AUREUS
ASSET MANAGEMENT

January 2023

2023 Global Asset Allocation Review

Introduction

The Aureus annual asset allocation review evaluates the risks and opportunities available in global financial markets and their potential impact on the investment portfolios of our clients. Our Asset Allocation Policy describes our positioning for the coming year and may be adjusted as market conditions evolve.

Beyond this annual perspective on global allocation, Aureus also develops a customized investment policy for each client based on their specific goals and objectives.

Summary

The Aureus 2023 global asset allocation review combines critical interpretations of global market factors with a focus on the following:

2023 Analysis			
Market Factors	▪ US Economy ▪ Global Economy ▪ Corporate Profitability ▪ Interest Rates & Inflation ▪ Geopolitics	**Asset Classes**	▪ Lower Risk ▪ Moderate Risk ▪ Higher Risk

Asset classes are grouped into three risk categories: Lower, Moderate, and Higher. The allocation presented below represents a 'base case' composite for portfolios. In practice, each client is adjusted based on risk and return factors specific to their investment objectives. Specific allocations below represent our opinion over the course of 2023. They are subject to changing information, market movement, and may be higher, or lower, at certain points during the year.

2023 Asset Allocation Summary

Risk Category & Asset Class	Risk Level	2023 Allocation	2023 Direction	2022 Allocation	2021 Allocation	2020 Allocation	2019 Allocation
Lower Risk		**23%**	=	**23%**	**23%**	**26%**	**28%**
Cash	Lowest	3%	↓				
Absolute Return	Low	11%	↓				
High-Quality Bonds	Low	9%	↑				
Moderate Risk		**7%**	↓	**9%**	**8%**	**6%**	**6%**
Directional Strategies	Moderate	3%	↓				
Credit Strategies	Moderate	4%	↑				
Higher Risk		**70%**	↑	**68%**	**69%**	**68%**	**66%**
US Equities	High	50%	↑				
Int'l Developed Equities	High	8%	↓				
Int'l Emerging Equities	High	12%	↑				
Total		**100%**		**100%**	**100%**	**100%**	**100%**

2023 Asset Class Commentary

This year's asset allocation reflects the following adjustments compared to 2022.

Lower Risk: Lower risk assets are maintained at 23%.

Treasury Bill yields (6 months) closed 2022 at 4.7%, significantly higher than the 0.2% a year ago. As a result, investors can now achieve some level of return on cash allocations. While the Fed may raise rates marginally from this point, we believe the bulk of the rate increase is behind us and will have the intended effect of lowering inflation. At current levels, cash returns are still below current inflation levels of 6%; however, if inflation continues to decline as expected, a 4% return is adequate, reduces portfolio volatility, and provides liquidity. Our cash allocation for 2023 is 3%, with the year starting at a higher level that we expect to decline over the course of the year.

Absolute Return investments are designed to provide a 5-7% return, or inflation plus 2-3%, with less volatility than equities and a lower correlation to interest rates than other fixed income. This allocation has performed well over the past several years, and we expect continued positive performance looking ahead. However, the market correction in high-quality bonds, another low-risk option, has made those a more attractive allocation than in past years. Therefore, we are lowering the allocation for absolute return to 11% for 2023.

For the first time in almost a decade, we are meaningfully increasing our allocation to high-quality bonds. Given the rise in interest rates in 2022 and the resulting bear market in bonds, the return opportunity has improved compared with prior years. Intermediate bonds currently produce a 4% return, and we have increased the allocation to 9% (from ≈3% in 2022). We expect bonds to serve their role in a portfolio by providing current income and producing returns negatively correlated with equity markets in the event of an economic recession. This compares to Absolute Return, which aims to produce a positive, uncorrelated value appreciation. When taken together, high-quality bonds and Absolute Return investments comprise 20% of the lower risk allocation.

Moderate Risk: Moderate risk assets decreased slightly for 2023 to 7%.

Last year we added an allocation to private credit strategies and increased the allocation to 4% for 2023. Corporate balance sheets are in good condition for most companies, and the higher interest rates available to investors in private markets remain attractive. The allocation is to companies in the BBB quality range, so these are not "junk" bonds.

The reduction in the moderate risk allocation comes from a reduced allocation to Directional Strategies, which declines from 6% to 4%. These investments are generally "hedged," meaning they should participate in periods when equity markets move higher and protect on the downside when equity markets correct. However, we have come through a bear market in stocks which, in our opinion, increases the relative attractiveness of "long-only" equities and makes the hedging component of directional strategies less valuable.

We maintain our 0% weighting to High-Yield investments, preferring private credit strategies. This asset class is currently not offering high enough yields to be attractive and defaults increase during slowdowns or recessions.

Higher Risk: Higher risk assets are increased for 2023 to 70%.

Following the bear market of 2022, valuations for US Equities are much improved. Last year's correction was primarily a result of rising interest rates impacting equity valuations, with forward P/E multiples contracting from 21.4x to 16.7x, a 22% reduction. At 16.7x, the market is roughly in-line with its 25-year average value, leaving it reasonably valued. While we are comfortable with valuation multiples, we recognize there is a downside risk to earnings estimates given slowing economic activity. If a recession materialized, we would expect it to be relatively minor. Over the course of the year, we are increasing the US allocation by 5% to 50% in the model portfolio.

