



*Prepared by:*



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# Fiduciary Investment Review™

*Prepared for:*

City of Madison 457 Deferred Compensation Plan  
July 18, 2019

*Presented by:*

**John Blossom, MSPA, CPFA, AIF®**  
Registered Fiduciary™

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# Table of Contents

MARKET REVIEW .....	3
PLAN ALLOCATION .....	12
MONITORING REOPORT .....	23
CONSIDERATIONS .....	60
COST ANALYSIS .....	68
COMMITTEE TOPICS .....	73
APPENDIX .....	80

# Market Review

This Section provides an overview of the U.S. and International Equity and Bond Markets. Fund performance for every plan is affected by broad market activity. The first page of the Review summarizes U.S. Equity, International Equity and Fixed Income returns.

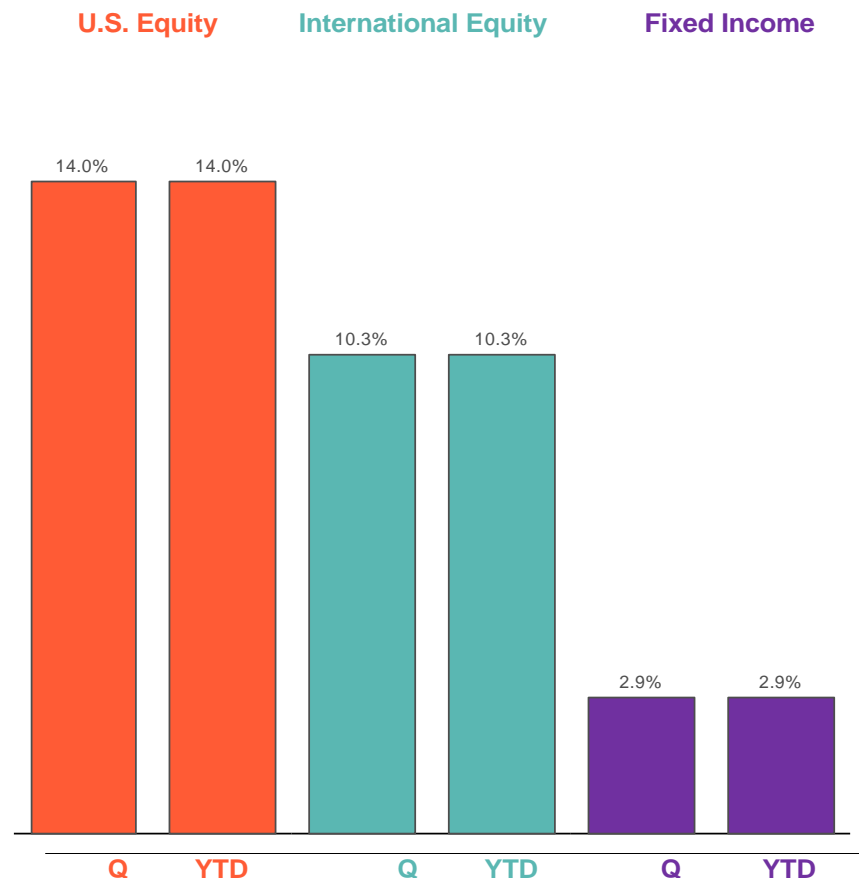
The Kaleidoscope Report shows relative performance of different asset classes for ten prior years and Year-to-Date for the current year (year 11). The Report shows the fallacy of making investment decisions based on past performance. The Report shows the importance of diversification among asset classes and the importance of re-balancing (to re-allocate earnings from higher return asset classes to other asset classes).

# Q1 2019 Market Review

## SUMMARY

- U.S. equity markets rebounded sharply up 14% (Russell 3000) in the first quarter on progress with China trade talks and more dovish comments from the Federal Reserve.
- International equities rallied as well, posting a 10.3% gain over the quarter (MSCI ACWI ex U.S.).
- The U.S. fixed income market was up 2.9% for the quarter (Bloomberg Barclays Aggregate) as interest rates declined. Additionally, the yield curve briefly inverted in late March with 3-month T-bills yielding more than 10-year Treasuries.
- The U.S. labor market remained tight with March unemployment at 3.8%.
- U.S. GDP growth remained solid in the fourth quarter up 2.2%. However, this was a deceleration from the third quarter pace.
- Growth stocks resumed their outperformance this quarter with the Russell 1000 Growth outperforming the Russell 1000 Value by 4.2%.
- The Federal Reserve signaled a pause in rate increases as they evaluate the extent of the global economic slowdown.

## TRAILING RETURNS



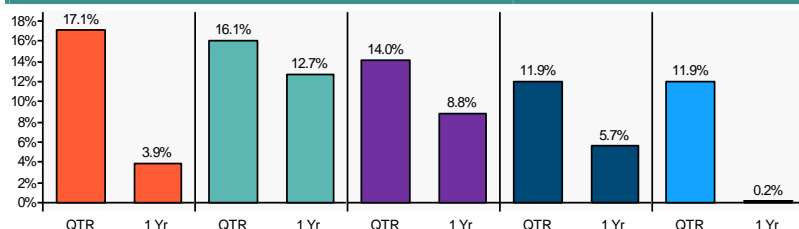
Quarterly and year-to-date returns of the following indices: U.S. Equity (Russell 3000 Index), Fixed Income (Bloomberg Barclays U.S. Aggregate Bond Index), and International Equity (MSCI ACWI ex U.S. Index)

# Q1 2019 Market Review - U.S. Equity

## U.S. EQUITY

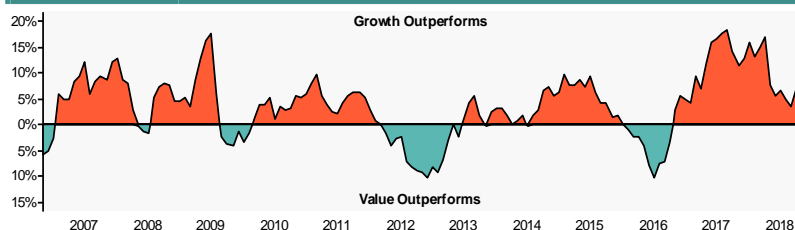
- The broad U.S. equity market, as measured by the Russell 3000 Index, was up 14% for the quarter.
- The best performing U.S. equity index for the quarter was Russell 2000 Growth, returning a positive 17.1%.
- The worst performing U.S. equity index for the quarter was Russell 2000 Value, returning a positive 11.9%.

## INDEX PERFORMANCE (sorted by trailing quarterly performance)



	QTR	YTD	1 Yr	3 Yr	5 Yr	10 Yr
Russell 2000 Growth	17.1	17.1	3.9	14.9	8.4	16.5
Russell 1000 Growth	16.1	16.1	12.7	16.5	13.5	17.5
Russell 3000	14.0	14.0	8.8	13.5	10.4	16.0
Russell 1000 Value	11.9	11.9	5.7	10.5	7.7	14.5
Russell 2000 Value	11.9	11.9	0.2	10.9	5.6	14.1

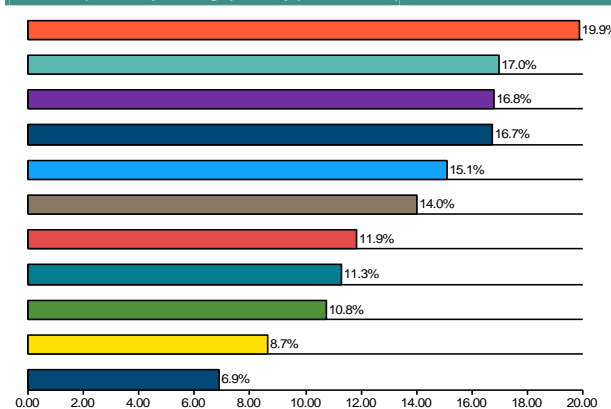
## GROWTH VS. VALUE



Over the last year, growth stocks outperformed value stocks by 7%.  
For the trailing quarter, growth stocks outperformed value stocks by 4.2%.

The graph above is plotted using a rolling one-year time period. Growth stock performance is represented by the Russell 2000 Growth Index. Value stock performance is represented by the Russell 1000 Value Index.

## SECTOR (sorted by trailing quarterly performance)



	QTR	YTD	1 Yr	3 Yr	5 Yr	10 Yr
Information Technology	19.9	19.9	14.9	22.3	18.2	19.9
Real Estate	17.0	17.0	19.7	7.9	10.3	19.2
Industrials	16.8	16.8	2.8	11.9	9.2	17.3
Energy	16.7	16.7	0.2	4.2	-3.8	6.1
Consumer Discretionary	15.1	15.1	11.3	13.4	12.5	20.6
Telecommunication Svcs.	14.0	14.0	8.2	1.5	5.2	9.7
Consumer Staples	11.9	11.9	10.2	5.2	8.5	13.6
Materials	11.3	11.3	-1.3	10.0	5.3	13.2
Utilities	10.8	10.8	19.7	9.7	11.1	13.4
Financials	8.7	8.7	-4.9	14.0	9.5	15.6
Health Care	6.9	6.9	14.6	13.1	11.7	16.9

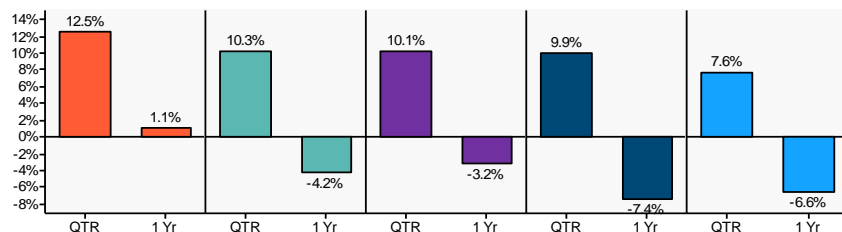
Source: S&P 1500 Sector Indices

# Q1 2019 Market Review - International Equity

## INTERNATIONAL EQUITY

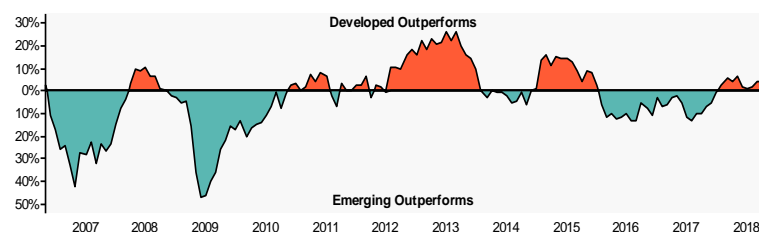
- Developed international equity returned a positive 10.1% in the last quarter (MSCI EAFE).
- Emerging market equity posted a positive 9.9% return (MSCI Emerging Markets Index).

## INDEX PERFORMANCE (sorted by trailing quarterly performance)



	QTR	YTD	1 Yr	3 Yr	5 Yr	10 Yr
MSCI EAFE Large Growth	12.5	12.5	1.1	8.3	4.1	9.7
MSCI ACWI ex US	10.3	10.3	-4.2	8.1	2.6	8.8
MSCI EAFE	10.1	10.1	-3.2	7.8	2.8	9.5
MSCI Emg Markets	9.9	9.9	-7.4	10.7	3.7	8.9
MSCI EAFE Large Value	7.6	7.6	-6.6	6.7	0.0	7.6

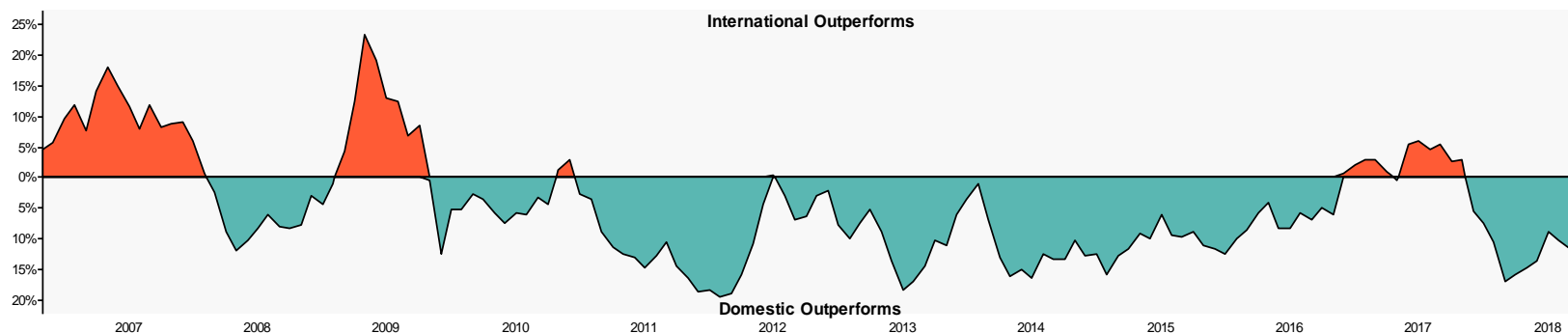
## DEVELOPED VS. EMERGING MARKETS



Over the last year, developed international stocks outperformed emerging market stocks by 4.2%.  
For the trailing quarter, developed international stocks outperformed emerging market stocks by 0.2%.

The graph above is plotted using a rolling one-year time period. Developed international stock performance is represented by the MSCI EAFE Index. Emerging market stock performance is represented by the MSCI Emerging Markets Index.

## INTERNATIONAL VS. DOMESTIC



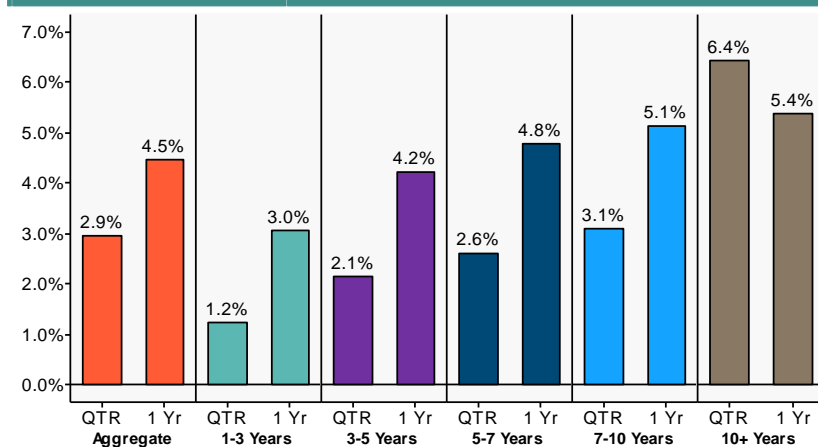
The graph above is plotted using a rolling one-year time period. International stock performance is represented by the MSCI ACWI ex U.S. Index. Domestic stock performance is represented by the Russell 3000 Index.

# Q1 2019 Market Review - Fixed Income

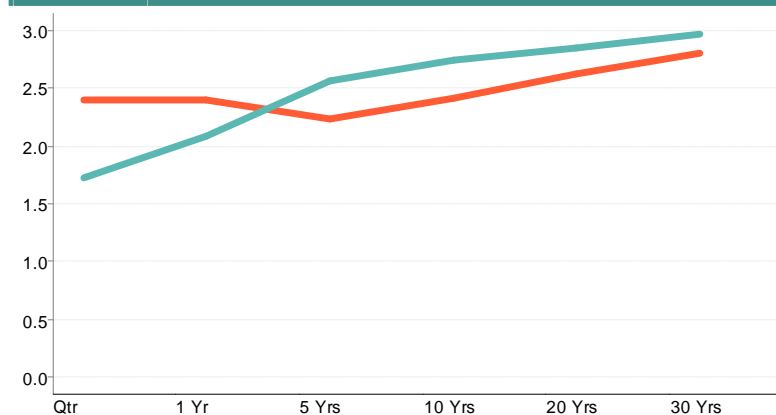
## FIXED INCOME

- The broad U.S. fixed income market returned a positive 2.9% (Bloomberg Barclays U.S. Aggregate) for the quarter.
- The best performing sector for the quarter was High Yield Corporate Bond, returning a positive 7.3%. The worst performing sector for the quarter was Cash, returning a positive 0.6%.

## PERFORMANCE BY MATURITY



## YIELD CURVE



Source: Bloomberg Barclays U.S. Aggregate Indices

Yield Curve - Current One Year Ago

## SECTOR (sorted by trailing quarterly performance)

	QTR	YTD	1 Yr	3 Yr	5 Yr	10 Yr
High Yield Corporate Bond	7.3	7.3	5.9	8.6	4.7	11.3
Corporate Investment Grade	5.1	5.1	4.9	3.6	3.7	6.7
TIPS	3.2	3.2	2.7	1.7	1.9	3.4
Aggregate Bond	2.9	2.9	4.5	2.0	2.7	3.8
Mortgage Backed Securities	2.2	2.2	4.4	1.8	2.6	3.1
Government	2.1	2.1	4.2	1.1	2.1	2.4
Cash	0.6	0.6	2.1	1.2	0.7	0.4

Source: Bloomberg Barclays U.S. Indices

# Q1 2019 Market Kaleidoscope

## ASSET CLASS RETURNS

The following chart exhibits the volatility of asset class returns from year to year by ranking indices in order of performance, highlighting the importance of diversification.

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD
Fixed Income 5.24	International 41.45	Sm Growth 29.09	Fixed Income 7.84	Global REIT 23.73	Sm Growth 43.30	Global REIT 22.81	Large Growth 5.67	Sm Value 31.74	Large Growth 30.21	Cash 1.87	Sm Growth 17.14
Cash 2.06	Large Growth 37.21	Sm Value 24.50	Large Growth 2.64	Sm Value 18.05	Sm Value 34.52	Large Value 13.45	Global REIT 0.59	Large Value 17.34	International 27.19	Fixed Income 0.01	Large Growth 16.10
Balanced Index -22.91	Sm Growth 34.47	Global REIT 23.44	Global REIT 1.70	Large Value 17.51	Large Growth 33.48	Large Growth 13.05	Fixed Income 0.55	Commodities 11.77	Sm Growth 22.17	Large Growth -1.51	Global REIT 14.39
Sm Value -28.92	Global REIT 33.68	Commodities 16.83	Balanced Index 0.87	International 16.83	Large Value 32.53	Balanced Index 6.61	Cash 0.05	Sm Growth 11.32	Balanced Index 15.46	Global REIT -4.77	Large Value 11.93
Commodities -35.65	Sm Value 20.58	Large Growth 16.71	Large Value 0.39	Large Growth 15.26	International 15.29	Fixed Income 5.97	Balanced Index -0.62	Balanced Index 7.28	Large Value 13.66	Balanced Index -5.12	Sm Value 11.93
Large Value -36.85	Large Value 19.69	Large Value 15.51	Cash 0.10	Sm Growth 14.59	Balanced Index 13.57	Sm Growth 5.60	Sm Growth -1.38	Large Growth 7.08	Global REIT 8.63	Large Value -8.27	International 10.31
Large Growth -38.44	Commodities 18.91	International 11.15	Sm Growth -2.91	Balanced Index 10.55	Global REIT 2.81	Sm Value 4.22	Large Value -3.83	Global REIT 6.90	Sm Value 7.84	Sm Growth -9.31	Balanced Index 9.42
Sm Growth -38.54	Balanced Index 18.87	Balanced Index 10.74	Sm Value -5.50	Fixed Income 4.22	Cash 0.07	Cash 0.03	International -5.66	International 4.50	Fixed Income 3.54	Commodities -11.25	Commodities 6.32
Global REIT -45.04	Fixed Income 5.93	Fixed Income 6.54	Commodities -13.32	Cash 0.11	Fixed Income -2.02	International -3.87	Sm Value -7.47	Fixed Income 2.65	Commodities 1.70	Sm Value -12.86	Fixed Income 2.94
International -45.53	Cash 0.21	Cash 0.13	International -13.71	Commodities -1.06	Commodities -9.52	Commodities -17.01	Commodities -24.66	Cash 0.33	Cash 0.86	International -14.20	Cash 0.60

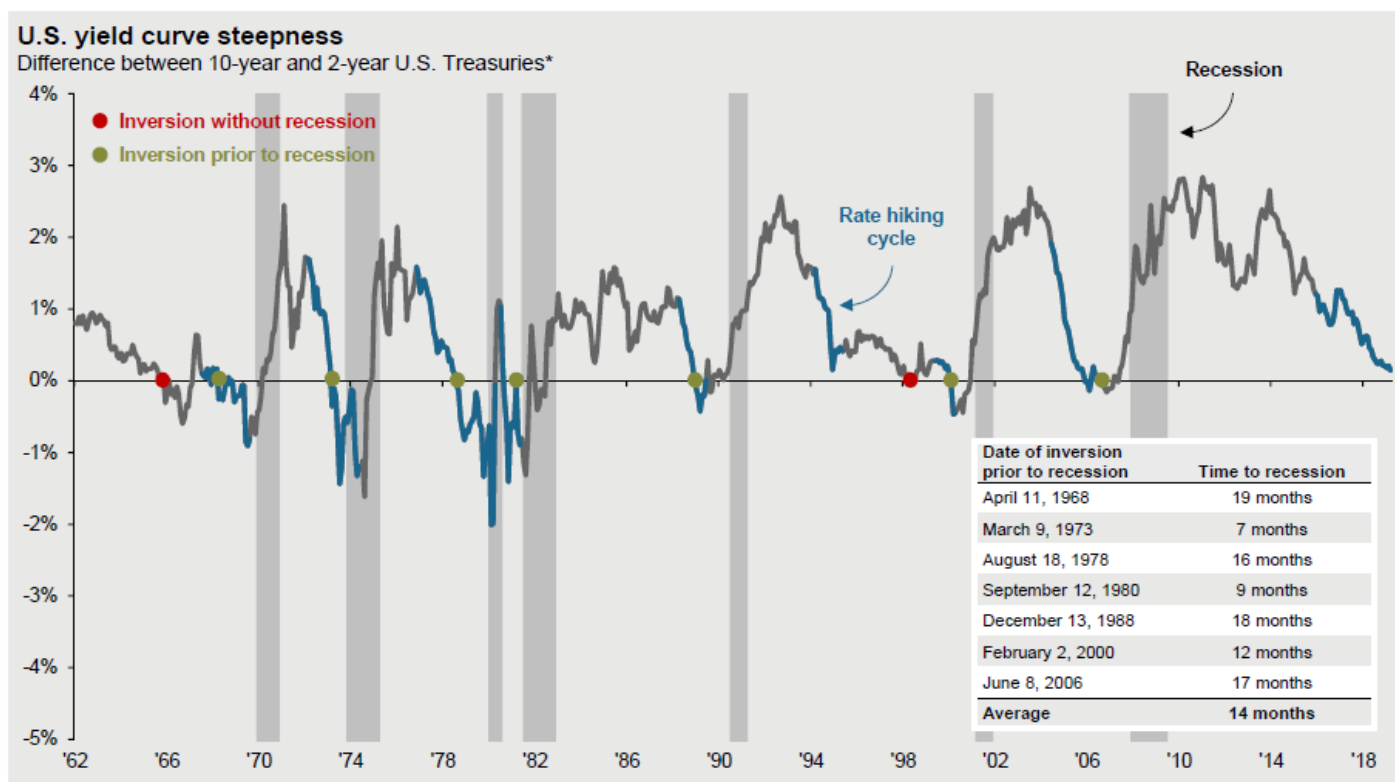
Large Value (Russell 1000 Value)	Small Growth (Russell 2000 Growth)	Global REIT (S&P Global REIT)
Large Growth (Russell 1000 Growth)	International (MSCI ACWI ex-US)	Commodities (Bloomberg Commodities)
Small Value (Russell 2000 Value)	Fixed Income (Bloomberg Barclays Agg)	Cash (Merrill Lynch 3-Mo T-Bill)
Balanced (40% Russell 3000, 40% Bloomberg Barclay's U.S. Aggregate, 20% MSCI ACWI ex US)		



# Q1 2019 Market Review - Chart of the Quarter

## U.S. yield curve inversion and recessions

The U.S. yield curve briefly inverted this quarter with 3-month T-bills yielding more than 10-year Treasuries. Historically inversions have often foreshadowed a recession. Even when recessions followed an inversion the average time lapse is fourteen months. Most other recession indicators are currently signaling expansion including jobless claims, credit spreads, retail sales and housing permits.



Source: J.P. Morgan Asset Management, FactSet, Federal Reserve.

# Q1 2019 Disclosures

Performance of indexes reflects the unmanaged result for the market segment the selected stocks represent. Indexes are unmanaged and not available for direct investment.

Citigroup Corporate Bond is an index which serves as a benchmark for corporate bond performance. You cannot invest directly in an index.

Citigroup Mortgage Master is an index which serves as a benchmark for U.S. mortgage-backed securities performance.

Citigroup WGBI Index is an index which serves as a benchmark for global bond performance, including 22 different government bond markets.

Credit Suisse High Yield Index is an unmanaged, trader priced index constructed to mirror the characteristics of the high yield bond market.

BC (Barclays Capital) U.S. Aggregate Bond Index represents securities that are U. S., domestic, taxable, and dollar denominated. The index covers the U. S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis.

BC Credit Bond Index includes publicly issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered.

BC U.S. Corporate Investment Grade represents investment grade corporate securities that are U. S., domestic, taxable, and dollar denominated.

BC High Yield Corporate Bond represents below investment grade corporate securities that are U. S., domestic, taxable, and dollar denominated.

BC TIPS Index includes publicly issued U.S. government treasury inflation protected securities that meet the specified maturity, liquidity and other requirements.

BC Mortgage Backed Securities covers agency mortgage-backed pass-through securities (both fixed-rate and hybrid ARMs) issued by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

BC Government Index includes publicly issued U.S. government securities that meet the specified maturity, liquidity and other requirements.

BarCap U.S. Aggregate 1-3 Yr. TR USD Index represents securities in the BC U.S. Aggregate Index that have maturity dates over the next 1 to 3 years.

BarCap U.S. Aggregate 3-5 Yr. TR USD Index represents securities in the BC U.S. Aggregate Index that have maturity dates over the next 3 to 5 years.

BarCap U.S. Aggregate 5-7 Yr. TR USD Index represents securities in the BC U.S. Aggregate Index that have maturity dates over the next 5-7 years.

BarCap U.S. Aggregate 7-10 Yr. TR USD Index represents securities in the BC U.S. Aggregate Index that have maturity dates over the next 7 to 10 years.

BarCap U.S. Aggregate 10+ Yr. TR USD Index represents securities in the BC U.S. Aggregate Index that have maturity dates over 10 years.

DJW 5000 (Full Cap) Index measures the performance of all U.S. common equity securities, and serves as an index of all stock trades in the United States.

MSCI FI Emerging Markets is a rules-based index which serves as a benchmark for emerging country fixed income performance.

MSCI FI EAFE International is a rules-based index which serves as a benchmark for developed international country fixed income performance.

MSCI EAFE Index is listed for foreign stock funds (EAFE refers to Europe, Australia, and Far East). Widely accepted as a benchmark for international stock performance, it is an aggregate of 21 individual country indexes.

MSCI EAFE Large Value represents the large cap value stocks within the MSCI EAFE Index.

MSCI EAFE Large Growth represents the large cap growth stocks within the MSCI EAFE Index.

MSCI EM (Emerging Markets) Index serves as a benchmark for each emerging country. The average size of these companies is (U.S.) \$400 million, as compared with \$300 billion for those companies in the World index.

MSCI World Index is a rules-based index that serves as a benchmark for the developed global equity markets.

MSCI Europe ex UK Index is a rules-based index that serves as a benchmark for the Europe's equity markets, excluding the United Kingdom.

MSCI Pacific ex Japan Index is a rules-based index that serves as a benchmark for Asia Pacific's equity markets, excluding Japan.

MSCI United Kingdom Index is a rules-based index that serves as a benchmark for the United Kingdom's equity markets.

MSCI Japan is a rules-based index that serves as a benchmark for Japan's equity markets.

Nareit All Reit Index includes all tax-qualified REITs with common shares that trade on the New York Stock Exchange, the American Stock Exchange or the NASDAQ National Market List.

3-Month T-bills (90 Day T-Bill Index) are government-backed short-term investments considered to be risk-free and as good as cash because the maturity is only three months.

