

2018 year-end updates



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.

Initial sales charges for class N shares (please see the prospectus for applicable share classes for your fund)

	Class N sales charge as a percentage of*:	
Amount of purchase at offering price (\$)	Net amount invested	Offering price**
Under 50,000	1.52%	1.50%
50,000 but under 100,000	1.27%	1.25%
100,000 but under 250,000	1.01%	1.00%
250,000 and above	NONE	NONE

* 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.

Class N shares [please see the prospectus for applicable share classes for your fund]

- (i) current and former Trustees of the fund, their family members, business and personal associates; current and former employees of Putnam Management and certain current and former corporate affiliates, their family members, business and personal associates; employer-sponsored retirement plans for the foregoing; and partnerships, trusts or other entities in which any of the foregoing has a substantial interest;
- (ii) clients of administrators or other service providers of employer-sponsored retirement plans (for purposes of this waiver, employer-sponsored retirement plans do not include SEP IRAs, SIMPLE IRAs or SARSEPs) (not applicable to tax-exempt funds);
- (iii) registered representatives and other employees of broker-dealers having sales agreements with Putnam Retail Management; employees of financial institutions having sales agreements with Putnam Retail Management or otherwise having an arrangement with any such broker-dealer or financial institution with respect to sales of fund shares; and their immediate family members (spouses and children under age 21, including step-children and adopted children);
- (iv) a trust department of any financial institution purchasing shares of the fund in its capacity as trustee of any trust (other than a tax-qualified retirement plan trust), through an arrangement approved by Putnam Retail Management, if the value of the shares of the fund and other Putnam funds purchased or held by all such trusts exceeds \$1 million in the aggregate;
- (v) clients of (i) broker-dealers, financial institutions, financial intermediaries or registered investment advisors that charge a fee for advisory or investment services or (ii) broker-dealers, financial institutions, or financial intermediaries that have entered into an agreement with Putnam Retail Management to offer shares through retail self directed brokerage account with or without the imposition of a transaction fee;
- (vi) college savings plans that qualify for tax-exempt treatment under Section 529 of the Internal Revenue Code of 1986, as amended (the "Code"); and
- (vii) shareholders reinvesting the proceeds from a Putnam Corporate IRA Plan distribution into a nonretirement plan account.

Administrators and other service providers of employer-sponsored retirement plans are required to enter into contractual arrangements with Putnam Investor Services in order to offer and hold fund shares. Administrators and other service providers of employer-sponsored retirement plans seeking to place trades on behalf of their plan clients should consult Putnam Investor Services as to the applicable requirements.

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.

Deferred sales charges for certain class A and certain class N shares [please see the prospectus for applicable share classes for your fund]

Purchases of class N shares that are part of a purchase of \$250,000 or more (other than by an employer-sponsored retirement plan) will be subject to a 0.25% deferred sales charge if redeemed within 9 months of purchase.

Deferred sales charges will be based on the lower of the shares' cost and current NAV. You may sell shares acquired by reinvestment of distributions without a charge at any time.

Appendix

Financial intermediary specific sales charge waiver information

As described in the prospectus, class A and M 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. Not all financial intermediaries specify financial intermediary-specific sales charge waiver categories for every share class. For information about sales charges and waivers available for share classes other than those listed below, please see the section "Additional reductions and waivers of sales charges" in the prospectus. You should consult your financial representative for assistance in determining whether you may qualify for a particular sales charge waiver.

AMERIPRISE FINANCIAL

Class A Shares Front-End Sales Charge Waivers Available at Ameriprise Financial

The following information applies to class A share purchases if you have an account with or otherwise purchase class A shares through Ameriprise Financial:

Effective June 1, 2018, shareholders purchasing class A shares of the fund through Ameriprise Financial will be eligible for the following front-end sales charge waivers only, which may differ from those disclosed elsewhere in this prospectus or the SAI:

