

August 22, 2025

BNY MELLON ADVANTAGE FUNDS, INC.
-BNY Mellon Opportunistic Small Cap Fund

Supplement to Summary Prospectus, Prospectus and Statement of Additional Information

The Board of Directors of BNY Mellon Advantage Funds, Inc. (the "Company") has approved, subject to shareholder approval, an Agreement and Plan of Reorganization (the "Agreement") between the Company, on behalf of BNY Mellon Opportunistic Small Cap Fund (the "Fund"), and BNY Mellon Investment Funds I, on behalf of BNY Mellon Small Cap Value Fund (the "Acquiring Fund"). The Agreement provides for the transfer of the Fund's assets to the Acquiring Fund in a tax-free exchange for Class A shares, Class I shares and Class Y shares of the Acquiring Fund having an aggregate net asset value equal to the value of the Fund's net assets and the assumption by the Acquiring Fund of the stated liabilities of the Fund, the distribution of the corresponding class of shares (with holders of Investor shares of the Fund receiving Class A shares of the Acquiring Fund) of the Acquiring Fund to Fund shareholders and the subsequent termination of the Fund (the "Reorganization").

It is currently contemplated that shareholders of the Fund as of September 23, 2025 (the "Record Date") will be asked to approve the Agreement on behalf of the Fund at a special meeting of shareholders to be held on or about December 9, 2025. If the Agreement is approved, the Reorganization will be consummated on or about February 13, 2026.

In anticipation of the Reorganization, effective on or about September 23, 2025 (the "Sales Discontinuance Date"), the Fund will be closed to any investments for new accounts, except that new accounts may be established by:

- Participants in group employer retirement plans (and their successor plans), provided that the plan sponsor has been approved by BNY Mellon Investment Adviser, Inc. and established the Fund as an investment option in the plan by the close of business on the Sales Discontinuance Date;
- Wrap programs that established the Fund as an investment option under the wrap program by the close of business on the Sales Discontinuance Date; and
- Certain funds in the BNY Mellon Family of Funds and series of BNY Mellon Funds Trust.

Shareholders of the Fund as of the Sales Discontinuance Date may continue to make additional purchases and to reinvest dividends and capital gains into their existing Fund accounts up until the time of the Reorganization.

A Prospectus/Proxy Statement with respect to the proposed Reorganization will be mailed prior to the meeting to the Fund's shareholders as of the Record Date. The Prospectus/Proxy Statement will describe the Acquiring Fund and other matters. Investors may obtain a free copy of the Prospectus of the Acquiring Fund by calling 1-800-373-9387.

BNY Mellon Opportunistic Small Cap Fund



Summary Prospectus | December 31, 2024

Class Ticker
Investor DSCVX
I DOPIX
Y DSCYX

Before you invest, you may want to review the fund's prospectus, which contains more information about the fund and its risks. You can find the fund's prospectus and other information about the fund, including the statement of additional information and most recent reports to shareholders, online at www.bny.com/investments. You can also get this information at no cost by calling 1-800-373-9387 (inside the U.S. only) or by sending an e-mail request to info@bny.com. The fund's prospectus and statement of additional information, dated December 31, 2024 (each as revised or supplemented), are incorporated by reference into this summary prospectus.

Investment Objective

The fund seeks capital appreciation.

Fees and Expenses

This table describes the fees and expenses that you may pay if you buy, hold and sell shares of the fund. **You may pay other fees, such as brokerage commissions and other fees to financial intermediaries, which are not reflected in the table and examples below.**

Annual Fund Operating Expenses (expenses that you pay each year as a percentage of the value of your investment)			
	Investor Shares	Class I Shares	Class Y Shares
Management fees	.75	.75	.75
Other expenses:			
Shareholder services fees	.25	none	none
Miscellaneous other expenses	.16	.24	.11
Total other expenses	.41	.24	.11
Total annual fund operating expenses	1.16	.99	.86
Fee waiver*	(.10)	(.10)	(.10)
Total annual fund operating expenses (after fee waiver)	1.06	.89	.76

* The fund's investment adviser, BNY Mellon Investment Adviser, Inc., has contractually agreed to waive receipt of a portion of its management fee in the amount of .10% of the value of the fund's average daily net assets until December 31, 2025. On or after December 31, 2025, BNY Mellon Investment Adviser, Inc. may terminate this waiver agreement at any time.

