

Q3 | 2022

Putnam Multi-Asset Model Portfolios Summary

Market commentary

Global equities posted a loss for the third quarter following weeks of volatility driven by worries about slowing global growth. Stocks struggled and markets experienced periodic sell-offs during the quarter on inflation and recession concerns. The period began on positive footing. Stocks rebounded in July and posted gains for the month. The Federal Reserve raised the target range for the federal funds rate by 75 basis points, lifting stocks briefly. Data showed U.S. GDP growth declined for the second consecutive quarter. In Europe, the European Central Bank raised its benchmark interest rate by 50 basis points, briefly sending the euro higher and lifting stocks, led by the banking sector. Data showed the eurozone economy unexpectedly grew,

easing recession fears. Earnings were mixed and offered some positive results that lifted stocks. The equity rally, however, did not continue in August, and stocks recorded a loss for the month. In the final weeks of the quarter, stocks struggled and posted losses for September. The Russia-Ukraine War continued to weigh on financial markets. The European Central Bank raised its benchmark bank rate again, increased inflation projections, and reduced its growth outlook for 2023. The Fed also raised the target range for the federal funds rate by another 75 basis points. Global bond yields moved higher, and their prices declined during the quarter.

Total returns of Putnam Multi-Asset Model Portfolios

Composite performance as of 9/30/22 (net)	Inception date	QTD	YTD	1 year	3 year	Since inception
Putnam Aggressive Growth Model	11/30/19	-5.53%	-24.57%	-19.70%	—	3.44%
Putnam Aggressive Growth Model Index		-5.75	-25.22	-19.85	—	3.53
Putnam Growth Model	4/30/19	-5.27	-22.59	-18.53	3.73%	3.79
Putnam Growth Model Index		-5.41	-23.12	-18.55	4.05	3.95
Putnam Balanced Growth Model	4/30/19	-4.96	-20.37	-17.11	2.56	3.12
Putnam Balanced Growth Model Index		-4.93	-20.89	-17.06	2.93	3.31
Putnam Conservative Growth Model	4/30/19	-4.96	-18.45	-16.36	0.61	1.69
Putnam Conservative Growth Model Index		-4.73	-18.79	-16.11	1.15	2.01
Putnam Balanced Income Model	4/30/19	-4.86	-16.67	-15.77	-1.25	0.23
Putnam Balanced Income Model Index		-4.33	-16.70	-15.27	-0.66	0.59
Putnam Income Model	11/30/19	-4.60	-13.83	-14.49	—	-3.89
Putnam Income Model Index		-3.77	-14.17	-14.04	—	-2.72

Past performance is not a guarantee of future results. An investment in these strategies can lose value. Returns are stated in U.S. dollars and include the reinvestment of dividends and interest. Returns less than one year are not annualized. Net-of-fees returns do not reflect the deduction of a management fee but are net of all fees and expenses applicable to the underlying funds within the model portfolio. Composites include all fully discretionary, actual accounts managed to represent the model portfolio strategy. Putnam does not have investment discretion over or place trade orders for any portfolios or accounts derived from the Putnam Multi-Asset Model Portfolios. Performance of accounts managed in accordance with the model by a third-party firm may differ from the performance shown. Please see the end disclosures for custom index components, weights, and rebalancing process.

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Portfolio changes

The Investment Committee has replaced the SPDR Portfolio S&P Sm Cap ETF with the Vanguard Russell 2000 Index Fund ETF, with the objective of reducing tracking error. The model expense ratios did not change meaningfully.

Model portfolio performance commentary

Putnam Aggressive Growth Model

Aggressive Growth Model
quarterly performance -5.53% (net)

Key driver(s) The portfolio saw negative returns on the quarter, driven by poor equity market returns. Active equity managers produced positive benchmark-relative performance, which helped the model outpace its benchmark.

Putnam Growth Model

Growth Model
quarterly performance -5.27% (net)

Key driver(s) The portfolio saw negative returns on the quarter, driven by poor equity market returns. Active equity managers produced positive benchmark-relative performance, which helped the model outpace its benchmark.

Putnam Balanced Growth Model

Balanced Growth Model
quarterly performance -4.96% (net)

Key driver(s) Weakness in bond and stock markets drove negative portfolio returns for the quarter. Poor benchmark-relative performance for fixed income managers overwhelmed positive active manager contributions from various equity managers.

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Model portfolio performance commentary

Putnam Conservative Growth Model

Conservative Growth Model
quarterly performance -4.96% (net)

Key driver(s)

Weakness in bond and stock markets drove negative portfolio returns for the quarter. Poor benchmark-relative performance for fixed income managers overwhelmed positive active manager contributions from various equity managers.

Putnam Balanced Income Model

Balanced Income Model
quarterly performance -4.86% (net)

Key driver(s)

Weakness in bond and stock markets drove negative portfolio returns for the quarter.

Putnam Income Model

Income Model
quarterly performance -4.60% (net)

Key driver(s)

The fixed income market broadly saw substantially negative returns due to rising interest rates and widening credit spreads, pushing the portfolio return into negative territory for the quarter.