Russell 1000 Growth Index is a market-capitalization weighted index of those firms in the Russell 1000 with higher price-to-book ratios and higher forecasted growth values.

Russell 1000 Value Index is a market-capitalization weighted index of those firms in the Russell 1000 with lower price-to-book ratios and lower forecasted growth values.

Russell Top 200 Growth Index is a market-capitalization weighted index of those firms in the Russell Top 200 with higher price-to-book ratios and higher forecasted growth values.

Russell Top 200 Value Index is a market-capitalization weighted index of those firms in the Russell Top 200 with lower price-to-book ratios and lower forecasted growth values.

Russell 2000 Growth Index is a market-weighted total return index that measures the performance of companies within the Russell 2000 Index having higher price-to-book ratio and higher forecasted growth values.

Russell 2000 Index consists of the smallest 2000 companies in the Russell 3000 Index, representing approximately 7% of the Russell 3000 total market capitalization.

Russell 2000 Value Index is a market-weighted total return index that measures the performance of companies within the Russell 2000 Index having lower price-to-book ratios and lower forecasted growth values.

Russell MidCap Growth Index is a market-weighted total return index that measures the performance of companies within the Russell MidCap Index having higher price-to-book ratios and higher forecasted growth values.

Russell Mid-Cap Index includes firms 201 through 1000, based on market capitalization, from the Russell 3000 Index.

Russell MidCap Value Index is a market-weighted total return index that measures the performance of companies within the Russell MidCap index having lower price-to-book ratios and lower forecasted growth values.

Russell Top 200 Index consists of the 200 largest securities in the Russell 3000 Index.

Russell 3000 Index is a market-capitalization weighted index, consisting of 3,000 U.S. common equity securities, reflective of the broad U.S. equity market.

Salomon 1-10 Yr. Governments is an index which serves as a benchmark for U.S. Government bonds with maturities ranging from 1 to 10 years.

S&P 500 Index measures the performance of the largest 500 U.S. common equity securities, and serves as an index of large cap stocks traded in the United States.

S&P 1500 Energy Index measures the performance of the energy sector in the S&P 1500 Index.

S&P 1500 Industrials measures the performance of the industrial sector in the S&P 1500 Index.

S&P 1500 Financials measures the performance of the financials sector in the S&P 1500 Index.

S&P 1500 Utilities measures the performance of the utilities sector in the S&P 1500 Index.

S&P 1500 Consumer Discretionary Index measures the performance of the consumer discretionary sector in the S&P 1500 Index.

S&P 1500 Consumer Staples Index measures the performance of the consumer staples sector in the S&P 1500 Index.

S&P 1500 Information Technology measures the performance of the information technology sector in the S&P 1500 Index.

S&P 1500 Materials measures the performance of the materials sector in the S&P 1500 Index.

S&P 1500 Health Care measures the performance of the health care sector in the S&P 1500 Index.

S&P 1500 Telecommunications Services Index measures the performance of the telecommunications services sector in the S&P 1500 Index.

# Q1 2019 Disclosures

## **General Disclosure:**

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## **Research/Outlook Disclosure:**

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# Plan Allocation Review

Plan asset allocation is shown at the Plan level and details are provided for each investment option.



# CITY OF MADISON

## 457 DEFERRED COMPENSATION

FUTURE CONTRIBUTIONS	<input type="checkbox"/> YES	<input type="checkbox"/> NO
REALLOCATION OF EXISTING BALANCES	<input type="checkbox"/> YES	<input type="checkbox"/> NO
ANNUAL DECEMBER AUTO REBALANCE OR <input type="checkbox"/> QUARTERLY <input type="checkbox"/> SEMI-ANNUAL <input type="checkbox"/> NONE		

Employee Name \_\_\_\_\_ Social Security # XXX-XX-

### CHOOSE 100% IN ONE TARGET MATURITY FUND

Schwab Target Retirement 2010 Index	Target Date	SWYAX	Expected Retirement Date Between 2000 - 2015	<input type="checkbox"/> 100%
Schwab Target Retirement 2020 Index	Target Date	SWYLY	Expected Retirement Date Between 2016 - 2020	<input type="checkbox"/> 100%
Schwab Target Retirement 2025 Index	Target Date	SWYDX	Expected Retirement Date Between 2021 - 2025	<input type="checkbox"/> 100%
Schwab Target Retirement 2030 Index	Target Date	SWYEX	Expected Retirement Date Between 2026 - 2030	<input type="checkbox"/> 100%
Schwab Target Retirement 2035 Index	Target Date	SWYFX	Expected Retirement Date Between 2031 - 2035	<input type="checkbox"/> 100%
Schwab Target Retirement 2040 Index	Target Date	SWYGX	Expected Retirement Date Between 2036 - 2040	<input type="checkbox"/> 100%
Schwab Target Retirement 2045 Index	Target Date	SWYHX	Expected Retirement Date Between 2041 - 2045	<input type="checkbox"/> 100%
Schwab Target Retirement 2050 Index	Target Date	SWYMX	Expected Retirement Date Between 2046 - 2050	<input type="checkbox"/> 100%
Schwab Target Retirement 2055 Index	Target Date	SWYJX	Expected Retirement Date Between 2051 - 2055	<input type="checkbox"/> 100%
Schwab Target Retirement 2060 Index	Target Date	SWYNX	Expected Retirement Date Between 2056 - 2060	<input type="checkbox"/> 100%

OR

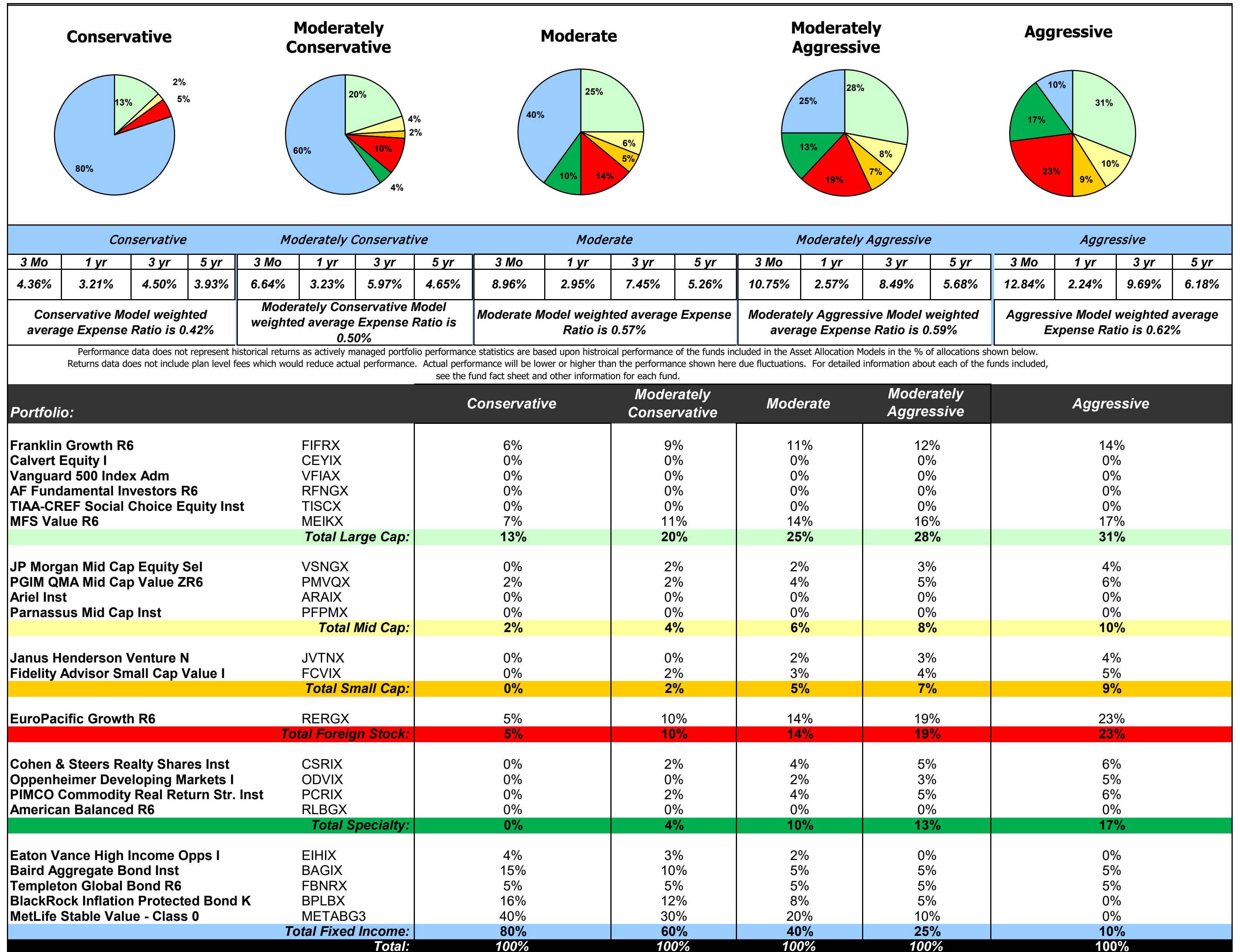
You may check one portfolio model or choose to custom blend using the individual funds.

			CONSERVATIVE	MODERATE LY CONSERVATIVE	MODERATE	MODERATE LY AGGRESSIVE	AGGRESSIVE	CUSTOM
			80%/20%	60%/40%	40%/60%	25%/75%	10%/90%	
Funds	Investment Style		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Franklin Growth R6	Large Growth	FIFRX	6%	9%	11%	12%	14%	%
Calvert Equity I	Large Growth	CEYIX	0%	0%	0%	0%	0%	%
Vanguard 500 Index Admiral	Large Blend	VFIAX	0%	0%	0%	0%	0%	%
American Fundamental Investors R6	Large Blend	RFNGX	0%	0%	0%	0%	0%	%
TIAA-CREF Social Choice Equity Inst	Large Blend	TISCX	0%	0%	0%	0%	0%	%
MFS Value R6	Large Value	MEIKX	7%	11%	14%	16%	17%	%
JP Morgan Mid Cap Equity I	Mid-Cap Growth	VSNGX	0%	2%	2%	3%	4%	%
PGIM QMA Mid Cap Value R6	Mid-Cap Value	PMVQX	2%	2%	4%	5%	6%	%
Ariel Inst	Mid-Cap Value	ARAIX	0%	0%	0%	0%	0%	%
Parnassus Mid-Cap Inst	Mid Cap Blend	PFPMX	0%	0%	0%	0%	0%	%
Janus Henderson Venture N	Small Growth	JVTNX	0%	0%	2%	3%	4%	%
Fidelity Advisor Small Cap Value I	Small Value	FCVIX	0%	2%	3%	4%	5%	%
EuroPacific Growth R6	Foreign Blend	RERGX	5%	10%	14%	19%	23%	%
Cohen & Steers Realty Shares Inst	Specialty Real Estate	CSRIX	0%	2%	4%	5%	6%	***%
PIMCO Commodity Real Return Str. Inst	Broad Commodities	PCRIX	0%	2%	4%	5%	6%	***%
Invesco Oppenheimer Develop Mkts R6	Divers. Emerging	ODVIX	0%	0%	2%	3%	5%	***%
American Balanced R6	Moderate Allocation	RLBGX	0%	0%	0%	0%	0%	%
Eaton Vance High Income Opps I	High Yield Bond	EIHIX	4%	3%	2%	0%	0%	%
Baird Aggregate Bond Inst	Inter. Term Bond	BAGIX	15%	10%	5%	5%	5%	%
Templeton Global Bond R6	Global Bond	FBNRX	5%	5%	5%	5%	5%	%
BlackRock Inflation Protected Bnd K Svc	TIPS	BPLBX	16%	12%	8%	5%	0%	%
MetLife Stable Value - Class 0	Stable Value	METABG3	40%	30%	20%	10%	0%	%
INDIVIDUAL FUNDS MUST TOTAL 100%								100%
								** No more than 6**%

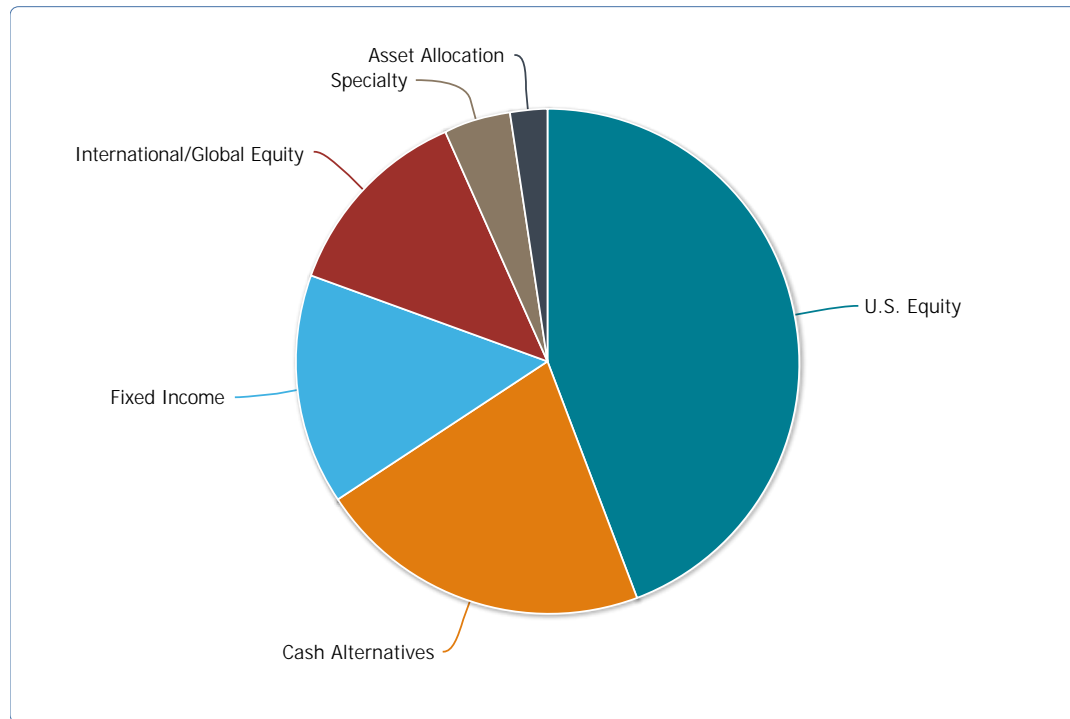
Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, we certify that the above information is accurate and correct. If a model is elected with this form, it will be rebalanced annually in December. Model Investment Choices and automatic rebalance timing and frequency can be changed on the Participant Website. Existing balances will be realigned with the model selected.

# City of Madison 457 Deferred Compensation Plan

## Model Portfolio Returns as of March 31, 2019



# Plan Allocation by Investment Type



Investment Type	Assets	Percentage
U.S. Equity	\$42,805,290.94	44.3%
Cash Alternatives	\$20,740,898.94	21.4%
Fixed Income	\$14,284,193.62	14.8%
International/Global Equity	\$12,406,572.84	12.8%
Specialty	\$4,089,980.52	4.2%
Asset Allocation	\$2,367,475.67	2.4%
<b>Total</b>	<b>\$96,694,412.53</b>	<b>100%</b>
as of 3/31/2019		

# Plan Allocation by Investment Type

Investment Name	Asset Class	Amount	Percentage	Score
<b>U.S. Equity</b>		<b>\$42,805,291</b>		
MFS Value R6	LCV	\$9,464,657	9.8 %	10
American Funds Fundamental Invs R6	LCB	\$4,597,572	4.8 %	9
TIAA-CREF Social Choice Eq Instl	LCB	\$458,959	0.5 %	7
Franklin Growth R6	LCG	\$10,927,429	11.3 %	8
Calvert Equity I	LCG	\$1,741,634	1.8 %	6
PGIM QMA Mid-Cap Value R6	MCV	\$3,086,529	3.2 %	7
Parnassus Mid Cap Institutional	MCB	\$315,517	0.3 %	9
JPMorgan Mid Cap Equity I	MCG	\$2,863,695	3.0 %	6
Fidelity Advisor Small Cap Value I	SCV	\$1,971,402	2.0 %	9
Janus Henderson Venture N	SCG	\$3,977,304	4.1 %	10
Ariel Fund Institutional	SMCV	\$281,219	0.3 %	8
Vanguard 500 Index Admiral	LCB-P	\$3,119,373	3.2 %	10
<b>Cash Alternatives</b>		<b>\$20,740,899</b>		
METLIFE STABLE VALUE CLASS 3	SV	\$20,740,786	21.4 %	
SCHWAB MONEY MARKET	MM-P	\$113	0.0 %	
<b>Fixed Income</b>		<b>\$14,284,194</b>		
Baird Aggregate Bond Inst	CFI	\$6,796,715	7.0 %	10
BlackRock Inflation Protected Bond K	UGT	\$3,868,375	4.0 %	7
Eaton Vance High Income Opportunities I	HY	\$999,274	1.0 %	9
Templeton Global Bond R6	GFI	\$2,619,829	2.7 %	8
<b>International/Global Equity</b>		<b>\$12,406,573</b>		
American Funds Europacific Growth R6	IE	\$11,020,542	11.4 %	9
Oppenheimer Developing Markets I	EME	\$1,386,031	1.4 %	10



# Plan Allocation by Investment Type

Investment Name	Asset Class	Amount	Percentage	Score
<b>Specialty</b>		<b>\$4,089,981</b>		
Cohen & Steers Instl Realty Shares	REI	\$2,343,112	2.4 %	10
PIMCO Commodity Real Ret Strat Instl	CBB	\$1,746,869	1.8 %	10
<b>Asset Allocation</b>		<b>\$2,367,476</b>		
Schwab Target 2010 Index	CON	\$17,441	0.0 %	
Schwab Target 2025 Index	MC	\$0	0.0 %	
Schwab Target 2020 Index	MC	\$432,339	0.4 %	
Schwab Target 2030 Index	MOD	\$491,813	0.5 %	
Schwab Target 2035 Index	MOD	\$0	0.0 %	
American Funds American Balanced R6	MOD	\$986,803	1.0 %	10
Schwab Target 2040 Index	MA	\$312,158	0.3 %	
Schwab Target 2045 Index	MA	\$0	0.0 %	
Schwab Target 2050 Index	MA	\$126,922	0.1 %	
Schwab Target 2055 Index	AGG	\$0	0.0 %	
Schwab Target 2060 Index	AGG	\$0	0.0 %	
<b>Total</b>		<b>\$96,694,413</b>	<b>100.0 %</b>	

# Returns Analysis

Performance as of 3/31/2019

Asset Allocation	Ticker/ ID	QTR	YTD	Annualized Returns				Since Incept.	Share Class Inception	Strategy Inception	Expense Ratio		
				1 Year	3 Year	5 Year	10 Year				Gross	Net	
Asset Allocation													
Conservative													
Schwab Target 2010 Index	SWYAX	6.25	6.25	4.81	-	-	-	4.88	8/25/2016	8/25/2016	0.13	0.08	
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-	
Moderate Conservative													
Schwab Target 2020 Index	SWYLY	7.19	7.19	4.73	-	-	-	6.07	8/25/2016	8/25/2016	0.13	0.08	
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-	
Schwab Target 2025 Index	SWYDX	8.52	8.52	4.79	-	-	-	7.16	8/25/2016	8/25/2016	0.12	0.08	
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-	
Moderate													
Schwab Target 2030 Index	SWYEX	9.49	9.49	4.76	-	-	-	7.93	8/25/2016	8/25/2016	0.12	0.08	
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-	
Schwab Target 2035 Index	SWYFX	10.36	10.36	4.68	-	-	-	8.52	8/25/2016	8/25/2016	0.12	0.08	
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-	
Moderate Aggressive													
Schwab Target 2040 Index	SWYGX	10.96	10.96	4.49	-	-	-	9.08	8/25/2016	8/25/2016	0.12	0.08	
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-	
Schwab Target 2045 Index	SWYHX	11.57	11.57	4.33	-	-	-	9.40	8/25/2016	8/25/2016	0.13	0.08	
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-	
Schwab Target 2050 Index	SWYMX	11.84	11.84	4.23	-	-	-	9.58	8/25/2016	8/25/2016	0.13	0.08	
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-	


# Returns Analysis

Performance as of 3/31/2019

Asset Allocation	Ticker/ ID	QTR	YTD	Annualized Returns				Since Incept.	Share Class Inception	Strategy Inception	Expense Ratio		
				1 Year	3 Year	5 Year	10 Year				Gross	Net	
Asset Allocation													
Aggressive													
Schwab Target 2055 Index	SWYJX	12.10	12.10	4.15	-	-	-	9.79	8/25/2016	8/25/2016	0.13	0.08	
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-	
Schwab Target 2060 Index	SWYNX	12.28	12.28	4.23	-	-	-	9.84	8/25/2016	8/25/2016	0.13	0.08	
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-	
Moderate													
American Funds American Balanced R6	RLBGX	7.95	7.95	6.56	9.29	7.83	12.30	11.62	5/1/2009	7/25/1975	0.28	0.28	
StyleBenchmark		9.20	9.20	5.83	8.56	6.60	10.46	-	-	-	-	-	
Active	Ticker/ ID	QTR	YTD	Annualized Returns				Since Incept.	Share Class Inception	Strategy Inception	Expense Ratio		
				1 Year	3 Year	5 Year	10 Year				Gross	Net	
U.S. Equity													
Large Cap Value													
MFS Value R6	MEIKX	12.82	12.82	4.94	10.27	8.31	13.90	7.73	5/1/2006	1/2/1996	0.48	0.48	
Russell 1000 Value Index		11.93	11.93	5.67	10.45	7.72	14.52	-	-	-	-	-	
Large Cap Blend													
American Funds Fundamental Invs R6	RFNGX	12.04	12.04	5.43	13.39	10.58	15.31	14.29	5/1/2009	8/1/1978	0.30	0.30	
TIAA-CREF Social Choice Eq Instl	TISCX	13.95	13.95	7.87	13.27	9.52	15.43	5.86	7/1/1999	7/1/1999	0.17	0.17	
Russell 1000 Index		14.00	14.00	9.30	13.52	10.63	16.05	-	-	-	-	-	
Large Cap Growth													
Calvert Equity I	CEYIX	17.20	17.20	20.14	16.84	13.22	16.76	8.86	11/1/1999	8/24/1987	0.76	0.74	
Franklin Growth R6	FIFRX	15.31	15.31	9.62	15.60	12.31	16.46	14.32	5/1/2013	4/1/1948	0.48	0.48	
Russell 1000 Growth Index		16.10	16.10	12.75	16.53	13.50	17.52	-	-	-	-	-	

# Returns Analysis

Performance as of 3/31/2019

Active	Ticker/ ID	QTR	YTD	Annualized Returns				Since Incept.	Share Class Inception	Strategy Inception	Expense Ratio		
				1 Year	3 Year	5 Year	10 Year				Gross	Net	
U.S. Equity													
Mid Cap Value													
PGIM QMA Mid-Cap Value R6	 PMVQX	12.16	12.16	-6.54	6.34	4.93	14.92	9.15	1/18/2011	8/19/1998	0.77	0.73	
Russell Mid-Cap Value Index		14.37	14.37	2.89	9.50	7.22	16.39	-	-	-	-	-	
Mid Cap Blend													
Parnassus Mid Cap Institutional	PPPMX	16.09	16.09	10.67	12.34	10.13	16.15	9.90	4/30/2015	4/29/2005	0.75	0.75	
Russell Mid-Cap Index		16.54	16.54	6.47	11.82	8.81	16.88	-	-	-	-	-	
Mid Cap Growth													
JPMorgan Mid Cap Equity I	VSNGX	18.06	18.06	7.33	12.14	9.01	16.31	10.36	12/31/1996	12/31/1996	1.01	0.89	
Russell Mid-Cap Growth Index		19.62	19.62	11.51	15.06	10.89	17.60	-	-	-	-	-	
Small Cap Value													
Fidelity Advisor Small Cap Value I	FCVIX	10.72	10.72	-4.59	7.29	6.06	15.32	9.93	11/3/2004	11/3/2004	0.91	0.91	
Russell 2000 Value Index		11.93	11.93	0.17	10.86	5.59	14.12	-	-	-	-	-	
Small Cap Growth													
Janus Henderson Venture N	JVTNX	20.78	20.78	9.00	16.17	11.20	19.01	14.71	5/31/2012	4/30/1985	0.67	0.67	
Russell 2000 Growth Index		17.14	17.14	3.85	14.87	8.41	16.52	-	-	-	-	-	
SMid Cap Value													
Ariel Fund Institutional	ARAIX	17.68	17.68	1.01	11.21	8.20	18.80	13.93	12/30/2011	11/6/1986	0.72	0.72	
Russell 2500 Value Index		13.12	13.12	1.84	9.85	6.02	15.03	-	-	-	-	-	

# Returns Analysis

Performance as of 3/31/2019

Active	Ticker/ ID	QTR	YTD	Annualized Returns				Since Incept.	Share Class Inception	Strategy Inception	Expense Ratio	
				1 Year	3 Year	5 Year	10 Year				Gross	Net
International/Global Equity												
International Equity												
American Funds Europacific Growth R6	RERGX	13.20	13.20	-4.66	9.33	4.27	9.94	8.87	5/1/2009	4/16/1984	0.49	0.49
MSCI ACWI ex USA NR		10.31	10.31	-4.22	8.09	2.57	8.85	-	-	-	-	-
Emerging Market Equity												
Oppenheimer Developing Markets I	ODVIX	12.43	12.43	-3.75	11.81	3.88	11.54	6.47	12/29/2011	11/18/1996	0.87	0.87
MSCI EM (Emerging Markets) ND USD		9.93	9.93	-7.41	10.68	3.68	8.94	-	-	-	-	-
Fixed Income												
Core Fixed Income												
Baird Aggregate Bond Inst	BAGIX	3.32	3.32	4.59	2.55	3.13	5.18	5.23	9/29/2000	9/29/2000	0.30	0.30
BB Aggregate Bond		2.94	2.94	4.48	2.03	2.74	3.77	-	-	-	-	-
U.S. Government TIPS												
BlackRock Inflation Protected Bond K	BPLBX	3.19	3.19	1.90	1.65	1.49	3.16	4.14	6/28/2004	6/28/2004	0.40	0.34
BB TIPS		3.19	3.19	2.70	1.70	1.94	3.41	-	-	-	-	-
High Yield												
Eaton Vance High Income Opportunities I	EIHIX	7.04	7.04	4.43	6.51	4.52	11.78	8.10	10/1/2009	8/19/1986	0.62	0.62
BofA ML US High Yield Master II Index		7.40	7.40	5.94	8.69	4.70	11.24	-	-	-	-	-
Global Fixed Income												
Templeton Global Bond R6	FBNRX	2.01	2.01	2.19	4.33	2.03	5.60	1.72	5/1/2013	9/18/1986	0.63	0.56
BofA ML Global Broad Market Index		2.25	2.25	-0.07	1.50	1.22	3.17	-	-	-	-	-

# Returns Analysis

Performance as of 3/31/2019

Active	Ticker/ ID	QTR	YTD	Annualized Returns				Since Incept.	Share Class Inception	Strategy Inception	Expense Ratio	
				1 Year	3 Year	5 Year	10 Year				Gross	Net
Specialty												
REIT												
Cohen & Steers Instl Realty Shares	CSRIX	17.15	17.15	20.37	7.21	9.84	18.51	11.92	2/14/2000	2/14/2000	0.77	0.75
DJUSSlct REIT United States		15.72	15.72	19.73	5.29	8.93	18.50	-	-	-	-	-
Commodities Broad Basket												
PIMCO Commodity Real Ret Strat Instl	PCRIX	9.37	9.37	-5.41	2.92	-8.90	-0.19	2.44	6/28/2002	6/28/2002	1.39	1.24
DJUBS US Commodity Index TR		6.32	6.32	-5.25	2.22	-8.92	-	-	-	-	-	-
Passive	Ticker/ ID	QTR	YTD	Annualized Returns				Since Incept.	Share Class Inception	Strategy Inception	Expense Ratio	
				1 Year	3 Year	5 Year	10 Year				Gross	Net
U.S. Equity												
Large Cap Blend												
Vanguard 500 Index Admiral	VFIAX	13.65	13.65	9.46	13.47	10.87	15.90	6.17	11/13/2000	8/31/1976	0.04	0.04
Russell 1000 Index		14.00	14.00	9.30	13.52	10.63	16.05	-	-	-	-	-
Cash Alternatives												
Money Market												
SCHWAB MONEY MARKET	15.ABG	-	-	-	-	-	-	-	-	-	-	-
No Benchmark Data		-	-	-	-	-	-	-	-	-	-	-

## Disclosure

- Performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment 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 the performance data quoted.
- The performance data quoted may not reflect the deduction of additional fees, if applicable. Additional fees would reduce the performance quoted.
- Performance data is subject to change without prior notice. Expenses shown reflect the fund's prospectus Net and Gross expense ratios.
- Some funds, accounts, or share classes may not be available for investment. Performance history prior to inception (if applicable) reflects another share class or account reflecting the manager's historical performance record.
- Fund Inception Date - the date on which a fund commenced operations.
- Share Class Inception Date - the date on which a fund's share class was introduced.