Example

The Example is intended to help you compare the cost of investing in the fund with the cost of investing in other mutual funds. The Example assumes that you invest \$10,000 in the fund for the time periods indicated and then hold or redeem all of your shares at the end of those periods. The Example also assumes that your investment has a 5% return each year and that the fund's operating expenses remain the same. The Example is based on net operating expenses, which reflects the contractual undertaking by BNY Mellon Investment Adviser, Inc. and, for the one-year example and the first year of the three-, five- and ten-years examples, reflects the management fee waiver agreement by BNY Mellon Investment Adviser, Inc. Although your actual costs may be higher or lower, based on these assumptions your costs would be:

	1 Year	3 Years	5 Years	10 Years
Investor Shares	\$108	\$359	\$629	\$1,400
Class I Shares	\$91	\$305	\$537	\$1,204
Class Y Shares	\$78	\$264	\$467	\$1,052

Portfolio Turnover

The fund pays transaction costs, such as commissions, when it buys and sells securities (or "turns over" its portfolio). A higher portfolio turnover may indicate higher transaction costs and may result in higher taxes when fund shares are held in a taxable account. These costs, which are not reflected in annual fund operating expenses or in the Example, affect the fund's performance. During the most recent fiscal year, the fund's portfolio turnover rate was 61.03% of the average value of its portfolio.

Principal Investment Strategy

To pursue its goal, the fund normally invests at least 80% of its net assets, plus any borrowings for investment purposes, in the stocks of small cap companies. The fund currently considers small cap companies to be those companies with market capitalizations that fall within the market capitalization range of companies comprising the Russell 2000® Index, the fund's benchmark index. As of November 30, 2024, the market capitalizations of the smallest and largest companies in the index were approximately \$10 million and \$17.255 billion, respectively, and the weighted average and median market capitalizations of the index were approximately \$3.974 billion and \$1.065 billion, respectively.

The fund's sub-adviser selects stocks for the fund's portfolio based primarily on bottom-up fundamental analysis. The sub-adviser uses a disciplined investment process that relies, in general, on proprietary fundamental research and valuation. Generally, elements of the process include analysis of a company's business prospects, estimation of the company's value and the identification of events or a catalyst that could cause the estimated value of the company to change. In general, the fund seeks exposure to securities and sectors that the fund's sub-adviser perceives to be attractive from a valuation and fundamental standpoint.

The fund typically sells a stock when, in the sub-adviser's view, it approaches intrinsic value, a significant deterioration of fundamental expectations develops, the revaluation catalyst becomes impaired based on subsequent events or a better risk/reward opportunity is presented in the marketplace.

Principal Risks

An investment in the fund is not a bank deposit. It is not insured or guaranteed by the Federal Deposit Insurance Corporation (FDIC) or any other government agency. It is not a complete investment program. The fund's share price fluctuates, sometimes dramatically, which means you could lose money.

