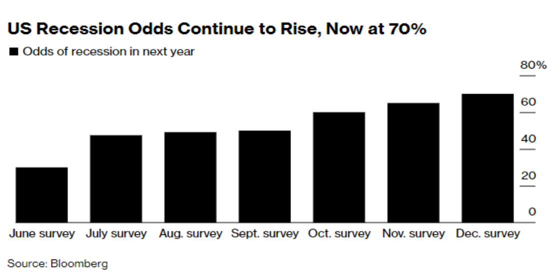
Current Investment Strategy and Themes

- ***Portfolios across the spectrum of risk continue to be defensive in anticipation of a higher probability of a stagflation scenario in the U.S. and higher odds of economic recession outside the U.S.***
- ***High quality assets, low duration and exposure to non-correlated assets continue to be the emphasis.***

The Markets in Review: December 2022

- Last year, the "Crash of 2022" was coined as a descriptor for global equity and bond markets. The confluence of rapidly rising interest rates and high rates of inflation around the globe swayed the consensus to predict a global economic recession from 2023 to 2024.
- These effects and others resulted in nearly 20% losses in stock returns and record double-digit losses in the bond market. Understandably, the bell weather 60%/40% portfolio finished 2023 with one of the worst losses on record (since 1937).
- On the portfolio construction side, we further de-risked our portfolios in November, anticipating further pain into 2023. We also used this opportunity to harvest tax losses across client portfolios.
- While the 4th quarter finished on a high note, with solid performance across most assets, very little from a fundamental or technical standpoint indicates this is sustainable. We paired back the riskiest positions across the equity portfolio, specifically the high-growth stock segment of disruptive innovation, and added exposure to energy and fundamental weighted non-US developed equities.
- Investors shunned liquid alternatives over the last decade as it was easy to generate returns by buying & holding the markets (U.S. stock & bond index funds), thanks to zero interest rates, low inflation, and excess liquidity. Market volatility was suppressed as a result.
- Given our current market outlook and view of where we are in the business cycle, we believe now is the time to focus on non-directional liquid strategies, including long/short equity, credit, and commodities as a diversifier, especially to the current inflated nature of traditional public financial assets.



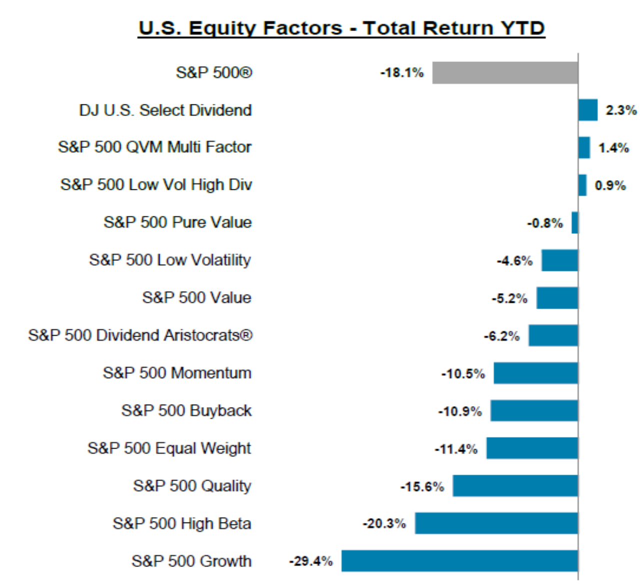
Key Market Indicators

Bullish | Favorable | Neutral | Cautious | Bearish

Equities	3rd Quarter	Last 12 Months	Last 3 Years	Last 5 Years	Last 10 Years	Current View
U.S. Large Cap	7.56%	-18.11%	7.66%	9.42%	12.56%	Cautious
U.S. Small Cap	6.23%	-20.44%	3.10%	4.13%	9.01%	Cautious
International Developed	17.34%	-14.45%	0.87%	1.54%	4.67%	Cautious
Emerging Markets Equity	9.70%	-20.09%	-2.69%	-1.40%	1.44%	Cautious
Fixed Income						
U.S. Aggregate	1.87%	-13.01%	-2.71%	0.02%	1.06%	Neutral
U.S. Government	0.72%	-12.32%	-2.57%	-0.06%	0.60%	Neutral
U.S. Corporate	3.44%	-15.26%	-2.86%	0.42%	1.82%	Neutral
U.S. High Yield	4.17%	-11.19%	0.05%	2.31%	4.03%	Neutral
Non-U.S. Developed	6.97%	-21.77%	-7.68%	-4.26%	-1.95%	Cautious
Emerging Market Debt	7.84%	-10.18%	-5.52%	-2.86%	-2.05%	Bearish
Alternatives						
REITs	5.24%	-24.37%	-0.11%	3.68%	6.53%	Cautious
Commodities	6.16%	20.63%	15.25%	8.96%	0.15%	Favorable
Managed Futures	8.06%	25.75%	10.83%	6.01%	5.30%	Favorable
Hedge Funds	0.17%	-4.38%	1.91%	1.41%	1.77%	Favorable

