

Summary Prospectus

March 28, 2025



Tortoise Essential Energy Fund (formerly Tortoise Power and Energy Infrastructure Fund)

NYSE: TPZ

Before you invest, you may want to review Tortoise Essential Energy Fund's (the "Fund") prospectus, which contains more information about the Fund and its risks. The current Statutory Prospectus and Statement of Additional Information dated March 28, 2025, are incorporated by reference into this Summary Prospectus. You can find the Fund's Statutory Prospectus, Statement of Additional Information, reports to shareholders and other information about the Fund online at <https://etp.tortoiseadvisors.com/funds/tortoise-essential-energy-fund/#literature>. You can also get this information at no cost by calling the Fund (toll-free) at (855) 994-4437 or by sending an e-mail request to info@tortoiseadvisors.com.

Investment Objectives

Tortoise Essential Energy Fund (formerly Tortoise Power and Energy Infrastructure Fund), a series of Tortoise Capital Series Trust (the “Fund”), seeks to provide a high level of current income to shareholders, with a secondary objective of capital appreciation.

Fees and Expenses of the Fund

This table describes the fees and expenses 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 example below.**

Shareholder Fees

<i>(fees paid directly from your investment)</i>	None
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Annual Fund Operating Expenses

(expenses that you pay as a percentage of the value of your investment)

Management Fees	0.85%
Distribution and Service (Rule 12b-1) Fees	—
Other Expenses ⁽¹⁾	—
Total Annual Fund Operating Expenses	0.85%

(1) Because the Fund is new, “Other Expenses” are based on estimated amounts for the current fiscal year.

Example

This example is intended to help you compare the cost of investing in the Fund with the cost of investing in other funds. The example assumes that you invest \$10,000 in the Fund for the time periods indicated and then 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 Fund’s operating expenses remain the same.

Although your costs may be higher or lower, based on these assumptions your costs would be:

One Year	Three Years
\$87	\$271

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. Because the Fund is newly offered, portfolio turnover information is not available.

Principal Investment Strategies

The Fund is a non-diversified series of Tortoise Capital Series Trust and is regulated as an “investment company” under the Investment Company Act of 1940 (the “1940 Act”). The Fund is actively managed and does not seek to track the performance of an index. The Fund’s primary investment objective to provide a high level of current income to shareholders and secondary investment objective of capital appreciation are non-fundamental.

The Fund seeks to invest in equity and fixed income securities primarily in power and energy infrastructure companies that provide stable and defensive characteristics throughout economic cycles. Such companies provide consistent dividends and stable earnings regardless of the state of the overall stock market.

Under normal circumstances, the Fund invests at least 80% of its total assets (including assets obtained through borrowings for investment purposes) in essential energy assets. Essential energy assets are issuers that derive more than 50% of their revenue from power or energy infrastructure operations. Power infrastructure companies use long-lived assets to provide electric power generation (including nuclear and renewable energy), transmission and distribution. Energy infrastructure companies are engaged in the production or delivery of energy-related goods or services and include (i) companies that use a network of pipeline assets to transport, store, gather and/or process crude oil, refined petroleum products (including biodiesel and ethanol), natural gas or natural gas liquids and other low carbon fuels, (ii) companies that store, transport, distribute or treat water, waste management, electric and heating systems and (iii) companies in the renewable and clean energy sectors such as those that produce or deliver solar, wind, hydro or geo-thermal related products or services.

We seek to achieve our investment objectives by investing in a wide range of securities that generate income, including both dividend-paying equity securities and fixed income securities. Up to 25% of these securities may be securities issued by master limited partnerships ("MLPs"). Securities that generate income in which we may invest include the following types of securities:

- ***Power and Energy Infrastructure Equity Securities.*** We may invest in a wide range of equity securities issued by power and energy infrastructure companies that are expected to pay dividends on a current basis. We expect that such equity investments will primarily include common stock and MLP common units. Our investment in MLP Securities is limited to 25% of total assets. The following is a more detailed description of each such security.
- ***Power and Energy Infrastructure Fixed Income Securities.*** We will invest a maximum of 50% of our assets in fixed income securities. Fixed income securities include bonds, debentures, or other debt instruments, which are expected to provide a high level of current income. Our investments in securities that generate income may have fixed or variable principal payments and various interest rate and dividend payment and reset terms, including fixed rate, floating rate, adjustable rate and payment in kind features. Our investments may have extended or no maturities. Securities that generate income also may be subject to call features and redemption provisions. We may invest in securities of any credit quality that generate income, including up to 25% of our total assets in fixed income securities rated non-investment grade (commonly referred to as "junk bonds"), that are considered speculative as to the issuer's capacity to pay interest and repay principal.