- Employer-sponsored retirement plans (e.g., 401(k) plans, 457 plans, employer-sponsored 403(b) plans, profit sharing and money purchase pension plans and defined benefit plans). For purposes of this provision, employer-sponsored retirement plans do not include SEP IRAs, Simple IRAs or SAR-SEPs
- Shares purchased through an Ameriprise Financial investment advisory program
- Shares purchased by third party investment advisors on behalf of their advisory clients through Ameriprise Financial's platform
- Shares purchased through reinvestment of capital gains distributions and dividend reinvestment when purchasing shares of the same 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. To the extent that this prospectus elsewhere provides for a waiver with respect to such shares following a shorter holding period, that waiver will apply to exchanges following such shorter period. To the extent that this prospectus elsewhere provides for a waiver with respect to exchanges of Class C shares for load waived shares, that waiver will also apply to such exchanges
- Employees and registered representatives of Ameriprise Financial or its affiliates and their immediate family members
- Shares purchased by or through qualified accounts (including IRAs, Coverdell Education Savings Accounts, 401(k)s, 403(b) TSCAs subject to ERISA and defined benefit plans) that are held by a covered family member, defined as an Ameriprise financial advisor and/or the advisor's spouse, advisor's lineal ascendant (mother, father, grandmother, grandfather, great grandmother, great grandfather), advisor's lineal descendant

(son, step-son, daughter, step-daughter, grandson, granddaughter, great grandson, great granddaughter) or any spouse of a covered family member who is a lineal descendant

- Shares purchased from the proceeds of redemptions within the same fund family, 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 load (i.e. Rights of Reinstatement)

MORGAN STANLEY WEALTH MANAGEMENT

Effective July 1, 2018, shareholders purchasing fund shares through a Morgan Stanley Wealth Management transactional brokerage account will be eligible only for the following front-end sales charge waivers with respect to class A shares, which may differ from and may be more limited than those disclosed elsewhere in this fund's Prospectus or SAI.

Front-end Sales Charge Waivers on class A Shares available at Morgan Stanley Wealth Management:

- Employer-sponsored retirement plans (e.g., 401(k) plans, 457 plans, employer-sponsored 403(b) plans, profit sharing and money purchase

- pension plans and defined benefit plans). For purposes of this provision, employer-sponsored retirement plans do not include SEP IRAs, Simple IRAs, SAR-SEPs or Keogh plans
- Morgan Stanley employee and employee-related accounts according to Morgan Stanley's account linking rules
- Shares purchased through reinvestment of dividends and capital gains distributions when purchasing shares of the same fund
- Shares purchased through a Morgan Stanley self-directed brokerage account
- Class C (i.e., level-load) shares that are no longer subject to a contingent deferred sales charge and are converted to Class A shares of the same fund pursuant to Morgan Stanley Wealth Management's share class conversion program
- Shares purchased from the proceeds of redemptions within the same fund family, provided (i) the repurchase occurs within 90 days following the redemption, (ii) the redemption and purchase occur in the same account, and (iii) redeemed shares were subject to a front-end or deferred sales charge

HOW TO BUY SHARES

Initial sales charges for class A, class M and class N shares. The public offering price of class A, class M and class N 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 indicate the sales charges applicable to purchases of class A, class M and class N shares of the funds by style category.

The sales charge for class A, class M and class N shares is allocated between your investment dealer and Putnam Retail Management as shown in the tables below, except when Putnam Retail Management, in its discretion, allocates the entire amount to your investment dealer.

The underwriter's commission, or dealer reallowance, is the sales charge shown in the prospectus less any applicable dealer discount. Putnam Retail Management will give dealers ten days' notice of any changes in the dealer discount.

Putnam Retail Management retains the entire sales charge on any retail sales made by it. The Putnam Funds require that a broker-dealer be associated with every account (a "broker-dealer of record"). In instances where the registered account owner has not designated a broker-dealer of record, Putnam Retail Management will be defaulted as the broker-dealer of record for the account. Putnam Retail Management is not a full service broker-dealer, and does not provide investment advice. As default broker-dealer of record, Putnam Retail Management will not be able to provide services that are typically offered by a brokerage firm, such as assisting with financial planning or providing recommendations, or otherwise assisting with investment decisions. Where Putnam Retail Management is listed as the default broker-dealer of record for an account, it will receive all applicable sales charges and service fees associated with the account.

For purchases of class N shares over \$250,000, Putnam Retail Management pays commissions on sales during the one-year period beginning with the date of the initial purchase. Each subsequent one-year measuring period for these purposes begins with the first qualifying purchase following the end of the prior period. Commissions for these purchases are paid at the rate of 0.25% of the amount of qualifying purchases up to \$4 million, 0.15% of the next \$46 million of qualifying purchases and 0.10% of qualifying purchases thereafter.

