

FIRST QUARTER 2023

Quarterly Market Commentary

Market Dashboard

Multi-Asset	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Global 60/40 (ACWI/U.S. Core Bonds)	2.87	5.56	5.56	(6.14)

Wilshire Risk Parity Index SM – 12% Volatility	6.51	8.66	8.66	(9.97)
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Source: Bloomberg. Indexes are total return.

Strategic Allocation Themes	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Growth ¹	3.08	7.31	7.31	(7.44)

Defensive Growth ²	1.58	2.08	2.08	(8.26)
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Diversified Credit ³	0.85	2.78	2.78	(3.97)
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Real Assets ⁴	1.50	0.90	0.90	(14.29)
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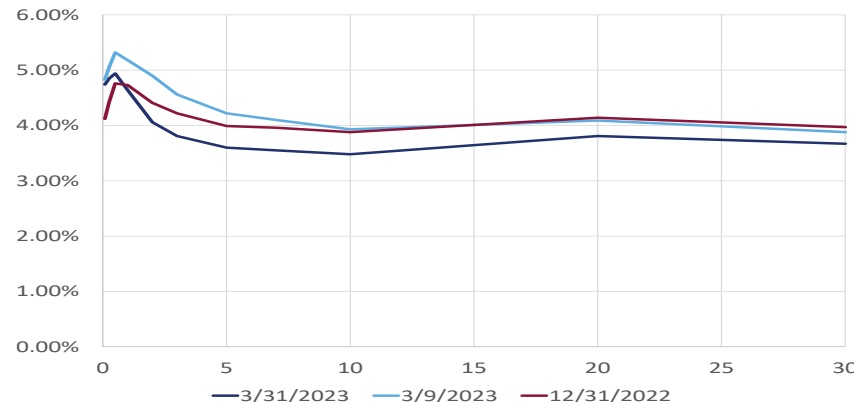
Defensive ⁵	2.54	2.96	2.96	(4.78)
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Source: Bloomberg. Indexes are total return.

Quarterly Insight

The yield curve inversion that began during the third quarter of last year worsened during the first quarter of 2023. The spread between the 10-year Treasury and 3-month T-Bill, arguably the strongest predictor of a pending recession, is at a level not seen since the early 1980's. The Federal Reserve's (Fed's) aggressive action has pushed the short-term rate to a spread of 1.37% above the benchmark ten-year. The probability of a recession in the next 12 months, according to the Federal Reserve Bank of New York, currently stands at 62%. The short end of the curve had been rising this quarter until early March when the FDIC announced that they had closed the failing Silicon Valley Bank. Market action quickly pushed the curve mostly below year-end 2022 levels.

Inversion in the U.S. Treasury Curve



Economic highlights

GDP: Real GDP growth was positive during the fourth quarter, expanding an annualized 2.6%. Growth for all of 2022 was modest at 0.9% after a rebound year in 2021, when the economy grew by 5.7%. Consumer, business and government spending all contributed to growth during the fourth quarter. The Atlanta Fed's GDPNow forecast for the first quarter of 2023 currently stands at 2.5%.

Source: Bureau of Economic Analysis.

Interest Rates: The Treasury curve fell for maturities one year and higher during the first quarter and rose modestly in the shorter end of the curve. The 10-year Treasury closed at 3.47%, down 41 basis points. The 10-year real yield (i.e., net of inflation) fell 43 basis points to 1.15%. The Federal Open Market Committee increased their overnight rate by 0.50%, targeting a range of 4.75% to 5.00%. 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 1.0% for the three months ending February. For the one-year period, the CPI was up 6.0%. The 10-year break-even inflation rate was little changed at 2.32% in March versus 2.30% in December.

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

Employment: Jobs growth remains solid, with an average of 351k jobs/month added during the three months ending in February. The unemployment rate was unchanged at 3.6%, as it was in November. Wage growth has slowed this year, up 0.2% in February, a likely welcome sign for the Federal Reserve.

Source: Dept. of Labor (BLS).

Housing: New data supports the notion that the housing market has cooled significantly since last June. The S&P Case-Shiller 20-City Home Price Index was down -1.4% over the three-months through January, while maintaining a 2.6% gain over the trailing 12-months.

Source: Standard & Poor's.

Source: Bloomberg.

U.S. Economy and Markets

The U.S. stock market, represented by the FT Wilshire 5000 IndexSM, was up 7.29% for the first quarter but is down -8.62% for the past 12 months. A majority of sectors were up for the quarter. The best performing were Information Technology (+21.2%) and Communication Services (+19.8%). The worst performing sectors were Financials (-5.2%) and Energy (-4.6%). From a size perspective, large-cap outperformed small-cap by 409 basis points. Growth stocks vastly outperformed value for the quarter but still trail meaningfully for the one-year return.