Covered Call Options Strategy. We also seek to provide current income from gains earned through an option strategy. We currently intend to write (sell) call options on selected equity securities in our portfolio and to only write call options on securities we hold in our portfolio ("covered calls"). The notional amount of such calls is expected to be less than approximately 20% of the total value of our portfolio, although this percentage may vary depending on the cash flow requirements of the portfolio and on our Adviser's assessment of market conditions. Under current market conditions, we presently intend to write covered calls that are generally one to three month terms and generally range from 5% to 15% out of the money, although this may vary from time to time. We currently intend to focus our covered call strategy on other energy

infrastructure companies that our Adviser believes are integral links in the energy infrastructure value chain for pipeline companies, although we may write options on other securities in our portfolio in certain market environments.

The Fund may invest up to 10% of its total assets in securities issued by non-U.S. issuers (including Canadian issuers). The Fund may invest in both equity and fixed-income securities issued by non-U.S. issuers. The Fund will not invest more than 25% of its total assets in non-investment grade rated fixed income securities. The Fund will not invest more than 15% of its total assets in restricted securities that are ineligible for resale under Rule 144A, all of which may be illiquid securities. These investment restrictions described above apply at the time of purchase, and the Fund will not be required to reduce a position due solely to market value fluctuations.

Principal Risks

Risk is inherent in all investing, and you could lose money by investing in the Fund. A summary description of certain principal risks of investing in the Fund is set forth below. Before you decide whether to invest in the Fund, carefully consider these risk factors associated with investing in the Fund, which may cause investors to lose money. There can be no assurance that the Fund will achieve its investment objectives.

General Business Risk. We are subject to all of the business risks and uncertainties associated with any business, including the risk that we will not achieve our investment objectives and that the value of an investment in our securities could decline substantially and cause you to lose some or all of your investment.

General Securities Risk. We invest in securities that may be subject to certain risks, including: (1) issuer risk, (2) credit risk, (3) interest rate risk, (4) reinvestment risk, (5) call or prepayment risk, (6) valuation risk, and (7) duration and maturity risk.

Capital Markets Risk. Global financial markets and economic conditions have been, and may continue to be, volatile due to a variety of factors, including significant write-offs in the financial services sector. Concerns about the general stability of financial markets and specifically the solvency of lending counterparties, may impact the cost of raising capital from the credit markets through increased interest rates, tighter lending standards, difficulties in refinancing debt on existing terms or at all and reduced, or in some cases ceasing to provide, funding to borrowers. In addition, lending counterparties under existing revolving credit facilities and other debt instruments may be unwilling or unable to meet their funding obligations. If funding is not available when needed, or is available only on unfavorable terms, companies may not be able to meet obligations as they come due.

Equity Securities Risk. Equity securities of entities that operate in the power and energy infrastructure sectors can be affected by macroeconomic and other factors affecting the stock market in general, expectations about changes in interest rates, investor sentiment towards such entities, changes in a particular issuer's financial condition, or unfavorable or unanticipated poor performance of a particular issuer (in the case of MLPs, generally measured in terms of distributions). Prices of equity securities of individual entities also can be affected by fundamentals unique to the company or partnership, including earnings power and coverage ratios. In addition, by writing covered call options, capital appreciation potential will be limited on a portion of our investment portfolio.

MLP Risk. An investment in MLP securities involves some risks that differ from the risks involved in an investment in the common stock of a corporation, including risks relating to the ownership structure of MLPs, the risk that MLPs might lose their partnership status for tax purposes and the risk that MLPs will not make distributions to holders (including us) at anticipated levels or with the expected tax character. In addition, if an MLP in which the Fund invests amends its partnership tax

return or an IRS audit results in a change to the tax return, shareholders may receive a corrected Form 1099 from the Fund, which could, in turn, require shareholders to amend their own federal, state or local tax returns and could result in shareholders having an additional tax liability.

