

Putnam Investments Strategic Volatility Equity Composite

Year	Gross of Fees Return (%)	Net of Fees Return (%)	Annual Benchmark Returns R1000 (%)	Annual Benchmark Returns S&P 500 (%)	Three-year Standard Deviation of Composite (%) ¹	Three-year Standard Deviation of Benchmark R1000 ¹ (%)	Three-year Standard Deviation of Benchmark S&P 500 ¹ (%)	Standard Deviation of Account Returns (%) ²	Composite Assets (millions)	Total Firm Assets (millions) ³	Number of Accounts
2018	-4.16	-4.76	-4.78	-4.38	10.31	10.96	10.80	N/A	132	117,149	≤5
2017	21.65	20.89	21.69	21.83	8.29	9.97	9.92	N/A	154	117,916	≤5
2016	8.07	7.40	12.05	11.96	8.36	10.69	10.59	N/A	153	109,728	≤5
2015	-3.18	-3.82	0.92	1.38	8.93	10.48	10.48	N/A	166	110,621	≤5
2014	13.61	12.77	13.24	13.69	8.69	9.12	8.98	N/A	202	120,093	≤5
2013	24.98	24.09	33.11	32.39	10.16	12.26	11.94	N/A	225	110,816	≤5
2012	13.09	12.30	16.42	16.00	N/A	N/A	N/A	N/A	460	98,926	≤5
2011	13.78	12.98	1.50	2.11	N/A	N/A	N/A	N/A	327	95,033	≤5
2010	7.55*	7.36*	11.19*	10.76*	N/A	N/A	N/A	N/A	232	102,320	≤5

* The period from inception, September 30, 2010, to December 31, 2010, is not annualized.

1 The three-year, annualized ex-post standard deviation of monthly composite and benchmark returns represents a measure of total investment risk (volatility) and calculates the variance of a distribution of returns. Data is not presented for periods with less than 36 months of composite returns.

2 The standard deviation of comparable performance over time is a measure of volatility. Composite dispersion is measured by the standard deviation across equal weighted portfolios represented within the composite for the full year. Standard deviation is N/A for composites with five or fewer accounts for the full year.

3 Total Firm Assets prior to 2011 do not include Guaranteed Investment Contract ("GIC") assets.

Firm overview: Putnam Investments claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Putnam Investments has been independently verified from January 1, 2000, through December 31, 2018. The verification report(s) is/are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. Putnam Investments (the "Firm") is defined as a broad-based investment management organization that provides financial services to institutions and individuals through separately managed accounts, pooled funds, and mutual funds. Except for a minority stake owned by employees, the Firm is a wholly owned subsidiary of Great-West Lifeco Inc. Investment management is provided by four wholly owned subsidiaries of the Firm: The Putnam Advisory Company, LLC; Putnam Investment Management, LLC; Putnam Fiduciary Trust Company; and Putnam Investments Limited. A list of the Firm's composite descriptions is available upon request.

