Nasdaq U.S. Multi-Asset Diversified Income Index

The Nasdaq U.S. Multi-Asset Diversified Income Index is designed to provide low volatility exposure to high-yielding securities from a diverse spectrum of the investable marketplace in a single instrument.

Launched on June 20, 2012, the Nasdaq U.S. Multi-Asset Diversified Income Index now has over ten years of live history. It serves as the underlying index for the First Trust Multi-Asset Diversified Income ETF (Nasdaq: MDIV). With an average yield of 7.2% since the index launch through October 31, 2022, the Index offers an attractive yield for income-seeking investors.

The Nasdaq U.S. Multi-Asset Diversified Income Index includes five U.S. asset class segments: equities, real estate investment trusts (REITs), master limited partnerships (MLPs), preferred stocks, and high yield corporate bonds (currently represented by the First Trust Tactical High Yield ETF, Nasdaq: HYLS). Except for high-yield corporate bonds, each one of the remaining four segments in the Index is yield-weighted and has its own set of eligibility criteria based on market capitalization, trading volume, volatility, and yield.

Diversification

The asset class segment target weights of the Index at each quarterly rebalance are shown in Graph 1. The Nasdaq U.S. Multi-Asset Diversified Income Index incorporates several diversification features in the methodology itself. First, the mix of asset class segments provides diversification via their low correlation with one another.

GRAPH 1: Index Asset Class Weighting

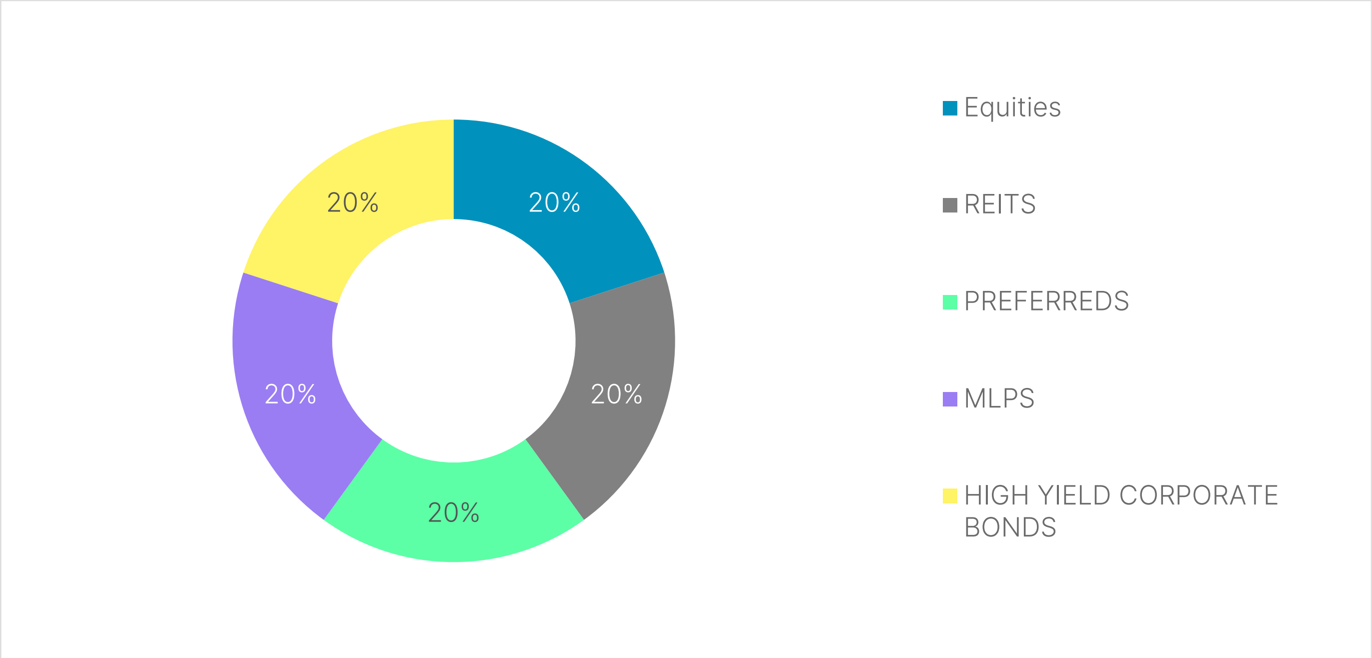


TABLE 1: Correlation

	Equities	REITs	Preferreds	MLPs	High Yield Corporate Bonds
Equities	1.00				
REITs	0.72	1.00			
Preferreds	0.43	0.58	1.00		
MLPs	0.56	0.61	0.44	1.00	
High Yield Corporate Bonds	0.59	0.68	0.65	0.44	1.00

