

2017 year-end updates



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IMPORTANT INVESTMENT INFORMATION

For complete information concerning the sales charge or contingent deferred sales charge (CDSC) that applies to any class of fund shares, please see the fund's current prospectus and statement of additional information. As required by SEC rules, the following information sets forth provisions regarding changes to sales charges or CDSCs during the past year.

How do I buy fund shares?

Here is a summary of the differences among the classes of shares:

Class B shares

Effective April 1, 2017, purchases for 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.

- No initial sales charge; your entire investment goes to work immediately
- Deferred sales charge of up to 5.00% if shares are sold within six years of purchase
- Higher annual expenses, and lower dividends, than class A, M or T shares because of higher 12b-1 fees
- Convert automatically to class A shares after eight years, thereby reducing future 12b-1 fees
- Orders for class B shares of one or more Putnam funds will be refused when the total value of the purchase, plus existing account balances that are eligible to be linked under a right of accumulation for purchases of class A shares (as described below), is \$100,000 or more. Investors considering cumulative purchases of \$100,000 or more should consider whether class A shares would be more advantageous and consult their financial representative.

Class T shares

- Class T shares are available only through financial intermediaries that offer shares of the fund through an omnibus brokerage platform.
- Initial sales charge of up to 2.50%

- Lower sales charges available for investments of \$250,000 or more
- No deferred sales charge
- Lower annual expenses, and higher dividends, than class B, C or M shares because of lower 12b-1 fees
- Potential for lower initial sales charge than class A shares, however, right of accumulation and statement of intention discounts (described in this prospectus) are not applicable to class T shares.

Initial sales charges for class T shares

	Class T sales charge as a percentage of*:	
Amount of purchase at offering price Transaction level (\$)	Net amount invested	Offering price**
Under 249,000	2.56%	2.50%
250,000 but under 499,999	2.04	2.00
500,000 but under 999,999	1.52	1.50
1,000,000 and above	1.01	1.00

* Because of rounding in the calculation of offering price and the number of shares purchased, actual sales charges you pay may be more or less than these percentages.

** Offering price includes sales charge.

Reducing your class A or class M sales charge

- **Additional reductions and waivers of sales charges.** In addition to the breakpoint discount methods described above (please see the prospectus for the referenced breakpoint discount methods) for class A and class M shares, the fund may sell the classes of shares specified below (please see the prospectus for other referenced share classes) without a sales charge or CDSC under the circumstances below (please see the prospectus for full disclosure of the referenced information). The sales charge and CDSC waiver categories described below (please see the prospectus for other referenced categories) do not apply to customers purchasing shares of the fund through any of the financial intermediaries specified in the Appendix to this prospectus (each, a "Specified Intermediary").

Different financial intermediaries may impose different sales charges. Please refer to the Appendix for the sales charge or CDSC waivers that are applicable to each Specified Intermediary.

Class T shares

The fund may sell class T shares without a sales charge under the following circumstances:

- (i) upon reinvestment of distributions by the fund; and
- (ii) upon exchange of shares of other classes of the fund.

The methods of reducing the sales charge through the right of accumulation and the statement of intention described above (please see the statement of additional information for the referenced description) with respect to class A and M shares do not apply to class T shares.

Additional information about reductions and waivers of sales charges, including deferred sales charges, is included in the SAI. You may consult your financial representative or Putnam Retail Management for assistance.

Appendix

Financial intermediary specific sales charge waiver information

As described in the prospectus, class A, M and T shares may be subject to an initial sales charge and class B and C shares may be subject to a CDSC. Certain financial intermediaries may impose different initial sales charges or waive the initial sales charge or CDSC in certain circumstances. This Appendix details the variations in sales charge waivers by financial intermediary. You should consult your financial representative for assistance in determining whether you may qualify for a particular sales charge waiver.

MERRILL LYNCH

Effective April 10, 2017, if you purchase fund shares through a Merrill Lynch platform or account held at Merrill Lynch, you will be eligible only for the following sales charge waivers (front-end sales charge waivers and CDSC waivers) and discounts, which may differ from those disclosed elsewhere in the fund's prospectus or SAI. It is your responsibility to notify your financial representative at the time of purchase of any relationship or other facts qualifying you for sales charge waivers or discounts.