U.S. Equity	MTD (%)	QTD (%)	YTD (%)	1Y (%)
FT Wilshire 5000 Index SM	2.77	7.29	7.29	(8.62)
Standard & Poor's 500	3.67	7.50	7.50	(7.73)
Wilshire 4500 Completion Index SM	(2.59)	5.77	5.77	(12.95)
MSCI USA Minimum Volatility	3.37	1.30	1.30	(4.42)

Source: Bloomberg. Indexes are total return.

U.S. Equity by Size/Style	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Wilshire US Large-Cap Index SM	3.48	7.64	7.64	(8.42)
Wilshire US Large-Cap Growth Index SM	6.83	15.68	15.68	(11.44)
Wilshire US Large-Cap Value Index SM	0.05	0.06	0.06	(4.79)
Wilshire US Small-Cap Index SM	(4.48)	3.55	3.55	(10.28)
Wilshire US Small-Cap Growth Index SM	(3.41)	6.35	6.35	(8.75)
Wilshire US Small-Cap Value Index SM	(5.48)	1.03	1.03	(11.70)
Wilshire US Micro-Cap Index SM	(3.31)	3.37	3.37	(15.96)

Source: Bloomberg. Indexes are total return.

GICS sector returns	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Communication Services	9.62	19.83	19.83	(18.64)
Consumer Discretionary	2.19	15.18	15.18	(18.78)
Consumer Staples	4.14	1.14	1.14	1.12
Energy	(0.86)	(4.56)	(4.56)	11.48
Financials	(10.27)	(5.15)	(5.15)	(15.02)
Health Care	1.90	(3.73)	(3.73)	(4.67)
Industrials	(0.27)	4.62	4.62	(0.65)
Information Technology	9.91	21.23	21.23	(6.50)
Materials	(2.26)	4.22	4.22	(9.41)
Real Estate	(2.07)	1.85	1.85	(20.04)
Utilities	4.46	(3.05)	(3.05)	(5.70)

Source: Wilshire Atlas. Indexes are total return.

Large-cap growth stocks outperformed this quarter, led by Technology and Discretionary names

International Economy and Markets

Performance results within international equity markets were positive for the first quarter, with developed outperforming emerging markets. The MSCI EAFE Index was up 8.47% for the quarter, while the MSCI Emerging Markets Index was up 3.96%. Banking weakness appeared in Europe as the Swiss bank, Credit Suisse, a key component of European finance, saw billions in depositor outflows in one day due to concerns of instability within the organization. Swiss authorities quickly pressed a plan for rival UBS to acquire the smaller bank at a reduced price, with Credit Suisse investors and creditors losing nearly everything. Across Europe, consumers continue to struggle with stubbornly high inflation and aggressive central bank tightening. China is quickly seeing benefits from its relaxed COVID-related restrictions as a key index measuring their services sector jumped in March to its highest level in more than a decade. The government has launched a concerted effort to attract foreign companies and boost foreign trade and investment.

Billions in outflows from Swiss bank Credit Suisse led to a government-orchestrated takeover by rival UBS

Non-U.S. Equity	MTD (%)	QTD (%)	YTD (%)	1Y (%)
MSCI ACWI	3.08	7.30	7.30	(7.44)
MSCI ACWI ex USA	2.45	6.87	6.87	(5.07)
MSCI ACWI ex USA Minimum Volatility	3.70	3.75	3.75	(7.58)
MSCI EAFE	2.48	8.47	8.47	(1.38)
MSCI Emerging Markets	3.03	3.96	3.96	(10.70)
MSCI ACWI ex USA Small Cap	0.23	4.70	4.70	(10.37)

Source: Bloomberg. Indexes are total return.

Non-U.S. Equity (local currency)	MTD (%)	QTD (%)	YTD (%)	1Y (%)
MSCI ACWI	2.45	7.02	7.02	(5.61)
MSCI ACWI ex USA	0.87	6.18	6.18	(0.14)
MSCI ACWI ex USA Minimum Volatility	2.37	3.34	3.34	(3.03)
MSCI EAFE	0.50	7.49	7.49	3.84
MSCI Emerging Markets	2.16	3.78	3.78	(6.65)
MSCI ACWI ex USA Small Cap	(1.23)	4.34	4.34	(4.19)

Source: Bloomberg. Indexes are total return.

Fixed Income Markets

The U.S. Treasury yield curve was up in the short-end (below 1-year) by approximately 50 basis points but fell across the remainder of the curve. The 10-year Treasury yield ended the quarter at 3.47%, down 41 basis points from December. Credit spreads were little changed during the quarter with investment grade up 8 basis points and high yield bonds down 14 basis points. The Federal Open Market Committee met twice during the quarter, as scheduled, and increased the overnight rate by 0.25% in both January and March, targeting a range of 4.75% to 5.00%. The Fed’s “dot plot” is messaging that the current expectation is for another 25 basis point increase before the end of 2023 while markets are pricing a year-end rate that would be approximately 50 basis points lower than the current rate. Following the

Fed Chair Powell stated that the U.S. banking system was “sound and resilient”

March meeting, Fed Chair Jerome Powell tried to ensure market participants that banking issues were isolated to a few banks and that the broader system was "sound and resilient."