Table 1 contains the cross-correlations of daily changes for the year ending October 31, 2022, among the five asset class segments. The segments exhibit a correlation ranging from a low of +0.43 (between Equities and Preferreds) to a high of +0.72 (between Equities and REITs) with an average of +0.57.

Second, the segments are regularly rebalanced in such a way to prevent any one segment from growing too large relative to the other, which would otherwise work to reduce the benefits of low correlation. In combination, the low correlation among the asset classes and quarterly rebalancing back to target weights helps maximize the diversification potential of the Index.

Low Volatility

The diversification features go a long way to deliver low index volatility, but the Nasdaq U.S. Multi-Asset Diversified Income Index also incorporates a volatility screen to help mitigate the risks often found when "reaching for yield."

Specifically, the individual asset class segments (with the exception of high yield corporate bonds) each exclude any security whose trailing one-year realized volatility is 15 percentage points or more above that of its more broadly defined benchmark universe.

For example, if the one-year realized volatility of the equity benchmark universe is 20%, then any single stock eligible for inclusion whose one-year realized volatility is 35% or more, irrespective of its yield or other factors, cannot be included in the Index.

The benefits of the diversification features are highlighted in Table 2. Here we see that the overall volatility of the Nasdaq U.S. Multi-Asset Diversified Income Total Return Index is lower than that of each of the four individual asset class segments (excluding high yield corporate bonds). The volatility of Nasdaq U.S. Multi-Asset Diversified Income Total Returns Index is lower than at least two of the four individual asset class segments in each of the calendar year sub-periods, as well.

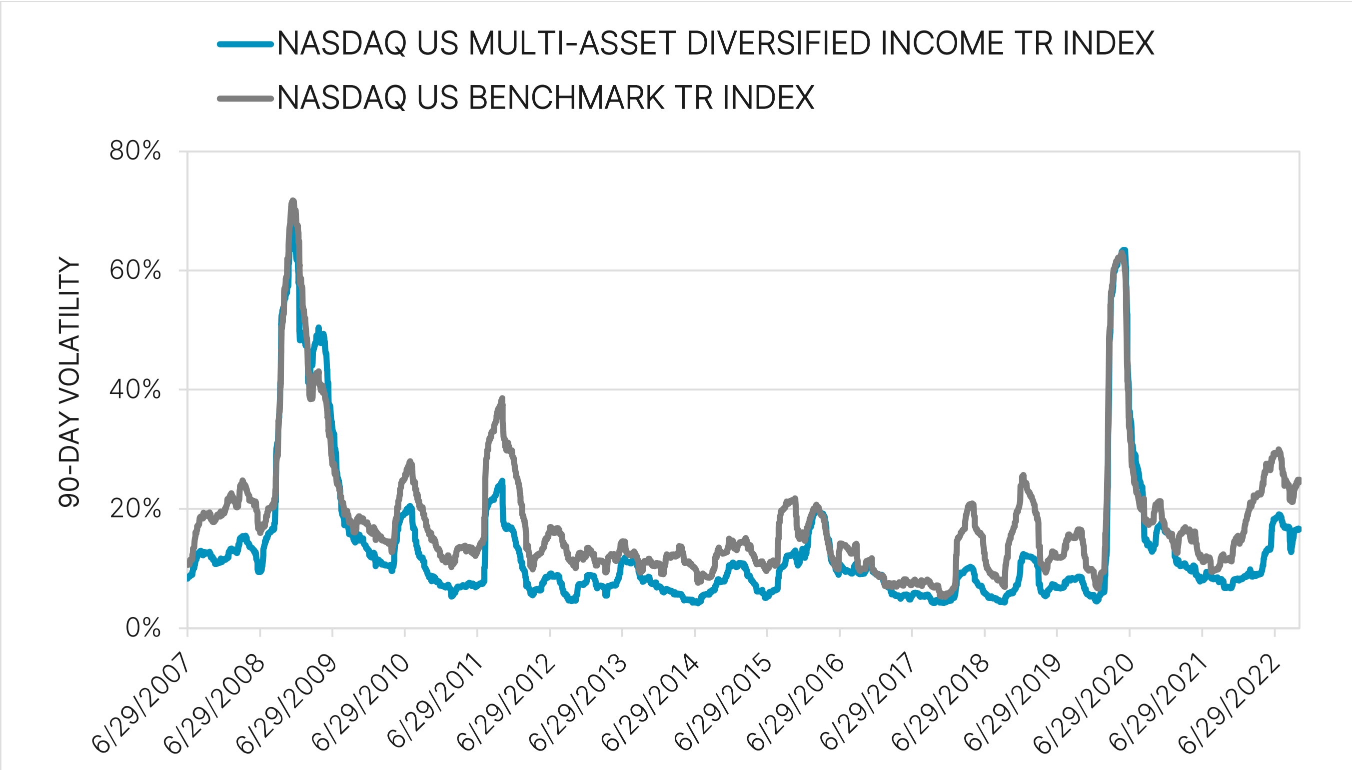
Further, the volatility of the equity segment of Nasdaq U.S. Multi-Asset Diversified Income Index, and the volatility of Nasdaq U.S. Multi-Asset Diversified Income Index, has been generally lower than that of the broad Nasdaq U.S. Benchmark Index.