- *Risks of stock investing:* Stocks generally fluctuate more in value than bonds and may decline significantly over short time periods. There is the chance that stock prices overall will decline because stock markets tend to move in cycles, with periods of rising prices and falling prices. The market value of a stock may decline due to general market conditions or because of factors that affect the particular company or the company's industry.
- *Small and midsize company risk:* Small and midsize companies carry additional risks because the operating histories of these companies tend to be more limited, their earnings and revenues less predictable (and some companies may be experiencing significant losses), and their share prices more volatile than those of larger, more established companies. The shares of smaller companies tend to trade less frequently than those of larger, more established companies, which can adversely affect the pricing of these securities and the fund's ability to sell these securities.
- *Growth and value stock risk:* By investing in a mix of growth and value companies, the fund assumes the risks of both. Investors often expect growth companies to increase their earnings at a certain rate. If these expectations are not met, investors can punish the stocks inordinately, even if earnings do increase. Value stocks involve the risk that they may never reach their expected full market value, either because the market fails to recognize the stock's intrinsic worth or the expected value was misgauged.
- *Market risk:* The value of the securities in which the fund invests may be affected by political, regulatory, economic and social developments, and developments that impact specific economic sectors, industries or segments of the market. In addition, turbulence in financial markets and reduced liquidity in equity, credit and/or fixed-income markets may negatively affect many issuers, which could adversely affect the fund. Global economies and financial markets are becoming increasingly interconnected, and conditions and events in one country, region or financial market may adversely impact issuers in a different country, region or financial market. These risks may be magnified if certain events or developments adversely interrupt the global supply chain; in these and other circumstances, such risks might affect companies world-wide.
- *Liquidity risk:* When there is little or no active trading market for specific types of securities, it can become more difficult to sell the securities in a timely manner at or near their perceived value. In such a market, the value of such securities and the fund's share price may fall dramatically. Investments that are illiquid or that trade in lower volumes may be more difficult to value.

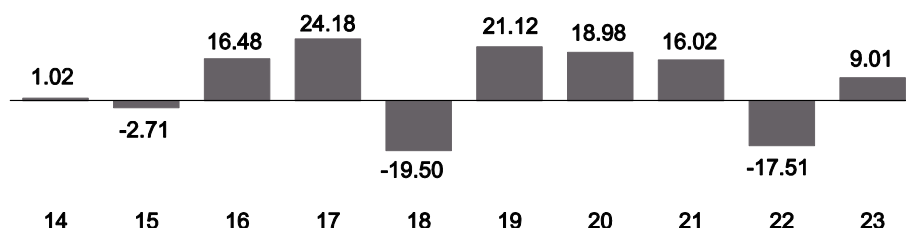
- *Management risk:* The investment process used by the fund's sub-adviser could fail to achieve the fund's investment goal and cause your fund investment to lose value.

Performance

The following bar chart and table provide some indication of the risks of investing in the fund. The bar chart shows changes in the performance of the fund's Investor shares from year to year. The table compares the average annual total returns of the fund's shares to those of broad measures of market performance. The fund's past performance (before and after taxes) is not necessarily an indication of how the fund will perform in the future. Performance for each share class will vary due to differences in expenses. More recent performance information may be available at www.bny.com/investments.

Year-by-Year Total Returns as of 12/31 each year (%)

Investor Shares



During the periods shown in the chart:

Best Quarter

Q2, 2020: 30.45%

Worst Quarter

Q1, 2020: -32.83%

The year-to-date total return of the fund's Investor shares as of September 30, 2024 was 8.30%.

After-tax performance is shown only for Investor shares. After-tax performance of the fund's other share classes will vary. After-tax returns are calculated using the historical highest individual federal marginal income tax rates, and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown, and the after-tax returns shown are not relevant to investors who hold their shares through U.S. tax-deferred arrangements such as 401(k) plans or individual retirement accounts. Returns after taxes on distributions and sale of fund shares may be higher than returns before taxes or returns after taxes on distributions due to an assumed tax benefit from losses on a sale of the fund's shares at the end of the period.

For the fund's Class I and Class Y shares, periods prior to the inception date reflect the performance of the fund's Investor shares. Such performance figures have not been adjusted to reflect applicable class fees and expenses of Class I and Class Y, respectively. Each share class is invested in the same portfolio of securities, and the annual returns would have differed only to the extent that the classes have different expenses.

