

BNY Mellon Midcap Index Fund, Inc.

ANNUAL
SHAREHOLDER
REPORT
OCTOBER 31, 2024

Investor Shares – PESPX

This annual shareholder report contains important information about BNY Mellon Midcap Index Fund, Inc. (the “Fund”) for the period of November 1, 2023 to October 31, 2024. You can find additional information about the Fund at bny.com/investments/literaturecenter. You can also request this information by calling 1-800-373-9387 (inside the U.S. only) or by sending an e-mail request to info@bny.com.

What were the Fund’s costs for the last year?

(based on a hypothetical \$10,000 investment)

Share Class	Costs of a \$10,000 investment	Costs paid as a percentage of a \$10,000 investment
Investor Shares*	\$58	0.50%

* During the period, fees were waived and/or expenses reimbursed pursuant to an agreement with the Fund’s investment adviser, BNY Mellon Investment Adviser, Inc.

How did the Fund perform last year?

- For the 12-month period ended October 31, 2024, the Fund’s Investor Shares shares returned 32.41%.
- In comparison, the S&P MidCap 400® Index (the “Index”) returned 32.99% for the same period.

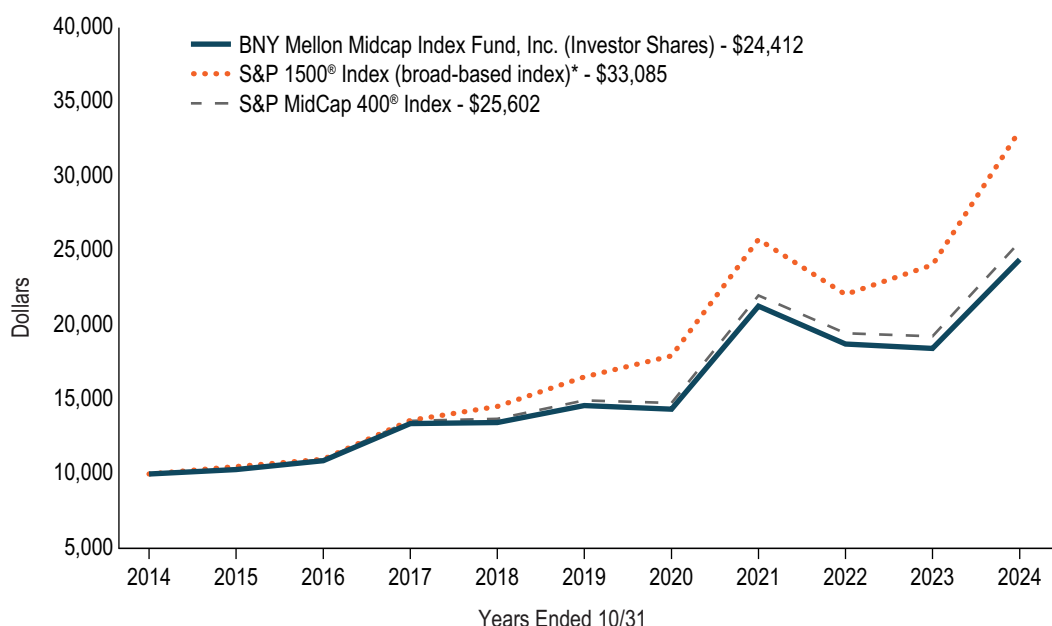
What affected the Fund’s performance?

- Mid-cap U.S. stocks generally rose during the period due to moderating inflation, low unemployment and positive corporate outlooks as the U.S. Federal Reserve began to cut interest rates.
- Gains lagged those of large-cap stocks but outpaced those of small-cap shares
- All sectors except energy produced positive returns, with financials, information technology and utilities outperforming by the greatest margin.
- Relatively weak returns were produced by the energy, communication services and health care sectors.
- The difference in returns between the Fund and the Index resulted primarily from transaction costs and operating expenses that are not reflected in Index results.

How did the Fund perform over the past 10 years?

The Fund's past performance is not a good predictor of the Fund's future performance. The graph and table do not reflect the deduction of taxes that a shareholder would pay on fund distributions or redemption of fund shares.

Cumulative Performance from November 1, 2014 through October 31, 2024 Initial Investment of \$10,000



The above graph compares a hypothetical \$10,000 investment in the Fund's Investor Shares shares to a hypothetical investment of \$10,000 made in each of the S&P 1500® Index (a broad-based index) and S&P MidCap 400® Index on 10/31/2014. The performance shown takes into account applicable fees and expenses of the Fund, including management fees and other expenses. The Fund's performance also assumes the reinvestment of dividends and capital gains. Unlike the Fund, the indexes are not subject to charges, fees and other expenses. Investors cannot invest directly in any index.

AVERAGE ANNUAL TOTAL RETURNS (AS OF 10/31/24)

Share Class	1YR	5YR	10YR
Investor Shares	32.41%	10.83%	9.34%
S&P 1500® Index (broad-based index)*	37.54%	14.90%	12.71%
S&P MidCap 400® Index	32.99%	11.37%	9.86%

* In accordance with regulatory changes requiring the Fund to compare its performance with a broad-based securities market index that represents the overall applicable market, the Fund added the indicated benchmark effective October 31, 2024.

The performance data quoted represent past performance, which is no guarantee of future results. For more current information visit bny.com/investments/literaturecenter.