Table 2: Volatility

	Equities	REITs	Preferreds	MLPs	High Yield Corporate Bonds	NASDAQ US MULTI-ASSET DIVERSIFIED INCOME TR INDEX	NASDAQ US BENCHMARK TR INDEX
2007	15.4%	26.8%	7.8%	13.8%	8.8%	10.9%	16.8%
2008	34.6%	70.3%	53.6%	42.9%	27.1%	36.3%	40.5%
2009	27.5%	61.0%	45.6%	28.4%	19.0%	30.6%	27.9%
2010	15.2%	23.2%	7.5%	17.4%	9.2%	12.8%	18.6%
2011	17.4%	24.8%	5.4%	21.1%	12.6%	14.6%	24.2%
2012	9.8%	11.4%	2.8%	12.1%	6.5%	7.0%	13.1%
2013	11.1%	17.1%	4.9%	12.6%	6.2%	8.6%	11.4%
2014	10.3%	9.2%	3.1%	21.0%	5.5%	7.1%	11.7%
2015	13.9%	14.1%	3.1%	29.8%	6.1%	9.9%	15.4%
2016	13.4%	17.4%	5.7%	37.9%	5.0%	12.6%	13.5%
2017	7.0%	9.4%	2.8%	14.3%	2.8%	5.2%	7.0%
2018	12.5%	13.3%	3.8%	19.4%	3.5%	8.4%	17.0%
2019	13.9%	10.0%	2.8%	14.8%	3.5%	7.1%	12.7%
2020	40.9%	66.3%	39.9%	62.9%	14.1%	35.2%	34.9%
2021	11.8%	14.9%	3.7%	21.2%	3.1%	8.9%	13.7%
2022	18.2%	26.7%	8.1%	26.0%	10.9%	15.0%	25.2%
Overall	19.4%	33.0%	21.0%	28.2%	11.1%	17.6%	21.0%

Graph 2 compares the rolling 90-day volatilities of the Nasdaq U.S. Multi-Asset Diversified Income Total Return Index versus the Nasdaq U.S. Benchmark Total Return Index. Over the entire period, the volatilities were 17.6% and 21.0% for the Nasdaq U.S. Multi-Asset Diversified Income Total Return Index and Nasdaq U.S. Benchmark Total Return Index, respectively. In 16 of the years of our study, NQMAUS achieved lower volatility than the US benchmark, with the two exceptions being 2009 and 2020. In 2009, the Index had a higher volatility reading of 30.6% and outperformed the U.S. benchmark by more than 20% that year. In 2020, however, the volatility spread was not necessarily meaningful, relatively speaking. In this instance, the index significantly underperformed the benchmark following the Covid-19 induced market crash and recovery.