Contact ABG Retirement Plan Services with any questions about this report or for the most current month-end performance at (309) 671-4200

# Monitoring Report

The ABG Quarterly Monitoring Report (QMR) shows the Monitoring Standards and Criteria used for each Standard. The weighting which is assigned to each Standard is also detailed.

The Monitoring Report provides detailed information for each fund's results for the most recent quarter and proceeding seven quarters. Each fund's total score is shown and any quarterly periods which do not meet the QMR criteria are shaded for emphasis.

Plan investments for which the Monitoring data is not available are included at the end of this section.

## INTRODUCTION

Your plan's Investment Policy Statement (IPS) requires monitoring of the plan's investments to ensure that the investments are appropriate for the plan and its participants. In your Investment Policy Statement, standards and criteria have been established for purposes of monitoring plan investments.

This Investment Report is intended to assist you in meeting your monitoring obligation. The report includes a Monitoring Report and a Performance Report. The Monitoring Report displays all of the plan's investments alphabetically by asset class. Each investment displays the standards and criteria specified in the IPS and how the investment has performed with respect to those criteria over the current and seven previous periods.

## INVESTMENT REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED  
COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## HOW TO USE THIS REPORT: MONITORING REPORT SAMPLE

Investment

Monitor Score

Monitor History

ABC Growth Fund (I)

Ticker: ABCGF

Fund Category: Large Growth

Notes: The investment committee decided (3/31/2008) that this fund required special attention since the fund's long-time manager was recently replaced. Even though manager tenure is not an IPS standard, we want to watch this fund given the comparative inexperience of the new management team.

87

Standards	Criteria	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	Q1 2017
Total Return 1 year	Top 20%	28%	26%	18%	17%	17%	13%	14%	9%
Total Return 3 year	Top 10%	9%	9%	8%	8%	8%	6%	7%	5%
Standard Deviation 3 year	Lowest 20%	24%	18%	26%	16%	17%	14%	13%	16%
Sharpe Ratio	Top 20%	19%	16%	25%	19%	14%	18%	19%	19%
Expense Ratio	Lowest 10%	9%	18%	7%	9%	10%	8%	9%	11%
Total Assets	\$500 million plus	\$1,222KK	\$1,206KK	\$1,156KK	\$1,029KK	\$932KK	\$900KK	\$872KK	\$750KK
Morningstar Rating	4 stars	3 stars	4 stars	4 stars	4 stars	4 stars	4 stars	4 stars	4 stars

Investment Note

Standards

Criteria

Period Highlight

Investment committee decisions and comments concerning an investment made during the previous committee meeting.

Each standard identified in the investment policy statement for purposes of monitoring an investment is listed.

The IPS expectation with respect to how an investment ranks within its asset class for each selected standard.

Indicates where an investment has underperformed a selected standard/criteria pair for the current period.



## INVESTMENT REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED  
COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

The Monitoring Report identifies investments that may merit your attention in three ways:



**1. Period Highlight** — Where an investment underperforms a standard/criteria in a particular time period, that period is highlighted in blue. For example, if your IPS specifies that an investment have a Morningstar rank of 4 stars and the investment has a 3 star rank for the most recent period, that period is highlighted in blue.

This approach is implemented for all time periods and standards. Investments that warrant attention are readily identifiable.

**2. Monitor Score** — The score is based on the weights assigned to each standard and reporting period item (see following page for actual weight values). The score is a percentage calculated using the sum of the weights of the standards that meet the specified criteria over the total sum of all the weights.

For some standards/periods, data may not be available. This report is configured to not include these items in the calculation of the score.

Based on the calculated investment score, each investment will be classified using the following table

	Score	Description
	0 to 68	 Review
	69 or greater	 Satisfactory

**3. Investment Note** — The Monitor Report includes notes from previous investment reviews you have conducted and recorded. An investment may or may not have a note attached, based on your own prior decisions. The notes enable you to call attention to considerations about an investment that may be independent of the standards and criteria specified in the IPS.

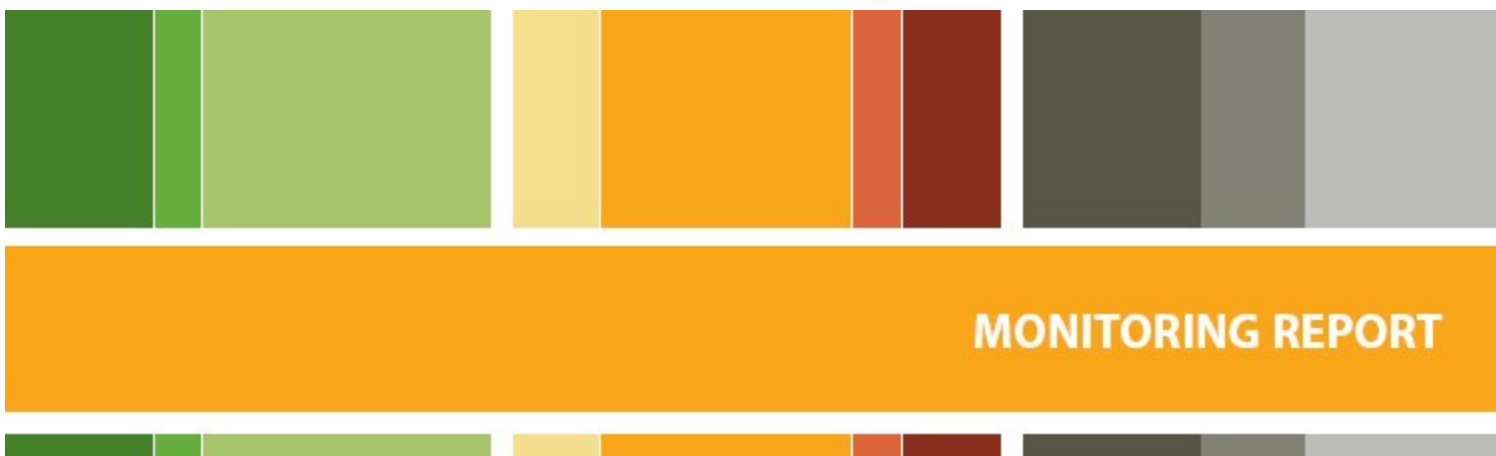
The Performance Report provides additional detail concerning your plan's investments. It includes in-depth performance information for each investment and its benchmark, as well as risk/expense and other data.

## YOUR PLAN'S STANDARDS AND CRITERIA

## INVESTMENT REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION  
PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Standards	Criteria	Weight							
		Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
Return 1 Yr Rank	Top 50%	4	4	4	3	3	3	2	2
Return 3 Yr Rank	Top 50%	4	4	4	3	3	3	2	2
Return 5 Yr Rank	Top 50%	5	5	5	4	4	4	3	3
Alpha 3 Yr Rank	Top 50%	0	0	0	0	0	0	0	0
RSquared 3 Yr Value	75% or greater	4	4	4	4	4	4	4	4
Sharpe Ratio 3 Yr Rank	Top 50%	0	0	0	0	0	0	0	0
Info Ratio 5 Yr Rank	Top 50%	0	0	0	0	0	0	0	0
Net Expense Ratio Rank	Lowest 55%	3	3	3	3	3	3	3	3
Manager Tenure	2 years or more	5	5	5	4	4	4	3	3



## YOUR PLAN'S SCORECARD

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED  
COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Investment	Score
PGIM QMA Mid-Cap Value Fund (R6)	56 - Review
PIMCO Commodity RealReturn Stgy. Fund (I)	60 - Review
BlackRock Infla. Protected Bond Fund (K)	63 - Review
Eaton Vance High Income Opport. Fund (I)	63 - Review
Templeton Global Bond Fund (R6)	68 - Review
Calvert Equity Fund (I)	69 - Satisfactory
Fidelity Advisor Small Cap Value Fund (I)	70 - Satisfactory
JPMorgan Mid Cap Equity Fund (I)	70 - Satisfactory
Janus Henderson Venture Fund (N)	73 - Satisfactory
Cohen & Steers Institutional Realty Shares	81 - Satisfactory
Franklin Growth Fund (R6)	87 - Satisfactory
American Funds EuroPacific Growth Fund (R6)	89 - Satisfactory
Parnassus Mid Cap Fund (I)	89 - Satisfactory
TIAA-CREF Social Choice Equity Fund (I)	89 - Satisfactory
Invesco Oppenheimer Developing Mkts Fund (R6)	91 - Satisfactory
MFS Value Fund (R6)	91 - Satisfactory
Vanguard 500 Index Fund (Adm)	91 - Satisfactory
American Funds Fundamental Investors (R6)	93 - Satisfactory
Ariel Fund (I)	95 - Satisfactory
Baird Aggregate Bond Fund (I)	98 - Satisfactory
American Funds American Balanced Fund (R6)	100 - Satisfactory

## YOUR PLAN'S SCORECARD

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED  
COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

The following fund(s) are included in the monitoring report, but no monitoring score is being calculated. Please ask your plan representative or advisor for more information.

	<b>Investment</b>
	Schwab Target 2010 Index Fund
	Schwab Target 2020 Index Fund
	Schwab Target 2025 Index Fund
	Schwab Target 2030 Index Fund
	Schwab Target 2035 Index Fund
	Schwab Target 2040 Index Fund
	Schwab Target 2045 Index Fund
	Schwab Target 2050 Index Fund
	Schwab Target 2055 Index Fund
	Schwab Target 2060 Index Fund

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

MFS Value Fund (R6)			Ticker: MEIKX		Monitor History							
<div>Fund Category: Large Value</div> <div>Notes:</div> <div><div>- Large Cap Value fund in the Asset Allocation Model Portfolios (12/15/2016)</div><div>- Changed from Share Class R4 to Share Class R6 (12/15/2016)</div></div>	<div>91</div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	
		Category		LV	LV	LV	LV	LV	LV	LV	LV	LV
		Return 1 Yr Rank	Top 50%	40%	65%	87%	94%	50%	27%	41%	46%	
		Return 3 Yr Rank	Top 50%	46%	47%	54%	46%	23%	14%	5%	4%	
		Return 5 Yr Rank	Top 50%	22%	32%	32%	27%	15%	10%	9%	7%	
		Alpha 3 Yr Rank	Top 50%	50%	43%	53%	46%	28%	20%	13%	10%	
		RSquared 3 Yr Value	75% or greater	87.86%	87.91%	86.23%	91.32%	93.06%	93.11%	93.42%	94.38%	
		Sharpe Ratio 3 Yr Rank	Top 50%	47%	44%	47%	40%	20%	16%	10%	7%	
		Info Ratio 5 Yr Rank	Top 50%	33%	45%	56%	52%	33%	16%	9%	4%	
		Net Expense Ratio Rank	Lowest 55%	13%	12%	13%	13%	13%	12%	12%	12%	
		Manager Tenure	2 years or more	17.2 years	17 years	16.7 years	16.5 years	16.2 years	16 years	15.7 years	15.5 years	
		Monitor Score		91	89	90	94	96	96	95	95	

Category Codes: LV=Large Value

American Funds Fundamental Investors (R6)			Ticker: RFNGX		Monitor History						
<div>Fund Category: Large Blend</div> <div>Notes: - Changed from Share Class R4 to Share Class R6 (12/15/2016)</div>	<div>93</div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		LB	LB	LB	LB	LB	LB	LB	LB
		Return 1 Yr Rank	Top 50%	69%	56%	65%	20%	18%	13%	13%	25%
		Return 3 Yr Rank	Top 50%	18%	11%	9%	3%	2%	1%	2%	4%
		Return 5 Yr Rank	Top 50%	16%	16%	28%	7%	4%	11%	7%	9%
		Alpha 3 Yr Rank	Top 50%	6%	9%	9%	6%	3%	4%	6%	7%
		RSquared 3 Yr Value	75% or greater	93.4%	93.83%	92.16%	95.84%	95.73%	95.53%	95.73%	95.98%
		Sharpe Ratio 3 Yr Rank	Top 50%	6%	9%	12%	5%	2%	2%	4%	6%
		Info Ratio 5 Yr Rank	Top 50%	11%	12%	18%	7%	4%	11%	5%	6%
		Net Expense Ratio Rank	Lowest 55%	14%	14%	15%	15%	14%	15%	14%	13%
		Manager Tenure	2 years or more	26.1 years	25.9 years	25.6 years	25.4 years	25.1 years	24.9 years	24.6 years	24.4 years
		Monitor Score		93	95	97	100	100	100	100	98

Category Codes: LB=Large Blend

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

TIAA-CREF Social Choice Equity Fund (I)			Ticker: TISCX		Monitor History						
<b>Fund Category: Large Blend</b>  <b>Notes:</b>  -Socially Responsible fund added as the result of action taken during a special meeting of the DC Committee. (08/19/2013) -Lower Cost Share Class authorized during Special DC Committee meeting. (08/13/2018) -Scoring over previous periods: 1Q18=71; 3Q17=69; 1Q17=60 (08/13/2018)	89	<b>Standards</b>	<b>Criteria</b>	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		LB	LB	LB	LB	LB	LB	LB	LB
		Return 1 Yr Rank	Top 50%	46%	45%	46%	42%	24%	52%	40%	30%
		Return 3 Yr Rank	Top 50%	22%	18%	27%	27%	36%	46%	49%	54%
		Return 5 Yr Rank	Top 50%	43%	48%	51%	54%	54%	44%	32%	38%
		Alpha 3 Yr Rank	Top 50%	33%	28%	33%	31%	40%	52%	53%	57%
		RSquared 3 Yr Value	75% or greater	97.92%	98.07%	97.07%	97.54%	97.33%	97.57%	97.41%	97.59%
		Sharpe Ratio 3 Yr Rank	Top 50%	29%	28%	29%	29%	36%	47%	49%	54%
		Info Ratio 5 Yr Rank	Top 50%	57%	63%	65%	62%	61%	47%	30%	37%
		Net Expense Ratio Rank	Lowest 55%	8%	8%	9%	9%	8%	9%	8%	8%
		Manager Tenure	2 years or more	13.3 years	13 years	12.8 years	12.5 years	12.3 years	12 years	11.8 years	11.5 years
		Monitor Score		89	87	83	--	--	--	--	--

Category Codes: LB=Large Blend

Vanguard 500 Index Fund (Adm)		Ticker: VFIAX		Monitor History								
<div>Fund Category: Large Blend</div> <div>Notes: - Fund added to replace Dreyfus S &amp; P 500 (PEOPX) (as a lower cost alternative) during the 3Q15 investment review. (12/14/2105)</div>	<div>91</div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	
		Category		LB	LB	LB	LB	LB	LB	LB	LB	LB
		Return 1 Yr Rank	Top 50%	18%	23%	18%	27%	35%	30%	38%	43%	
		Return 3 Yr Rank	Top 50%	16%	13%	9%	9%	11%	13%	12%	10%	
		Return 5 Yr Rank	Top 50%	8%	8%	8%	11%	13%	13%	19%	20%	
		Alpha 3 Yr Rank	Top 50%	19%	18%	16%	13%	14%	17%	16%	13%	
		RSquared 3 Yr Value	75% or greater	100%	100%	100%	100%	100%	100%	100%	100%	
		Sharpe Ratio 3 Yr Rank	Top 50%	14%	13%	7%	8%	10%	11%	10%	9%	
		Info Ratio 5 Yr Rank	Top 50%	93%	93%	92%	92%	92%	92%	92%	91%	
		Net Expense Ratio Rank	Lowest 55%	3%	3%	3%	3%	3%	3%	3%	2%	
		Manager Tenure	2 years or more	2.9 years	2.7 years	2.4 years	2.2 years	1.9 years	1.7 years	1.4 years	1.2 years	
		Monitor Score			91	89	86	83	80	82	84	86

Category Codes: LB=Large Blend

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Calvert Equity Fund (I)			Ticker: CEYIX		Monitor History						
<div>Fund Category: Large Growth</div> <div>Notes:</div> <div>-This fund was originally chosen as a Socially Responsible option the Plan's Investment offerings. (12/09/2014)</div> <div>-Placed "Under Scrutiny" per 1Q15 DC Committee review. It is not part of the Model Portfolio allocation percentages. (06/16/2015)</div> <div>-Scores from previous periods: 1Q18=44; 3Q17=47; 1Q17=51 (08/13/2018)</div> <div>-Lower cost share class authorized during a Special DC Committee meeting. (08/13/2018)</div> <div>-Remained "Under Scrutiny" 3Q17,1Q18 and 3Q18 (12/12/2018)</div>	69	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		LG	LG	LG	LG	LG	LG	LG	LG
		Return 1 Yr Rank	Top 50%	4%	5%	53%	67%	44%	65%	82%	87%
		Return 3 Yr Rank	Top 50%	33%	19%	75%	68%	57%	66%	60%	50%
		Return 5 Yr Rank	Top 50%	23%	27%	54%	68%	68%	70%	68%	64%
		Alpha 3 Yr Rank	Top 50%	7%	7%	39%	40%	29%	42%	35%	25%
		RSquared 3 Yr Value	75% or greater	84.3%	87.48%	85.15%	87.22%	87.17%	87.62%	87.89%	88.36%
		Sharpe Ratio 3 Yr Rank	Top 50%	2%	2%	24%	31%	16%	34%	26%	18%
		Info Ratio 5 Yr Rank	Top 50%	11%	16%	52%	66%	--	77%	74%	71%
		Net Expense Ratio Rank	Lowest 55%	28%	24%	24%	24%	23%	22%	20%	18%
		Manager Tenure	2 years or more	3.8 years	3.6 years	3.3 years	3 years	2.8 years	2.6 years	2.3 years	2 years
		Monitor Score		69	60	53	--	--	--	--	--

Category Codes: LG=Large Growth

Franklin Growth Fund (R6)			Ticker: FIFRX		Monitor History						
<div>Fund Category: Large Growth</div> <div>Notes:</div> <div>- Changed from Share Class A to Share Class R6 (12/15/2016)</div> <div>-Large Cap Growth fund in the Asset Allocation Model Portfolios (12/15/2016)</div>	87	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		LG	LG	LG	LG	LG	LG	LG	LG
		Return 1 Yr Rank	Top 50%	60%	60%	67%	74%	58%	58%	31%	26%
		Return 3 Yr Rank	Top 50%	48%	27%	45%	48%	36%	34%	22%	20%
		Return 5 Yr Rank	Top 50%	41%	27%	33%	45%	35%	35%	23%	31%
		Alpha 3 Yr Rank	Top 50%	50%	26%	21%	32%	23%	21%	13%	13%
		RSquared 3 Yr Value	75% or greater	95%	94.83%	91.42%	93.11%	92.89%	92.05%	91.91%	92.81%
		Sharpe Ratio 3 Yr Rank	Top 50%	33%	18%	4%	17%	8%	6%	4%	5%
		Info Ratio 5 Yr Rank	Top 50%	19%	12%	9%	16%	12%	28%	11%	26%
		Net Expense Ratio Rank	Lowest 55%	8%	9%	9%	9%	9%	8%	7%	6%
		Manager Tenure	2 years or more	10.3 years	10.1 years	9.8 years	9.6 years	9.3 years	9.1 years	8.8 years	8.6 years
		Monitor Score		87	89	91	93	95	97	97	95

Category Codes: LG=Large Growth



# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Ariel Fund (I)			Ticker: ARAIX		Monitor History						
<div><div>Fund Category: Mid-Cap Value</div><div>Notes:</div><div>-Socially Responsible Fund added as the result of action taken during a special meeting of the DC Committee (08/19/2013)</div><div>-Scoring from previous periods: 1Q18=97; 3Q17=93; 1Q17=87 (08/13/2018)</div><div>-Lower cost share class authorized during Special DC Committee meeting. (08/13/2018)</div></div>	<div><div>95</div><div></div></div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		MV	MV	MV	MV	MV	MV	MV	MV
		Return 1 Yr Rank	Top 50%	40%	52%	4%	11%	12%	16%	34%	3%
		Return 3 Yr Rank	Top 50%	8%	46%	5%	39%	45%	37%	33%	20%
		Return 5 Yr Rank	Top 50%	7%	27%	6%	4%	4%	4%	7%	2%
		Alpha 3 Yr Rank	Top 50%	52%	72%	77%	89%	91%	88%	82%	66%
		RSquared 3 Yr Value	75% or greater	78.86%	79.8%	72.62%	77.25%	77.4%	75.48%	75.83%	78.42%
		Sharpe Ratio 3 Yr Rank	Top 50%	35%	55%	53%	68%	70%	77%	72%	47%
		Info Ratio 5 Yr Rank	Top 50%	4%	11%	3%	3%	2%	4%	11%	8%
		Net Expense Ratio Rank	Lowest 55%	19%	20%	20%	20%	19%	19%	19%	17%
		Manager Tenure	2 years or more	32.4 years	32.2 years	31.9 years	31.7 years	31.4 years	31.2 years	30.9 years	30.7 years
		Monitor Score		95	95	97	--	--	--	--	--

Category Codes: MV=Mid-Cap Value

PGIM QMA Mid-Cap Value Fund (R6)			Ticker: PMVQX		Monitor History							
<div><div>Fund Category: Mid-Cap Value</div><div>Notes:</div><div><div>-This fund is the Mid Cap Value Fund within the Asset Allocation Model Portfolios. (06/16/2014)</div><div>-Previous Share Class Scoring History: 1Q18=74; 3Q17=82; 1Q17=87 (08/13/2018)</div><div>-Lower cost share class authorized during Special DC Committee meeting. (08/13/2018)</div></div></div>	<div><div></div><div>56</div></div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	
		Category		MV	MV	MV	MV	MV	MV	MV	MV	MV
		Return 1 Yr Rank	Top 50%	97%	91%	84%	60%	71%	50%	25%	25%	
		Return 3 Yr Rank	Top 50%	83%	81%	78%	53%	53%	44%	49%	39%	
		Return 5 Yr Rank	Top 50%	67%	55%	37%	30%	25%	11%	17%	14%	
		Alpha 3 Yr Rank	Top 50%	85%	78%	73%	48%	48%	38%	40%	32%	
		RSquared 3 Yr Value	75% or greater	73.78%	76.88%	61.91%	66.06%	66.43%	66.96%	68.16%	70.25%	
		Sharpe Ratio 3 Yr Rank	Top 50%	87%	80%	83%	56%	53%	45%	50%	41%	
		Info Ratio 5 Yr Rank	Top 50%	48%	38%	28%	26%	26%	9%	18%	14%	
		Net Expense Ratio Rank	Lowest 55%	20%	21%	21%	21%	27%	26%	25%	23%	
		Manager Tenure	2 years or more	4.9 years	4.7 years	4.4 years	4.2 years	3.9 years	8.4 years	8.2 years	7.9 years	
		Monitor Score		56	63	67	--	--	--	--	--	

Category Codes: MV=Mid-Cap Value

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Parnassus Mid Cap Fund (I)			Ticker: PPFPMX		Monitor History						
<b>Fund Category: Mid-Cap Blend</b>  <b>Notes:</b>  -This fund was originally chosen as a Socially Responsible option to the Plan's investment offerings ruing a special meeting of the DC Committee. (08/19/2013) -Lower cost share class authorized during Special DC Committee meeting. (08/13/2018) -Scoring for previous periods: 1Q18=93; 3Q17=95; 1Q17=94 (08/13/2018)	89	<b>Standards</b>	<b>Criteria</b>	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		MB	MB	MB	MB	MB	MB	MB	MB
		Return 1 Yr Rank	Top 50%	3%	10%	61%	71%	67%	46%	72%	53%
		Return 3 Yr Rank	Top 50%	14%	11%	34%	6%	14%	25%	8%	5%
		Return 5 Yr Rank	Top 50%	2%	3%	32%	31%	35%	48%	43%	39%
		Alpha 3 Yr Rank	Top 50%	3%	5%	5%	3%	5%	9%	6%	4%
		RSquared 3 Yr Value	75% or greater	80.9%	81.33%	72.98%	76.45%	77.86%	82.51%	82.88%	82.99%
		Sharpe Ratio 3 Yr Rank	Top 50%	3%	6%	4%	3%	4%	8%	3%	3%
		Info Ratio 5 Yr Rank	Top 50%	2%	7%	35%	32%	46%	58%	45%	40%
		Net Expense Ratio Rank	Lowest 55%	30%	29%	30%	30%	32%	32%	32%	31%
		Manager Tenure	2 years or more	10.5 years	10.3 years	10 years	9.8 years	9.5 years	9.3 years	9 years	8.8 years
		Monitor Score		89	88	87	--	--	--	--	--

Category Codes: MB=Mid-Cap Blend


JPMorgan Mid Cap Equity Fund (I)			Ticker: VSNGX		Monitor History							
<div>Fund Category: Mid-Cap Growth</div> <div>Notes:</div> <div>- Mid Cap Growth fund in the Asset Allocation Models. Fund added to replace BlackRock Opportunities Inv A (BMEAX) as the result of action taken during the 1Q2013 review. (06/30/2013)</div>	<div>70</div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	
		Category		MG	MG	MG	MG	MG	MG	MG	MG	MG
		Return 1 Yr Rank	Top 50%	67%	76%	84%	88%	77%	76%	58%	60%	
		Return 3 Yr Rank	Top 50%	79%	72%	80%	72%	59%	56%	43%	37%	
		Return 5 Yr Rank	Top 50%	60%	41%	50%	48%	36%	26%	22%	19%	
		Alpha 3 Yr Rank	Top 50%	72%	66%	73%	67%	59%	53%	41%	37%	
		RSquared 3 Yr Value	75% or greater	89.92%	91.12%	81.62%	85.18%	83.52%	83.04%	82.91%	82.6%	
		Sharpe Ratio 3 Yr Rank	Top 50%	69%	66%	61%	63%	51%	44%	31%	33%	
		Info Ratio 5 Yr Rank	Top 50%	69%	60%	58%	55%	40%	30%	22%	19%	
		Net Expense Ratio Rank	Lowest 55%	29%	29%	29%	28%	29%	27%	26%	26%	
		Manager Tenure	2 years or more	16.3 years	16 years	15.8 years	15.5 years	15.3 years	15 years	14.8 years	14.5 years	
		Monitor Score		70	75	77	80	84	88	93	95	

Category Codes: MG=Mid-Cap Growth

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Fidelity Advisor Small Cap Value Fund (I)			Ticker: FCVIX		Monitor History							
<b>Fund Category: Small Value</b>  <b>Notes:</b>  - Changed from Share Class A to Share Class I (12/15/2016) - Small Cap Value fund in the Asset Allocation Model Portfolios (12/15/2016)	 <b>70</b>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	
		Category		SV	SV	SV	SV	SV	SV	SV	SV	SV
		Return 1 Yr Rank	Top 50%	70%	42%	38%	77%	7%	21%	67%	77%	
		Return 3 Yr Rank	Top 50%	73%	45%	69%	45%	20%	27%	20%	17%	
		Return 5 Yr Rank	Top 50%	18%	19%	30%	37%	28%	19%	20%	12%	
		Alpha 3 Yr Rank	Top 50%	36%	30%	26%	18%	5%	10%	3%	7%	
		RSquared 3 Yr Value	75% or greater	70.47%	69.71%	51.73%	55.86%	53.48%	59.37%	55.53%	55.44%	
		Sharpe Ratio 3 Yr Rank	Top 50%	45%	32%	21%	13%	4%	8%	2%	9%	
		Info Ratio 5 Yr Rank	Top 50%	41%	34%	51%	47%	44%	24%	19%	--	
		Net Expense Ratio Rank	Lowest 55%	25%	26%	25%	30%	28%	27%	26%	47%	
		Manager Tenure	2 years or more	6.2 years	6 years	5.7 years	5.5 years	5.2 years	5 years	4.7 years	4.5 years	
		Monitor Score		70	72	70	71	72	71	70	72	