We are net reducing our exposure to International equities in 2023, although this shift is composed of a modest increase in Emerging Markets ("EM") exposure and a larger decrease in Developed Markets ("DM"). From a valuation perspective, DM appear attractive, trading at a 15% discount to their 10-year average multiple and having seen multiples contract by 16% in 2022. However, lack of visibility on the Russia/Ukraine conflict, Brexit headwinds, a less resolute central bank approach to tackling inflation, and a general lack of innovation leave us more cautious. The EM index finished 2022 down ~40% from its Feb 2021 peak and is currently experiencing one of its longest bear markets. China has been a key culprit of this decline, driven by a crackdown on the information technology industry, real estate related debt concerns, its COVID-zero policy, and a general ramping of geopolitical tensions. However, we see many of these issues improving or resolving in 2023, which helped by a peaking US dollar, should benefit stocks.

Of our 70% weighting to higher risk assets, we suggest a 50% weighting to US equities with the remaining 20% to international equities — favoring EM over DM.

2022 – Year in Review

Investment Return Summary

Asset Class/Index	Asset	2022	2021	2020	2019	2018	2017	3 Year	5 Year	10 Year
Cash										
BofA ML U.S. Treasury Bills	Treasury Bills	1.3	0.1	0.7	2.3	1.9	0.8	0.7	1.3	0.8
Fixed Income										
Barclays US Aggregate	US Fixed Income	-13.0	-1.5	7.5	8.7	0.0	3.5	-2.7	0.0	1.1
Barclays US Intermediate Agg.	US Fixed Income	-9.5	-1.3	5.6	6.7	0.9	2.3	-1.9	0.3	1.0
ICE BofA High Yield	US High Yield Bonds	-11.2	5.3	6.2	14.4	-2.3	7.5	-0.2	2.1	3.9
Global Equities										
S&P 500	US Large Cap	-18.1	28.7	18.4	31.5	-4.4	21.8	7.7	9.4	12.6
Russell 2000	US Small Cap	-20.4	14.8	19.8	25.5	-11.0	14.7	3.1	4.1	9.0
MSCI EAFE	Developed International	-14.5	11.3	7.8	22.0	-13.8	25.0	0.9	1.5	4.7
MSCI EMF	Emerging International	-20.1	-2.5	18.3	18.4	-14.6	37.3	-2.7	-1.4	1.4
Alternatives										
HFRX Equity Hedge	Equity Hedge Funds	-3.2	12.1	4.6	10.7	-9.4	10.0	4.3	2.6	3.3
HFRX Global Hedge Fund	Hedge Funds	-4.4	3.7	6.8	8.6	-6.7	6.0	1.9	1.4	1.8
S&P GSCI	Commodities	26.0	40.3	-23.7	17.6	-13.8	5.8	10.5	6.5	-3.3
S&P GSCI Gold	Gold	-0.7	-4.3	20.9	18.0	-2.8	12.8	4.8	5.7	0.0
Inflation										
CPI-U (All items)	Inflation	6.5	7.0	2.3	1.9	2.1	2.1	4.9	3.8	2.6

Best performing   Worst performing

Not many good things to say about 2022 for investors. Outside of commodities, which delivered their second consecutive positive return, most other investable asset classes were down double-digits. US stocks as measured by the S&P 500 finished the year -18.1%, after being as much as 25% lower during the year. International stocks followed suit with developed markets returning -14.5% and emerging markets -20.1%. Historically, fixed income investments provide a buffer to negative equity returns, but not last year as interest rates rose across the maturity spectrum. Short-term interest rates (measured by 6-month Treasury bills) began the year at 0.2% and finished at 4.7%. The longer 10-year Treasury note rates began 2022 at 1.5% and closed at 3.9%. While higher interest rates provide more income to new investors, those holding fixed income in 2022 experienced negative total returns from the dramatic move higher in rates. The positively sloped yield curve (higher yields from longer maturities) of January 2022 has inverted with maturities less than one-year now providing higher yields than those with longer maturities.

As mentioned above, global equities were disappointing across the board, as happens in a bear market. US Value stocks (-8%) were decidedly better than growth stocks (-29%) on a relative basis. The NASDAQ Composite, representing smaller companies and heavily weighted to technology, was the worst performer at -30% for the year. Looking over the last 3 years - which includes two bear markets, one from the pandemic in 2020 and then last year – US stocks produced an annualized return of 7.7%. This was well above bond returns of 0% and inflation of 4.2%, giving stocks a real return of 3.5% above inflation. Over the longer 5-year and 10-year periods, US stocks were again the preferred asset class with annualized returns of 9.4% and 12.6% for those periods.

Bonds posted their worst return in the last fifty years, with long bonds -13.0%, intermediate bonds -9.5%, and high-yield bonds -11.2%. The impact of higher rates was felt across financing markets as the cost of corporate debt moved higher and mortgage rates moved as high as 7%, materially impacting monthly mortgage payments and housing affordability.

Market headlines for 2022 were dominated by the commitment of the Federal Reserve to reduce inflation by raising interest rates by 4.25% during the year, the fastest pace on record. When Russia invaded Ukraine in February, it hit the front page as a full-fledged military assault, a humanitarian crisis, a major contributor to global energy shortages, and sizable economic costs for a conflict now approaching one year in duration. The hangover effects of the Covid pandemic continued to linger and contributed to economic challenges throughout 2022.