GRAPH 2: 90-Day Volatility



High Yield

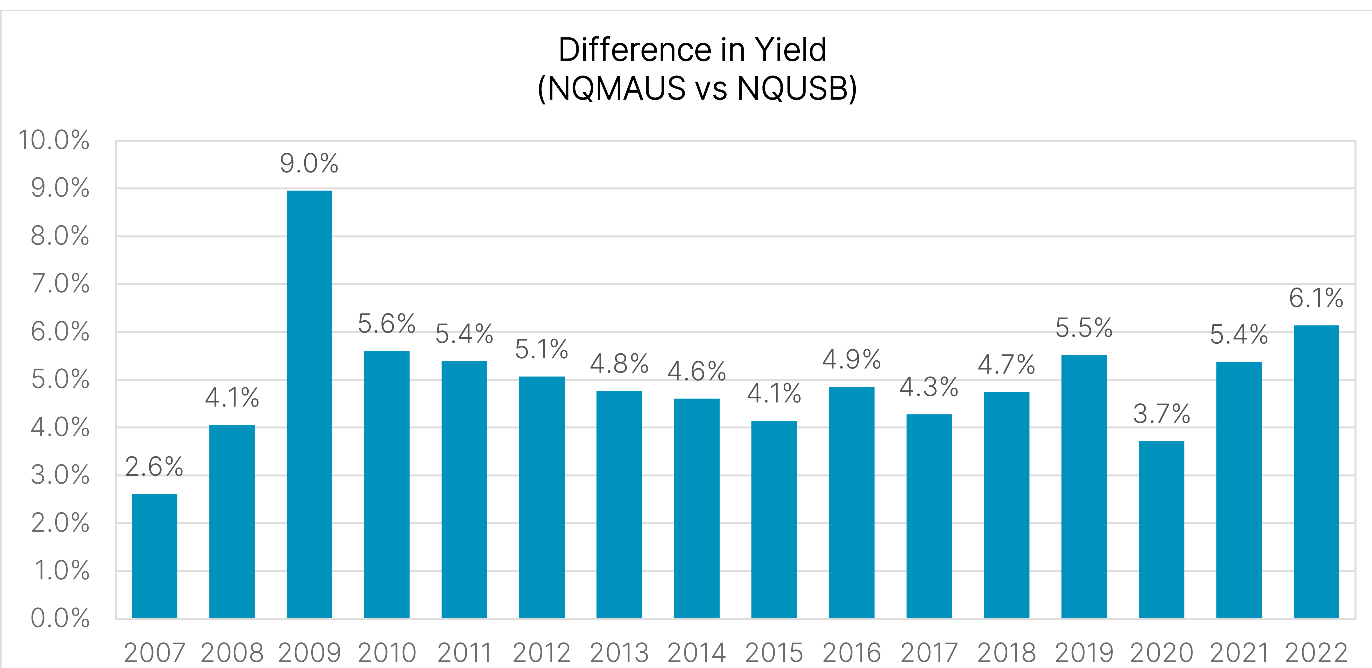
The value of the Index, in addition to its attractive low volatility and diversification benefits, is its consistently high yield. Table 3 shows the annualized yield of the Index—calculated as the total sum of the difference in daily returns between the total return index less the price return index—as 7.1% over the full period compared to a 2.2% yield for its U.S. benchmark. Comparable yield calculations for each segment over the full period and each calendar year sub-periods are also provided.

TABLE 3: Annualized Dividend Yield

	Equities	REITs	Preferreds	MLPs	High Yield Corporate Bonds	NASDAQ US MULTI-ASSET DIVERSIFIED INCOME INDEX	NASDAQ US BENCHMARK INDEX
2007	3.7%	4.9%	6.5%	6.1%	6.8%	5.7%	3.0%
2008	3.9%	5.4%	8.6%	5.0%	6.9%	6.0%	1.9%
2009	6.8%	9.0%	14.2%	19.4%	13.0%	12.4%	3.5%
2010	5.8%	7.0%	9.0%	10.5%	9.1%	8.1%	2.5%
2011	5.5%	8.9%	7.8%	7.4%	7.7%	7.3%	1.9%
2012	5.8%	9.8%	7.8%	7.3%	7.3%	7.5%	2.5%
2013	5.3%	8.1%	7.1%	9.7%	6.3%	7.4%	2.6%
2014	5.0%	8.2%	7.3%	6.5%	5.8%	6.7%	2.1%
2015	4.1%	7.0%	7.3%	5.9%	5.6%	6.1%	2.0%
2016	4.9%	10.2%	6.9%	8.6%	5.7%	7.2%	2.3%
2017	4.5%	8.9%	7.2%	8.5%	5.5%	6.4%	1.7%
2018	4.3%	9.5%	7.6%	11.5%	5.8%	7.7%	2.1%
2019	4.7%	7.9%	7.0%	10.3%	5.2%	6.8%	1.7%
2020	3.6%	5.6%	6.6%	11.9%	5.1%	6.7%	1.4%
2021	3.6%	5.6%	6.4%	9.8%	5.5%	6.1%	1.2%
2022	4.2%	10.4%	7.8%	9.0%	7.4%	7.8%	1.6%
Overa ll	4.7%	7.9%	7.8%	9.2%	6.8%	7.2%	2.1%