Investment Grade Fixed Income Securities Risk. We may invest a portion of our assets in fixed income securities rated “investment grade” by nationally recognized statistical rating organizations (“NRSROs”) or judged by our investment adviser, Tortoise Capital Advisors, L.L.C. (the “Adviser”), to be of comparable credit quality. Although we do not intend to do so, we may invest up to 100% in such securities. Investment grade fixed income securities are rated Baa3 or higher by Moody’s Investors Service, Inc. (“Moody’s”), BBB- or higher by Standard & Poor’s Ratings Services (“S&P”), or BBB- or higher by Fitch, Inc. (“Fitch”). Despite being considered to be subject to fewer risks than non-investment grade fixed income securities, commonly referred to as “junk bonds,” investment grade fixed income securities are, in fact, subject to risks, including volatility, credit risk and risk of default, sensitivity to general economic or industry conditions, potential lack of resale opportunities (illiquidity), and additional expenses to seek recovery from issuers who default.

Non-investment Grade Fixed Income Securities Risk. Non-investment grade securities are rated Ba1 or lower by Moody’s, BB+ or lower by S&P or BB or lower by Fitch or, if unrated, are determined by our Adviser to be of comparable credit quality. Non-investment grade securities, also sometimes referred to as “junk bonds,” generally pay a premium above the yields of U.S. government securities or fixed income securities of investment grade issuers because they are subject to greater risks than these securities. These risks, which reflect their speculative character, include the following: greater volatility; greater credit risk and risk of default; potentially greater sensitivity to general economic or industry conditions; potential lack of attractive resale opportunities (illiquidity); and additional expenses to seek recovery from issuers who default.

Concentration Risk. The Fund’s strategy of concentrating its assets in the group of industries comprising the power and energy infrastructure sectors means that the performance of the Fund will be closely tied to the performance of these particular market sectors. Therefore, a downturn in the power and energy infrastructure sectors would have a larger impact on the Fund than on an investment company that does not concentrate in these sectors. Specific risks of investing in the power and energy infrastructure sectors include the following: (1) interest rate risk, (2) credit rating downgrade risk, (3) terrorism and natural disasters risk, (4) climate change regulation risk, (5) operating risk, (6) power infrastructure company risk, and (7) energy infrastructure company risk. The Fund’s concentrations in these investments may present more risk than if we were broadly diversified over numerous industries and sectors of the economy.

Power Infrastructure Company Risk. Companies operating in the power infrastructure sector also are subject to additional risks, including: (1) regulatory risk, (2) Federal Energy Regulatory Commission risk, (3) environmental risk and (4) competition risk. To the extent that any of these risks materialize for a company whose securities are in our portfolio, the value of these securities could decline and our net asset value and share price could be adversely affected.

Energy Infrastructure Company Risk. Companies operating in the energy infrastructure sector also are subject to additional risks, including: (1) pipeline company risk, (2) gathering and processing company risk, (3) propane company risk, (4) supply and demand risk, (5) price volatility risk, (6) competition risk, and (7) regulatory risk. To the extent that any of these risks materialize for a company whose securities are in our portfolio, the value of these securities could decline and our net asset value and share price would be adversely affected.

Non-U.S. Securities Risk. Investments in the securities of non-U.S. issuers may involve risks not ordinarily associated with investments in securities and instruments of U.S. issuers, including different accounting, auditing and financial standards, less government supervision and regulation, additional tax withholding and taxes, difficulty enforcing rights in foreign countries, less publicly available information, difficulty effecting transactions, higher expenses, and exchange rate risk.

Restricted Securities Risk. Restricted securities (including Rule 144A securities) are less liquid than freely tradable securities because of statutory and contractual restrictions on resale. This lack of liquidity creates special risks for us.

Rule 144A Securities Risk. Rule 144A provides an exemption from the registration requirements of the Securities Act of 1933 (the “1933 Act”), for the resale of certain restricted securities to qualified institutional buyers, such as the Fund. An insufficient number of qualified institutional buyers interested in purchasing Rule 144A-eligible securities held by us, however, could affect adversely the marketability of certain Rule 144A securities, and we might be unable to dispose of such securities promptly or at reasonable prices. In addition, if for any reason we are required to liquidate all or a portion of our portfolio quickly, we may realize significantly less than the fair value at which we previously recorded these investments.

