PMA®
ASSET MANAGEMENT

Semi-Annual
MARKET OUTLOOK

WINTER 2022-2023

No pain no gain

2017	2018	2019	2020	2021	2022 YTD
International Equities 27.4%	US Tbill 1.8%	S&P 500 31.5%	US All Cap Equity 21.0%	US Real Estate 43.1%	US Tbill 1.1%
S&P 500 21.8%	Securitized 1.0%	US All Cap Equity 30.8%	Russell 2000 20.0%	S&P 500 28.7%	High Yield Corps (10.6%)
US All Cap Equity 21.2%	US Treasury 0.9%	US Real Estate 25.8%	S&P 500 18.4%	US All Cap Equity 25.7%	Securitized (11.4%)
Russell 2000 14.6%	Aggregate Bond 0.0%	Russell 2000 25.5%	International Equities 11.2%	Russell 2000 14.8%	TIPS (11.6%)
High Yield Corps 7.5%	TIPS (1.3%)	International Equities 21.8%	TIPS 11.0%	International Equities 8.8%	US Treasury (12.3%)
Investment Grade Corps 6.4%	High Yield Corps (2.1%)	Investment Grade Corps 14.5%	Investment Grade Corps 9.9%	TIPS 6.0%	Aggregate Bond (12.8%)
US Real Estate 5.1%	Investment Grade Corps (2.5%)	High Yield Corps 14.3%	US Treasury 8.0%	High Yield Corps 5.3%	S&P 500 (14.3%)
Aggregate Bond 3.5%	S&P 500 (4.4%)	Aggregate Bond 8.7%	Aggregate Bond 7.5%	US Tbill 0.0%	Investment Grade Corps (15.4%)
TIPS 3.0%	US Real Estate (4.6%)	TIPS 8.4%	High Yield Corps 7.1%	Securitized (1.0%)	US All Cap Equity (15.6%)
Securitized 2.5%	US All Cap Equity (5.2%)	US Treasury 6.9%	Securitized 4.2%	Investment Grade Corps (1.0%)	International Equities (15.7%)
US Treasury 2.3%	Russell 2000 (11.0%)	Securitized 6.4%	US Tbill 0.5%	Aggregate Bond (1.5%)	Russell 2000 (15.7%)
US Tbill 0.8%	International Equities (14.6%)	US Tbill 2.2%	US Real Estate (7.6%)	US Treasury (2.3%)	US Real Estate (21.4%)

Figure 1. Sources: PMA Asset Management. Bloomberg.

The markets have been extremely challenging in 2022 and certainly unlike any period in modern history where virtually all asset classes lost value. We'd have to go back to the late 70's to find a remotely similar environment for overall market returns, however the structure and complexity of today's market is quite different in many respects. Treasury Inflation Protected securities (TIPS), which didn't exist during the stagflation cycle in the 1970's, have experienced negative double digit total returns YTD. (Table 1) Disappointingly, the only asset that directly compensates investors for being "long inflation" didn't work. Even gold, a huge outperformer during previous periods of high inflation, was down this year by over 3% through the end of November. True to the no pain no gain adage, market corrections can prove healthy in the longer term for investors. On the bright side, assets are at cheaper levels and income levels are higher for savers. We've also experienced a period of historically strong returns, so drawdowns aren't surprising.

Fortunately, expected returns look much better for 2023 given the harshness of the correction, especially within the fixed income market. Inflation remains the central issue facing the market once again this year, which should slowly recede toward the Fed's long-term targets. The current inflation spike is something of a perfect storm in terms of the speed and magnitude of the shock. Certainly, easy monetary and fiscal policies were contributing factors, working as one would expect, providing low financing costs and government stimulus to support demand for individuals and businesses as the world recovered from COVID. While the merits for those policies were justifiable, then tenor of those decisions was too long, and policy rates were overly accommodative. The rebound in demand was surprisingly massive versus expectations. Supply chain problems put additional inflationary price pressures on the system. New geopolitical risks also had a somewhat surprising contribution to inflation pressures as the Ukraine conflict significantly increased energy costs. In our view, the current inflation spike should be relatively quick despite the pain, perhaps more like the post-World War II inflation period of the 1950's. Nearly half of excess inflation during the current period has come from energy and auto prices which should unwind as production and supply issues are adjusting to meet demand. We already see this in inventory levels and lower prices for energy and shipping. A deceleration in shelter prices and real estate should help as well. Overall, while economic risks remain somewhat skewed to the downside given ongoing restrictive financial conditions and ongoing geopolitical challenges, our base case projection for the US economy is for a bumpy landing with little GDP growth in 2023 and moderating levels of inflation.