As of October 31, 2022, the index delivered a trailing annualized yield of 7.8% vs. only 1.6% for its benchmark, one of the widest gaps in its history as shown in Graph 3 below. This brought its cumulative average yield up to 7.2%, 5.1% higher than its benchmark's 2.1% yield. In fact, the Index's yield was at least 3.7% higher than that of its benchmark for each year from 2008 to 2022, and this difference averaged a substantial 5.0%.

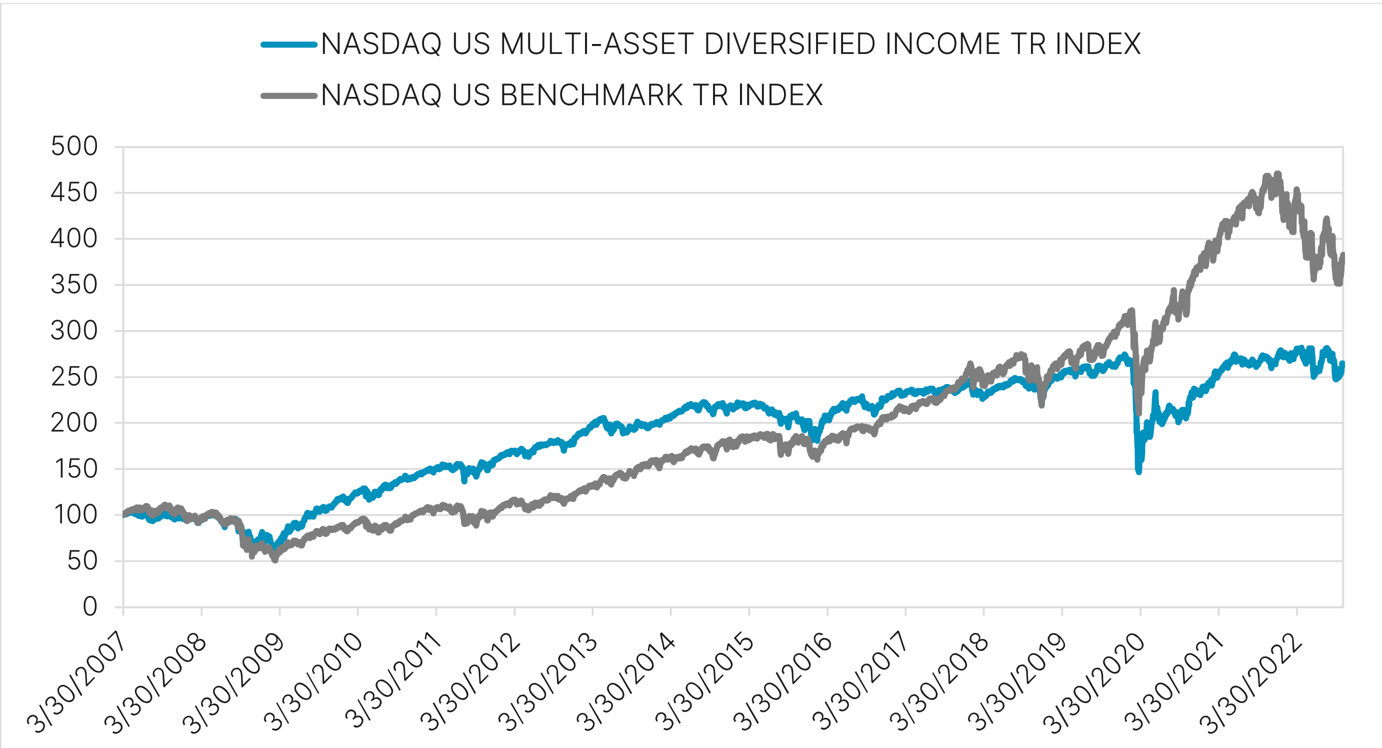
GRAPH 3: Difference in Dividend Yield



Performance

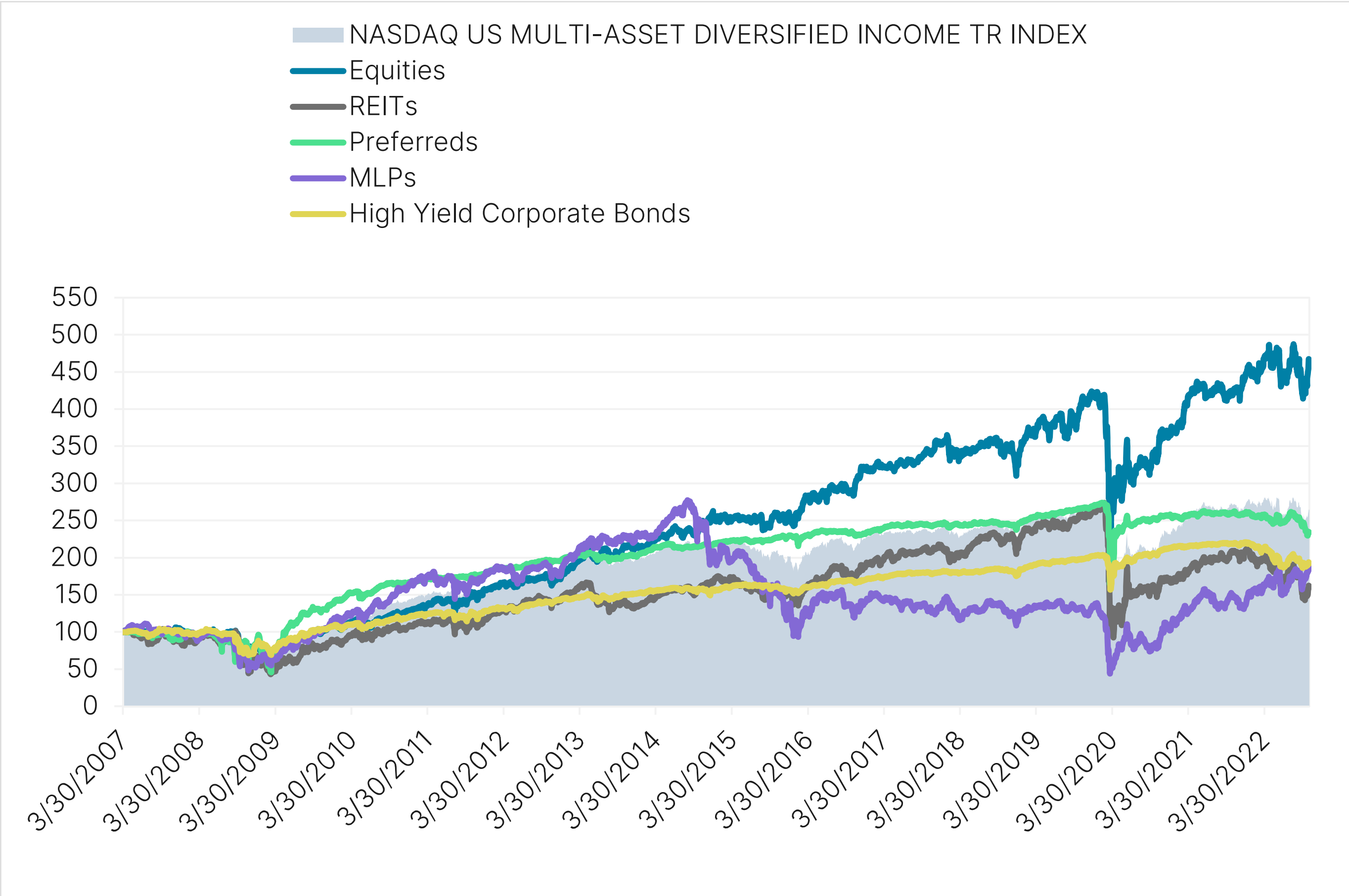
Comparing the Nasdaq U.S. Multi-Asset Index to the Nasdaq U.S. Benchmark—a broad U.S. index composed mostly of Equities (it also includes REITs, though in a much lower amount)—the Nasdaq U.S. Multi-Asset Index underperformed the broader U.S. benchmark on a cumulative basis, as shown on Graph 4 below.

