Citi Global Wealth Investments

Opportunities on the Horizon: *Investing Through a Slowing Economy*

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Citi Global Wealth
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Foreword

JIM O'DONNELL
CEO of Citi Global Wealth

I'm excited to introduce Opportunities on the Horizon: *Investing Through* a Slowing Economy, our 2023 Mid-Year Wealth Outlook. In this edition, we lay out our expectations and highlight key investment themes to consider for the remainder of the year and beyond.

While 2023 has brought its share of challenges, we also see it as a year of change and opportunity. Inflation is gradually easing, but the US Federal Reserve continues to raise interest rates, leading to an economic slowdown. We expect a "rolling recession" in the US, while other regions gradually emerge from recent shocks. Meanwhile, there is a surplus of cash sitting on the sidelines, waiting to buy the dip. As inflation subsides, we anticipate the US Fed will shift from interest rate hikes to cuts and a potential recovery in 2024, unlocking more potential opportunities for investors.

Keeping portfolios fully invested remains important, and there is a lot you can do to preserve and grow your assets in the interim. In this Outlook, David Bailin, Steven Wieting and our Investment Strategy team offer insights to capture higher bond yields, shift to more defensive and income-oriented equities and shift to diversify currency exposure. We also explore potential opportunities that may come from ongoing trends like the rise of artificial intelligence or nearshoring.

Timely guidance is even more valuable when markets are volatile. In addition to our long-form report, we have prepared a series of short videos and a brief implementation guide for your convenience. Your relationship team can then suggest suitable strategies.

Throughout these tumultuous times, we are proud to serve as your trusted partner and guide.

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1.1

FROM THE DESK OF THE CIO:

Our 2023 Mid-Year Wealth Outlook

DAVID BAILIN
Chief Investment Officer
Citi Global Wealth

This is a time when investors are looking for a way forward. While headlines about US debt, the impact of artificial intelligence, US-China tensions and the war in Ukraine dominate the news, we believe the landscape for investing has the potential to evolve positively. Our view, reflected in our updated Strategic Return Estimates[1] (See FIGURE 3: Recession, recovery: A journey unfinished), is that investors who stay invested and rotate their portfolios toward timely opportunities may be well-rewarded over the next decade.

At the moment, investor sentiment appears poor, and that creates potential opportunities. Bearishness, as measured by short equity interest, is at multi-decade highs while the amount of money in money funds and Treasury Bills (T-bills) is at a record high. Rates for short-term cash are at the highest level since 2007.[2] All these factors suggest that investors are waiting for a decline in market indices before shifting assets into equities. This may be the most anticipated bear market ever. It is also an argument for why market timing will not work. If everyone is waiting, any decline may be brief and untradable.

[1] Strategic Return Estimates (SRE) based on indices are Citi Global Wealth Investments' forecast of returns over a 10-year time horizon for specific asset classes (to which the index belongs). Indices are used to proxy for each asset class. Cash refers to the US Cash SRE. The forecast for each specific asset class is made using a proprietary methodology that is appropriate for that asset class. Equity asset classes use a proprietary forecasting methodology based on the assumption that equity valuations revert to their long-term trend over time. The methodology is built around specific valuation measures that require several stages of calculation. Assumptions on the projected growth of earnings and dividends are additionally applied to calculate the SRE of the equity asset class. Hedge Fund and Private Equity SREs are linked to equity SREs. Fixed Income asset class forecasts use a proprietary forecasting methodology that is based on current yield levels. Other asset classes use other specific forecasting methodologies. SREs are in US dollars. SREs are generally updated on an annual basis, however they may be updated off cycle based on market conditions or methodology adjustments. Strategic Return Estimates are no guarantee of future performance. SREs do not reflect the deduction of client fees and expenses. Future rates of return cannot be predicted with certainty. Investments that pay higher rates of return are often subject to higher risk and greater potential loss in an extreme scenario. The actual rate of return on investments can vary widely. This includes the potential loss of principal on your investment. It is not possible to invest directly in an index. All SRE information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading.

[2] Haver Analytics as of June 1, 2023

Markets are up so far in 2023, which might seem surprising given all the bad economic news — from high interest rates to persistent inflation. But we are not surprised. We continue to suggest our clients stay invested. For the better part of 16 months, we have maintained our positions in conservative, income-oriented equities as well as in quality fixed income, leaning toward US assets. During 2022, the most consistent dividend payers in the US — our largest style overweight[3] — lost 6.2% while the broad US equities lost 19.2%.[4] Asset allocation clearly matters, as does diversification.

Stay invested and be mindful of what and when to invest

As we describe in this 2023 Mid-Year Outlook, the economic policy "hangover" from the COVID-19 shock, government intervention and subsequent rate hikes still reverberate across the world economy (See Recession, recovery: A journey unfinished). For the past 10 years, US dollar assets boomed, boosted by a flight to safety. Yet, the number of equity market leaders in 2023 is very concentrated. Since the beginning of 2023, more than 90% of US stock market appreciation can be attributed to just five stocks.

As these issues resolve, we see potential, global investment opportunities unfolding. Value creation is, in fact, underway — one reason why our SREs are higher (See FIGURE 3: Recession, recovery: A journey unfinished). When we look at the value of small- and mid-cap stocks (SMID), international equities and emerging markets broadly, we see many assets around the world that have become unusually cheap on a relative basis (**FIGURE 1**).

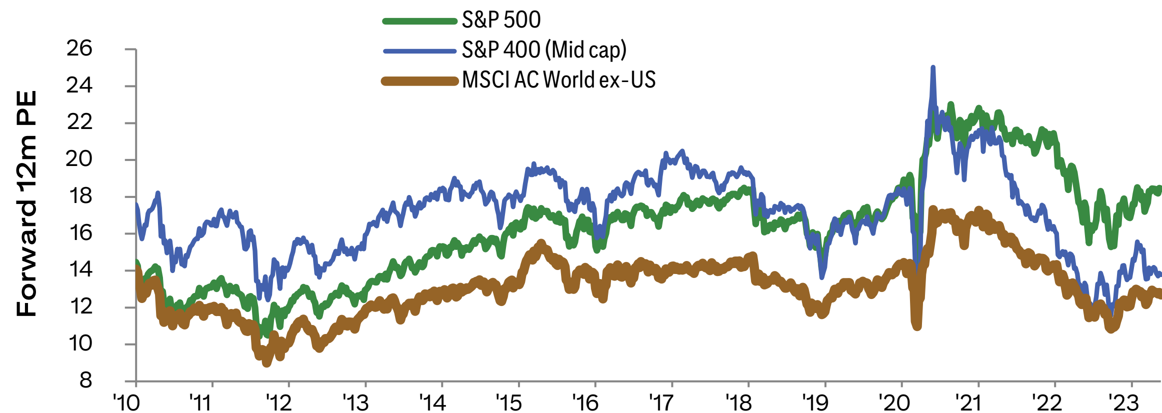
In our view, the landscape for investing suggests some major shifts in portfolios. We believe that active asset allocation may add value in the period just ahead. Below are some ways we see potential opportunities evolving:

Less cash, more duration

With the resolution of the debt ceiling negotiations, we expect to see peak short-term interest rates. We anticipate that the US government will issue an unusually large amount of T-bills and bonds to refill its coffers. When that happens, this may crowd out deposits, drive up yields and increase the value of the US dollar.

Though investors will be tempted to concentrate assets in T-bills and money market funds, we think this will ultimately hurt their returns. A different strategy is to extend duration by buying intermediate duration corporate bonds, US municipal bonds and preferred equity securities. By doing so, investors can potentially retain higher yields for longer and may profit if and when interest rates fall, as they will likely do when the Federal Reserve reverses course and starts cutting rates.

FIGURE 1: US Large- Mid-Caps and Non-US Equity Valuations



Source: Bloomberg as of May 31, 202. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

[3] Adaptive Valuation Strategies (AVS) is the Citi Global Wealth Investment's proprietary strategic asset allocation methodology. It determines the suitable long–term mix of assets for each client's investment portfolio. The AVS portfolio used in the analysis is the Global USD Traditional Only Risk Level 3 portfolio. Risk levels are an indication of clients' appetite for risk. An AVS L3 - Seeks modest capital appreciation and, secondly, capital preservation. The Level 3 Diversification does not guarantee a profit or ensure against a loss of principal.

[4] Dividend growers proxied by S&P 500 Dividend Aristocrats total return index and broad US equities proxied by Russell 3000 total return index.

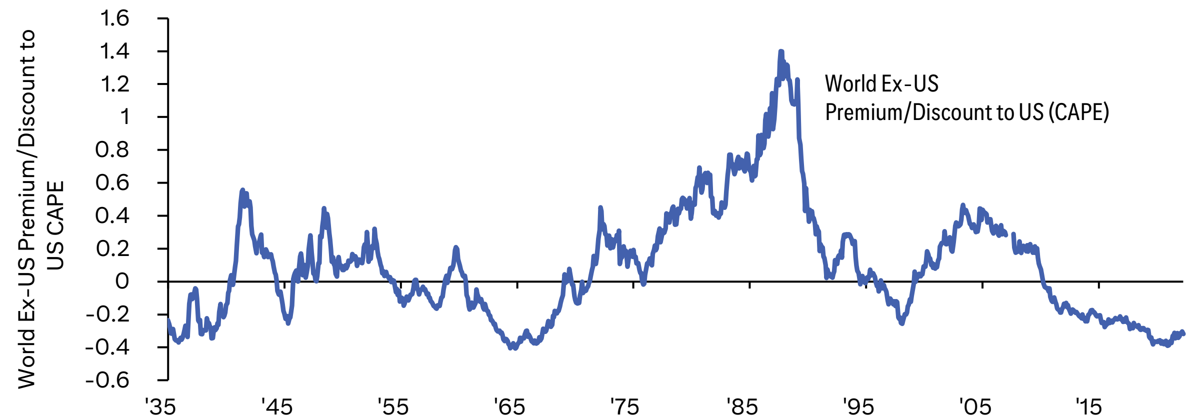
Adding non-US debt exposure

The peaking US dollar, now near its highest level in 50 years, is likely to begin a gradual, uneven decline. This trajectory suggests that credit-worthy, non-US sovereign debt could be a solid addition to fixed income holdings (See **As US dollar dominance ends, currencies may drive returns**). Not only may these securities offer higher yields, but the falling dollar may provide a higher total return to maturity.

Investing in non-US equities

Non-US equities present good value. Non-US shares are trading at historically wide valuation discounts to US shares (**FIGURE 2**). At the same time, the prospects for growth outside the US suggest that non-US earnings may grow substantially. We have already increased our weighting to Asian, European and Latin American equity markets, while reducing some of our defensive equity exposures that outperformed during 2022, like large cap pharmaceuticals. As the global recovery unfolds, we will likely look to boost non-US equities further across a range of industries, focusing on sectors and companies with the potential for sustainable revenue growth and profits.

FIGURE 2: US vs Non-US Relative CAPE



Source: Factset as of April 21, 2023. Using MSCI World ex-US and MSCI US indices. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary. The CAPE ratio is a valuation measure that uses real earnings per share (EPS) over a 10-year period to smooth out fluctuations in corporate profits that occur over different periods of a business cycle.

Seeking value within US markets

Within US markets, we believe there are areas of relative value worth investing in as we enter and recover from a rolling recession. An important area of note are SMID stocks, which currently trade at a 30% valuation discount to US large caps for profitable firms.[5] SMID stocks generally perform best in the first year of a recovery when their earnings are expected to rebound.

The S&P MidCap 400[6] and the S&P SmallCap 600[7] are two additional categories that may provide profit opportunity. Focusing on profitable small- and medium-sized companies is advisable when the Fed reduces rates to fight unemployment, as we believe it will soon.

Broadening our tech and growth equity exposures

Early in the pandemic, from 2020-2021, the valuations of large tech stocks surged. Then, in 2022, we saw a reversal. Valuations of growth shares dropped as the Fed increased the Fed Funds rate at an unprecedented pace.

[5] S&P 400 and S&P 600 vs S&P 500 on 2023 EPS estimates.
[6] Also known as the S&P 400, the index tracks 400 mid-sized companies in the US equity market.
[7] Tracks 600 small-sized companies in the US equity market that meet specific inclusion criteria.

But as the yield curve inverted, investors have started to refocus their attention to technology companies with strong balance sheets and growth prospects. Even though US industries have powerful and promising growth prospects, 2023's tech gains have been limited to a handful of companies. Large Cap US IT is up 37% year to-date.[8] Firms providing the infrastructure for a new form of artificial intelligence, known as generative AI (See **Generative AI: The beginning of (another) technological revolution**) are responsible for a lot of that gain. And while we will add further exposure to generative AI, many other future portfolio opportunities may lie in small- and medium-sized tech companies whose valuations do not yet reflect their future growth potential.

Alternative investing and private credit

Finally, we see an opportunity within alternative investments for qualified investors. A shortage of capital now exists in private credit. Banks have pulled back their lending due to deposit woes and an overexposure to commercial real estate assets, like office space. The Fed is continuing quantitative tightening, while the Treasury is ramping up borrowing and investors are hoarding cash and short-term investments. For qualified investors, it may be possible to earn equity-like rates of return in selected debt securities.

Loans for private equity buy-outs, lending to later stage venture companies, mezzanine debt for real estate refinancings and other similar lending opportunities are yielding more than 10% per annum.[9] Unlike in 2008-09, we do not see a credit collapse on the horizon. Corporate balance sheets are in good shape with future credit problems likely to be concentrated in commercial real estate. Capital shortages do not occur frequently, so this is an area where qualified private investors may benefit for the next three to five years.

Watch for signals

The double-digit declines in both stocks and bonds in 2022 — the worst combined return for 60/40 portfolios since 1931[10] — reset valuations and the relative value of different portfolio investments. In anticipation of poor market conditions in 2022, we doubled up on defensive investments in 2021. Though we prefer the long-term return properties of dividend growth shares, we expect to return to a normal weighting. And while we currently enjoy a high yield on short-term high-grade bonds, we will rotate from them to intermediate US and emerging market credit to continue to seek income and potentially benefit if and when rates fall. We will move from defensive to overweight risk assets as a result of valuation improvements and market dislocations as they arise.

The US Treasury hit its debt ceiling at the start of 2023 and took emergency steps to limit debt issuance. Now, we expect $1.3 trillion in new borrowings, likely by the end of the third quarter of 2023. When the Treasury needs to raise a huge amount of capital and the Fed continues to tighten, we anticipate that fears about more Fed policy tightening will lower prices of already attractive assets.

Looking ahead

One of the reasons we are seeking to diversify equity exposures from the S&P 500 is that large-cap stocks have performed above expectations over the past two years yet actual S&P 500 earnings per share has declined in 2023. This means we see them as expensive on a relative basis. While they may rise in value in 2024, US large cap shares are less likely to lead the market higher.

To capture the potential of our new Strategic Return Estimates,[1] we will consider rotating toward different risk assets, geographies and strategies in the second half of 2023 and into 2024. We may diversify our equity selections and "go overweight" across equity strategies as potential opportunities become apparent.

We expect US bonds to act as a foundation for portfolios, seeking positive real yields and negative correlation to reduce portfolio volatility. Here we will seek diversification to non-US

[8] S&P 500 Information Technology Index. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.
[9] Private equity firms lend less as demand cools, March 3, 2023 by Chibuike Oguh.
[10] Source: Global Financial Data as of June 5, 2023.

bonds and to longer dated securities, but as we expect rates to decline, we see a reallocation to equities as likely.

The risk of being early versus staying on the sidelines

When T-bill rates and cash balances are high, it is tempting to do nothing. In the near-term, that may seem safe, but looking out one year, we believe that those who do not own core portfolios may be less well-off. After the double market shocks of the pandemic and an overly reactive Fed, the next decade looks like one where returns may be above average. Those who stay in cash will not see returns when markets are recovering.

Market timing hurts portfolio returns. The worst and best days in a market often occur near one another, and you cannot afford to miss the big up days. What investors should focus on is the value of active asset allocation, which is about choosing what to invest in and when.

Over the coming months, we strongly urge investors to reduce their exposure to cash as an asset class. Extending duration should be an investor's first step. While we may be early when buying certain equities or bonds, our goal is to capture the "total return" of an underperforming asset class. This requires foresight and a willingness to act.

1.2

Recession, recovery: A journey unfinished

STEVEN WIETING
Chief Investment Strategist and Chief Economist

The market rebound in 2023 has reminded investors of the futility of market timing. While the worst looks to be behind us, the bear market journey is not yet complete. Investors can potentially benefit from income-generating assets while beginning to reengage portfolios in a number of building valuation opportunities and long-term growth generators.

- In 2022, we rotated to conservative, income generating assets in both equities and bonds. After playing defense, this opens the door to further investment opportunities ahead
- We have adjusted our economic forecasts slightly upward, but the effects of policy tightening in US labor markets is still to be felt
- Our present asset allocation strategy prioritizes quality income, focusing on companies with strong balance sheets and consistent dividends. In our AVS Risk Level 3 Portfolio,[1] we are overweight US government bonds. While we have been cautious on small-cap equities, future returns have improved as valuations collapsed. The same is true for many assets around the world where we have already begun to shift portfolios

[1] Adaptive Valuation Strategies (AVS) is the Citi Global Wealth Investments' proprietary strategic asset allocation methodology. It determines the suitable long–term mix of assets for each client's investment portfolio. The AVS portfolio used in the analysis is the Global USD Traditional Only Risk Level 3 portfolio. Risk levels are an indication of clients' appetite for risk. An AVS L3 - Seeks modest capital appreciation and, secondly, capital preservation. The level 3 diversification does not guarantee a profit or ensure against a loss of principal.

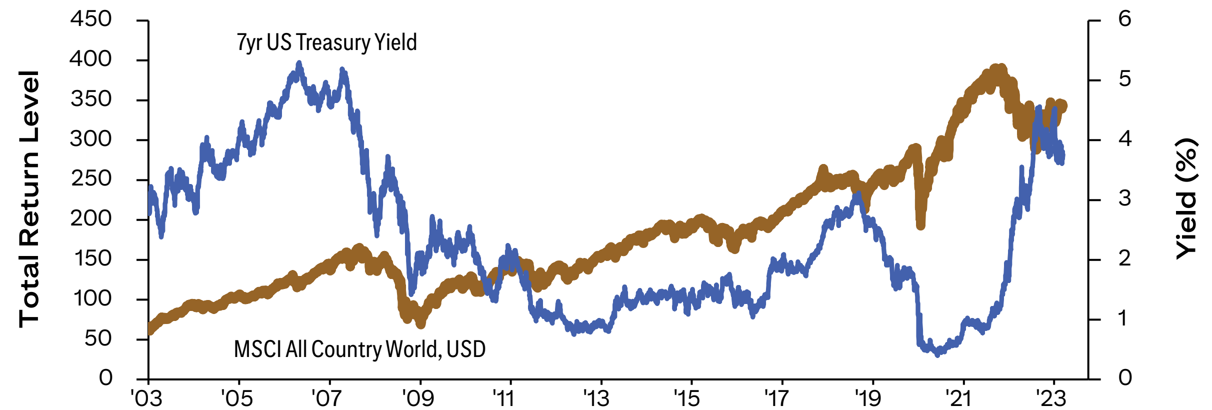
2023's first half performance for world financial markets should remind investors of the folly of market timing. Despite ample worries to the contrary, global equities have returned 8.0%[2] in the year to date and global bonds 2.0%.[3]

Of course, this rebound followed 2022's abysmal results, the worst combined US stock and bond market performance since 1931. It was a severe reckoning; the price to pay for government actions that overstimulated the economy during and after the COVID shock, then reversing course to tame the resulting inflation.

Investment opportunities ahead

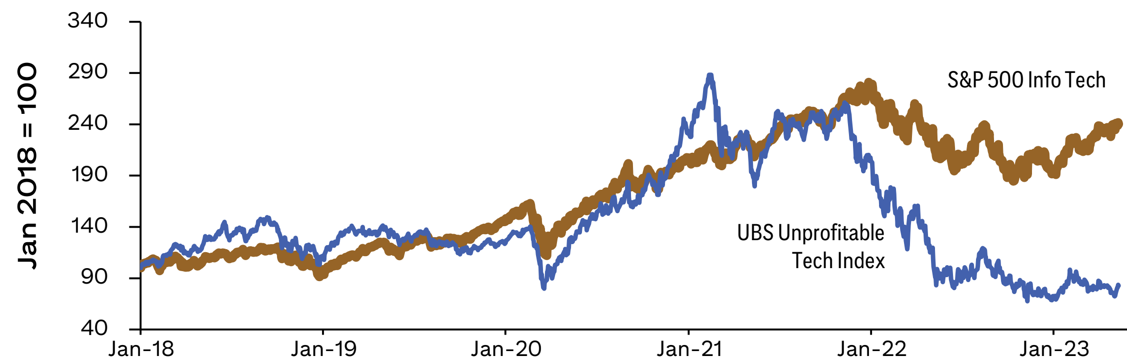
The double-digit declines in 2022 created stronger investment opportunities than the initial economic recovery of 2020-2021. Though off their highs, US government bond yields have risen three to four percentage points across different points of the yield curve (**FIGURE 1**). There's been a significant rotation out of speculative investments into conservative, income-generating assets. All these developments have improved our long-term strategic asset returns estimates for the decade to come (**FIGURE 2 and 3**).

FIGURE 1: US Treasury Yields Highest since 2007



Source: Bloomberg as of May 4, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

FIGURE 2: Sobering: Unprofitable Firms Have Seen an Historically Large Decline



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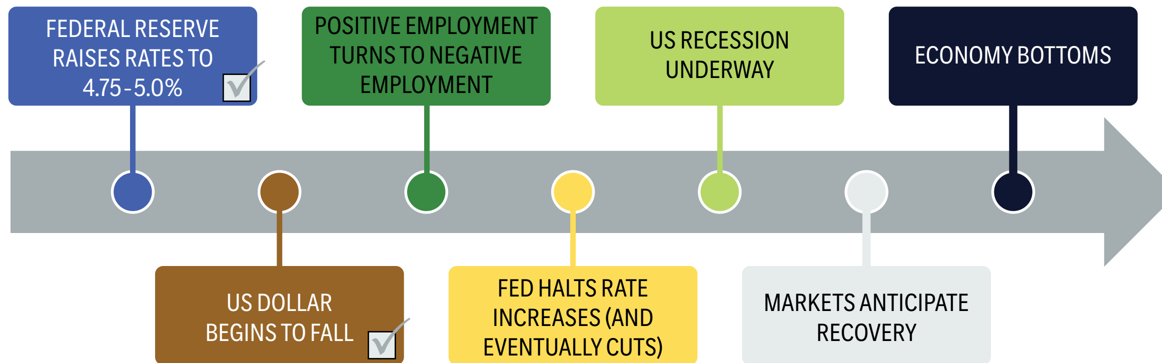
[2] Source: S&P 500 as of June 2, 2023
[3] Source: US Aggregate Bond Index as of June 2, 2023

FIGURE 3: Strategic Return Estimates (SRE) Are Higher

ASSET CLASS	2023 SRE	2022 SRE
Developed Market Equities	7.0%	3.8%
Emerging Market Equities	12.9%	8.1%
Investment Grade Fixed Income	4.6%	1.8%
High Yield Fixed Income	7.4%	2.6%
Emerging Market Fixed Income	7.8%	3.6%
Cash	3.4%	0.9%
Hedge Funds	9.1%	4.1%
Private Equity	17.6%	11.6%
Real Estate	10.6%	8.8%
Commodities	2.4%	1.5%

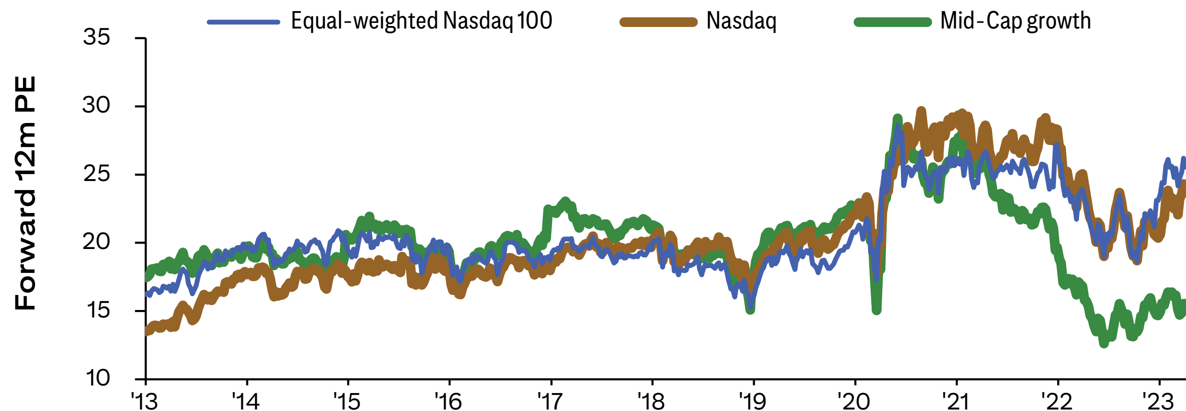
Source: Citi Global Wealth Investments' data as of October 31, 2022. Strategic Return Estimates (SRE) based on indices are Citi Global Wealth Investments' forecast of returns over a 10-year time horizon for specific asset classes (to which the index belongs). Indices are used to proxy for each asset class. Cash refers to the US Cash SRE. The forecast for each specific asset class is made using a proprietary methodology that is appropriate for that asset class. Equity asset classes use a proprietary forecasting methodology based on the assumption that equity valuations revert to their long-term trend over time. The methodology is built around specific valuation measures that require several stages of calculation. Assumptions on the projected growth of earnings and dividends are additionally applied to calculate the SRE of the equity asset class. Hedge Fund and Private Equity SREs are linked to equity SREs. Fixed Income asset class forecasts use a proprietary forecasting methodology that is based on current yield levels. Other asset classes use other specific forecasting methodologies. SREs are in US dollars. SREs are generally updated on an annual basis, however they may be updated off cycle based on market conditions or methodology adjustments. Strategic Return Estimates are no guarantee of future performance. SREs do not reflect the deduction of client fees and expenses. Future rates of return cannot be predicted with certainty. Investments that pay higher rates of return are often subject to higher risk and greater potential loss in an extreme scenario. The actual rate of return on investments can vary widely. This includes the potential loss of principal on your investment. It is not possible to invest directly in an index. All SRE information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading.

