

FOURTH QUARTER 2022

## Quarterly Market Commentary

### Market Dashboard

Multi-Asset	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Global 60/40 (ACWI/U.S. Core Bonds)	(2.54)	6.64	(16.02)	(16.02)
Wilshire Risk Parity Index <sup>SM</sup> – 12% Volatility	(3.58)	3.94	(21.30)	(21.30)

Source: Bloomberg. Indexes are total return.

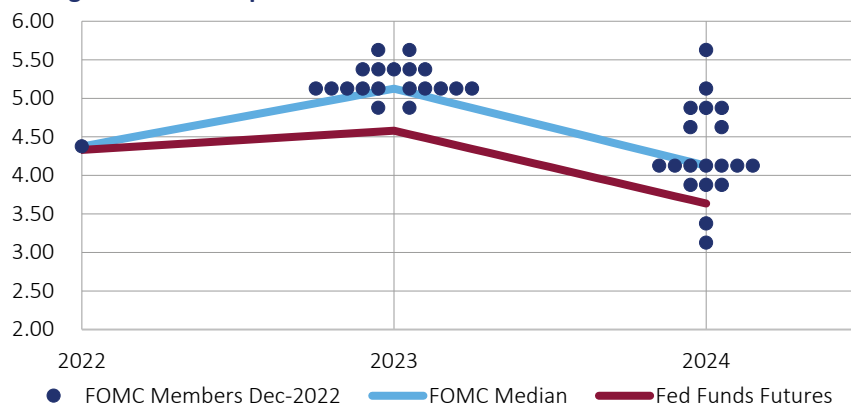
Strategic Allocation Themes	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Growth <sup>1</sup>	(3.94)	9.76	(18.36)	(18.36)
Defensive Growth <sup>2</sup>	(2.45)	5.70	(13.70)	(13.70)
Diversified Credit <sup>3</sup>	(0.07)	5.59	(12.50)	(12.50)
Real Assets <sup>4</sup>	(2.44)	5.50	(9.71)	(9.71)
Defensive <sup>5</sup>	(0.45)	1.87	(13.01)	(13.01)

Source: Bloomberg. Indexes are total return.

### Quarterly Insight

The Federal Reserve's aggressive action to combat unacceptably high inflation is the story of 2022 with uncertainty around Fed policy poised to drive market volatility in 2023. The FOMC raised rates 4.25%, with increases becoming more dramatic in May. This marks the largest 12-month increase since 1981 (also a period of inflation near or above double-digits). Unsurprisingly, fixed income suffered but so did equities as investors repriced off a higher risk-free rate. The Fed is currently forecasting a rate 0.75% higher by the end of 2023. The open market does not agree – or perhaps doubts their credibility to continue tightening, with a modest change forecasted for the next year. How this disagreement plays out is likely to be a primary market driver this year.

#### Divergence in Rate Expectations



Source: Bloomberg.

### Economic highlights

**GDP:** Real GDP growth reversed course during the third quarter after two negative readings, expanding an annualized 3.2%. Growth was strong enough to push the economy into positive territory for the year, however modest. Consumer spending and net exports were sources of strength, while business spending fell. The Atlanta Fed's GDPNow forecast for the fourth quarter currently stands at 3.7%.

Source: Bureau of Economic Analysis.

**Interest Rates:** The Treasury curve rose for maturities two years and lower during the fourth quarter but was mostly unchanged further out on the curve. The 10-year Treasury closed at 3.88%, up 5 basis points. The 10-year real yield (i.e., net of inflation) fell 10 basis points to 1.58%. The Federal Open Market Committee increased their overnight rate by a total of 1.25%, targeting a range of 4.25% to 4.50%. The committee's current median outlook is for a rate of approximately 5.1% by the end of 2023.

Source: U.S. Treasury.

**Inflation:** Consumer price changes have moderated as the Consumer Price Index rose 0.9% for the three months ending November. For the one-year period, the CPI was up 7.1%. The 10-year break-even inflation rate increased to 2.30% in December versus 2.15% in September.

Source: Dept. of Labor (BLS), U.S. Treasury.

**Employment:** Jobs growth remains solid, with an average of 272k jobs/month added during the three months ending in November. The unemployment rate was unchanged at 3.7%, as it was in August. Wages jumped 0.6% in November, which was double the forecasted rate and reinforces the Fed's aggressive action.

Source: Dept. of Labor (BLS).

**Housing:** New data supports the notion that the housing market has cooled significantly since June. In fact, the S&P Case-Shiller 20-City Home Price Index was down -3.1% over the three-months through October, while maintaining an 8.7% gain over the trailing 12-months.