Inflation was the primary concern for investors and policymakers. The Fed's assault on inflation continued with seven rate increases, totaling 4.25% over a nine-month period, a pace and magnitude of increase not seen since the inflationary period of the mid-1970s. Inflation levels (Consumer Price Index, "CPI") have come down from the 9.1% June peak to 6.5% in December, still far from a 2% Fed target but improving.

A long-anticipated recession remains on the horizon, although the labor markets have demonstrated incredible resilience thus far. The US did experience two consecutive quarters of negative GDP growth in mid-2022, but that was not officially ruled a recession because of strong labor demand. For 2023, US GDP growth is expected to rise in the 2% range, similar to the full-year estimate for 2022 and slower than the 6% rise during the pandemic rebound in 2021. While valuation multiples contracted meaningfully, corporate earnings still grew mid-single digits in 2022.

2023 Model Factors

Model Factor 1 - Fundamentals

Key considerations include economic prospects, inflation expectations, and the corporate earnings outlook.

Economic Overview

Slowing Growth

Now entering the fourth year following the global pandemic, there are signs that we are returning to "normal" in social, medical, and economic terms. Global GDP is projected at 2.8% for 2022. This follows the 2020 pandemic onset of -4.4% and the 2021 bounce-back of 5.6%. The huge government stimulus plans and Treasury Department Quantitative Easing ("QE") during the pandemic have essentially ended. Economies are dealing with tighter monetary policies (quantitative tightening or "QT"), reduced fiscal support, and inflation – all leading to slower growth and widely-anticipated recessions.

	Annualized % Change in Real GDP from Prior Quarter										
Country/Region	2019 y/y	2020 y/y	Q1 2021	Q2 2021	Q3 2021	Q4 2021	2021 y/y	Q1 2022	Q2 2022	Q3 2022	Q4 2022E	2022 y/y E
United States	2.3	-2.8	6.3	7.0	2.7	7.0	5.9	-1.6	-0.6	3.2		1.9
China	5.9	2.2	--	--	--	--	8.1	--	--	--		3.3
Japan	-0.4	-4.3	-0.6	1.3	-1.8	4.9	2.2	-1.8	4.5	-0.8		1.5
Germany	1.1	-4.1	-5.7	7.9	3.2	-0.1	2.6	3.2	0.4	1.6		1.8
United Kingdom	1.6	-11.0	-4.1	28.8	7.1	6.2	7.6	2.5	0.2	-1.2		4.3
France	1.9	-7.9	0.3	4.5	13.8	2.3	6.8	-0.8	1.9	0.7		2.5
OECD Total	***1.7***	***-4.4***	***3.2***	***7.1***	***4.9***	***5.4***	***5.6***	***1.0***	***1.9***	***1.4***		***2.8***

To date, in the US, we have seen resilience from corporations and consumers. Corporations have solid balance sheets, sufficient liquidity, and have been able to raise prices and manage margins in this higher inflation environment. The tight labor market has spurred wage inflation, and consumers have largely spent down the excess savings accumulated during the pandemic. While we have already seen slowdowns in many industries, such as software, advertising, semiconductor chips, durable goods, and retail, we still believe a recession would be relatively contained in magnitude and duration.

Some factors to focus on as we move through 2023 are:

- *The path of inflation and the "stickiness" of certain components such as shelter, wages, and energy prices.* To date, we have witnessed goods-related inflation fall off quickly, while service-related inflation has proven more persistent. However, many service-related components of CPI are backward looking and do not reflect the softening we have seen in real-time indicators such as home prices and announced layoffs.
- *The future duration and magnitude of the Fed's interest rate hikes and quantitative tightening.* The Fed can push the economy into recession through continued rate increases if they believe inflation is proving persistent. On the other hand, if the Fed raises rates too high or holds them at elevated levels for too long, there will be economic repercussions.
- *Employment picture.* Unemployment stands at a very low 3.5%, and the number of job openings per unemployed individual remains historically elevated. The Fed is attempting to soften the labor market to avoid a wage price spiral that would put persistent upward pressure on the inflation rate through higher wages due to competition for workers. However, rising unemployment would also be a clear negative for economic growth.
- *The ability of corporations to manage through a higher price environment.* While many companies responded to higher input costs with price increases, there are signs that elasticity of demand is increasing, calling into question the ability to rely on price increases to protect margins. The other option is reducing expenses, which usually includes some degree of workforce reduction.

- *The trajectory of energy prices.* Oil prices were extremely volatile in 2022, reaching a high near $125 and a low around $70 per barrel. Changes in energy prices can have a rapid impact on the economy, and while prices remain well off their highs, we recognize that rising demand from China as its economy reopens and supply shocks due to geopolitics could lead to additional price spikes.