FIGURE 4. How the Recovery May Unfold Across 2023



Source: Cit Global Wealth Investments' Office of the Chief Investment Strategist as of March 31, 2023. All forecasts and expressions of opinion are subject to change without notice, and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

FIGURE 5. The Bear Market Has Claimed Victims in Smaller Companies



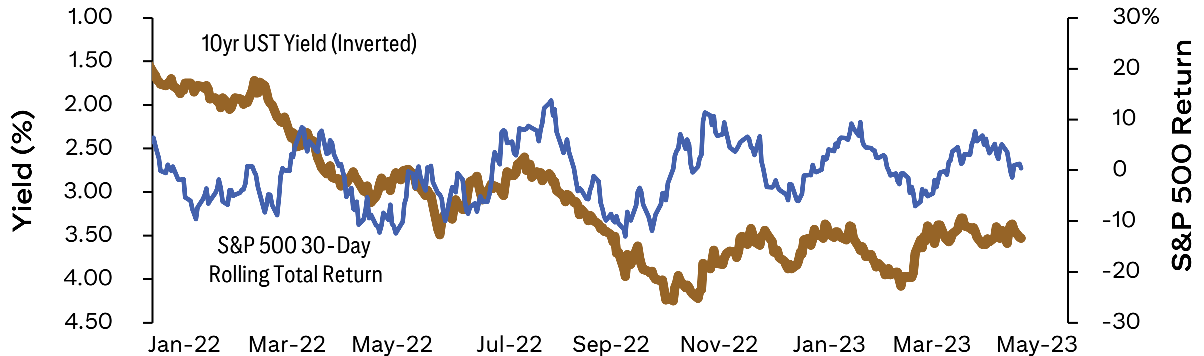
Source: Bloomberg as of May 26, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

A journey unfinished

We continue to believe that the worst of the reckoning is behind us. But, we aren't at the end of the bear market journey quite yet. In our Roadmap to Recovery (See Wealth Outlook 2023: Roadmap to Recovery) we argued there is a likely sequence of events that will need to unfold before we arrive at a true, sustained expansion (**FIGURE 4**). In short, it is simply too early to price in a new economic recovery while the Federal Reserve is still tightening monetary policy.

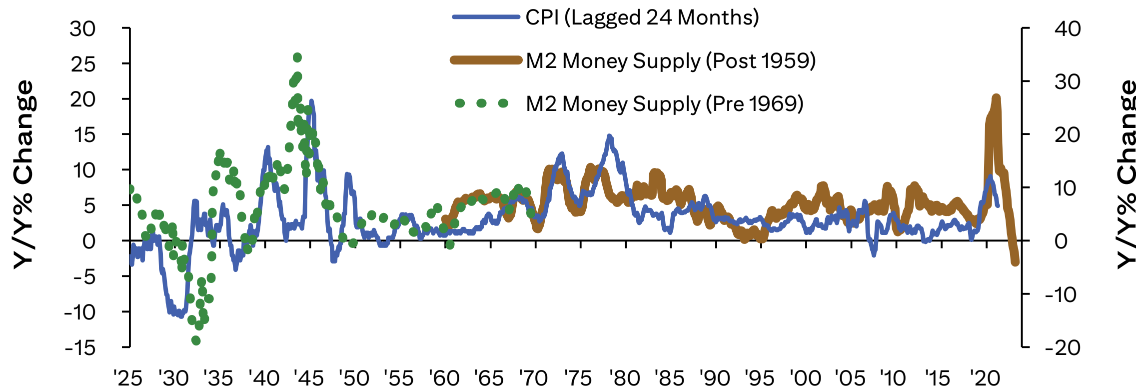
So far this year, investment performance across styles and sectors has been inconsistent. Our asset allocation has maintained a "quality income vigil." We have retained an overweight stance on the most consistent dividend growers or companies with the strongest balance sheets since January 2022. In the AVS Risk Level 3 Portfolio, we have remained underweight small cap equities, companies that generally are more indebted and less able to endure macroeconomic cycles and shocks. Our overweight position on bonds remains concentrated in US government issues. While our near-term returns may lag behind episodic rallies, our positions should hold up against any selloffs. At the same time, the benefits of "playing defense" have been diminishing. Valuations are improving in some of the less defensive assets where we are currently underweight (**FIGURE 5**).

FIGURE 6: Correlation between Stock and Bond Returns



Source: Factset as of May 4, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

FIGURE 7: Money Supply Leads Inflation by 2 Full Years



Source: Haver Analytics as of May 11, 2023.

The benefits of diversification are evident again

After sharp yield increases, government bonds are again providing both regular income and a negative correlation to risk assets (See Bonds are Back Again: Where to find potential fixed income opportunities now). These are the properties that allow balanced stock and bond portfolios to have higher risk adjusted returns than individual asset classes (**FIGURE 6**). Thus far, performance of balanced portfolios suggests a period of stronger longer-term returns ahead.

Our updated economic forecast

We have always believed that one global shock should not require two recessions. The supply disruptions that came with COVID were not historically unique. All global supply shocks — whether through wars or embargoes — have destabilized consumer prices for a time (**FIGURE 7**). Policymakers arguably succeeded in limiting long-lasting economic damage from the initial pandemic shock. But their decision to provide broad and sustained stimulus even during the post-COVID recovery exacerbated a mismatch in supply and demand.

As the Fed eased monetary policy all through the US growth boom of 2021, inflation surged along with real GDP, which rose 6%. Subsequently, the Fed chose to tighten monetary policy through the present economic slowdown.

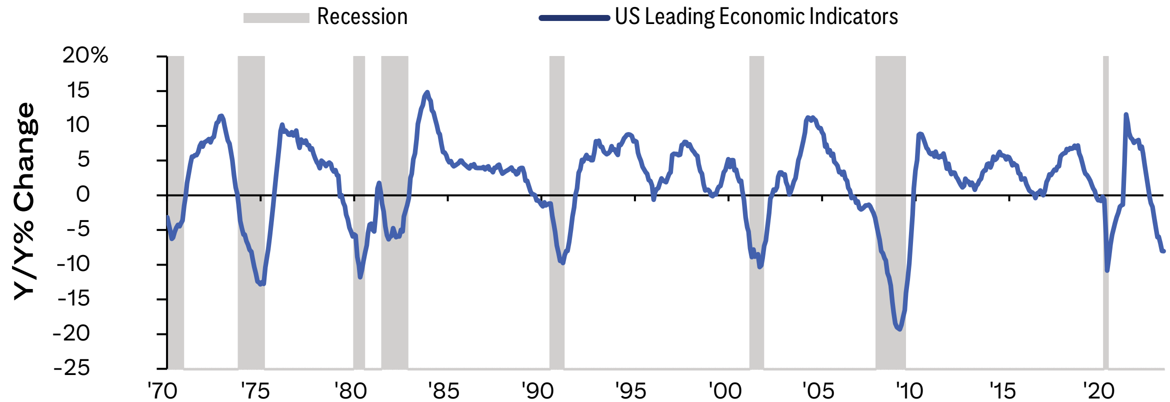
We believe the full economic effects of the Fed's tightening and the retrenchment of bank lending have not fully played out in the economy. When the Fed met in May, it raised policy rates to 5.125% and continued quantitative tightening (QT). This was despite the US Index of Leading Economic Indicators already being down 8% (**FIGURE 8**).

While the economy and Fed policy appear to be on a collision course, pent-up demand and momentum from the post-COVID rebound have meant a stronger US economy than we first anticipated in 2023. Adding to the momentum has been China's earlier-than-expected reopening plus fading war-induced energy shocks. Taking into account all these developments, we've revised our 2023 growth forecasts slightly upward (**FIGURE 9** and see our [Regional Preview]).

Dragging on our 2023 and 2024 outlook, however, are the impacts of greater-than-expected policy tightening as the Fed confronts "labor hoarding" by employers in the US. This suggest that the negative impact from tightening has simply been pushed to a later date (**FIGURE 10**). Our US real GDP forecast for 2023 has been raised to 1% from 0.5%, but we have cut our 2024 forecast to 1.4% from 2.1%.

The slowest period for the US economy is likely to come in either 2023 or the beginning of 2024. Together, these two years are likely to show below trend growth until the US economy rebuilds "slack" and US monetary policy eases. For now, the US continues to reflect its major difference in government policies pre- and post-COVID versus China's policy-induced hard landing and rapidly rising unemployment (**FIGURE 11**).

FIGURE 8: US Index of Leading Economic Indicators Year-Over-Year



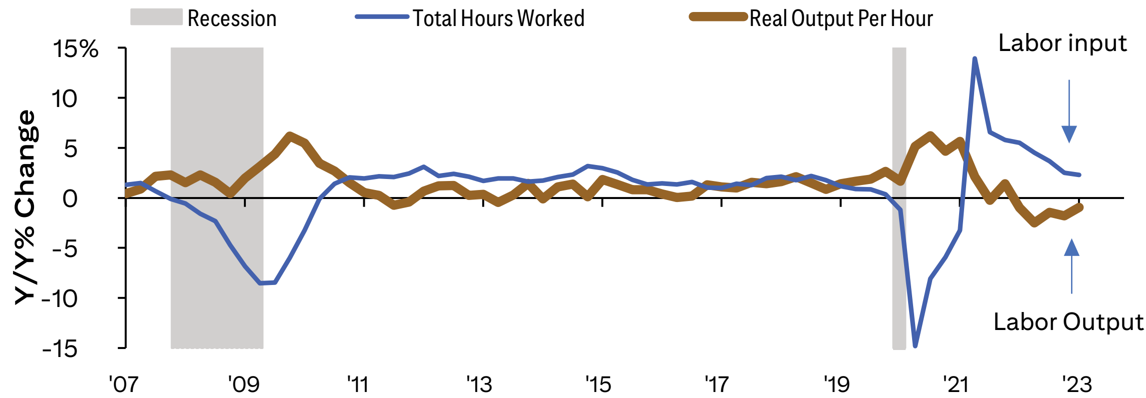
Source: Haver Analytics as of May 11, 2023. Gray areas are US recessions. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

FIGURE 9: Citi Global Wealth Investments GDP Forecasts

AS OF MAY 2023 (PREVIOUS ESTIMATES ARE IN PARENTHESIS)					
	2020	**2021**	**2022**	**2023**	**2024**
China	2.4	7.5	3.0	5.8 (5.5) ↑	4.5 (4.2) ↑
US	-3.4	5.7	2.0	1.0 (0.5) ↑	1.4 (2.1) ↓
EU	-6.3	5.4	3.6	0.8 (0.0) ↑	1.1 ↑
UK	-11.0	7.6	4.1	0.3 (-0.5) ↑	1.1 ↑
Global	-3.2	5.7	3.4	2.5 (2.0) ↑	2.4 (2.4)

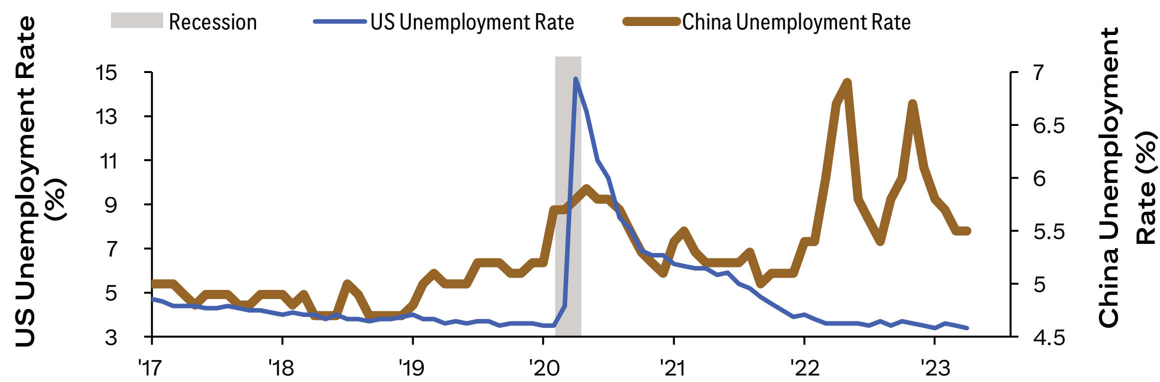
Source: Haver Analytics and Citi Global Wealth Investments as of May 2023. All forecasts and expressions of opinion are subject to change without notice, and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

FIGURE 10: Falling Productivity as Employers Hoard Labor



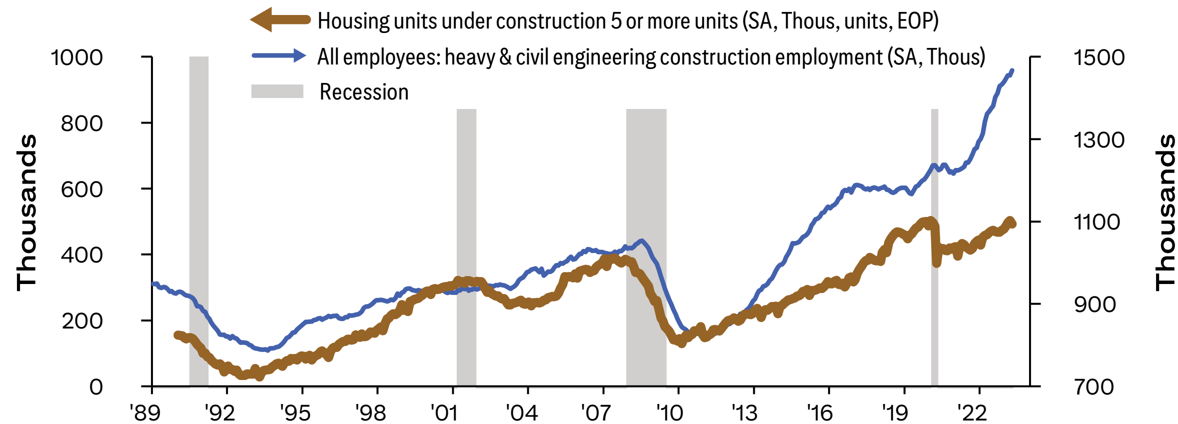
Source: Haver Analytics as of May 22, 2023.

FIGURE 11: Contrasting Cycles – Unemployment Rates in the US and China



Source: Haver Analytics as of May 22, 2023.

FIGURE 12: US Multi-Family Apartments Under Construction vs Related Construction Employment Y/Y%



Source: Haver Analytics as of May 22, 2023. Gray areas are US recessions.

Less inflation on the horizon

We believe headline US Consumer Price Index (CPI) inflation is set to slow to 3.5% by the end of 2023, down from 6.5% at the end of 2022. A further decline is likely to get close to the Fed's 2% target in 2024. Getting there will require some economic pain.

Consider how zero policy rates helped finance a record number of multi-family housing construction activity since COVID struck (**FIGURE 12**). These "long cycle" apartment projects will be delivered later this year and all through the next. Sharply higher financing costs suggest there will be a collapse in new construction and related unemployment will follow. On the other hand, the increased supply of rental units should significantly cool shelter price inflation, a key CPI component that is still reaching new cycle highs at mid-year 2023.

More volatility to come

As we write, the US Congress has just passed a suspension of the statutory debt ceiling through January 2025. This will open the floodgates to a stepped up round of borrowing as the US Treasury replenishes its nearly depleted cash balance. Aside from borrowing to finance US deficits, net new Treasury bill issuance in the months ahead could exceed $300 billion and $1.3 trillion across all US Treasury issues by the end of 2023. At presently high yields, the borrowing could displace other asset classes and temporarily boost the US dollar. If so, we would see it as a stronger opportunity to add to non-US assets for the years to come. For example, we have already added overweights in Brazil and emerging markets in Asia (See Currencies).

The situation for the US is also quite different from 2011 when the S&P 500 fell more than 15% after a debt ceiling agreement was reached. In the period that followed, US shares recovered sharply and outperformed the world during the next decade. However, at the time of that fiscal deal, the US unemployment rate exceeded 8.5% and the Fed's policy rate hugged zero. US corporate profits were still deeply depressed from the Global Financial Crisis of 2007-2008. Therefore, profits rose rapidly in the years that followed. Today, the Fed is still restraining the US economy and US corporate profits are high but on the decline. For these reasons, we don't believe large cap US equities will lead global equity returns in the coming few years.

Our future set of potential opportunities

Last year, soaring bond yields collapsed growth stocks. This year, growth-style investing recovered. The gains, however, have been concentrated in the largest firms with the strongest balance sheets. The S&P 500 IT sector has returned 35% year to date while the S&P 600 IT sector has returned more than 15%.

We maintain overweight positions in long-term growth drivers such as cybersecurity and look

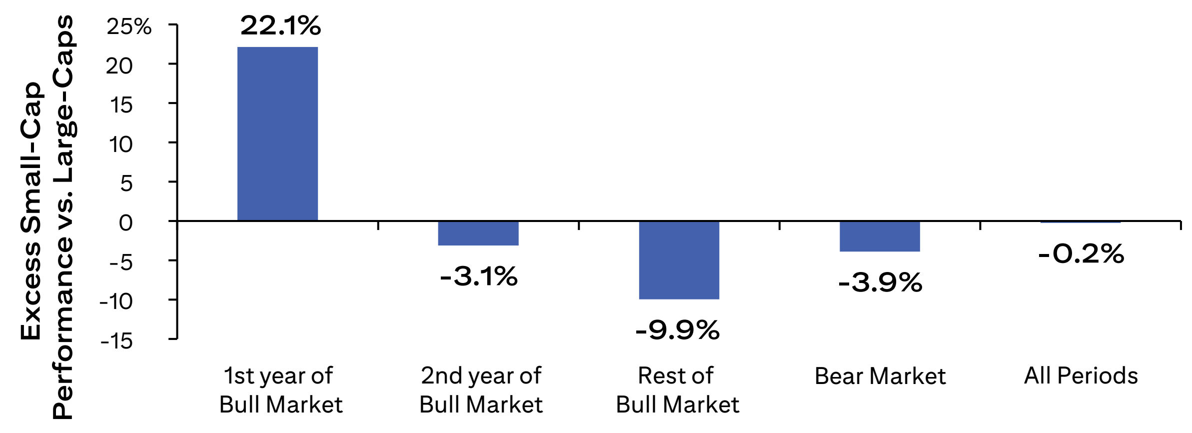
opportunistically at artificial intelligence and renewable energy. We're also focused on future increases in our allocation to global small- and mid-caps over large-caps as large-caps are already trading at 25 times trailing earnings per share (EPS). By contrast, profitable US small- and medium-cap (SMID) shares are trading near a 30% discount to large-cap shares on 2023 estimates.

Similar or even larger valuation discounts can be found in international equity markets. The valuation gap is further compounded by the strong US dollar. This should help non-US markets generate enhanced returns in the decade to come. We've already shifted portfolios to address the opportunity.

In the year to date, our position in large-cap US equities has outperformed an underweight in small caps by more than 900 basis points. We are not yet ready to relinquish this component of our defensive posture (**FIGURE 13**). However, as "defensive" shares have become consensus overweights - in some cases having seen substantial upward revaluation - returns are becoming more compelling for the shares left behind, even if an investor is "early."

Historical data shows that only twice in the past century has a bear market in US shares taken longer than two calendar years to bottom. While we are not yet in a convincing bull market cycle, we expect to be further along in our investment journey by the time of our Wealth Outlook 2024.

FIGURE 13: Small- and Mid-Cap Outperformance Tends to be Highly Concentrated in Early Bull Markets



Source: Haver Analytics as of May 12, 2023. Small caps proxied with Russell 2000 and large caps proxied with S&P 500. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

The value of strategic asset allocation: Mitigating portfolio risk during times of investor stress

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XIN HE
Investment Quantitative Research Senior Lead, Citi Investment Management

During times of acute market stress, a disciplined strategic asset allocation may lead to higher risk-adjusted long-term returns by mitigating drawdowns and volatility. Given 2022's market downturn, the high valuation for the US dollar and the likely growth the global economy may experience after recessionary conditions end in the US, our strategic asset allocation framework, Adaptive Valuation Strategies[1], now forecasts higher risk-adjusted returns over the long-term.

- Using strategic asset allocation (SAA) to diversify among different asset classes may improve investment outcomes
- Citi's proprietary SAA methodology, Adaptive Valuation Strategies (AVS), can help reduce volatility risk in a portfolio
- A long-term focus, disciplined investment framework and patience are hallmarks of a sound SAA strategy

[1] Adaptive Valuation Strategies (AVS) is Citi Global Wealth Investments' proprietary strategic asset allocation methodology. It determines the suitable long–term mix of assets for each client's investment portfolio. The AVS portfolio used in the analysis is the Global USD Traditional Only risk level 3 portfolio. Risk levels are an indication of clients' appetite for risk. An AVS L3 - Seeks modest capital appreciation and, secondly, capital preservation. The level 3 Diversification does not guarantee a profit or ensure against a loss of principal.

Seeking better outcomes with less investor stress

Investing is stressful, especially when there are contradicting trends. Investors seeking returns must put their money to work and tolerate some degree of volatility in the value of their investments. There is no reward without some risk, but diversification and processes designed to rebalance portfolios over time may improve risk-adjusted returns.

We believe that our strategic asset allocation methodology may deliver tangible benefits to investment portfolios. By spreading risk over different asset classes, SAA can lead to higher risk-adjusted returns over the long term. In periods of acute market stress, a disciplined asset allocation has historically enabled portfolios to mitigate the incidence of drawdowns and has led to quicker recoveries.

We view SAA — a disciplined long-term portfolio strategy that involves diversifying among different asset classes and rebalancing exposures periodically —as essential to optimize the process for efficiently achieving investment goals. Four decades of foundational investment studies[2] show SAA can explain more than 90% of the variability in portfolio returns in the long-term, elevating its value-add to any investment strategy.

While the benefits of diversification to enhance long-term risk-adjusted returns are well known, sticking to a disciplined investment strategy and avoiding the temptation to "time the market" can potentially lead to tangible benefits, especially in turbulent times. That includes both improved returns and a better ownership experience for investors. In other words, SAA could potentially help mitigate portfolio risk and help reduce investor stress during challenging market conditions.

Curbing volatility during stressful market conditions

AVS is our proprietary SAA methodology. AVS looks forward over a 10-year horizon and is based on the insight that lower current valuations give way to higher returns over time (whereas higher valuations have generally been followed by lower returns). Our framework uses current asset class valuations to produce SRE. This, in turn, informs how the strategy allocates to each asset class in our SAA. The assumptions are updated on an annual basis. In 2022, we witnessed a sharp valuation de-rating as markets tumbled across the board. Given 2022's market downturn, the high valuation for the US dollar and the likely growth the global economy may experience after recessionary conditions end in the US, our framework forecasts higher risk-adjusted returns over the long term.

To measure performance during stressful market conditions, we compare the S&P 500 Index with our AVS Risk Level 3 portfolio from our proprietary AVS framework in terms of volatility, drawdowns and recoveries.

There is a belief that during times of acute market stress, the correlation for risky asset classes goes to one, while volatility rises disproportionately. At Citi Global Wealth Investments, we believe this is not a complete picture. Our asset allocation has historically helped to cool down portfolios in heated circumstances. **FIGURE 1** looks at the annualized volatility during the last three US recessions and the associated equity bear markets: the dot-com bubble in 2000, the Global Financial Crisis in 2007-2008 and the COVID-19 recession in 2020. These figures have been computed using daily data corresponding to the associated peak-to-trough periods.

As shown, during the prolonged equity bear market of the dot-com bubble (from September 1, 2000 to October 9, 2002), the S&P 500 recorded a volatility of 22.9% while our asset allocation showed a volatility of 9.6%-9.7%. During the bear market associated with the Global Financial Crisis (GFC), the volatility for the S&P 500 was 37.3% while the volatility for our asset allocation was less than half of that at 17.1%. The COVID induced drawdown was particularly short and acute, a fine example of markets in 'panic mode' given its intensity and speed. The S&P 500 volatility showed 79.8% while our asset allocation had 35.3% — again, less than half.

These results can have potential benefits when applied to investor portfolios.