Source: Standard & Poor's.

## U.S. Economy and Markets

The U.S. stock market, represented by the FT Wilshire 5000 Index<sup>SM</sup>, was up 7.10% for the fourth quarter but was down -19.04% for all of 2022. A majority of sectors were up for the quarter. The best performing were Energy (+19.9%), Industrials (+16.6%) and Materials (+14.6%). The two sectors producing losses were Consumer Discretionary (-8.0%) and Communication Services (-1.8%). From a size perspective, small-cap outperformed large-cap by 86 basis points. Growth stocks underperformed value for the quarter and also trailed meaningfully for the year.

U.S. Equity	MTD (%)	QTD (%)	YTD (%)	1Y (%)
FT Wilshire 5000 Index <sup>SM</sup>	(5.87)	7.10	(19.04)	(19.04)
Standard & Poor's 500	(5.76)	7.56	(18.11)	(18.11)
Wilshire 4500 Completion Index <sup>SM</sup>	(6.27)	5.34	(23.86)	(23.86)
MSCI USA Minimum Volatility	(3.73)	9.80	(9.19)	(9.19)

Source: Bloomberg. Indexes are total return.

U.S. Equity by Size/Style	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Wilshire US Large-Cap Index <sup>SM</sup>	(5.86)	7.05	(19.03)	(19.03)
Wilshire US Large-Cap Growth Index <sup>SM</sup>	(7.98)	0.75	(29.54)	(29.54)
Wilshire US Large-Cap Value Index <sup>SM</sup>	(3.77)	13.75	(5.51)	(5.51)
Wilshire US Small-Cap Index <sup>SM</sup>	(6.11)	7.91	(18.65)	(18.65)
Wilshire US Small-Cap Growth Index <sup>SM</sup>	(6.18)	7.07	(23.07)	(23.07)
Wilshire US Small-Cap Value Index <sup>SM</sup>	(6.04)	8.68	(14.22)	(14.22)
Wilshire US Micro-Cap Index <sup>SM</sup>	(4.21)	4.93	(26.07)	(26.07)

Source: Bloomberg. Indexes are total return.

GICS sector returns	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Communication Services	(7.98)	(1.84)	(40.04)	(40.04)
Consumer Discretionary	(10.90)	(8.00)	(36.33)	(36.33)
Consumer Staples	(3.05)	12.55	(1.09)	(1.09)
Energy	(3.98)	19.90	62.48	62.48
Financials	(5.97)	11.89	(12.44)	(12.44)
Health Care	(2.06)	11.64	(5.64)	(5.64)
Industrials	(3.74)	16.64	(8.25)	(8.25)
Information Technology	(8.05)	3.80	(29.42)	(29.42)
Materials	(5.90)	14.59	(13.21)	(13.21)
Real Estate	(5.09)	4.34	(26.20)	(26.20)
Utilities	(0.87)	8.74	1.21	1.21

Source: Wilshire Atlas. Indexes are total return.

Large-cap growth stocks were an outlier this quarter, struggling to produce a positive return

## International Economy and Markets

Performance results within international equity markets were positive for the fourth quarter, with developed outperforming emerging markets. The MSCI EAFE Index was up 17.34% for the quarter, while the MSCI Emerging Markets Index was up 9.70%. Europe faced similar headwinds as the United States. in 2022 – surging inflation and aggressive central bank tightening – but also had to more directly contend with the ongoing war in Ukraine. The labor market remains tight in the eurozone – including Germany where unemployment has fallen below 3% – and many businesses report that a labor shortage is limiting production. Despite China’s zero-COVID policies, including widespread lockdowns, infections continued to surge intermittently. Tension among the country’s citizens continued to rise and led to protests not seen in decades. In early December, the central government took definitive steps to ease restrictions.

Non-U.S. Equity	MTD (%)	QTD (%)	YTD (%)	1Y (%)
MSCI ACWI	(3.94)	9.76	(18.36)	(18.36)
MSCI ACWI ex USA	(0.75)	14.29	(16.00)	(16.00)
MSCI ACWI ex USA Minimum Volatility	0.22	8.35	(12.75)	(12.75)
MSCI EAFE	0.08	17.34	(14.45)	(14.45)
MSCI Emerging Markets	(1.41)	9.70	(20.09)	(20.09)
MSCI ACWI ex USA Small Cap	0.17	13.31	(19.97)	(19.97)

Source: Bloomberg. Indexes are total return.