Tax Risk. We intend to elect to be treated, and intend to qualify each year, as a “regulated investment company” (a “RIC”) under the Internal Revenue Code of 1986, as amended (the “Code”). If for any taxable year we fail to qualify for the special federal income tax treatment afforded to RICs, all of our taxable income will be subject to federal income tax at regular corporate rates (without any deduction for distributions to our shareholders) and our income available for distribution to shareholders will be reduced.

Valuation Risk. The fair value of certain of our investments may not be readily determinable. The fair value of these securities will be determined pursuant to methodologies established by our Board of Trustees. Our determination of fair value may differ materially from the values that would have been used if a ready market for these securities had existed.

Liquidity Risk. Certain securities may trade less frequently than those of larger companies that have larger market capitalizations. Investments in securities that are less actively traded or over time experience decreased trading volume may be difficult to dispose of when we believe it is desirable to do so, may restrict our ability to take advantage of other opportunities, and may be more difficult to value.

Non-Diversification Risk. We are registered as a non-diversified, open-end management investment company under the 1940 Act. Accordingly, there are no regulatory limits under the 1940 Act on the number or size of securities that we hold, and we may invest more assets in fewer issuers compared to a diversified fund. However, in order to qualify as a RIC for federal income tax purposes, we must meet certain diversification requirements.

Covered Call Risk. We cannot guarantee that our covered call option strategy will be effective. There are several risks associated with transactions in options on securities. For example, the significant differences between the securities and options markets could result in an imperfect correlation between these markets. The use of options also may require us to sell portfolio securities at inopportune times or for prices other than current market values, may limit the amount of appreciation we can realize on an investment, or may cause us to hold a security we might otherwise sell.

Competition Risk. There are a number of alternatives to us as vehicles for investment in a portfolio of companies operating primarily in the power and energy infrastructure sectors, including publicly traded investment companies, structured notes, private funds, open-end funds and indexed products. These competitive conditions may adversely impact our ability to meet our investment objectives.

Performance Risk. We may not be able to achieve operating results that will allow us to make distributions at a specific level or to increase the amount of these distributions from time to time. In addition, the 1940 Act and restrictions and provisions in credit facilities and fixed income securities may limit our ability to make distributions.

Legal and Regulatory Change Risk. The regulatory environment for open-end companies is evolving, and changes in the regulation of open-end companies may adversely affect the value of our investments or our ability to pursue our trading strategy. The effect of any future regulatory change on us could be substantial and adverse.

Management Risk. Our ability to achieve our investment objective is directly related to our Adviser's investment strategies for the Fund. The value of your investment in our common shares may vary with the effectiveness of the research and analysis conducted by our Adviser and their ability to identify and take advantage of attractive investment opportunities. If the investment strategies of our Adviser do not produce the expected results, the value of your investment could be diminished or even lost entirely, and we could underperform the market or other funds with similar investment objectives.

Cybersecurity Risk. Investment advisers, including the Adviser, must rely in part on digital and network technologies (collectively "cyber networks") to conduct their businesses. Such cyber networks might in some circumstances be at risk of cyberattacks that could potentially seek unauthorized access to digital systems for purposes such as misappropriating sensitive information, corrupting data, or causing operational disruption. Cyber incidents could potentially occur, and might in some circumstances result in unauthorized access to sensitive information about the Adviser or its clients.

Pandemic and Epidemic Risk. Widespread disease, including pandemics and epidemics, have been and can be highly disruptive to economies and markets, adversely impacting individual companies, sectors, industries, markets, currencies, interest and inflation rates, credit ratings, investor sentiment, and other factors affecting the value of the Fund's investments. These disruptions could prevent the Fund from executing advantageous investment decisions in a timely manner and negatively impact its ability to achieve its investment objectives. Any such event(s) could have a significant adverse impact on the value and risk profile of the Fund.

ETF-Related Risk

Authorized Participant Concentration Risk. Only an authorized participant may engage in creation or redemption transactions directly with the Fund. However, participants are not obligated to make a market in the Fund's shares or submit purchase and redemption orders for Creation Units.

Cash Transactions Risk. The Fund intends to effect creations and redemptions for a combination of cash and in-kind securities. As a result, an investment in the Fund may be less tax-efficient than an investment in an ETF that effects its creations and redemptions only in-kind.

Because the Fund may effect redemptions for cash, it may be required to sell portfolio securities in order to obtain the cash needed to distribute redemption proceeds. A sale of portfolio securities may result in capital gains or losses and may also result in higher brokerage costs.

