

Capital Markets Snapshot

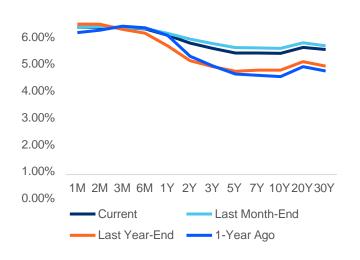
Courtesy of LWS Financial Week ending May 31, 2024

In a light week of economic releases, corporate earnings were the driver behind the market's negative performance this week, but all three indices managed to post positive returns for the month. Friday's release of the Personal Consumption Expenditures (PCE) Price Index was in line with expectations with a gain of 0.3% for the month and 2.7% on a year over year (YoY) basis. The Core PCE, which excludes food and energy, came in below expectations with a gain of 0.2%.

Fixed Income Markets Overview

- Bonds were relatively flat for the week as investors had no change in their rate forecasts following the PCE release.
- Housing data this week continues to show increasing prices across the U.S. as the S&P Core Logic Case-Shiller 20 City Composite Price Index reported a YoY increase of 7.4% as of March 2024, the highest level since 2022. San Diego saw the largest price gain, followed by New York and Cleveland.
- Higher home prices along with elevated mortgage rates continue to put pressure on real estate sales with April pending home sales dropping below expectations with a decline of 7.7%.

U.S. Treasury Yield Curve



Asset Class	Name	1W	YTD	3Y(Ann.)	5Y(Ann.)
Short	1-3 Year Govt/Credit	0.2%	0.8%	0.3%	2.0%
Core Plus	Intermediate Govt/Credit	0.2%	-0.3%	-1.4%	1.9%
	International Aggregate	-0.1%	-3.3%	-5.8%	-1.0%
	US Aggregate	0.0%	-1.6%	-3.1%	1.1%
	US Treasury	0.0%	-1.9%	-3.3%	0.6%
	US TIPS	0.3%	-0.1%	-1.4%	3.0%
	US Corporate	0.1%	-1.1%	-2.7%	2.5%
	US Corporate High Yield	0.0%	1.6%	1.8%	5.3%
Other	Emerging Markets Aggregate	0.0%	1.6%	-2.2%	2.4%
Muni	US Municipals	-0.4%	-1.9%	-1.3%	2.2%
	US Municipals High Yield	-0.4%	1.7%	-0.3%	4.2%

Source: Bloomberg as of May 31, 2024

5.57%

5.82%

Date	5/31/2024	4/30/2024	12/29/2023	5/31/2023
Federal Funds Rate	5.48%	5.48%	5.60%	5.28%
3 Month Treasury	5.46%	5.46%	5.40%	5.52%
6 Month Treasury	5.42%	5.44%	5.26%	5.46%
2 Year Treasury	4.89%	5.04%	4.23%	4.40%
5 Year Treasury	4.52%	4.72%	3.84%	3.74%
10 Year Treasury	4.51%	4.69%	3.88%	3.64%
30 Year Treasury	4.65%	4.79%	4.03%	3.85%
US Aggregate	5.10%	5.31%	4.53%	4.59%
US Corporate	5.52%	5.73%	5.06%	5.37%
US Corporate High Yield	8.00%	8.11%	7.59%	8.81%
US Municipal	3.93%	3.77%	3.22%	3.64%

Spreads Over 10-Year US Treasuries

US Municipal High Yield

Interest Rates (%)

Date	5/31/2024	4/30/2024	12/29/2023	5/31/2023
30 Year Treasury	0.14%	0.10%	0.15%	0.21%
US Aggregate	0.59%	0.62%	0.65%	0.95%
US Corporate	1.01%	1.04%	1.18%	1.73%
US Corporate High Yield	3.49%	3.42%	3.71%	5.17%
US Municipal	-0.58%	-0.92%	-0.66%	0.00%
US Municipal High Yield	1.12%	0.97%	1.69%	2.18%

5.63%

Equity Markets Overview

- As mentioned, all three equity indices were down for the week with the Nasdaq seeing the largest decline of 1.1%.
 For the month of May all three indices were higher with the S&P up by 4.8%, the DJIA up by 1.5%, and the Nasdaq with a gain of 6.9%.
- There were mixed signs in the retail sector last week with earnings from Foot Locker and the Gap beating analysts' estimates, but Kohls, Nordstrom, and Ulta Beauty falling below expectations. Other key earnings reports included disappointing results from Salesforce, Marvell Technologies, and Dell Computer.
- With 98% of the S&P 500 companies having reported first quarter earnings, FactSet is reporting an earnings growth rate of 5.9%. 78% of the reporting companies have announced positive earnings surprises, while 61% have reported positive revenue surprises.

