

# Morningstar ratings as of 12/31/18

Putnam funds that have received a four- or five-star overall rating for class Y shares in their Morningstar category based on risk-adjusted returns.

	Category	Fund symbol	Overall rating	Number of funds rated	3-year rating	Number of funds rated	5-year rating	Number of funds rated	10-year rating	Number of funds rated
<b>Taxable Income Funds</b>										
Convertible Securities Fund	Convertibles	PCGYX	★★★★	80	★★★	80	★★★	63	★★★★★	41
Diversified Income Trust	Nontraditional Bond	PDVYX	★★★★	274	★★★	274	★★★	177	★★★★★	62
Global Income Trust	World Bond	PGGYX	★★★★	260	★★★	260	★★★★	244	★★★★★	138
Income Fund	Intermediate-Term Bond	PNCYX	★★★★★	876	★★★★	876	★★★★	767	★★★★★	560
<b>Tax-Free Income Funds</b>										
Tax Exempt Income Fund	Muni National Long	PTEYX	★★★★	146	★★★★	146	★★★	130	★★★★	107
Tax-Free High Yield Fund	High Yield Muni	PTFYX	★★★★	156	★★★★	156	★★★	129	★★★★	82
CA Tax Exempt Income Fund	Muni California Long	PCIYX	★★★★	90	★★★★	90	★★★	87	★★★★	71
MA Tax Exempt Income Fund	Muni Massachusetts	PMAYX	★★★★	40	★★★★★	40	★★★★	38	★★★★	36
MN Tax Exempt Income Fund	Muni Minnesota	PMNYX	★★★★	43	★★★★	43	★★★★	41	★★★★	30
<b>Value Funds</b>										
Equity Income Fund	Large Value	PEIYX	★★★★	1100	★★★★	1100	★★★★	937	★★★★	686
<b>Blend Funds</b>										
Research Fund	Large Blend	PURYX	★★★★★	1208	★★★★	1208	★★★★	1071	★★★★★	805
<b>Growth Funds</b>										
Growth Opportunities Fund	Large Growth	PGOYX	★★★★	1247	★★★★★	1247	★★★★	1107	★★★★	799
Sustainable Future Fund	Mid-Cap Value	PMVYX	★★★★	363	★★★	363	★★★★	306	★★★★	218
Sustainable Leaders Fund	Large Growth	PNOYX	★★★★	1247	★★★★	1247	★★★★	1107	★★★	799
<b>Global Sector Funds</b>										
Global Technology Fund	Technology	PGTYX	★★★★	182	★★★★	182	★★★★	174	★★★	146
<b>Asset Allocation Funds</b>										
Dynamic Asset Alloc. Balanced Fund	Allocation — 50% to 70% Equity	PABYX	★★★★	697	★★★	697	★★★★	610	★★★★★	440
Dynamic Asset Alloc. Conserv. Fund	Tactical Allocation	PACYX	★★★★	240	★★★	240	★★★★	178	★★★★★	63
Dynamic Asset Alloc. Growth Fund	Allocation — 70% to 85% Equity	PAGYX	★★★★	322	★★★	322	★★★★	280	★★★★★	196
George Putnam Balanced Fund	Allocation — 50% to 70% Equity	PGEYX	★★★★★	697	★★★★★	697	★★★★★	610	★★★★★	440
<b>RetirementReady Funds</b>										
RetirementReady 2040 Fund	Target-Date 2040	PRZZX	★★★★	196	★★	196	★★★★	155	★★★★	97
RetirementReady 2045 Fund	Target-Date 2045	PRVYX	★★★★	184	★★	184	★★★★	141	★★★★★	67
RetirementReady 2050 Fund	Target-Date 2050	PRRUX	★★★★	196	★★	196	★★★★	155	★★★★★	79

Morningstar rating	Ranking within category
★★★★★	top 10%
★★★★	next 22.5%
★★★	next 35%
★★	next 22.5%
★	bottom 10%

The Morningstar Rating™ for funds, or “star rating,” is calculated for managed products (including mutual funds, variable annuity, and variable life subaccounts, exchange-traded funds, closed-end funds, and separate accounts) with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product’s monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall

Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and ten-year (if applicable) Morningstar Rating metrics. The weights are: 100% three-year rating for 36–59 months of total returns, 60% five-year rating/40% three-year rating for 60–119 months of total returns, and 50% ten-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the ten-year overall star rating formula seems to give the most weight to the ten-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods. Ratings do not take into account the effects of sales charges and loads.

All funds involve risk, including the loss of principal. You can lose money by investing.

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Investors should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing. For a prospectus, or a summary prospectus if available, containing this and other information for any Putnam fund or product, call your financial representative or call Putnam at 1-800-225-1581. Please read the prospectus carefully before investing.