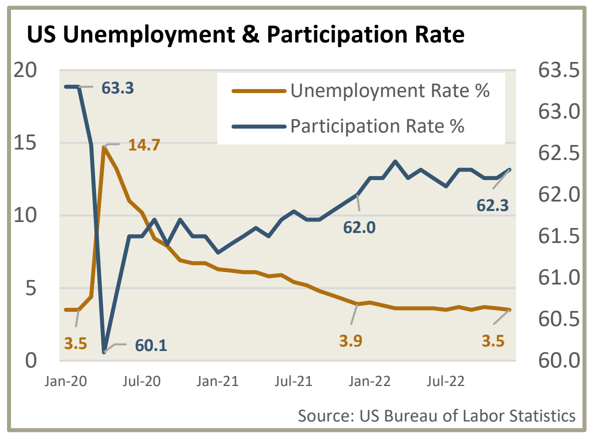
A Divided Washington

Congress ended 2022 with the approval of a $1.7 trillion omnibus spending bill, perhaps the last major spending bill we will see given the divided Congress. This adds to a list of legislative victories for the Biden administration that has included: a major bipartisan infrastructure deal, a technology bill, a veterans' health bill, a gun safety bill, and several new investments in climate and health care. With the election of a split Congress at the end of 2022, we expect President Biden's legislative agenda will grind to a halt. This takes the risk of tax hikes off the table until 2025—when Trump tax cuts are set to expire. We can also expect more fiscal fights, which have already begun with Republicans unwilling to raise the debt ceiling without extracting political concessions. For the time being, markets are expecting this to amount to a lot of noise and little risk of an actual default. It also means that if the US economy does tip into a recession, we should not expect fiscal support to ride to the rescue.

Consumer Economy

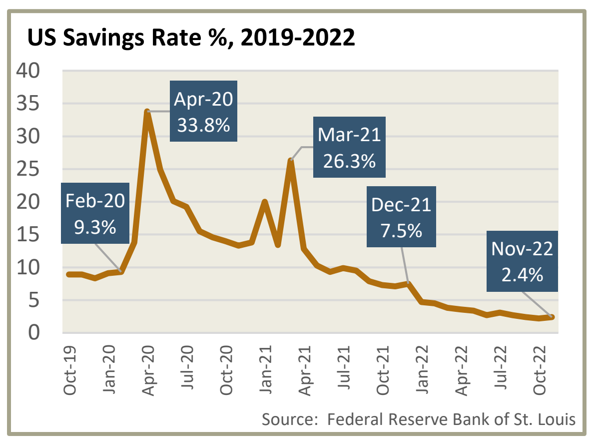
Employment

The national unemployment rate finished 2022 at 3.5%, slightly below the level of YE 2021. The rate now matches the pre-pandemic rate of 3.5%. Labor participation flattened out during 2022, finishing the year at 62.3%, still well below the pre-pandemic level of 63.3%. The Job Openings and Labor Turnover Survey (JOLTS number) remains elevated at 1.7x, as there were 10.5 million job openings in November compared to 6.0 million unemployed. There are signs that the postings/job seekers ratio is declining. Many technology firms have announced layoffs in recent weeks, although that trend has not spread very far across the economy.

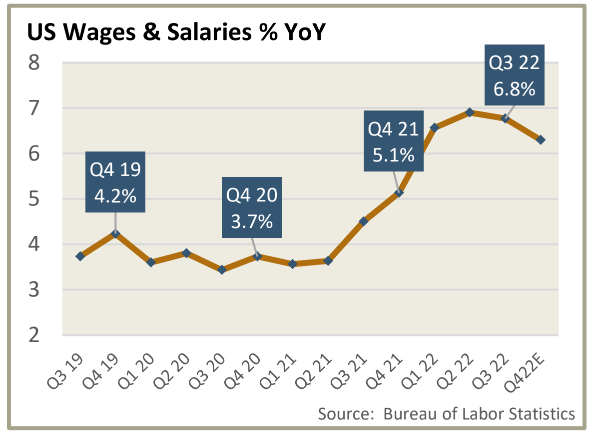


Savings

Government stimulus checks and a limited ability to spend during the pandemic combined to send savings rates to record levels. However, the expiration of government stimulus and robust consumer spending on services (travel) in 2022 caused the savings rate to plummet to 2.4%, a level not seen since mid-2005. Consumer debt from credit cards and home equity lines increased over 2021 levels. On a positive note, excess savings accumulated in the pandemic peaked at $2.1 trillion in 2021, and $0.9 trillion remains to support household spending moving forward.



Wages



Wages for part-time and full-time workers were up 6.2% YoY in November, according to the Atlanta Fed's Wage Growth Tracker. This is well above the 3.7% average growth rate of the past 10 years. The current labor shortage has left workers feeling more emboldened to quit and employers more desperate to increase compensation to attract employees. While there is still some lingering pandemic driven absence from the labor force, the aging of the baby-boom generation is now being attributed as the primary cause of the decline in labor participation. As this demographic trend is unlikely to change, barring a shift in immigration policy, worker shortages will likely persist. This will: 1) make employers more reluctant to fire workers for fear they won't be able to replace them, 2) increase investment in automation and other productivity increasing solutions, 3) embolden organized labor, and 4) continue to provide upward pressure on wages. We have seen a rash of recent layoff announcements from tech companies, but to date, workers have been able to find new jobs relatively quickly. A recession could negatively impact this trend, but so far, the data does not support a major slowdown in employment.