Average Annual Total Returns (as of 12/31/23)

Class (Inception Date)	1 Year	5 Years	10 Years
Investor Shares returns before taxes	9.01%	8.50%	5.58%
Investor Shares returns after taxes on distributions	8.64%	7.73%	3.70%
Investor Shares returns after taxes on distributions and sale of fund shares	5.57%	6.72%	3.97%
Class I (9/30/16) returns before taxes	9.22%	8.69%	5.72%
Class Y (9/30/16) returns before taxes	9.34%	8.83%	5.80%
Russell 3000® Index* reflects no deductions for fees, expenses or taxes	25.96%	15.16%	11.48%
Russell 2000® Index reflects no deductions for fees, expenses or taxes	16.93%	9.97%	7.16%

* In accordance with regulatory changes requiring the fund's primary benchmark to represent the overall applicable market, the fund's primary prospectus benchmark changed to the indicated benchmark effective as of August 31, 2024.

Portfolio Management

The fund's investment adviser is BNY Mellon Investment Adviser, Inc. (BNYM Investment Adviser). BNYM Investment Adviser has engaged its affiliate, Newton Investment Management North America, LLC (NIMNA), to serve as the fund's sub-adviser.

Andrew Leger is the fund's primary portfolio manager. Mr. Leger has been a portfolio manager of the fund since September 2021 and is a portfolio manager at NIMNA.

Purchase and Sale of Fund Shares

In general, for Investor shares and Class I shares, the fund's minimum initial investment is \$2,500 and \$1,000, respectively, and the minimum subsequent investment is \$100. For Class Y shares, the minimum initial investment generally is \$1,000,000, with no minimum subsequent investment. You may sell (redeem) your shares on any business day by calling 1-800-373-9387 (inside the U.S. only) or by visiting www.bny.com/investments. If you invested in the fund through a third party, such as a bank, broker-dealer or financial adviser, or through a Retirement Plan (as defined below), you may mail your request to sell shares to BNY Institutional Services, P.O. Box 534442, Pittsburgh, Pennsylvania 15253-4442. If you invested directly through the fund, you may mail your request to sell shares to BNY Shareholder Services, P.O. Box 534434, Pittsburgh, Pennsylvania 15253-4434. If you are an Institutional Direct account holder, please contact your BNY relationship manager for instructions.

Retirement Plans include qualified or non-qualified employee benefit plans, such as 401(k), 403(b)(7), Keogh, pension, profit-sharing and other deferred compensation plans, whether established by corporations, partnerships, sole proprietorships, non-profit entities, trade or labor unions, or state and local governments, but do not include IRAs (including, without limitation, traditional IRAs, Roth IRAs, Coverdell Education Savings Accounts, IRA "Rollover Accounts" or IRAs set up under Simplified Employee Pension Plans (SEP-IRAs), Salary Reduction Simplified Employee Pension Plans (SARSEPs) or Savings Incentive Match Plans for Employees (SIMPLE IRAs)).

Tax Information

The fund's distributions are taxable as ordinary income or capital gains, except when your investment is through an IRA, Retirement Plan or other U.S. tax-advantaged investment plan (in which case you may be taxed upon withdrawal of your investment from such account).

Payments to Broker-Dealers and Other Financial Intermediaries

If you purchase shares through a broker-dealer or other financial intermediary (such as a bank), the fund's distributor and its related companies may pay the intermediary for the sale of fund shares and related services. To the extent that the intermediary may receive lesser or no payments in connection with the sale of other investments, the payments from the fund's distributor and its related companies may create a potential conflict of interest by influencing the broker-dealer or other intermediary and your financial representative to recommend the fund over the other investments. This potential conflict of interest may be addressed by policies, procedures or practices adopted by the financial intermediary. As there may be many different policies, procedures or practices adopted by different intermediaries to address the manner in which compensation is earned through the sale of investments or the provision of related services, the compensation rates and other payment arrangements that may apply to a financial intermediary and its representatives may vary by intermediary. Ask your financial representative or visit your financial intermediary's website for more information.

This prospectus does not constitute an offer or solicitation in any state or jurisdiction in which, or to any person to whom, such offering or solicitation may not lawfully be made.