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Putnam PanAgora Market Neutral Fund

Summary prospectus

8 | 16 | 17

| FUND SYMBOLS | CLASS A | CLASS B | CLASS C | CLASS M | CLASS R | CLASS R6 | CLASS T | CLASS Y |
|--------------|---------|---------|---------|---------|---------|----------|---------|---------|
| | PPMAX | PPMBX | PPMDX | PPMVX | PPMLX | PPMRX | Pending | PPMYX |

Putnam PanAgora Market Neutral Fund

Before you invest, you may wish to review the fund's prospectus, which contains more information about the fund and its risks. You may obtain the prospectus and other information about the fund, including the statement of additional information (SAI) and most recent reports to shareholders, at no cost by visiting putnam.com/funddocuments, calling 1-800-225-1581, or e-mailing Putnam at funddocuments@putnam.com.

The fund's prospectus and SAI, both dated 8/16/17, are incorporated by reference into this summary prospectus.

Goal

Putnam PanAgora Market Neutral Fund seeks absolute return (i.e. positive total return in diverse market environments over time).

Fees and expenses

The following table describes the fees and expenses you may pay if you buy and hold shares of the fund. You may qualify for sales charge discounts if you and your family invest, or agree to invest in the future, at least \$50,000 in Putnam funds. More information about these and other discounts is available from your financial advisor and in *How do I buy fund shares?* beginning on page 19 of the fund's prospectus, in Appendix A to the fund's prospectus, and in *How to buy shares* beginning on page II-1 of the fund's statement of additional information (SAI).

Shareholder fees *(fees paid directly from your investment)*

| Share class | Maximum sales charge (load) imposed on purchases (as a percentage of offering price) | Maximum deferred sales charge (load) (as a percentage of original purchase price or redemption proceeds, whichever is lower) |
|----------------------|--|--|
| Class A | 5.75% | 1.00%* |
| Class B ¹ | NONE | 5.00%** |
| Class C | NONE | 1.00%*** |
| Class M | 3.50% | NONE |
| Class R | NONE | NONE |
| Class R6 | NONE | NONE |
| Class T ² | 2.50% | NONE |
| Class Y | NONE | NONE |

Annual fund operating expenses

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

| Share class | Management fees | Distribution and service (12b-1) fees | Other expenses ^e | Total annual fund operating expenses | Expense reimbursement ^f | Total annual fund operating expenses after expense reimbursement |
|----------------------|-----------------|---------------------------------------|-----------------------------|--------------------------------------|------------------------------------|--|
| Class A | 1.30% | 0.25% | 0.74% | 2.29% | (0.39)% | 1.90% |
| Class B ¹ | 1.30% | 1.00% | 0.74% | 3.04% | (0.39)% | 2.65% |
| Class C | 1.30% | 1.00% | 0.74% | 3.04% | (0.39)% | 2.65% |
| Class M | 1.30% | 0.75% | 0.74% | 2.79% | (0.39)% | 2.40% |
| Class R | 1.30% | 0.50% | 0.74% | 2.54% | (0.39)% | 2.15% |
| Class R6 | 1.30% | N/A | 0.64% | 1.94% | (0.39)% | 1.55% |
| Class T ² | 1.30% | 0.25% | 0.74% | 2.29% | (0.39)% | 1.90% |
| Class Y | 1.30% | N/A | 0.74% | 2.04% | (0.39)% | 1.65% |

¹ Purchases of class B shares are closed to new and existing investors except by exchange from class B shares of another Putnam fund or through dividend and/or capital gains reinvestment.

² Class T shares are not currently available for purchase.

* Applies only to certain redemptions of shares bought with no initial sales charge.

** A deferred sales charge on class B shares may apply to certain redemptions of shares purchased by exchange from another Putnam fund.

*** This charge is eliminated after one year.

= Other expenses are based on estimated amounts for the current fiscal year.

Reflects Putnam Investment Management, LLC's contractual obligation to limit certain fund expenses through 12/30/2018. This obligation may be modified or discontinued only with approval of the Board of Trustees.