Front-end Sales Charge Waivers on Class A Shares available through Merrill Lynch

- Employer-sponsored retirement, deferred compensation and employee benefit plans (including health savings accounts) and trusts used to fund those plans, provided that the shares are not held in a commission-based brokerage account and shares are held for the benefit of the plan
- Shares purchased by college savings plans that qualify for tax-exempt treatment under Section 529 of the Internal Revenue Code of 1986, as amended
- Shares purchased through a Merrill Lynch-affiliated investment advisory program
- Shares purchased by third party investment advisors on behalf of their advisory clients through Merrill Lynch's platform
- Shares of funds purchased through the Merrill Edge Self-Directed platform
- Shares purchased through reinvestment of capital gains distributions and dividend reinvestment when purchasing shares of the fund (but not any other Putnam fund)

- Shares exchanged from Class C shares of the same fund in the month of or following the 10-year anniversary of the purchase date
- Employees and registered representatives of Merrill Lynch or its affiliates and their family members
- Trustees of the fund, and employees of Putnam Management or any of its affiliates, as described in the fund's prospectus
- Shares purchased from the proceeds of redemptions from a Putnam fund, provided (1) the repurchase occurs within 90 days following the redemption, (2) the redemption and purchase occur in the same account, and (3) redeemed shares were subject to a front-end or deferred sales charge (known as Rights of Reinstatement)

CDSC Waivers on A, B and C Shares available through Merrill Lynch

- Death or disability of the shareholder
- Shares sold as part of a systematic withdrawal plan as described in the fund's prospectus
- Return of excess contributions from an IRA Account
- Shares sold as part of a required minimum distribution for IRA and retirement accounts due to the shareholder reaching age 70½
- Shares sold to pay Merrill Lynch fees but only if the transaction is initiated by Merrill Lynch
- Shares acquired through a right of reinstatement
- Shares held in retirement brokerage accounts that are exchanged for a share class with lower operating expenses due to transfer to certain fee based accounts or platforms (applicable to A and C shares only)

Front-end Sales Charge Discounts available through Merrill Lynch: Breakpoints, Rights of Accumulation & Letters of Intent

- Breakpoints as described in the fund's prospectus and SAI
- Rights of Accumulation (ROA), which entitle you to breakpoint discounts, will be automatically calculated based on the aggregated holding of fund family assets held by accounts within your household at Merrill Lynch. Eligible Putnam fund assets not held at Merrill Lynch may be included in the ROA calculation only if you notify your financial representative about such assets
- Letters of Intent (LOI), which allow for breakpoint discounts based on anticipated purchases of Putnam funds, through Merrill Lynch, over a 13-month period

HOW TO BUY SHARES

Initial sales charges for class A, class M and class T shares. The public offering price of class A, class M and class T shares is the net asset value plus a sales charge that varies depending on the size of your purchase (calculable as described above) (please see the statement of additional information for the referenced description). The fund receives the net asset value. The tables below (please see the statement of additional information for tables that are not included below) indicate the sales charges applicable to purchases of class A, class M and class T shares of the funds by

style category. The variations in sales charges may reflect the varying efforts required to sell shares to different categories of purchasers, as well as other relevant factors.

The sales charge for class A shares and class M shares is allocated between your investment dealer and Putnam Retail Management as shown in the tables below (please see the statement of additional information for tables that are not included below), except when Putnam Retail Management, in its discretion, allocates the entire amount to your investment dealer. For class T shares, the entire sales charge amount will be allocated to the investment dealer, as shown in the table below (please see the statement of additional information for tables that are not included below).

For Putnam PanAgora Managed Futures Strategy, Putnam PanAgora Market Neutral Fund and Putnam PanAgora Risk Parity Fund only:

Amount of transaction at offering price (\$)	CLASS A		CLASS M	
	Sales charge as a percentage of offering price	Amount of sales charge reallocated to dealers as a percentage of offering price	Sales charge as a percentage of offering price	Amount of sales charge reallocated to dealers as a percentage of offering price
Under 50,000	6.10%	5.75%	3.63%	3.50%
50,000 but under 100,000	4.71	4.50	2.56	2.50
100,000 but under 250,000	3.63	3.50	1.52	1.50
250,000 but under 500,000	2.56	2.50	1.01	1.00
500,000 and above	NONE	NONE	N/A**	N/A**