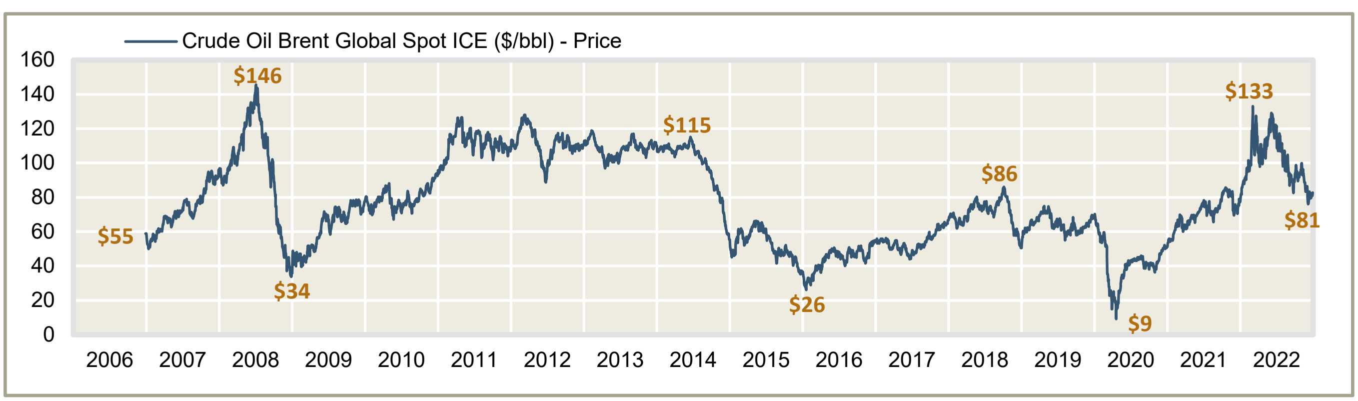
Global Monetary Policies

A year ago, the global economy was being supported by unprecedented central bank efforts to provide easy money, leading to negative yields on over one-third of world sovereign bonds and massive money supply infusions. Now the Eurozone is facing inflation rates >8% and the need to implement tighter policies in the form of higher interest rates a less fiscal stimulus. We expect they will not be as aggressive as the US Fed, given the challenges of energy supply resulting from the war in Ukraine.

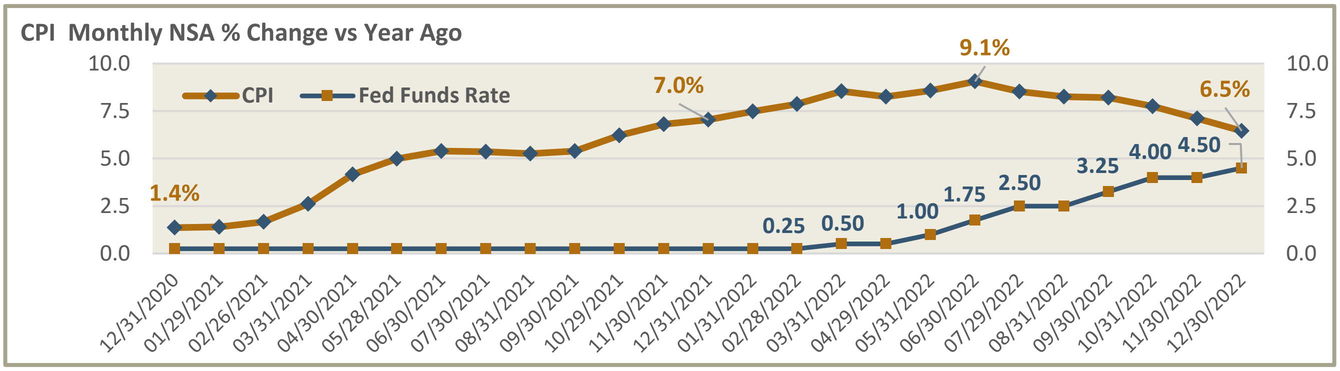
Oil Prices

Oil prices continued to be volatile. 2022 brought the onset of the Russia-Ukraine conflict in February, driving prices from $80 to over $130 in just two months, but falling to $83 by year-end. Global inventory levels are low, and drillers have been slow to begin new exploration projects. OPEC clearly prefers higher prices and has been willing to cut production to influence supplies. A combination of these factors signal continued volatility in prices.

Natural gas, a primary heating source for Europe and 40% supplied by Russia, had a similar path. Starting in 2022 at $3.40 per MMBtu prices rose to $9.75 in August, only to finish 2022 where it started at $3.50.