Category Codes: SV=Small Value


Janus Henderson Venture Fund (N)			Ticker: JVTNX		Monitor History						
<div>Fund Category: Small Growth</div> <div>Notes:</div> <div>-Fund added to replace Franklin Small Cap Growth R6 as the result of action taken during 1Q18 DC Committee review. (06/20/2018)</div> <div>-Small Cap Growth fund in the Asset Allocation Models (06/20/2018)</div>	<div>73</div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		SG	SG	SG	SG	SG	SG	SG	SG
		Return 1 Yr Rank	Top 50%	43%	57%	61%	51%	34%	37%	70%	71%
		Return 3 Yr Rank	Top 50%	49%	61%	46%	43%	36%	53%	26%	21%
		Return 5 Yr Rank	Top 50%	15%	24%	21%	17%	13%	18%	14%	18%
		Alpha 3 Yr Rank	Top 50%	45%	59%	52%	50%	48%	64%	44%	29%
		RSquared 3 Yr Value	75% or greater	78.58%	80.47%	64.64%	72.47%	68.31%	73.46%	71.42%	72.92%
		Sharpe Ratio 3 Yr Rank	Top 50%	40%	55%	30%	43%	36%	54%	29%	21%
		Info Ratio 5 Yr Rank	Top 50%	14%	32%	22%	16%	12%	--	12%	18%
		Net Expense Ratio Rank	Lowest 55%	7%	7%	7%	7%	6%	7%	6%	6%
		Manager Tenure	2 years or more	5.9 years	5.6 years	5.4 years	5.1 years	4.9 years	4.6 years	4.4 years	4.1 years
Monitor Score		73	68	69	--	--	--	--	--		

Category Codes: SG=Small Growth

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Cohen & Steers Institutional Realty Shares			Ticker: CSRIX		Monitor History						
<b>Fund Category: Real Estate</b>  <b>Notes:</b>  -Specialty Real Estate fund in the Plan's Asset Allocation Models. (08/01/2011) -Lower cost share class authorized during Special DC Committee meeting (08/13/2018) Scoring from previous periods: 1Q18=77; 3Q17=75; 1Q17=74 (08/13/2018)	 <b>81</b>	<b>Standards</b>	<b>Criteria</b>	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		SR	SR	SR	SR	SR	SR	SR	SR
		Return 1 Yr Rank	Top 50%	8%	15%	5%	23%	29%	26%	36%	25%
		Return 3 Yr Rank	Top 50%	16%	26%	17%	14%	23%	16%	14%	10%
		Return 5 Yr Rank	Top 50%	13%	11%	8%	12%	11%	9%	11%	11%
		Alpha 3 Yr Rank	Top 50%	20%	25%	25%	20%	26%	20%	17%	10%
		RSquared 3 Yr Value	75% or greater	31.23%	32.97%	25.96%	26.78%	26.14%	19.27%	15.58%	19.5%
		Sharpe Ratio 3 Yr Rank	Top 50%	18%	26%	20%	17%	24%	20%	18%	16%
		Info Ratio 5 Yr Rank	Top 50%	13%	10%	10%	11%	11%	9%	10%	11%
		Net Expense Ratio Rank	Lowest 55%	23%	22%	22%	21%	19%	19%	20%	19%
		Manager Tenure	2 years or more	11.5 years	11.2 years	11 years	10.7 years	10.5 years	10.2 years	10 years	9.7 years
		Monitor Score		81	81	80	--	--	--	--	--

Category Codes: SR=Real Estate

American Funds EuroPacific Growth Fund (R6)			Ticker: RERGX		Monitor History						
<div>Fund Category: Foreign Large Growth</div> <div>Notes:</div> <div>- Foreign Large Blend fund in the Asset Allocation Model Portfolios (12/15/2016)</div> <div>- Changed from Share Class R4 to Share Class R6 (12/15/2016)</div>	89	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		FG	FG	FG	FG	FG	FG	FG	FG
		Return 1 Yr Rank	Top 50%	56%	52%	76%	57%	38%	51%	21%	16%
		Return 3 Yr Rank	Top 50%	31%	31%	47%	44%	36%	35%	33%	22%
		Return 5 Yr Rank	Top 50%	36%	38%	30%	28%	20%	27%	27%	24%
		Alpha 3 Yr Rank	Top 50%	32%	36%	52%	47%	38%	36%	34%	24%
		RSquared 3 Yr Value	75% or greater	92.04%	92.16%	89.32%	91.23%	90.71%	89.24%	89.74%	89.24%
		Sharpe Ratio 3 Yr Rank	Top 50%	27%	33%	48%	45%	27%	22%	26%	21%
		Info Ratio 5 Yr Rank	Top 50%	29%	29%	21%	20%	11%	17%	16%	13%
		Net Expense Ratio Rank	Lowest 55%	6%	5%	5%	5%	5%	5%	5%	5%
		Manager Tenure	2 years or more	27.3 years	27 years	26.8 years	26.5 years	26.3 years	26 years	25.8 years	25.5 years
		Monitor Score		89	91	93	95	96	93	94	93

Category Codes: FG=Foreign Large Growth

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Invesco Oppenheimer Developing Mkts Fund (R6)			Ticker: ODVIX		Monitor History						
<div><div>Fund Category: Diversified Emerging Mkts</div><div>Notes:</div><div><div>-Diversified Emerging Market fund within the Plan's Asset Allocation Model Portfolio. (08/01/2011)</div><div>-Changed from Share Class A to Share Class Y (08/20/2013)</div><div>-Lower cost share class authorized during Special DC Committee meeting. (08/13/2018)</div></div></div>	<div><div></div><div>91</div></div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category	EM	EM	EM	EM	EM	EM	EM	EM	EM
		Return 1 Yr Rank	Top 50%	10%	9%	10%	8%	38%	53%	41%	41%
		Return 3 Yr Rank	Top 50%	18%	27%	11%	12%	39%	63%	66%	69%
		Return 5 Yr Rank	Top 50%	28%	42%	35%	20%	26%	29%	30%	28%
		Alpha 3 Yr Rank	Top 50%	15%	26%	8%	16%	42%	67%	68%	70%
		RSquared 3 Yr Value	75% or greater	74.93%	78.15%	78.89%	80.43%	82.29%	78.92%	77.27%	78.02%
		Sharpe Ratio 3 Yr Rank	Top 50%	9%	20%	5%	12%	36%	59%	65%	70%
		Info Ratio 5 Yr Rank	Top 50%	26%	40%	36%	20%	26%	32%	36%	34%
		Net Expense Ratio Rank	Lowest 55%	17%	17%	17%	17%	17%	17%	16%	16%
		Manager Tenure	2 years or more	11.9 years	11.7 years	11.4 years	11.2 years	10.9 years	10.7 years	10.4 years	10.2 years
Monitor Score		91	91	88	--	--	--	--	--		

Category Codes: EM=Diversified Emerging Mkts

PIMCO Commodity RealReturn Sty. Fund (I)			Ticker: PCRIX		Monitor History							
<div>Fund Category: Commodities Broad Basket</div> <div>Notes:</div> <div>- Changed from Share Class A to Share Class Instl (12/15/2016)</div> <div>- Broad Commodities fund in the Asset Allocation Model Portfolios (12/15/2016)</div>	<div>60</div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	
		Category		BB	BB	BB	BB	BB	BB	BB	BB	BB
		Return 1 Yr Rank	Top 50%	41%	68%	44%	48%	61%	55%	53%	39%	
		Return 3 Yr Rank	Top 50%	44%	40%	52%	61%	54%	47%	52%	61%	
		Return 5 Yr Rank	Top 50%	58%	58%	58%	54%	78%	73%	74%	66%	
		Alpha 3 Yr Rank	Top 50%	47%	40%	54%	64%	47%	38%	40%	35%	
		RSquared 3 Yr Value	75% or greater	85.2%	83.62%	84.11%	88.31%	89.17%	88.61%	89.85%	90.45%	
		Sharpe Ratio 3 Yr Rank	Top 50%	46%	41%	51%	63%	48%	37%	42%	40%	
		Info Ratio 5 Yr Rank	Top 50%	56%	54%	59%	51%	76%	72%	73%	67%	
		Net Expense Ratio Rank	Lowest 55%	64%	63%	64%	40%	22%	19%	18%	17%	
		Manager Tenure	2 years or more	11.3 years	11 years	10.8 years	10.5 years	10.3 years	10 years	9.8 years	9.5 years	
		Monitor Score		60	61	63	68	70	74	76	79	

Category Codes: BB=Commodities Broad Basket

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Baird Aggregate Bond Fund (I)			Ticker: BAGIX		Monitor History						
<b>Fund Category: Intermediate Core Bond</b>  <b>Notes:</b>  -Intermediate Bond fund in the Plan's Asset Allocation Models. (12/14/2015) -Lower cost share class authorized during Special DC Committee meeting. (08/13/2018) Scoring from previous periods: 1Q18=94; 3Q17=93; 1Q17=97 (08/13/2018)	98	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		CI	CI	CI	CI	CI	CI	CI	CI
		Return 1 Yr Rank	Top 50%	16%	36%	50%	42%	37%	34%	45%	55%
		Return 3 Yr Rank	Top 50%	39%	33%	41%	26%	30%	23%	16%	14%
		Return 5 Yr Rank	Top 50%	15%	14%	23%	20%	20%	18%	18%	18%
		Alpha 3 Yr Rank	Top 50%	43%	38%	43%	32%	32%	33%	30%	24%
		RSquared 3 Yr Value	75% or greater	99.08%	98.6%	98.42%	98.31%	98.43%	98.68%	98.62%	98.59%
		Sharpe Ratio 3 Yr Rank	Top 50%	44%	36%	43%	28%	31%	27%	21%	20%
		Info Ratio 5 Yr Rank	Top 50%	1%	2%	2%	2%	2%	1%	1%	1%
		Net Expense Ratio Rank	Lowest 55%	9%	9%	8%	8%	7%	8%	8%	8%
		Manager Tenure	2 years or more	18.5 years	18.3 years	18 years	17.8 years	17.5 years	17.3 years	17 years	16.8 years
		Monitor Score		98	97	97	--	--	--	--	--

Category Codes: CI=Intermediate Core Bond

Eaton Vance High Income Opport. Fund (I)			Ticker: EIHIX		Monitor History						
<div>Fund Category: High Yield Bond</div> <div>Notes:</div> <div>High Yield Bond in the asset allocation models. This fund was added replacing/accepting assets from Fidelity High Income-SPHIX as a result of the 1Q16 investment committee meeting. (06/14/2016)</div> <div>63</div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	
	Category		HY	HY	HY	HY	HY	HY	HY	HY	
	Return 1 Yr Rank	Top 50%	54%	55%	54%	61%	38%	53%	52%	60%	
	Return 3 Yr Rank	Top 50%	67%	63%	41%	29%	22%	18%	10%	6%	
	Return 5 Yr Rank	Top 50%	10%	13%	11%	11%	8%	10%	9%	10%	
	Alpha 3 Yr Rank	Top 50%	66%	62%	40%	29%	22%	20%	11%	8%	
	RSquared 3 Yr Value	75% or greater	2.15%	0.78%	6.77%	3.18%	4.61%	1.99%	1.84%	5.43%	
	Sharpe Ratio 3 Yr Rank	Top 50%	63%	37%	9%	16%	13%	12%	9%	8%	
	Info Ratio 5 Yr Rank	Top 50%	9%	12%	4%	3%	3%	4%	2%	1%	
	Net Expense Ratio Rank	Lowest 55%	18%	16%	17%	16%	15%	16%	15%	13%	
	Manager Tenure	2 years or more	23.3 years	23 years	22.8 years	22.5 years	22.3 years	22 years	21.8 years	21.5 years	
	Monitor Score		63	66	69	70	71	70	72	74	

Category Codes: HY=High Yield Bond

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

BlackRock Infla. Protected Bond Fund (K)			Ticker: BPLBX		Monitor History						
<div>Fund Category: Inflation-Protected Bond</div> <div>Notes:</div> <div>-Share Class change from Svc Share Class to R6 (12/15/2016)</div> <div>-TIPS in Asset Allocation Models. (12/15/2016)</div>		Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		IP	IP	IP	IP	IP	IP	IP	IP
		Return 1 Yr Rank	Top 50%	67%	56%	38%	22%	23%	26%	59%	51%
		Return 3 Yr Rank	Top 50%	36%	42%	46%	38%	48%	37%	47%	48%
		Return 5 Yr Rank	Top 50%	34%	33%	39%	31%	36%	39%	36%	36%
		Alpha 3 Yr Rank	Top 50%	41%	50%	45%	45%	49%	48%	56%	56%
		RSquared 3 Yr Value	75% or greater	68.02%	66.3%	69.6%	58.03%	58.46%	62.34%	59.49%	56.19%
		Sharpe Ratio 3 Yr Rank	Top 50%	36%	44%	43%	38%	49%	38%	47%	47%
		Info Ratio 5 Yr Rank	Top 50%	43%	40%	46%	40%	43%	49%	47%	47%
		Net Expense Ratio Rank	Lowest 55%	21%	20%	21%	21%	17%	17%	18%	16%
		Manager Tenure	2 years or more	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	7.5 years	7.2 years	7 years
		Monitor Score		63	65	69	72	74	77	77	78

Category Codes: IP=Inflation-Protected Bond

Templeton Global Bond Fund (R6)			Ticker: FBNRX		Monitor History						
<div>Fund Category: World Bond</div> <div>Notes:</div> <div><div>- Change from Share Class A to Share Class R6 (12/15/2016)</div><div>- Global Bond fund in the Asset Allocation Model Portfolios (12/15/2016)</div><div>-Fund was placed "Under Scrutiny" per 3Q18 Deferred Compensation Committee investment review. (12/12/2018)</div></div>	<div>68</div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		Category		IB	IB	IB	IB	IB	IB	IB	IB
		Return 1 Yr Rank	Top 50%	38%	13%	58%	91%	97%	84%	1%	3%
		Return 3 Yr Rank	Top 50%	9%	21%	14%	80%	65%	56%	40%	30%
		Return 5 Yr Rank	Top 50%	31%	31%	32%	39%	41%	29%	15%	14%
		Alpha 3 Yr Rank	Top 50%	3%	3%	5%	33%	40%	9%	4%	7%
		RSquared 3 Yr Value	75% or greater	9.39%	6.52%	3.32%	2.11%	0.93%	1.79%	1.6%	0.52%
		Sharpe Ratio 3 Yr Rank	Top 50%	27%	39%	35%	84%	79%	68%	50%	35%
		Info Ratio 5 Yr Rank	Top 50%	24%	25%	27%	33%	43%	27%	23%	26%
		Net Expense Ratio Rank	Lowest 55%	18%	17%	16%	16%	14%	12%	12%	13%
		Manager Tenure	2 years or more	17.3 years	17 years	16.8 years	16.5 years	16.3 years	16 years	15.8 years	15.5 years
		Monitor Score		68	67	66	65	65	66	69	67

Category Codes: IB=World Bond

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

American Funds American Balanced Fund (R6)		Ticker: RLBGX		Monitor History								
<div>Fund Category: Allocation--50% to 70% Equity</div> <div>Notes: - Changed from Share Class R4 to Share Class R6 (12/15/2016)</div>	<div>100</div>	Standards	Criteria	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	
		Category		MA	MA	MA	MA	MA	MA	MA	MA	MA
		Return 1 Yr Rank	Top 50%	15%	6%	19%	8%	23%	14%	16%	50%	
		Return 3 Yr Rank	Top 50%	9%	5%	6%	2%	2%	2%	2%	2%	
		Return 5 Yr Rank	Top 50%	4%	3%	4%	3%	2%	2%	2%	3%	
		Alpha 3 Yr Rank	Top 50%	5%	4%	3%	2%	2%	2%	3%	2%	
		RSquared 3 Yr Value	75% or greater	93.37%	93.52%	90.42%	89.93%	90.5%	89.16%	88.48%	87.34%	
		Sharpe Ratio 3 Yr Rank	Top 50%	4%	3%	1%	2%	2%	2%	3%	2%	
		Info Ratio 5 Yr Rank	Top 50%	2%	2%	3%	3%	2%	2%	2%	2%	
		Net Expense Ratio Rank	Lowest 55%	2%	2%	2%	2%	2%	2%	2%	2%	
		Manager Tenure	2 years or more	22.3 years	22 years	21.8 years	21.5 years	21.3 years	21 years	20.8 years	20.5 years	
		Monitor Score		100	100	100	100	100	100	100	100	

Category Codes: MA=Allocation--50% to 70% Equity

Schwab Target 2010 Index Fund		Ticker: SWYAX		Monitor History						
Fund Category: Target-Date 2000-2010 Notes:	Standards	Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	
	Category	TA	TA	TA	TA	TA	TA	TA	TA	
	Return 1 Yr Rank	1%	9%	9%	36%	62%	78%	88%	--	
	Return 3 Yr Rank	--	--	--	--	--	--	--	--	
	Return 5 Yr Rank	--	--	--	--	--	--	--	--	
	Alpha 3 Yr Rank	--	--	--	--	--	--	--	--	
	RSquared 3 Yr Value	--	--	--	--	--	--	--	--	
	Sharpe Ratio 3 Yr Rank	--	--	--	--	--	--	--	--	
	Info Ratio 5 Yr Rank	--	--	--	--	--	--	--	--	
	Net Expense Ratio Rank	1%	2%	1%	3%	1%	1%	1%	1%	
	Manager Tenure	2.6 years	2.4 years	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	0.9 years	

Category Codes: TA=Target-Date 2000-2010



# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Schwab Target 2020 Index Fund		Monitor History							
Fund Category: Target-Date 2020									
Notes:									
Standards		Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
Category		TE	TE	TE	TE	TE	TE	TE	TE
Return 1 Yr Rank		7%	10%	15%	38%	61%	61%	59%	--
Return 3 Yr Rank		--	--	--	--	--	--	--	--
Return 5 Yr Rank		--	--	--	--	--	--	--	--
Alpha 3 Yr Rank		--	--	--	--	--	--	--	--
RSquared 3 Yr Value		--	--	--	--	--	--	--	--
Sharpe Ratio 3 Yr Rank		--	--	--	--	--	--	--	--
Info Ratio 5 Yr Rank		--	--	--	--	--	--	--	--
Net Expense Ratio Rank		1%	1%	1%	1%	1%	1%	1%	1%
Manager Tenure		2.6 years	2.4 years	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	0.9 years

Category Codes: TE=Target-Date 2020

Schwab Target 2025 Index Fund		Monitor History							
Fund Category: Target-Date 2025									
Notes:									
Standards		Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
Category		TG	TG	TG	TG	TG	TG	TG	TG
Return 1 Yr Rank		4%	19%	13%	37%	61%	59%	57%	--
Return 3 Yr Rank		--	--	--	--	--	--	--	--
Return 5 Yr Rank		--	--	--	--	--	--	--	--
Alpha 3 Yr Rank		--	--	--	--	--	--	--	--
RSquared 3 Yr Value		--	--	--	--	--	--	--	--
Sharpe Ratio 3 Yr Rank		--	--	--	--	--	--	--	--
Info Ratio 5 Yr Rank		--	--	--	--	--	--	--	--
Net Expense Ratio Rank		1%	1%	1%	1%	1%	1%	1%	1%
Manager Tenure		2.6 years	2.4 years	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	0.9 years

Category Codes: TG=Target-Date 2025

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Schwab Target 2030 Index Fund		Monitor History							
Fund Category: Target-Date 2030		Standards							
Notes:		Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		TH	TH	TH	TH	TH	TH	TH	TH
		6%	14%	16%	39%	63%	64%	60%	--
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		1%	1%	1%	1%	1%	1%	1%	1%
		2.6 years	2.4 years	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	0.9 years

Category Codes: TH=Target-Date 2030

Schwab Target 2035 Index Fund		Monitor History							
Fund Category: Target-Date 2035		Standards							
Notes:		Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
		TI	TI	TI	TI	TI	TI	TI	TI
		8%	18%	32%	55%	74%	72%	62%	--
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		1%	1%	1%	1%	1%	1%	1%	1%
		2.6 years	2.4 years	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	0.9 years

Category Codes: TI=Target-Date 2035

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Schwab Target 2040 Index Fund		Monitor History							
Fund Category: Target-Date 2040									
Notes:									
Standards		Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
Category		TJ	TJ	TJ	TJ	TJ	TJ	TJ	TJ
Return 1 Yr Rank		12%	17%	28%	48%	68%	65%	55%	--
Return 3 Yr Rank		--	--	--	--	--	--	--	--
Return 5 Yr Rank		--	--	--	--	--	--	--	--
Alpha 3 Yr Rank		--	--	--	--	--	--	--	--
RSquared 3 Yr Value		--	--	--	--	--	--	--	--
Sharpe Ratio 3 Yr Rank		--	--	--	--	--	--	--	--
Info Ratio 5 Yr Rank		--	--	--	--	--	--	--	--
Net Expense Ratio Rank		1%	1%	1%	1%	1%	1%	1%	1%
Manager Tenure		2.6 years	2.4 years	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	0.9 years

Category Codes: TJ=Target-Date 2040

Schwab Target 2045 Index Fund		Monitor History							
Fund Category: Target-Date 2045									
Notes:									
Standards		Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
Category		TK	TK	TK	TK	TK	TK	TK	TK
Return 1 Yr Rank		14%	21%	25%	51%	73%	64%	52%	--
Return 3 Yr Rank		--	--	--	--	--	--	--	--
Return 5 Yr Rank		--	--	--	--	--	--	--	--
Alpha 3 Yr Rank		--	--	--	--	--	--	--	--
RSquared 3 Yr Value		--	--	--	--	--	--	--	--
Sharpe Ratio 3 Yr Rank		--	--	--	--	--	--	--	--
Info Ratio 5 Yr Rank		--	--	--	--	--	--	--	--
Net Expense Ratio Rank		1%	1%	1%	1%	1%	1%	1%	1%
Manager Tenure		2.6 years	2.4 years	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	0.9 years

Category Codes: TK=Target-Date 2045

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Schwab Target 2050 Index Fund		Monitor History							
Fund Category: Target-Date 2050									
Notes:									
Standards		Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
Category		TN	TN	TN	TN	TN	TN	TN	TN
Return 1 Yr Rank		15%	23%	21%	46%	66%	59%	53%	--
Return 3 Yr Rank		--	--	--	--	--	--	--	--
Return 5 Yr Rank		--	--	--	--	--	--	--	--
Alpha 3 Yr Rank		--	--	--	--	--	--	--	--
RSquared 3 Yr Value		--	--	--	--	--	--	--	--
Sharpe Ratio 3 Yr Rank		--	--	--	--	--	--	--	--
Info Ratio 5 Yr Rank		--	--	--	--	--	--	--	--
Net Expense Ratio Rank		1%	1%	1%	1%	1%	1%	1%	1%
Manager Tenure		2.6 years	2.4 years	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	0.9 years

Category Codes: TN=Target-Date 2050

Schwab Target 2055 Index Fund		Monitor History							
Fund Category: Target-Date 2055									
Notes:									
Standards		Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
Category		TL	TL	TL	TL	TL	TL	TL	TL
Return 1 Yr Rank		16%	33%	22%	42%	63%	56%	41%	--
Return 3 Yr Rank		--	--	--	--	--	--	--	--
Return 5 Yr Rank		--	--	--	--	--	--	--	--
Alpha 3 Yr Rank		--	--	--	--	--	--	--	--
RSquared 3 Yr Value		--	--	--	--	--	--	--	--
Sharpe Ratio 3 Yr Rank		--	--	--	--	--	--	--	--
Info Ratio 5 Yr Rank		--	--	--	--	--	--	--	--
Net Expense Ratio Rank		1%	1%	1%	1%	1%	1%	1%	1%
Manager Tenure		2.6 years	2.4 years	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	0.9 years

Category Codes: TL=Target-Date 2055

# IPS STANDARDS AND CRITERIA: STATUS REPORT

## MONITORING REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

Schwab Target 2060 Index Fund		Monitor History							
Fund Category: Target-Date 2060+									
Notes:									
Standards		Q1 2019	Q4 2018	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017
Category		XQ	XQ	XQ	XQ	XQ	XQ	XQ	XQ
Return 1 Yr Rank		14%	34%	29%	54%	68%	56%	45%	--
Return 3 Yr Rank		--	--	--	--	--	--	--	--
Return 5 Yr Rank		--	--	--	--	--	--	--	--
Alpha 3 Yr Rank		--	--	--	--	--	--	--	--
RSquared 3 Yr Value		--	--	--	--	--	--	--	--
Sharpe Ratio 3 Yr Rank		--	--	--	--	--	--	--	--
Info Ratio 5 Yr Rank		--	--	--	--	--	--	--	--
Net Expense Ratio Rank		1%	1%	1%	1%	1%	1%	1%	1%
Manager Tenure		2.6 years	2.4 years	2.1 years	1.9 years	1.6 years	1.4 years	1.1 years	0.9 years

Category Codes: XQ=Target-Date 2060+

# Reliance MetLife Stable Value Series 25157 - Class 0

**Benchmark**  
Money Market-Taxable

**Net Crediting Rate**  
2.87%

**Overall Morningstar Rating™**  
★★★★

Out of 476 Stable Value investments. 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 page for details.

**Morningstar Return**  
Above Average

**Morningstar Risk**  
Low

## Investment Information

### Investment Objective & Strategy

The primary investment objective of the Fund is to preserve principal while generating earnings at rates competitive over time with short-term high quality fixed income investments. The Fund invests entirely in the MetLife Group Annuity Contract 25157 which consists of separately managed investment portfolios directed by Reliance Trust Company.

### Fees and Expenses

Total Annual Operating Expense Net	0.62%
Fees per \$1,000	\$6.20

### Portfolio Manager(s)

Management Team. Since 01-00

### Operations and Management

Inception Date	01-03-00
Trustee	Reliance Trust Company
Web Site	www.reliance-trust.com
CUSIP	759522105
Wrap Provider	Metropolitan Life Insurance Co

### Morningstar Category: Stable Value

Stable value funds seek to provide income while preventing price fluctuations. The most common stable value funds invest in a diversified portfolio of bonds and enter into wrapper agreements with financial companies to guarantee against fluctuations in their share prices. The safety of these funds therefore depends on both the fund's investments as well as the financial strength of the insurance companies and banks that back the wrapper agreements.

### What do Stable Value Funds invest in?

Stable value funds tend to invest in high-quality bonds with short- to intermediate-term maturities. They also purchase insurance contracts which aim to provide price stability on a day-to-day basis. The horizontal axis of the Morningstar Fixed Income Style Box™ shows duration, a measure of how the funds price will change in response to interest-rate changes. Because stable value funds insurance contracts usually prevent any fluctuations in the funds prices, these funds are insulated from interest-rate volatility and their duration is effectively zero.