For all Putnam funds that offer class T shares (except Putnam PanAgora Managed Futures Strategy, Putnam PanAgora Market Neutral Fund and Putnam PanAgora Risk Parity Fund, Putnam Short Duration Income Fund and Putnam Absolute Return 100 Fund)*:

Amount of transaction at offering price (\$)	CLASS T	
	Sales charge as a percentage of offering price	Amount of sales charge reallocated to dealers as a percentage of offering price
Under 249,000	2.50%	2.50%
250,000 but under 499,999	2.00	2.00
500,000 but under 999,999	1.50	1.50
1,000,000 and above	1.00	1.00

For Putnam PanAgora Managed Futures Strategy, Putnam PanAgora Market Neutral Fund and Putnam PanAgora Risk Parity Fund:

Amount of transaction at offering price (\$)	CLASS T	
	Sales charge as a percentage of offering price	Amount of sales charge reallocated to dealers as a percentage of offering price
Under 249,000	2.56%	2.50%
250,000 but under 499,999	2.04	2.00
500,000 but under 999,999	1.52	1.50
1,000,000 and above	1.01	1.00

* Purchases into Putnam Short Duration Income Fund and Putnam Absolute Return 100 Fund will not be subject to any sales charge.

Application of CDSC to Systematic Withdrawal Plans (“SWP”).

The SWP provisions relating to CDSC waivers described below (please see the statement of additional information for the referenced waivers) do not apply to customers purchasing shares of the fund through a Specified Intermediary, unless otherwise specified in the Appendix to the fund’s prospectus. Please refer to the Appendix to the fund’s prospectus for the SWP provisions that are applicable to each Specified Intermediary.

Ways to Reduce Initial Sales Charges—Class A and Class M Shares

There are several ways in which an investor may obtain reduced sales charges on purchases of class A shares and class M shares. The variations in sales charges reflect the varying efforts required to sell shares to separate categories of purchasers. These provisions may be altered or discontinued at any time. The breakpoint discounts described below [please see the full prospectus for breakpoint discounts] do not apply to customers purchasing shares of the fund through any of the financial intermediaries specified in the Appendix to the fund’s prospectus (each, a “Specified Intermediary”). Please refer to the Appendix to the fund’s prospectus for the breakpoint discounts that are applicable to each Specified Intermediary.

Exchange Privilege

Except as otherwise set forth in this section (please see the full prospectus for additional details), by calling Putnam Investor Services, investors may exchange shares valued in the aggregate up to \$500,000 between accounts with identical registrations, provided that no certificates are outstanding for such shares. During periods of unusual market changes and shareholder activity, shareholders may experience delays in contacting Putnam Investor Services by telephone to exercise the telephone exchange privilege.

Class T shares may not be exchanged for any other share class or for class T shares of another Putnam fund.

Putnam Investor Services also makes exchanges promptly after receiving a properly completed Exchange Authorization Form and, if issued, share certificates. If the shareholder is a corporation, partnership, agent, or surviving joint owner, Putnam Investor Services will require additional documentation of a customary nature. Because an exchange of shares involves the redemption of fund shares and reinvestment of the proceeds in shares of another Putnam fund, completion of an exchange may be delayed under unusual circumstances if the fund were to suspend redemptions or postpone payment for the fund shares being exchanged, in accordance with federal securities laws. Exchange

Authorization Forms and prospectuses of the other Putnam funds are available from Putnam Retail Management or investment dealers having sales contracts with Putnam Retail Management. The prospectus of each fund describes its goal(s) and policies, and shareholders should obtain a prospectus and consider these objectives and policies carefully before requesting an exchange. Shares of certain Putnam funds are not available to residents of all states. The fund reserves the right to change or suspend the exchange privilege at any time. Shareholders would be notified of any change or suspension. Additional information is available from Putnam Investor Services at 1-800-225-1581.

Shareholders of other Putnam funds may also exchange their shares at net asset value for shares of the fund, as set forth in the current prospectus of each fund. Exchanges from Putnam Government Money Market Fund, Putnam Money Market Fund or Putnam Short Duration Income Fund into another Putnam fund may be subject to an initial sales charge. Generally, exchanges of class T shares of one Putnam fund for class T shares of another Putnam fund will be subject to the initial sales charge applicable to class T shares. As described in the prospectus, shareholders holding shares through certain financial intermediaries with whom Putnam Retail Management has entered into arrangements may be able to exchange into class T shares without being subject to an initial sales charge.