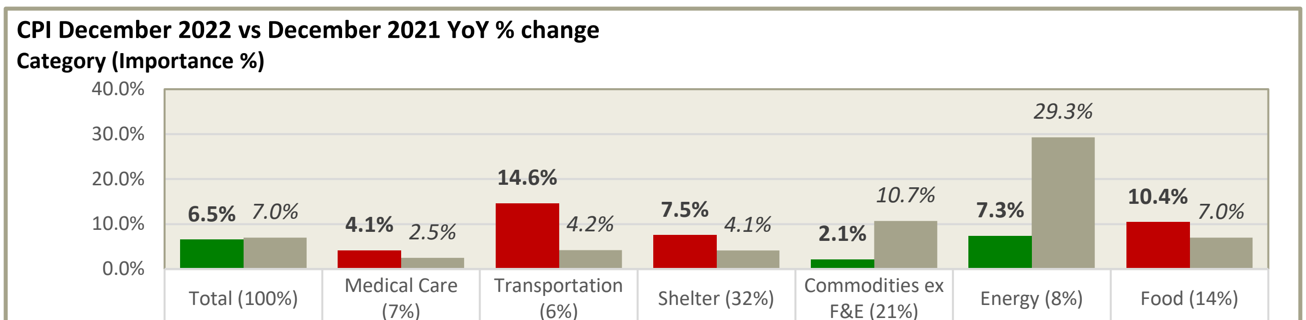


Inflation



The Consumer Price Index ("CPI") finished 2022 with a 6.5% year-over-year increase. In June, the indicator peaked at 9.1% and then fell for the next six months. The Fed initially felt high inflation was "transitory" but realized, too late, that action was necessary and began a series of increases. The chart above highlights that the Fed first raised interest rates from 0.25% to 0.50% in March 2022, when inflation registered at 8.5%. They followed with six additional hikes, three of 0.75%, bringing the current rate to 4.50%. Higher interest rates have already had an impact on many sectors, and, despite their hawkish tone, the Fed may pause their hikes sooner than expected, probably in the 5% range.

At this point, the causes of inflation are well-known, many having their origin in the global pandemic and resulting fiscal and monetary response. What remains to be seen is the endurance of inflationary factors. For example, energy inflation which closed 2021 at a 29.3% rate, closed 2022 at a 7.3% rate. Shelter, the largest factor in the CPI, has increased from a 4.1% rate at the end of 2021 to a 7.5% rate at the end of 2022. The chart below shows the largest weightings in the CPI, and their year over year % change, green bars indicate a lower rate, and red bars a higher rate than one year ago.



	Total (100%)	Medical Care (7%)	Transportation (6%)	Shelter (32%)	Commodities ex F&E (21%)	Energy (8%)	Food (14%)
2021YoY %	7.0%	2.5%	4.2%	4.1%	10.7%	29.3%	7.0%
2022 YoY	6.5%	4.1%	14.6%	7.5%	2.1%	7.3%	10.4%

We expect inflation to continue trending lower in 2023, driven by less consumer demand in some Covid-surging categories, such as housing, and less corporate demand as global economies slow. Inflation readings are backward looking, and they may fall faster than expected. We believe that by 2024, the CPI will be growing in a manageable 3-4% range.

Corporate Earnings

A year ago, we expected 2022 to gradually transition back to a more normalized business operating environment. However, the unforeseen economic effects of COVID and our response to it, have proven remarkably stubborn. Difficult comparisons against stimulus driven spending in 1Q22 gave way to continued inflationary driven cost pressures and supply chain challenges that persisted for much of the year. Despite this, earnings growth for the S&P 500 is still estimated to have grown over 5% in 2022, with Energy, the largest contributor to growth. Heading into 2023, headwinds from stimulus and cost inflation are moderating, but with the Conference Board Leading

Economic Indicator down 3.7% YoY in November, a weakening manufacturing outlook, and an extremely weak backdrop for housing, it is unlikely to be business as usual in 2023. Despite this, S&P 500 earnings are still estimated to grow 4% in the year as the US either narrowly avoids a recession or experiences a mild recession. Healthy consumer and business balance sheets, the potential for a rebound in already depressed industries (e.g., automotive, aviation), a resilient labor market, and expectations the Fed may lower rates toward the end of 2023 are offsetting factors. Finding exceptional businesses that can manage through difficult operating environments will be important. It is also important to remember that the market is forward-looking, and the stock market will begin anticipating a rebound in corporate earnings well before estimates trough.

Economic Growth

United States:

Real GDP in 2022 is expected to grow 1.9%. Expectations for 2023 are for more moderate growth of just 0.3%. While still positive, these estimates demonstrate how forecasters are torn on whether the US will enter a recession. The pace and magnitude of the Fed's shift away from policy tightening, how quickly inflation abates, and the path of energy prices are key elements to monitor.

Factors	Influence
▪ Government fiscal spending	+
▪ Inflation	-
▪ Employment	+
▪ Higher short-term rates	-
▪ Supply chain improvements	+
▪ Consumer spending	=/-

Europe and Japan:

European economies will likely struggle amidst elevated inflation, tightening from the ECB and geopolitical headwinds. Any potential peace agreement between Russia and Ukraine would be a positive development, but there are currently few signs of a truce. Japan's central bank remains accommodative; However, Japan's economy is highly cyclical and susceptible to a slowing global macro environment.

Factors	Influence
▪ Diversification of energy sources	+
▪ Tighter Central Bank policies	-
▪ Inflation pressures	-
▪ China reopening	+
▪ Strong labor markets	+

Emerging Markets:

China is the primary focus in EM. Recent re-opening is positive long-term but has short-term risks. The recent, subtle, favorable shift toward private enterprise is positive – if durable. Supply chain restructuring provides opportunities for many EM economies. The headwinds of the strong dollar for most of 2022 appear to have reversed, generally a positive for EM.

Factors	Influence
▪ China reopening	+
▪ Improving global economies	+
▪ China regulatory intervention	=
▪ Dollar Weakness	+

Model Factor 2 - Valuation

Key considerations are valuation and yields, viewed historically in absolute and relative terms.