Asset Class	Name	1W	YTD	3Y(Ann.)	5Y(Ann.)
All-Cap	S&P 1500	-0.4%	10.8%	9.0%	15.8%
Large-Cap	S&P 500	-0.5%	11.3%	9.6%	16.4%
	S&P 500 Growth	-1.2%	15.5%	9.1%	17.8%
	S&P 500 Value	0.4%	6.5%	9.3%	13.9%
Mid-Cap	S&P Midcap 400	0.2%	7.9%	4.4%	10.9%
	S&P Midcap 400 Growth	-0.4%	13.1%	4.8%	11.1%
	S&P Midcap 400 Value	0.9%	2.4%	3.9%	10.1%
Small-Cap	S&P Smallcap 600	0.7%	1.6%	0.1%	7.5%
	S&P Smallcap 600 Growth	0.6%	5.3%	0.9%	8.3%
	S&P Smallcap 600 Value	0.9%	-2.1%	-0.7%	6.5%
Int'l.	MSCI ACWI ex-USA	-0.9%	5.8%	0.0%	5.3%
	MSCI EM	-3.1%	3.4%	-6.6%	1.5%

Source: Bloomberg as of May 31, 2024

Alternative Markets Overview

- The price of oil was down for the month of May.
 OPEC+ is scheduled to meet this week and analysts are watching to see if the group will extend production cuts.
- Silver outperformed gold in May, up by almost 14% while gold was relatively flat despite reaching a new high mid-month. For the year to date, silver has seen a gain of over 27%, while gold is up 13.2%.
- Bitcoin also showed positive returns for the month, up by 11%. Ethereum has seen a 31% gain thanks in part to SEC approval for spot ETFs.

Name	1W	YTD	3Y (Ann.)	5Y (Ann.)
S&P GSCI	-1.3%	9.5%	13.1%	5.8%
Gold	-0.5%	13.2%	7.2%	12.5%
FTSE All Equity NAREIT	2.1%	-4.3%	-2.0%	6.3%
Bitcoin	-2.0%	61.1%	23.4%	55.6%
Ethereum	1.1%	64.2%	14.1%	45.9%

Source: Bloomberg as of May 31, 2024



- **Upcoming Week**
- As we head into June, look for readings this week on the May ISM Manufacturing and Non-Manufacturing Indices, April Factory Orders, and Consumer Credit.
- Friday will be the all-important May Jobs report. Current expectations are looking for an increase of 185,000 jobs for the month, a slight increase over April's level.

Glossary and Disclosures

This commentary is brought to you courtesy of MML Investors Services, a subsidiary of Massachusetts Mutual Life Insurance Company. Securities, investment advisory, and wealth management solutions offered by MML Investors Services, LLC member SIPC, a registered broker-dealer, and a registered investment adviser. [Add if DBA is included: [DBA] is not a subsidiary or affiliate of MML Investors Services. LLC or its affiliated companies.]

Past performance is not indicative of future results. Indexes are unmanaged. You cannot invest directly in an index

This material does not constitute a recommendation to engage in or refrain from a particular course of action. The information within has not been tailored for any individual. The opinions expressed herein are those of the author as of the date of writing and are subject to change. Also, this material may contain forward looking statements that are subject to certain risks and uncertainties. Actual results, performance, or achievements may differ materially from those expressed or implied.

Neither MML Investors Services, LLC, nor its representatives, can assist with digital asset purchases or sales or otherwise provide investment advice concerning digital assets, such as cryptocurrencies. Any information provided is educational in nature and should not be relied upon to make digital asset related decisions.

S&P 1500 Index combines three leading indices, the S&P 500, the S&P Midcap 400, and the S&P Smallcap 600, to cover approximately 90% of U.S. equity market capitalization.

S&P 500 Index includes approximately 500 leading companies that covers approximately 80% of available U.S. equity market capitalization.

S&P 500 Growth Index is a stock index that represents the fastest-growing companies in the S&P 500 based on three factors: sales growth, ratio of earnings change to price, and reconstitute.

S&P 500 Value Index is a stock index that represents the companies in the S&P 500 with the most attractive valuations based on three factors: book value, earnings, and sales to price.

S&P Midcap 400 Index is distinct from the large-cap S&P 500 and designed to measure the performance of 400 U.S. mid-sized companies, which have differing liquidity and growth potential than large and small cap companies.

