

OPERS Target 2050 Fund

Benchmark

Morningstar Lifetime Mod 2050 TR USD

Overall Morningstar Rating **

Morningstar Return

Morningstar Risk

Below Average

Above Average

Rated against 196 Target-Date 2050 funds. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure for details.

Investment Strategy from investment's prospectus

This fund seeks long-term growth of capital with some current income and provides a true 'one decision' diversified investment option for members throughout their working careers. It is automatically adjusted during the course of a specified time period aimed at a target retirement date.

The OPERS Target 2050 Fund should provide a diversified investment that is appropriate for an investor who has a long (retiring between 2048 and 2052) investment period and is very comfortable with fluctuations in the value of their investment.

Category Description: Target-Date 2050

Target-date portfolios provide diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind (in this case, the years 2046-2050) for retirement. These portfolios aim to provide investors with an optimal level of return and risk, based solely on the target date. Management adjusts the allocation among asset classes to more-conservative mixes as the target date approaches, following a preset glide path. A target-date portfolio is part of a series of funds offering multiple retirement dates to investors.

Volatility Analysis



In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Best 3 Month Return	Worst 3 Month Return
28.72%	-34.20%
(Mar '09 - May '09)	(Sep '08 - Nov '08)

Operations

Prospectus Net Expense 0.04% of fund assets Ratio

04-01-08 Fund Inception Date Total Fund Assets (\$mil) 53.15

Portfolio Manager(s)

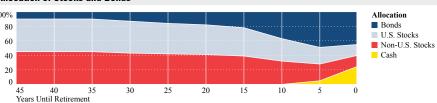
Management Team

Management Company OPERS

Notes

You should review the Investment Options Disclosures document before making any investment decisions. The Morningstar Rating that is reflected on this page is hypothetical. The Rating is considered hypothetical because Morningstar does not independently analyze the custom fund universe. Rather the Rating is assigned to the custom fund universe as a means to compare the institutional funds with the universe of mutual funds that Morningstar rates.

Allocation of Stocks and Bonds



Performance 20 Total Return% as of 12-31-18 15 ■ Investment 10 Benchmark 5 0 -5 -10 Average annual, if greater -15 than 1 year YTD 10 Year Since Inception -9.43 -9.43 6.40 3.73 9.15 7.44 Fund Return % -8.41 -8.41 7.05 4.51 10.27 Benchmark Return %

4.33

**

155

5

9.60

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79

Portfolio Analysis as of 12-31-18

-8.41



-8.41

6.11

196

Top 10 Holdings as of 12-31-18	% Assets
BlackRock MSCI ACWI ex U.S. Index F	44.35
BlackRock Russell 1000® Index NL F	23.35
BlackRock Russell 2000® Index NL F	19.66
BlackRock U.S. Debt Index NL F	6.56
BlackRock Govt/Credit Bond Index NL F	6.07

Total Number of Holdings Annual Turnover Ratio %

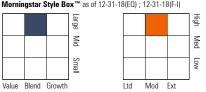
Morningstar Style Box™ as of 12-31-18(EQ) : 12-31-18(F-I)

4.74

Category Average %

Morningstar Rating™

of Funds in Category



Morningstar Sectors as of 12-31-18	% Fund	S&P 500 %
♣ Cyclical	41.64	32.63
Basic Materials	5.89	2.56
Consumer Cyclical	11.65	11.82
Financial Services	19.59	15.83
♠ Real Estate	4.51	2.42
w Sensitive	35.80	40.71
Communication Services	3.34	3.58
Tenergy	5.72	5.32
Industrials	11.36	9.92
Technology	15.38	21.89
→ Defensive	22.56	26.65
Consumer Defensive	7.93	7.85
Healthcare	11.22	15.46
Utilities Utilities	3.41	3.34

