

# Federated MDT Mid Cap Growth Fund

4Q  
2018

12/31/18

## Fund Facts

### Performance Inception Date

R6 Shares: 8/31/84  
Institutional Shares: 8/23/84  
A Shares: 8/23/84  
C Shares: 8/16/95

### Benchmark

Russell Midcap<sup>®</sup> Growth Index

### Morningstar Category

Mid-Cap Blend

### Lipper Category

Mid-Cap Growth Funds

### Fund Assets

\$379.4 million

### Ticker Symbols

R6 Shares - FGSKX  
Institutional Shares - FGSIX  
A Shares - FGSAX  
C Shares - FGSCX

### Key Investment Team

Daniel Mahr, CFA  
Frederick Konopka, CFA  
John Paul Lewicke  
Damien Zhang, CFA

## Fund Description

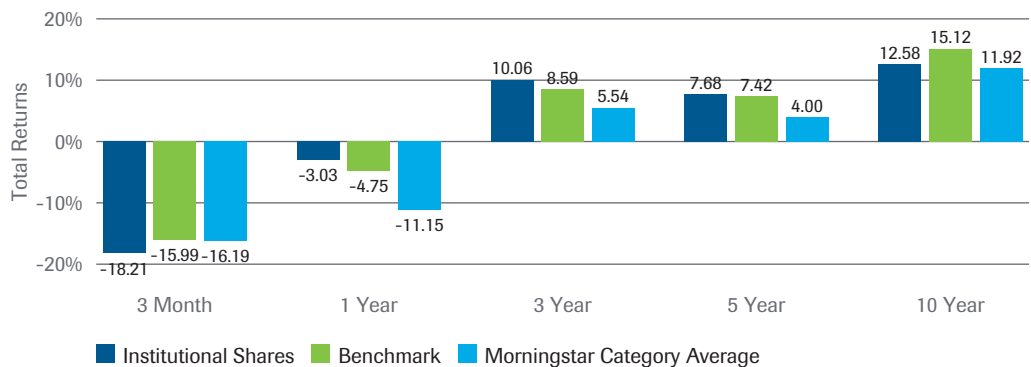
The fund pursues capital appreciation by investing in a diversified portfolio of U.S. mid-cap companies from the Russell Midcap Growth Index. Through a fundamentally based, bottom up, systematic approach, it seeks to remove subjective and emotional influences from the stock-selection process.

## Performance

### Average Annual Total Returns (%)

Performance shown is before tax.

	3 Month	YTD	1 Year	3 Year	5 Year	10 Year	15 Year	Since Inception	Expense Ratio*	
									Before Waivers	After Waivers
R6 Shares	-18.24	-3.03	-3.03	9.87	7.25	12.00	7.36	9.86	0.97	0.84
Institutional Shares	-18.21	-3.03	-3.03	10.06	7.68	12.58	7.87	10.56	1.02	0.85
A Shares (NAV)	-18.27	-3.26	-3.26	9.80	7.41	12.35	7.74	10.51	1.29	1.15
A Shares (MOP)	-22.77	-8.59	-8.59	7.75	6.20	11.72	7.34	10.33	1.29	1.15
Benchmark	-15.99	-4.75	-4.75	8.59	7.42	15.12	8.98	-	-	-



### Calendar Year Returns (%)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Institutional Shares	-3.03	24.74	10.21	-4.70	13.93	40.44	6.98	-3.36	19.17	30.87
Benchmark	-4.75	25.27	7.33	-0.20	11.90	35.74	15.81	-1.65	26.38	46.29
Morningstar Category Average	-11.15	15.93	14.14	-4.75	7.80	34.10	16.15	-3.81	22.52	37.39

Performance quoted represents past performance, which is no guarantee of future results. Investment return and principal value will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than what is stated. To view performance current to the most recent month-end, and for after-tax returns, contact us or visit [FederatedInvestors.com](http://FederatedInvestors.com). Maximum Offering Price figures reflect the maximum sales charge of 5.5% for A Shares. See the prospectus for other fees and expenses that apply to a continued investment in the fund.

\* The fund's expense ratio is from the most recent prospectus. The expense ratio may reflect voluntary fee waivers and/or expense reimbursements determined by the fund's Advisor and its affiliates. The voluntary waivers and/or reimbursements, if applicable, are in effect up to but not including the later of 1/1/20 or the date of the fund's next effective prospectus.

## Investment Process

### Fundamentally Based Research

Fundamentally based research identifies powerful combinations of value, growth and quality characteristics across market environments.