Source: Morningstar, data as of 12/30/2022

S&P 500 Factor Returns 4Q2022



Source: S&P Dow Jones

Risk Examination – December 2022

A quarterly update on our views of the complex risk factors in global markets

Valuation | Earnings | Macro | Liabilities | Technical

Key: Bullish | Favorable | Neutral | Cautious | Bearish

Valuation

- Equity valuations have improved over the last quarter, but pressure remains on earnings. We do expect multiple compression over the next several years. From a pure valuation standpoint, global small cap stocks, non-US-developed and emerging market equities are trading at sizable discounts to U.S. large cap stocks. Bond valuations have improved, but interest rate levels may remain elevated in the current economic environment.

Earnings

- We believe the market will be entering an earnings recession this year as real economic growth slows. The other negative for earnings growth is that consensus forecasts are too optimistic. When this is the case, the market tends to punish those stocks that deliver negative earnings surprises.

Macroeconomic

- Our expectation of economic growth rates has moved lower as the effects of the Fed fighting off high inflation should result in a slowing labor market and higher debt servicing costs. All of this should sharply curtail household demand. Supply constraints have eased along with demand. The challenge is that we think the odds favor lower real growth and elevated rates of inflation (stagflation).

Liabilities

- Liabilities have exploded on government and corporate balance sheets over the last cycle. Household borrowing rates are not far behind. The shift now should be on balance sheet repair and debt repayment and not on earnings growth and increased individual spending. This will likely place additional pressure on growth and governments to provide extra stimulus programs to re-start the global economy.

Technical/Sentiment

- The uncertainty from the effects of the crisis in Ukraine and its broader geopolitical impact (i.e. the new Axis of Evil; Russia, China & Iran), elevated inflation rates, and lower economic growth ahead will most likely continue to feed higher volatility in the public markets.
- The consensus view calls for a global economic recession for 2023 into 2024, with the U.S. having the greatest odds of contradicting the consensus.

2023-2024 Economic and Investment Scenarios

Our assessment of potential macro scenarios

	Recession	K – Shaped Recovery	Return to New Normal	Robust Recovery
Economy / Geopolitical	▪ Negative growth precipitated by elevated interest rates, inflation & lower growth ▪ Civil unrest ▪ Demand slowdown, focus on cost-cutting	▪ Weakness in consumer discretionary ▪ Strength in E-commerce/innovation ▪ Fed rate hikes & no room for fiscal stimulus	▪ Gradual recovery with radically different labor market ▪ Inward focus ▪ Steady growth/low inflation	▪ Inflation reverts to Fed target ▪ Job growth/higher consumption ▪ Infrastructure spend
Markets	▪ Prolonged sell-off in risky assets ▪ Rush to safe-haven assets such as the U.S. dollar, gold and cash	▪ Negative effect from inflation ▪ Volatility dominates ▪ Highly valued & concentrated markets ▪ Focus on risk	▪ Extended recovery puts focus on value, small cap & higher inflation ▪ Pressure on Big Tech	▪ Negative real rates, a flood of new money = continued asset inflation ▪ Alternative assets & equities prosper
Focus	▪ Flight to quality: Short duration U.S. Treasuries, U.S. Dollar, & Gold benefit	▪ Premium on asset diversification = liquid alts ▪ Commodities & non-directional investments	▪ Focus shifts from sentiment driven markets to fundamentals	▪ Fully invested, but highly diversified
Probability	**40%**	**30%**	**20%**	**10%**

< < < Downside < < < | > > > Upside > > >

Risks

Downside:

- Geopolitical risk of a mis-step with Russia, China & Iran
- Sustained high rates of inflation
- Runaway debt growth on pace to equal Japan
- Higher rates of poverty and social displacement
- Further job displacement – weak demand

Upside:

- Effective use of fiscal stimulus spurs economic growth
- Globalization returns
- Labor market returns with shift in focus and higher productivity
- Strong real economic growth and productive use of credit
- Raises the wealth effect across multiple sectors
- Lower rates of inflation, above trend real growth

Portfolio Asset Class Positioning

PORTFOLIO SEGMENT / SEGMENT OBJECTIVE	SEGMENT CONSTITUENTS	SEGMENT COMMENTS
Equity *Diversified Exposure with premium on quality, value, & lower volatility*	▪ Global exposure to high quality companies and innovators in their field ▪ Diversified across size, high quality, low volatility and rising dividend payers across global markets	▪ Higher exposure to U.S. equities with equal-weighted exposure to large-cap, mid-cap, small cap stocks ▪ Emphasis on high dividend payers, low volatility and high quality across developed markets ▪ Continued emphasis on actively managed beta exposures
Fixed Income *Seek to Preserve Capital, and Diversify Equity Exposure*	▪ Overweight low duration and high quality ▪ U.S. cash equivalents & TIPs ▪ Not a time to "reach for yield" ▪ Exposure to asset-backed & asset-backed, and senior loans	▪ Bias toward short duration ▪ Favor high quality credit over rates ▪ Issuer selection critical ▪ Inflation protected short term T-bonds
Opportunistic *Highest Conviction Ideas Based on 12-24 Month Proprietary Forecasts*	▪ Reduced emphasis on disruptive innovation themes ranging from Cyber technologies to immunotherapies ▪ Passive energy exposure ▪ Continued exposures to E-commerce, medical instruments, cloud computing & cybersecurity	▪ Reflects Palladiem's shorter-term model (value and momentum) ▪ Seeking participation in select themes with attractive return potential based on innovative technologies such as 3D printing, gene therapies, digital wallets, *renewable energy* and AI
Alternative *Anticipated Risk Mitigation with Alpha Opportunities*	▪ Hedged Equity ▪ Merger Arbitrage ▪ Global Macro – Credit ▪ Carbon Credits ▪ Commodity Dynamic Roll Strategy ▪ Systematic L/S Managed Futures	▪ Lower than average return and higher risk expectations for equities and bonds presents the challenge of providing uncorrelated sources of risk and return. ▪ We favor exposure to risk-managed approaches to investing in liquid alternatives with an emphasis on M&A, Carbon Credits, Commodities, Absolute Return, Hedged Equity, & Managed Futures

All investments are subject to risk, including the loss of principal. For additional information about the Palladiem Investment Portfolios, please refer to the Disclosures at the end of this report.

Important Disclosures

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It is important to remember that there are risks inherent in any investment and that there is no assurance that any investment, asset class, style or index will provide positive performance over time. Diversification and strategic asset allocation do not guarantee a profit or protect against a loss in a declining m]

markets. Past performance is not a guarantee of future results. All investments are subject to risk, including the loss of principal. Portfolio positions referenced are subject to change at any time, your portfolio may not reflect the information referenced.

Palladiem has sole discretion to change allocations to styles and vehicles at any time.

Index definitions:

"U.S. Large Cap" represented by the S&P 500 Index.
"U.S. Small Cap" represented by the Russell 2000 Index.
"International" represented by the MSCI Europe, Australasia, Far East (EAFE) Net Return Index.
"Emerging" represented by the MSCI Emerging Markets Net Return Index.
"U.S. Aggregate" represented by the Bloomberg U.S. Aggregate Bond Index.
"U.S. Government" represented by the Bloomberg U.S. Government Bond Index.
"U.S. Corporate" represented by the Bloomberg U.S. Credit Bond Index.
"U.S. High Yield" represented by the Bloomberg U.S. Corporate High Yield Index.
"Non-U.S. Developed" represented by the S&P International Treasury ex U.S. Index.
"Emerging Market Debt" represented by the JP Morgan GBI-EM Global Core Index
"REITs" represented by the FTSE North American Real Estate Investment Trust (REIT) Equity REITs Index.
"Commodities" represented by the Dow Jones Commodity Index .
"Managed Futures" represented by the Credit Suisse Managed Futures Index.
"Global Macro" represented by the Credit Suisse Global Macro Index

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