Equities

Global Equity Valuation Comparison

	10 Year P/E Ratio			Jan.	Jan.	10 Year Price/Book Ratio			Jan.	Jan.
Country/Region	High	Low	Avg.	2023	2022	High	Low	Avg.	2023	2022
US	24.0	12.8	17.4	16.7	21.4	4.5	2.0	3.1	3.5	4.5
Europe	19.1	10.3	14.2	12.1	14.7	2.0	1.1	1.6	1.6	1.9
Japan	19.4	11.1	14.6	12.4	14.4	1.5	0.9	1.2	1.1	1.3
Emerging Markets	18.9	10.9	14.3	14.0	15.5	2.4	1.4	1.8	1.9	2.3

Source: FactSet, January 2023. Forward P/E and P/B ratios.

The US market price/earnings ratio finished the year at 16.7x forward earnings after contracting 22% in 2022. This puts it below its 10-year average but in line with its 25-year average valuation level. Given the S&P 500's 18% decline during 2022 combined with mid-single-digit earnings growth, one might expect the multiple to be lower. However, the high starting point to start the year leaves us merely in line with the average despite experiencing our second bear market in three years. Peaking interest rates should be supportive of market values. However, the risk of margin contraction and negative earnings revisions due to a weak economy will likely cap material upside until investors have more visibility on the path forward for the economy.

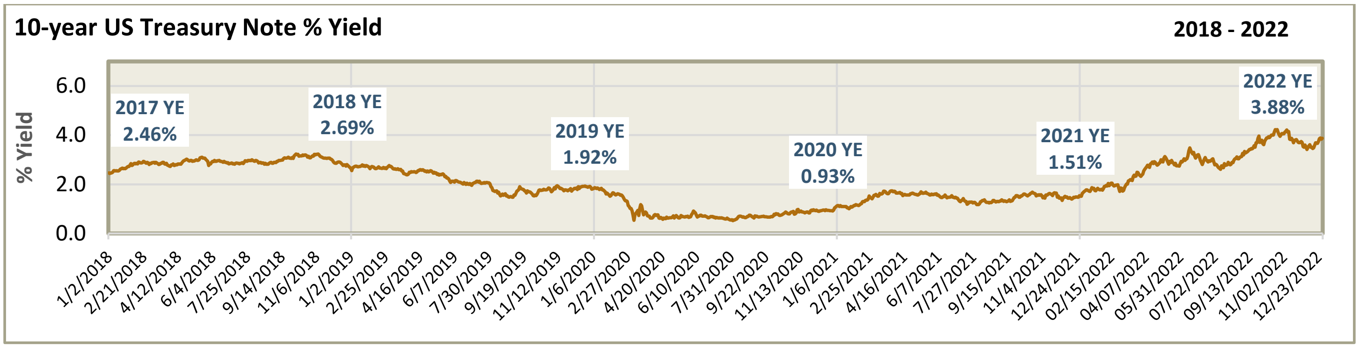
Equity valuations in Europe, Japan, and emerging markets also fell sharply last year. However, due to their lower starting point, international markets now trade at discounts to their historic average valuation levels. As discussed above, geopolitical risks remain a material headwind for most major international markets.

Bonds

Interest rates moved precipitously higher in 2022 as the Fed began its campaign against inflation. Expectations are that the Fed will continue to move short-term rates higher by another 0.25%, once or twice, moving rates toward 5%. To date, the 10-year Treasury yield rose from 1.5% to 3.9% during 2022, continuing to diverge from short-term rates, resulting in an inverted yield curve of -0.6% (10-year yield less 2-year yield). An inverted yield curve may be a precursor to recession but could also mean that investors are confident that inflation will continue its downward path in 2023.

As is the practice in Washington, the debt ceiling needs to go higher – most likely at the last possible date. While we expect this to happen, the rise of fiscal conservatives in the House has the risk of making this uncomfortable for bond investors and adding volatility to interest rates.

With the exception of the UK, most developed market bonds continue to yield below those in the US. Most developed market yields trail the US in efforts to lower inflation through raising interest rates, likely due to uncertainty in their economies and existing geopolitical risks. That said, most central banks will need to follow a tightening path similar to the US, but timing and magnitude will differ.



Model Factor 3 - Geopolitical

Key considerations are government and political conditions in specific geographies that may impact economies and investment markets.

United States

The headline remains the Russia-Ukraine war with tragic casualties, and millions of Ukrainians displaced or fleeing to Europe. Over $100 billion in aid has been directed to Ukraine, with half from the US. Relations between China and the US remain complex, with co-dependence on economic issues and tensions related to Taiwan.

Europe

The Russia-Ukraine war has major implications for neighboring Europe. The economic costs and disruptions, largely related to energy supplies, remain one year after the start of the conflict. Fortunately, this winter has been mild. The expansion and strengthening of NATO are a positive longer-term for stability in the region if/when the current conflict is resolved. Brexit is now two years old, and while we have progress on trade and immigration issues, the pandemic and war have diverted attention from more detailed implementation issues.

Asia ex-China

China continues to play a major role in the outlook for many of these countries. However, given its economic weight and possible military ambitions, these countries look more cautiously at China. The disruption of supply chains during the pandemic has created opportunities for new trade relationships that may benefit other emerging economies.