### Stock Selection

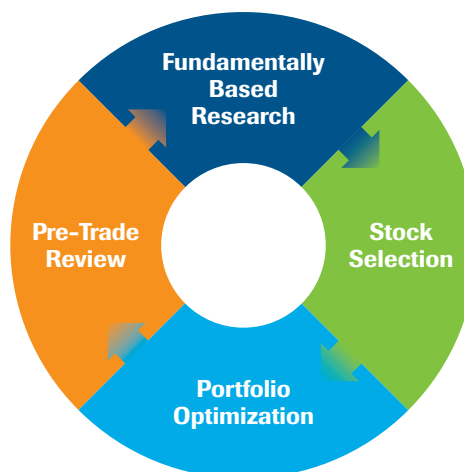
Stock alphas are forecasted based on each company's characteristics.

### Portfolio Optimization

Proprietary software is used to maximize portfolio alpha, net of trading costs, while managing risk.

### Pre-Trade Review

All trades are reviewed to ensure they are based on the most recent and accurate information. Insights from pre-trade review provide important feedback to the team and inspire further research.



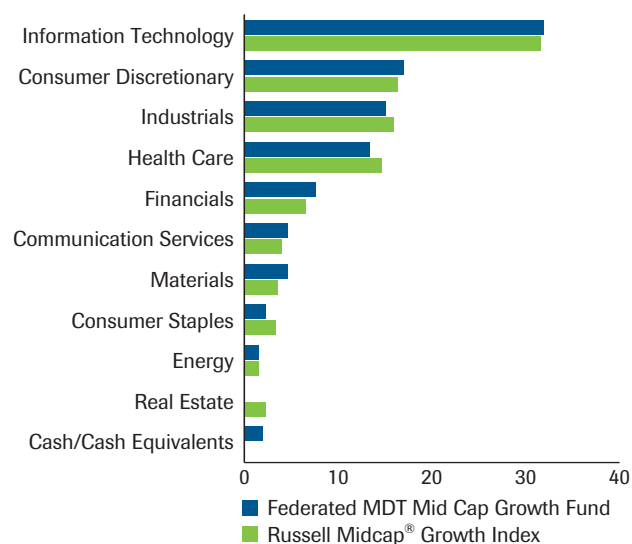
## Portfolio Statistics

Weighted Median P/E (LTM)	21.9x
Weighted Median P/E (NTM)	16.9x
Weighted Median Market Cap	\$11.0 b
Weighted Median Price/Book	6.8x
Number of Securities	113

## Top Holdings (%)

Xilinx, Inc.	3.4
Global Payments, Inc.	3.2
Fortinet Inc.	3.0
Veeva Systems, Inc.	2.9
Lennox International, Inc.	2.8
Live Nation Entertainment, Inc.	2.8
Westlake Chemical Corp.	2.7
Wyndham Destinations, Inc.	2.7
Allison Transmission Holdings, Inc.	2.6
Northern Trust Corp.	2.5
<b>Total % of Portfolio</b>	<b>28.6</b>

## Sector Weightings (%)



## Highlights

- Mid cap growth stocks underperformed mid cap value stocks slightly
- Growth stocks with very high analyst conviction and strong technical factors contributed to underperformance
- Fund ended quarter roughly sector neutral to benchmark

## Looking Back

There was a significant market correction in the fourth quarter of 2018 as earlier optimism was shaken by a series of unusual political events, both domestic and international, starting with the killing of journalist Jamal Khashoggi inside the Saudi consulate in Istanbul as the quarter began. Uncertainty about interest rates grew as President Trump tweeted his opposition to the rate increases planned by the Federal Reserve. The tariff war with China broadened, and Brexit clouded the economic future of Britain and the European Union. Toward the end of the quarter, Special Counsel Robert Mueller's investigation began issuing indictments against key individuals affiliated with the Trump administration.

In the face of these events, the market became extremely volatile, sometimes swinging several percent in different directions on successive days. The Russell 3000 Index was down 7.36% in October, up 2.00% in November, and down 9.31% in December, for a fourth-quarter return of -14.30%. The mood was risk-off, with large caps doing better than the perceived-higher-risk small caps (the mega-cap Russell Top 200 Index returned -13.23%, while the small-cap Russell 2000 Index returned -20.20%), and value stocks doing better than growth stocks (the Russell 3000 Value Index returned -12.24%, while the Russell 3000 Growth Index returned -16.33%).