From a market perspective, we find ourselves in an environment of significantly higher interest rates for borrowers with slower prospective earnings growth and declining margins for many corporations. Over the past year, interest rates and the average cost of capital for US businesses have increased at the fastest annual pace in decades. Short rates are nearly 4.5% higher just this year, while intermediate and long rates are over 2.0% higher. In addition to higher financing costs, weaker economic growth has weighed on credit and equity markets given the increasing prospect for an economic hard landing. Both the US investment grade fixed income and US equity markets have both performed poorly with oddly similar results overall, correlation benefits be damned. Liquidity is another particular concern for our team. Market liquidity remains severely constrained with little hope for improvement as the Fed proceeds to shrink its balance sheet.

We expect US fixed income will outperform US equities in 2023 primarily to higher income levels and significantly lower risks. Earnings are going to be challenged which increases the probability of higher return volatility in the equity markets. While we expect equities to earn modestly positive returns in the year ahead, continued geopolitical risks and lingering inflation pressures increase the likelihood of further volatility in equity markets. Within the fixed income market, we are more optimistic about potential returns.

EXPECTED RETURNS	2023		
Asset Class	**Base Case**	**High**	**Low**
US Fixed Income	4.0%-6.0%	8.0%	-1%
US Equities	1.0%-3.0%	15%	-20%
Cash	4.5%	5.5%	4%

Figure 2.

Yields are near multi decade highs, and the Fed will likely end its tightening phase sometime during 2023. We expect positive returns for fixed income in 2023 with a much tighter range of expected returns than equities. Investment grade and high yield credit sectors have produced strongly positive excess returns versus similar maturity

Treasuries over the past several months as higher income levels largely offset interest rate and credit risk. We continue to take some comfort in the fact that corporate, bank, and consumer balance sheets remain relatively healthy which should help cushion the blow should economic growth and earnings experience a harder landing. While growth is expected to be much softer in the year ahead and corporate margins compressing, our base case estimate is for the economy to experience a bumpy landing and exhibit flat to slight growth.

Overall, we expect returns to remain pressured in the months ahead as tighter policy, weakening economic fundamentals and slowing earnings growth likely pressure asset values once again. The Fed has an immediate challenge in front of it currently, trying to push back on the recent significant loosening of financial conditions, as yields have moved 50bps lower and stocks have moved significantly higher since the November Fed meeting. While that's good for investor returns, caution is warranted as the recent strong November jobs report and associated wage inflation data remind us that the economy isn't rolling over as quickly as many predicted. The Fed's work is not yet done. Despite the tumultuous year we have experienced, we do expect positive returns over the full year ahead as inflation eventually slows, providing a much-needed catalyst for the Fed to pivot allowing the market to move ahead. History backs this up. Since 1999, the average annualized return when the Federal Reserve has paused interest rate hikes prior to cuts has seen the best returns at 14.7% compared to 4.7% during a cutting phase.

Fixed Income Outlook

While we respect the Fed has clearly indicated "there is still a long way to go" and "the larger risk is coming from tightening too little", history tends to show that rates tend to peak around four months prior to the last hike in the cycle. Given a more tempered message from Fed Chairman Powell in late November, the fixed income market has already priced in a Fed policy pivot sometime later this winter

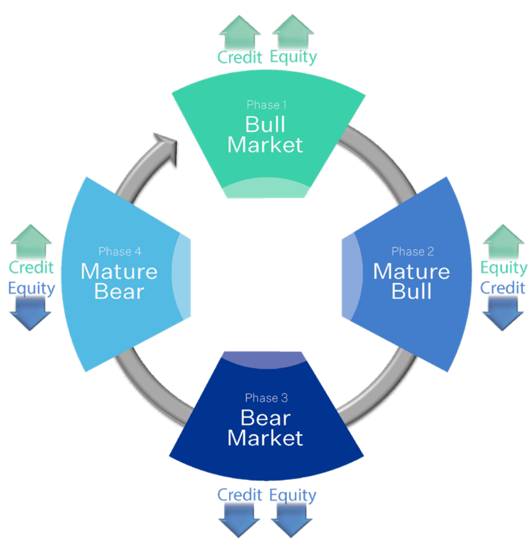

Figure 3.

into the early Spring of 2023. That said, while it's nice to finally earn income, total returns may remain challenged here in the near term until the Fed gets closer to finishing the job. While tactically bearish on rates here in the near term, the belly of the yield curve is increasingly attractive as locking in current short term forward rates are attractive. High quality income producing sectors should outperform in the year ahead from a total return perspective.