Composition of composite: The Putnam Investments Strategic Volatility Equity Composite (the "Composite") is an equity strategy combined with an option overlay. The portfolio is levered by 135%. The objective is to outperform the return of the Russell 1000 Index over a full market cycle, with the same volatility. It takes very little sector risk and no out-of-benchmark positions, and stays fully equitized. The stocks in the equity portfolio are selected by the portfolio manager based on screens for risk and fundamental characteristics. The stocks generally have low beta and low volatility metrics. The option strategy involves selling out-of-the-money short-term calls and buying out-of-the-money long-term puts. The option overlay seeks to significantly dampen the volatility of the portfolio and help improve its risk-adjusted return potential. The portfolio is leveraged so that the volatility of the portfolio is comparable to the benchmark. The Composite comprises all fully discretionary assets, including carve-out assets, managed by Putnam in this style. The Composite only includes portfolios where cash is denominated in U.S. dollars. Although accounts in the Composite pursue the same investment strategy, they may have different benchmarks. The Composite creation date was September 17, 2012. The Composite was formerly called the Levered Low Volatility Equity USD Composite. As of November 1, 2012, a secondary benchmark, the S&P 500, was added for comparative purposes. Levered low-volatility equity sleeves of master funds have been included in the Composite. These sleeves are considered "carve-outs." A "carve-out" is a portion of a portfolio that is by itself representative of a distinct investment strategy. It is used to create a track record for a narrower mandate from a multiple-strategy portfolio managed to a broader mandate. Carve-outs are managed separately with their own cash. A borrowing rate of Libor 3 months plus 15 basis points is applied to the sleeves in the Composite as the cost of borrowing is not reflected at the sleeve/sub account level. The borrowing rate is derived from the contract terms of the swap derivative most representative of the basket of swaps used to synthetically leverage the portfolio. Actual borrowing costs for your portfolio could differ from the applied rate, and your returns could be higher or lower than those of the Composite. However, the applied borrowing rate is intended to provide the most appropriate example of the impact of borrowing costs on a levered low-volatility equity client portfolio. Composites may include portfolios with certain existing investment restrictions that the Firm believes do not materially impact the investment strategy.

Risk considerations: This strategy is not intended to be a complete investment program. It is important to understand that you can lose money by investing in this strategy. Investing in this strategy entails numerous risks. This strategy may use futures, options, and other derivative instruments to gain exposure to various markets. Derivatives involve the risk, in the case of many over-the-counter instruments, of the potential inability to terminate or sell derivatives positions and the potential failure of the other party to the instrument to meet its obligations. The use of leverage through derivatives may magnify this risk. Leverage and derivatives carry other risks that may result in losses, including the effect of unexpected market shifts and/or the potential illiquidity of certain derivatives. Strategies that use leverage to gain exposure to various markets may not be suitable for all investors. Any use of leverage exposes the strategy to risk of loss. In some cases, the risk may be substantial. The effectiveness of the index option-based risk management strategy may be reduced if the strategy's equity portfolio does not correlate to the performance of the index underlying its option positions. The strategy may invest in foreign securities traded in U.S. markets, including through ADRs. Foreign securities are subject to foreign currency fluctuations, higher volatility than U.S. securities, and limited liquidity. Political, economic, and information risks are also associated with foreign securities. Investments in emerging markets may be subject to these risks to a greater extent than those in more developed markets. The strategy may invest in real estate investment trusts (REITs). REITs are subject to certain risks, particularly those risks associated with the real estate market and mortgage investing. These risks include fluctuating property values, changes in interest rates, property taxes, and mortgage-related risks. Selling index call options can reduce the risk of owning stocks, but it limits the opportunity to profit from an increase in the market value of

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stocks in exchange for up-front cash at the time of selling the call option. The strategy also risks losing all or part of the cash paid for purchasing index put options. Unusual market conditions or the lack of a ready market for any particular option at a specific time may reduce the effectiveness of the option strategies, and for these and other reasons the option strategies may not reduce the strategy's volatility to the extent desired. From time to time, the strategy may reduce its holdings of put options, resulting in an increased exposure to a market decline.

Calculation of composite: Returns are presented in U.S. dollars ("USD"). Benchmark, Putnam account and Putnam mutual fund valuation sources and timing may sometimes differ, causing dispersion within the composite and between the composite and the benchmark. The results of the Composite for all periods shown include the reinvestment of dividends and other earnings. The Firm values securities using market quotations, fair value prices from pricing services and/or broker quotations. In limited circumstances, the Firm will value securities based solely on its own analysis, this may include using model prices based on third-party data or, for private equity securities, a fair valuation process whereby a special Valuation committee will review the nature of each deal, the model currently used to value each deal, and any critical underlying assumptions in order to determine fair value. Fair valuations based on internal resources are made in accordance with the Putnam Funds Pricing Procedures and are subject to the oversight of the Firm's Valuation Committee. Please note that, in limited cases, the inputs used to value the security are unobservable and reflect the source's own assumptions. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