For Growth Funds, Blend Funds, Value Funds, Asset Allocation Funds (excluding Retirement Income Fund Lifestyle 1, Putnam PanAgora Managed Futures Strategy, Putnam PanAgora Market Neutral Fund and Putnam PanAgora Risk Parity Fund), Global Sector Funds and RetirementReady® Funds 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	5.75%	5.00%	3.50%	3.00%
50,000 but under 100,000	4.50	3.75	2.50	2.00
100,000 but under 250,000	3.50	2.75	1.50	1.00
250,000 but under 500,000	2.50	2.00	1.00	1.00
500,000 but under 1,000,000	2.00	1.75	1.00	1.00
1,000,000 and above	NONE	NONE	N/A*	N/A*

For Putnam PanAgora Managed Futures Strategy, Putnam PanAgora Market Neutral Fund, Putnam PanAgora Risk Parity Fund and Putnam Multi-Asset Absolute Return 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	5.75%	5.00%	3.50%	3.00%
50,000 but under 100,000	4.50	3.75	2.50	2.00
100,000 but under 250,000	3.50	2.75	1.50	1.00
250,000 but under 500,000	2.50	2.00	1.00	1.00
500,000 and above	NONE	NONE	N/A**	N/A**

For Retirement Income Fund Lifestyle 1, Taxable Income Funds and Tax-Exempt Funds (except for Money Market Funds, Putnam Short-Term Municipal Income Fund, Putnam Floating Rate Income Fund, and Putnam Short Duration Income Fund):

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	4.00%	3.50%	3.25%	3.00%
50,000 but under 100,000	4.00	3.50	2.25	2.00
100,000 but under 250,000	3.25	2.75	1.25	1.00
250,000 but under 500,000	2.50	2.00	1.00	1.00
500,000 and above	NONE	NONE	N/A**	N/A**

For Putnam Fixed Income Absolute Return Fund and Putnam Floating Rate Income 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 100,000	2.25%	2.00%	0.75%	0.75%
100,000 but under 250,000	1.75%	1.50%	0.75%	0.75%
250,000 but under 500,000	1.25%	1.00%	0.75%	0.75%
500,000 and above	NONE	1.00%	N/A**	N/A**

For Putnam Short Duration Bond Fund and Putnam Short-Term Municipal Income Fund only:

Amount of transaction at offering price (\$)	CLASS A	
	Sales charge as a percentage of offering price	Amount of sales charge reallocated to dealers as a percentage of offering price
Under 100,000	2.25%	2.00%
100,000 - 249,999	1.25%	1.00%
250,000 and above	NONE	NONE

Amount of transaction at offering price (\$)	CLASS M	
	Sales charge as a percentage of offering price	Amount of sales charge reallocated to dealers as a percentage of offering price
Under 250,000	0.75%	0.75%
250,000 and above	N/A***	N/A***

Money Market Fund) purchased by retail investors on or after March 1, 2018 that are not subject to an initial sales charge (in accordance with the schedules stated above) are subject to a CDSC of 1.00% if redeemed before the first day of the month in which the twelve-month anniversary of that purchase occurs. Class A shares of Putnam Short Duration Bond Fund and Putnam Short-Term Municipal Income Fund purchased by retail investors that are not subject to an initial sales charge (in accordance with the schedules stated above) are subject to a CDSC of 1.00% if redeemed before the first day of the month in which the nine-month anniversary of that purchase occurs. Class A shares of Putnam Short Duration Income Fund, Putnam Money Market Fund and Putnam Government Money Market Fund purchased by retail investors on or after March 1, 2018 by exchanging shares from another Putnam fund that were not subject to an initial sales charge (in accordance with the schedules stated above) are subject to a CDSC of 1.00% if redeemed before the first day of the month in which the twelve-month anniversary of the original purchase occurs. Class N shares of any Putnam Fund purchased by retail investors that are not subject to an initial sales charge (in accordance with the schedules stated above) are subject to a CDSC of 0.25% if redeemed before the first day of the month in which the nine-month anniversary of that purchase occurs. Class T1 shares of Putnam Money Market Fund and Putnam Government Money Market Fund purchased by retail investors by exchanging shares from another Putnam fund that were not subject to an initial sales charge (in accordance with the schedules stated above) are subject to a CDSC of 1.00% if redeemed before the first day of the month in which the nine-month anniversary of the original purchase occurs.

The CDSC assessed on redemptions of fewer than all of an investor's class A shares or class N shares (and, for Putnam Money Market Fund and Putnam Government Money Market Fund, class T1 shares) subject to a CDSC will be based on the amount of the redemption minus the amount of any appreciation on the investor's CDSC-subject shares since the purchase of such shares. The CDSC assessed on full redemptions of CDSC-subject shares will be based on the lower of the shares' cost and current NAV. Class A shares that are exchanged between Putnam funds will maintain the CDSC time period for the fund in which the initial purchase was made. Putnam Retail Management will retain any CDSC imposed on redemptions of such shares to compensate it for the up-front commissions paid to financial intermediaries for such share sales.