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Model portfolio performance attribution

Contribution to total performance for Q3 2022

FUND NAME	PUTNAM AGGRESSIVE GROWTH MODEL	PUTNAM GROWTH MODEL	PUTNAM BALANCED GROWTH MODEL	PUTNAM CONSERVATIVE GROWTH MODEL	PUTNAM BALANCED INCOME MODEL	PUTNAM INCOME MODEL
Putnam Growth Opportunities Y	-0.43%	-0.36%	-0.28%	-0.12%	0.00%	0.00%
Putnam Large Cap Value Y	-1.02%	-0.85%	-0.69%	-0.48%	-0.22%	0.00%
Schwab US Large-Cap ETF™	-0.59%	-0.43%	-0.43%	-0.24%	-0.14%	0.00%
Schwab US Small-Cap ETF™	0.00%	0.00%	-0.10%	-0.06%	-0.04%	0.00%
Putnam Small Cap Growth Y	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Putnam Small Cap Value Y	-0.18%	-0.12%	0.00%	0.00%	0.00%	0.00%
iShares Core MSCI EAFE ETF	-1.94%	-1.55%	-1.03%	-0.72%	-0.36%	0.00%
WisdomTree EM ex-SOE ETF	-0.76%	-0.61%	-0.12%	0.00%	0.00%	0.00%
Putnam Income Y	0.00%	-0.55%	-1.29%	-2.02%	-2.67%	-1.78%
iShares Core US Aggregate Bond ETF	0.00%	-0.27%	-0.63%	-0.95%	-1.04%	-1.02%
Xtrackers USD High Yield Corp Bd ETF	0.00%	-0.05%	-0.05%	-0.05%	-0.12%	-0.18%
Putnam Mortgage Securities Y	0.00%	0.00%	0.00%	0.00%	0.00%	-1.15%
iShares 7-10 Year Treasury Bond ETF	0.00%	0.00%	0.00%	0.00%	0.00%	-0.37%
Putnam Ultra Short Duration Income Y	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%

Portfolio performance attribution represents the underlying holdings for a fully discretionary, actual invested account managed to represent the model portfolio strategy. Investors may not invest directly in a model portfolio except through certain platforms that may offer our models or through implementation by certain third-party firms, both which may require a certain allocation to cash which is not reflected in the model portfolios. Putnam does not have investment discretion over or place trade orders for any portfolios or accounts derived from the Putnam Multi-Asset Model Portfolios. Performance attribution of accounts managed in accordance with the model by a third-party firm may differ from the performance attribution shown. Past performance is not a guarantee of future results. An investment in these strategies can lose value.

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Performance commentary for underlying Putnam Funds for Q3 2022

Putnam Large Cap Value Fund returned -3.71% (net) for the quarter, while its benchmark, the Russell 1000 Value Index, returned -5.62%. Stock selection contributed most to relative outperformance with sector allocation decisions also having a positive impact. Positions within consumer staples, consumer discretionary, and health care were most additive. Performance also benefited from underweights to communication services and real estate, the two weakest sectors in the benchmark. A small cash balance was also additive during the weak market environment. Our exposure within information technology and industrials detracted modestly.

Putnam Growth Opportunities Fund returned -3.12% (net) for the quarter, while its benchmark, the Russell 1000 Growth Index, returned -3.60%. Selections within health care, industrials, consumer staples, and financials proved favorable. Our positions within information technology and materials detracted most from relative results.

Putnam Small Cap Growth Fund returned 0.12% (net), while its benchmark, the Russell 2000 Growth Index, returned 0.24%. The portfolio saw a positive contribution from stock selection during the period, while sector allocations detracted modestly. The industrials sector was a notable source of strength, followed by the consumer staples sector. Offsetting this relative outperformance were names held in the consumer discretionary sector, followed by health care.

Putnam Small Cap Value Fund returned -4.91% (net) for the quarter, while its benchmark, the Russell 2000 Value Index, returned -4.61%. The impact from stock selection was modestly negative while sector allocations offset some relative weakness.

Putnam Income Fund returned -5.94% (net) for the quarter, while its benchmark, the Bloomberg U.S. Aggregate Bond Index, returned -4.75%. Term structure risk strategies were the largest detractor during the quarter. Prepayment risk strategies were also a meaningful detractor from relative returns, driven by exposure to agency interest-only (IO) securities. Mortgage credit strategies were a meaningful contributor during the quarter. The fund's modest overweight exposure to investment-grade (IG) and high-yield (HY) corporate credit also contributed to relative returns driven by exposure in July.

Putnam Mortgage Securities Fund returned -6.04% (net), while its benchmark, the Bloomberg U.S. MBS Index, returned -5.35%. Performance from the portfolio's exposure to CMBS contributed for the period. Residential mortgage credit strategies also contributed, led by our credit risk transfer (CRT) holdings. Term structure strategies were the primary detractor to relative performance. Prepayment strategies also detracted during the period, driven by our agency IO and inverse IO holdings.