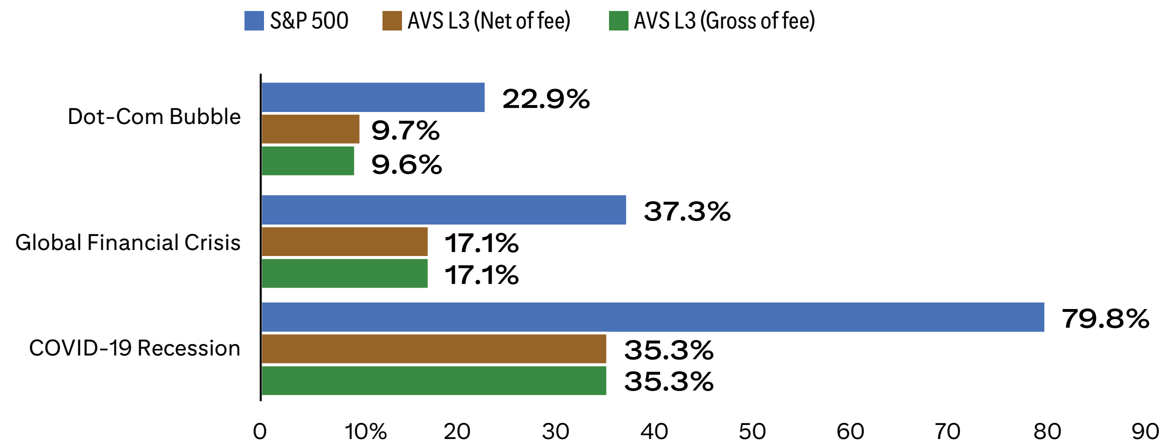
[2] Gary P. Brinson, L. Randolph Hood, and Gilbert L. Beebower, Determinants of Portfolio Performance, Financial Analysts Journal, July/August 1986. Also see Roger G. Ibbotson, Importance of Asset Allocation, Financial Analyst Journal, March/April 2010.

Reducing portfolio drawdowns in times of stress

Volatility is not an investor's sole concern. It can be very challenging to hold on to investments when a portfolio plummets in value by 20%, 40% or more. Emotional investors may feel relieved by cutting losses and getting out of the market. But this can be damaging to their long-term returns. Markets tend to recover before economies do and over longer time horizons choosing when to get in and out of markets efficiently becomes nearly impossible. By diversifying portfolios and rebalancing them with discipline, a strategic asset allocation can potentially reduce portfolio drawdowns and get to recovery faster – **FIGURE 2**. During the dot-com bubble, the S&P 500 lost 47.4% of its value from the previous peak, while our asset allocation recorded a more contained drawdown of 32.8% net of fees (25.9% for a gross of fee). During the Global Financial Crisis, one of the most extreme events in the past several decades, the S&P 500 more than halved in value (-55.4%). Although our asset allocation reached the prior high eight months after the S&P 500 did, its drawdown was 15% (-41.5%) lower than the S&P.

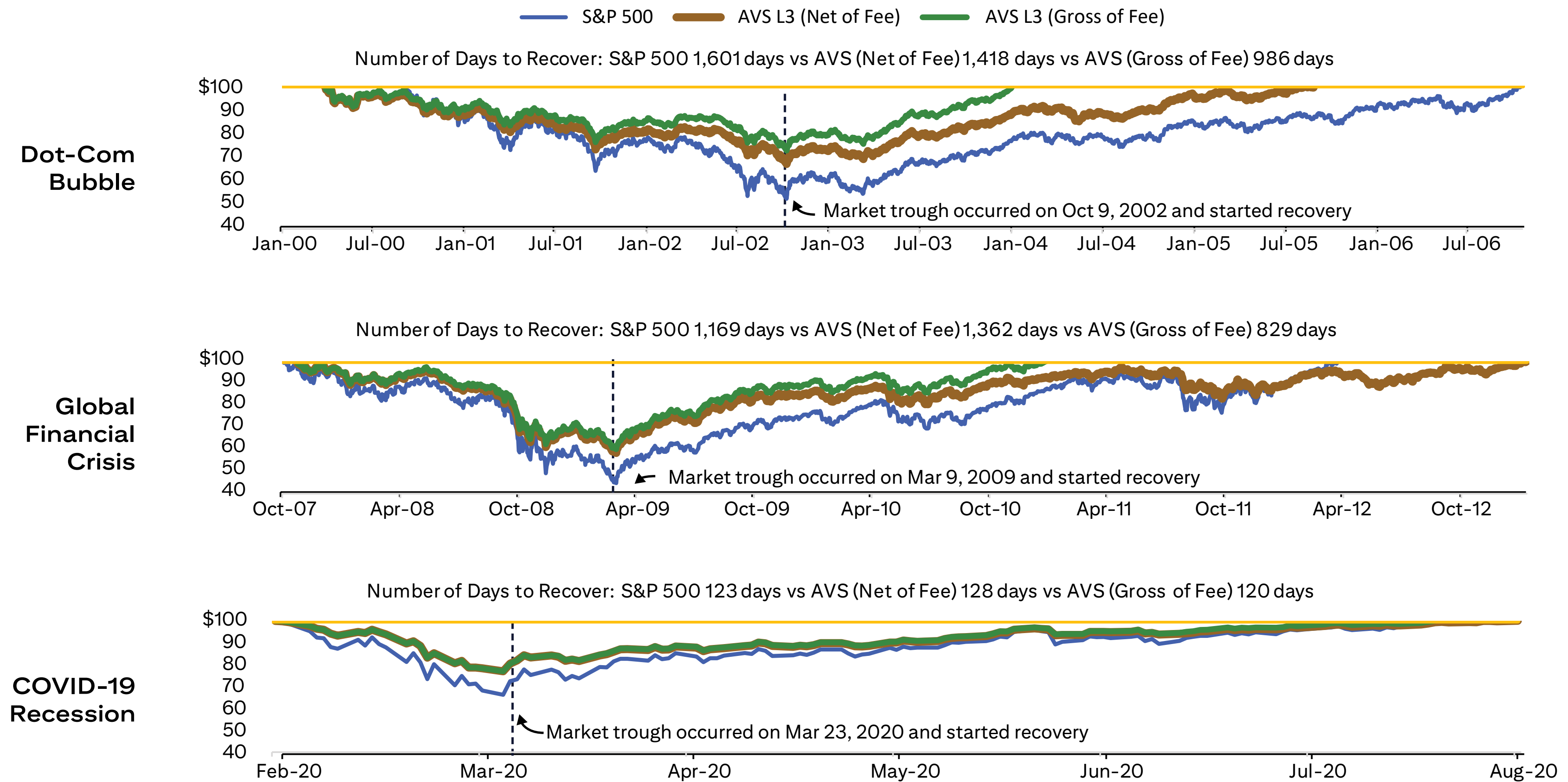
To further test the validity of our strategic asset allocation approach, we extended our analysis to consider the 10 most severe selloffs in the S&P 500 since the dot-com bubble (**FIGURE 3 and 4)**. As shown, on average our asset allocation registered less than half the volatility of the S&P 500 and had an average drawdown rate that was a third less.

FIGURE 1: Annualized Volatility During Periods of Market Stress



Source: Citi Global Wealth Investments and Bloomberg, as of May 1, 2023. Dot-Com Bubble event looks at the annualized volume from peak date of S&P 500 on Sep 1, 2000, to trough date on Oct 9, 2002; GFC from peak date on Oct 9, 2007, to trough date on Mar 9, 2009; COVID-19 episode from peak date on Feb 19, 2020, to trough date on Mar 23, 2020. The figures refer to the realized volatility of the S&P 500 Index and the AVS Risk Level 3 allocation. The performance of the AVS Level 3 Portfolio was calculated on an asset class level using indexes to proxy for each asset class. Gross of fees returns do not reflect the deduction of advisory fees. Net performance results reflect a deduction of 2.5% annual maximum fee that can be charged in connection with advisory services that covers advisory fees and transaction costs. All performance information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income or commodities markets in general which cannot be, and have not been, accounted for in the preparation of hypothetical performance information, all of which can affect actual performance. The returns shown above are for indexes and do not represent the result of actual trading of investable assets/securities. The asset classes used to populate the allocation model may underperform their respective indexes and lead to lower performance than the model anticipates.

FIGURE 2: Comparing Dot-Com Bubble, Global Financial Crisis and COVID-19 Recession Recovery Times



Source: Citi Global Wealth Investments and Bloomberg, as of May 1, 2023. Dot-Com Bubble event looks at the annualized volume from peak date of S&P 500 on Sep 1, 2000, to trough date on Oct 9, 2002; GFC from peak date on Oct 9, 2007, to trough date on Mar 9, 2009; COVID-19 episode from peak date on Feb 19, 2020, to trough date on Mar 23, 2020. The performance of the AVS level 3 portfolio was calculated on an asset class level using indexes to proxy for each asset class. Gross of fees returns do not reflect the deduction of advisory fees. Net performance results reflect a deduction of 2.5% annual maximum fee that can be charged in connection with advisory services that covers advisory fees and transaction costs All performance information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of hypothetical performance information, all of which can affect actual performance. The returns shown above are for indexes and do not represent the result of actual trading of investable assets/securities. The asset classes used to populate the allocation model may underperform their respective indexes and lead to lower performance than the model anticipates.

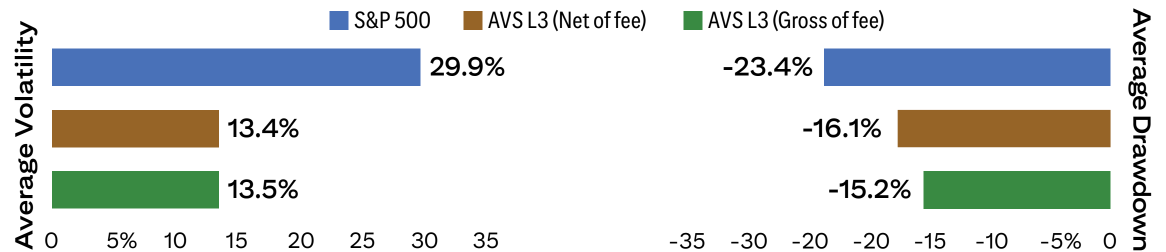
Long-term wealth creation

It is generally recognized that the three key ingredients for long-term wealth creation are:

1. A long-term focus
2. Sticking to a disciplined investment framework and avoiding the temptation to time the market
3. Patience

In our view, all are elements of a strategic asset allocation framework. Adhering to these principles day after day is a good recipe for seeking long-term success. Some days may be more difficult than others, but a thoughtful strategic asset allocation can help dampen panic when the market is most volatile, potentially reducing the chance of irrational or emotional investor decision-making.

FIGURE 3: Less Volatility, Drawdowns with AVS L3



Source: Citi Global Wealth Investments and Bloomberg as of May 1, 2023.

FIGURE 4: Volatilities and Drawdowns During 10 Different Severe Selloffs

Drawdown Dates --S&P 500		Annualized Volatility			Drawdown		
Peak Date	Trough Date	S&P 500	AVS L3 (Net of Fee)	AVS L3 (Gross of fee)	S&P 500	AVS L3 (Net of Fee)	AVS L3 (Gross of fee)
2007-10-09	2009-03-09	37.3%	17.1%	17.1%	-55.3%	-40.7%	-39.1%
2000-09-01	2002-10-09	22.9%	9.7%	9.6%	-47.4%	-30.7%	-25.9%
2020-02-19	2020-02-23	79.8%	35.3%	35.3%	-33.8%	-23.1%	-23.1%
2022-02-03	2022-10-12	23.7%	12.4%	12.3%	-24.5%	-21.9%	-21.1%
2018-09-20	2018-12-24	20.5%	9.0%	9.0%	-19.4%	-10.1%	-9.8%
2015-07-20	2016-02-11	19.0%	9.3%	9.3%	-13,0%	-11.1%	-10.3
2000-03-24	2000-04-14	27.0%	12.5%	13.4%	-11.1%	-6.8%	-6.2%
2018-01-26	2018-02-08	29.7%	10.4%	10.4%	-10.1%	-5.7%	-5.7%
2012-04-02	2012-06-01	14.2%	8.2%	8.2%	-9.6%	-7.2%	-7.2%
2020-09-02	2020-09-23	24.5%	10.7%	10.7%	-9.5%	-4.2%	-4.2%
Average		29.9%	13.4%	13.5%	-23.4%	-16.1%	-15.2%

Source: Citi Global Wealth Investments and Bloomberg as of May 1, 2023.

The performance of the AVS level 3 portfolio was calculated on an asset class level using indexes to proxy for each asset class. Gross of fees returns do not reflect the deduction of advisory fees. Net performance results reflect a deduction of 2.5% annual maximum fee that can be charged in connection with advisory services that covers advisory fees and transaction costs All performance information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income or commodities markets in general which cannot be, and have not been accounted for in the preparation of hypothetical performance information, all of which can affect actual performance. The returns shown above are for indexes and do not represent the result of actual trading of investable assets/securities. The asset classes used to populate the allocation model may underperform their respective indexes and lead to lower performance than the model anticipates.

1.4

A guide to investing through a slowing economy

ALFONSO CAMACHO
Global Head of Markets Distribution

JEFFREY SACKS
Client Portfolio Manager, Citi Investment Management

The choices investors make over the next six to nine months may have profound implications for their portfolio returns over the years to come. While we believe staying invested is always wise, the current environment requires investors to reconsider their portfolio composition and the timing for making allocation changes.

We are entering an economic slowdown or a mild recession, one that has been telegraphed. While we believe the Federal Reserve will inhibit a rapid rebound, there is a huge amount of surplus cash waiting to "buy the dip". Investor sentiment is poor, the landscape for investing is improving. Long-term potential growth opportunities in areas such as artificial intelligence (See Generative AI: The beginning of (another) technological revolution) and Sustainable Energy (See Unusual investment opportunities in an atypical energy cycle) are potent and unrelated to today's economic challenges.

Investors should now reconsider their portfolio composition and the timing for making allocation changes, while invested. As the year progresses, more active asset allocation should include lengthening duration in intermediate duration corporate bonds, US municipal bonds, preferred securities, and increasing investments in both non-US debt and equities. Looking forward to the next US recovery, there is relative value in US small- and mid-cap (SMID) stocks and potential opportunities in tech outside of the leaders as growth recovers.

Our Global Investment Committee has allocated to bonds to capture higher yield and to hold defensive-income oriented equities. With this Mid-Year Outlook, we are preparing for a reallocation in our portfolios. Here are some strategies for investors to consider:

Fixed income allocations

In the short-term, staying invested in cash or ultra short-term fixed income securities represents a risk to medium-term returns as reinvestment may occur at lower future yields. The US yield curve is inverted, with the shortest-term bonds yielding the most.

Investors should consider transitioning away from non-core cash and short duration fixed income investments. Higher yields may be achieved by prioritizing the selection of quality investment grade corporate credits. After a substantial yield rise a compelling case for adding to emerging market debt (US dollar-denominated) is building.

We also see potential opportunities in private credit and other areas of illiquidity and dislocation in the fixed income markets. For qualified investors, private credit and other alternative funds may bolster medium-term fixed income returns.

A coming reallocation within equities

Defensive positioning in equities should not mean staying out of the market. For now, dividend growing companies may help reduce portfolio volatility while also offering some growth and income.

We believe that small and mid-sized firms in the US, and select emerging markets, are becoming undervalued.

Our opportunistic overweights by industry include cybersecurity and semiconductor equipment, defense shares among others (See **Putting national security interests ahead of economic cooperation: The evolution of G2 deglobalization and its implications**).

Diversification of currency exposure

After a decade of US dollar dominance, currency exposure diversification may be important for the potential to strengthen investment returns and long-term preservation of investors' wealth. In addition, qualified investors may consider diversifying portfolio exposures into non-US dollar investments in applicable asset classes. In cases where investors have large holdings in less liquid US dollar assets, it is important to consider the use of these risk management strategies to possibly mitigate the impact of the bearish US dollar trend.

Unstoppables remain

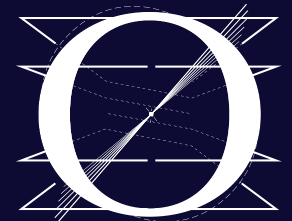
Unstoppable trends continue as long-term multi-year trends that are likely to transform the world around us, including technological advances, demographic developments and new behaviours. Broad thematic funds seek to capture these potential opportunities. Based on each investor's objectives they may use strategies to build the exposure gradually with a long-term view. Currently, some of the sub-trends such as cybersecurity and life sciences offer good entry points.

Signals to follow

We believe decision-making should be guided by holding asset allocation within diversified portfolios. In our multi-asset class strategies we seek to rotate to different types of equities and, ultimately, tilt portfolios toward a greater exposure to equities. We do not believe that cash yields will be as strong a year or more from now.

How can suitable investors raise equity allocations?

- Selection of equity markets and sectors that have lower than typical valuations
- Investments that may provide suitable investors with an entry point at the minimum price of a market over a pre-set period
- Strategies that seek downside risk mitigation at the price of giving up potential returns
- Markets that may benefit from foreign exchange movements into returns



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Currencies

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2.1

As US dollar dominance ends, currencies may drive returns

STEVEN WIETING
Chief Investment Strategist and Chief Economist

A decade ago, we predicted that the US dollar would achieve far greater value and that the US would attract more investment. That's exactly what happened. Now, we see the USD as having peaked. This turning point creates a series of potential opportunities that are reflected in our updated Strategic Return Estimates (SRE)[1] for non-US assets.

- The Federal Reserve's aggressive tightening cycle and global shocks contributed to the strength of the US dollar in 2022, which reached its second highest value in history
- In the coming two years, we expect the Fed to unwind half of its tightening steps while other central banks stay relatively steady
- US dollar appreciation supported inflows into US stocks which are now trading at a historically high valuation premium to international equities
- Non-US equity returns are poised to gain from currencies when they appreciate against the US dollar

[1] Strategic Return Estimates are no guarantee of future performance. Past performance is no guarantee of future returns. Strategic Return Estimates based on indices are Citi Global Wealth Investments' forecast of returns for specific asset classes (to which the index belongs) over a 10-year time horizon. Indexes are used to proxy for each asset class. The forecast for each specific asset class is made using a proprietary methodology that is appropriate for that asset class. Equity asset classes utilize a proprietary forecasting methodology based on the assumption that equity valuations revert to their long-term trend over time. The methodology is built around specific valuation measures that require several stages of calculation. Assumptions on the projected growth of earnings and dividends are additionally applied to calculate the SRE of the equity asset class. Fixed Income asset class forecasts use a proprietary forecasting methodology that is based on current yield levels. Other asset classes utilize other specific forecasting methodologies. SRE do not reflect the deduction of client fees and expenses. Past performance is not indicative of future results. Future rates of return cannot be predicted with certainty. Investments that pay higher rates of return are often subject to higher risk and greater potential loss in an extreme scenario. The actual rate of return on investments can vary widely. This includes the potential loss of principal on your investment. It is not possible to invest directly in an index. All SRE information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading.

The king of currencies?

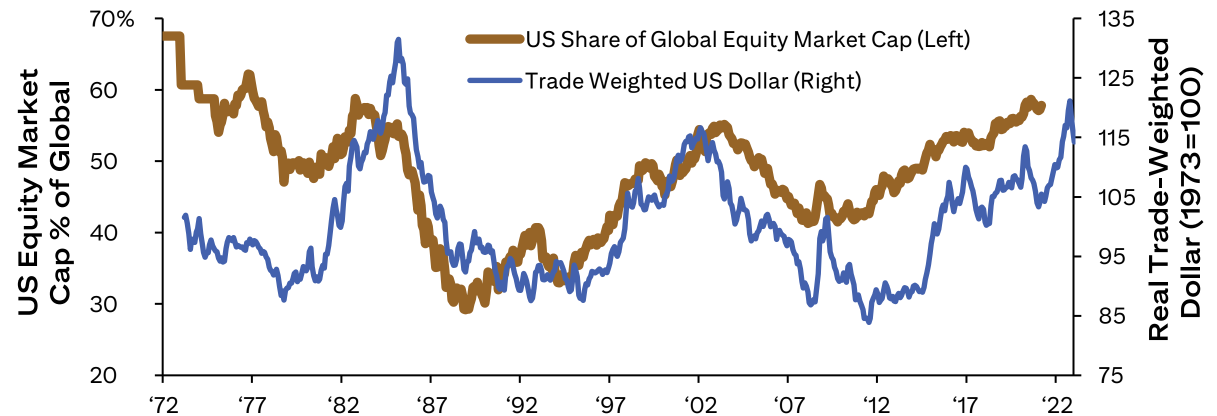
The US dollar is arguably the most successful fiat currency in history. Its widespread use as a store of value in finance and trade since World War II has made it the "king of currencies" in modern times. US dollar assets make up nearly 60% of the foreign reserves of the world's central banks, while 88% of the world's trade is invoiced in dollars.

In our Mid-Year Wealth Outlook a decade ago, we forecasted that "major financial trends of the past decade are reversing. Important trends including the falling US dollar ... and global investor outflows from dollar-denominated investments are at an end." Sure enough, in the ten years since, the US dollar soared, and investors returned to the US with a vengeance.

Now we see another reversal at hand. We believe the dollar is likely entering a secular bear market, its third in the past 50 years (**FIGURE 1**). Confidence, as expressed in dollar holdings worldwide, is peaking and so is the relative valuation of US equities.

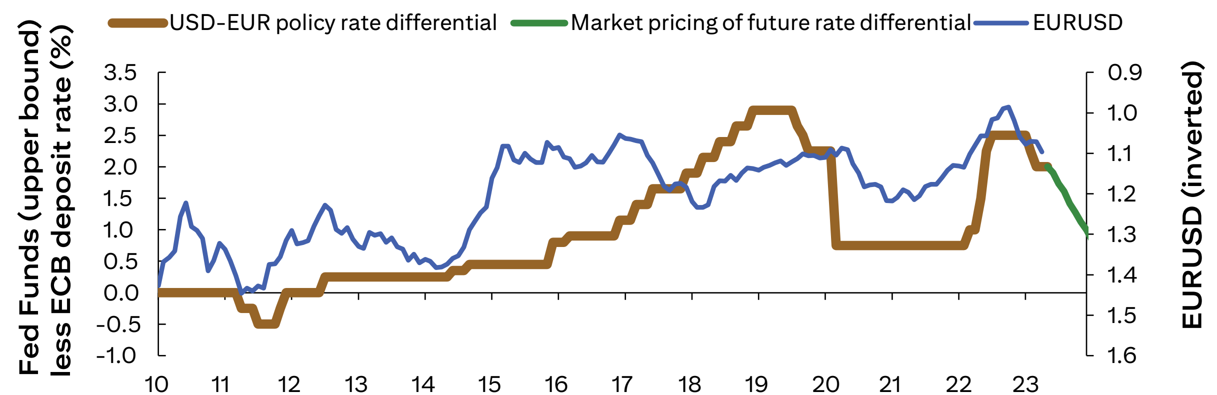
The Federal Reserve did the US no favors when it supported a huge fiscal expansion in 2021. What followed was monetary inflation. The Fed then sent the US dollar rising to its second-highest historic level in 2022 by embarking on a rapid tightening campaign that outstripped the tightening efforts of the rest of the world's central banks.

FIGURE 1: Strong US Dollar and US Equities



Source: Haver Analytics and Bloomberg as of April 22, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

FIGURE 2: Diverging USD-Euro Policy Rates



Source: Haver Analytics as of May 4, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Past performance is no guarantee of future results. Real results may vary.

A turning point just ahead of us

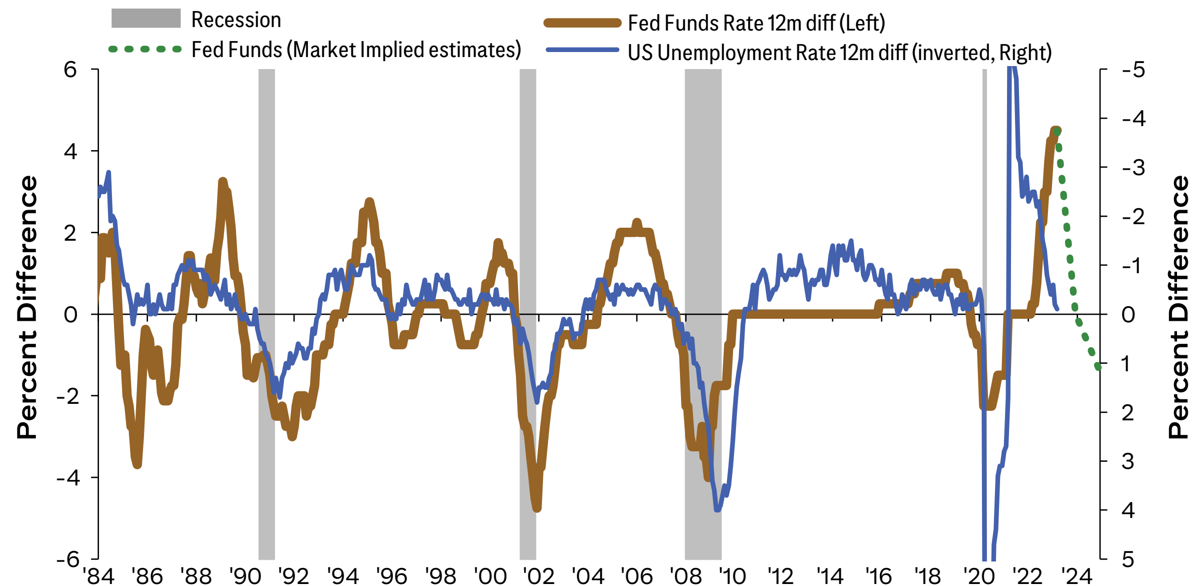
Ultimately, the highly cyclical US labor market and the Fed's mandate to support maximum employment will likely undermine the dollar in the coming years. By the end of 2024, we expect the Fed to unwind half its 2022-2023 tightening steps while other central banks remain steady (**FIGURE 2 and 3**).