A terminal Fed Funds rate near 5% is anchored into the capital markets and largely in line with our expectations. Elsewhere in the rates market, while the Fed has indicated a likelihood of future SOMA (System Open Market Account) sales of mortgage-backed securities (MBS) commencing in 2023, spreads on MBS passthroughs have widened to levels rarely seen. Further, the impact of higher rates is reducing the expectation of forward production keeping supply and demand balanced. With premium dollar price risk largely gone and spreads are materially wider, the agency commercial mortgage-backed securities (CMBS) sector is selectively cheap. Similarly, spreads have widened materially in the highest quality auto and credit card backed asset backed market which make them also compelling. We subscribed to the higher they fly, the further they fall theory. With used auto prices up 35+%, proper due diligence is required and investors should remain selective. Liquidity and key rate decisions are critical considerations for the year ahead as risk markets may be in for another bumpy ride. Overall, we have turned to an overweight in the rates sector as absolute yield levels and relatively wide spreads are attractive versus other sectors and asset classes.

Within the investment grade and high yield corporate bond sector, valuations are fair as moderate credit stress is largely priced in at this point. If we don't enter a more pronounced recession, carry and modest spread compression are achievable. If we enter a hard landing and/or earnings significantly underperform, spreads could widen further. We remain modestly overweight the sector with a strong preference for quality companies given the uncertain economic environment. Strong and relatively stable credit fundamentals support this view.

However, there are rising idiosyncratic risks that temper our enthusiasm. We remain in the bear market phase of the credit cycle so quality remains an important consideration. Negative supply technicals and continued credit outflows will remain headwinds. Attractive carry and modest tightening potential exist in 2023.

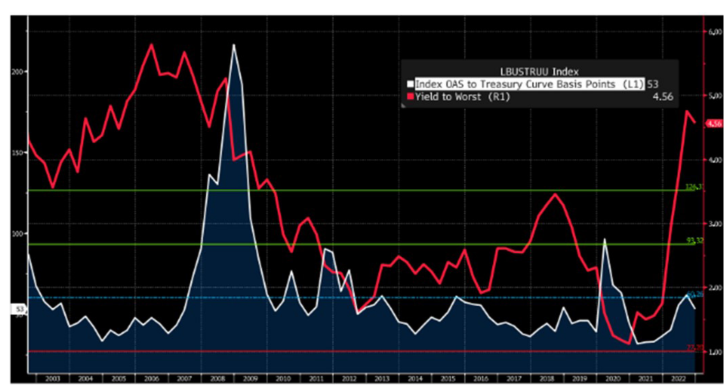

Figure 4.

Overall, the stage is set for low to mid-single digit returns in the year ahead which should outpace equity returns on a risk adjusted basis.

Credit fundamentals remain stable within the municipal sector. Federal stimulus money and stronger than expected tax revenues have helped stabilize financials, though increased expense headwinds from labor inflation will have a negative impact. Spreads have widened out this year, like all non-Treasury sectors, but have less risk at this point in the credit cycle. With higher yields, we would expect demand to outpace supply and increasingly so when the Fed pivots. Liquidity continues to be a challenge in the taxable municipal sector. The healthcare and higher education sectors of the municipal market have made good strides this year, but challenges remain to these credits. Airports and toll roads have recovered awe well with increases in travel post-pandemic. We remain cautious in this sector overall given its relative lack of liquidity at this point in the cycle.

Equity Outlook

We have a neutral outlook on US equities as we expect returns to remain highly volatile amidst economic and earning uncertainty. While the S&P 500's total return is down significantly year to date, this is primarily due to the Federal Reserve swiftly increasing interest rates to combat inflation. It is a distinct possibility that markets have not fully priced in an economic slowdown or potential recession. In addition, the Fed continues to hike rates and may end with a higher for longer terminal rate than markets currently price in. Uncertainty is unusually high for equity returns. A substantial equity rally is probable when the Fed ultimately pauses, leading to our assessment that low to mid-single digit positive returns are possible for the S&P 500 in 2023.

By the time the Fed starts to pivot, the forward market will no longer be considering a recession, given more clarity on the path of inflation and interest rates. We anticipate this should lead to a smoother 2024 for the equity markets. Once the Fed pauses, the rally should initially be led by growth and mega-cap stocks which have been particularly hard hit.

Traditional calendar effects and the current political backdrop may provide equity support this year as well. The third year in the presidential cycle has historically been the best performing during the 4-year stretch, generating average S&P 500 returns of 13.5% since the 1928 election cycle versus an average of 6.1% in the three other years. A split government, under a Democrat President, has also historically been the best political setting historically for equity returns, with an average return of 16% during those years. Despite our expectation for modestly positive 2023 returns, our conviction is low as we expect volatility and high data dependence to continue.