Putnam Ultra Short Duration Income Fund returned 0.56% (net), while its benchmark, the ICE BofA U.S. Treasury Bill Index, returned 0.42%. Corporate credit was the largest contributor to the fund's relative performance, as 1-3 year investment-grade corporate spreads tightened marginally during the quarter. Our allocations to commercial paper contributed to returns as well.

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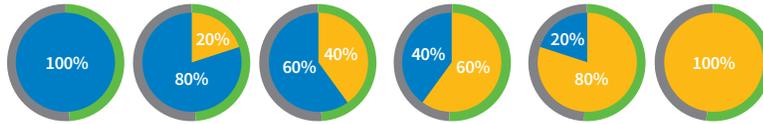
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All Bloomberg indices are provided by Bloomberg Index Services Limited.

Target allocations as of Q3 2022

Stock and bond target allocations (right) are implemented with the funds and ETFs below.

- Stock
- Bond
- Active
- Passive



FUND/ETF AS OF 9/30/22	AGGRESSIVE GROWTH	GROWTH	BALANCED GROWTH	CONSERVATIVE GROWTH	BALANCED INCOME	INCOME	EXPENSE RATIO*
Active Putnam Funds	48.8%	48.7%	49.2%	51.0%	51.0%	52.0%	
● Putnam Large Cap Value Fund Y (PEIYX)	27.5	23.0	18.5	13.0	6.0	—	0.63
● Putnam Growth Opportunities Fund Y (PGOYX)	13.8	11.5	9.0	4.0	—	—	0.74
● Putnam Small Cap Growth Fund Y (PSYGX)	3.8	2.5	—	—	—	—	0.96
● Putnam Small Cap Value Fund Y (PYSVX)	3.8	2.5	—	—	—	—	0.90
● Putnam Income Fund Y (PNCYX)	—	9.2	21.7	34.0	45.0	30.0	0.48
● Putnam Mortgage Securities Fund Y (PUSYX)	—	—	—	—	—	19.0	0.64
● Putnam Ultra Short Duration Income Fund Y (PSDYX)	—	—	—	—	—	3.0	0.30
Passive ETFs	51.3%	51.3%	50.8%	49.0%	49.0%	48.0%	
● Schwab US Large-Cap ETF	12.5	9.0	9.0	5.0	3.0	—	0.03
● iShares Russell 1000 Growth ETF	13.8	11.5	9.0	9.0	6.0	—	0.18
● Vanguard Russell 2000 ETF	—	—	3.5	2.0	1.5	—	0.10
● iShares Core MSCI EAFE ETF	18.8	15.0	10.0	7.0	3.5	—	0.07
● WisdomTree Emerging Markets ex-State-Owned Enterprises ETF	6.3	5.0	1.0	—	—	—	0.32
● iShares Core U.S. Aggregate Bond ETF	—	5.8	13.3	20.0	22.0	21.5	0.03
● iShares 7-10 Year Treasury Bond ETF	—	—	—	—	—	6.5	0.15
● Xtrackers USD High Yield Corp Bond ETF	—	5.0	5.0	6.0	13.0	20.0	0.15
Weighted average expense ratio†	0.41%	0.38%	0.33%	0.31%	0.30%	0.32%	
Overlay fees	—	—	—	—	—	—	

* Stated prospectus expense ratio, most recent prospectus available.

† Expense ratio for each model is the weighted average of prospectus expense ratios of each fund and ETF based on current model portfolio allocations. Totals may not sum to 100% due to rounding.

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Actual client accounts may differ from the model allocation and may hold cash.

Aggressive Growth Model Index represents 67.5% the Russell 1000® Index, 18.75% the MSCI EAFE Index (ND), 7.5% the Russell 2000® Index, and 6.25% the MSCI Emerging Markets Index (ND). Growth Model Index represents 60% the Russell 3000® Index, 15% the MSCI EAFE Index (ND), 15% the Bloomberg U.S. Aggregate Bond Index, 5% the Bloomberg U.S. Corporate High Yield Index, and 5% the MSCI Emerging Markets Index (ND). Balanced Growth Model Index represents 49% the Russell 3000 Index, 35% the Bloomberg U.S. Aggregate Bond Index, 10% the MSCI EAFE Index (ND), 5% the Bloomberg U.S. Corporate High Yield Index, and 1% the MSCI Emerging Markets Index (ND). Conservative Growth Model Index represents 54% the Bloomberg U.S. Aggregate Bond Index, 33% the Russell 3000 Index, 7% the MSCI EAFE Index (ND), and 6% the Bloomberg U.S. Corporate High Yield Index. Balanced Income Model Index represents 67% the Bloomberg U.S. Aggregate Bond Index, 16.5% the Russell 3000 Index, 13% the Bloomberg U.S. Corporate High Yield Index, and 3.5% the MSCI EAFE Index (ND). Income Model Index represents 77% the Bloomberg U.S. Aggregate Bond Index, 20% the Bloomberg U.S. Corporate High Yield Index, and 3% the ICE BofA U.S. 3-Month Treasury Bill Index. Custom indexes are rebalanced on a quarterly basis. Indexes are unmanaged and do not incur expenses. You cannot invest directly in an index.

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