Commission payments and CDSCs for class B and class C shares. Except in the case of Putnam Money Market Fund, Putnam Government Money Market Fund and Putnam Short Duration Income Fund as noted below, Putnam Retail Management will pay a 4% commission on sales of class B shares of the fund only to those financial intermediaries who have entered into service agreements with Putnam Retail Management. For tax-exempt funds, this commission includes a 0.20% pre-paid service fee (except for Putnam Tax-Free High Yield Fund and Putnam AMT-Free Municipal Fund, each of which has a 0.25% pre-paid service fee). For Putnam Floating Rate Income Fund, Putnam Short Duration Bond Fund, Putnam Fixed Income

- * The funds will not accept purchase orders for class M shares (other than by employer-sponsored retirement plans) where the total of the current purchase, plus existing account balances that are eligible to be linked under a right of accumulation (as described below) is \$1 million or more.
- ** The funds will not accept purchase orders for class M shares (other than by employer-sponsored retirement plans) where the total of the current purchase, plus existing account balances that are eligible to be linked under a right of accumulation (as described below) is \$500,000 or more.
- *** The fund will not accept purchase orders for class M shares (other than by employer-sponsored retirement plans) where the total of the current purchase, plus existing account balances that are eligible to be linked under a right of accumulation (as described below) is \$250,000 or more.

For all Putnam funds that offer class N shares:

Amount of transaction at offering price (\$)	CLASS N	
	Sales charge as a percentage of offering price	Amount of sales charge reallocated to dealers as a percentage of offering price
Under 50,000	1.50%	1.25%
50,000 but under 100,000	1.25%	1.00%
100,000 but under 250,000	1.00%	0.75%
250,000 and above	NONE	0.25%

Purchases of class A, class N and class T1 shares without an initial sales charge. Class A shares of any Putnam fund (other than Putnam Short Duration Bond Fund, Putnam Short Duration Income Fund, Putnam Short-Term Municipal Income Fund, Putnam Government Money Market Fund, and Putnam

Absolute Return Fund and Putnam Short-Term Municipal Income Fund, Putnam Retail Management will pay a 1.00% commission to financial intermediaries selling class B shares of the fund.

Except in the case of Putnam Money Market Fund, Putnam Government Money Market Fund and Putnam Short Duration Income Fund, Putnam Retail Management pays financial intermediaries a 1.00% commission on sales of class C shares of a fund.

Putnam Retail Management will retain any CDSC imposed on redemptions of class B and class C shares to compensate it for the cost of paying the up-front commissions paid to financial intermediaries for class B or class C share sales.

Conversion of class B shares into class A shares. Class B shares will automatically convert to class A shares on or around the end of the month eight years after the purchase date (for Putnam Small Cap Value Fund, on or around the end of the month six years after the purchase date, and for Putnam Sustainable Future Fund, on or around the end of the month five years after the purchase date). Class B shares acquired by exchanging class B shares of another Putnam fund will convert to class A shares based on the time of the initial purchase, and the holding period of the fund of initial purchase will apply. Any CDSC for such shares will be calculated using the schedule of the fund into or from which shares have been exchanged that would result in the highest CDSC applicable to such shares." Class B shares acquired through reinvestment of distributions will convert to class A shares based on the date of the initial purchase to which such shares relate. For this purpose, class B shares acquired through reinvestment of distributions will be attributed to particular purchases of class B shares in accordance with such procedures as the Trustees may determine from time to time. The conversion of class B shares to class A shares is subject to the condition that such conversions will not constitute taxable events for federal tax purposes. Shareholders should consult with their tax advisers regarding the state and local tax consequences of the conversion of class B shares to class A shares, or any other exchange or conversion of shares. Average annual total return performance information for class B shares shown in the fund's prospectus assumes conversion to class A shares after the applicable period described in the fund's prospectus.