## Volatility Analysis

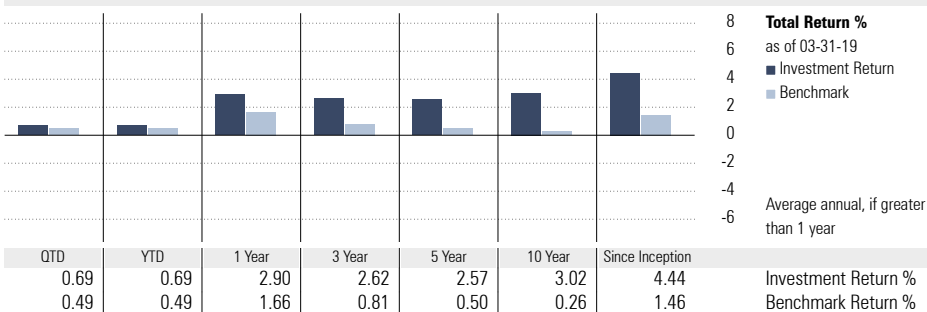
Investment



Category

In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

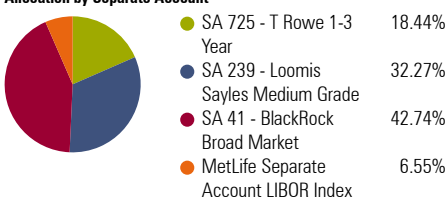
## Performance



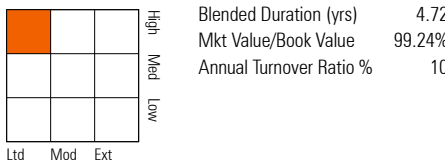
**Performance Disclosure: (1) The Fund's returns are net of operating expenses applicable to the share class. Current performance may be lower or higher. Investment value will fluctuate, and shares, when redeemed, may be worth more or less than original cost. (2) Morningstar Money Market Average. This is an average of all the Money Market Funds in the Morningstar Principia database. - - - Current Fund crediting rates and rates of return are available by contacting Reliance\_CITgroup@fisglobal.com.**

## Portfolio Analysis

### Allocation by Separate Account



### Morningstar Fixed Income Style Box™ as of 03-31-19



### Credit Analysis: as of 03-31-19

AM Best	A+
Fitch	AA-
Moody's Investors	Aa3
Standard & Poor's	AA-
> Average Credit Qual.	AA-

## Principal Risks

Credit and Counterparty, Extension, Inflation-Protected Securities, Prepayment (Call), Reinvestment, Long-Term Outlook and Projections, Loss of Money, Not FDIC Insured, Country or Region, Municipal Project-Specific, Active Management, High Portfolio Turnover, Income, Issuer, Interest Rate, Market/Market Volatility, Bank Loans, Convertible Securities, High-Yield Securities, Mortgage-Backed and Asset-Backed Securities, Municipal Obligations, Leases, and AMT-Subject Bonds, Repurchase Agreements, Restricted/Illiquid Securities, U.S. Government Obligations, Derivatives, Fixed-Income Securities, Maturity/Duration, Sovereign Debt, Multimanaged, Investment-Grade Securities, Passive Management, Unrated Securities, Variable-Rate Securities, Zero-Coupon Bond

Please refer to the Fund's Offering Statement for more information.

For use with Institutions (Plan Fiduciary, Investment Professional and Authorized Agents of Plan Fiduciary) only, not for use with retail investors or the general public.

# Disclosure

## About the Fund

The Fund is a bank collective trust fund for which Reliance Trust Company serves as trustee and investment manager. The Fund is not FDIC-insured or registered with the Securities and Exchange Commission. Investors should carefully consider the fund's investment objectives, risks, charges and expenses before investing. To obtain an offering circular containing this and other information, contact us at Reliance\_CITGroup@FISglobal.com.

## About Metropolitan Life Insurance Company

For over 140 years MetLife has been one of the most Trusted financial institutions in the United States and is a leading global provider of insurance, employee benefits and other financial services.

## General

This Fund is a bank collective trust fund for which Reliance Trust Company, an FIS Company, ("RTC") serves as trustee and investment manager. The Fund is not FDIC insured and is not guaranteed by Reliance Trust nor guaranteed by any governmental agency. Units of beneficial interest in the Fund are not registered under the Securities Act of 1933 in reliance on an exemption under that Act for interests in a collective trust fund maintained by a bank for certain types of employee benefit trusts.

Participation in the Fund is limited to eligible trusts that are accepted by the Trustee as participating trusts as more fully described in the Offering Statement.

## Performance

The performance information provided is historical and past performance is not a guarantee of future results. Current performance may be lower or higher than performance information shown.

RTC charges a total annualized fee for investment and administrative services equivalent to 0.62% of assets invested in the Fund. The fee will be calculated and accrued daily in the Fund's net asset value and will be paid from the Fund's assets monthly or quarterly as determined by RTC. These charges are reflected in the returns presented. Returns also include all income, realized and unrealized capital gains and losses, and all transactional and contract execution costs.

## Consider these risks before investing:

The Fund is not intended as a complete investment program, and there can be no guarantee that it will achieve its investment objective. No Fund is insured or guaranteed by any government agency, by the Trustee or by the Advisor. See also "Fund-Specific Risks" in the relevant Fund's appendix to the Offering Statement. The risk factors are not intended to be exhaustive and there may be other risks that should be taken into account in relation to an investment in a particular Fund.

## Fee and Expense Disclosure

The Fund shall have multiple class available for eligible participating trust as more fully described in the Offering Statement.

## Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end funds, and separate accounts) with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population

for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods.

## Morningstar Return

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+ Avg), the middle 35% Average (Avg), the next 22.5% Below Average (- Avg), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

## Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+ Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

## Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment style as of the date noted on this report.

For equity funds the vertical axis shows the market capitalization of the long stocks owned and the horizontal axis shows investment style (value, blend, or growth).

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest rate sensitivity as measured by a bond's effective duration.

Morningstar seeks credit rating information from fund companies on a periodic basis (e.g., quarterly). In compiling credit rating information Morningstar accepts credit ratings reported by fund companies that have been issued by all

Nationally Recognized Statistical Rating Organizations (NRSROs). For a list of all NRSROs, please visit <http://www.sec.gov/divisions/marketreg/ratingagency.htm>. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating, and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings. PLEASE NOTE: Morningstar, Inc. is not itself an NRSRO nor does it issue a credit rating on the fund. An NRSRO or rating agency ratings can change from time-to-time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low", "medium", or "high" based on their average credit quality. Funds with a low credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; medium are those less than "AA-", but greater or equal to "BBB-"; and high are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index (MCBI), which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

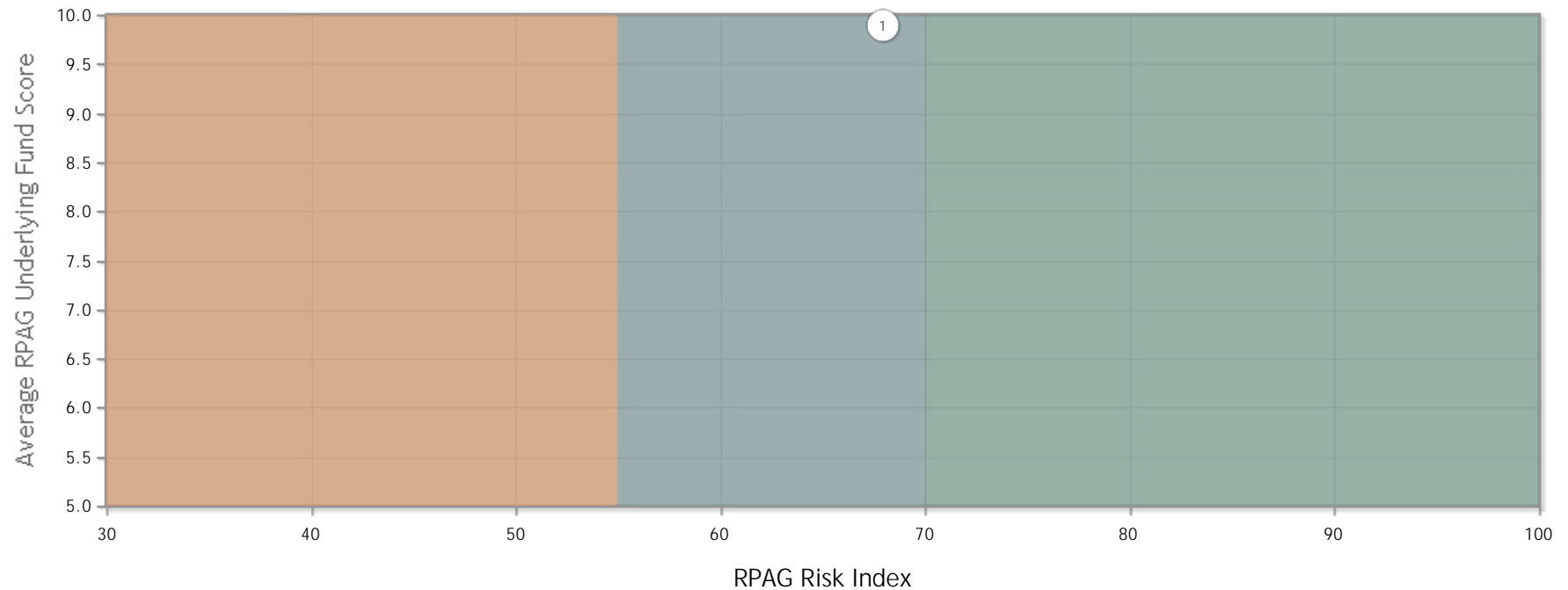
For municipal bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases static breakpoints are utilized. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-US taxable and non-US domiciled fixed income funds static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: greater than 3.5 and less than equal to 6 years; (iii) Extensive: greater than 6 years.

# TDF Evaluation

In order to evaluate and select a TDF series, fiduciaries should conduct a thorough quantitative and Scorecard analysis. Important factors include glidepath risk, underlying funds, fees and asset class coverage.



# Risk Index & Underlying Score



1 Schwab Target Index

**Glidepath Risk Category:**

Conservative

Moderate

Aggressive

Please refer to the RPAG TDF Risk Index and the Evaluating The TDFs Underlying Funds pages for definitions. Funds listed are for illustrative purposes only. The actual funds and corresponding scores may vary by plan.

# TDF Matrix

TDF Series Name	Glidepath Risk	Risk Index	Equity Glide Path (Approx.)		Roll Down Age		Approx. Equity Exposure at 65	Management Style	Investment Type	Equity Tactical (+/-)
			Starting Eq	Ending Eq	Begin	End				
Schwab Target Index	Moderate	68	95%	25%	21	85	40%	Passive	Proprietary Funds	0%
Industry Average	Moderate	67	92%	31%	35	75	41%			4%

# TDF Matrix Definitions

**TDF Series Name:** Name of the TDF series.

**TDF Design Analysis:** each series is placed into a risk category (aggressive, moderate, conservative) based on the Glidepath Risk Index.

**Glidepath Risk Index:** A glidepath describes the transition from equity assets to fixed-income investments as an investor approaches retirement. The Glidepath Risk Index quantifies a glidepath's overall aggressiveness by considering four key factors, as explained below:

Equity exposure at retirement (age 65): Equity risk is responsible for a large portion of the volatility in broadly diversified portfolios. This represents 65 percent of the risk index weight.

Glidepath slope: a steeper glidepath that transitions away from equity assets to fixed-income investments near retirement age limits the ability to recover large losses and is more susceptible to sequencing risk. Sequencing risk is the risk of experiencing negative returns in a period when withdrawals are being made. A steeper transition away from equity assets in this case would make it subsequently more difficult for the investor to recoup losses experienced during this time. This represents 25 percent of the index weight.

Equity at the start of the glidepath. This represents 2.5 percent of the index weight.

Equity at the end of the glidepath. This represents 7.5 percent of the risk index weight.

**Starting Eq:** A glidepath's beginning equity percentage

**Ending Eq:** A glidepath's ending equity percentage, which may be at retirement age or past retirement age depending on the structure of the glidepath.

**Begin Roll Down Age:** the participant age corresponding to the glidepath's first decline in equity percentage

**End Roll Down Age:** the participant age corresponding to the time when the glidepath reaches its lowest and final equity percentage point

**Approx. Equity Exposure at 65:** the glidepath's approximate equity percentage at participant age 65 (assumed retirement age)

**Active/Passive:** describes the management style of the underlying funds within the TDF series. Active: fund manager attempts to implement a particular strategy with the goal to outperform a benchmark. Passive: fund manager implements a strategy to match, not outperform, the performance of a particular benchmark, gross of fees.

**Investment Type:** describes the structure of the underlying funds within the series

**Tactical Asset Allocation:** A glidepath can be strategic or tactical. Every TDF has a policy glidepath, which specifies the asset allocations at given time and serves as the base glidepath to which the portfolios are rebalanced periodically. Managers implementing a strategic glidepath do not

actively deviate from these policy levels, although the policy weights can change slightly over time due to changes in long term capital market expectations. Managers implementing a tactical glidepath can actively deviate from policy allocations to act on their short term outlooks for certain asset classes in an attempt to outperform the policy allocation, in addition to changing the policy weights over time based on long term capital market expectations. This metric describes the maximum percentage deviation from the glidepath the manager is allowed to implement.

## Investment Types

**Proprietary Funds:** a TDF is labeled proprietary if the underlying funds comprising the TDF series are managed by the same investment company managing the TDF itself.

**Collective Trusts:** a collective investment fund is a fund that is operated by a trust company or a bank and handles a pooled group of trust accounts. Collective investment funds combine the assets of various individuals and organizations to create a larger, well-diversified portfolio. Collective Investment trusts are not registered products.

**MultiManager:** a TDF is labeled multimanager if the underlying funds comprising the TDF series are managed by various investment companies, at least some of which are not the same investment company as the company managing the TDF itself.

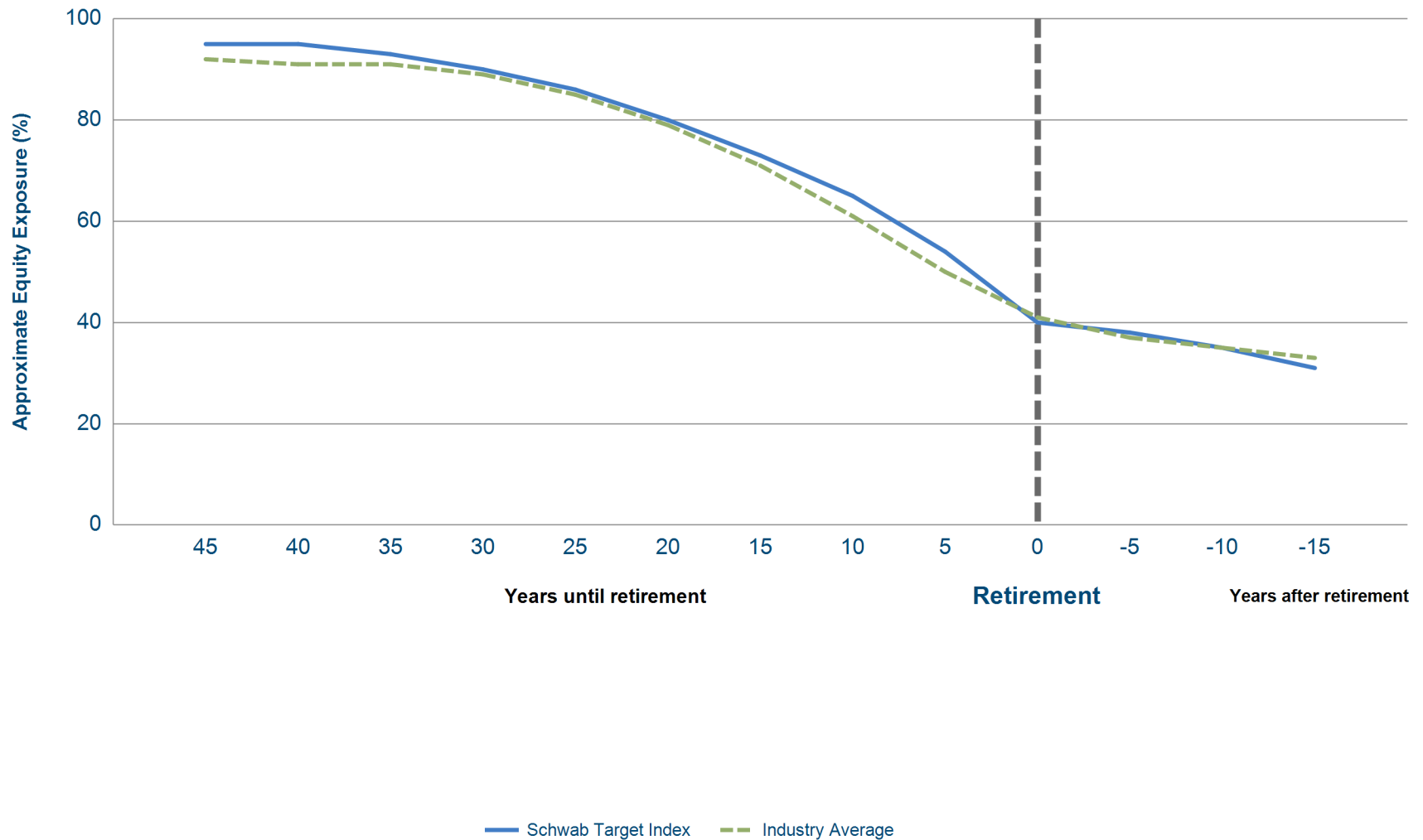
## Disclaimers

Investments in target date funds are subject to the risks of their underlying funds. The investment risk of target date funds change over time as its asset allocation changes. Asset allocation and diversification do not protect against market loss. No target date fund is considered a complete retirement program and there is no guarantee any single fund will provide sufficient retirement income at or through retirement. Principal invested is not guaranteed at any time, including at or after the funds' target dates. The target date is typically the date in which the participant is expecting to retire.

Past performance does not guarantee future results.

Mutual funds are sold by prospectus only. Before investing, investors should carefully consider the investment objectives, risks, charges and expenses of a mutual fund. The fund prospectus provides this and other important information. Please contact your representative or the Company to obtain a prospectus. Please read the prospectus carefully before investing or sending money.

# TDF Glidepath Comparision



# Asset Class Coverage

TDF Series	Schwab Target Index
US Large Equity	✓
US Mid Equity	✓
US Small Equity	✓
International Equity	✓
Emerging Market Equity	✓
US Fixed Income	✓
US Tips	✓
International Fixed Income	
REITs	✓
Commodities	

Source: Morningstar  
 Information is for illustrative purposes only and cannot be guaranteed now or in the future

# Scorecard™ - Style Box Summary

## Schwab Target Index: Underlying Fund Scores

U.S. Large Cap Schwab US Large-Cap ETF (10)	U.S. Mid/Small Cap Schwab US Small-Cap ETF (9)	International Large Cap Equity Schwab International Equity ETF (10)
International Mid/Small Cap Equity	REITs Schwab US REIT ETF (10)	Commodities
Core Fixed Income Schwab US Aggregate Bond ETF (10)	Other Fixed Income Schwab Short-Term US Treasury ETF (10) Schwab US TIPS ETF (10)	Specialty/Other Schwab Emerging Markets Equity ETF (10)

Only ten funds will appear in each style box category for spacing purposes.

# Scorecard™

## Target Date Series

Asset Allocation	Category	Risk Index	Allocation Score (Series Funds)		Selection Score (Underlying Funds)		Blended Score			
			# of Funds	Avg Score	# of Funds	Avg Score	Q1 2019	Q4 2018	Q3 2018	Q2 2018
Schwab Target Index Series Institutional	MOD	68	11	-	8	9.9	-	-	-	-

## Allocation (Series Funds)

Asset Allocation	Category	Ticker/ ID	Style			Risk/Return			Peer Group		Qual	Score			
			Risk Level	Style Diversity	R <sup>2</sup>	Risk/ Return	Up/ Down	Info Ratio	Return Rank	SR Rank		Q1 2019	Q4 2018	Q3 2018	Q2 2018
Schwab Target 2010 Index	CON	SWYAX										-	-	-	-
												-	-	-	-
Schwab Target 2015 Index	CON	SWYBX										-	-	-	-
												-	-	-	-
Schwab Target 2025 Index	MC	SWYDX										-	-	-	-
												-	-	-	-
Schwab Target 2020 Index	MC	SWY LX										-	-	-	-
												-	-	-	-
Schwab Target 2030 Index	MOD	SWYEX										-	-	-	-
												-	-	-	-

# Scorecard™

continued

## Allocation (Series Funds)

Asset Allocation	Category	Ticker/ ID	Style			Risk/Return			Peer Group		Qual	Score			
			Risk Level	Style Diversity	R <sup>2</sup>	Risk/ Return	Up/ Down	Info Ratio	Return Rank	SR Rank		Q1 2019	Q4 2018	Q3 2018	Q2 2018
Schwab Target 2035 Index	MOD	SWYFX										-	-	-	-
												-	-	-	-
Schwab Target 2040 Index	MA	SWYGX										-	-	-	-
												-	-	-	-
Schwab Target 2045 Index	MA	SWYHX										-	-	-	-
												-	-	-	-
Schwab Target 2050 Index	MA	SWYMX										-	-	-	-
												-	-	-	-
Schwab Target 2055 Index	AGG	SWYJX										-	-	-	-
												-	-	-	-
Schwab Target 2060 Index	AGG	SWYNX										-	-	-	-
												-	-	-	-

## Selection (Underlying Funds)

Passive	Category	Ticker/ ID	Style				Peer Group				Qual	Score			
			Style	Style Drift	R <sup>2</sup>	Tracking Error	TE Rank	Expense Rank	Return Rank	SR Rank		Q1 2019	Q4 2018	Q3 2018	Q2 2018
Schwab US Large-Cap ETF	LCB-P	SCHX	1	1	1	1	1	1	1	1	2	10	10	10	10
			0.8/ 99.8	1.5	100.0	0.2	2.0	6.0	2.0	5.0		LCB-P	LCB-P	LCB-P	LCB-P



# Scorecard™

continued

Passive	Category	Ticker/ ID	Style				Peer Group				Qual	Score			
			Style	Style Drift	R <sup>2</sup>	Tracking Error	TE Rank	Expense Rank	Return Rank	SR Rank	2pt Max	Q1 2019	Q4 2018	Q3 2018	Q2 2018
Schwab US Small-Cap ETF	SCB-P	SCHA	1	0	1	1	1	1	1	1	2	9	9	9	9
			6.3/ -84.2	8.6	99.0	1.6	56.0	4.0	62.0	40.0		SCB-P	SCB-P	SCB-P	SCB-P
Schwab International Equity ETF	ILCB-P	SCHF	1	1	1	1	1	1	1	1	2	10	10	10	10
			-13.7/ 35.3	10.7	99.4	0.9	1.0	5.0	15.0	21.0		ILCB-P	ILCB-P	ILCB-P	ILCB-P
Schwab Emerging Markets Equity ETF	EME-P	SCHE	1	1	1	1	1	1	1	1	2	10	10	10	10
			-20.3/ -98.2	7.4	97.5	2.1	53.0	10.0	24.0	11.0		EME-P	EME-P	EME-P	EME-P
Schwab US Aggregate Bond ETF	CFI-P	SCHZ	1	1	1	1	1	1	1	1	2	10	10	10	10
			-19.3/ 37.4	4.4	100.0	0.1	25.0	19.0	18.0	17.0		CFI-P	CFI-P	CFI-P	CFI-P
Schwab US TIPS ETF	UGT-P	SCHP	1	1	1	1	1	1	1	1	2	10	10	10	10
			-99.2/ 99.1	0.3	100.0	0.1	35.0	25.0	28.0	33.0		UGT-P	UGT-P	UGT-P	UGT-P
Schwab Short-Term US Treasury ETF	SHG-P	SCHO	1	1	1	1	1	1	1	1	2	10	10	10	10
			-98.3/ 99.9	0.2	99.9	0.0	2.0	21.0	15.0	21.0		SHG-P	SHG-P	SHG-P	SHG-P
Schwab US REIT ETF	REI-P	SCHH	1	1	1	1	1	1	1	1	2	10	10	10	10
			-99.6/ 99.9	0.1	100.0	0.1	1.0	1.0	28.0	26.0		REI-P	REI-P	REI-P	REI-P

# TDF Comparison Summary

TDF Series	Schwab Target Index
Strategy Investment Expense	0.08%
Glidepath Risk	Moderate
Management Style	Passive
Average Underlying Fund Score	9.9
Number of Underlying Funds Scoring Watchlist or Below	0
3(38) Independent Manager Selection	No

Information is for illustrative purposes only and cannot be guaranteed now or in the future.  
Source: Retirement Plan Advisory Group



# Considerations

Considerations for investment changes, if any, are included in this Section.

The Summary of Considerations shows:

Watch List - No current action will be taken.

Eliminate - The fund will be removed from the plan.

Add - Shows a fund which will be added to the investment menu.

Map To - States where assets held in an “Eliminate” fund will be automatically moved.

# Considerations

Eliminate Funds PGIM QMA Mid-Cap Value R6 AND Map to Ariel Fund Institutional


Active	Category	Ticker/ ID	Style			Risk/Return			Peer Group		Qual	Score			
			Style	Style Drift	R <sup>2</sup>	Risk/ Return	Up/ Down	Info Ratio	Return Rank	Info Ratio Rank	2pt Max	Q1 2019	Q4 2018	Q3 2018	Q2 2018
PGIM QMA Mid-Cap Value R6	MCV	PMVQX	1	1	1	0	0	0	1	1	2	7	7	7	7
			-98.2/ -23.1	13.2	93.5	13.7/ 4.9	94.5/ 109.4	-0.62	46.0	45.0		MCV	MCV	MCV	MCV

Active	Category	Ticker/ ID	Style			Risk/Return			Peer Group		Qual	Score			
			Style	Style Drift	R <sup>2</sup>	Risk/ Return	Up/ Down	Info Ratio	Return Rank	Info Ratio Rank	2pt Max	Q1 2019	Q4 2018	Q3 2018	Q2 2018
Ariel Fund Institutional	SMCV	ARAIX	0	0	1	1	1	1	1	1	2	8	8	7	8
			-14.1/ -27.2	37.7	84.4	16.5/ 8.2	112.4/ 101.7	0.33	39.0	20.0		SMCV	SMCV	SMCV	SMCV

AND Add Schwab US Mid-Cap IndexSchwab Small Cap Index


Passive	Category	Ticker/ ID	Style				Peer Group				Qual	Score			
			Style	Style Drift	R <sup>2</sup>	Tracking Error	TE Rank	Expense Rank	Return Rank	SR Rank	2pt Max	Q1 2019	Q4 2018	Q3 2018	Q2 2018
Schwab US Mid-Cap Index	MCB-P	SWMCX										-	-	-	-
												-	-	-	-

# Considerations

AND Add Schwab US Mid-Cap IndexSchwab Small Cap Index															
Passive	Category	Ticker/ ID	Style				Peer Group				Qual	Score			
			Style	Style Drift	R <sup>2</sup>	Tracking Error	TE Rank	Expense Rank	Return Rank	SR Rank	2pt Max	Q1 2019	Q4 2018	Q3 2018	Q2 2018
Schwab Small Cap Index 	SCB-P	SWSSX	1	1	1	1	1	1	1	1	2	10	10	10	10
			1.9/ -99.9	1.1	100.0	0.1	10.0	4.0	5.0	14.0		SCB-P	SCB-P	SCB-P	SCB-P

# Summary of Considerations

Add	Asset Class	Fund	Score
	MCB-P	Schwab US Mid-Cap Index	-
	SCB-P	Schwab Small Cap Index	10

Eliminate	Asset Class	Fund	Score	Action	Asset Class	Fund	Score
	MCV	PGIM QMA Mid-Cap Value R6	7	map to	SMCV	Ariel Fund Institutional	8

Considerations:  Add  Delete  Watchlist

# PGIM QMA Mid-Cap Value R6

## Category: Mid Cap Value

PMVQX  
3/31/2019

### Fund Strategy

The investment seeks capital growth. The fund normally invests at least 80% of its investable assets in equity and equity-related securities of mid-cap companies. The subadviser considers mid-cap companies to be companies with market capitalizations within the market cap range of companies included in the Russell Midcap Index (measured at the time of purchase). Most of the fund's assets will typically be invested in U.S. equity and equity-related securities, including up to 25% of its total assets in real estate investment trusts (REITs).