Market Maker Risk. The Fund faces numerous market risks, including the potential lack of an active market for Fund shares due to a limited number of market makers. Decisions by market makers or authorized participants to reduce their role or step away from these activities in times of market stress could inhibit the effectiveness of the arbitrage process in maintaining the relationship between the underlying values of the Fund's portfolio securities and the Fund's market price. This reduced effectiveness could result in Fund shares trading at a discount to net asset value and in greater than normal intraday bid-ask spreads for Fund shares.

Trading Issues Risk. Trading in Fund shares on the exchange may be halted due to market conditions or for reasons that, in the view of the exchange, make trading in shares inadvisable. In addition, trading in Fund shares on the exchange is subject to trading halts caused by extraordinary market volatility pursuant to the exchange's "circuit breaker" rules. There can be no assurance that the requirements of the New York Stock Exchange (the "Exchange") necessary to maintain the listing of the Fund will continue to be met or will remain unchanged.

Share Price Risk. Disruptions to creations and redemptions, bid-ask spreads, the existence of extreme market volatility or potential lack of an active trading market for shares of the Fund may result in shares trading at a significant premium or discount to net asset value ("NAV"). Due to the bid-ask spread, or if the Fund's shares are otherwise trading at a premium or discount to NAV, investors may receive more or less than NAV when buying or selling their shares on an exchange.

Performance History

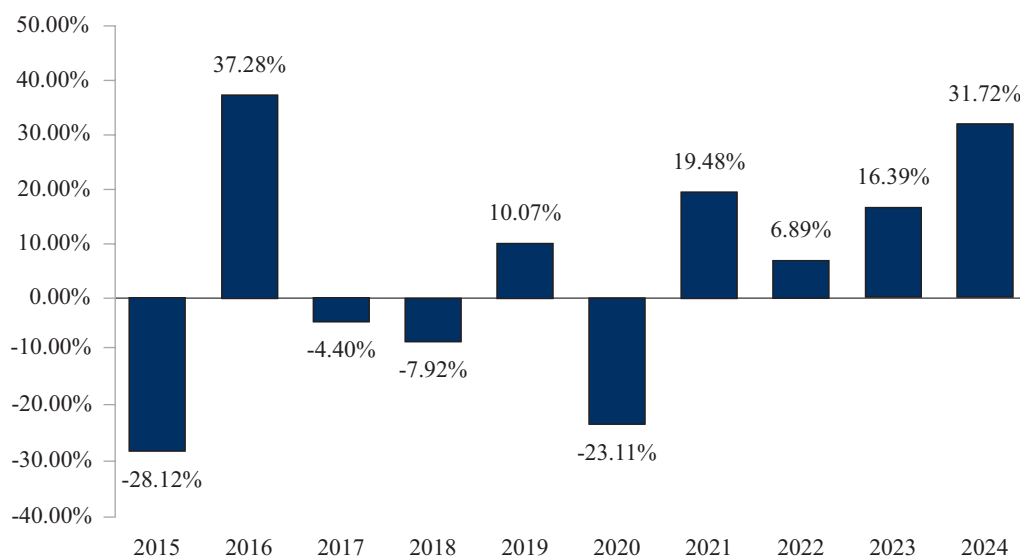
On December 5, 2024, the stockholders of Tortoise Pipeline & Energy Fund, Inc., Tortoise Energy Independence Fund, Inc. and Tortoise Power and Energy Infrastructure Fund, Inc., each a Maryland corporation that is registered as a closed-end management investment company (the "Target Funds"), approved an Agreement and Plan of Merger (the "Plan") by and between the Target Funds, and the Trust, on behalf of the Fund, pursuant to which each Target Fund would be merged with and into a wholly-owned subsidiary of the Fund (the "Mergers"). As a result of the Mergers, the Fund has assumed the performance history of Tortoise Power and Energy Infrastructure Fund, Inc. ("TPZ" or the "Predecessor Fund").