Conversion of class C shares into class A shares. Effective April 1, 2018, Class C shares will automatically convert to class A shares on or around the end of the month ten years after the purchase date, provided that the fund or the financial intermediary through which a shareholder purchased class C shares has records verifying that the class C shares have been held for at least ten years, and that class A shares are available for purchase by residents in the shareholder's jurisdiction. Group retirement plan recordkeeping platforms of certain broker-dealer intermediaries who hold class C shares with the fund in an omnibus account do not track participant level share lot aging. These class C shares would not satisfy the conditions for the conversion. Class C shares acquired by exchanging class C shares of another Putnam fund will convert to class A shares based on the time of the initial purchase. Any CDSC for such shares will be calculated using the schedule of the fund into or from which shares have been exchanged that would result in the highest CDSC applicable to such shares. Class C shares acquired through reinvestment of distributions will convert to class A shares based on the date of the initial purchase to which such shares relate. For this purpose, class C shares acquired through reinvestment of distributions will be attributed to particular purchases of class C shares in accordance with such procedures as the Trustees may determine from time to time. The conversion of class C shares to class A shares is subject to the condition that such conversions will not constitute taxable events for federal tax purposes. Shareholders should consult with their tax advisers regarding the state and local tax consequences of the conversion of class C shares to class A shares, or any other exchange or conversion of shares.

For purposes of the waiver categories set forth in subparagraph (v) of the fund's prospectus under the sub-section Additional reductions and waivers of sales charges – Class B and class C shares, Benefit Payments currently include, without limitation, (1) distributions from an IRA due to death or post-purchase disability, (2) a return of excess contributions to an IRA or 401(k) plan, and (3) distributions from retirement plans qualified under Section 401(a) of the Code or from a 403(b) plan due to death, disability, retirement or separation from service. These waivers may be changed at any time.

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

There are several ways in which an investor may obtain reduced sales charges on purchases of class A shares, class M shares and class N shares.

These provisions may be altered or discontinued at any time. The breakpoint discounts described below [please see the full prospectus for additional details] 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.

Right of accumulation. A purchaser of class A shares, class M shares or class N shares may qualify for a right of accumulation discount by combining all current purchases by such person with the value of certain other shares of any class of Putnam funds already owned. The applicable sales charge is based on the total of:

- (i) the investor's current purchase(s); and
- (ii) the higher of (x) the maximum public offering price (at the close of business on the previous day) or (y) the initial value of total purchases (less the value of shares redeemed on the applicable redemption date) of:
 - (a) all shares held in accounts registered to the investor and other accounts eligible to be linked to the investor's accounts (as described below) in all of the Putnam funds (except closed-end and money market funds, unless acquired as described in (b) below); and
 - (b) any shares of money market funds acquired by exchange from other Putnam funds.

For shares held on December 31, 2007, the initial value will be the value of those shares at the maximum public offering price on that date.

A combined purchase currently may also include shares of any class of other continuously offered Putnam funds (other than money market funds and class A and class M shares of Putnam Short Duration Income Fund) purchased at the same time, if the dealer places the order for such shares directly with Putnam Retail Management.

Statement of Intention. Investors may also obtain the reduced sales charges for class A, class M or class N shares shown in the prospectus for investments of a particular amount by means of a written Statement of Intention (also referred to as a Letter of Intention), which expresses the investor's intention to invest that amount (including certain "credits," as described below) within a period of 13 months in shares of any class of the fund or any other continuously offered Putnam fund (excluding Putnam money market funds and Putnam Short Duration Income Fund), including through an account established as part of a Section 529 college savings plan managed by Putnam Management. Each purchase of class A shares, class M shares or class N shares under a Statement of Intention will be made at the lesser of (i) the public offering price applicable at the time of such purchase and (ii) the public offering price applicable on the date the Statement of Intention is executed to a single transaction of the total dollar amount indicated in the Statement of Intention.

An investor may receive a credit toward the amount indicated in the Statement of Intention equal to the maximum public offering price as of the close of business on the previous day of all shares he or she owns, or which are eligible to be linked for purposes of the right of accumulation described above, on the date of the Statement of Intention which are eligible for purchase under a Statement of Intention (plus any shares of money market funds and Putnam Short Duration Income Fund acquired by exchange of such eligible shares, and any class N shares of Putnam Short Duration Income Fund). Investors do not receive credit for shares purchased by the reinvestment of distributions. Investors qualifying for the "combined purchase privilege" (see above) may purchase shares under a single Statement of Intention.

The Statement of Intention is not a binding obligation upon the investor to purchase the full amount indicated. The minimum initial investment under a Statement of Intention is 5% of such amount, and must be invested immediately. Class A shares, class M shares or class N shares purchased with the first 5% of such amount will be held in escrow to secure payment of the higher sales charge applicable to the shares actually purchased if the full amount indicated is not purchased. When the full amount indicated has been purchased, the escrow will be released. If an investor desires to redeem escrowed shares before the full amount has been purchased, the shares will be released from escrow only if the investor pays the sales charge that, without regard to the Statement of Intention, would apply to the total investment made to date.