Example

The following hypothetical example is intended to help you compare the cost of investing in the fund with the cost of investing in other funds. It assumes that you invest \$10,000 in the fund for the time periods indicated and then, except as indicated, redeem all your shares at the end of those periods. It assumes a 5% return on your investment each year and that the fund's operating expenses remain the same. Your actual costs may be higher or lower.

| Share class | 1 year | 3 years |
|-------------------------|--------|---------|
| Class A | \$757 | \$1,173 |
| Class B | \$768 | \$1,160 |
| Class B (no redemption) | \$268 | \$860 |
| Class C | \$368 | \$860 |
| Class C (no redemption) | \$268 | \$860 |
| Class M | \$585 | \$1,108 |
| Class R | \$218 | \$710 |
| Class R6 | \$158 | \$527 |
| Class T | \$438 | \$869 |
| Class Y | \$168 | \$558 |

Portfolio turnover

The fund pays transaction-related costs, such as commissions, when it buys and sells securities (or “turns over” its portfolio). A higher turnover rate may indicate higher transaction costs and may result in higher taxes when the fund’s shares are held in a taxable account. These costs, which are not reflected in annual fund operating expenses or the above example, affect fund performance. The fund’s turnover rate will be available after the fund completes its first fiscal year.

Investments, risks, and performance

Investments

The fund pursues its goal by investing through a diversified set of long/short equity strategies that seek to identify and exploit multiple price inefficiencies that exist in global equity markets. PanAgora Asset Management, Inc. (“PanAgora”), the subadviser to the fund, believes that these inefficiencies create investment opportunities in different market segments, at different times, and for different reasons, before they are ultimately arbitrated away. By using a diversified set of strategies that PanAgora believes have low correlation to one another, the fund seeks to generate returns under different market conditions and over different time horizons that are more stable over time than the returns of any individual strategy.

The fund’s strategies rely on quantitative models and information and data inputs to those models in an effort to capitalize on investment opportunities that exist when the prospects of a company’s likely success or failure are not fully recognized by market participants. PanAgora expects to implement the fund’s strategies primarily through investing in total return swap contracts.

The fund’s strategies are managed within three distinct sleeves of the fund designed to capitalize on long-term, intermediate-term, and short-term price inefficiencies. PanAgora strategically allocates the fund’s investments among the various strategies, varying the allocations from time to time based upon its assessment of the attractiveness of the available opportunity set, to seek to increase the potential for higher returns.

Although the fund may have net long or short exposure to the stock market at any time, PanAgora expects that, over time, the fund’s returns will not closely correlate with stock market movements. PanAgora may adjust the fund’s portfolio from time to time, and may use derivatives, to minimize exposure to stock market movements. The fund’s portfolio is also adjusted on a regular basis in an effort to manage risk from systematic factors (such as market or interest rate movements), risk from sector, country and region exposure, as well as excessive risk from any one security, by using derivatives, exchange traded funds (ETFs) and other risk management and portfolio construction techniques.

The fund expects to use total return swaps, and may also use other derivatives (such as futures contracts, options, currency swaps and other swap contracts), to take long or short positions in equity securities (principally common stocks, American Depositary Receipts (ADRs), and real estate investment trusts (REITs)), fixed income securities, and other investment companies (principally ETFs). The fund may have exposure to U.S. and non-U.S. (including both developed and emerging market) companies, to companies of any market capitalization and to fixed income securities of any credit quality, duration or maturity (principally government-issued instruments, money market instruments, and investment-grade corporate instruments). At times, the fund may also hold these

instruments directly. The fund may take “short” derivatives positions and may use derivatives to hedge and for speculative purposes.

A significant portion of the assets of the fund will be invested in short-term instruments, including cash and cash equivalents generally with one year or less term to maturity. These investments serve as collateral for the derivative positions the fund takes and also may earn income for the fund.

Risks

It is important to understand that you can lose money by investing in the fund.

There can be no assurance that the fund’s strategies will achieve any particular level of return. The fund’s allocation of assets among strategies and asset classes may hurt performance, and efforts to generate returns under different market conditions and over different time horizons through the use of strategies and allocation decisions may not be successful. If the quantitative models or data that are used in managing the fund prove to be incorrect or incomplete, investment decisions made in reliance on the models or data may not produce the desired results and the fund may realize losses.

The value of the securities in which the fund invests (whether directly or indirectly through derivatives) may fall or fail to rise over extended periods of time for a variety of reasons, including general financial market conditions, changing market perceptions (including perceptions about the risk of default or expectations about monetary policy or interest rates), changes in government intervention in the financial markets, and factors related to a specific issuer or industry. These and other factors may lead to increased volatility and reduced liquidity in the fund’s portfolio holdings. These risks are generally greater for small and midsize companies.

The fixed income securities in which the fund invests (whether directly or indirectly through derivatives) are subject to interest rate risk, which means the value of those investments is likely to fall if interest rates rise. The fund’s investments in fixed income securities also are subject to credit risk, which is the risk that the issuer of the fixed income security may default on payment of interest or principal. Interest rate risk is generally greater for the fund’s investments in longer-term fixed income securities.