## Performance

Federated MDT Mid Cap Growth Fund Institutional Shares returned -18.21% in the fourth quarter of 2018, underperforming the -15.99% return of its benchmark, the Russell Midcap Growth Index.

### Performance Contributors

- Growth stocks with very high analyst conviction and prices near 52-week highs
- Security selection in Consumer Discretionary sector
- Weak performer underweighted by the fund: Advanced Micro Devices Inc.

### Performance Detractors

- Growth stocks with very high analyst conviction and strong technical factors
- Stocks with high analyst conviction, prices near 52-week highs and not notably worsening earnings to price
- Security selection in Health Care and Information Technology sectors
- Weak performers overweighted by the fund: Align Technology Inc., Fortinet Inc. and Neurocrine Biosciences, Inc.

*Performance quoted represents past performance, which is no guarantee of future results. Investment return and principal value will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than what is stated. To view performance current to the most recent month-end, and for after-tax returns, contact us or visit [FederatedInvestors.com](http://FederatedInvestors.com).*

## How We Are Positioned

The fund ended the fourth quarter roughly sector-neutral to the benchmark according to the GICS sectors, except for a small underweight in Real Estate (the fund does not hold REITs). Within the sectors, there were small overweight positions in the insurance and consumer durables and apparel industries. There were small underweight positions in the real estate and diversified financials industries.

*See disclosure section for important disclosures and definitions.*

### Risk Statistics

	3 Year	5 Year	7 Year	10 Year
Standard Deviation	15.26	13.58	13.33	15.79
Alpha	0.77	0.20	-0.78	-2.00
Beta	1.11	1.03	1.04	0.99
Correlation	0.95	0.94	0.95	0.96
R <sup>2</sup>	89.80	89.30	90.01	92.95
Up Capture Ratio	110.09	100.81	101.29	96.92
Down Capture Ratio	105.64	99.41	106.73	109.32
Sharpe Ratio	0.58	0.51	0.84	0.77
Tracking Error	5.10	4.46	4.25	4.20

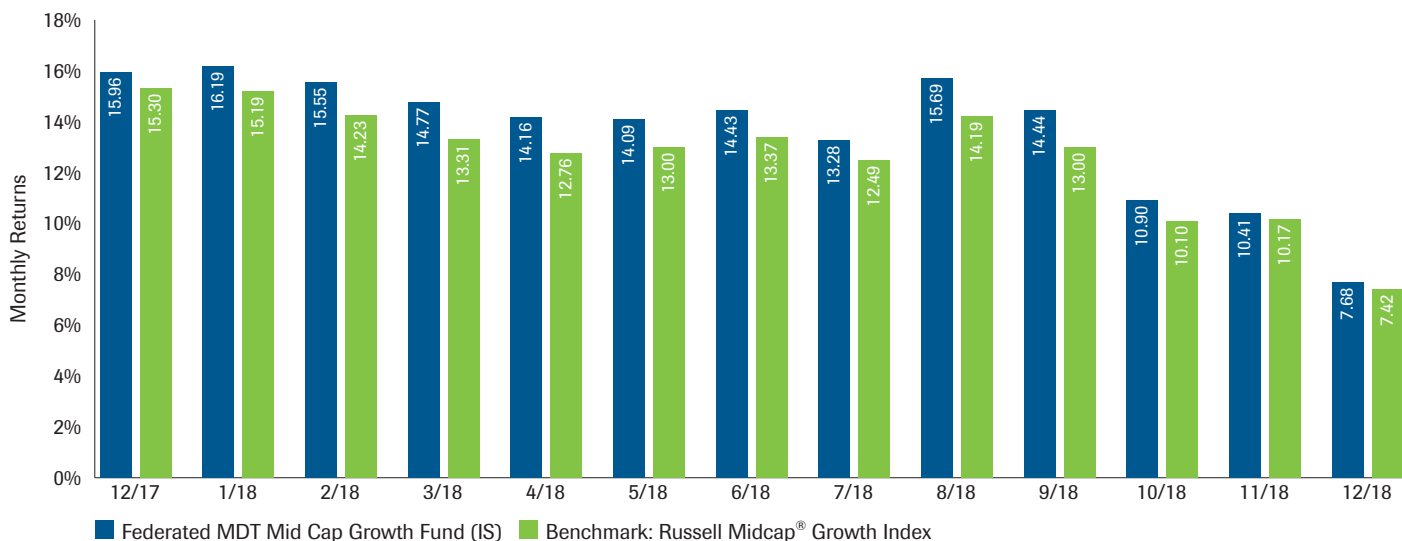
Sources: Federated Investors, Morningstar, Inc.  
Fund vs. Russell Midcap<sup>®</sup> Growth Index

See disclosure section for important definitions.