China

Recently China ended its zero-COVID policy, setting the stage for re-opening. In the near term, a lack of immunity in the population and ineffective vaccines may negatively impact economic growth as cases rise. Longer-term, this is more positive as global dependence on Chinese export of goods, improved supply chains, and consumer spending benefit global economies. The Taiwan situation remains open and highly dependent on the US/China relationship, as any response to China’s intentions has global economic implications.

Model Factors – Summary Table:

Region	Economic Fundamentals	Valuation & Risk	Geopolitical
US	▪ Strong consumer balance sheets and job market support consumer spending. ▪ Fed tightening is well underway and could, if mismanaged, lead to recession. ▪ Interest rates are higher – a positive for investors, but more costly for both consumer and corporate borrowers. ▪ A divided Congress may mean nothing major out of Washington. May be a good thing, given the massive fiscal stimulus of the last three years.	▪ With slower economic growth in 2022, earnings continued to move higher. It remains to be seen if businesses can pass through costs and maintain margins. ▪ Higher interest rates have lowered valuation of equities, which, depending on earnings, are more attractive than a year ago. ▪ After years of TINA (there is no alternative – to stocks), bonds now provide a current yield above the dividend yield, making them relatively more attractive.	▪ Nearly a year after Russia invaded Ukraine, the conflict continues unabated. A stronger and expanded NATO may lessen future Russian territorial ambitions. ▪ Other tensions exist with China/Taiwan, and North Korea. ▪ Reopening borders for travel may help with the nationalistic tendencies nursed by the global pandemic.
Developed Markets	▪ Central banks are dealing with the switch from QE to QT while managing through inflation and recession concerns. ▪ Despite short-term challenges, Japan's long-term prospects are benefitting from trends such as a weaker yen, attractive valuations, and increasing profitability.	▪ Historic inflation numbers could potentially undermine recovery. ▪ Fairly low equity valuations should provide tailwinds for European and Japanese equities – we've been saying this for years.	▪ Weak external demand, elevated energy prices, and tightening financial conditions may constrain growth. ▪ Japan looks to be more insulated from geo-political issues affecting the rest of the world but will need to contend with its fiscal and monetary policy measures.
Emerging Markets	▪ Emerging markets started to rebound in Q4. This trend may persist, thanks to robust growth, slowing inflation, a weaker US dollar, and better fundamentals. ▪ Liquidity has improved, and interest from investors could increase. ▪ China's growth outlook improves, largely fueled by increased pent-up household spending. Growth may be temporarily hindered by the recent surge in Covid-19 cases and hospitalizations.	▪ Emerging markets equities may be undervalued compared to historical levels, making them an attractive investment opportunity. ▪ China's economy has the benefit of lower inflation rates, providing more flexibility in policy decisions. Institutional holdings in Chinese equities are at a five-year low, and valuations are below average.	▪ Emerging markets economies are expected to experience stronger growth than developed markets. ▪ The shuffling of supply chains and reshoring creates opportunities for EM countries. ▪ As is generally the case, political and economic instabilities are more prevalent in emerging countries.

Expected Returns

2023 Asset Allocation: Expected Returns

Asset Class	Risk Level	Expected Nominal Return	2023 Allocation	Expected Nominal Return Attribution
Cash	Lowest	3.0% – 5.0%	3%	0.0% – 0.0%
Fixed Income	Low	3.5% – 5.0%	9%	0.0% – 0.1%
Absolute Return	Low	5.0% – 7.0%	11%	0.8% – 1.1%
Directional Alternatives	Moderate	5.0% – 9.0%	3%	0.3% – 0.5%
Private Credit	Moderate	7.0% – 9.0%	4%	0.2% – 0.3%
US Equities	High	7.0% – 10.0%	50%	2.3% – 4.5%
International Developed Equities	High	6.0% – 10.0%	8%	0.6% – 1.2%
International Emerging Equities	High	6.0% – 12.0%	12%	0.6% – 1.3%
Total Portfolio Nominal Return			100%	**6.1% – 9.2%**
Less Expected Inflation				(3.5%)
Total Portfolio Real Return				**2.6% – 5.7%**

Calculating expected returns is mainly a quantitative exercise to establish a range of returns for both asset classes and an overall “average” portfolio. History has shown that these asset classes rarely deliver these expected returns during any one calendar year, given the cyclicality and volatility of individual asset classes. For example, US equities returned -4.4% in 2018, followed by 31.5% in 2019, 18.4% in 2020, 28.7% in 2021, and -18.8% in 2022. Looking over the last 20 years, the annualized return is 9.8% for US equities – a more appropriate number for this exercise. Over longer periods, these more volatile one-year returns are smoothed, and returns generally move toward longer-term asset-class averages. The expected nominal returns in the table above incorporate factors specific to our view of the current market environment and allow us to express our assumptions and apply them to a client’s portfolio.

For 2023, following a bear market in both stocks and bonds, we expect positive returns from US equities, International equities, and bonds. However, the equity range of returns are slightly higher, given the current valuation, than a year ago. In a base-case portfolio implementation, we would expect a diversified portfolio to generate expected nominal returns in the 6.1% to 9.2% range, with inflation estimated to be 3.5% (higher than 2022), the real return could be in the range of 2.6% to 5.7%.

As always, we remain diligent in our approach to the financial markets and the management of our client’s investment portfolios. As new information becomes available, we will update our models and adjust our allocations when market conditions warrant.

We appreciate the opportunity to share our views and welcome your questions and comments.