S&P Midcap 400 Growth Index is a stock index that represents the fastest-growing companies in the S&P Midcap 400 based on three factors: sales growth, ratio of earnings change to price, and momentum.

S&P Midcap 400 Value Index is a stock index that represents the companies in the S&P Midcap 400 with the most attractive valuations based on three factors: book value, earnings, and sales to price.

S&P Smallcap 600 Index measures the performance of 600 small-sized U.S. companies to reflect the small-cap segment of the U.S. equity market, which is typically known for less liquidity than large cap stocks.

S&P Smallcap 600 Growth Index is a stock index that represents the fastest-growing companies in the S&P Smallcap 600 based on three factors: sales growth, ratio of earnings change to price, and momentum.

S&P Smallcap 600 Value Index is a stock index that represents the companies in the S&P Smallcap 600 with the most attractive valuations based on three factors: book value, earnings, and sales to price.

MSCI ACWI ex-US Index captures large and mid-cap representation across 22 of 23 Developed Markets (DM) countries (excluding the US) and 24 Emerging Markets (EM) countries.

MSCI Emerging Markets Index captures large and mid-cap representation across 24 Emerging Markets (EM) countries.

S&P GSCI is broad-based and production weighted to represent the global commodity market beta. The index is designed to be investable by including the most liquid commodity futures.

S&P GSCI Gold a sub-index of the S&P GSCI, provides investors with a reliable and publicly available benchmark tracking the COMEX gold future.

FTSE All Equity NAREIT Index contains all tax-qualified REITs with more than 50 percent of total assets in qualifying real estate assets other than mortgages secured by real property that also meet minimum size and liquidity criteria.

Bitcoin USD Spot Exchange Rate measures the last price of 1 Bitcoin in USD.

Bloomberg Galaxy Bitcoin Index is designed to measure the performance of a single bitcoin traded in USD.

Ethereum USD Spot Exchange Rate measure the last price of 1 Ethereum in USD.

Bloomberg Galaxy Ethereum Index is designed to measure the performance of a single Ethereum traded in USD.

Bloomberg Barclays 1-3 Year Govt/Credit Index is the 1-3 Yr. component of the U.S. Government/Credit index, which includes securities in the Government, which includes treasuries and agencies debt securities, and Credit Indices, which includes publicly issued U.S. corporate and foreign debt that meet specified maturity, liquidity, and quality requirements

Bloomberg Intermediate US Government/Credit Bond Index is a broad-based flagship benchmark that measures the non-securitized component of the US Aggregate Index with less than 10 years to maturity; this includes investment grade, US dollar-denominated, fixed-rate treasuries, government-related and corporate securities

Bloomberg Barclays Global Aggregate Bond Index provides a broad-based measure of the global investment-grade fixed income markets, with three major components of this index are the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices.

Bloomberg Barclays U.S. Aggregate Bond Index represents securities that are SECregistered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.

Bloomberg Barclays U.S. Treasury Aggregate Bond Index is the U.S. Treasury component of the U.S. Government index and represents public obligations of the U.S. Treasury with a remaining maturity of one year or more.

Bloomberg US TIPS Index consists of Inflation-Protection securities issued by the U.S. Treasury.

Bloomberg Barclays US Corporate Bond Index is the Corporate component of the U.S. Credit index and represents publicly issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements.

Bloomberg Barclays U.S. Corporate High Yield Index covers the universe of fixed rate, non-investment grade debt.

Bloomberg Barclays Emerging Markets Bond Index is broad-based with country eligibility and classification as an Emerging Market being rules-based and reviewed on an annual basis using World Bank income group and International Monetary Fund (IMF) country classifications.

Bloomberg Barclays U.S. Municipal Index is a rules-based, market-value-weighted index engineered for the long-term tax-exempt bond market.

Bloomberg Barclays US High Yield Municipal Index is an unmanaged index of noninvestment-grade municipal debt securities, which provides a representation of the performance of US high-yield tax-exempt bonds.

Federal Funds Rate is the interest rate at which depository institutions trade federal funds (balances held at Federal Reserve Banks) with each other overnight.

U.S. Treasury Securities are issued by the federal government and are considered to be among the safest investments you can make, because all Treasury securities are backed by the "full faith and credit" of the U.S. government.

©2022 Massachusetts Mutual Life Insurance Company, Springfield, MA 01111-0001 All Rights Reserved. www.massmutual.com