



# OTCAX

# Very Unattractive Rating

## MFS Series Trust IV: MFS Mid Cap Growth Fund

- [Predictive Ratings](#) are based on the aggregation of our models for the fund's holdings, all of the fund's expenses, & the fund's overall rank.
- Stock-picking ([Portfolio Management](#)) and fund expenses ([Total Annual Costs](#)) drive fund performance.

### Investment Recommendation

- We strongly recommend investors avoid OTCAX.
- Despite strong past performance, we expect the fund to significantly underperform the market on a total return basis.
- OTCAX's Portfolio Management rating does not justify its high Total Annual Costs.

### Fund Rankings

- 5th percentile of the 7000+ equity funds we cover.
- 320 out of 339 Mid Cap Growth funds.
- All 11 ETFs in the same category rank better.
- See rankings for all US equity funds on our [fund screener](#).

### Portfolio Management Rating Details

- OTCAX receives our Unattractive Portfolio Management rating because its aggregate holdings are expected to underperform the aggregate holdings of IWP.
- IWP, OTCAX's benchmark, receives our Neutral rating.
- Our fund analytics are based on aggregating our models and ratings for each fund's holdings.
- Our [top-ranked](#) stock ratings leverage key data from the financial footnotes for unrivaled research quality.

### Portfolio Management Rating Breakdown

**Quality of Earnings Components: Ratings & Values**

Attractive	Economic vs Reported EPS	Positive EE
Neutral	Return on Invested Capital (ROIC)	10%

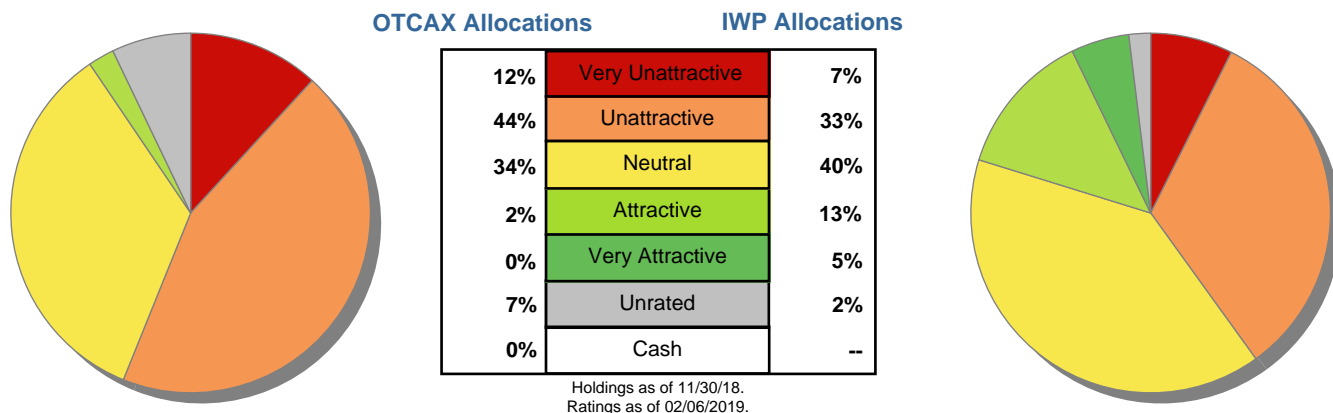
**Valuation Components: Ratings & Values**

Unattractive	Free Cash Flow Yield	-1%
Very Unattractive	Price to Economic Book Value Ratio	4.8
Very Unattractive	Growth Appreciation Period	64 year(s)

**Fund Asset Allocation: Rating & Value**

Very Attractive	Cash Allocation	0% cash
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### Stock and Cash Rating Allocations vs Benchmark - iShares Trust: iShares Russell Mid-Cap Growth ETF (IWP)



### Active Management Commentary

- OTCAX allocates 56% of its value to Unattractive-or-worse-rated stocks while IWP allocates 40%.
- OTCAX allocates 2% of its value to Attractive-or-better-rated stocks while IWP allocates 18%.
- Investors should expect funds with higher Total Annual Costs to allocate more value to Attractive and Very Attractive Stocks and less to Unattractive and Very Unattractive stocks than alternative funds with lower costs.
- Active portfolio management of OTCAX does not add value versus its ETF benchmark IWP.

Return - Annual		Top 5 Holdings		Key Mutual Fund Statistics			
Year to Date	12.1%	MFS Inst MM Port	-	Net Assets(mm)	\$4,045.00	Category	Mid Cap Growth
1 Year	11.5%	Bright Horizons Family Solutions	BFAM	NAV	\$17.29	Mgmt Co	MFS Investment Management
3 Year	18.7%	PerkinElmer Inc	PKI	Benchmark	IWP	Manager	Fischman/Gordon
5 Year	11.9%	Verisk Analytics Inc	VRSK	# of Holdings	103	Tenure	2008
Inception	8.1%	Ametek Inc	AME	Initial Min	\$1,000	Inception	12/01/1993

Data from Lipper, a Thomson Reuters Company, and New Constructs, LLC.

Details on Total Annual Costs Rating are on page 2.



**Total Annual Costs Rating and Ranking**

Rating	Total Annual Costs	Fund Universe % Rank	Category Rank
Unattractive	3.55%	9%	308 of 339

This rating reflects all expenses, loads, fees, and transaction costs in a single value that is comparable across all funds.