The larger question for US exchange rates is "what's in the price?" While we are oversimplifying slightly, the near record high US dollar means that there is an embedded expectation that the US will have stronger real economic growth and less inflation than other countries in the years ahead. The Fed's aggressive interest rate hikes attracted inflows from international investors seeking yield. Those inflows will likely slow during the upcoming Fed easing cycle, weakening the dollar.

The dollar's decade-long rise helped drive US equities toward a record 62% share of the world's equity market capitalization last year (**FIGURE 1**). This hasn't come without a cost elsewhere. Non-US equities currently hug a record low valuation compared to the US, nearly 40% below current-year earnings per share (EPS) estimates, and nearly 30% below a 10-year average of actual EPS (**FIGURE 4**). While US firms may outgrow global peers based on their industry and individual merits, such a premium valuation requires continued outperformance.

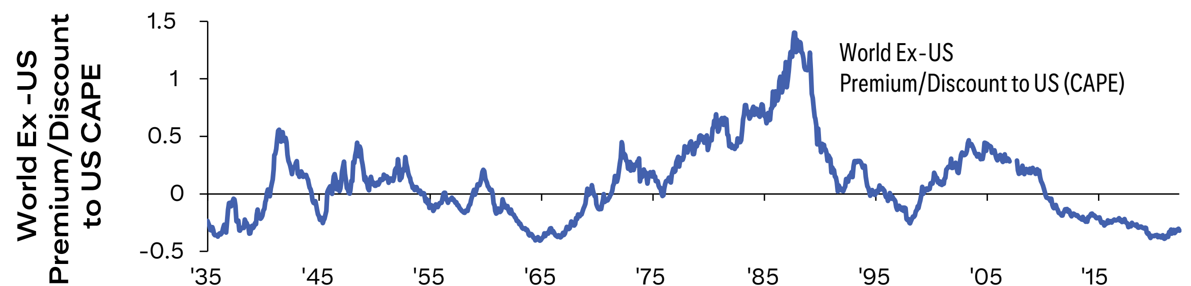
We believe that some foreign firms could potentially make competitive headway against US companies and that returns from non-US equities may increase if foreign currencies appreciate against the dollar.

FIGURE 3: Rapid Rate Hikes Expected to Ease



Source: Haver Analytics and Bloomberg as of May 2, 2023. The gray shaded areas are US recessions. All forecasts are expressions of opinion, are subject to change without notice and are not intended to be a guarantee of future events. Past performance is no guarantee of future results. Real results may vary.

FIGURE 4: Non-US Equities at a Discount to US Equities



Source: Factset as of April 21, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary. The CAPE ratio is a valuation measure that uses real (EPS) over a 10-year period to smooth out fluctuations in corporate profits that occur over different periods of a business cycle.

China and crypto aren't the catalysts for the dollar's decline

Over the decades, we've heard numerous spurious predictions of the US dollar's demise only to see it appreciate. The stories behind a collapse in the dollar typically involve China. Like most other global traders, China has no particular interest in conducting business in US dollars, a currency it can't control. The crypto world is another dollar naysayer, with a self-interest to promote alternative monetary systems. More than once, crypto pundits have pronounced the sudden end of the US dollar.

Of course, an important story that didn't get much attention was the US government's decision to freeze much of Russia's more than $600 billion in foreign reserves. This alerted US antagonists to the potential risk of holding US dollars to bolster domestic currencies. Nonetheless, central bank foreign reserve holdings and the US dollar's value are very lightly correlated in all but long-term periods.

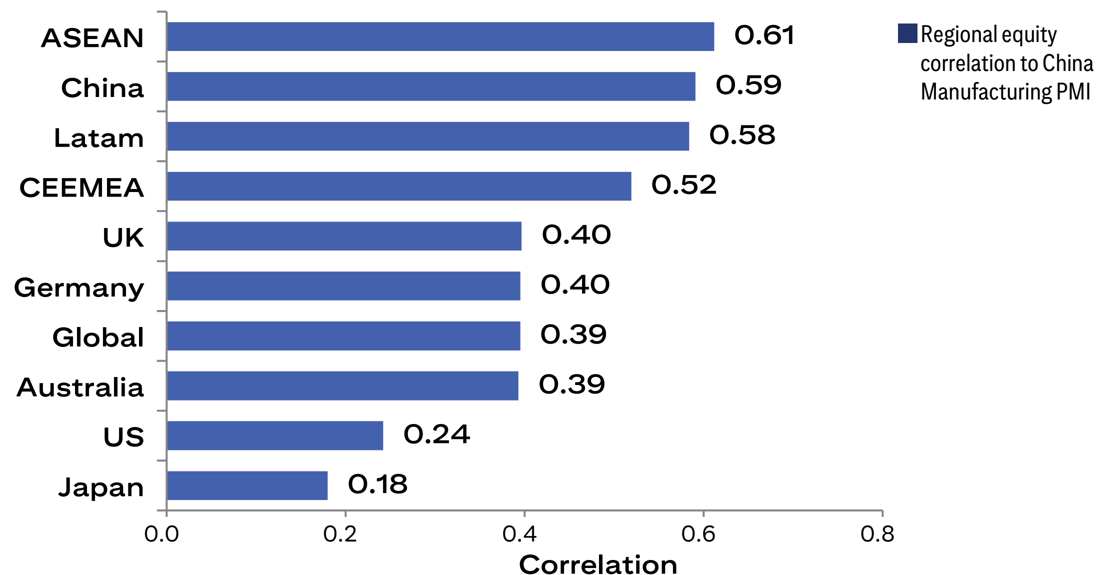
Yet at present valuation levels - and the already deep penetration of the US dollar in portfolios and trade – forward-looking fundamentals simply suggest some unwinding of the US dollar's past decade of gains.

Seeking returns as the dollar declines

The Fed's abrupt tightening cycle and the Russian energy shock sank many currencies to record lows last year against the US dollar. The recent key pain point for Europe was the significant surge in natural gas import costs last autumn as Russian supplies were cut off. This generated a "term-of-trade shock" and a brief economic contraction. Since then, we've raised our economic outlook and our allocation for the depressed region with its low expectations (See Recession, recovery: A journey unfinished and Europe: Selective opportunities amid modest growth).

We expect some emerging markets, including China and Brazil, to ease monetary policy in the coming year. Given the backdrop of US rate cuts in the coming year, this should provide a boost to local markets and economies (**FIGURE 5**). We've broadened our overweight allocations in recent months to include a wider swath of Asian equities markets. We expect to make additional moves when we see the recognition of US economic risks more fully priced.

FIGURE 5: China Recovery Impacts the Association of Southeast Asian Nation (ASEAN) Equities



Source: Bloomberg as of January 31, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary. The Association of Southeast Asian Nations (ASEAN) is a political and economic union of 10 member states in Southeast Asia.

The movements of foreign capital have historically been a powerful force affecting local equity returns. The factors that drive foreign investors to acquire more net US assets are generally the same factors that drive local returns (**FIGURE 6**). This is especially true in emerging markets where confidence in local currencies is currently low and inflation is abating, which supports the higher relative returns for emerging markets in our updated Strategic Return Estimates– (**FIGURE 7 and 8**). A strong growth environment and low inflation are typically positive for equities even if it hurts the competitiveness of exporters.

Understanding the strategic return estimates (SRE)[1]

The 2022 market decline – the largest combined falls in equities and fixed income since 1931 – may be a reason for higher future returns across markets. This potentially is true for non-US markets starting at a lower initial valuation.

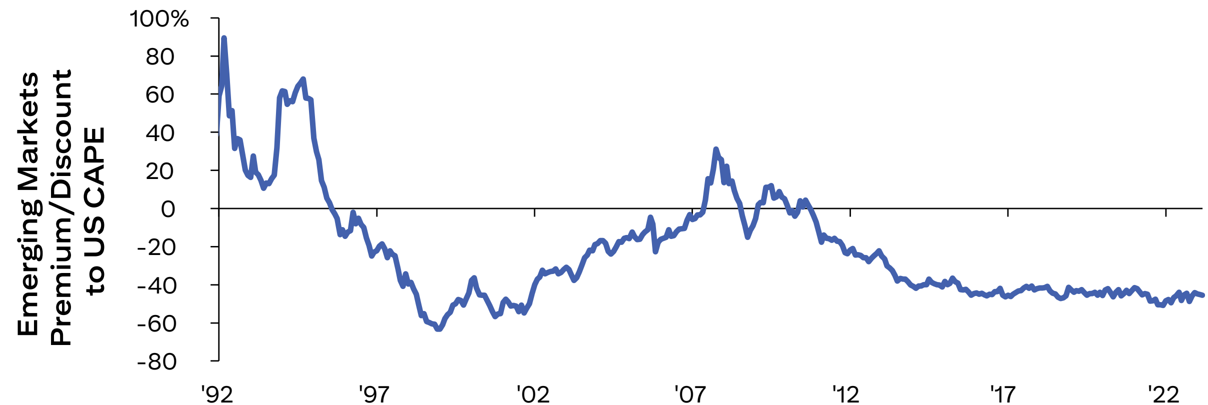
A second reason why USD returns can exceed prior periods is the dollar's likely decline. Our asset class Strategic Return Estimates (SRE's) for emerging equities and fixed income suggest a 12.9% and 7.8% respective potential return opportunity per annum over the coming decade.

FIGURE 6: US Dollar Impact in Recent History

Decade ending in December	Annualized Real Total Returns S&P 500 (%)	Change in Real Broad Trade Weighted Dollar Index (%)
1970s	0.4	-13.9%
1980s	13.8	3.4%
1990s	28.4	8.3%
2000s	-0.9	-12.1%
2010s	11.9	17.7%

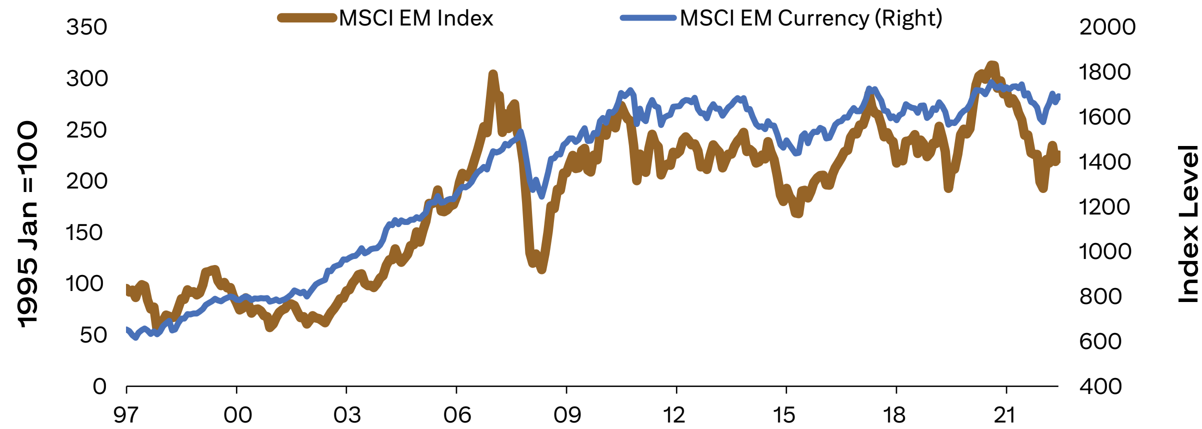
Source: Bloomberg as of April 25, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

FIGURE 7: Emerging Markets Equities at Discount to US Equities

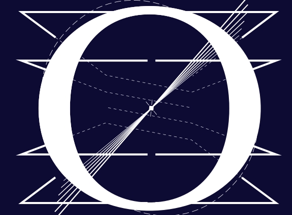


Source: Factset as of April 21, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

FIGURE 8: Emerging Markets Sentiment Currently Low



Source: Bloomberg and Haver Analytics as of May 4, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.



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Bonds are Back Again

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3.1

Bonds are Back Again: Where to find potential fixed income opportunities now

Bonds are back and there are numerous potential opportunities to diversify bond portfolios, add to duration, and possibly earn higher total returns. This is a time for portfolio action in the fixed income space.

BRUCE HARRIS
Head of Global Fixed Income Investment Strategy

STEFAN BACKHUS
Head of Alternatives Strategy, Alternative Investments

- Wise bond investors may have a second opportunity to diversify portfolios and achieve high levels of income. As banks reduce lending and capital markets become less liquid, investors may be able to increase their bond returns by changing where and how they invest
- Investors can expect the high rates of returns they are earning in money market funds and Treasury bills (T-bills) to decline meaningfully over the coming 12-24 months
- To maintain current returns, longer-duration bonds and investment grade (IG) corporate or municipal bonds may provide opportunities for income and appreciation while offsetting potential credit spread widening during a recession
- For suitable investors, market illiquidity is creating investment opportunities in hedge funds and private credit. Skilled alternative bond managers may be abe to earn higher returns by investing in markets where the "flight to safety" in money markets and government bonds has left high yielding credits in search of buyers

Bonds are indeed back. The 2-year Treasury yield and 10-year Treasury yield are roughly the same from the start of the year through May 26th, though yields dipped significantly for a period in the early spring. This price action evidenced Treasuries fulfilling their traditional role as a general "flight to quality" asset, most likely due to heightened fears during the US regional banking crisis. Recent optimism in late May over the debt ceiling and more optimistic economic data brought yields back to roughly the same yields as the beginning of the year, offering investors a chance to own bonds at these more favorable higher yield levels.

Year-to-date, the Bloomberg US Aggregate Index and the Bloomberg US Corporate Bond Index have each risen by roughly 1.5%, driven largely by interest carry.

Investor demand for higher yields remains robust, especially when compared to the last decade. Recent US regional banking stress further reduced market expectations for rate hikes, though this has partially reversed some in recent weeks. Even high-yield bonds have performed well, despite concerns over a possible future banking "credit crunch" and recession in the US. The Bloomberg US Corporate High Yield Bond Index is up 3.3% year-to-date.

What should we expect from bonds going forward? The inverted yield curve points to shallow recession and subsequent rate cuts. Meanwhile, investors are enjoying the short end of the yield curve with T-bills paying 5.25% for 1-year maturities and 5.3% for 3-month bills. These rates are almost 150 basis points more than longer-dated Treasury notes.

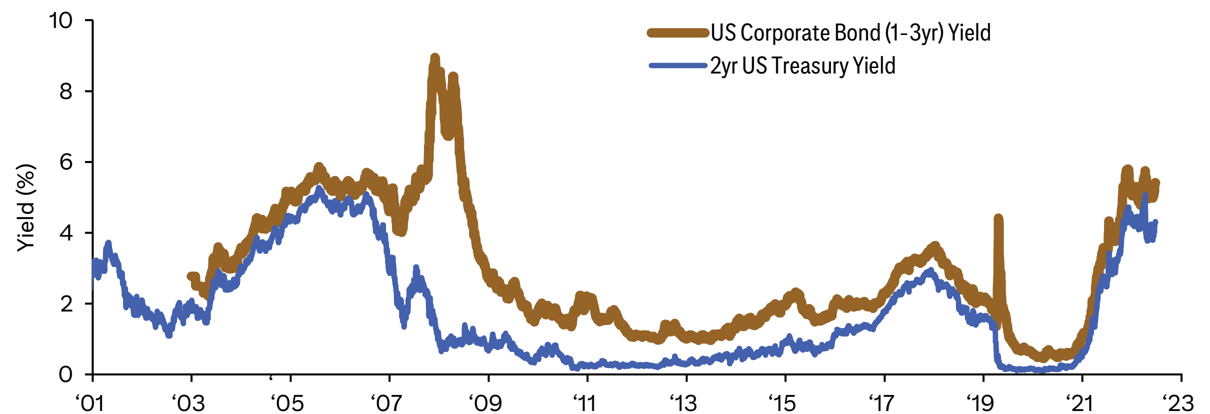
We think that the allure of high short-term rates has dampened demand for longer term fixed income securities. The focus on "income now" ignores the fact that when unemployment rises, inflation slows and consumer demand fades, the Federal Reserve will likely begin cutting rates aggressively. Currently, the market is pricing future rate cuts that may bring the Fed Funds rate to 3.5% by the end of 2024.

Thinking ahead may be rewarding

In each of the three recessions between 1990 and the COVID-19 pandemic, the Fed cut interest rates by at least 500 basis points. While we do not expect that degree of monetary easing, even cuts of 250 basis points could reduce short-term T-bill yields and make them less attractive than the current yields of longer-term bonds. This is why we believe investors should seek to rotate capital into longer duration bonds sooner rather than later.

In addition to adding duration, investors should consider adding intermediate duration investment grade corporate bonds or similarly rated longer duration municipal bonds. Investment grade credit spreads offer an additional 100-150 basis points of yield depending on tenor. Higher-rated corporate bonds can offer 5% to 6% yields alongside T-bills and deposits (**FIGURE 1**).

FIGURE 1: Corporate Bonds Yields Higher than 2-Year Treasury Yield



Source: Bloomberg as of May 26, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

ABCs: Avoid bad credits

Due to concerns over a possible recession and the lack of capital for more highly leveraged companies, we would not advocate for investing in lower-rated high yield bonds or loans unless investors are knowledgeable about the credit risk of these companies.

Suitable investors who have patient capital to deploy may find that alternative fixed income managers with stable capital pools and expertise in security underwriting will prosper. By using sophisticated modeling and due diligence, they can seek to selectively provide liquidity in times of uncertainty and limited capital availability from capital markets and banks.

Spotlight on private credit

In marked contrast to the flood of money into T-bills and money market funds, the opposite has been true for leveraged loans and high yield bonds. Three consecutive and sizable major bank failures caused new loan issuance to plummet.

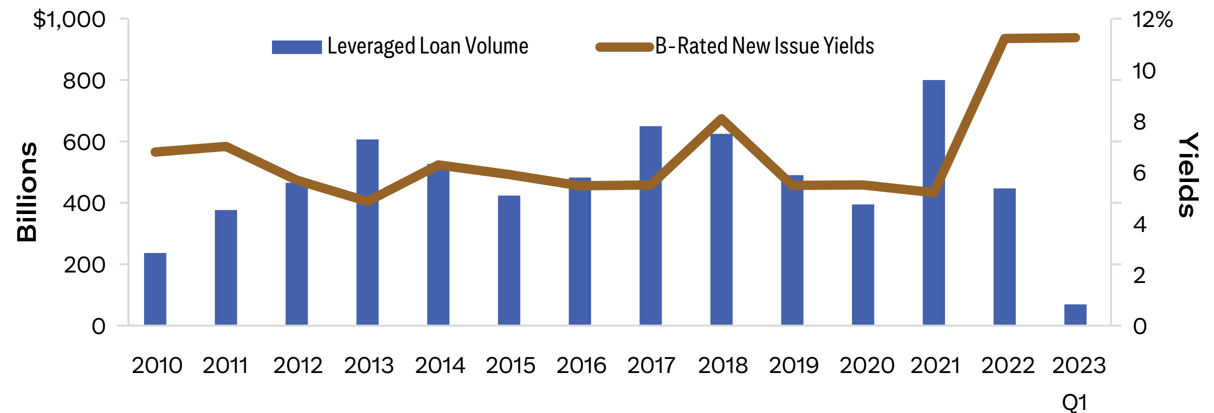
Seventy percent of leveraged loans issuances in 2022 occurred in the first half of the year. In the third quarter of 2022, syndicated loans got hung up on bank balance sheets, leading sellers to deeply discount the loans they wanted to sell, with pricing in the low 90s relative to par in many cases. Now liquidity has dried up. In the first quarter of 2023, just $69.9B of leveraged loans were issued, the lowest quarterly amount since the fourth quarter of 2014 (**FIGURE 2**).

When illiquidity equals potential opportunity for investors

When credit tightens, borrowers pay higher yields and receive lower loan to value funding, providing bond and loan investors better protection and higher returns on performing credit. Yields on B-rated new issue loans climbed to 11.26% as of March 31, 2023 (**FIGURE 2**). We expect that yields for complex credits in public markets and for private lenders may rise even more. As banks have become more risk averse, there is potential opportunity for lead credit investors to provide private market strategies to companies, extending out maturities for benefits including higher coupons, fees, and/or improved collateral.

This is why we suggest that investors with the suitable investment objectives and two- to five-year horizons consider an allocation to direct lending funds and business development companies (BDCs) that seek to generate higher total returns without taking excessive risk.

FIGURE 2: Leveraged Loan Volume Is Down but New Issue Yields are Up



Source: LCD as of March 31, 2023 Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Our views

Potential opportunities to earn two or even three times the rate of government securities by lending to fundamentally sound companies at attractive valuations are unusual and often fleeting. As markets contemplate a recession of unknown length and severity — and as banks preserve capital amidst deposit balance uncertainty — skilled bond managers may take advantage of market dislocations.

A decline in bank lending, lower passive investment flows and slowing collateralized loan obligation (CLO) issuance are symptoms of concerns with future corporate profits. But that concern seems overblown relative to prior recessionary periods.

In the alternatives space, suitable investors can choose from diversified credit hedge funds, private BDCs, distressed credit hedge funds and opportunistic private credit funds to seek opportunities for their portfolios. Each of these strategies seeks to take advantage of volatility and dislocations created from the uncertainty of capital market access. With flexible capital, they are patient and step in as a liquidity provider in order to take advantage of credit opportunities.

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4.1

Finding value beyond narrow leadership

JOSEPH FIORICA
Head of Global Equity Investment Strategy

A highly concentrated US tech rally this year masks the value still present in global equities following the 2022 bear market. Economic and profits growth should bottom in the next few quarters, presenting an opportunity to diversify portfolios into non-US shares, profitable small firms, and still-depressed growth stocks.

- Of the $4 trillion in global market cap created so far this year, 89% can be attributed to just 10 companies[1]
- While US large caps look expensive relative to prevailing interest rates, we see value in non-US equities and profitable small and mid-sized companies
- While we don't expect global equities to simply surge higher in the year ahead, we see both cyclical and structural tailwinds for non-US shares in the next market cycle
- Global dividend growth is another tactical overweight that has seen smaller drawdowns since the bear market began in 2022. While dividend growers tend to lag in early cycle recoveries, we still believe this strategy has a permanent place in core portfolios given their track record of long-term outperformance

[1] Proxied using MSCI AC World Index as of May 31, 2023

Through May, global equities have already matched a typical year's annual return, up 7% year-to-date. But under the hood, the rally has been far from broad-based.[1] Of the $4 trillion in global market cap created so far this year, 89% can be attributed to just 10 companies, mostly US mega-cap tech names (there are 2,880 companies in the MSCI AC World Index). While these market cap-weighted indices have delivered solid gains, the average return across S&P 500 constituents is closer to flat. US small caps have also missed out on the rally.

For many on the sidelines, the decision to buy equities or continue to sit in cash feels a lot harder. But the choice of whether to own the S&P 500 at 19x expected earnings or US T-bills at a 5% yield is an overly simplistic way of looking at the investment landscape. The global equity universe today presents us with plenty of compelling opportunities at reasonable valuations. Our Global Investment Committee recently added to shares in Asia, Europe, and Latin America which in aggregate trade at a 30% discount to the S&P 500. And given very top-heavy performance in the US, value is starting to emerge in profitable small- and mid-cap stocks as an additional alternative to expensive US large caps.

Will the next cycle be different for non-US stocks?

A common misconception among US-biased investors is that US stocks always have and always will trade at a premium to shares abroad. While this has certainly been true for the last decade or so, it is not a law of nature. In fact, for much of the last 100 years US equities have traded much closer to parity and sometimes even at a discount to their global peers (FIGURE 7: Emerging Markets Equities at Discount to US Equities in Currencies). Over the past 15 years, however, US equities have gradually richened relative to international shares as America's tech dominance offered investors a highly coveted segment of growth in an otherwise muted global growth environment. While global equities are unlikly to simply surge higher in the year ahead, we see both cyclical and structural tailwinds for non-US shares in the expansion that will eventually follow the present period of economic uncertainty.

As we discussed in As US dollar dominance ends, currencies may drive returns, an eventual unwind of aggressive Fed tightening should take some steam out of the US dollar's rally vs major currencies. As US interest rates fall, investors who flocked to higher-yielding US assets and high-quality US equities may need to look elsewhere in the world to find better value.

Meanwhile, meaningful corporate governance reforms in Japan and Europe also look promising. Japanese financial authorities are actively incentivizing companies to return more cash to shareholders, catching the attention of some of the world's largest investors. In Europe, conglomerates have been spinning off businesses at a premium while simplifying their structures. Buybacks and M&A have also picked up this year.

Lastly, long-term thematic trends can also explain US equity market dominance over the past decade. Growth in the major trends of the 2010s like social media, e-commerce, cloud computing, and smart phones were all dominated by US tech giants. But in the next decade, unstopable trends like global aging, electrification & decarbonization, and a rising Asian middle class may benefit more than just US firms. Pharmaceuticals, brands servicing emerging markets consumers, and clean energy leaders can be found across the global equity landscape. Investing with a US bias risks missing out on a key subset of these potential winners.

Capturing improving value outside of mega-caps

Aggressive monetary and fiscal stimulus during the pandemic was aimed at supporting businesses facing existential risks from the stay-at-home economy. This support helped smaller, riskier firms outperform the giants in the year following the 2020 COVID lows. But the side effects of that stimulus – surging inflation and sharply rising borrowing costs – have benefited large firms with scale and pricing power. Meanwhile smaller firms have lagged, giving up all of their post-COVID era gains.