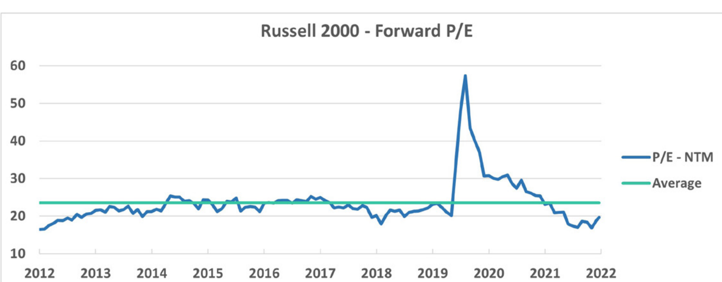

Figure 5.

Within US equities, we have a modest preference for small capitalization stocks as they have a higher value orientation, less foreign exchange headwinds, less geopolitical exposure, less Chinese exposure, and a more domestic supply-chain. Additionally, the group has the most attractive valuations with the Russell 2000 trading at a 19% forward price to earnings discount to its average since 1995 and a 16% discount relative to the last ten years. We are concerned with the broader reach of large capitalization companies which includes more foreign revenues and a higher exposure to Asian production centers. While China's COVID-Zero policy may be easing, is remains a wild card that could hamper the production and supply-chain of large capitalization firms. Consistent with our core philosophy and process, we continue to prefer companies that consistently generate strong free cash flows and dividend income, exhibit strong balance sheets and trade at appropriate valuations given their growth prospects. Security selection will continue to be important, as poor returns have opened the door to more opportunities. We expect several growth sectors will continue to struggle, especially those with most of their earnings in the future or those who need to roll debt at much higher rates.

As we highlighted previously, the upside for both growth and large capitalization stocks is the potential large rally when the Fed pauses tits tightening cycle. We remain underweight both developed and emerging market equities, as they offer fewer quality companies compared to US corporations and have more geo-political risks. We believe a strong US dollar could remain a headwind for overseas earnings. Emerging markets high exposure to commodities during a global economic slowdown is also concerning. Another risk is that global central banks continue to have more dovish policies relative to the U.S., making inflation potentially more entrenched in those markets. We continue to be worried about Chinese regulatory policies, weaker growth, social unrest, and its COVID-Zero policy.

Earnings per share (EPS) growth expectations are important determinants of both investor sentiment and potential returns in any year but will be especially important in 2023. Earnings per

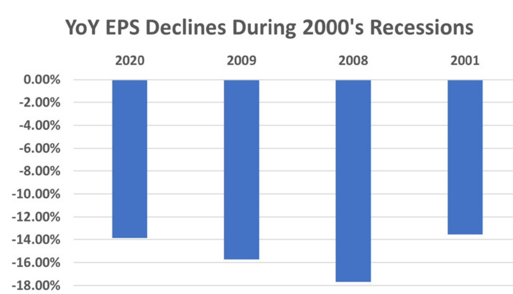

Figure 6

share growth estimates are suggesting 5.9% year over year growth next year. While margins have expanded significantly following the pandemic, they are expected to normalize back to pre-pandemic levels over 2023 driven by FX pressure, wage growth, weaker demand, and significant retailer discounting. During the recent earnings season, management teams have highlighted slowing demand across several sectors as the global economy has slowed considerably. It is possible that 2023 EPS estimates will decline further, and we could see flat to low single digit earnings growth.

Comparing current growth estimates to EPS declines during recent recessions is cause for some concern. During recessions in this millennia, EPS has averaged a 15% year-over-year decline. While this cycle is certainly different than any other downside risks remain if we enter a hard landing. Unemployment expectations for 2023 are comparatively low relative to past recessions at 4.3% versus a 6.8% average during the last seven recessions. The consumer remains in good shape overall with a healthy labor market and rising income levels. Spending has yet to materially subside as consumers have chosen to use savings versus reducing consumption following these higher inflation levels. That said, we expect this to lead to a shallower recession if one occurs. A last point of concern for 2023 EPS, is a potential for decreased share buyback activity, which supports the measure by reducing the number of shares outstanding. A 1% buyback tax is expected to modestly curtail corporate buyback activity. From a valuation perspective, multiples have certainly come down from recent highs this year which create future return opportunities. However, with 2023 EPS estimates trending lower, the forward price/earnings ratio has seen modest increases as of late. The current forward P/E for the S&P 500 sits at 17.9x a half turn above the average multiple since 1990. While current multiples are a vast improvement from 21.3x average we have seen in the post-pandemic era, stocks are fairly valued at the present time. Fundamentals need to improve, which will take some time.

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