**Reported Costs vs Benchmark: as of 12/28/2018**

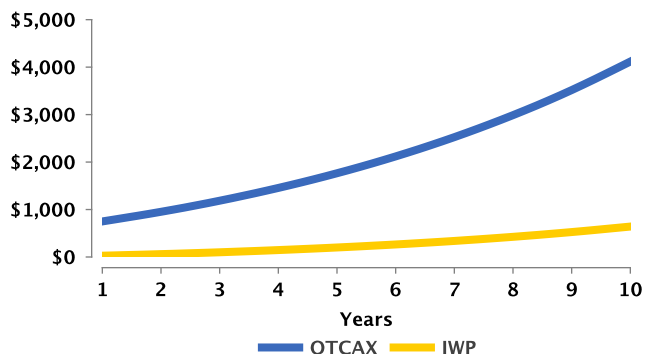
	OTCAX	Benchmark: IWP
Front-End Load	5.75%	--
Expense Ratio	1.13%	0.25%
Back-End Load	0.00%	--
Redemption Fee	0.00%	--

**Total Annual Costs Breakdown**

All Cost Types	Annualized Values	
	OTCAX	Benchmark: IWP
Front-End Load	2.19%	--
Expense Ratio	1.28%	0.28%
Back-End Load	0.00%	--
Redemption Fee	0.00%	--
Transaction Costs	0.07%	--
<b>Total Annual Costs</b>	<b>3.55%</b>	<b>0.28%</b>

**Accumulated Total Costs vs Benchmark**

Accumulated Total Costs represent the dollar value of costs investors incur during a 10-yr holding period. Assumes a \$10,000 investment and a 10% annual return for the fund and its benchmark.



- 3-year Accumulated Total Costs are \$1,185.80 for OTCAX and \$99.58 for IWP. 10-year Accumulated Total Costs are \$4,117.48 for OTCAX and \$641.19 for IWP.

- To justify its higher Total Annual Costs, OTCAX must outperform its ETF benchmark before all costs by 3.26% annually over 3 years or 1.71% annually over 10 years.
- This analysis assumes a 3-year holding period, the average for all funds.
- Transaction costs are estimated using the fund's annual portfolio turnover ratio of 33%.

Data from Lipper, a Thomson Reuters Company, and New Constructs, LLC.

**Overview of Our Predictive Mutual Fund Rating System**

New Constructs' [Predictive Fund Ratings](#) enable smarter investing by assessing the key drivers of future fund performance. We start by analyzing every fund holding based on New Constructs' stock ratings, which are regularly featured as among the [best by Barron's](#). Next, we measure and rank the all-in costs of investing in a fund. Finally, we rank the fund compared to all other funds to identify the best and worst funds in the market.

- Intuitively, there are two drivers of future fund performance.
- 1) New stock-picking ([Portfolio Management Rating](#)) and
  - 2) Fund expenses ([Total Annual Costs Rating](#)) drive investment performance

The figure below details the criteria that drive our Predictive Rating system for funds. The drivers of our predictive rating system are Portfolio Management and Total Annual Costs. The [Portfolio Management Rating](#) is the same as our [Stock Rating](#) except that we incorporate [Asset Allocation](#) in the Portfolio Management Rating. The [Total Annual Costs Rating](#) captures the all-in cost of being in a fund over a 3-year holding period, the average period for all mutual fund investors.

Predictive Rating	Portfolio Management Rating						Total Annual Costs Rating
	Quality of Earnings		Valuation			Asset Allocation	
	Economic vs Reported EPS	Return on Invested Capital (ROIC)	FCF Yield	Price-to-EBV Ratio	Growth Appreciation Period (yrs)	Cash %	
Very Unattractive	Misleading Trend	Bottom Quintile	< -5%	> 3.5 or -1 < 0	> 50	> 20%	> 4%
Unattractive	False Positive	4th Quintile	-5% < -1%	2.4 < 3.5 or < -1	20 < 50	8% < 20%	2% < 4%
Neutral	Neutral EE	3rd Quintile	-1% < 3%	1.6 < 2.4	10 < 20	2.5% < 8%	1% < 2%
Attractive	Positive EE	2nd Quintile	3% < 10%	1.1 < 1.6	3 < 10	1% < 2.5%	0.5% < 1%
Very Attractive	Rising EE	Top Quintile	> 10%	0 < 1.1	0 < 3	< 1%	< 0.5%



## New Constructs® - Research to Fulfill the Fiduciary Duty of Care

Ratings & screeners on 3000 stocks, 650 ETFs and 7000 mutual funds help you make prudent investment decisions.

New Constructs leverages the latest in machine learning to analyze structured and unstructured financial data with unrivaled speed and accuracy. The firm's forensic accounting experts work alongside engineers to develop proprietary NLP libraries and financial models. Our investment ratings are based on the best fundamental data in the business for stocks, ETFs and mutual funds. Clients include many of the top hedge funds, mutual funds and wealth management firms. David Trainer, the firm's CEO, is regularly featured in the media as a thought leader on the fiduciary duty of care, earnings quality, valuation and investment strategy.

### To fulfill the Duty of Care, research should be:

1. **Comprehensive** - All relevant publicly-available (e.g. 10-Ks and 10-Qs) information has been diligently reviewed, including footnotes and the management discussion & analysis (MD&A).
2. **Un-conflicted** - Clients deserve unbiased research.
3. **Transparent** - Advisors should be able to show how the analysis was performed and the data behind it.
4. **Relevant** - Empirical evidence must provide [tangible, quantifiable correlation](#) to stock, ETF or mutual fund performance.

### Value Investing 2.0: Diligence Matters: Technology is Key to Value Investing with Scale

Accounting data is only the beginning of fundamental research. It must be translated into economic earnings to truly understand profitability and valuation. This translation requires deep analysis of footnotes and the MD&A, a process that our [robo-analyst technology](#) empowers us to perform for thousands of stocks, ETFs and mutual funds.

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