### Fund Information

Strategy Asset (\$ mm):	711.00
Share Class Assets (\$ mm):	201.00
Manager:	Stephen Courtney
Manager Tenure:	5 Years

### Portfolio Statistics

Alpha*:	-5.24	P/E:	11.88
Beta*:	1.16	P/B:	1.20
Std Dev:	14.40	SEC Yield (%):	-
R <sup>2</sup> *:	95.12	Turnover:	78.00
as of date 2/28/2019		as of date 3/31/2019	

\*Best fit index: Morningstar US Mid Val TR USD  
\*3-year statistic: Morningstar US Mid Val TR USD

### Top 10 Holdings (%)

as of 2/28/2019

PACCAR Inc / PCAR	1.32
PPL Corp / PPL	1.27
United Continental Holdings Inc / UAL	1.25
KeyCorp / KEY	1.24
Royal Caribbean Cruises Ltd / RCL	1.24
Fifth Third Bancorp / FITB	1.23
Freeport-McMoRan Inc / FCX	1.23
Regions Financial Corp / RF	1.22
Citizens Financial Group Inc / CFG	1.22
Western Digital Corp / WDC	1.20
% in Top 10 Holdings	12.42
# of Holdings	159

### Scorecard System

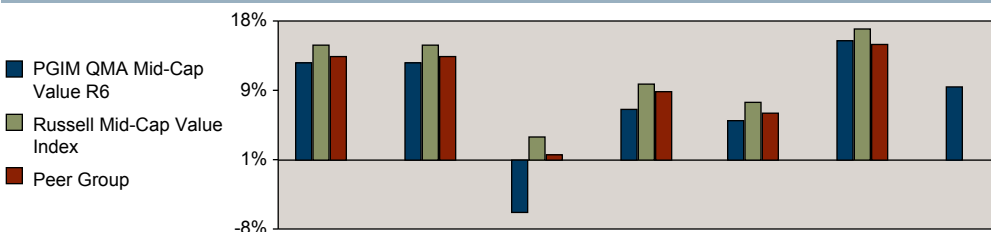
Active Strategies	Ticker	Style			Risk/Return			Peer Group		Qual. (2pt max)	Score 3/31/201
		Style	Style Drift	R <sup>2</sup>	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank		
Mid Cap Value											
PGIM QMA Mid-Cap Value R6	PMVQX	1	1	1	0	0	0	1	1	2	7
		-98.21/-23.13	13.15	93.47	13.66/4.93	94.45/109.41	-0.62	46.00	45.00		MCV

Active Strategies	Score 3/31/2019	Score 12/31/2018	Score 9/30/2018	Score 6/30/2018	Score 3/31/2018	Score 12/31/2017	Score 9/30/2017	Score 6/30/2017
PGIM QMA Mid-Cap Value R6	7	7	7	7	7	10	9	9
	MCV	MCV	MCV	MCV	MCV	MCV	MCV	MCV

The Scorecard System methodology incorporates both quantitative and qualitative factors into evaluating fund managers and their investment strategies. To be scored, there is a fund history requirement (5 years for active strategies and 3 years for passive strategies). The scoring system is built around pass/fail criteria, on a scale of 0-10 (with 10 being the best). 80% of the score is quantitative and 20% is qualitative. For Active and Asset Allocation Strategies, the scorecard factors are weighted 30% to style, 30% to risk/return, 20% to peer group rankings and 20% to qualitative factors (manager tenure, expense ratio relative to category average and strength of statistics). For Passive Strategies the scorecard factors are weighted 40% to style, 40% to peer group rankings and 20% to qualitative factors (expense ratio relative to category average, strength of statistics). For active, asset allocation and passive strategies, other significant factors may be considered into a fund's qualitative score. For further explanation of the Scorecard System, please refer to the Scorecard Tutorial.

### Performance Analysis

as of 3/31/2019



	Qtr	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
PGIM QMA Mid-Cap Value R6	12.16%	12.16%	-6.54%	6.34%	4.93%	14.92%	9.15%
Russell Mid-Cap Value Index	14.37%	14.37%	2.89%	9.50%	7.22%	16.39%	-
Peer Group Performance*	12.94%	12.94%	0.66%	8.55%	5.87%	14.46%	-
Peer Group Rank*	73	73	97	85	70	46	-
Peer Group Size (funds)*	-	-	417	368	318	225	-

\*Morningstar Peer Group: Mid-Cap Value

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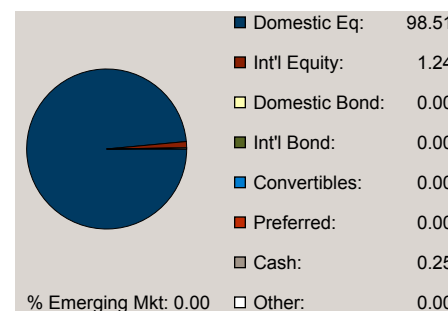
### Sector Allocation

as of 2/28/2019

Comm:	1.38	-
Technology:	3.24	-
Healthcare:	3.33	-
Cons Defensive:	5.36	-
Utilities:	5.51	-
Energy:	7.79	-
Basic Materials:	9.10	-
Industrials:	10.33	-
Real Estate:	13.69	-
Cons Cyclical:	16.47	-
Financial Services:	23.80	-

### Asset Allocation (%)

as of 2/28/2019



### Additional Information

Prospectus Net Exp. Ratio:	0.73
Prospectus Gross Exp. Ratio:	0.77
Avg Exp Ratio Morningstar (%):	1.09
12b-1 fees (%):	-
Closed - New Inv:	-
Closed - All Inv:	-
Min Investment:	\$5000000
Waiver Amt:	0.04
Waiver Exp Date:	2/29/2020
Strategy Inception:	8/19/1998
Share Class Inception:	1/18/2011

# Schwab US Mid-Cap Index

## Category: Mid Cap Blend

SWMCX  
3/31/2019

### Fund Strategy

The investment seeks to track the performance of a benchmark index that measures the total return of mid capitalization U.S. stocks. To pursue its goal, the fund generally invests in securities that are included in the Russell Midcap® Index. It is the fund's policy that under normal circumstances it will invest at least 90% of its net assets (including, for this purpose, any borrowings for investment purposes) in securities included in the index. The Russell Midcap Index measures the performance of the mid-cap segment of the U.S. equity universe. It is a subset of the Russell 1000® Index, representing the smallest issuers in the Russell 1000 Index.

### Fund Information

Strategy Asset (\$ mm):	277.00
Share Class Assets (\$ mm):	277.00
Manager:	Christopher Bliss
Manager Tenure:	1 Years

### Portfolio Statistics

Alpha*:	-	P/E:	19.33
Beta*:	-	P/B:	2.57
Std Dev:	-	SEC Yield (%):	-
R2*:	-	Turnover:	-
as of date 2/28/2019		as of date 3/31/2019	

\*Best fit index:  
\*3-year statistic:

### Top 10 Holdings (%)

as of 2/28/2019

ServiceNow Inc / NOW	0.58
Analog Devices Inc / ADI	0.54
Autodesk Inc / ADSK	0.49
Edwards Lifesciences Corp / EW	0.48
Fidelity National Information Services Inc / FIS	0.48
Ross Stores Inc / ROST	0.47
Fiserv Inc / FISV	0.46
Sempra Energy / SRE	0.45
Roper Technologies Inc / ROP	0.44
Williams Companies Inc / WMB	0.44
% in Top 10 Holdings	4.82
# of Holdings	787

### Scorecard System

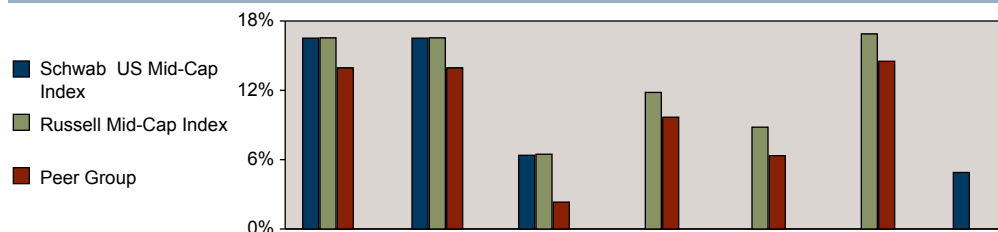
Passive Strategies	Ticker	Style				Peer Group				Qual. (2pt max)	Score 3/31/201
		Style	Style Drift	R <sup>2</sup>	Tracking Error	TE Rank	Expense Rank	Return Rank	SR Ratio Rank		
Mid Cap Blend											
Schwab US Mid-Cap Index	SWMCX	-	-	-	-	-	-	-	-	-	-

Passive Strategies	Score 3/31/2019	Score 12/31/2018	Score 9/30/2018	Score 6/30/2018	Score 3/31/2018	Score 12/31/2017	Score 9/30/2017	Score 6/30/2017
Schwab US Mid-Cap Index	-	-	-	-	-	-	-	-

The Scorecard System methodology incorporates both quantitative and qualitative factors into evaluating fund managers and their investment strategies. To be scored, there is a fund history requirement (5 years for active strategies and 3 years for passive strategies). The scoring system is built around pass/fail criteria, on a scale of 0-10 (with 10 being the best). 80% of the score is quantitative and 20% is qualitative. For Active and Asset Allocation Strategies, the scorecard factors are weighted 30% to style, 30% to risk/return, 20% to peer group rankings and 20% to qualitative factors (manager tenure, expense ratio relative to category average and strength of statistics). For Passive Strategies the scorecard factors are weighted 40% to style, 40% to peer group rankings and 20% to qualitative factors (expense ratio relative to category average, strength of statistics). For active, asset allocation and passive strategies, other significant factors may be considered into a fund's qualitative score. For further explanation of the Scorecard System, please refer to the Scorecard Tutorial.

### Performance Analysis

as of 3/31/2019



	Qtr	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Schwab US Mid-Cap Index	16.51%	16.51%	6.38%	-	-	-	4.89%
Russell Mid-Cap Index	16.54%	16.54%	6.47%	11.82%	8.81%	16.88%	-
Peer Group Performance*	13.94%	13.94%	2.33%	9.67%	6.34%	14.51%	-
Peer Group Rank*	11	11	18	-	-	-	-
Peer Group Size (funds)*	-	-	457	377	330	234	-

\*Morningstar Peer Group: Mid-Cap Blend

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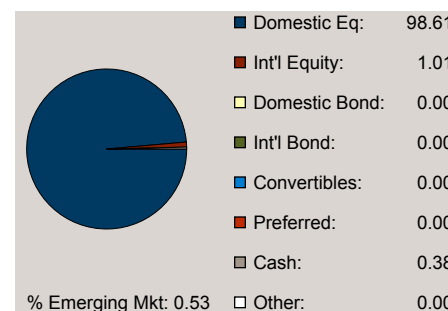
### Sector Allocation

as of 2/28/2019

Comm:	0.95	-
Energy:	4.10	—
Basic Materials:	4.28	—
Cons Defensive:	5.08	—
Utilities:	6.30	—
Real Estate:	9.29	—
Healthcare:	9.48	—
Financial Services:	13.05	—
Cons Cyclical:	14.30	—
Industrials:	15.20	—
Technology:	17.97	—

### Asset Allocation (%)

as of 2/28/2019



### Additional Information

Prospectus Net Exp. Ratio:	0.04
Prospectus Gross Exp. Ratio:	0.04
Avg Exp Ratio Morningstar (%):	1.06
12b-1 fees (%):	-
Closed - New Inv:	-
Closed - All Inv:	-
Min Investment:	\$0
Waiver Amt:	-
Waiver Exp Date:	-
Strategy Inception:	12/20/2017
Share Class Inception:	12/20/2017



# Schwab Small Cap Index

## Category: Small Cap Blend

SWSSX  
3/31/2019

### Fund Strategy

The investment seeks to track the performance of a benchmark index that measures the total return of small capitalization U.S. stocks. The fund normally invests at least 80% of its net assets (including, for this purpose, any borrowings for investment purposes) in these stocks; typically, the actual percentage is considerably higher. It generally will seek to replicate the performance of the index by giving the same weight to a given stock as the index does. The fund may invest in derivatives, principally futures contracts, and lend its securities to minimize the gap in performance that naturally exists between any index fund and its corresponding index.

### Fund Information

Strategy Asset (\$ mm):	4092.00
Share Class Assets (\$ mm):	4092.00
Manager:	Ferian Juwono
Manager Tenure:	6 Years

### Portfolio Statistics

Alpha*:	0.02	P/E:	17.67
Beta*:	1.00	P/B:	2.09
Std Dev:	15.90	SEC Yield (%):	-
R <sup>2</sup> :	100.00	Turnover:	17.00
as of date 2/28/2019		as of date 3/31/2019	

\*Best fit index: Russell 2000 TR USD  
\*3-year statistic: Russell 2000 TR USD

### Top 10 Holdings (%)

as of 2/28/2019

E-Mini Russ 2000 Mar19 Xcme 20190315	0.57
Etsy Inc / ETSY	0.41
The Trade Desk Inc A / TTD	0.31
Five Below Inc / FIVE	0.31
Integrated Device Technology Inc / IDTI	0.30
HubSpot Inc / HUBS	0.30
Ciena Corp / CIEN	0.29
Cree Inc / CREE	0.26
Primerica Inc / PRI	0.26
Planet Fitness Inc A / PLNT	0.25
% in Top 10 Holdings	3.27
# of Holdings	2015

### Scorecard System

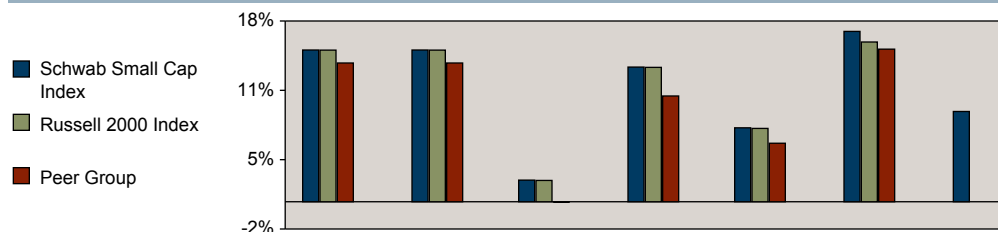
Passive Strategies	Ticker	Style				Peer Group				Qual. (2pt max)	Score 3/31/201
		Style	Style Drift	R <sup>2</sup>	Tracking Error	TE Rank	Expense Rank	Return Rank	SR Ratio Rank		
Small Cap Blend											
Schwab Small Cap Index	SWSSX	1	1	1	1	1	1	1	1	2	10
		1.89/-99.87	1.07	100.00	0.07	10.00	4.00	5.00	14.00		SCB-P

Passive Strategies	Score 3/31/2019	Score 12/31/2018	Score 9/30/2018	Score 6/30/2018	Score 3/31/2018	Score 12/31/2017	Score 9/30/2017	Score 6/30/2017
Schwab Small Cap Index	10	10	10	10	10	10	10	10
	SCB-P	SCB-P	SCB-P	SCB-P	SCB-P	SCB-P	SCB-P	SCB-P

The Scorecard System methodology incorporates both quantitative and qualitative factors into evaluating fund managers and their investment strategies. To be scored, there is a fund history requirement (5 years for active strategies and 3 years for passive strategies). The scoring system is built around pass/fail criteria, on a scale of 0-10 (with 10 being the best). 80% of the score is quantitative and 20% is qualitative. For Active and Asset Allocation Strategies, the scorecard factors are weighted 30% to style, 30% to risk/return, 20% to peer group rankings and 20% to qualitative factors (manager tenure, expense ratio relative to category average and strength of statistics). For Passive Strategies the scorecard factors are weighted 40% to style, 40% to peer group rankings and 20% to qualitative factors (expense ratio relative to category average, strength of statistics). For active, asset allocation and passive strategies, other significant factors may be considered into a fund's qualitative score. For further explanation of the Scorecard System, please refer to the Scorecard Tutorial.

### Performance Analysis

as of 3/31/2019



	Qtr	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Schwab Small Cap Index	14.59%	14.59%	2.08%	12.95%	7.11%	16.38%	8.68%
Russell 2000 Index	14.58%	14.58%	2.05%	12.92%	7.05%	15.36%	-
Peer Group Performance*	13.34%	13.34%	-0.03%	10.17%	5.62%	14.67%	-
Peer Group Rank*	29	29	29	13	25	17	-
Peer Group Size (funds)*	-	-	738	634	519	382	-

\*Morningstar Peer Group: Small Blend

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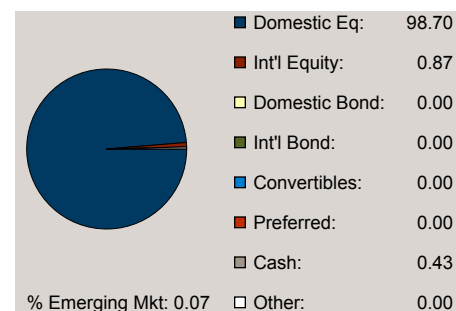
### Sector Allocation

as of 2/28/2019

Comm:	1.32	-
Energy:	2.89	-
Cons Defensive:	3.51	-
Utilities:	3.54	-
Basic Materials:	5.18	-
Real Estate:	8.36	-
Cons Cyclical:	12.85	-
Healthcare:	14.03	-
Industrials:	14.21	-
Technology:	16.95	-
Financial Services:	17.15	-

### Asset Allocation (%)

as of 2/28/2019



### Additional Information

Prospectus Net Exp. Ratio:	0.04
Prospectus Gross Exp. Ratio:	0.04
Avg Exp Ratio Morningstar (%):	1.15
12b-1 fees (%):	-
Closed - New Inv:	-
Closed - All Inv:	-
Min Investment:	\$0
Waiver Amt:	0.03
Waiver Exp Date:	-
Strategy Inception:	5/19/1997
Share Class Inception:	5/19/1997

# Ariel Fund Institutional

## Category: SMid Cap Value

ARAIX  
3/31/2019

### Fund Strategy

The investment seeks long-term capital appreciation. The fund invests in small/mid cap undervalued companies that show strong potential for growth. It invests primarily in equity securities of U.S. companies that have market capitalizations within the range of the companies in the Russell 2500<sup>TM</sup> Index, measured at the time of initial purchase.

### Fund Information

Strategy Asset (\$ mm):	2231.00
Share Class Assets (\$ mm):	826.00
Manager:	John W. Rogers
Manager Tenure:	32 Years

### Portfolio Statistics

Alpha*:	-3.33	P/E:	11.17
Beta*:	1.22	P/B:	1.91
Std Dev:	16.11	SEC Yield (%):	-
R <sup>2</sup> *:	86.27	Turnover:	19.00
as of date 12/31/2018		as of date 3/31/2019	

\*Best fit index: Morningstar US Mid Cap TR USD  
\*3-year statistic: Morningstar US Mid Cap TR USD

### Top 10 Holdings (%)

as of 12/31/2018

KKR & Co Inc / KKR	4.18
Zebra Technologies Corp / ZBRA	4.15
MSG Networks Inc Class A / MSGN	4.09
Lazard Ltd Shs A / LAZ	3.49
Tegna Inc / TGNA	3.48
Kennametal Inc / KMT	3.41
Nielsen Holdings PLC / NLSN	3.41
JM Smucker Co / SJM	3.39
Viacom Inc B / VIAB	3.36
Northern Trust Corp / NTRS	3.32
% in Top 10 Holdings	36.27
# of Holdings	42

### Scorecard System

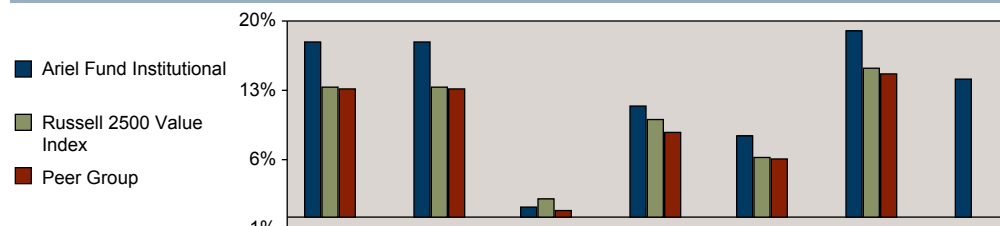
Active Strategies	Ticker	Style			Risk/Return			Peer Group		Qual. (2pt max)	Score 3/31/201
		Style	Style Drift	R <sup>2</sup>	Risk / Return	Up / Down	Info Ratio	Return Rank	Info Ratio Rank		
SMid Cap Value											
Ariel Fund Institutional	ARAIX	0	0	1	1	1	1	1	1	2	8
		-14.14/ -27.18	37.71	84.36	16.49/ 8.20	112.42/ 101.69	0.33	39.00	20.00		SMCV

Active Strategies	Score 3/31/2019	Score 12/31/2018	Score 9/30/2018	Score 6/30/2018	Score 3/31/2018	Score 12/31/2017	Score 9/30/2017	Score 6/30/2017
Ariel Fund Institutional	8	8	7	8	9	9	9	8
	SMCV	SMCV	SMCV	SMCV	SMCV	SMCV	SMCV	MCV

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### Performance Analysis

as of 3/31/2019



	Qtr	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Ariel Fund Institutional	17.68%	17.68%	1.01%	11.21%	8.20%	18.80%	13.93%
Russell 2500 Value Index	13.12%	13.12%	1.84%	9.85%	6.02%	15.03%	-
Peer Group Performance*	12.94%	12.94%	0.66%	8.55%	5.87%	14.46%	-
Peer Group Rank*	3	3	42	10	10	1	-
Peer Group Size (funds)*	-	-	417	368	318	225	-

\*Morningstar Peer Group: Mid-Cap Value

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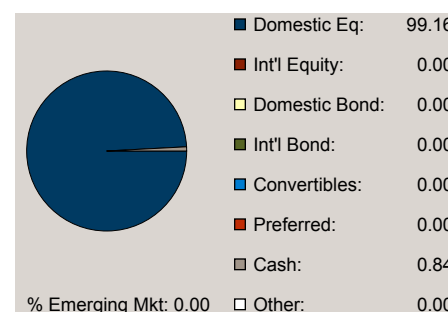
### Sector Allocation

as of 12/31/2018

Comm:	0.00
Utilities:	0.00
Energy:	0.37
Basic Materials:	3.85
Cons Defensive:	5.24
Healthcare:	5.39
Real Estate:	6.23
Technology:	7.99
Financial Services:	21.30
Industrials:	22.91
Cons Cyclical:	26.70

### Asset Allocation (%)

as of 12/31/2018



### Additional Information

Prospectus Net Exp. Ratio:	0.72
Prospectus Gross Exp. Ratio:	0.72
Avg Exp Ratio Morningstar (%):	1.09
12b-1 fees (%):	-
Closed - New Inv:	-
Closed - All Inv:	-
Min Investment:	\$1000000
Waiver Amt:	-
Waiver Exp Date:	-
Strategy Inception:	11/6/1986
Share Class Inception:	12/30/2011

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# Cost Analysis

Plan Sponsors, and those with decision making authority on a plan, have a responsibility to understand the fees paid from plan assets. This responsibility includes confirmation that the fees paid are “reasonable”.

The Benchmarking Report in this Section is provided by an independent organization. The Report compares this plan’s expenses with those of a large number of similar size (assets and participants) plans.

# Total Cost Analysis

Alliance Benefit Group								
Asset Class	Assets (\$)	Assets (%)	Score	Fund Name	Expense (%)	Expense (\$)	Revenue Sharing (%)	Revenue Sharing (\$)
CON	\$17,441	0.02%	-	Schwab Target 2010 Index	0.08%	\$14	0.00%	\$0
MC	\$0	0.00%	-	Schwab Target 2025 Index	0.08%	\$0	0.00%	\$0
MC	\$432,340	0.45%	-	Schwab Target 2020 Index	0.08%	\$346	0.00%	\$0
MOD	\$491,813	0.51%	-	Schwab Target 2030 Index	0.08%	\$393	0.00%	\$0
MOD	\$0	0.00%	-	Schwab Target 2035 Index	0.08%	\$0	0.00%	\$0
MA	\$312,158	0.32%	-	Schwab Target 2040 Index	0.08%	\$250	0.00%	\$0
MA	\$0	0.00%	-	Schwab Target 2045 Index	0.08%	\$0	0.00%	\$0
MA	\$126,922	0.13%	-	Schwab Target 2050 Index	0.08%	\$102	0.00%	\$0
AGG	\$0	0.00%	-	Schwab Target 2060 Index	0.08%	\$0	0.00%	\$0
AGG	\$0	0.00%	-	Schwab Target 2055 Index	0.08%	\$0	0.00%	\$0
MOD	\$986,803	1.02%	10	American Funds American Balanced R6	0.28%	\$2,763	0.00%	\$0
LCV	\$9,464,657	9.79%	10	MFS Value R6	0.48%	\$45,430	0.00%	\$0
LCB	\$4,597,572	4.76%	9	American Funds Fundamental Invs R6	0.30%	\$13,793	0.00%	\$0
LCB	\$458,959	0.48%	7	TIAA-CREF Social Choice Eq Instl	0.17%	\$780	0.00%	\$0
LCB	\$3,119,373	3.23%	10	Vanguard 500 Index Admiral	0.04%	\$1,248	0.00%	\$0
LCG	\$1,741,634	1.80%	6	Calvert Equity I	0.74%	\$12,888	0.00%	\$0
LCG	\$10,927,429	11.30%	8	Franklin Growth R6	0.48%	\$52,452	0.00%	\$0
MCV	\$3,086,529	3.19%	7	PGIM QMA Mid-Cap Value R6	0.73%	\$22,532	0.00%	\$0
MCB	\$315,517	0.33%	9	Parnassus Mid Cap Institutional	0.75%	\$2,366	0.08%	\$252
MCG	\$2,863,695	2.96%	6	JPMorgan Mid Cap Equity I	0.89%	\$25,487	0.23%	\$6,586
SCV	\$1,971,403	2.04%	9	Fidelity Advisor Small Cap Value I	0.91%	\$17,940	0.23%	\$4,534
SCG	\$3,977,304	4.11%	10	Janus Henderson Venture N	0.67%	\$26,648	0.00%	\$0
SMCV	\$281,219	0.29%	8	Ariel Fund Institutional	0.72%	\$2,025	0.08%	\$225
IE	\$11,020,542	11.40%	9	American Funds Europacific Growth R6	0.49%	\$54,001	0.00%	\$0
EME	\$1,386,031	1.43%	10	Oppenheimer Developing Markets I	0.87%	\$12,058	0.00%	\$0
CFI	\$6,796,715	7.03%	10	Baird Aggregate Bond Inst	0.30%	\$20,390	0.03%	\$2,039

# Total Cost Analysis

Alliance Benefit Group								
Asset Class	Assets (\$)	Assets (%)	Score	Fund Name	Expense (%)	Expense (\$)	Revenue Sharing (%)	Revenue Sharing (\$)
UGT	\$3,868,375	4.00%	7	BlackRock Inflation Protected Bond K	0.34%	\$13,152	0.00%	\$0
HY	\$999,274	1.03%	9	Eaton Vance High Income Opportunities I	0.62%	\$6,196	0.13%	\$1,299
GFI	\$2,619,829	2.71%	8	Templeton Global Bond R6	0.56%	\$14,671	0.00%	\$0
SV	\$20,740,786	21.45%	-	METLIFE STABLE VALUE CLASS 3	0.00%	\$0	0.00%	\$0
MM	\$113	0.00%	-	SCHWAB MONEY MARKET	0.00%	\$0	0.00%	\$0
REI	\$2,343,112	2.42%	10	Cohen & Steers Instl Realty Shares	0.75%	\$17,573	0.08%	\$1,874
CBB	\$1,746,869	1.81%	10	PIMCO Commodity Real Ret Strat Instl	1.24%	\$21,661	0.00%	\$0
Totals	\$96,694,413	100.00%			%	\$		
Weighted Investment Expense					0.40%	\$387,159	0.02%	\$16,811
Asset-Based Fees					0.30%	\$290,083		
Billed Fees					0.00%	\$0		
<b>TOTALS</b>					<b>0.70%</b>	<b>\$677,242</b>		

Information is for illustrative purposes only and cannot be guaranteed now or in the future.