The fund’s investments in total return swap contracts and other derivatives are subject to losses caused by unanticipated market movements, and there may be imperfect correlation between price movements of a derivative and price movements of the security or other asset for which the derivative is intended as a substitute. Derivatives may be difficult to value and may increase the fund’s transaction costs. Derivatives also involve the risk of the potential inability to terminate or sell derivatives positions. Derivatives can significantly increase the fund’s exposure to credit and counterparty risks. Derivatives, particularly over-the-counter instruments, involve the risk of the potential failure of the other party to the instrument to meet its obligations. Derivatives are subject to the risk that the fund may be delayed or prevented from recovering margin or other amounts deposited with a clearinghouse, futures commission merchant or other counterparty. If the fund has insufficient cash, it may have to sell its investments to meet daily variation margin requirements at a time when it may be disadvantageous to do so.

The fund’s use of derivatives also increases its risks by increasing investment exposure (which may be considered leverage). Leveraging may cause the fund’s performance to be more volatile, may expose the fund to losses in excess of the amounts invested, and may

require the fund to liquidate portfolio securities when it may not be advantageous to do so, to satisfy its obligations or to meet segregation requirements.

The fund's use of "short" derivatives positions may have the effect of economic leverage, which magnifies investment exposure, and may result in losses if the underlying assets appreciate in value.

The value of international investments traded in foreign currencies may be adversely impacted by fluctuations in exchange rates. International investments, particularly investments in emerging markets, may carry risks associated with potentially less stable economies or governments (such as the risk of seizure by a foreign government, the imposition of currency or other restrictions, or high levels of inflation or deflation), and may be or become illiquid.

Exposure to REITs subjects the fund to the risks associated with direct ownership in real estate, including economic downturns that have an adverse effect on real estate markets.

Exposure to open-end or closed-end investment companies and ETFs subjects the fund to substantially the same risks as those associated with direct ownership of the securities comprising the index on which an index ETF is based or the other holdings of an active or index ETF or other investment company.

The fund may have some direct or indirect exposure to illiquid securities. PanAgora may not be able to sell the fund's illiquid investments when it considers it desirable to do so, or PanAgora may be able to sell them only at less than their value.

The fund expects to engage in frequent trading. Funds with high turnover may be more likely to realize capital gains that must be distributed to shareholders as taxable ordinary income. High turnover may also cause a fund to pay more brokerage commissions and to incur other transaction costs (including imputed transaction costs), which may detract from performance.

The fund may not achieve its goal, and it is not intended to be a complete investment program. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency.

Performance

Performance information will be available after the fund completes a full calendar year of operation.

Your fund's management

Investment advisor

Putnam Investment Management, LLC

Sub-advisor

PanAgora Asset Management, Inc.

Portfolio managers

George Mussalli

Portfolio Manager, portfolio manager of the fund since 2017

Richard Tan

Portfolio Manager, portfolio manager of the fund since 2017

Purchase and sale of fund shares

You can open an account, purchase and/or sell fund shares, or exchange them for shares of another Putnam fund by contacting your financial advisor or by calling Putnam Investor Services at 1-800-225-1581. Purchases of class B shares are closed to new and existing investors except by exchange from class B shares of another Putnam fund or through dividend and/or capital gains reinvestment. Class T shares are not currently available for purchase.

When opening an account, you must complete and mail a Putnam account application, along with a check made payable to the fund, to: Putnam Investor Services, P.O. Box 8383, Boston, MA 02266-8383. The minimum initial investment of \$500 is currently waived, although Putnam reserves the right to reject initial investments under \$500 at its discretion. There is no minimum for subsequent investments.

You can sell your shares back to the fund or exchange them for shares of another Putnam fund any day the New York Stock Exchange (NYSE) is open. Shares may be sold or exchanged by mail, by phone, or online at putnam.com. Some restrictions may apply.

Tax information

The fund's distributions will be taxed, generally as ordinary income, unless you hold the shares through a tax-advantaged arrangement, in which case you will generally be taxed only upon withdrawal of monies from the arrangement.

Financial intermediary compensation

If you purchase the fund through a broker/dealer or other financial intermediary (such as a bank or financial advisor), the fund and its related companies may pay that intermediary for the sale of fund shares and related services. Please bear in mind that these payments may create a conflict of interest by influencing the broker/dealer or other intermediary to recommend the fund over another investment. Ask your advisor or visit your advisor's website for more information.

Additional information, including current performance, is available at putnam.com/funddocuments, by calling 1-800-225-1581, or by e-mailing Putnam at funddocuments@putnam.com.

Class T shares of the fund
are not currently available
for purchase.