### 5-Year Risk/Return



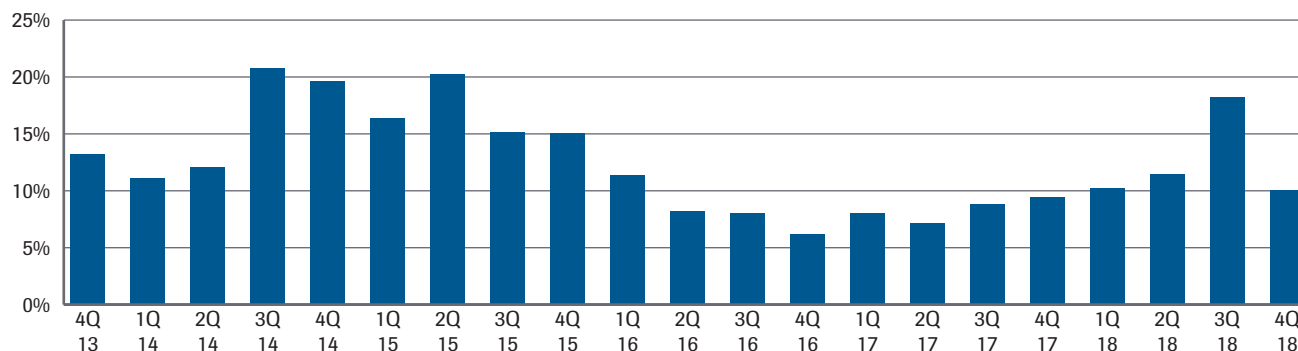
### 5-Year Rolling Monthly Performance vs. Russell Midcap<sup>®</sup> Growth Index



Source: Morningstar, Inc. Performance for 5-year periods (1-month shift) from 1/1/13 - 12/31/18  
Returns are for IS Shares. Other classes of shares are available whose performance will vary due to different charges and expenses.  
Timeframe based on current management style of Federated MDT Mid Cap Growth Fund.

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### 3-Year Rolling Returns (IS)



### Category Rankings

#### Morningstar Mid-Cap Blend Category

R6 Shares	1 Year	3 Year	5 Year	10 Year
Morningstar Category % Rank	3	5	4	56
Morningstar Category Rank	10 of 464 Funds	14 of 382 Funds	8 of 335 Funds	121 of 235 Funds
IS Shares	1 Year	3 Year	5 Year	10 Year
Morningstar Category % Rank	3	5	3	43
Morningstar Category Rank	9 of 464 Funds	13 of 382 Funds	5 of 335 Funds	-
A Shares	1 Year	3 Year	5 Year	10 Year
Morningstar Category % Rank	3	6	3	51
Morningstar Category Rank	13 of 464 Funds	17 of 382 Funds	7 of 335 Funds	105 of 235 Funds

#### Lipper Mid-Cap Growth Funds

R6 Shares	1 Year	3 Year	5 Year	10 Year
Lipper Category % Rank	30	19	28	84
Lipper Category Rank	113 of 386 Funds	65 of 351 Funds	91 of 330 Funds	191 of 228 Funds
IS Shares	1 Year	3 Year	5 Year	10 Year
Lipper Category % Rank	30	18	21	-
Lipper Category Rank	113 of 386 Funds	61 of 351 Funds	69 of 330 Funds	-
A Shares	1 Year	3 Year	5 Year	10 Year
Lipper Category % Rank	31	21	26	76
Lipper Category Rank	119 of 386 Funds	71 of 351 Funds	85 of 330 Funds	172 of 228 Funds

Past performance is no guarantee of future results. Rankings are based on total return and do not take sales charges into account.

**Investors should carefully consider the fund's investment objectives, risks, charges and expenses before investing. To obtain a summary prospectus or a prospectus containing this and other information, contact us or visit [FederatedInvestors.com](http://FederatedInvestors.com). Please carefully read the summary prospectus or the prospectus before investing.**

The fund's Institutional Shares commenced operations on January 29, 2010. For the period prior to the commencement of operations for the Institutional Shares, the performance information shown is for the fund's A Shares. The performance of the A Shares has not been adjusted to reflect the expenses of the Institutional Shares since the Institutional Shares have a lower expense ratio than the expense ratio of the A Shares. The performance of the A Shares has been adjusted to remove any voluntary waiver of the fund's expenses related to the A Shares that may have occurred during the period prior to the commencement of operations of the Institutional Shares. The performance information shown also has been adjusted to reflect the absence of sales charges applicable to the A Shares.