## Fee Detail- City of Madison

### Administration Fees

Asset Based Admin Fee	0.10%	x	\$96,694,413	\$96,694
Annual Advisor Fee	0.05%	x	\$96,694,413	\$48,347
Custody				<u>Included</u>

<b>Total Administration Fees</b>				\$145,042	0.15%
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### Advisor Fees

Annual Participant Education Fee	0.15%	x	\$96,694,413	<u>\$145,042</u>	0.15%
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<b>Total Annual Fee</b>				\$290,083	0.30%
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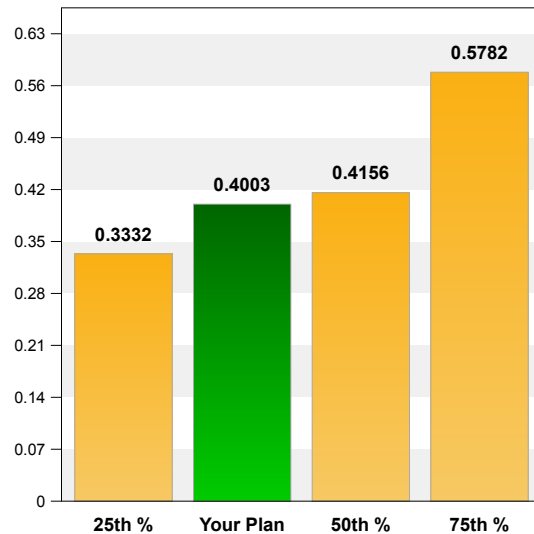
# PLAN COMPARISON | AXIS UNIVERSE OF AVERAGES REPORT

**Your Plan:** City of Madison 457 Deferred Compensation Plan  
**Plan Asset Value:** \$96,694,413  
**Number of Participants:** 1,096

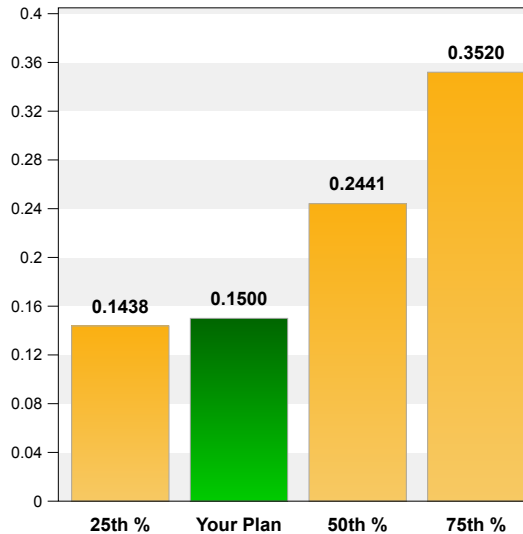
**AXIS Universe Band:** 344 Plans  
**Plan Asset Value:** \$50 Million to \$100 Million  
**Number of Participants:** 1,000 - 5,000

	Plan Cost (Dollars)	Plan Cost (%)	AXIS Universe (Dollars)	AXIS Universe (%)
Fund Expense Fees	\$387,068	0.4003	\$401,862	0.4156
Recordkeeping and Administration Fees	\$145,042	0.1500	\$236,031	0.2441
Advisor Fees	\$145,042	0.1500	\$135,082	0.1397
<b>Total Fees</b>	<b>\$677,152</b>	<b>0.7003</b>	<b>\$772,975</b>	<b>0.7994</b>
Average Fee per Participant	\$618	0.0006	\$705	0.0007

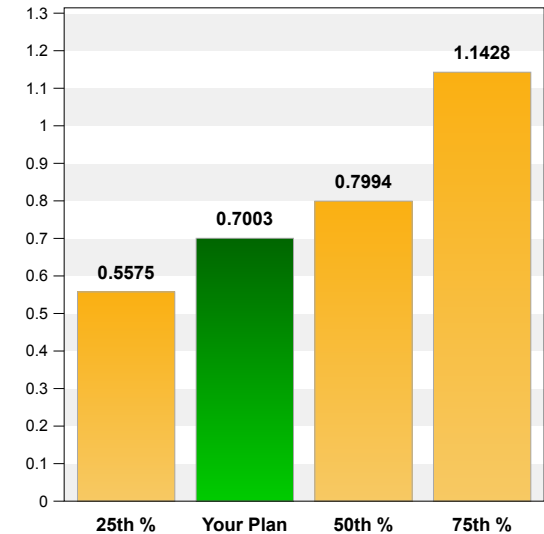
Fund Expense Fees



Recordkeeping and Administration Fees



Total Fees\*



\* Total Fees are calculated using Fund Expense, Recordkeeping and Administration, and Advisor Fees.

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# Committee Topics

As time permits, these items may be topics of discussion during the meeting.



<b>January</b>	<b>Monday</b>	1/7 9am - 10:30am 1/7 11am-12:30 1/7 1pm - 2:30pm	<b>Station 1</b> <b>Station 8</b> <b>Station 5</b>	316 W Dayton St. 3945 Lien Rd. Cottage Grove Rd.
	<b>Wednesday</b>	1/9 10am - 12pm 1/9 12pm - 3pm 1/9	<b>MPD Midtown</b> <b>HR</b> <b>COM Onsites</b>	4020 Mineral Point Rd. MMB Room 202 CCB-MMB Room
	<b>Thursday</b>	1/24 9am - 10:30am 1/24 11am - 12:30pm 1/24 1pm - 2:30pm	<b>Station 2</b> <b>Station 14</b> <b>MPD South</b>	421 Grand Canyon Dr. 314 W Dayton St. 825 Hughes Pl
	<b>Wednesday</b>	1/30 8:30am - 10:30am 1/30 10:30am-11:30am 1/30 12pm-1pm 1/30 1:30 - 2:30	<b>MPD West</b> <b>Station 7</b> <b>Station 10</b> <b>Traffic Engineering</b>	1701 McKenna Blvd 1810 McKenna Blvd 1517 Troy Dr. 1120 Sayle St.
<b>February</b>	<b>Wednesday</b>	2/6 8:30am - 11am 2/6 12pm - 3pm 2/6 11:30am - 1pm 2/6 1:30 pm-3pm	<b>Metro</b> <b>HR</b> <b>Station 14</b> <b>Streets West</b>	1101 E Washington MMB Room 202 314 W Dayton St. 1501 W Badger Rd.
	<b>Wednesday</b>	2/13	<b>COM Onsites</b>	CCB-MMB Room
	<b>Thursday</b>	2/14 9am-10:30am 2/14 11am-12:30pm 2/14 1pm - 2:30pm	<b>Station 2</b> <b>Station 9</b> <b>Station 6</b>	421 Grand Canyon Dr. 201 N Midvale Blvd 825 W Badger
	<b>Friday</b>	2/22 9am-11am 2/22 11:30am-1pm 2/22 1:30pm-3pm	<b>MPD East</b> <b>Station 5</b> <b>Station 8</b>	809 S Thompson Dr. 4418 Cottage Grove Rd. 3945 Lien Rd.
	<b>Wednesday</b>	2/27 9:30am - 10:30am 2/27 11am-12pm 2/27 12:30pm - 2pm 2/27 2:30pm-4pm	<b>Station 4</b> <b>Station 3</b> <b>MPD Central</b> <b>Water Utility</b>	1437 Monroe St. 1217 Williamson St. 211 S Carroll St. Paterson

<b>March</b>	<b>Wednesday</b>	3/6 3pm-4:30pm	<b>Construction Engineering</b>	1602 Emil St.
	<b>Thursday</b>	3/7 8am-10am	<b>Water Utility (Olin)</b>	119 E Olin
		3/7 10:30am-12pm	<b>Station 1</b>	316 W Dayton
		3/7 12pm - 3pm	<b>HR</b>	MMB Room 162
		3/7 12pm - 1pm	<b>Fire Admin</b>	W Dayton
		3/7 1:30pm - 3pm	<b>Streets East</b>	4602 Sycamore St.
	<b>Wednesday</b>	3/13 9am-10:30am	<b>Station 12</b>	400 S Point Rd.
		3/13 11am-12:30pm	<b>Station 7</b>	1810 McKenna Blvd
		3/13 1:30pm-3:30pm	<b>Parks West</b>	1402 Wingra Creek
	<b>Wednesday</b>	3/13	<b>COM Onsites</b>	CCM-MMB Room
	<b>Tuesday</b>	3/19	<b>Retirement Seminar - Around the Corner</b>	City Muni Building
	<b>Friday</b>	3/29 9am - 10:30am	<b>Station 14</b>	314 W Dayton St.
		3/29 11am-12:30pm	<b>Station 8</b>	3945 Lien Rd.
		3/29 1pm - 2:30pm	<b>Station 10</b>	1517 Troy Dr.
<b>April</b>	<b>Wednesday</b>	4/3 10am - 11:30am	<b>Station 2</b>	421 Grand Canyon Dr.
		4/3 12pm-1:30pm	<b>Station 6</b>	825 W Badger
		4/3 2pm - 4pm	<b>Monona Terrace</b>	1 John Nolen Dr.
	<b>Wednesday</b>	4/10 12pm - 3pm	<b>HR</b>	MMB Room 202
		4/10	<b>COM Onsites</b>	CCB-MMB Room
	<b>Thursday</b>	4/11 10am-11:30am	<b>Station 6</b>	825 W Badger
		4/11 12pm-2pm	<b>MPD South</b>	825 Hughes Pl
	<b>Thursday</b>	4/18 9:30am-11:30am	<b>Fleet Services</b>	200 N First St.
		4/18 1pm - 3pm	<b>Central Library</b>	201 W Mifflin St.
		4/18 3:30p - 4:30p	<b>Olbrich</b>	Atwood Ave.
	<b>Tuesday</b>	4/23 8:30am-10:30am	<b>MPD Central</b>	211 S Carroll St.
		4/23 11am-12:30pm	<b>Station 2</b>	421 Grand Canyon Dr
		4/23 1pm-3pm	<b>Streets West</b>	1501 W Badger Rd.

<b>May</b>	<b>Wednesday</b>	5/1 9am - 10:30am 5/1 11am-12:30pm 5/1 1pm-2:30pm	<b>Metro</b> <b>Station 8</b> <b>Station 10</b>	1101 E Washington 3945 Lien Rd. 1517 Troy Dr.
	<b>Monday</b>	5/6 9am - 10:30am 5/6 11am-12:30pm 5/6 1pm-2:30pm	<b>Station 4</b> <b>Station 11</b> <b>Station 13</b>	1437 Monroe St. 4011 Morgan Way 6350 Town Center Dr.
	<b>Wednesday</b>	5/8 12 pm - 3pm 5/8	<b>HR</b> <b>COM Onsites</b>	MMB Room 202 CCB-MMB Room
	<b>Wednesday</b>	5/15 8:30am-10:30am 5/15 11am - 12:30 5/15 1pm - 3pm	<b>MPD North</b> <b>Station 10</b> <b>Streets East</b>	2033 Londonderry Dr. 1517 Troy Dr. 4602 Sycamore St.
	<b>Thursday</b>	5/23 9am-10:30am 5/23 11am-12:30pm 5/23 1pm-3pm	<b>Station 1</b> <b>Station 12</b> <b>MPD West</b>	316 W Dayton St. 400 S. Point Rd. 1710 McKenna Blvd
	<b>Wednesday</b>	5/29 9am-10:30pm 5/29 11am - 12:30pm 5/29 1pm-3pm	<b>Fleet Services</b> <b>Station 5</b> <b>MPD East</b>	200 N First St. 4418 Cottage Grove Rd. 809 S Thompson Dr.
<b>June</b>	<b>Wednesday</b>	6/5 8am-9:30am 6/5 10am - 11:30am 6/5 12pm - 1:30pm 6/5 2pm - 3:30pm	<b>Water Utility (Olin)</b> <b>Station 3</b> <b>Station 5</b> <b>Station 10</b>	119 E Olin 1217 Williamson St. 4418 Cottage Grove Rd 1517 Troy Dr.
	<b>Wednesday</b>	6/12 12pm - 3pm 6/12	<b>HR</b> <b>COM Onsites</b>	MMB Room 202 CCB -MMB Room
	<b>Thursday</b>	6/13 9am - 10:30am 6/13 11am - 12:30pm 6/13 2:30pm-4:30pm	<b>Station 13</b> <b>Station 5</b> <b>Water Utility</b>	6350 Town Center Dr. 4418 Cottage Grove Rd. 921 E Main Street
	<b>Monday</b>	6/17 9am-10:30am 6/17 11am - 12pm 6/17 12:30pm-1:30pm	<b>Station 1</b> <b>Station 2</b> <b>Station 7</b>	316 W Dayton St. 421 Grand Canyon Dr. 1701 McKenna Blvd
	<b>Friday</b>	6/28 8:30am - 10:30 6/28 11am - 12:30pm 6/28 1pm - 3:30pm	<b>Metro</b> <b>Station 8</b> <b>Warner Park</b>	1101 E Washington 3945 Lien Rd. 1625 Northport Dr.

<b>July</b>	<b>Monday</b>	7/1 9:30am - 11am 7/1 11:30am - 1pm 7/1 1:30pm-3pm	<b>Station 10</b> <b>Station 8</b> <b>Traffic Engineering</b>	1517 Troy Dr. 3945 Lien Rd. 1120 Sayle St.
	<b>Wednesday</b>	7/10 9am - 10:30am 7/10 11am-12:30pm 7/10 12pm - 3pm 7/10 3pm-4:30pm 7/10	<b>Station 12</b> <b>Station 9</b> <b>HR</b> <b>Construction Engineering</b> <b>COM Onsites</b>	400 S Point Rd. 201 N Midvale Blvd MMB Room 202 1602 Emil St. CCB-MMB Room
	<b>Thursday</b>	7/18 9am - 10:30am 7/18 11am-12:30pm 7/18 1pm-3pm	<b>Station 9</b> <b>Station 4</b> <b>Streets East</b>	201 Midvale Blvd 1437 Monroe St. 4602 Sycamore St.
	<b>Wednesday</b>	7/24 9am-10:30am 7/24 11am - 12:30pm 7/24 1:30pm - 3:30pm	<b>Station 3</b> <b>Station 9</b> <b>MPD Midtown</b>	1217 Williamson St. 201 Midvale Blvd 4020 Mineral Point Rd.
	<b>Monday</b>	7/29 8:30am-9:30am 7/29 10:30am-12:30pm 7/29 1pm-3pm	<b>Fleet Services</b> <b>MPD East</b> <b>MPD North</b>	200 N First St. 809 S Thompson Dr. 2033 Londonderry Dr.
	<b>Wednesday</b>	7/31	<b>Retirement Seminar - Retirement Planning</b>	City Muni Building
<b>August</b>	<b>Wednesday</b>	8/7 8:30am - 10:30am 8/7 11am - 1pm 8/7 1:30pm - 3:30pm	<b>MPD Central</b> <b>Monona Terrace</b> <b>Central Library</b>	211 N Carroll St. 1 John Nolen Dr. 201 W Mifflin St.
	<b>Tuesday</b>	8/13 9am - 10:30am 8/13 11am - 12:30pm 8/13 1pm - 2:30pm	<b>Station 5</b> <b>Station 2</b> <b>Station 7</b>	4418 Cottage Grove Rd. 421 Grand Canyon 1810 McKenna Blvd
	<b>Wednesday</b>	8/14 12pm - 3pm 8/14	<b>HR</b> <b>COM Onsites</b>	MMB Room 202 CCB-MMB Room
	<b>Thursday</b>	8/22 9am-11pm 8/22 11:30am-1pm 8/22 1:30pm-3:30pm	<b>MPD South</b> <b>Station 6</b> <b>Parks West</b>	825 Hughes Pl 825 W Badger 1402 Wingra Creek
	<b>Friday</b>	8/30 9am - 10:30am 8/30 11am-12:30pm 8/30 1pm - 2:30	<b>Station 6</b> <b>Station 5</b> <b>Station 8</b>	825 W Badger Rd 4418 Cottage Grove Rd. 3945 Lien Rd.



<b>September</b>	<b>Thursday</b>	9/5 9am - 10:30am 9/5 11am - 12:30pm 9/5 1pm - 2:30pm	<b>Station 4</b> <b>Station 1</b> <b>Station 8</b>	1437 Monroe St 316 W Dayton St. 3945 Lien Rd.
	<b>Tuesday</b>	9/10 9:30am-11pm 9/10 11:30am - 1pm 9/10 1:30pm-3pm	<b>Station 7</b> <b>Station 2</b> <b>Streets West</b>	1810 McKenna Blvd 421 Grand Canyon 1501 W Badger Rd.
	<b>Wednesday</b>	9/11 12pm -3pm 9/11	<b>HR</b> <b>COM Onsites</b>	MMB Room 202 CCB-MMB Room
	<b>Thursday</b>	9/19 8am-10:30am 9/19 11am-12:30pm 9/19 12pm-2:30pm 9/19 2:30pm - 4pm	<b>Water Utility (Olin)</b> <b>Station 3</b> <b>Station 1</b> <b>Fire Admin</b>	119 E Olin 1217 Williamson St. 316 W Dayton W Dayton
	<b>Tuesday</b>	9/24 9am - 10:30am 9/24 11am - 12:30pm 9/24 1pm - 2:30pm 9/24 2:45pm-4:30pm	<b>Station 4</b> <b>Station 1</b> <b>Station 3</b> <b>Water Utility</b>	1437 Monroe St. 316 W Dayton St. 1217 Williamson St. 921 E Main Street
<b>October</b>	<b>Wednesday</b>	10/2 9am - 10:30am 10/2 11am - 12:30pm 10/2 1pm - 2:30pm 10/2 2:45pm - 4pm	<b>Station 5</b> <b>Station 1</b> <b>Station 6</b> <b>Construction Engineering</b>	4418 Cottage Grove Rd. 316 W Dayton 825 W Badger Rd 1602 Emil St.
	<b>Wednesday</b>	10/9 9:30am-11am 10/9 11:30am - 1pm 10/9 12pm - 3pm 10/9 1:30pm - 3pm 10/9	<b>Station 4</b> <b>Station 3</b> <b>HR</b> <b>Traffic Engineering</b> <b>COM Onsites</b>	1437 Monroe St. 1217 Williamson St. MMB Room 202 1120 Sayle St. CCB-MMB Room
	<b>Thursday</b>	10/17 9am - 10:30am 10/17 11am - 12:30pm 10/17 1pm - 2:30pm	<b>Station 5</b> <b>Station 6</b> <b>Station 4</b>	4418 Cottage Grove Rd. 825 W Badger Rd. 1437 Monroe St.
	<b>Wednesday</b>	10/23 9:30am - 11am 10/23 11:30am - 1pm 10/23 1:30pm - 3pm	<b>Station 11</b> <b>Station 13</b> <b>Station 8</b>	4011 Morgan Way 6350 Town Center Dr. 3945 Lien Rd.
	<b>Monday</b>	10/28 9:30am - 10am 10/28 11:30am-1pm 10/28 1:30pm - 3:30pm	<b>Station 2</b> <b>Station 7</b> <b>MPD West</b>	421 Grand Canyon Dr. 1810 McKenna Blvd 1710 McKenna Blvd

<b>November</b>	<b>Wednesday</b>	11/6 9am - 10:30am	<b>Station 8</b>	3945 Lien Rd.
		11/6 11am - 12:30pm	<b>Station 3</b>	1217 Williamson St.
		11/6 1pm - 2:30pm	<b>Station 1</b>	316 W Dayton St.
	<b>Wednesday</b>	11/13 8:30am-10:30am	<b>MPD Midtown</b>	4020 Mineral Point Rd.
		11/13 11am-12:30pm	<b>Station 10</b>	Troy Dr.
		11/13 12pm - 3pm	<b>HR</b>	MMB Room 162
		11/13 1pm - 2:30pm	<b>Station 11</b>	4011 Morgan Way
		11/13	<b>COM Onsites</b>	CCB-MMB Room
	<b>Wednesday</b>	11/20 8:30am-10am	<b>MPD East</b>	809 S Thompson Dr.
		11/20 10:30am - 12:30pm	<b>MPD Central</b>	211 S Carroll
		11/20 1pm - 2:30pm	<b>Station 4</b>	1437 Monroe St.
	<b>Wednesday</b>	11/27 9am-11am	<b>MPD North</b>	2033 Londonderry Dr.
		11/27 11am-12:30pm	<b>Station 10</b>	Troy Dr.
		11/27 1pm - 2:30pm	<b>Station 8</b>	3945 Lien Rd.
		11/27 2:45pm-4:30pm	<b>Water Utility</b>	921 E Main Street
<b>December</b>	<b>Wednesday</b>	12/4 9am - 11am	<b>Fleet Services</b>	200 N First St.
		12/4 11:30am - 1pm	<b>Station 3</b>	1217 Williamson St.
		12/4 1:30pm - 4pm	<b>Metro</b>	1101 E Washington Ave
	<b>Wednesday</b>	12/11 9am - 10:30am	<b>Station 9</b>	201 Midvale Blvd
		12/11 11am - 12:30pm	<b>Station 1</b>	316 W Dayton
		12/11 12pm - 3pm	<b>HR</b>	MMB Room 162
		12/11 1pm-3pm	<b>Streets East</b>	4602 Sycamore St.
		12/11	<b>COM Onsites</b>	CCB-MMB Room
	<b>Thursday</b>	12/19 8:30am - 10:30am	<b>Monona Terrace</b>	1 John Nolen Dr.
		12/19 11am - 12:30pm	<b>Station 9</b>	201 Midvale Blvd
		12/5 1:30pm-3:30pm	<b>Parks West</b>	1402 Wingra Creek

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# Appendix

The Appendix includes background data and in depth information supporting the report and fund considerations presented.

# Scorecard System Methodology™

The **Scorecard System Methodology** incorporates both quantitative and qualitative factors in evaluating fund managers and their investment strategies. The **Scorecard System** is built around pass/fail criteria, on a scale of 0 to 10 (with 10 being the best) and has the ability to measure active, passive and asset allocation investing strategies. Active and asset allocation strategies are evaluated over a five-year time period, and passive strategies are evaluated over a three-year time period.

Eighty percent of the fund's score is quantitative (made up of eight unique factors), incorporating modern portfolio theory statistics, quadratic optimization analysis, and peer group rankings (among a few of the quantitative factors). The other 20 percent of the score is qualitative, taking into account things such as manager tenure, the fund's expense ratio relative to the average fund expense ratio in that asset class category, and the fund's strength of statistics (statistical significance). Other criteria that may be considered in the qualitative score includes the viability of the firm managing the assets, management or personnel issues at the firm, and/or whether there has been a change in direction of the fund's stated investment strategy. The following pages detail the specific factors for each type of investing strategies.

Combined, these factors are a way of measuring the relative performance, characteristics, behavior and overall appropriateness of a fund for inclusion into a plan as an investment option. General fund guidelines are shown in the "Scorecard Point System" table below. The Scorecard Point System is meant to be used in conjunction with our sample Investment Policy Statement, in order to help identify what strategies need to be discussed as a "watch-list" or removal candidate; what strategies continue to meet some minimum standards and continue to be appropriate; and/or identify new top-ranked strategies for inclusion into a plan.

<i><b>Scorecard Point System</b></i>	
<b>Good:</b>	<b>9-10 Points</b>
<b>Acceptable:</b>	<b>7-8 Points</b>
<b>Watch:</b>	<b>5-6 Points</b>
<b>Poor:</b>	<b>0-4 Points</b>



# Scorecard System Methodology™

## Target Date Fund Strategies

**Target Date Fund strategies** are investment strategies that invest in a broad array of asset classes that may include U.S. equity, international equity, emerging markets, real estate, fixed income, high yield bonds and cash (to name a few asset classes). These strategies are managed to a retirement date or life expectancy date, typically growing more conservative as that date is approached). For this type of investment strategy, the **Scorecard System** is focused on how well these managers can add value from asset allocation. Asset allocation is measured using our **Asset allocation strategies methodology** and manager selection is measured using either our **Active and/or Passive strategies methodologies**, depending on the underlying fund options utilized within the Target Date Fund strategy.

*Risk-based strategies* follow the same evaluation criteria and are evaluated on both their asset allocation and security selection.

Weightings	Target Date Fund Strategies	Maximum Points
<b>Asset Allocation Score (Average) 50%</b>	<p>The individual funds in this Score average require five years of time history to be included. See Asset Allocation strategies methodology for a detailed breakdown of the Scoring criteria. Funds without the required time history are not included in the Score average.</p> <p>The Funds included in this average are from the Conservative, Moderate Conservative, Moderate, Moderate Aggressive and Aggressive categories, where Funds (also referred to as “vintages”) are individually Scored according to their standard deviation or risk bucket.</p>	<b>5</b>
<b>Selection Score (Average) 50%</b>	<b>Active strategies:</b> The individual active funds in this Score average require five years of time history to be Scored. See Active strategies methodology for a detailed breakdown of the Scoring criteria. Funds without the required time history are not included in the Score average.	<b>5</b>
	<b>Passive strategies:</b> The individual passive funds in this Score average require three years of time history to be Scored. See Passive strategies methodology for a detailed breakdown of the Scoring criteria. Funds without the required time history are not included in the Score average.	
	<b>Total</b>	<b>10</b>

# Scorecard System Methodology™

## Asset Allocation Strategies

**Asset allocation strategies** are investment strategies that invest in a broad array of asset classes that may include U.S. equity, international equity, emerging markets, real estate, fixed income, high yield bonds and cash (to name a few asset classes). These strategies are typically structured in either a risk-based format (the strategies are managed to a level of risk, e.g., conservative or aggressive) or, in an age-based format (these strategies are managed to a retirement date or life expectancy date, typically growing more conservative as that date is approached). For this type of investment strategy, the **Scorecard System** is focused on how well these managers can add value, with asset allocation being the primary driver of investment returns and the resulting Score. *Multisector Bond (MSB) asset class* follows the same evaluation criteria with some slightly different tolerance levels where noted. These managers are also evaluated on both their asset allocation and security selection.

Weightings	Asset Allocation Strategies	Maximum Points
<b>Style Factors 30%</b>	<b>Risk Level:</b> The fund's standard deviation is measured against the category it is being analyzed in. The fund passes if it falls within the range for that category.	1
	<b>Style Diversity:</b> Fund passes if it reflects appropriate style diversity (returns-based) among the four major asset classes (Cash, Fixed Income, U.S. & International Equity) for the given category. <i>MSB</i> funds pass if reflect some level of diversity among fixed income asset classes (Cash, U.S. Fixed Income, Non-U.S. Fixed Income and High Yield/Emerging Markets).	1
	<b>R-Squared:</b> Measures the percentage of a fund's returns that are explained by the benchmark. Fund passes with an R-squared greater than 90 percent. This statistic measures whether the benchmark used in the analysis is appropriate.	1
<b>Risk/Return Factors 30%</b>	<b>Risk/Return:</b> Fund passes if its risk is less than the benchmark or its return is greater than the benchmark. Favorable risk/return characteristics are desired.	1
	<b>Up/Down Capture Analysis:</b> Measures the behavior of a fund in up and down markets. Fund passes with an up capture greater than its down capture. This analysis measures the relative value by the manager in up and down markets.	1
	<b>Information Ratio:</b> Measures a fund's relative risk and return. Fund passes if ratio is greater than 0. This statistic measures the value added above the benchmark, adjusted for risk.	1
<b>Peer Group Rankings 20%</b>	<b>Returns Peer Group Ranking:</b> Fund passes if its median rank is above the 50 <sup>th</sup> percentile.	1
	<b>Sharpe Ratio Peer Group Ranking:</b> Fund passes if its median rank is above the 50 <sup>th</sup> percentile. This ranking ranks risk-adjusted excess return.	1
<b>Qualitative Factors 20%</b>	Two points may be awarded based on qualitative characteristics of the fund. Primary considerations are given to manager tenure, fund expenses and strength of statistics, however, other significant factors may be considered. It is important to take into account nonquantitative factors, which may impact future performance.	2
<b>Total</b>		<b>10</b>

# Scorecard System Methodology™

## Active Strategies

**Active strategies** are investment strategies where the fund manager is trying to add value and outperform the market averages (for that style of investing). Typically, these investment strategies have higher associated fees due to the active involvement in the portfolio management process by the fund manager(s). For this type of investment strategy, the **Scorecard System** is trying to identify those managers who can add value on a consistent basis within their own style of investing.