GRAPH 4: Index Total Return Performance vs. Benchmark



Equities experienced a strong rebound following the Covid-19 sell-off in March of 2020. Since the Nasdaq U.S. Benchmark tracks mainly Equities (also includes REITs), while the Nasdaq U.S. Multi-Asset Diversified Income Index contains only 20% Equities (with the other 80% equally distributed among MLPs, REITs, Preferreds, and High Yield Corporate Bonds), the former outperformed significantly in 2020. This outperformance was also seen in 2019 and 2021. However, in 2022, we've seen relatively strong performance from NQMAUS. Through October 31, 2022, the Index is outperforming the benchmark by approximately 16%, making this the strongest year, relatively speaking, since 2009 when NQMAUS outpaced by 22.0%. More recently, MLPs have outperformed Equities thus far in 2022. Similarly, Preferreds outperformed Equities annually from the heart of the financial crisis in 2008 to 2010, whereas MLPs significantly outpaced Equities during the crisis recovery in 2009 and 2010.

GRAPH 5: Index Total Return Performance vs. Underlying Asset Classes



Graph 5 (above) and Table 4 (below) illustrate the relative returns of the Nasdaq U.S. Multi-Asset Diversified Income Index and the five underlying asset class-specific indexes. Naturally, the Index's performance falls near the middle of the range across the five segments, with Equities having the highest total return and MLPs, High Yield Corporate Bonds and REITS having the lowest returns. Still, it is worth noting that NQMAUS has cumulatively outperformed four of the five asset class segments, mirroring its second-place standing from a volatility perspective.

TABLE 4: Total Return

	Equities	REITs	Preferreds	MLPs	High Yield Corporate Bonds	NASDAQ US MULTI-ASSET DIVERSIFIED INCOME TR INDEX	NASDAQ US BENCHMARK TR INDEX
2007	3.3%	(9.5%)	(10.0%)	(0.4%)	1.6%	(2.8%)	5.0%
2008	(21.6%)	(25.1%)	(2.1%)	(43.1%)	(17.6%)	(20.9%)	(36.3%)
2009	34.2%	29.7%	56.6%	102.0%	28.5%	51.2%	29.3%
2010	18.3%	22.5%	21.3%	43.8%	11.9%	23.7%	17.5%
2011	21.9%	8.0%	6.8%	7.4%	6.8%	11.1%	1.0%
2012	10.7%	22.6%	9.9%	1.1%	11.7%	11.7%	16.4%
2013	25.0%	(5.2%)	3.3%	30.9%	5.8%	11.5%	33.5%
2014	18.6%	22.8%	7.6%	(13.7%)	3.2%	8.9%	12.5%
2015	(0.2%)	(8.0%)	5.2%	(31.9%)	0.1%	(7.0%)	0.5%
2016	23.9%	23.9%	1.1%	2.6%	8.4%	12.1%	13.0%
2017	10.8%	14.0%	6.2%	(5.8%)	6.4%	6.1%	21.4%
2018	(7.7%)	(1.2%)	(0.9%)	(13.7%)	(2.5%)	(5.3%)	(5.4%)
2019	29.7%	23.9%	10.4%	17.2%	14.7%	19.2%	31.2%
2020	(12.7%)	(35.1%)	(4.2%)	(23.2%)	5.3%	(14.0%)	21.3%
2021	21.7%	22.3%	1.3%	34.2%	3.7%	16.9%	25.9%
2022	3.7%	(22.9%)	(10.6%)	34.7%	(12.8%)	(2.8%)	(18.3%)
Overall - Annualized	10.4%	3.1%	5.6%	4.1%	4.3%	6.4%	9.0%

NOTES

1. All overall calculations used data from 3/30/2007 – 10/31/2022, with internally back-tested data by Nasdaq.
2. Volatility is calculated as the annualized standard deviation of daily returns.
3. Dividend yield data prior to 2017 is calculated using Total Return (TR) – Price Return (PR); 2017 and onward is calculated using internal Index Dividend Point (IDP) data.
4. 2007 and 2022 returns and yields in the tables have been annualized only where indicated.