U.S. Fixed Income	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Bloomberg U.S. Aggregate	2.54	2.96	2.96	(4.78)
Bloomberg Long Term Treasury	4.74	6.17	6.17	(16.00)
Bloomberg Long Term Corporate	4.32	5.45	5.45	(11.46)
Bloomberg U.S. TIPS	2.89	3.34	3.34	(6.06)
Bloomberg U.S. Credit	2.74	3.45	3.45	(5.31)
Bloomberg U.S. Corporate High Yield	1.07	3.57	3.57	(3.34)
S&P/LSTA Leveraged Loan	(0.03)	3.25	3.25	2.54

Source: Bloomberg. Indexes are total return.

Market Rates	Mar 31	Dec 31	Sept 30	June 30
10-Year Treasury	3.47	3.88	3.83	3.02
10-Year Breakeven Inflation	2.32	2.30	2.15	2.34

Source: Bloomberg. Indexes are total return.

Global Fixed Income	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Bloomberg Global Aggregate	3.16	3.01	3.01	(8.07)
Bloomberg Global Aggregate (Hdg)	2.22	2.90	2.90	(3.86)
Bloomberg EM LC Gov't Universal	2.57	2.81	2.81	(4.04)
Bloomberg EM LC Gov't Universal (Hdg)	1.27	1.98	1.98	2.37

Source: Bloomberg. Indexes are total return.

Real Asset Markets

Real estate securities were up during the first quarter in both the United States and abroad. Commodity results were negative for the quarter, with crude oil falling by -5.7% to \$75.67 per barrel. Increasing concerns over a potential recession have weighed on oil prices this year, although a continued recovery in China could push prices higher going forward. Natural gas prices fell dramatically for the second straight quarter due to relatively mild winter temperatures and near record level production. Natural gas prices were down -50.5% for the first quarter and -67.2% for the past six months, closing at \$2.22 per million BTUs. Gold prices were up 7.8% during the first quarter, finishing at approximately \$1,969 per troy ounce, as the Fed continued its hawkish stance toward inflation.

Natural gas fell -67% during the past six months as production surged

Real Assets	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Wilshire US Real Estate Securities Index SM	(2.55)	3.44	3.44	(21.20)
Wilshire Global Real Estate Securities Index SM	(2.83)	2.35	2.35	(20.78)
FTSE Global Core Infrastructure 50/50	3.03	0.74	0.74	(7.06)
Alerian Midstream Energy	(0.11)	0.77	0.77	(1.19)
Bloomberg Commodity	(0.21)	(5.36)	(5.36)	(12.49)
Gold	7.79	7.96	7.96	1.64
Bitcoin	22.67	71.27	71.27	(37.96)

Source: Bloomberg. Indexes are total return.

Alternatives

In the first quarter, the Wilshire Liquid Alternative Index returned 1.20%, posting consecutive positive quarters for the first time since the first and second quarters of 2021. Equity hedge managers had a positive start to the year, with U.S.- and Asia-focused funds generating positive alpha on top of beta contribution, despite relative underperformance heading into the new year. Event-driven managers experienced a mixed Q1, with the risk-on environment in January being followed by a reversal in February and volatility in March surrounding issues in the U.S. banking sector. Merger arbitrage managers were impacted by negative news from the U.K. Capital Markets Authority on the \$68 billion Activision/Microsoft deal, casting significant doubt on the likelihood that the deal will close. Relative value managers enjoyed a positive Q1, supported by a favorable market backdrop and easing volatility. Macro managers had trouble navigating the risk-on period in January but quickly surged in February as previous trends in equities and yields resumed. The dramatic volatility in U.S. fixed income in March ultimately pushed many managers, especially trend followers, to negative returns for the quarter.

Relative value managers were supported by a favorable market backdrop and easing volatility

Alternatives	MTD (%)	QTD (%)	YTD (%)	1Y (%)
Wilshire Liquid Alternative Index SM	0.10	1.20	1.20	(2.68)
Wilshire Liquid Alternative Equity Hedge Index SM	0.98	2.45	2.45	(1.70)
Wilshire Liquid Alternative Event Driven Index SM	(0.44)	0.42	0.42	(1.83)
Wilshire Liquid Alternative Global Macro Index SM	(3.72)	(2.62)	(2.62)	(0.18)
Wilshire Liquid Alternative Multi-Strategy Index SM	(0.43)	1.14	1.14	(3.41)
Wilshire Liquid Alternative Relative Value Index SM	0.80	1.53	1.53	(3.63)

Source: Bloomberg. Indexes are total return.

¹ 100% Global Equity

² 60% Low Vol Global Equity, 40% U.S. Convertibles

³ 42.5% U.S. High Yield, 42.5% EMD, 15% Banks Loans

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

⁵ 100% U.S. Core Bonds

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