Small- and mid-cap stocks' (SMID) tepid performance over the past two years means that valuations have improved, with profitable small cap names now trading at a 26% discount to larger peers. While large cap growth in particular has rallied in 2023, fast-growing small firms remain in the doldrums (**FIGURE 1**). Market expectations for a Fed pivot should change this paradigm, enabling a catch-up in small-cap

growth shares, led by non-cyclical health care and technology firms.

Small-cap value benchmarks are closely tied to performance of regional banks. It is hard to be sure the cascade of small bank failures is behind us, while further consolidation is likely, but broad regional bank shares should recover once economic conditions stabilize. Regional banks play a key role in the US economy, facilitating and underwriting loans to small businesses in local markets where large banks are not players. From a valuation perspective, regional banks have only been cheaper on a price to tangible book basis during the depths of COVID and during the Great Financial Crisis. While it may be premature to add in a tactical window, quality small cap value shares look compelling at current levels with a multi-year time horizon.

With capital costs still high, stick to profitable small caps

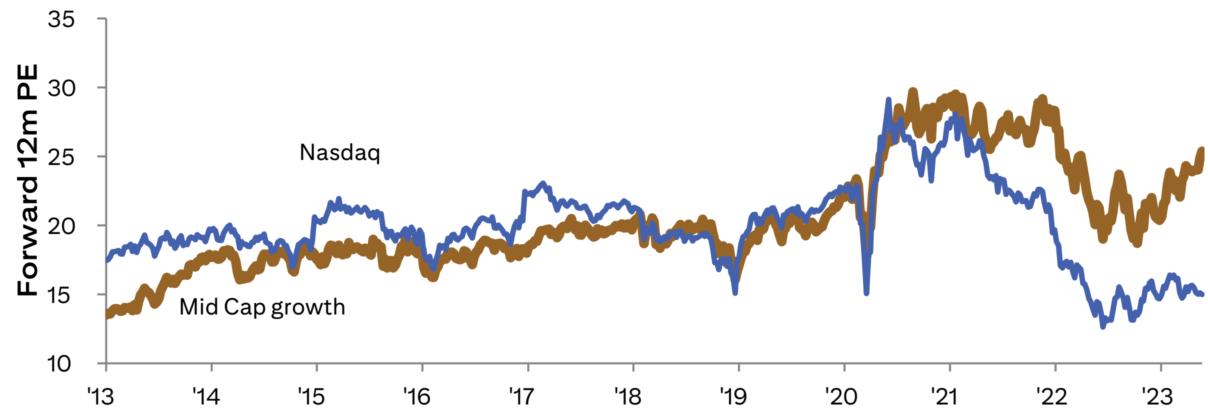
While the value proposition in small-cap shares is apparent, moving down in cap does not come without taking on some additional risk. When the Global Investment Committee moved SMID to overweight in April 2020, economic and pandemic-related conditions were still highly uncertain but policy was unambiguously supportive. Investors unfortunately don't enjoy those same tailwinds today, with the Federal Reserve still yet to signal a shift towards easing and US fiscal deficits more likely to contract than expand in coming years. The longer interest rates stay high, the greater refinancing risk will be for small, more highly levered companies.

Given this uncertainty on the interest rate front, our preferred way to play the SMID space is through an up-in-quality approach. Profitable small firms are more likely to survive a period where capital costs remain elevated than those that rely on access to debt or equity markets to sustain growth. This is a segment of the equity market where active management can add real value by hunting for under-the-radar opportunities while avoiding value traps at risk of stagnation or bankruptcy.

What to do with expensive defensives

Hiding out in value and defensive sectors was a winning playbook in 2022. Dividend growth shares outperformed the broad market by 12%, while sectors like energy, pharmaceuticals, staples and utilities delivered positive performance as growth shares plunged. This ongoing macro uncertainty has led many investors – including us – to hoard stability in portfolios.

FIGURE 1: Large Cap (Nasdaq) vs Mid Cap Growth Valuations



Source: Bloomberg as of June 1, 2023. Mid cap growth proxied using S&P 400 Growth Index. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

As economic and profits growth bottoms in the next few quarters, this year may mark the twilight of the defensive trade. The Global Investment Committee already trimmed our overweight to global pharmaceuticals after 23% outperformance vs global equities since mid-2021. US large cap value shares are now trading at valuations 21% above their average since 1995. But not all defensives were spared last year. Faster-growing health care segments like biotech and life sciences were hit by rising capital costs, but their underlying business models should be relatively uncorrelated to the economic cycle. The earnings of cyber security specialists remain resilient and will likely be a key secondary beneficiary from the buildout of AI, as discussed in **Generative AI: The beginning of (another) technological revolution**, Global dividend growth is another tactical overweight that has seen smaller drawdowns since the bear market began in 2022. While dividend growers tend to lag in early cycle recoveries, this strategy should have a permanent place in core portfolios given its track record of long-term outperformance.

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Unstoppable Trends

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5.1

Putting national security interests ahead of economic cooperation: The evolution of G2 deglobalization and its implications

LIGANG LIU
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KEN PENG
Head of Asia Pacific Investment Strategy

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As economic competition between China and the US intensifies, technology has become the primary focus. Separating the development, use and distribution of technology by the world's two largest economies will create new risks and potential opportunities for investors.

- The US and other western nations are prioritizing national security over economic cooperation with China
- US and Japanese investments in China have declined and many US businesses are looking to diversify operations, creating potential opportunites for reshoring or nearshoring, especially in robotics and artificial intelligence (AI)
- US neighbors such as Mexico stand to benefit from nearshoring

A recent shift in US-China relations has far-reaching implications for businesses and investors.

Western countries are adopting a unified strategy to address China's growing global aspirations and economic might. Their approach puts national security goals ahead of economic efficiency, a major departure from what most of the western hemisphere seemed to believe, as their economies evolved after World World II.

In a speech at the Brookings Institution this past April, President Biden's National Security Advisor, Jake Sullivan, stated that the US is focused on "de-risking and diversifying, not decoupling" from China. As part of this approach, Sullivan said the US is following a "small yard, high fence" approach to guard advanced US technology against leaks to China and working to build a secure supply chain with friendly nations. EU leaders expressed a similar approach in their dealings with China.[1]

Sullivan's speech was significant because it signaled that the US sees limits on the transfer of technology and innovation to China as a means to increase its security. Technology is not a "small yard" when it comes to value-added products. This means more goods will need to be developed, designed and distributed away from China. And in response, China will need to invest in its own technology infrastructure to a much larger degree than it contemplated just five years ago. Such actions are "inefficient" in that costs for both China and the West will rise, and the benefits of globalization will fade.

Growing tensions

Even before Sullivan's statements, investors believed the US had sought trade, technology, and economic decoupling with China. During the Trump Administration, most Chinese exports to the US were subject to 25% trade tariffs and many Chinese technology companies were put on lists that barred firms from accessing US technology and doing business in the US without explicit permission.

Since taking office, President Biden has left the tariffs unchanged and further expanded the scope of the Trump-era policies to further limit US companies from selling a wider range of technologies to even more Chinese companies without a special license. This comes after severely restricting the use of Chinese components in good produced by Western companies.

Compared to the Trump Administration, which effectively started a trade war with China, the Biden Administration has taken a more comprehensive, targeted and systematic approach to protect "vital US interests." In short, the focus on ring-fencing access to advanced technologies represents a new type of deglobalization against a "strategic rival."

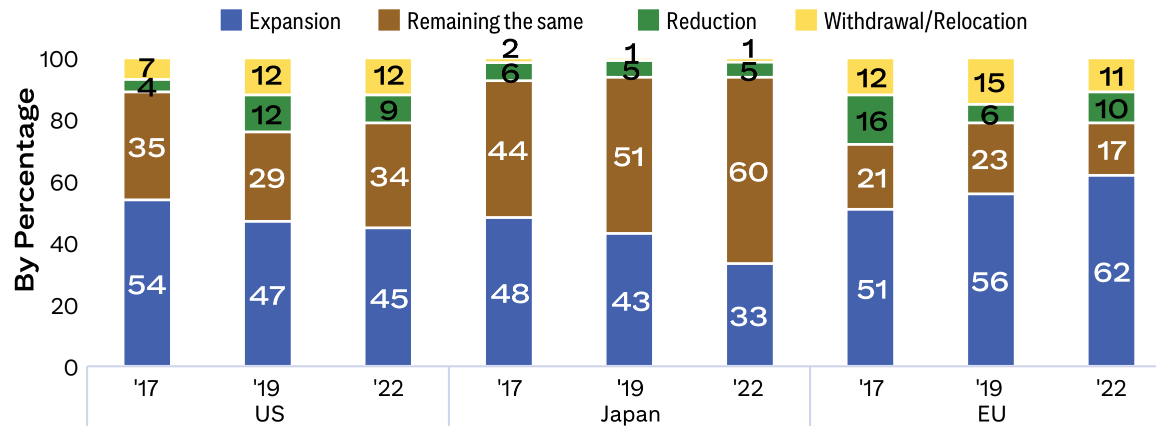
Declining investment in China

The sharp acceleration of this US policy is already impacting the willingness of multinational companies to expand or initiate new investments in China. Surveys from the American Chamber of Commerce in China and the JETRO, a Japanese government agency to promote international trade and investment[12], show that only 45% of US firms intend to expand operations in China, down from 54% in 2017. Just 33% of Japanese firms said they intend to expand in China, down from 48% in 2017 (**FIGURE 1**).

Interestingly, European Union (EU) multinationals are heading in the other direction, with 62% intending to expand operations in China, up from 51% in 2017. More US firms have also reported an intention to move out of China, with 21% saying they intend to move in 2022, up from 11% in 2017. Japanese firms didn't show the same inclination to leave, while EU firms are signaling an intention to stay, with just 21% saying they intend to leave, down from 28% in 2017.

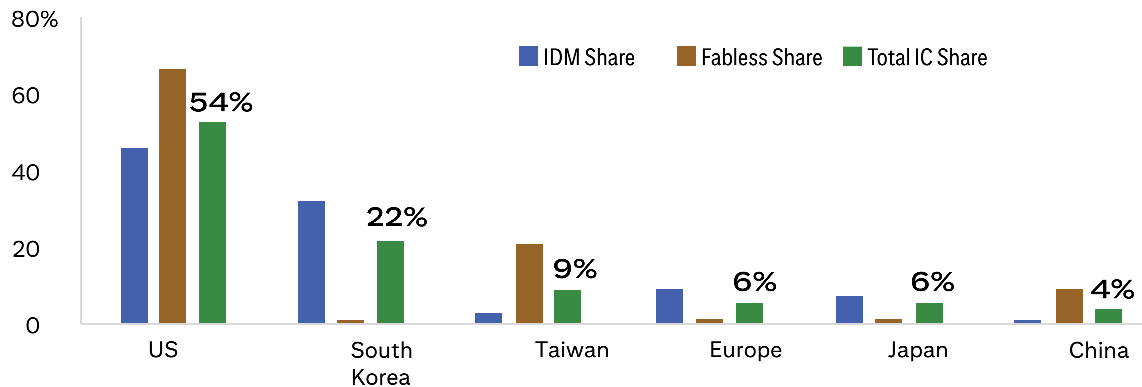
[1] Remarks by National Security Advisor Jake Sullivan on Renewing American Economic Leadership at the Brookings Institution. April 27, 2023
[2] AmCham 2023 China Business Climate Survey Report includes approximately 400 survey participants, 2022 JETRO Survey on Business Conditions of Japanese Companies in Asia and Oceania includdes approximately 700 survey participants

FIGURE 1: Shifting Investment Intentions in China



Source: AmCham China, JETRO, European Chamber and Citi Global Wealth Investments, as of May 11, 2023. Note: The Japan data comes from the JETRO survey asking about companies' intention to expand business. The data for the EU comes from a survey from the European Chamber while the US data comes from a survey from AmCham China. The categories of 'Remaining the same' and 'Reduction' for US and EU firms are based on estimates based on two survey questions about expansion plans and de-investment plans.

FIGURE 2: Market Share of the Global Semiconductor Sector

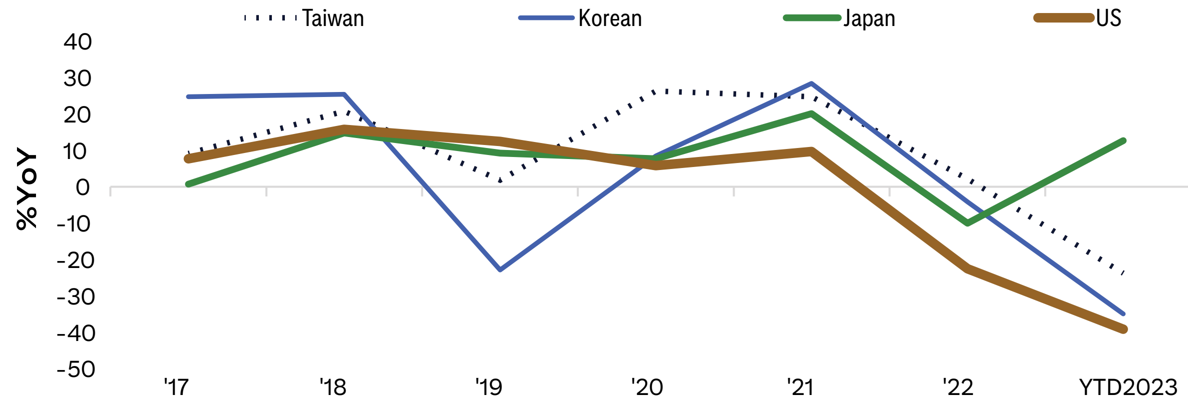


Source: IC Insights, Citi GPS, as of Oct 2022. Chart shows countries' market share in key semiconductor subsectors: integrated device manufacturers (IDM), which design and manufacture semiconductors in-house and fabless shares, which design semiconductors but contract out the manufacturing. Total IC share shows countries' total market share in integrated circuits (IC), also known as semiconductors or chips.

Decelerating exports to China

The "small yard, high fence" policy has already greatly impacted semiconductor makers. For US global semiconductor makers, which collectively represent 54% of global semiconductor production, the new regulations mean less business with China in the near term (**FIGURE 2**). US companies are withdrawing US personnel from their operations in China and are expected to move specific equipment and assembly operations to the US, Europe and elsewhere. The short-term impact is already showing up in the drop in exports to China. Among the key global semiconductor producers, Chinese imports from the US dropped by a staggering 40% year-over-year (YoY) in 2023 — the sharpest decline of any prior period (**FIGURE 3**). Despite the drop, we believe the potential for long-term growth prospects in semiconductors will more than make up for the loss of sales to China (see Generative AI: The beginning of (another) technological revolution).

FIGURE 3: Chinese Imports of Semiconductors from the US and the Rest of the World



Source: Korean International Trade Association (KITA), as of May 2023. Note: YTD2023 includes Jan-Apr 2023.

What should investors consider?

The evolving relationship between the West and China will cause costs to rise.

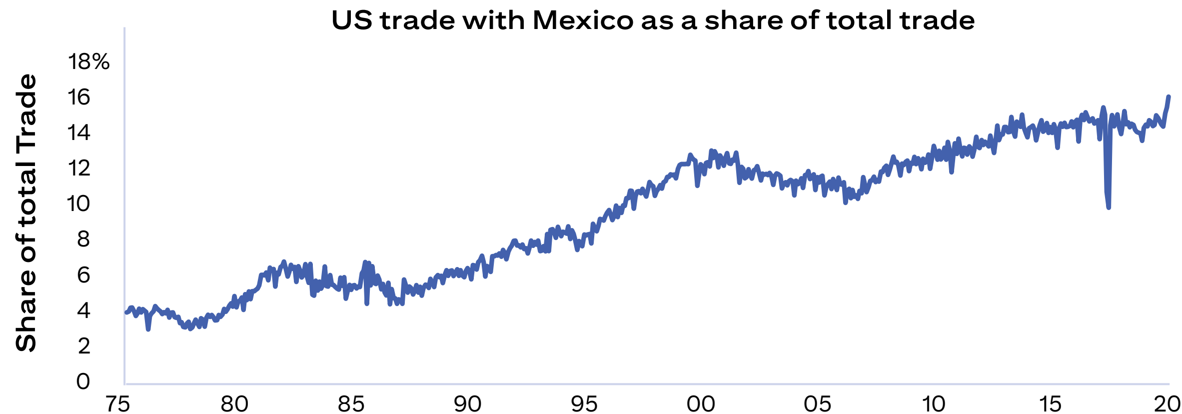
Shifting G2 tech policies will have significant repercussions for corporate research & development (R&D) spend in China and the US, opening up potential new opportunities for investors. China has seen restricted technology firms rise in market value, just as Western suppliers have seen their share prices rally. While CIG are presently overweight China due to its rapidly improving macroeconomics, the slowing global economy and realignment of the West's priorities will require even more selectivity in the building of Chinese investment portfolios, now and in the future.

The Biden Administration's new industrial policies directly impact strategically critical sectors like supply-chain technology, smart manufacturing, semiconductor, biotech, green energy, space communications, aerospace technologies and new materials. US companies moving operations away from China will create new reshoring or "friend shoring" opportunities. Technologies such as robotics and AI and industries that secure critical natural resources allow for greater onshoring and nearshoring. Recent legislation – the Inflation Reduction Act, the Infrastructure and Investment Jobs Act and the CHIPS & Science Act – are all supportive of the development and investment of these technologies. CHIPS & Science, for example, directs $280 billion in spending over the next 10 years across R&D, manufacturing, workforce development and tax credits.

As companies look to replicate advanced technologies in North America, the need for robotics and AI technology expands, given that higher labor costs are inevitable with onshoring.

US neighbors like Mexico also stand to possibly benefit from nearshoring. The 2020 passage of United States-Mexico-Canada Agreement (USMCA) as well as US policy preferences such as the North American final assembly, all tilt the playing field in favor of Mexico and Canada. Indeed, Mexico is capturing an increasing share of total US trade (**FIGURE 4**). Logistics and transportation companies can be attractive investments, as are sectors that benefit from the rise of the Mexican consumer. Financial institutions may also do well as more people in Mexico enter the formal economy.

FIGURE 4: US-Mexico Trade Will Continue to Increase



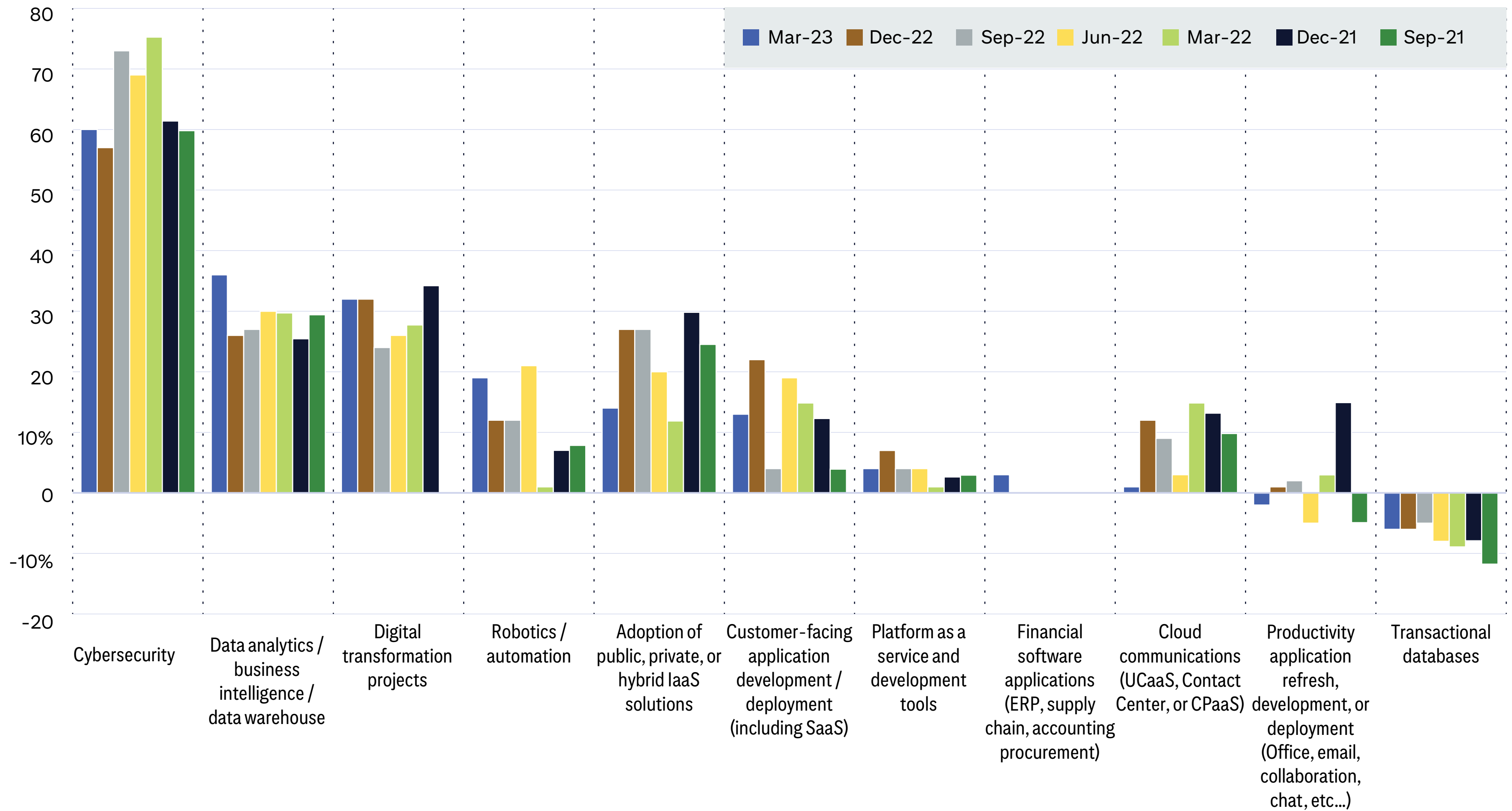
Source: Haver Analytics as of May 2023.

Cybersecurity is another high-quality subsector that may benefit from larger defense budgets. We look for companies that are focused on the privileged access management space and those specializing in the proactive identification of cyber threats and marketing corporations. Demand for these services is expected to stay strong as chief information officers make cyber defense a bigger priority (**FIGURE 5**).

Both defense and cybersecurity both stand to potentially benefit from the long-term repercussions of a G2 polarization as the US and its allies dedicate more resources to national security. Before the Ukrainian/Russian conflict, investments in defense were focused on drones and advanced communications, but now countries are spending more on aerospace and defense. We look for companies that are part of the defense supply chain, such as makers of instrumentation and digital imaging, as well as companies with existing demand from the US and its allies, such as Germany and members of NATO.

Even if the balance of power oscillates in the White House or chambers of Congress, the stance of more protectionist trade will be steady. We are intent on seeking to identify the industries that may benefit from the inevitable “high fence” the US will put up to keep others out in this increasingly polarized G2 world.

FIGURE 5: Top CIO Priorities



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Source: Citi Research. Net result of responses to the following two questions: Since the beginning of the year, which three indicatives have g=become a higher investment priority? Since the beginning of the year, which three initiatives have become a lower investment priority?

5.2

Unusual investment opportunities in an atypical energy cycle

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World events and the rise of renewable energy are reshaping the energy landscape. The players leading the charge include major traditional energy companies and energy producing nations that see the green transition as inevitable and profitable. Capital scarcity favors leading firms with strong capital positions.

- OPEC's early cuts to output suggests a different market outlook for energy equity and credit investors
- The US and other countries are rebuilding energy stockpiles after the war in Ukraine disrupted supply. Ongoing geopolitical conflicts highlight the important role of non-OPEC oil producers like Brazil, as well as renewable energy
- European energy companies have been trading at a 40% discount to US counterparts, but have been investing heavily in improvements that could pay off in the near future, potentially narrowing that valuation gap
- We expect to see consolidation in the renewable energy sector

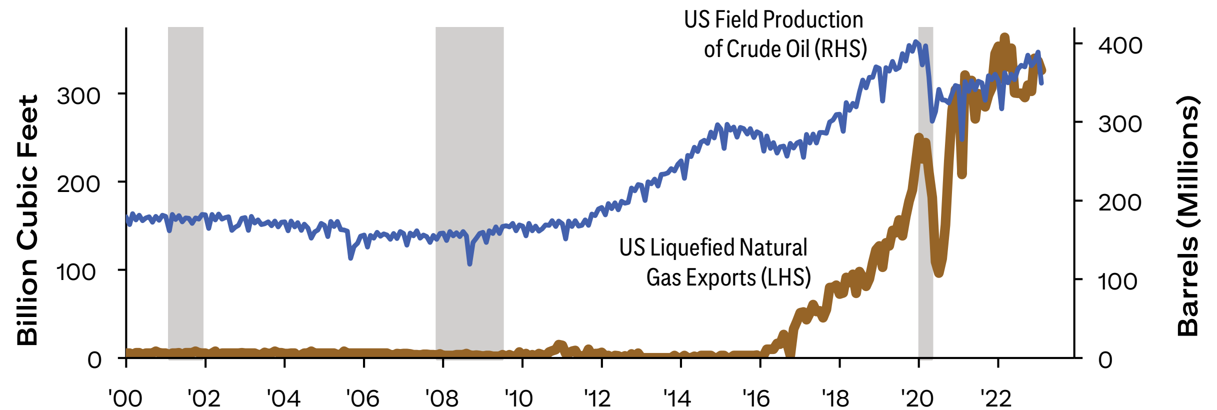
An unusual energy cycle is upon us. While the global price of oil has fallen 15% since April 12th 2023[1], there is no sign a recession at western energy firms. In the US, crude oil output is moving toward record highs. To help replace Russian gas supplies to Europe, US liquified natural gas (LNG) exports surged 45% above their pre-COVID level (**FIGURE 1**). At the same time, OPEC reduced output by about 3% through cuts announced in October 2022 and April 2023.[1]

Under normal circumstances, OPEC cuts production as demand falls (**FIGURE 2**). That's not the case just yet. This time around, OPEC is attempting to maintain higher prices in the face of future demand reduction, maximizing the market price per barrel.

