denominated Brady bonds, Eurobonds, traded loans, and local market debt-instrument issues by sovereign and quasi-sovereign entities of emerging markets countries.

MSCI All Country World Index

The MSCI ACWI is a free float-adjusted, market capitalization-weighted index designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 49 country indexes comprising 23 developed and 25 emerging markets country indexes. The developed markets country indexes included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States. The emerging markets country indexes included are: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Saudi Arabia, South Africa, Taiwan, Thailand, Turkey, and the United Arab Emirates.

MSCI World Index

The MSCI World Index represents a free float-adjusted, market capitalization-weighted index that is designed to measure the equity market performance of developed markets. It includes 23 developed markets country indexes: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

S&P 500 Index

The S&P 500 Index measures the stock performance of 500 large companies listed on stock exchanges in the United States. The S&P 500 is a capitalization-weighted index and the performance of the ten largest companies in the index account for 21.8% of the performance of the index. The average annual total return of the index, including dividends, since inception in 1926 has been 9.8%; however, there were several years where the index declined more than 30%.

US Citigroup Economic Surprise Index

Citigroup Economic Surprise Index represents the sum of the difference between official economic results and forecasts. With a sum over 0 its economic performance generally beats market expectations. With a sum below 0, its economic conditions are generally worse than expected.

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