For federal income tax purposes, an exchange is a sale on which the investor generally will realize a capital gain or loss depending on whether the net asset value at the time of the exchange is more or less than the investor's basis.

Same-Fund Exchange Privilege. Class A shareholders who are eligible to purchase class R5, class R6, class T or class Y shares may exchange their class A shares for class R5, class R6, class T or class Y shares of the same fund, provided that such shares are offered to residents of the shareholder's state, that the class A shares are no longer subject to a CDSC and, in the case of class R5, class R6 and class T shares, if applicable, the shares are available through the relevant retirement plan.

Class C shareholders who are eligible to purchase class A shares without a sales charge because the shareholders are (i) clients of broker-dealers, financial institutions, financial intermediaries or registered investment advisors that are approved by Putnam Retail Management and charge a fee for advisory or investment services or (ii) clients of broker-dealers, financial institutions, or financial intermediaries that have entered into an agreement with Putnam Retail Management to offer shares through a fund 'supermarket' or retail self-directed brokerage account (with or without the imposition of a transaction fee) may exchange their class C shares for class A shares of the same fund, provided that (i) the class C shares are no longer subject to a CDSC and (ii) class A shares of such fund are offered to residents of the shareholder's state.

Class C shareholders who are eligible to purchase class T or class Y shares may exchange their class C shares for class T or class Y shares of the same fund, provided that the class C shares are no longer subject to a CDSC, class T or class Y shares of such fund are offered to residents of the shareholder's state and, in the case of class T shares, if applicable, the shares are available through the relevant retirement plan.

Class M shareholders who are eligible to purchase class T or class Y shares may exchange their Class M shares for class T or class Y shares of the same fund, provided that class T or class Y shares of such fund are offered to residents of the shareholder's state.

Class R shareholders who are eligible to purchase class R5 or class R6 shares may exchange their class R shares for class R5 or class R6 shares of the same fund, provided that such shares are offered to residents of the shareholder's state and, in the case of class R5 and class R6 shares, the shares are available through the relevant retirement plan.

Class R5 shareholders who are eligible to purchase class A, class R, class R6 or class Y shares may exchange their class R5 shares for class A, class R, class R6, or class Y shares of the same fund, provided that such shares are offered to residents of the shareholder's state and are available through the relevant retirement plan.

Class R6 shareholders who are eligible to purchase class A, class R, class R5 or class Y shares may exchange their class R6 shares for class A, class R, class R5 or class Y shares of the same fund, provided that such shares are offered to residents of the shareholder's state and are available through the relevant retirement plan.

Class Y shareholders who are eligible to purchase class A, class C, class R5, class R6 or class T shares may exchange their class Y shares for class A, class C, class R5, class R6 or class T shares of the same fund, provided that such shares are offered to residents of the shareholder's state and, in the case of class R5 and class R6 shares, the shares are available through the relevant retirement plan. Class Y shareholders should be aware that the financial institution or intermediary through which they hold class Y shares may have the authority under its account or similar agreement to exchange class Y shares for class A, class C or class T shares under certain circumstances, and none of the Putnam Funds, Putnam Retail Management or Putnam Investor Services are responsible for any actions taken by a shareholder's financial institution or intermediary in this regard.

No sales charges or other charges will apply to any such exchange. For federal income tax purposes, a same-fund exchange is not expected to result in the realization by the investor of a capital gain or loss. Shareholders should be aware that (i) the same-fund exchange privilege may be effected only if permitted by a shareholder's dealer of record, (ii) the same-fund exchange privilege may not be available for all accounts and may not be offered by all dealers, financial institutions and other intermediaries through which a shareholder may hold shares, and (iii) the dealer of record through whom a shareholder holds shares may be authorized (e.g., under its account or similar agreement with a shareholder) to reject any same-fund exchange. None of the Putnam funds, Putnam Retail Management or Putnam Investor Services are responsible for any determinations made, or any actions taken, by a shareholder's dealer of record in respect of same-fund exchanges. To exchange shares under the same-fund exchange privilege, please contact your investment dealer or Putnam Investor Services.