The accompanying bar chart and table provide some indication of the risks of investing in the Predecessor Fund. The bar chart shows changes in the Predecessor Fund's annual total returns from year to year. Following the bar chart is the Predecessor Fund's highest and lowest quarterly returns during the periods shown in the bar chart. The table illustrates how the Predecessor Fund's average annual returns for the 1-year, 5-year and 10-year periods compare with those of a broad measure of market performance. Past performance (before and after taxes) will not necessarily continue in the future. In addition, because the Predecessor Fund and the Fund have certain differences, including investment policies and practices and that the Predecessor Fund was a closed-end fund that utilized leverage while the Fund is an exchange-traded fund that does not utilize leverage, the Predecessor Fund's past performance is not indicative of how the Fund will, or is expected to, perform in the future.

Updated information on the Fund's results can be obtained by visiting www.tortoiseadvisors.com or by calling toll-free at 844-874-6339.

TPZ Calendar Year Total Returns as of 12/31

Tortoise Power and Energy Infrastructure Fund Calendar Year Total Returns as of 12/31



The bar chart does not reflect sales loads. If it did, the annual total returns reflected would be lower.

During the periods shown in the chart above:

Best Quarter	Worst Quarter
38.38%	-51.94%
June 30, 2020	March 31, 2020

Average Annual Total Returns for the Periods Ended December 31, 2024			
	1 Year	5 Years	10 years
TPZ Performance			
Return Before Taxes (based on net asset value ("NAV"))	31.72%	8.53%	3.71%
Return After Taxes on Distributions	31.22%	7.49%	1.89%
Return After Taxes on Distributions and Sale of Fund Shares	18.96%	6.17%	1.99%
Index Performance			
S&P 500 Energy Total Return Index (reflects no deduction for fees, expenses or taxes)	5.72%	12.12%	4.90%
S&P 500 Total Return Index (reflects no deduction for fees, expenses or taxes)	25.02%	14.53%	13.10%

After-tax returns in the above table 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 an investor's tax situation and may differ from those shown, and after-tax returns shown are not relevant to investors who hold Shares through tax-advantaged arrangements, such as 401(k) plans or individual retirement accounts.

Investment Adviser

Tortoise Capital Advisors, L.L.C. (the “Adviser”)

Portfolio Managers

The investment management of the Fund’s portfolio is the responsibility of the Adviser’s investment committee. The investment committee’s members are Brian A. Kessens, James R. Mick, Matthew G.P. Sallee, and Robert J. Thummel, Jr., all of whom share responsibility for such investment management and have each served as portfolio manager to the Fund since its inception in 2024.

Purchase and Sale of Shares

The Fund will issue (or redeem) shares to certain institutional investors (typically market makers or other broker-dealers) only in blocks of shares known as “Creation Units.” ETF Creation Unit transactions are typically conducted in exchange for the deposit or delivery of in-kind securities and/or cash constituting a substantial replication, or a representation, of the securities included in the relevant benchmark index. The Fund intends to effect redemptions for a combination of cash and in-kind securities. Individual shares may only be purchased and sold on a national securities exchange through a broker-dealer. You can purchase and sell individual shares of the Fund throughout the trading day like any publicly traded security. The Fund’s shares are listed on the Exchange. The price of the Fund’s shares is based on market price, and because exchange-traded fund shares trade at market prices rather than NAV, the Fund’s shares may trade at a price greater than NAV (premium) or less than NAV (discount). Except when aggregated in Creation Units, the Fund’s shares are not redeemable securities.

Investors may incur costs attributable to the difference between the highest price a buyer is willing to pay to purchase shares of the Fund (bid) and the lowest price a seller is willing to accept for shares of the Fund (ask) when buying or selling shares of the Fund in the secondary market (the “bid-ask spread”). Recent information about the Fund, including its NAV, market price, premiums and discounts, and bid-ask spreads is available on the Fund’s website at <https://tortoiseadvisors.com/>.

Tax Information

Distributions made by the Fund may be taxable as ordinary income, or capital gains, unless you are a tax-exempt organization or are investing through a tax-advantaged arrangement, such as a 401(k) plan or individual retirement account. Any withdrawals made from such tax-advantaged arrangement generally will be taxable to you as ordinary income.

Payments to Broker-Dealers and Other Financial Intermediaries

If you purchase the Fund through a broker-dealer or other financial intermediary (such as a bank), the Fund and its related companies may pay the intermediary for the sale of Fund shares and related services. These payments may create a conflict of interest by influencing the broker-dealer or other intermediary and your salesperson to recommend the Fund over another investment. Ask your salesperson or visit your financial intermediary’s Web site for more information.