The fund's R Shares, re-designated as R6 Shares on September 1, 2016, commenced operations on December 12, 2006. For the period prior to the commencement of operations of the R Shares (now known as R6 Shares), the performance information shown is for the fund's A Shares, adjusted to reflect the expenses of the R Shares, and the performance information shown for the R6 Shares prior to September 1, 2016 reflects the higher R Shares expenses. The performance information shown also has been adjusted to reflect the absence of sales charges applicable to the A Shares. See the prospectus for other fees and expenses that apply to a continued investment in the fund.

### A Word About Risk

Mutual funds are subject to risks and fluctuate in value.

Mid-capitalization companies often have narrower markets and limited managerial and financial resources compared to larger and more established companies.

The quantitative models and analysis used by the fund may perform differently than expected and negatively affect fund performance.

### Definitions

**Russell Midcap® Growth Index** measures the performance of the mid-cap growth segment of the U.S. equity universe. It includes those Russell Midcap® Index companies with higher price-to-book ratios and higher forecasted growth values. The Russell Midcap® Growth Index is constructed to provide a comprehensive and unbiased barometer of the mid-cap growth market. The Index is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true mid-cap growth market.

**S&P 500 Index** is an unmanaged capitalization-weighted index of 500 stocks designated to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

Indexes are unmanaged and cannot be invested in directly.

**Alpha** shows how much or how little return is generated, given the risk a portfolio takes. A portfolio with an Alpha greater than 0 has earned more than expected given its Beta—meaning the portfolio has generated excess return without increasing risk. A portfolio with a negative Alpha is producing a lower return than would be expected given its risk.

**Beta** measures a portfolio's volatility relative to the market. A Beta greater than 1.00 suggests the portfolio has historically been more volatile than the market as measured by the fund's benchmark. A Beta less than 1.00 suggests the portfolio has historically had less volatility relative to the market.

**Correlation** is the degree to which one variable (here, the fund's returns) fluctuates relative to another (the returns of the fund's benchmark). Correlation ranges from 1.00, when two variables move identically in the same direction, to -1.00, when two variables move identically in the opposite direction.

**R-Squared** indicates what percentage of a portfolio's movement in performance is explained by movement in performance of the market. R-squared ranges from 0 to 100, and a score of 100 suggests that all movements of a portfolio's performance are completely explained by movements in the market as measured by the fund's benchmark.

**Sharpe Ratio** is calculated by dividing a fund's annualized excess return by the fund's annualized standard deviation. The higher the Sharpe Ratio, the better the fund's historical risk adjusted performance.

**Standard Deviation** is a historical measure of the variability of returns relative to the average annual return. A higher number indicates higher overall volatility.

**Tracking Error** is the difference between a portfolio's returns and the benchmark or index it was meant to mimic or beat.

**Up Capture Ratio/Down Capture Ratio** is a measure of how well a manager was able to replicate or improve on periods of positive benchmark returns, and how badly the manager was affected by periods of negative benchmark returns. The up-market capture ratio is a measure of a manager's performance in up markets relative to the index during the same period. For example, a ratio value of 115 indicates that the manager has outperformed the market index by 15% in periods when the index has risen. The down-market capture ratio is the direct opposite of the up-market capture ratio, gauging performance of the manager relative to the index in down markets. A ratio value of 80 would indicate the manager had declined on 80% as much as the declining overall market, indicating relative outperformance.

**Weighted Median Price/Book** is a ratio comparing share price to book value or assets minus liabilities.

**Weighted Median Market Cap** is the calculation representing the median market capitalization of the stocks in the portfolio, weighted by the amount of each stock.

**Weighted Median P/E (LTM—Latest 12 Months)** is a ratio comparing share price to earnings per share using data from the previous 12 months.

**Weighted Median P/E (NTM—Next 12 Months)** is a ratio comparing share price to earnings per share using estimated data for the next 12 months.

### Ratings and Rating Agencies

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Morningstar Category identifies funds based on their actual investment styles as measured by their underlying portfolio holdings over the past three years. If the fund is less than three years old, the category is based on the life of the fund. ©2019 Morningstar, Inc. All Rights Reserved. The information contained herein: (1) is proprietary to Morningstar; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information. Past performance is no guarantee of future results.

**This must be preceded or accompanied by a prospectus.**