This is not welcome news for those counting on lower energy prices, but it does suggest that energy credit and equity investors can view the sector somewhat differently from the typical boom and bust norms associated with prior economic downturns (**FIGURE 3**).

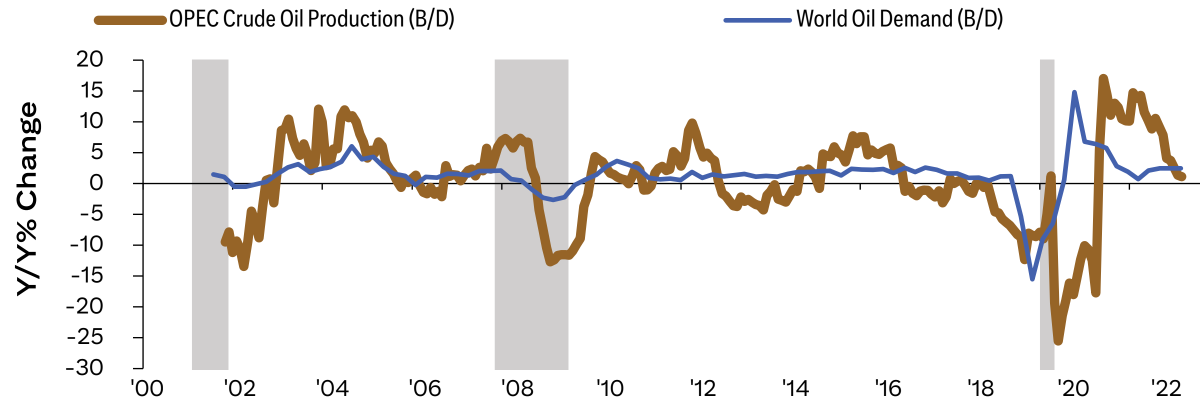
We are not forecasting a "new supercycle" for the oil industry as suggested by other firms. Citi Research's renowned commodities team has been more cautious than many in assessing risks to commodities prices. Increases to petroleum and gas supplies typically lag behind demand recovery. History shows that higher prices will, over time, cause supplies to increase, forcing a new equilibrium to be established. This time, the new supplies will include even faster adoption of alternative energy sources.

FIGURE 1: LNG Prices Surge



Source: Haver Analytics as of May 3, 2023. Grey areas note US recessions.

FIGURE 2: OPEC Cut Production Before a Dip in Demand



Source: Haver Analytics as of May 3, 2023. Grey areas note US recessions.

[1] Reuters, OPEC+ announces surprise oil output cuts, April 2, 2023, https://www.reuters.com/business/energy/sarabia-other-opec-producers-announce-voluntary-oil-output-cuts-2023-04-02/

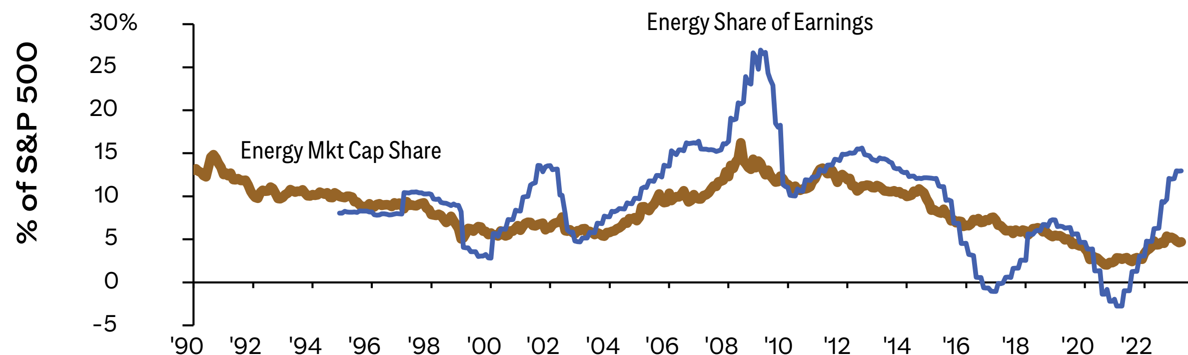
FIGURE 3: Volatile Energy Sector Equities*

Sector	Peak to Trough Percent change
Healthcare	7.7
Consumer Staples	4.9
Utilities	-13.2
Telecom Services	-27.4
IT	-32.3
Industrials	-42.8
Consumer Discretionary	-50.7
Materials	-58.3
Financials	-71.4
Energy	-113.9

Source: Haver Analytics as of May 3, 2023. The indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results.

*Last four periods of US Recession dates based on official National Bureau of Economic Research (NBER) calculations: Jul 1990.(Q3) - Mar 1991.(Q1), Mar 2001.(Q1) - Nov 2001.(Q4), Dec 2007.(Q4) - Jun.2009 (Q2) and Feb 2020.(Q4) - Apr 2020 (Q2) along with near-term peaks and troughs in EPS associated with each of these four recessionary periods for each sector listed.

FIGURE 4: Energy Sector Earnings Outpace Sector Market Cap



Source: Bloomberg as of May 2, 2023. The indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results.

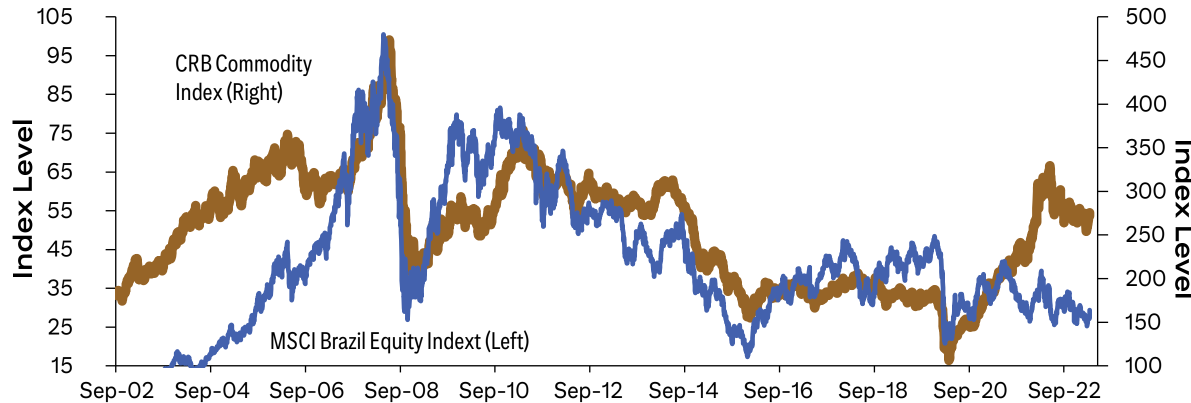
That said, capital inflows to conventional, carbon-based energy have returned. The world still relies on six million barrels per day of Russian crude oil exports, even if many western economies refuse to buy from them. Since the beginning of the war in Ukraine, the amount of oil in the US Strategic Petroleum Reserve has declined 38% from end-2021 levels. The US is also buying oil again to build up the stockpile. This need to hold and maintain energy stockpiles, be it oil and gas or renewables, distinguishes the energy sector from other cyclical industries (**FIGURE 4**).

As a generally fungible commodity, crude oil trade has been redirected around the world, but the global oil price would be much higher without Russian crude exports to willing buyers. Geopolitical conflicts have and will continue to cause price spikes. Continued conflict in Ukraine and the need for the US and other countries to rebuild energy stockpiles raises the investment and development prospects for non-OPEC producers like Brazil (**FIGURE 7**). It also creates sustained opportunities for the renewable energy sector.

Global energy companies invest in the future

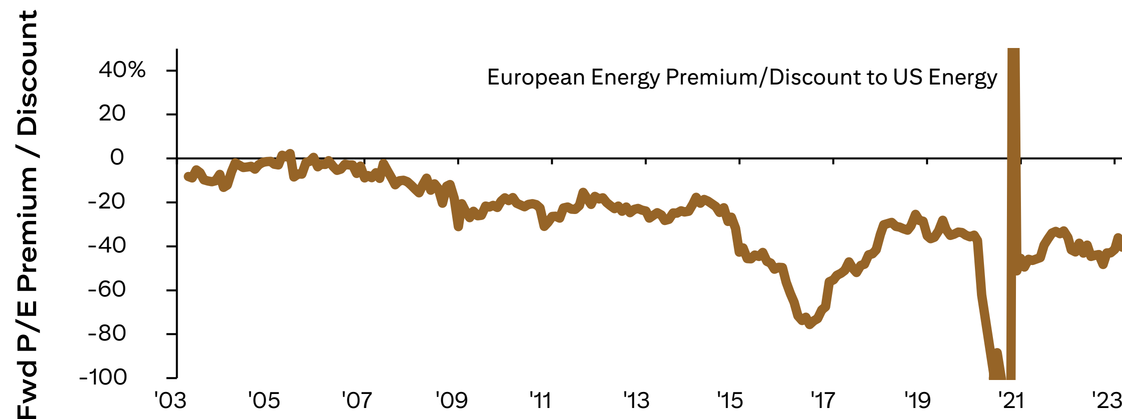
Between geopolitical tensions affecting energy supplies and the rise of renewable energy, the energy industry is going through a sea change. Companies are jockeying to maintain dominance in the shifting landscape. They are also mindful of the need to be capital efficient and invest more prudently.

FIGURE 5: MSCI Brazil Equity Index vs CRB Commodity Index



Source: Bloomberg as of June 5, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

FIGURE 6: European Energy Shares Trade at a Discount to US Peers



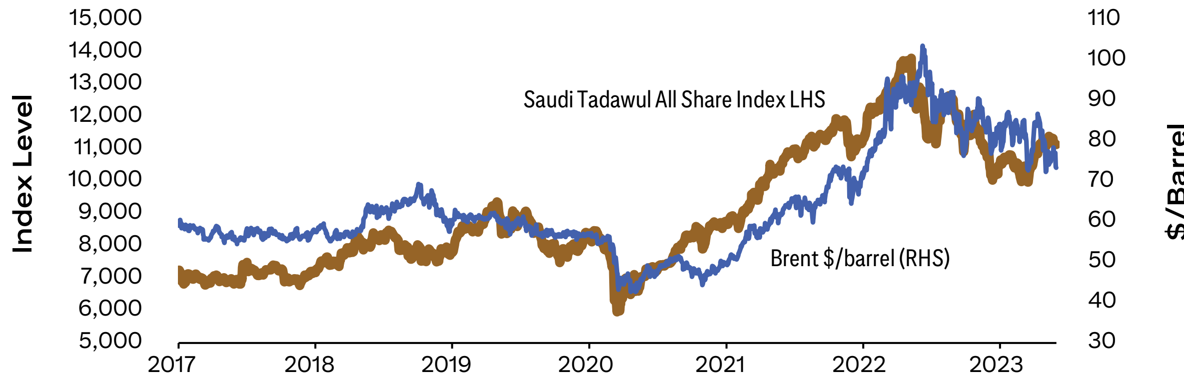
Source: Factset as of May 15, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

For the past 20 years, European energy companies have been trading at a discount to their US energy counterparts (**FIGURE 6**). After reaching lows in 2021, European energy valuations have rallied a bit but remain at a 40% discount to US energy firms. This valuation difference is unjustified as European and US energy companies are similar in many ways. Part of the valuation discount could be due to general European companies falling out of favor with investors. We see this as an arbitrage opportunity favoring investment in non-US firms, a strategy that is consistent with our view that the US dollar has peaked.

Green is the new brown

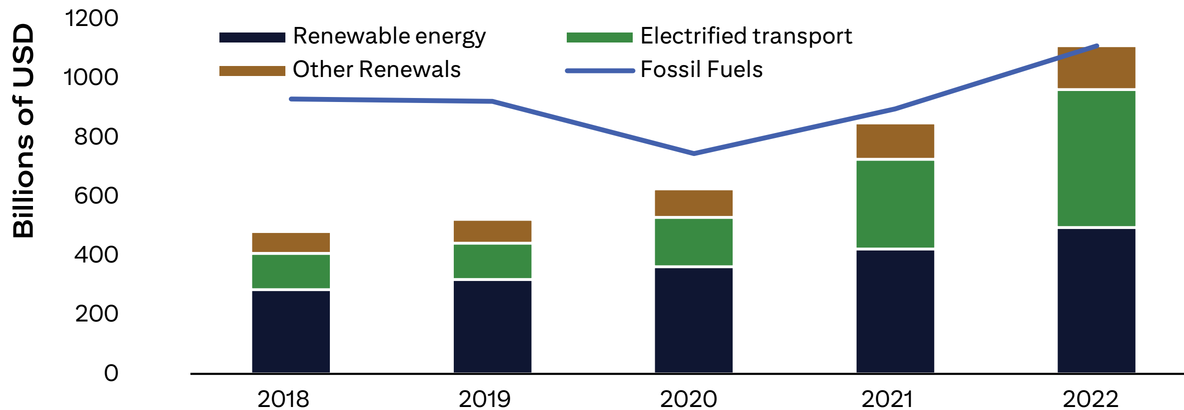
The European energy companies have been leaders in making structural changes to strengthen balance sheets to deploy capital on long-term projects, including a focus on a green energy transition. We believe these changes will make EU energy companies more valuable, boosting earnings and share prices.

FIGURE 7: Saudi Market vs Crude Oil



Source: Bloomberg as of May 31, 2023 . The indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results.

FIGURE 8: Investment in Renewable Energy vs Fossil Fuels



Source: Bloomberg New Energy Finance as of May 2023. Chart shows how investment in renewables compares to investment in fossil fuels and electrified transport.

The Middle East is leaning green, too

Meanwhile, growing geopolitical tensions and changing market dynamics have prompted some Middle Eastern countries, particularly Saudi Arabia and the United Arab Emirates (UAE), to invest heavily in renewable energy sources to prepare for an eventual shift in the global energy landscape (See Middle East Strategy). These investments have taken various forms, including the development of large-scale solar and green hydrogen projects and the construction of refineries focused on producing petrochemicals instead of traditional transportation fuels.

The shift by Middle Eastern countries toward renewable energy sources has been driven by concerns over stranded assets and the growing global focus on energy transition, as well as the favorable economics of solar power in the sun-drenched region.

At the same time, Saudi Arabia and the UAE continue to expand their oil production capacity, reflecting their belief that oil demand will not decline as quickly as some expect. This has led to a delicate balancing act, as these countries seek to capitalize on their vast, low-cost oil reserves while also preparing for a future in which fossil fuels play a diminishing role in the global energy mix.

Competition between renewables and carbon energy is intensifying

The global transition to greener energy sources presents a significant challenge for Middle Eastern hydrocarbon exporters, which are heavily dependent on revenues from fossil fuel extraction. The need for large-scale investment in renewable energy infrastructure, coupled with the growing vulnerability of their existing business models, has led some observers to question whether the energy transition could provide the impetus for improved trade and reform within the region.

The United Arab Emirates and Saudi Arabia's ambitious renewable energy targets, such as the former's aim to achieve 30% renewable energy by 2030 and the latter's goal of 50% by the same year, signal a growing awareness of the need for change. By investing in renewable energy projects and infrastructure, these countries are securing their own energy futures and contributing to the global push toward a cleaner, more sustainable energy mix.

As the world continues to grapple with the challenges posed by climate change and the need for a more sustainable energy future, the actions of OPEC+ and major oil-producing nations will play a crucial role in shaping the trajectory of the global energy market.

Consolidation will accelerate the adoption of renewables

Renewable energy is becoming more economically attractive as the price continues to decline and demand increases. Even in the relatively energy-rich US, electric heat pump installations are growing rapidly, and electric passenger vehicle sales grew by 65%, compared with a 14% decline for those with internal combustion engines. OPEC's production cut means that energy prices will likely remain higher than in previous downturns.

Relatively high oil prices will impact the renewable energy sector unevenly. Established energy firms that already have substantial revenue will have the opportunity to gain market share and acquire valuable human and patent resources from firms less well-positioned to weather the coming downturn.

We see conditions for a round of consolidation in the renewable energy sector, much like we've seen with railroads and oil at the beginning of the 20th century and again in the tech sector at the beginning of the 2000s. We view this sort of creative destruction as a feature, not a negative, that is likely to help accelerate the green energy transition.

For investors, selectivity will be key. Businesses with a valuable product or intellectual property asset but no good way of executing on it may be absorbed by entities with access to capital and strong execution capabilities. It's likely the clean technology (cleantech) sector will end up bigger, though with fewer firms.

What should investors do now?

Investors should consider investing in firms that are cash flow positive and well financed. As access to capital is currently constrained, companies with capital can more rapidly develop and dominate their respective markets.

Battery, metals, and oil & gas companies that are slowly evolving their business models in a diversified manner may be safer than startups at this stage in the economic cycle. Startups are typically more reliant on government policies that focus on grants instead of consumption stimulus. But as the green energy industry matures, government funds are shifting from research to consumption stimulus. Larger electric vehicle companies are focusing on vertical integration, which could lead to some consolidation. As battery companies try to secure mineral supply, some startups may fail, and their assets will get sold off. For better or worse, in this cycle the winners will be able to compound their returns.

Large companies are facing meaningful challenges, such as carbon taxes. Firms that can either generate offsets or reduce carbon emissions create more value. For example, a tax

refund on an electric vehicle will benefit larger companies selling more vehicles, while smaller companies will be less able to capture as large a share of government spending.

Like 1998, this is a moment of consolidation and strategic decision making that will decide winners and losers over the coming decade and beyond. Ultimately, we see a stronger, growing, and developing energy industry, one where old and new energy will evolve toward a different mix that will ultimately benefit society. We believe this is a historically important moment for cleantech — many of the winners of the next few decades will be decided. Therefore, it is particularly important for investors to focus on cleantech companies that are consolidating and gathering strength. Investors can also add to leading energy firms whose cash flow, efficiency and focused strategic execution will allow them to seek distressed opportunities and attract more capital for sustained growth.

5.3

Generative AI: The beginning of (another) technological revolution

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We are likely witnessing the birth of a technology as significant as the internet itself. The growing demand for generative AI will have ripple effects across industries, with winners and losers emerging over time.

- The expected growth in AI suggests investment opportunities for companies that facilitate its infrastructure, such as hardware manufacturers and cloud computing vendors
- AI will drive enormous productivity gains and incremental economic growth as it is adopted
- As a new industry, there are risks related to regulation, data privacy and cybersecurity

The internet, Wall Street and just about every manager in every business have been buzzing about AI chatbots since a wave of new launches began in November 2022. It took just five days for a popular AI chatbot to reach 1 million users, compared to 10 months for another popular social media company and 3.5 years for a common streaming service (**FIGURE 1**). Tech giants and startups alike are racing to develop ever more intelligent AI algorithms to get a toehold in the next generation of computing. In short, we are likely witnessing the birth of a technology as significant as the internet.[1]

What is generative AI?

These new AI-driven chatbots use technology known as generative AI, which is machine learning taken to an entirely new level. When we talk to Alexa or Siri, we are actively engaging with machine learning. Machine learning is also what drives weather prediction and statistical modeling across industries. It drives the estimates of likely outcomes we see for everything from betting odds in sports to the probability of an earthquake in a vulnerable city.

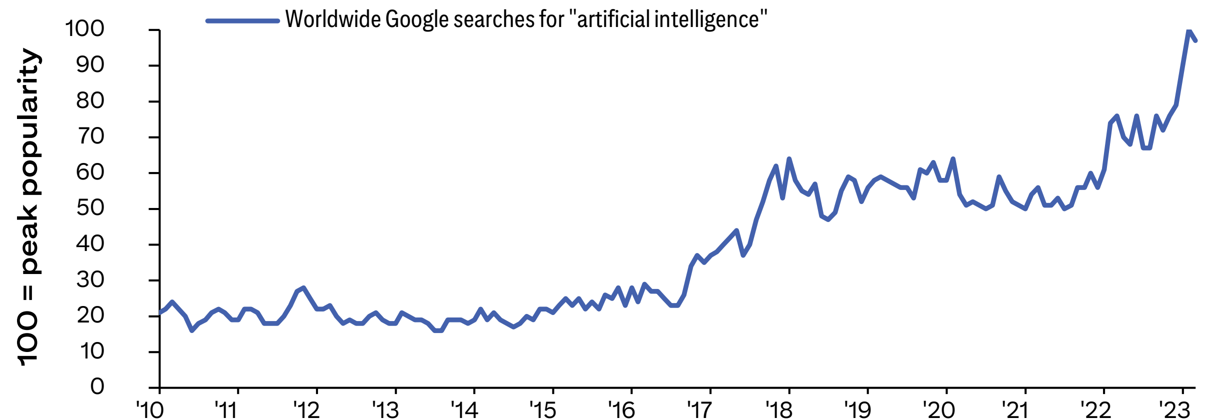
What makes generative AI models such a breakthrough is their ability to discern context and create new content, drawing from massive amounts of data. When starting a sentence, generative AI can predict with high accuracy how it will end. To build the models, some of the world's best data scientists and computer engineers trained models using 570GB of books, webtext and articles from across the internet.

Whereas machine learning could identify pictures of animals or patterns from data, generative AI can generate images of animals based on all available similar images or write unique paragraphs about historical events with appropriate contextual references to time, place and participants. Ultimately, generative AI may change how a broad range of jobs are performed across almost every industry.

Researchers using generative AI can quickly summarize complex topics, a development that worries educators that want to see students produce original work. AI will help humans with increasingly intensive tasks and generate new content or ideas. The quality of the models can produce outputs that are, in certain cases, indistinguishable from human-generated content.

AI will likely require that we revisit the concept of "original content" given its ability to "invent". In medicine, AI may be able to predict what sequence a "next new medicine" might take by looking at prior molecules or compounds.

FIGURE 1: Worldwide Google Searches for 'Artificial Intelligence'



Source: Google as of April 18, 2023.

[1] ChatGPT: Everything you need to know about OpenAI's GPT-4 upgrade | BBC Science Focus Magazine, 2023

Potential opportunities and risks

PwC estimates that AI could contribute up to $15.7 trillion to the global economy by 2030.[2] A large chunk of this is estimated to come from productivity gains ($6.6 trillion). Examples include AI helping educators grade exams, software developers to write or debug code, job seekers to write resumes, or online content providers to sell and advertise products and services.

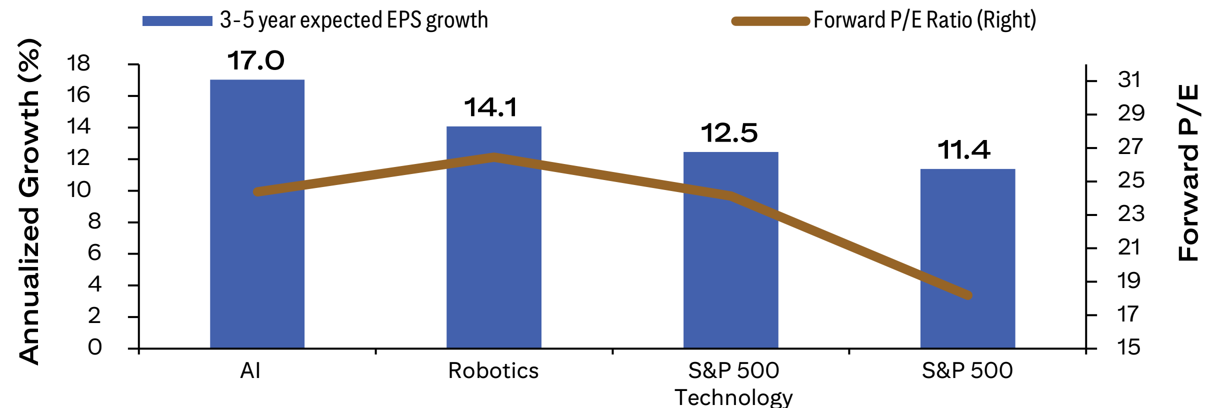
Generative AI will be a key building block for many other future technologies. Generative AI is disruptive too, capable of driving enormous productivity gains and incremental economic growth in the years ahead. Winners and losers will emerge from across all sectors of the economy. And that includes a huge impact on workers.

In his congressional testimony in May, Sam Altman, the CEO of OpenAI, the company that created ChatGPT, suggested the rapid regulation of generative AI — remarkable given that few tech CEOs seek regulatory oversight. He suggested the formation of a new government agency charged with licensing large AI models and empowering it to revoke that license for companies whose models don't comply with government standards. He also proposed safety standards for AI models, independent audits by experts and evaluating and extinguishing dangerous capabilities like acting independently.[3]

Indeed, regulation, patents, copyright and data privacy concerns are key risks to watch. Intellectual property is another major issue. Copyright laws vary worldwide, but if someone uses generative AI to write a paper, will the sources of the information be correctly attributed? Another concern is generative AI creating false and even dangerous conclusions, drawing from inaccurate data. People do this too, but generative AI can create and spread false information faster. The technology's code-writing ability arms cyber criminals with an easier way to write malicious code or create new phishing scams. Then there are social implications, especially when it becomes difficult to discern between human and machine interactions. As this revolutionary technology rolls out, these issues will require humans to create policies, practices, checks and balances.