Non-U.S. Equity (local currency)	MTD (%)	QTD (%)	YTD (%)	1Y (%)
MSCI ACWI	(4.74)	7.36	(15.98)	(15.98)
MSCI ACWI ex USA	(2.89)	7.82	(9.62)	(9.62)
MSCI ACWI ex USA Minimum Volatility	(1.61)	3.57	(6.22)	(6.22)
MSCI EAFE	(3.01)	8.72	(7.00)	(7.00)
MSCI Emerging Markets	(2.00)	6.57	(15.54)	(15.54)
MSCI ACWI ex USA Small Cap	(2.04)	6.70	(12.76)	(12.76)

Source: Bloomberg. Indexes are total return.

Chinese leaders reversed strict zero-COVID policies in early December, possibly in response to protests

## Fixed Income Markets

The U.S. Treasury yield curve was up in the short-end (below 3-years) by 50-135 basis points but largely unchanged across the remainder of the curve. The 10-year Treasury yield ended the quarter at 3.88%, up just 5 basis points from September. Credit spreads tightened during the quarter within both investment grade and high yield bonds (down 84 basis points within the speculative market). The Federal Open Market Committee met twice during the quarter, as scheduled, and increased the overnight rate by 0.75% in November and 0.50% in December, targeting a range of 4.25% to 4.50%. The Fed’s “dot plot” is messaging that the current intent is for another 75 basis points in increases before the end of 2023. Following the December meeting, Fed Chair Jerome Powell indicated that inflation data during the fourth

The FOMC raised the overnight rate by 1.25% this quarter, forecasting a rate above 5% by year-end 2023

quarter has been encouraging but that it will take “substantially more evidence” to ensure that modest price increases are sustainable.

U.S. Fixed Income	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Bloomberg U.S. Aggregate	(0.45)	1.87	(13.01)	(13.01)
Bloomberg Long Term Treasury	(1.70)	(0.59)	(29.26)	(29.26)
Bloomberg Long Term Corporate	(1.15)	5.40	(25.62)	(25.62)
Bloomberg U.S. TIPS	(1.02)	2.04	(11.85)	(11.85)
Bloomberg U.S. Credit	(0.43)	3.44	(15.26)	(15.26)
Bloomberg U.S. Corporate High Yield	(0.62)	4.17	(11.19)	(11.19)
S&P/LSTA Leveraged Loan	0.42	2.71	(0.63)	(0.63)

Source: Bloomberg. Indexes are total return.

Market Rates	Dec 31	Sept 30	June 30	Mar 31
10-Year Treasury	3.88	3.83	3.02	2.34
10-Year Breakeven Inflation	2.30	2.15	2.34	2.83

Source: Bloomberg. Indexes are total return.

Global Fixed Income	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Bloomberg Global Aggregate	0.54	4.55	(16.25)	(16.25)
Bloomberg Global Aggregate (Hdg)	(1.18)	0.99	(11.22)	(11.22)
Bloomberg EM LC Gov't Universal	2.23	4.66	(8.83)	(8.83)
Bloomberg EM LC Gov't Universal (Hdg)	0.70	1.77	(2.58)	(2.58)

Source: Bloomberg. Indexes are total return.

## Real Asset Markets

Real estate securities were up during the fourth quarter in both the United States and abroad. Commodity results also were positive for the quarter, with crude oil rising modestly by 1.0% to \$80.26 per barrel. Oil prices were quite volatile in 2022, with lows approaching \$70 and highs at nearly \$125, due to tightening supplies with the Ukraine invasion but then falling demand from China. Natural gas prices fell dramatically during the quarter due to relatively mild winter temperatures – despite the destruction done by Winter Storm Elliott. By quarter-end, natural gas was down -33.9%, closing at \$4.48 per million BTUs. Gold prices were up 9.8% during the quarter, finishing at approximately \$1,826 per troy ounce, as the Federal Reserve continued its hawkish stance toward inflation.

Natural gas fell -34%  
for the quarter on  
expectations of a  
mild January

Real Assets	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Wilshire US Real Estate Securities Index <sup>SM</sup>	(5.61)	4.09	(26.75)	(26.75)
Wilshire Global Real Estate Securities Index <sup>SM</sup>	(3.91)	6.35	(24.91)	(24.91)
FTSE Global Core Infrastructure 50/50	(2.11)	9.24	(4.15)	(4.15)
Alerian Midstream Energy	(6.02)	8.38	21.53	21.53
Bloomberg Commodity	(2.45)	2.22	16.09	16.09
Gold	3.14	9.84	(0.28)	(0.28)
Bitcoin	(3.07)	(14.65)	(64.22)	(64.22)

Source: Bloomberg. Indexes are total return.