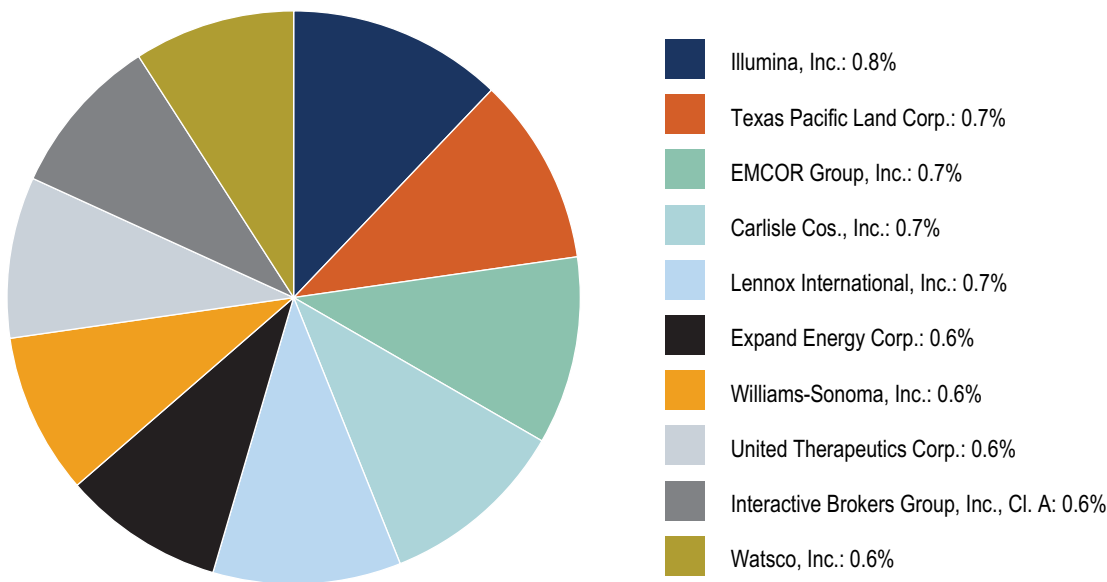
KEY FUND STATISTICS (AS OF 10/31/24)

Fund Size (Millions)	Number of Holdings	Total Advisory Fee Paid During Period	Annual Portfolio Turnover
\$1,556	403	\$3,935,734	17.87%

Not FDIC Insured. Not Bank-Guaranteed. May Lose Value

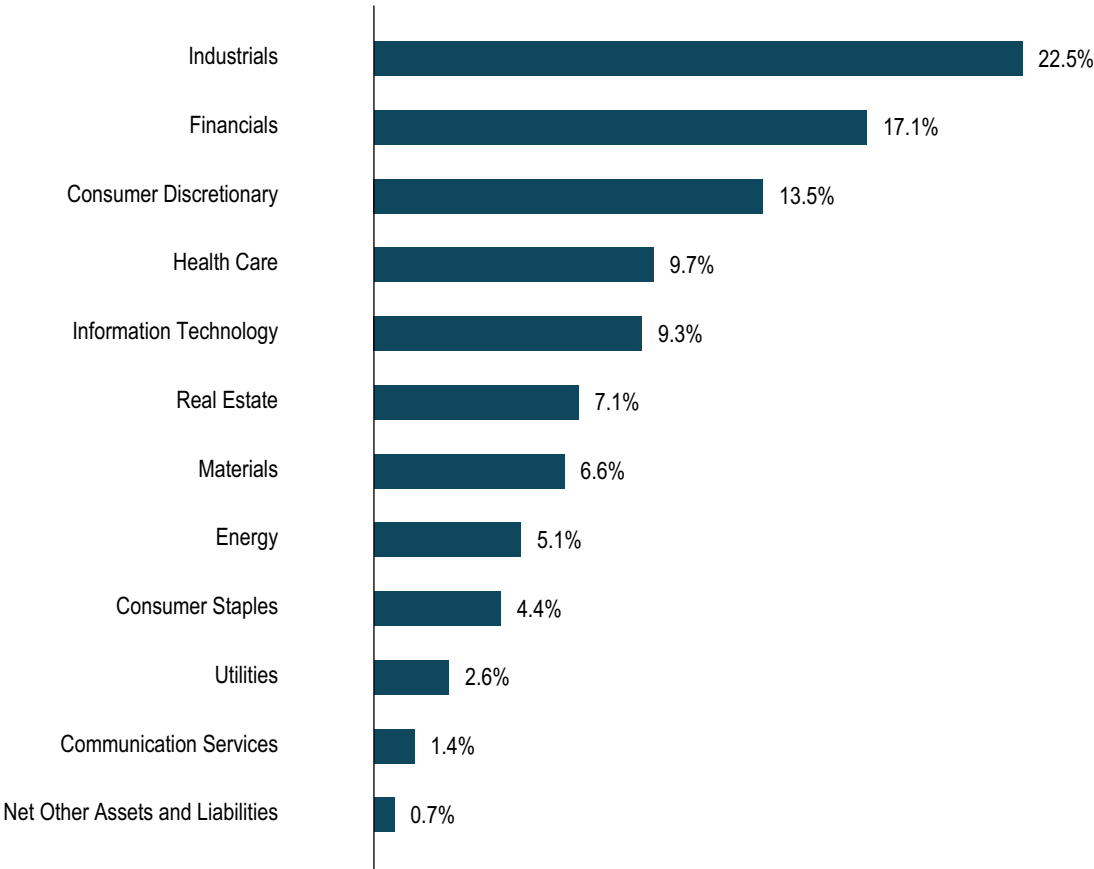
PORTFOLIO HOLDINGS (AS OF 10/31/24)

Top Ten Holdings (Based on Net Assets)*



* Excludes money market funds or other short-term securities held for the investment of cash and cash collateral for securities loaned, if any.

Sector Allocation (Based on Net Assets)



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For additional information about the Fund, including its prospectus, financial information, portfolio holdings and proxy voting information, please visit bny.com/investments/literaturecenter.