As the technology develops, there will be winners and losers across industries. In the race to establish dominance in AI, larger, well-established companies have more to lose when rolling out generative AI because of reputation risk. Rushing out products or services that are misleading or low quality would be a hit to their reputations. But the benefits will be bountiful for those who get it right and can use AI to support their businesses. There will be billions spent on learning, introducing, embedding and assessing the impacts of generative AI.

FIGURE 2: Valuations and EPS Growth Rates for AI, Robotics and Technology Shares



Source: Factset as of April 18, 2023. Indices corresponding to each column AI: Indxx Artificial Intelligence and Big Data Index; Robotics: ROBO Global Robotics and Automation Index. The indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real returns may vary.

[2] PwC's Global Artificial Intelligence Study, 2017.
[3] Oversight of A.I.: Rules for Artificial ... | United States Senate Committee on the Judiciary, 2023

What to do now

Pure AI equity investment opportunities are few and far between. The most advanced AI development platforms are either privately held or housed within large companies with diverse sources of revenue. That said, we see potential growth opportunities in companies that provide the computing and infrastructure that power AI (**FIGURE 2**). These include hardware manufacturers making advanced semiconductors and infrastructure providers such as cloud computing vendors.

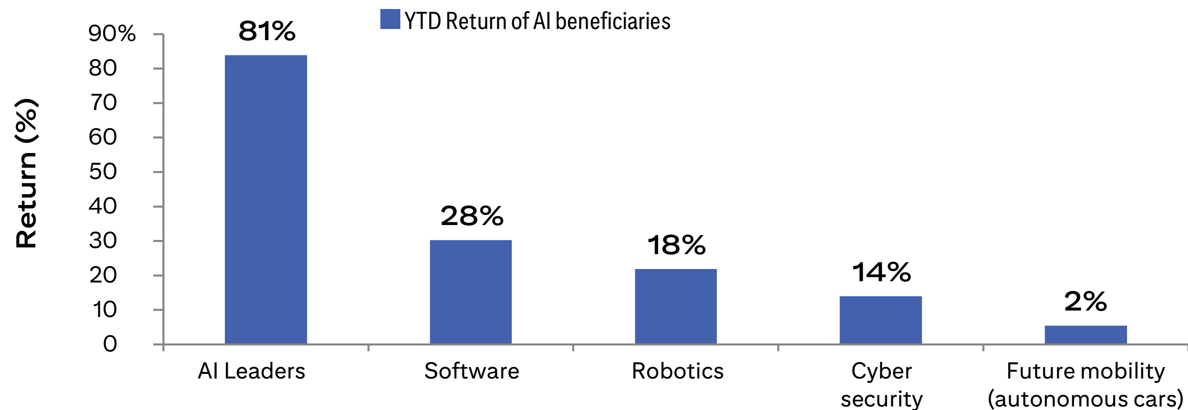
Secondary parts of the generative AI ecosystem stand to benefit as well. Semiconductor capital equipment companies that produce the machines that manufacture AI-optimized chips should see increased demand (**FIGURE 3**).

Cybersecurity companies are another obvious initial beneficiary that may be underrated.

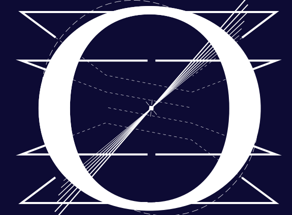
And finally, we will be highly mindful of the companies that adopt the technology in their products and operations. Increasingly sophisticated AI models will make robots more productive and autonomous vehicles more reliable. Services-oriented companies that can embed AI effectively into day-to-day processes will begin to improve their enterprises' quality, value, efficiency and profitability.

We expect, over time, to see trends emerge and to see companies report on how they are using generative AI in their operations. Intuitively, AI will be able to track the use of AI. That's the whole point. This technology will build upon itself. Firms that do not embed this technology into their business practices may see their competitive positions will erode.

FIGURE 3: Shares in Industry Groups Tied to AI in 2023-to-date



Source: Bloomberg as of May 31, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.



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Regional previews

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6.1 Asia: Economies get a boost from the late reopening, weaker dollar

KEN PENG
Head of Asia Pacific Investment Strategy

Asia is set to outgrow and outperform relative to other regions over the years to come. Demographics, diversification of supply chains, a weaker US dollar and a more accommodative Federal Reserve should provide the fuel. We see Japan, India and Southeast Asia receiving increasing attention from global investors.

Asia's post-Covid reopening came after other regions, but the benefit of its later reopening is faster growth even as the US and Europe are slowing. China is a main driver, even with recent challenges. We expect China's real GDP growth to reach 5.8% in 2023, followed by a return to 4.5% in 2024. For the region excluding Japan and China, we see GDP growth moderating to 4.0% in 2023, then picking up to 4.5% in 2024 (**FIGURE 1**).

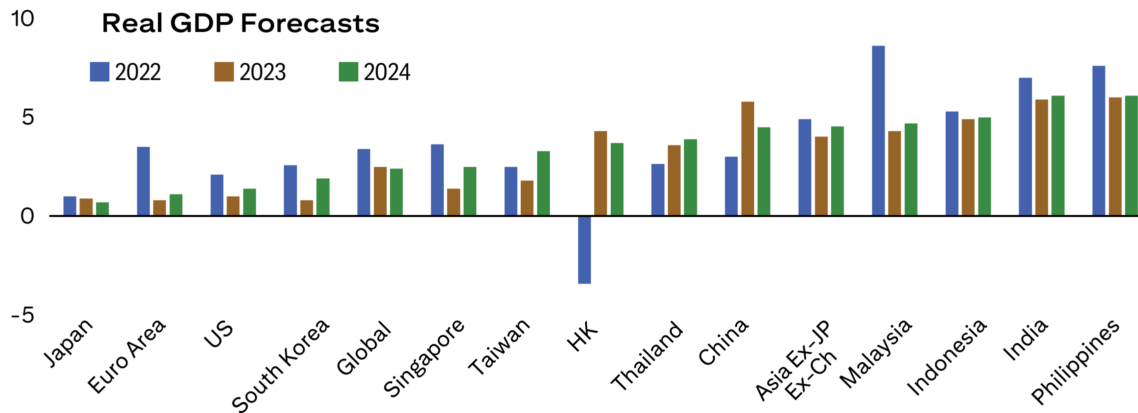
Given this backdrop, we see potential equity opportunities across Asia, especially in industry-leading companies with strong balance sheets. In regional fixed income, we remain focused on quality. Asia is vulnerable to US recession and uncertainties about Chinese consumer demand and geopolitics.

China: China's recovery has been uneven. Consumer spending, driven by a boom in travel and other service sectors, leads the way. But residential real estate and manufacturing continue to face headwinds, as it will take some time to digest inventories. The government's pro-growth economic policies have not yet revived market sentiment. We expect additional easing in both business and financial policies, as well as moderate rate cuts in the second half of the year. These actions should spur economic and earnings growth. At current valuations of under 10 times forward earnings, recent disappointing market performance appears overstated as potential for a substantial and sustained economic recovery remains.

Japan: Global investors increasingly see Japanese equities as a means to access Asian development, especially amidst US-China tensions. Recent wage negotiations between corporates and unions have produced a 3.8% wage hike agreement, the largest in three decades (**FIGURE 2**). We expect that the Bank of Japan will purposefully exit its ultra-loose monetary policy, which could take place in the second half of this year. If this happens, the yen has room to strengthen further. Corporate governance reforms are also progressing, with the Tokyo Exchange pushing a wide array of firms to increase dividends and buybacks. This has begun to lift valuations from low levels.

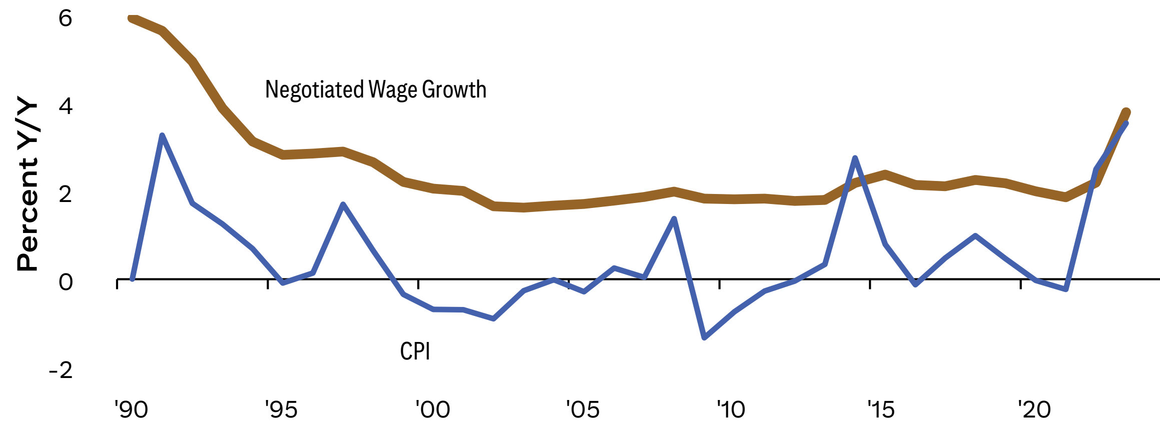
India & Southeast Asia: The post-Covid recovery in India and Southeast Asia has been boosted by a substantial rise in investment as global companies seek to diversify their supply chains. The economic recovery is strongest in Thailand, India, Indonesia, and the Philippines, all of which saw stronger earnings growth. Equity prices have rallied in tandem, but continue to lag earnings, so valuations remain at the lower end of their historical multi-year range (**FIGURE 3**). We expect improved equity performance in the second half of this year, supported by potential weakness in the US dollar, rising demand in the region and increasing direct foreign investment due to US-China strategic competition.

FIGURE 1: We Expect GDP Growth to Remain Elevated in Asia through 2023-24



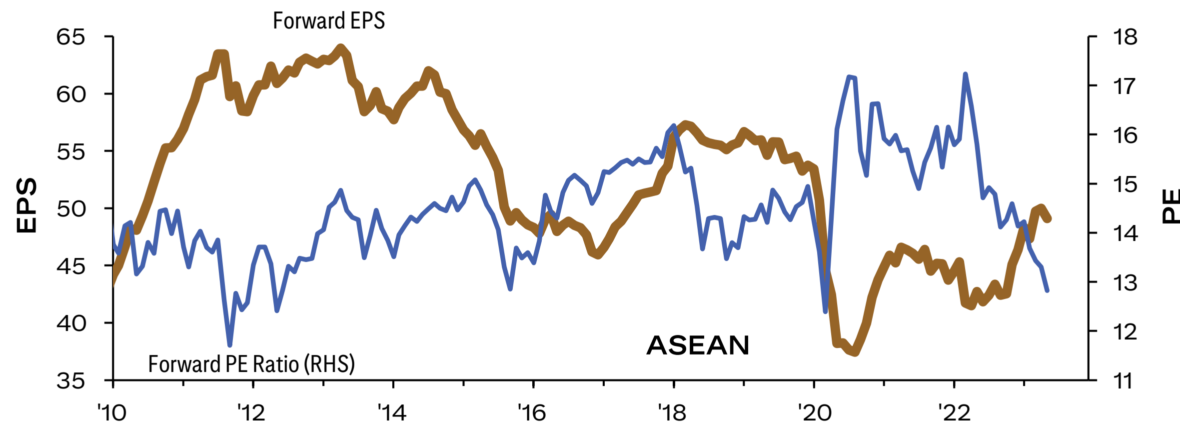
Source: Haver Analytics, Citi Global Wealth Investment CIO Bulletin Five Insights Likely to Drive Markets in 2023, Citi Research Global Economic Outlook & Strategy, as of May 22, 2023.

FIGURE 2: Japan's Negotiated Wage Growth and CPI Inflation Reach Highest Level in Three Decades



Source: Haver Analytics, as of April 2023.

FIGURE 3: ASEAN Earnings Revisions Had Been Positive, while Valuations Have Fallen Notably



Source: Bloomberg, as of May 30, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

6.2

Europe: Selective opportunities amid modest growth

GUILLAUME MENUET
Head of Europe, Middle East and Africa Investment Strategy and Economics

Both Europe and the UK are exceeding modest expectations as GDP growth and equity valuations appear more attractive.

Europe has avoided a recession as a rapid drop in energy prices offset its war-related trade shocks. Continued tightness in labor markets also buoyed markets. We expect 2023 real GDP growth to average 0.8% year-on-year in the euro area and 0.3% year-on-year in the UK.

One of the key risks to economic activity will be higher interest rates and stricter bank lending standards following aggressive central bank tightening. Although policy rates will likely peak in mid-year 2023, we expect that there will be some drag on investment and hiring plans, dampening domestic demand.

A better 2024

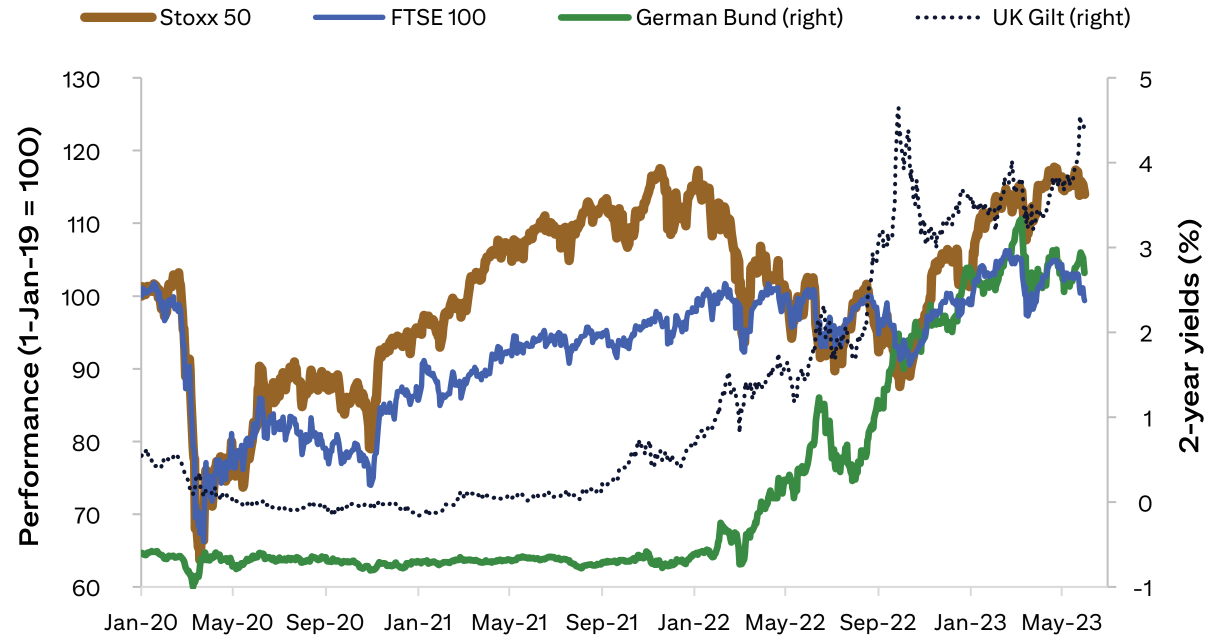
Fortunately, headline inflation is set to decline going into 2024, contributing to some improvement in consumer confidence, but we're not anticipating much growth. We are forecasting real GDP growth to average 1.1% in the euro area and the UK in 2024.

Despite expected progress in Ukraine's efforts to regain territory in its upcoming spring offensive, we do not see an imminent end to its war with Russia. A quicker-than-expected resolution of the conflict would likely be a significant positive for risk assets and Europe in particular.

Fixed income: Euro area government bond yields likely peaked in March, but we see only a further limited rally in yields given the present stickiness of core inflation and the need for the European Central Bank to defend its price stability mandate. In the UK, yields will likely stay elevated as the government seeks to rebuild some credibility after the hiccup from the 2022 autumn budget (**FIGURE 1**).

Equities: Both Europe ex-UK and UK equities are trading at low valuations compared to the US market. Within those markets, we are overweight the consumer discretionary sector and see some short-term upside potential in financials due to a stronger euro and improving net interest margins.

FIGURE 1: Euro and UK: Equity Market Indices and 2-Year Sovereign Bond Yields



Source: Bloomberg, as of May 31, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Latin America: Favorable financial conditions, cautious central banks

JORGE AMATO
Head of Latin America Investment Strategy

We see selective opportunities across Latin America as central banks are likely to begin easing cycles in 2023. Brazil is likely to benefit from the rebound in China.

Latin America's largest economies are set to slow down in 2023. Much like the rest of the world, Central Banks in the region have tightened monetary policy to battle inflation. However, their actions were swifter and more effective than in developed economies. As a result, inflation in the region has been decelerating. While we anticipate more favorable financial conditions ahead, the Latin American central banks are likely to remain cautious. Consensus growth for the region is below 1% this year, down from about 3.7% in 2022.

On the political and structural reform fronts, populist governments have been less destabilizing than markets feared, stemming capital outflows to some extent. Local currencies have been very resilient thanks to the combination of high local interest rates and receding inflation (**FIGURE 1**). This has supported local debt markets, as reflected by the 14.6% year-to-date gain in the Bloomberg LATAM Local Debt Index.[1]

Mexico, with its close ties to US industry and demand, has been a beneficiary of geopolitics and the surprisingly resilient US economy. As US companies move operations closer to home, "nearshoring" has translated into strong capital inflows for Mexico and remittances are correspondingly robust. Capital investment is on the upswing and consumer confidence remains firm. This positive macro environment has not gone unnoticed by investors. The Mexican peso is up 11% and the Mexican stock market has returned a stellar 20% in US dollar (USD) terms, year-to-date.[2] Given our expectations of a mild US recession, we find Mexican markets to now be a momentum play, with limited incremental value at current levels.

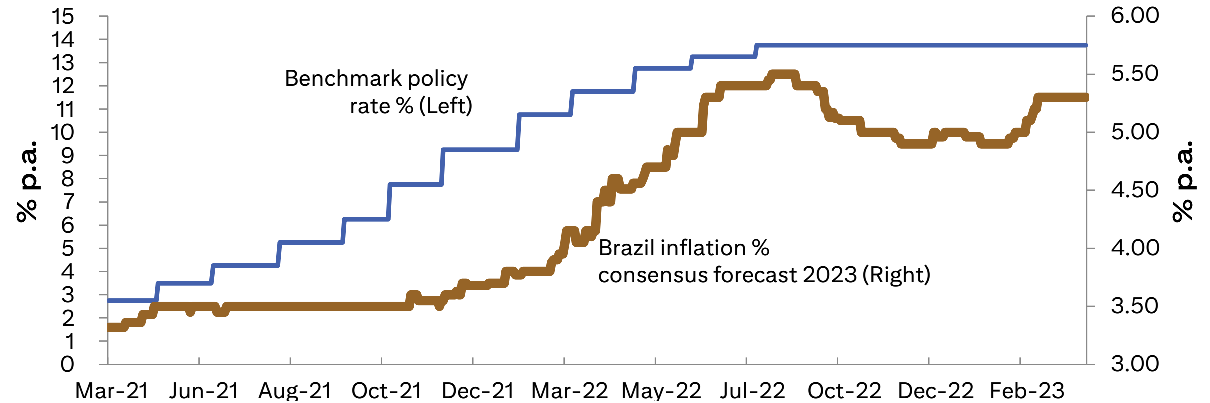
[1] Source: Bloomberg as of June 1, 2023
[2] Source: Bloomberg as of June 2, 2023

Brazil's economy surprised to the upside in 2022, growing 2.9%. As the impact of higher interest rates take hold and the rest of the world slows down, we believe Brazil is also likely to decelerate to less than 1% real growth in 2023. Partially offsetting Brazil's present slowdown is China. As Brazil's largest trading partner, China is expected to grow close to 6% in 2023, providing broad support to economic activity in Brazil in the years ahead.

Brazil's new fiscal rules should ease concerns around fiscal excesses. It should also give the central bank (BACEN) more room to manage inflationary risks. Inflation is easing, and this can give the monetary authority room to ease. Right now, real rates are close to 9% while equity multiples are below 8 times.

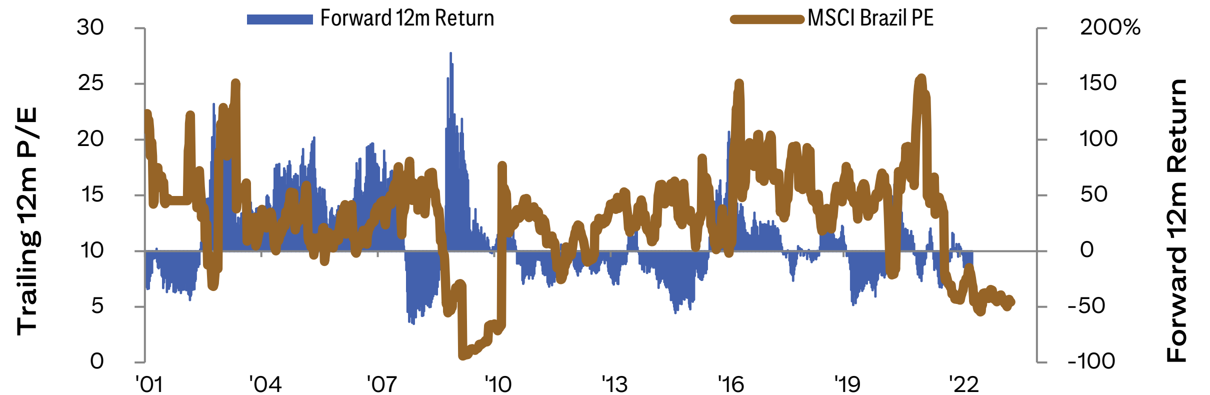
As we assess relative and absolute value in the region, we view Brazil's equity and local bond markets potentially attractive on a risk-adjusted basis (**FIGURE 2**). We expect to consider further portfolio allocation to Brazil as we rotate into emerging market (EM) shares in the future.

FIGURE 1: Higher Interest Rates, Moderating Inflation



Source: Bloomberg as of May 30, 2023

FIGURE 2: Brazil Valuations Down



Source: Haver Analytics as of April 28, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

6.4

North America faces a rolling recession

CHARLES REINHARD
Head of North America Investment Strategy

LORRAINE SCHMITT
North America Investment Strategist

The US shows signs of a "rolling recession" as we enter the second half of 2023. Though we presently favor defensive sectors, such as large-cap consumer staples and healthcare shares, there are undervalued segments of the US market to consider adding in the near future. A rotation away from Treasury bills toward diversified, longer duration fixed income assets is also advised.

At mid-year 2023, we are suffering the aftermath of "shock and overstimulation," a time when simultaneous growth and contraction are occurring in the US economy. After the most rapid series of rate hikes in Federal Reserve history, we see economic headwinds building while distortions from the pandemic dissipate.

The banking panic that resulted in the failure of three major financial institutions was exacerbated by the Federal Reserve's sharp pivot to fight inflation. Banks saw the value of their lending books plummet just as depositors were able to access cash rates well above deposit returns. The Federal Reserve continues to seek an end to an inflationary cycle that saw its balance sheet rise from $4 trillion to $9 trillion in 2020-2021 as it dispensed record levels of monetary aid during the COVID pandemic.

FIGURE 1 is a simple illustration of the complex tailwinds and headwinds within the US economy as we enter the second half of 2023. The fact that these contradictory conditions co-exist is responsible for the elongation of our entry into and out of what will be a shallow or "rolling" recession. This makes it difficult to identify an obvious recession/recovery pattern that would make for easy investment choices.

FIGURE 1: Conflicting Positives and Negatives for the US Equity Market Outlook

Tailwinds	Headwinds
Resilient employment in services sustains consumer spending	High Fed policy rates, Quantitative Tightening (QT), reduced bank leading, restrained capital entrepreneurs
Inflation slowing	Weakening commercial real estate fundamentals, spillovers to SMID banks
Strong corporate balance sheets, private credit availability	Treasury Bill issuance to surge post-debt ceiling agreements
Inventories are heading down (housing and manufacturing), "working off" a recession	Failing labor productivity to weaken labor market
Historic high equity short positions and large cash balances	China and EU economies gain less than expected on initial China reopening
	Estimated EPS far above achievable corporate profit gains (record high expected by 4Q 2023)

Source: Citi Global Wealth Investments

Both employment and inflation are heading down

US employment dropped by a record amount in 2020 and as the economy subsequently recovered rapidly, many employers could not find basic labor. Many firms in 2023 are still hoarding labor as a result. Over the past few months, layoff announcements have accelerated, most notably in technology, finance and construction. This is in response to the fact that six of the 11 major sectors of the S&P 500 were in "profit recessions" after their first quarter 2023 results. Employers have also been cutting temporary workers.

Positive economic signs, too

Despite the string of negative developments, there are positive areas within the US economy. Inflation has decreased from 9% in June 2022 to 5% in April 2023 and we forecast it will drop to 3.5% by the end of the year (See Recession, recovery: A journey unfinished). A measure of global supply chain pressures tracked by the New York Fed has returned to pre-pandemic levels. A reduction in goods inventories is beginning while services spending is keeping the broader growth rate of the economy positive. This is gradually setting the stage for a stronger growth period within 2024.