## Alternatives

Liquid alternative managers posted their first positive quarter since Q4 2021, driven by easing inflationary pressures and dovish Fed rhetoric in the first two months of the quarter. All sub-strategies ended the quarter positive except for global macro, as these managers struggled with reversals in both fixed income and currencies. Equity hedge managers enjoyed a supportive environment as markets priced in a lower-than-expected inflation print early in the quarter but struggled in December as the Fed re-established its hawkish stance. Supportive equity markets and moderate volume were tailwinds to the event driven space during the quarter, while notable exposure to the Rogers/DuPont termination weighed on the peer group. Relative value managers benefitted from tightening spreads and rallying Treasuries early in the quarter but experienced a moderate pullback as sentiment shifted heading into year end.

Global macro managers struggled with reversals in fixed income and currency

Alternatives	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Wilshire Liquid Alternative Index <sup>SM</sup>	(1.34)	1.70	(5.69)	(5.69)
Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup>	(2.35)	4.87	(6.46)	(6.46)
Wilshire Liquid Alternative Event Driven Index <sup>SM</sup>	(0.37)	0.80	(2.97)	(2.97)
Wilshire Liquid Alternative Global Macro Index <sup>SM</sup>	(2.35)	(4.65)	7.99	7.99
Wilshire Liquid Alternative Multi-Strategy Index <sup>SM</sup>	(1.49)	2.48	(6.34)	(6.34)
Wilshire Liquid Alternative Relative Value Index <sup>SM</sup>	(0.55)	1.10	(8.13)	(8.13)

Source: Bloomberg. Indexes are total return.

<sup>1</sup> 100% Global Equity

<sup>2</sup> 60% Low Vol Global Equity, 40% U.S. Convertibles

<sup>3</sup> 42.5% U.S. High Yield, 42.5% EMD, 15% Banks Loans

<sup>4</sup> 43% Global REITS/GLI, 33% Commodities, 48% TIPS, 9% Gold, -31% Cash

<sup>5</sup> 100% U.S. Core Bonds

## Important Information

This material contains confidential and proprietary information of Wilshire, and is intended for the exclusive use of the person to whom it is provided. It may not be disclosed, reproduced, or redistributed, in whole or in part, to any other person or entity without prior written permission from Wilshire. Wilshire is a global financial services firm providing diverse services to various types of investors and intermediaries. Wilshire's products, services, investment approach and advice may differ between clients and all of Wilshire's products and services may not be available to all clients. For more information regarding Wilshire's services, please see Wilshire's ADV Part 2 available at [www.wilshire.com/ADV](http://www.wilshire.com/ADV).

The Wilshire Indexes are calculated and distributed by Wilshire. The indices do not represent an investment. It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments derived from that index. Wilshire makes no representations regarding the advisability of investing in investment products based on the Wilshire Indexes not sponsored, endorsed, sold or promoted by Wilshire. Index returns do not reflect payment of certain sales charges or fees an investor may pay to purchase the securities underlying the Index or investment vehicles intended to track the performance of the Index. The imposition of these fees and charges would cause actual performance of the securities/vehicles to be lower than the Index performance shown. Inclusion of a company in the Wilshire Indexes does not in any way reflect an opinion of Wilshire on the investment merits of the company. Index returns are preliminary and are subject to revision.

This material is intended for informational purposes only and should not be construed as legal, accounting, tax, investment, or other professional advice. Past performance does not guarantee future returns. This material may include estimates, projections and other "forward-looking statements." Forward-looking statements represent Wilshire's current beliefs and opinions in respect of potential future events. These statements are not guarantees of future performance and undue reliance should not be placed on them. Such forward-looking statements necessarily involve known and unknown risks and uncertainties, which may cause actual events, performance and financial results to differ materially from any projections. Forward-looking statements speak only as of the date on which they are made and are subject to change without notice. Wilshire undertakes no obligation to update or revise any forward-looking statements.

This material represents the current opinion of Wilshire based on information from sources believed to be reliable. Wilshire gives no representations or warranties as to the accuracy of such information, and accepts no responsibility or liability (including for indirect, consequential or incidental damages) for any error, omission or inaccuracy in such information and for results obtained from its use. Information and opinions are as of the date indicated, and are subject to change without notice.

Past performance is not indicative of future results.

Wilshire Advisors LLC (Wilshire) is an investment advisor registered with the SEC. Wilshire® is a registered service mark. All other trade names, trademarks, and/or service marks are the property of their respective holders.

Copyright © 2023 Wilshire. All rights reserved.

MM-332879 0323

## More information

For more information, please contact us directly:

T +1 310 451 3051

Wilshire

1299 Ocean Avenue, Suite 700, Santa Monica, CA 90401

[wilshire.com](http://wilshire.com)