Benchmark disclosure: The Russell 1000 Index includes the 1,000 largest securities in the Russell 3000 Index. The S&P 500 Index covers 500 industrial, utility, transportation, and financial companies of the U.S. markets (mostly NYSE issues). The index represents about 75% of NYSE market capitalization and 30% of NYSE issues. It is a capitalization-weighted index calculated with dividends reinvested. Benchmarks are generally taken from published sources and may have different calculation methodologies, pricing times, and foreign exchange sources from the Composite. The effect of those differences is deemed to be immaterial. The securities holdings of the Composite may differ materially from those of the index used for comparative purposes. Indexes are unmanaged and do not incur expenses. You cannot invest directly in an index. Frank Russell Company is the source and owner of the trademarks, service marks and copyrights related to the Russell Indexes. Russell® is a trademark of Frank Russell Company.

Gross and Net of fees disclosure: Gross of Fee Returns are net of transactions costs but do not include the deduction of management fees and other expenses that may be incurred in managing an investment account. A portfolio's return will be reduced by management and other fees. The impact of management fees can be material. For instance, assume that \$1 million is invested in a Putnam Investments account, and this account achieves a 10% compounded annual return, gross of fees, for 10 years. If a management fee of 0.50% was charged each year for the 10-year period, the annual return would be 9.5% and the ending dollar value would be \$2,478,200, net of fees, as opposed to \$2,593,700, gross of fees. The actual fee rates are stated in advisory contracts with clients. For composites that contain U.S. mutual funds and UCITS funds, gross-of-fee performance is calculated by applying the prorated monthly percentage of the total net annual expense ratio (as published in the fund's annual report) to the monthly return on net asset value per share. Annual expense ratios for the current year may be based on the prior year's financial statements. Returns may be adjusted based upon each year's audited annual report.

Net of fee returns are calculated using a model fee ("Model Net Fee"). For the applicable time periods, net of fees returns reflect either the deduction of the highest management fee that is paid by a portfolio in the Composite during the performance period, applied on a monthly basis or the deduction of the highest applicable management fee in effect during the performance period that would be charged based on the fee schedule appropriate to this mandate, without the benefit of breakpoints, applied on a monthly basis, whichever is higher. Net of fee calculation methodology may change over time. For composites that include commingled funds that pay a performance fee and that calculate performance using the highest fee paid by an account in the composite, performance based fee adjustments are included in net of fee returns. For commingled funds, the fee is typically updated for the most recent fiscal year end after the portfolio has been audited. Returns may be adjusted based upon each year's audited annual report. Please be advised that the Composite may include other investment products or share classes of funds that are subject to management fees, including performance fees, that are inapplicable to you but that could have been in excess of the Model Net Fee. Therefore, the actual performance of all the portfolios in the composite on a net-of-fees basis will be different, and may be higher or lower, than the Model Net Fee performance. Composites that include certain commingled portfolios may also assess a performance fee to underlying investors which could result in the underlying investors paying a higher total management fee than the highest stated management fee below. However, Model Net Fee performance is intended to provide the most appropriate example of the impact management fees would have by applying management fees relevant to you to the gross performance of the Composite. Actual investment advisory fees incurred by clients are typically negotiated on an individual basis and may vary depending upon, among other things, the applicable fee schedule and portfolio size.

Fee schedule: The standard fee schedule is based on the market value of an account's assets under management and is stated on an annual basis. Separate account management fees are subject to change and are for investment management services only. Standard management fee is: 0.55% of assets on the first \$50 million, 0.50% of assets on the next \$50 million, 0.45% of assets on the next \$150 million, and 0.40% for assets over \$250 million.

Past performance is not a guarantee of future performance. No assurance can be given as to future performance.