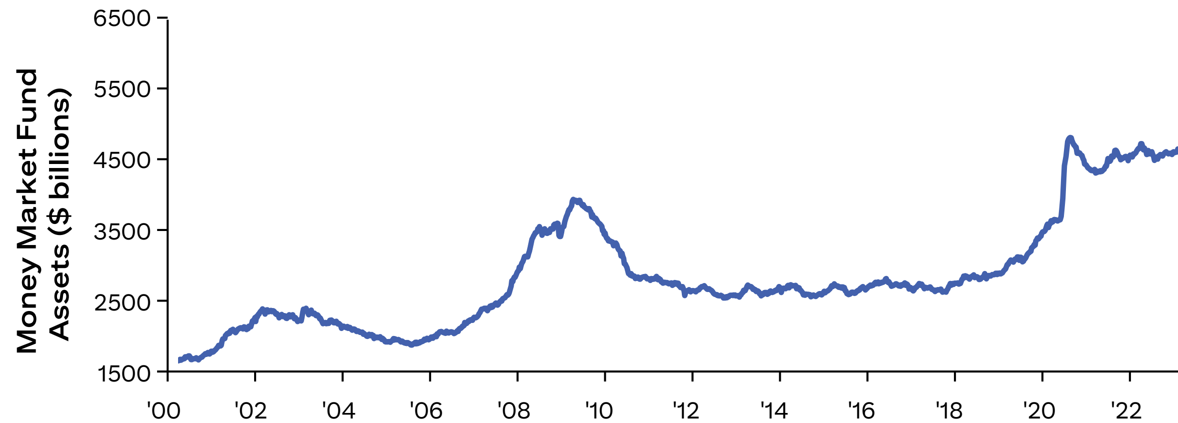
We still believe the Fed's aggressive fight against inflation and the current delay in labor market weakness will ultimately cause the Fed to reverse course toward the end of 2023. This sequence of events suggests that the currently high overnight money fund rates and high yields of the shortest-term T-bills will not be available a year from now. We also expect the 10-year US Treasury yield to decline to 3% at the end of 2023.

Historically, the stock market has bottomed when the Fed lowers rates during a recession. In the present case, investors built record high short positions on the expectation of recession in 2022. While US equities still face risks, considerable bad economic news has been digested. And then there is generative AI (See Generative AI: The beginning of (another) technological revolution). The introduction of a new technology that is likely to rival the internet in its impact on the US and world economies has led to new highs for firms able to provide the infrastructure for its rapid adoption.

Cash waiting to invest

Investors have juggled a laundry list of risks, from the recent debt ceiling brinksmanship to tight Federal Reserve policy to further EPS declines, that could trigger an elusive-until now- equity market selloff. With huge cash balances on the sidelines, potential "dip-buyers" have kept US equities range bound. During this time, a very large valuation discount has developed in profitable small- and mid-cap companies that face immediate economic risks but are poised for stronger returns in a recovery period. Our new 10-year strategic return estimates (See FIGURE 3: Recession, recovery: A journey unfinished) reflect the brighter prospects for markets after the material equity and debt declines of 2022.

FIGURE 2 : Money Market Balances Are at An All-Time High



Source: Bloomberg as of May 19, 2023. Past performance is no guarantee of future results. Real results will vary.

What should investors consider now?

Though we are favoring defensive sectors such as Consumer Staples and Healthcare now, there are several areas that are likely candidates for inclusion into portfolios in the coming months. These are sectors that tend to outperform the broader market during and after initial Fed rate cuts. We will continue to favor companies that grow their dividends or are aligned with our Unstoppable Trends.

SMID to rise

Regional bank shares have pulled back enough for long-term investors to take notice. While it is hard to say for sure that further bank failures are behind us, their systemic importance to the US economy as a whole suggest a rebound in 2024 when loan volumes, lending margins and credit conditions improve. Regional banks now trade at 1.1 times tangible book value, versus a COVID low of 1 times.

US small caps have completely given up their outperformance versus large caps in the post-COVID era. As a result of their tepid performance, valuations have improved, with profitable SMID names now trading at 14 times trailing 12-month earnings, a 26% discount to their larger brethren. An expected Fed pivot later in 2023 should change this paradigm, enabling a catch-up in small cap growth shares, led by non-cyclical health care and technology names.

A move to longer duration bonds

High-quality US bonds are currently offering above average yields versus the past decade (See **FIGURE 1 in Bonds are Back Again**). We see value in government and investment-grade corporate bonds with two- to five-year maturities and in municipal bonds for US investors seeking after-tax income.

For qualified investors that do not require highly liquid portfolios, the recent US banking turmoil mixed with volatility in the bond market have provided potential credit opportunities for alternative fixed-income managers with deep research expertise and strong risk management processes, in our view.

Finally, we expect this rolling recession to be shallow. Whereas robust recoveries tend to follow deep recessions, moderate recoveries tend to follow shallow ones. This is why being fully invested is critical. The down and up pivot points in markets will likely occur near one another. Capturing the best days will be essential given the modest growth we expect in 2024.

GLOSSARY

ASSET CLASS DEFINITIONS:

Cash is represented by US 3-month Government Bond TR, measuring the US dollar-denominated active 3-Month, fixed-rate, nominal debt issues by the US Treasury.

Commodities asset class contains the index composites — GSCI Precious Metals Index, GSCI Energy Index, GSCI Industrial Metals Index, and GSCI Agricultural Index — measuring investment performance in different markets, namely precious metals (e.g., gold, silver), energy commodity (e.g., oil, coal), industrial metals (e.g., copper, iron ore), and agricultural commodity (i.e., soy, coffee) respectively. Reuters/Jeffries CRB Spot Price Index, the TR/CC CRB Excess Return Index, an arithmetic average of commodity futures prices with monthly rebalancing, is used for supplemental historical data.

Direct Private Investments or **Direct Investments** imply the purchase or acquisition of a stake or controlling interest in a business, asset or special purpose vehicle/instrument by means other than the purchase of shares.

Emerging Markets (EM) Hard Currency Fixed Income is represented by the FTSE Emerging Market Sovereign Bond Index (ESBI), covering hard currency emerging market sovereign debt.

Global Developed Market Corporate Fixed Income is composed of Bloomberg Barclays indices capturing investment debt from seven different local currency markets. The composite includes investment grade rated corporate bonds from the developed-market issuers.

Global Developed Market Equity is composed of MSCI indices capturing large-, mid- and small-cap representation across 23 individual developed-market countries, as weighted by the market capitalization of these countries. The composite covers approximately 95% of the free float-adjusted market capitalization in each country.

Global Developed Investment Grade Fixed Income is composed of Bloomberg Barclays indices capturing investment-grade debt from twenty different local currency markets. The composite includes fixed-rate treasury, government-related, and investment grade rated corporate and securitized bonds from the developed market issuers. Local market indices for US, UK and Japan are used for supplemental historical data.

Global Emerging Market Fixed Income is composed of Bloomberg Barclays indices measuring performance of fixed-rate local currency emerging markets government debt for 19 different markets across Latin America, EMEA and Asia regions. iBoxx ABF China Govt. Bond, the Markit iBoxx ABF Index comprising local currency debt from China, is used for supplemental historical data.

Ibbotson High Yield Index, a broad high yield index including bonds across the maturity spectrum, within the BB-B rated credit quality spectrum, included in the below-investment-grade universe, is used for supplemental historical data.

Hedge Funds are composed of investment managers employing different investment styles as characterized by different subcategories – HFRI Equity Long/Short: Positions both long and short in primarily equity and equity derivative securities; HFRI Credit: Positions in corporate fixed income securities; HFRI Event Driven: Positions in companies currently or prospectively involved in a wide variety of corporate transactions; HFRI Relative Value: Positions based on a valuation discrepancy between multiple securities; HFRI Multi Strategy: Positions based on realization of a spread between related yield instruments; HFRI Macro: Positions based on movements in underlying economic variables and their impact on different markets; Barclays Trader CTA Index: The composite performance of established programs (Commodity Trading Advisors) with more than four years of performance history.

High Yield Bank Loans are debt financing obligations issued by a bank or other financial institution to a company or individual that holds legal claim to the borrower's assets in the event of a corporate bankruptcy. These loans are usually secured by a company's assets, and often pay a high coupon due to a company's poor (noninvestment grade) credit worthiness.

High Yield Fixed Income is composed of Bloomberg Barclays indices measuring the non-investment grade, fixed-rate corporate bonds denominated in US dollars, British pounds and euros. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt.

Private Credit is debt financing provided by non-bank lenders such as hedge funds, private debt funds, business development companies (BDCs) and specialty finance companies. Private credit can take on various forms, including direct loans, mezzanine financing or private debt funds. Small- and medium-sized companies most commonly take on private credit.

Private Equity is an alternative investment class which at its most basic form is the capital or ownership of shares not publicly traded or listed on a stock exchange. Its characteristics are often driven by those for Developed Market Small Cap Equities, adjusted for illiquidity, sector concentration, and greater leverage.

Real Estate Investment Trust or REIT is a corporate entity that either has bulk or all its asset base, income and investments related to real estate. In the US under Security and Exchange Commission (SEC) guidelines, for an entity to qualify as an REIT, at least 90% of its taxable annual income to shareholders in the form of dividends must be from real estate. While typically REITs are publicly traded, not all are, as Public Non-Listed REITs (PNLRs) can register with SEC as REITs, but do not trade on major stock exchanges.

INDEX DEFINITIONS:

Ball Metaverse Index is a selection of companies in categories defined by the Metaverse Market Map.

Bloomberg Electric Vehicles Index aims to represent the performance of a set of companies that are expected to derive significant revenues from electric vehicles, energy storage technologies, lithium, cobalt and copper mining, and hydrogen fuel cells.

Bloomberg Global Aggregate Bond Index is a flagship measure of global investment grade debt from twenty-four local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers.

Bloomberg JPMorgan Asia Currency Index or ADXY is a US dollar tradable index of emerging Asian currencies. It creates a benchmark for monitoring Asia's currency markets on an aggregate basis.

Bloomberg US Aggregate Index is a broad-based flagship benchmark that measures the investment grade, US dollar denominated, fixed-rate taxable bond market.

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

Bloomberg US Treasury Index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Bloomberg-JP Morgan Asia currency index is a spot index of the most actively traded currency pairs in Asia's emerging markets valued against the US dollar.

Consumer Price Index or CPI is a widely-used economic indicator that tracks the average price of a basket of goods or services used by the typical consumer, including housing, transportation, clothing and food. It's published regularly by various government statistical agencies and used to gauge inflation or deflation.

CRB Commodity Spot Index is an unweighted geometric mean of the individual commodity price relative to the base period prices. The computation procedure involves obtaining for each commodity, the ratio of its price in any given period to its price in the base period and taking the 22nd root of the product of these ratios. This product is then multiplied by 100 to obtain the index number for each period. The calculation is made by means of logarithms.

Euro Stoxx 50 Index is derived from the Euro Stoxx Index and represents the performance of the 50 largest companies among the 20 supersectors in terms of free-float market capitalization in the Eurozone. The index captures about 60% of the free-float market cap of the Euro Stoxx total market Index.

FTSE 100 Index or The Financial Times Stock Exchange 100 Index is a share index of the top 100 companies listed on the London Stock Exchange with the highest market capitalization.

FTSE All-World Index is a stock market index representing global equity performance that covers over 3,100 companies in 47 countries starting in 1986.

FTSE NAREIT Mortgage REITS Index is a freefloat adjusted, market capitalization-weighted index of US Mortgage REITs. Mortgage REITs include all tax-qualified REITs with more than 50 percent of total assets invested in mortgage loans or mortgage-backed securities secured by interests in real property.

HFRI ED Distressed/Restructuring Index tracks distressed/restructuring strategies which employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near-term proceedings. Managers are typically actively involved with the management of these companies, frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments which are publicly traded, in some cases actively and in others under reduced liquidity but in general for which a reasonable public market exists. In contrast to Special Situations, Distressed Strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure.

Indxx Artificial Intelligence & Big Data Index tracks the performance of companies that are positioned to benefit from the development and use of AI in their products and services, as well as companies that produce hardware used in AI applied for the analysis of big data. The index includes companies such as AI developers, AI-as-a-service, AI hardware and quantum computing.

Indxx Global Cloud Computing Index tracks the performance of companies that are in the Cloud Computing Industry. The Cloud Computing Industry is involved in the delivery of computing services, servers, storage, databases, networking, software, analytics and more over the Internet which is referred to as 'The Cloud'.

Indxx Global Fintech Thematic Index tracks the performance of companies listed in developed markets that are offering technology-driven financial services which are disrupting existing business models in the financial services and banking sectors.

MSCI AC Asia ex-Japan Index captures large and mid-cap representation across 2 of 3 Developed Markets (DM) countries* (excluding Japan) and 9 Emerging Markets (EM) countries* in Asia. With 1,187 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI AC World Automobiles Index is composed of large- and mid-cap automobile stocks across emerging and developed countries.

MSCI ACWI World ex-USA Index covers large and mid cap representation across 22 of 23 Developed Markets (DM) countries (excluding the US) and 27 Emerging

Markets (EM) countries. With 2,352 constituents, the index covers approximately 85% of the global equity opportunity set outside the US.

MSCI AC World Index is designed to represent performance of the full opportunity set of large- and mid-cap stocks across 23 developed and 24 emerging markets. As of May 2022, it covers more than 2,933 constituents across 11 sectors and approximately 85% of the free float-adjusted market capitalization in each market.

MSCI AC World ex-USA Index captures large- and mid-cap companies across 22 of 23 development markets, excluding the US. With 881 constituents, the index covers about 85% of the free float-adjusted market capitalization in each country.

MSCI ASEAN Index captures large and mid cap representation across 4 Emerging Markets countries, 1 Developed Market country and 1 Frontier Market country. With 156 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI Australia Index is designed to measure the performance of the large and mid cap segments of the Australia market. With 59 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Australia.

MSCI Brazil Index measures the performance of large and midcap segments of the Brazilian market. With 48 constituents, the index covers about 85% of the Brazilian equity universe.

MSCI China Index captures large and mid-cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs). With 704 constituents, the index covers about 85% of this China equity universe.

MSCI Emerging Markets Index captures large and midcap representation across twenty-four Emerging Markets (EM) countries. With 837 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI Emerging Markets Currency Index measures the total return of 25 emerging market currencies relative to the US dollar. The weight of each currency is equal to its country weight in the MSCI Emerging Markets Index.

MSCI Emerging Markets (EM) Latin America Index captures large and mid-cap representation across five Emerging Markets (EM) countries in Latin America. With 113 constituents, the index covers approximately 85% of the free float adjusted market capitalization in each country.

MSCI Germany Index is designed to measure the performance of the large and mid cap segments of the German market. With 59 constituents, the index covers about 85% of the equity universe in Germany.

MSCI Global Alternative Energy Index includes developed and emerging market large-, mid- and small-cap companies that derive 50% or more of their revenues from products and services in Alternative energy.

MSCI Japan Index is designed to measure the performance of the large and mid cap segments of the Japanese market. With 237 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.

MSCI United Kingdom Index is designed to measure the performance of the large and mid cap segments of the UK market. With 79 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the UK.

MSCI USA Index is designed to measure the performance of the large and mid cap segments of the US market. With 626 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the US.

MSCI World Information Technology Index tracks the large- and mid-cap IT segments across 23 developed markets countries.

MSCI World Index covers large- and mid-cap equities across 23 Developed Markets countries. With 1,603 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI World Momentum Index is designed to reflect the performance of an equity momentum strategy by emphasizing stocks with high price momentum, while maintaining reasonably high trading liquidity, investment capacity and moderate index turnover.

Nasdaq 100 is a large-cap growth index consisting of 100 of the largest US and international nonfinancial companies listed on the Nasdaq Stock Market based on market capitalization.

Nasdaq CTA Cybersecurity Index tracks the performance of companies engaged in the Cybersecurity segment of the technology and industrial sectors. The Index includes companies primarily involved in the building, implementation and management of security protocols applied to private and public networks, computers and mobile devices in order to provide protection of the integrity of data and network operations.

Nasdaq OMX Clean Edge Smart Grid Infrastructure Index includes companies that are primarily engaged and involved in electric grid; electric meters, devices, and networks; energy storage and management; and enabling software used by the smart grid and electric infrastructure sector.

Manufacturing Purchasing Managers' Index or PMI is a survey-based economic indicator that measures the activity level of purchasing managers in the manufacturing sector. PMI is expressed as a number from 0 to 100, a figure above 50 indicates expansion.

Prime Mobile Payments Index provides a reference measure for the global payments industry by focusing on companies facilitating the mass migration from physical cash registers to a mobile point of sale. Potential beneficiaries of this growing trend include software providers, payment processors, gateways, and credit card networks. Those companies collectively represent mobile payments industry.

Real broad trade weighted dollar index shows the value of a currency, usually the US dollar, against a basket of foreign currencies, adjusted for inflation. It is used by policymakers, economists and investors to gauge a currency's strength or weakness relative to multiple trading partners.

ROBO Global Robotics & Automation Index tracks the robotics, automation, and AI revolution for investors. It includes more than 80 robotics and automation stocks across 11 subsectors in over 14 countries.

ROBO Global Healthcare Technology and Innovation Index tracks the global value chain of healthcare technology and innovation. It includes more than 80 stocks across 9 subsectors in 15 countries.

Russell 2000 Index measures the performance of the small-cap segment of the US equity universe. The Russell 2000 Index is a subset of the Russell 3000 Index representing some 10% of the total market capitalization of that index.

Saudi Tadawul All Share Index (TASI) tracks the performance of companies listed on the Saudi Stock Exchange, also known as Tadawul.

S&P 500 Index is a capitalization-weighted index that includes a representative sample of 500 leading companies in leading industries of the US economy. Although the S&P 500 focuses on the large-cap segment of the market, with over 80% coverage of US equities, it is also an ideal proxy for the total market.

S&P 500 Healthcare Index includes companies from the S&P 500 Index that are involved from such areas as pharmaceuticals, healthcare equipment & supplies, biotechnology and healthcare providers and services.

S&P 500 Hotels, Resorts and Cruise Lines Index is a sub-index of the S&P 500 Index and represents the performance of hotels, resorts and cruise line companies that are represented in the latter index.

S&P 500 Information Technology Index is a sub-index of companies included in the S&P 500 that are classified as members of the Global Industry Classification Standard® (GICS®) information technology sector.

S&P 500 Software & Services Index is a sub-index of the S&P 500 Index and represents the performance of IT services and Software that are represented in the latter index.

S&P MidCap 400 includes 400 companies and represents about 6% of the US markets. Companies included in the index are based in the US, meet market capitalization requirements and maintain a public float of at least 10% of its shares outstanding.

S&P MidCap 400 Growth Index measures growth stocks using three factors: sales growth, the ratio of earnings change to price and momentum. Constituents are drawn from the S&P MidCap 400.

S&P Global Dividend Aristocrats is designed to measure the performance of the highest dividend yielding companies within the S&P Global Broad Market Index (BMI) that have followed a policy of increasing or stable dividends for at least ten consecutive years.

S&P SmallCap 600 is comprised of 600 companies. It measures of performance of the small-cap segment of the US market.

Securities Industry and Financial Markets Association or SIFMA Municipal Swap Index is a 7-day high-grade market index comprised of tax-exempt Variable Rate Demand Obligations (VRDOs) with certain characteristics. The Index is calculated and published by Bloomberg. The Index is overseen by SIFMA's Municipal Swap Index Committee.

Solactive E-commerce Index tracks the price movements in shares of companies which are active in the field of e-commerce. This may include companies that operate e-commerce platforms, provide E-commerce software, analytics or services, and/or primarily sell goods and services online and generate the majority of their overall revenue from online retail.

Solactive Social Media Index tracks the price movements in shares of companies which are active in the social media industry, including companies that provide social networking, file sharing, and other web-based media applications. A maximum of 50 components are included and weighted according to freefloat market capitalization. The index is calculated as a total return index in US dollars.

UBS Unstoppable Tech Index tracks the performance of emerging high growth tech and tech-enabled companies which have yet to complete a full-year with positive earnings. The basket has been optimized for liquidity with initial weights capped at 4%.

VIX or the **Chicago Board Options Exchange (CBOE) Volatility Index**, is a real-time index representing the market's expectation of 30-day forward-looking volatility, derived from the price inputs of the S&P 500 index options.

OTHER TERMINOLOGY:

Adaptive Valuations Strategies or AVS is Citi Private Bank's own strategic asset allocation methodology. It determines the suitable long-term mix of assets for each client's investment portfolio.

Assets Under Management or **AUM** are the total market value of the investments that a person or entity handles on behalf of investors.

Basis points or **BPS** is used to express small changes in interest rates or yields on bonds, notes and bonds. One basis point is 0.01% or one one-hundredth of a percent of yield while 100 basis points is 1%.

Business development company, also known as a BDC, is a regulated investment company that raises capital from individual and institutional investors through the sale of shares in the stock market. BDCs provide financing to private companies, typically small- and mid-sized businesses. BDCs are required to distribute a significant portion of their taxable income to shareholders in the form of dividends.

Correlation is a statistical measure of how two assets or asset classes move in relation to one another. Correlation

is measured on a scale of 1 to -1. A correlation of 1 implies perfect positive correlation, meaning that two assets or asset classes move in the same direction all of the time. A correlation of -1 implies perfect negative correlation, such that two assets or asset classes move in the opposite direction to each other all the time. A correlation of 0 implies zero correlation, such that there is no relationship between the movements in the two over time.

Digital commerce involves transactions conducted online to purchase goods and services. Digital remittances are funds sent from one person to another over the internet, typically across borders.

Earnings per share, or EPS, portion a company's profit allocated to each outstanding share of common stock. EPS is widely used to assess a company's profitability.

EU or the European Union is a political and economic union of 27 member states in Europe.

Eurodollar futures and options are market tools for traders to express views on future interest rate moves.

Fed funds rate or the effective federal funds rate (EFFR) is calculated as a volume-weighted median of overnight federal funds transactions reported in the US FR 2420 Report of Selected Money Market Rates. The federal funds market consists of domestic unsecured borrowings in US dollars by depository institutions from other depository institutions and certain other entities, primarily government-sponsored enterprises.

Internal Rate of Return or IRR is used to measure the profitability of potential investments. It is defined as the discount rate at which the net present value (NPV) of all cash flows from an investment are equal to zero. This measure of return takes into consideration the time value of money and allows for comparison with projected rates of return on other investments.

Liquified natural gas, or LNG, is a form of natural gas that has been converted into a liquid by cooling the gas to very low temperatures. By liquifying the natural gas, it takes up less space and can be transported by specialized tankers or stored in cryogenic tanks.

Mobile POS payments are payments made at the point of sale but facilitated via mobile devices like smart phones.

OPEC or the Organization or Petroleum Exporting Countries is an intergovernmental organization that helps countries coordinate and unify petroleum policies. The organization plays a significant role in influencing global oil prices and supply. OPEC consists of 13 member countries including Saudi Arabia, Iraq, Iran and Venezuela.

Par is the nominal or face value of a security. It represents the value the security was originally issued at or its redemption value at maturity. A bond selling at par is worth the same amount it was issued for or at which it will be redeemed at maturity.

Quantitative Tightening also known as QT is a monetary policy tool that central banks use to reduce the amount of money in circulation. It is the opposite of quantitative easing. QT typically involves central banks selling its holdings of government bonds, allowing existing bonds to mature without reinvesting the proceeds or raising reserve requirements for banks.

Real total return shows a return that has been adjusted to include capital appreciation, dividend income and dividend growth. It is expressed as a percentage of the amount invested.

Sharpe ratio is a measure of risk-adjusted return, expressed as excess return per unit of deviation, typically referred to as risk.

SMID is short for small- and mid-cap stocks.

Strategic Return Estimates or SREs are based on Citi Global Wealth Investments' forecast of returns for specific asset classes (to which the index belongs) over a 10-year time horizon. The forecast for each specific asset class is made using a proprietary methodology based on the assumption that equity valuations revert to their long-term trend over time.

Yield Curve is a graph that plots the yields of all bonds of the same quality with maturities ranging from shortest to longest. When short-term rates are lower, it is called a positive curve. When short-term rates are higher, it is called an inverted yield curve. When there is little difference between long- and short-term rates, it's called a flat yield curve. The most common version of the yield curve plots US Treasury securities.

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Bond rating equivalence

Alpha and/or numeric symbols used to give indications of relative credit quality. In the municipal market, these designations are published by the rating services. Internal ratings are also used by other market participants to indicate credit quality.

Bond credit quality ratings		Rating agencies	
Credit risk	**Moody's**[1]	**Standard and Poor's**[2]	**Fitch Ratings**[2]
Investment Grade			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium grade (Strong)	A	A	A
Medium grade	Baa	BBB	BBB
Not Investment Grade			
Lower medium grade (somewhat speculative)	Ba	BB	BB
Low grade (speculative)	B	B	B
Poor quality (may default)	Caa	CCC	CCC
Most speculative	Ca	CC	CC
No interest being paid or bankruptcy petition filed	C	D	C
In default	C	D	D

1 The ratings from Aa to Ca by Moody's may be modified by the addition of a 1, 2, or 3 to show relative standing within the category.
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