Weightings	Active Strategies	Maximum Points
<b>Style Factors 30%</b>	<b>Style Analysis:</b> Returns-based analysis to determine the style characteristics of a fund over a period of time. Fund passes if it reflects the appropriate style characteristics. Style analysis helps ensure proper diversification in the Plan.	1
	<b>Style Drift:</b> Returns-based analysis to determine the behavior of the fund/manager over multiple (rolling) time periods. Fund passes if the fund exhibits a consistent style pattern. Style consistency is desired so that funds can be effectively monitored within their designated asset class.	1
	<b>R-Squared:</b> Measures the percentage of a fund's returns that are explained by the benchmark. Fund passes with an R-squared greater than 80 percent. This statistic measures whether the benchmark used in the analysis is appropriate.	1
<b>Risk/Return Factors 30%</b>	<b>Risk/Return:</b> Fund passes if its risk is less than the benchmark or its return is greater than the benchmark. Favorable risk/return characteristics are desired.	1
	<b>Up/Down Capture Analysis:</b> Measures the behavior of a fund in up and down markets. Fund passes with an up capture greater than its down capture. This analysis measures the relative value by the manager in up and down markets.	1
	<b>Information Ratio:</b> Measures a fund's relative risk and return. Fund passes if ratio is greater than 0. This statistic measures the value added above the benchmark, adjusted for risk.	1
<b>Peer Group Rankings 20%</b>	<b>Returns Peer Group Ranking:</b> Fund passes if its median rank is above the 50 <sup>th</sup> percentile.	1
	<b>Information Ratio Peer Group Ranking:</b> Fund passes if its median rank is above the 50 <sup>th</sup> percentile. This ranking ranks risk-adjusted excess return.	1
<b>Qualitative Factors 20%</b>	Two points may be awarded based on qualitative characteristics of the fund. Primary considerations are given to manager tenure, fund expenses and strength of statistics, however, other significant factors may be considered. It is important to take into account nonquantitative factors, which may impact future performance.	2
<b>Total</b>		<b>10</b>

# Scorecard System Methodology™

## Passive Strategies

**Passive strategies** are investment strategies where the fund manager is trying to track or replicate some area of the market. These types of strategies may be broad-based in nature (e.g., the fund manager is trying to track/replicate the entire U.S. equity market like the S&P 500) or may be more specific to a particular area of the market (e.g., the fund manager may be trying to track/replicate the technology sector). These investment strategies typically have lower fees than active investment strategies due to their passive nature of investing and are commonly referred to as index funds. For this type of investment strategy, the **Scorecard System** is focused on how well these managers track and/or replicate a particular area of the market with an emphasis on how they compare against their peers.

Weightings	Passive Strategies	Maximum Points
<b>Style &amp; Tracking Factors</b> 40%	<b>Style Analysis:</b> Returns-based analysis to determine the style characteristics of a fund over a period of time. Fund passes if it reflects the appropriate style characteristics. Style analysis helps ensure proper diversification in the Plan.	1
	<b>Style Drift:</b> Returns-based analysis to determine the behavior of the fund/manager over multiple (rolling) time periods. Fund passes if the fund exhibits a consistent style pattern. Style consistency is desired so that funds can be effectively monitored within their designated asset class.	1
	<b>R-Squared:</b> Measures the percentage of a fund's returns that are explained by the benchmark. Fund passes with an R-squared greater than 95 percent. This statistic measures whether the benchmark used in the analysis is appropriate.	1
	<b>Tracking Error:</b> Measures the percentage of a fund's excess return volatility relative to the benchmark. Fund passes with a tracking error less than 4. This statistic measures how well the fund tracks the benchmark.	1
<b>Peer Group Rankings</b> 40%	<b>Tracking Error Peer Group Ranking:</b> Fund passes if its median rank is above the 75 <sup>th</sup> percentile.	1
	<b>Expense Ratio Peer Group Ranking:</b> Fund passes if its median rank is above the 75 <sup>th</sup> percentile.	1
	<b>Returns Peer Group Ranking:</b> Fund passes if its median rank is above the 75 <sup>th</sup> percentile.	1
	<b>Sharpe Ratio Peer Group Ranking:</b> Fund passes if its median rank is above the 75 <sup>th</sup> percentile.	1
<b>Qualitative Factors</b> 20%	Two points may be awarded based on qualitative characteristics of the fund. Primary considerations are given to fund expenses and strength of statistics, however, other significant factors may be considered. It is important to take into account nonquantitative factors, which may impact future performance.	2
Total		10

# Manager Research Methodology

## Beyond the Scorecard

The **Scorecard System**™ uses an institutional approach which is comprehensive, independent, and utilizes a process and methodology that strives to create successful outcomes for plan sponsors and participants. The **Scorecard** helps direct the additional research the Investment team conducts with fund managers throughout the year. Three of the primary factors that go into the fund manager research are people, process and philosophy.

### PEOPLE

#### Key Factors:

- Fund manager and team experience
- Deep institutional expertise
- Organizational structure
- Ability to drive the process and performance

### PROCESS

#### Key Factors:

- Clearly defined
- Consistent application
- Sound and established
- Clearly communicated
- Successfully executed process

### PHILOSOPHY

#### Key Factors:

- Research and ideas must be coherent and persuasive
- Strong rationale
- Logical and compelling
- Focus on identifying skillful managers

# Scorecard System Disclosures

Investment objectives and strategies vary among fund, and may not be similar for funds included in the same asset class.

All definitions are typical category representations. The specific share classes or accounts identified above may not be available or chosen by the Plan. Share class and account availability is unique to the client's specific circumstances. There may be multiple share classes or accounts available to the client from which to choose. All recommendations are subject to vendor/provider approval before implementation into the Plan. The performance data quoted may not reflect the deduction of additional fees, if applicable. If reflected, additional fees would reduce the performance quoted.

Performance data is subject to change without prior notice.

Performance of indexes reflects the unmanaged result for the market segment the selected stocks represent. Indexes are unmanaged and not available for direct investment.

The information used in the analysis has been taken from sources deemed to be reliable, including, third-party providers such as *Markov Processes International*, *Morningstar*, firms who manage the investments, and/or the retirement plan providers who offer the funds.

Every reasonable effort has been made to ensure completeness and accuracy; however, the final accuracy of the numbers and information is the responsibility of the investment manager(s) of each fund and/or the retirement plan providers offering these funds. Discrepancies between the figures reported in this analysis, and those reported by the actual investment managers and/or retirement plan providers, may be caused by a variety of factors, including: Inaccurate reporting by the manager/provider; Changes in reporting by the manager/provider from the time this report was prepared to a subsequent retro-active audit and corrected reporting; Differences in fees and share-classes impacting net investment return; and, Scriveners error by your advisor in preparing this report.

The enclosed Investment Due Diligence report, including the **Scorecard System**, is intended for plan sponsor and/or institutional use only. The materials are not intended for participant use.

The purpose of this report is to assist fiduciaries in selecting and monitoring investment options. A fund's score is meant to be used by the Plan sponsor and/or fiduciaries as a tool for selecting the most appropriate fund.

Fund scores will change as the performance of the funds change and as certain factors measured in the qualitative category change (e.g., manager tenure). Fund scores are not expected to change dramatically from each measured period, however, there is no guarantee this will be the case. Scores will change depending on the changes in the underlying pre-specified Scorecard™ factors.

Neither past performance nor statistics calculated using past performance are guarantees of a fund's future performance. Likewise, a fund's score using the **Scorecard System™** does not guarantee the future performance or style consistency of a fund.

This report was prepared with the belief that this information is relevant to the Plan sponsor as the Plan sponsor makes investment selections.

Fund selection is at the discretion of the investment fiduciaries, which are either the Plan sponsor or the Committee appointed to perform that function.

Cash Equivalents (e.g., money market fund) and some specialty funds are not scored by the **Scorecard System**.

The enclosed Investment Due Diligence report and Scorecard™ is not an offer to sell mutual funds. An offer to sell may be made only after the client has received and read the appropriate prospectus.

For the most current month-end performance, please contact your advisor.

The Strategy Review notes section is for informational purposes only. The views expressed here are those of your advisor and do not constitute an offer to sell an investment. An offer to sell may be made only after the client has received and read the appropriate prospectus.

**Carefully consider the investment objectives, risk factors and charges and expenses of the investment company before investing. This and other information can be found in the fund's prospectus, which may be obtained by contacting your Investment Advisor/Consultant or Vendor/Provider. Read the prospectus carefully before investing.**

**For a copy of the most recent prospectus, please contact your Investment Advisor/Consultant or Vendor/Provider.**

ACR#305988 02/19



# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Fund Performance and Benchmarks

Fund Name	Ticker	3 Month Total	% Rank	YTD	% Rank	1 Year Total	% Rank	3 Year Annual	% Rank	5 Year Annual	% Rank	10 Year Annual	% Rank
							✓		✓		✓		
<b>LARGE VALUE</b>													1,256 funds in category
MFS Value Fund (R6)	91 ■ MEIKX	12.82%	13%	12.82%	13%	4.94%	40%	10.27%	46%	8.31%	22%	13.90%	38%
Category Average		11.30%	--	11.30%	--	4.19%	--	9.98%	--	7.11%	--	13.56%	--
Russell 1000 Value Index		11.93%	--	11.93%	--	5.67%	--	10.45%	--	7.72%	--	14.52%	--
<b>LARGE BLEND</b>													1,481 funds in category
American Funds Fundamental Investors (R6)	93 ■ RFNGX	12.04%	77%	12.04%	77%	5.43%	69%	13.39%	18%	10.58%	16%	15.31%	32%
TIAA-CREF Social Choice Equity Fund (I)	89 ■ TISCX	13.95%	22%	13.95%	22%	7.87%	46%	13.27%	22%	9.52%	43%	15.43%	27%
Vanguard 500 Index Fund (Adm)	91 ■ VFIAX	13.65%	28%	13.65%	28%	9.46%	18%	13.47%	16%	10.87%	8%	15.90%	13%
Category Average		12.93%	--	12.93%	--	6.72%	--	11.81%	--	8.90%	--	14.54%	--
Russell 1000 Index		14.00%	--	14.00%	--	9.30%	--	13.52%	--	10.63%	--	16.05%	--
<b>LARGE GROWTH</b>													1,430 funds in category
Calvert Equity Fund (I)	69 ■ CEYIX	17.20%	27%	17.20%	27%	20.14%	4%	16.84%	33%	13.22%	23%	16.76%	32%
Franklin Growth Fund (R6)	87 ■ FIFRX	15.31%	63%	15.31%	63%	9.62%	60%	15.60%	48%	12.31%	41%	16.46%	39%
Category Average		15.99%	--	15.99%	--	10.84%	--	15.55%	--	11.40%	--	16.00%	--
Russell 1000 Growth Index		16.10%	--	16.10%	--	12.75%	--	16.53%	--	13.50%	--	17.52%	--
<b>MID-CAP VALUE</b>													424 funds in category
Ariel Fund (I)	95 ■ ARAIX	17.68%	3%	17.68%	3%	1.01%	40%	11.21%	8%	8.20%	7%	18.80%	1%
PGIM QMA Mid-Cap Value Fund (R6)	56 ■ PMVQX	12.16%	79%	12.16%	79%	-6.54%	97%	6.34%	83%	4.93%	67%	14.92%	41%
Category Average		13.42%	--	13.42%	--	0.50%	--	8.46%	--	5.75%	--	14.33%	--
Russell Mid Cap Value Index		14.37%	--	14.37%	--	2.89%	--	9.50%	--	7.22%	--	16.39%	--
<b>MID-CAP BLEND</b>													468 funds in category
Parnassus Mid Cap Fund (I)	89 ■ PPFMX	16.09%	18%	16.09%	18%	10.67%	3%	12.34%	14%	10.13%	2%	16.15%	17%
Category Average		14.35%	--	14.35%	--	2.16%	--	9.46%	--	6.08%	--	14.47%	--
Russell Mid Cap Index		16.54%	--	16.54%	--	6.47%	--	11.82%	--	8.81%	--	16.88%	--
<b>MID-CAP GROWTH</b>													624 funds in category
JPMorgan Mid Cap Equity Fund (I)	70 ■ VSNGX	18.06%	59%	18.06%	59%	7.33%	67%	12.14%	79%	9.01%	60%	16.31%	40%
Category Average		18.62%	--	18.62%	--	8.77%	--	14.67%	--	9.38%	--	15.92%	--
Russell Mid Cap Growth Index		19.62%	--	19.62%	--	11.51%	--	15.06%	--	10.89%	--	17.60%	--
<b>SMALL VALUE</b>													453 funds in category
Fidelity Advisor Small Cap Value Fund (I)	70 ■ FCVIX	10.72%	87%	10.72%	87%	-4.59%	70%	7.29%	73%	6.06%	18%	15.32%	20%
Category Average		12.34%	--	12.34%	--	-2.53%	--	8.35%	--	4.32%	--	14.07%	--
Russell 2000 Value Index		11.93%	--	11.93%	--	0.17%	--	10.86%	--	5.59%	--	14.12%	--
<b>SMALL GROWTH</b>													697 funds in category
Janus Henderson Venture Fund (N)	73 ■ JVTNX	20.78%	23%	20.78%	23%	9.00%	43%	16.17%	49%	11.20%	15%	19.01%	7%
Category Average		17.64%	--	17.64%	--	8.15%	--	16.24%	--	8.69%	--	16.46%	--
Russell 2000 Growth Index		17.14%	--	17.14%	--	3.85%	--	14.87%	--	8.41%	--	16.52%	--

✓ The checked column denotes that the field is being monitored for this plan. Shaded values indicate that the value did not meet the criteria.



# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Fund Performance and Benchmarks

Fund Name	Ticker	3 Month Total	% Rank	YTD	% Rank	1 Year Total	% Rank	3 Year Annual	% Rank	5 Year Annual	% Rank	10 Year Annual	% Rank
							✓		✓		✓		
<b>REAL ESTATE</b>													270 funds in category
Cohen & Steers Institutional Realty Shares	81 ■ CSRIX	17.15%	27%	17.15%	27%	20.37%	8%	7.21%	16%	9.84%	13%	18.51%	15%
Category Average		16.29%	--	16.29%	--	16.95%	--	5.61%	--	8.28%	--	17.27%	--
S&P 1500 REIT Industry Index		16.86%	--	16.86%	--	20.55%	--	7.71%	--	10.37%	--	19.08%	--
<b>FOREIGN LARGE GROWTH</b>													466 funds in category
American Funds EuroPacific Growth Fund (R6)	89 ■ RERGX	13.20%	42%	13.20%	42%	-4.66%	56%	9.33%	31%	4.27%	36%	9.94%	46%
Category Average		13.17%	--	13.17%	--	-3.65%	--	8.20%	--	3.91%	--	9.96%	--
MSCI All Country World ex-US NR Index		10.31%	--	10.31%	--	-4.22%	--	8.08%	--	2.57%	--	8.85%	--
<b>DIVERSIFIED EMERGING MKTS</b>													893 funds in category
Invesco Oppenheimer Developing Mkts Fund (R6)	91 ■ ODVIX	12.43%	27%	12.43%	27%	-3.75%	10%	11.81%	18%	3.88%	28%	11.54%	6%
Category Average		10.61%	--	10.61%	--	-9.38%	--	9.23%	--	2.74%	--	8.93%	--
MSCI Emerging Markets NR Index		9.93%	--	9.93%	--	-7.41%	--	10.67%	--	3.68%	--	8.94%	--
<b>COMMODITIES BROAD BASKET</b>													138 funds in category
PIMCO Commodity RealReturn Styg. Fund (I)	60 ■ PCRIX	9.37%	20%	9.37%	20%	-5.41%	41%	2.92%	44%	-8.90%	58%	-0.19%	18%
Category Average		7.72%	--	7.72%	--	-5.75%	--	3.13%	--	-8.35%	--	-2.43%	--
S&P 500 Index		13.65%	--	13.65%	--	9.50%	--	13.50%	--	10.91%	--	15.92%	--
<b>INTERMEDIATE CORE BOND</b>													1,081 funds in category
Baird Aggregate Bond Fund (I)	98 ■ BAGIX	3.32%	45%	3.32%	45%	4.59%	16%	2.55%	39%	3.13%	15%	5.18%	33%
Category Average		3.17%	--	3.17%	--	3.95%	--	2.39%	--	2.52%	--	4.71%	--
Bloomberg Barclays U.S. Aggregate Bond Index		2.94%	--	2.94%	--	4.48%	--	2.02%	--	2.74%	--	3.77%	--
<b>HIGH YIELD BOND</b>													727 funds in category
Eaton Vance High Income Opport. Fund (I)	63 ■ EIHIX	7.04%	43%	7.04%	43%	4.43%	54%	6.51%	67%	4.52%	10%	11.78%	4%
Category Average		6.47%	--	6.47%	--	4.31%	--	7.02%	--	3.51%	--	9.61%	--
Bloomberg Barclays U.S. Corporate High Yield Index		7.26%	--	7.26%	--	5.93%	--	8.56%	--	4.68%	--	11.26%	--
<b>INFLATION-PROTECTED BOND</b>													230 funds in category
BlackRock Infla. Protected Bond Fund (K)	63 ■ BPLBX	3.19%	44%	3.19%	44%	1.90%	67%	1.65%	36%	1.49%	34%	3.16%	29%
Category Average		3.07%	--	3.07%	--	2.06%	--	1.61%	--	1.26%	--	2.84%	--
Bloomberg Barclays U.S. Treasury TIPS Index		3.19%	--	3.19%	--	2.70%	--	1.70%	--	1.94%	--	3.41%	--
<b>WORLD BOND</b>													338 funds in category
Templeton Global Bond Fund (R6)	68 ■ FBNRX	2.01%	78%	2.01%	78%	2.19%	38%	4.33%	9%	2.03%	31%	5.60%	29%
Category Average		2.82%	--	2.82%	--	0.02%	--	2.23%	--	1.34%	--	4.44%	--
Bloomberg Barclays Global Aggregate Index		2.20%	--	2.20%	--	-0.38%	--	1.49%	--	1.04%	--	3.05%	--
<b>ALLOCATION--50% TO 70% EQUITY</b>													770 funds in category
American Funds American Balanced Fund (R6)	100 ■ RLBGX	7.95%	81%	7.95%	81%	6.56%	15%	9.29%	9%	7.83%	4%	12.30%	4%
Category Average		8.96%	--	8.96%	--	3.78%	--	7.42%	--	5.22%	--	10.04%	--
S&P Target Risk Growth Index		8.48%	--	8.48%	--	2.96%	--	7.64%	--	5.59%	--	9.60%	--

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# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Fund Performance and Benchmarks

Fund Name	Ticker	3 Month Total	% Rank	YTD	% Rank	1 Year Total	% Rank	3 Year Annual	% Rank	5 Year Annual	% Rank	10 Year Annual	% Rank
							✓		✓		✓		
<b>TARGET-DATE 2000-2010</b>												161 funds in category	
Schwab Target 2010 Index Fund	SWYAX	6.25%	45%	6.25%	45%	4.81%	1%	--	--	--	--	--	--
Category Average		6.01%	--	6.01%	--	3.26%	--	5.51%	--	4.09%	--	8.26%	--
S&P Target Date 2010 Index		6.20%	--	6.20%	--	3.81%	--	5.47%	--	4.35%	--	7.50%	--
<b>TARGET-DATE 2020</b>												271 funds in category	
Schwab Target 2020 Index Fund	SWYLX	7.19%	57%	7.19%	57%	4.73%	7%	--	--	--	--	--	--
Category Average		7.29%	--	7.29%	--	3.21%	--	6.37%	--	4.48%	--	9.25%	--
S&P Target Date 2020 Index		7.45%	--	7.45%	--	3.94%	--	6.96%	--	5.27%	--	9.50%	--
<b>TARGET-DATE 2025</b>												247 funds in category	
Schwab Target 2025 Index Fund	SWYDX	8.52%	48%	8.52%	48%	4.79%	4%	--	--	--	--	--	--
Category Average		8.34%	--	8.34%	--	3.27%	--	7.42%	--	5.06%	--	10.36%	--
S&P Target Date 2025 Index		8.37%	--	8.37%	--	3.90%	--	7.74%	--	5.66%	--	10.32%	--
<b>TARGET-DATE 2030</b>												260 funds in category	
Schwab Target 2030 Index Fund	SWYEX	9.49%	52%	9.49%	52%	4.76%	6%	--	--	--	--	--	--
Category Average		9.38%	--	9.38%	--	3.14%	--	8.23%	--	5.54%	--	10.88%	--
S&P Target Date 2030 Index		9.39%	--	9.39%	--	3.82%	--	8.43%	--	6.05%	--	11.04%	--
<b>TARGET-DATE 2035</b>												242 funds in category	
Schwab Target 2035 Index Fund	SWYFX	10.36%	47%	10.36%	47%	4.68%	8%	--	--	--	--	--	--
Category Average		10.39%	--	10.39%	--	3.08%	--	9.11%	--	5.98%	--	11.64%	--
S&P Target Date 2035 Index		10.27%	--	10.27%	--	3.66%	--	9.08%	--	6.41%	--	11.65%	--
<b>TARGET-DATE 2040</b>												260 funds in category	
Schwab Target 2040 Index Fund	SWYGX	10.96%	52%	10.96%	52%	4.49%	12%	--	--	--	--	--	--
Category Average		11.00%	--	11.00%	--	2.89%	--	9.41%	--	6.17%	--	11.74%	--
S&P Target Date 2040 Index		10.82%	--	10.82%	--	3.59%	--	9.55%	--	6.66%	--	12.05%	--
<b>TARGET-DATE 2045</b>												242 funds in category	
Schwab Target 2045 Index Fund	SWYHX	11.57%	43%	11.57%	43%	4.33%	14%	--	--	--	--	--	--
Category Average		11.51%	--	11.51%	--	2.88%	--	9.85%	--	6.38%	--	12.17%	--
S&P Target Date 2045 Index		11.10%	--	11.10%	--	3.46%	--	9.84%	--	6.81%	--	12.34%	--
<b>TARGET-DATE 2050</b>												257 funds in category	
Schwab Target 2050 Index Fund	SWYMX	11.84%	37%	11.84%	37%	4.23%	15%	--	--	--	--	--	--
Category Average		11.65%	--	11.65%	--	2.78%	--	9.84%	--	6.40%	--	12.01%	--
S&P Target Date 2050 Index		11.28%	--	11.28%	--	3.41%	--	10.11%	--	6.96%	--	12.50%	--
<b>TARGET-DATE 2055</b>												241 funds in category	
Schwab Target 2055 Index Fund	SWYJX	12.10%	32%	12.10%	32%	4.15%	16%	--	--	--	--	--	--
Category Average		11.76%	--	11.76%	--	2.79%	--	10.01%	--	6.52%	--	12.48%	--
S&P Target Date 2055 Index		11.31%	--	11.31%	--	3.37%	--	10.28%	--	7.02%	--	12.64%	--

✓ The checked column denotes that the field is being monitored for this plan. Shaded values indicate that the value did not meet the criteria.

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Fund Performance and Benchmarks

Fund Name	Ticker	3 Month Total	% Rank	YTD	% Rank	1 Year Total	% Rank	3 Year Annual	% Rank	5 Year Annual	% Rank	10 Year Annual	% Rank
							✓		✓		✓		
TARGET-DATE 2060+												236 funds in category	
Schwab Target 2060 Index Fund	SWYNX	12.28%	31%	12.28%	31%	4.23%	14%	--	--	--	--	--	--
Category Average		11.94%	--	11.94%	--	2.83%	--	10.15%	--	6.25%	--	--	--
S&P Target Date 2055 Index		11.31%	--	11.31%	--	3.37%	--	10.28%	--	7.02%	--	12.64%	--

✓ The checked column denotes that the field is being monitored for this plan. Shaded values indicate that the value did not meet the criteria.

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Historical Performance (Previous 8 Years)

Fund Name	Ticker	2018	% Rank	2017	% Rank	2016	% Rank	2015	% Rank	2014	% Rank	2013	% Rank	2012	% Rank	2011	% Rank
<b>LARGE VALUE</b> <span>1,256 funds in category</span>																	
MFS Value Fund (R6)	91 ■ MEIKX	-9.78%	66%	17.86%	27%	14.25%	55%	-0.42%	13%	10.68%	59%	35.95%	16%	16.57%	33%	-0.05%	51%
Category Average		-8.76%	--	15.96%	--	15.00%	--	-3.55%	--	10.97%	--	31.82%	--	14.98%	--	0.36%	--
Russell 1000 Value Index		-8.27%	--	13.66%	--	17.34%	--	-3.83%	--	13.45%	--	32.53%	--	17.51%	--	0.39%	--
<b>LARGE BLEND</b> <span>1,481 funds in category</span>																	
American Funds Fundamental Investors (R6)	93 ■ RFNGX	-6.33%	56%	23.72%	13%	12.88%	20%	3.71%	7%	9.27%	84%	31.94%	56%	17.53%	18%	-1.57%	73%
TIAA-CREF Social Choice Equity Fund (I)	89 ■ TISCX	-5.53%	45%	20.93%	52%	13.51%	16%	-2.39%	76%	11.25%	62%	34.32%	28%	14.05%	73%	-0.05%	55%
Vanguard 500 Index Fund (Adm)	91 ■ VFIAX	-4.43%	23%	21.79%	30%	11.93%	30%	1.36%	23%	13.64%	20%	32.33%	49%	15.96%	43%	2.08%	22%
Category Average		-6.47%	--	20.54%	--	10.68%	--	-0.53%	--	11.60%	--	32.53%	--	15.38%	--	0.06%	--
Russell 1000 Index		-4.78%	--	21.69%	--	12.05%	--	0.92%	--	13.24%	--	33.11%	--	16.42%	--	1.50%	--
<b>LARGE GROWTH</b> <span>1,430 funds in category</span>																	
Calvert Equity Fund (I)	69 ■ CEYIX	5.42%	5%	26.24%	65%	2.71%	53%	4.19%	51%	11.57%	38%	31.17%	79%	16.14%	44%	-1.70%	57%
Franklin Growth Fund (R6)	87 ■ FIFRX	-3.06%	61%	27.36%	58%	8.86%	10%	2.36%	68%	15.36%	7%	29.75%	87%	13.69%	74%	0.63%	33%
Category Average		-1.97%	--	28.37%	--	3.18%	--	4.12%	--	10.40%	--	34.70%	--	15.81%	--	-1.28%	--
Russell 1000 Growth Index		-1.51%	--	30.21%	--	7.08%	--	5.67%	--	13.05%	--	33.48%	--	15.26%	--	2.64%	--
<b>MID-CAP VALUE</b> <span>424 funds in category</span>																	
Ariel Fund (I)	95 ■ ARAIX	-13.42%	51%	16.23%	20%	15.87%	68%	-3.78%	40%	11.29%	35%	45.09%	3%	20.75%	8%	-11.34%	98%
PGIM QMA Mid-Cap Value Fund (R6)	56 ■ PMVQX	-19.55%	91%	12.78%	55%	21.55%	21%	-6.21%	68%	15.16%	7%	37.57%	27%	15.14%	72%	-0.36%	16%
Category Average		-13.38%	--	13.34%	--	18.15%	--	-5.02%	--	9.73%	--	35.13%	--	16.34%	--	-3.82%	--
Russell Mid Cap Value Index		-12.29%	--	13.34%	--	20.00%	--	-4.78%	--	14.75%	--	33.46%	--	18.51%	--	-1.38%	--
<b>MID-CAP BLEND</b> <span>468 funds in category</span>																	
Parnassus Mid Cap Fund (I)	89 ■ PFPMX	-6.39%	11%	16.04%	45%	16.28%	37%	-0.65%	16%	11.25%	25%	28.24%	95%	18.57%	28%	3.34%	6%
Category Average		-11.69%	--	15.70%	--	14.04%	--	-4.28%	--	8.59%	--	35.27%	--	16.95%	--	-3.61%	--
Russell Mid Cap Index		-9.06%	--	18.52%	--	13.80%	--	-2.44%	--	13.22%	--	34.76%	--	17.28%	--	-1.55%	--
<b>MID-CAP GROWTH</b> <span>624 funds in category</span>																	
JPMorgan Mid Cap Equity Fund (I)	70 ■ VSNEX	-8.29%	76%	21.35%	80%	7.36%	31%	0.15%	48%	12.86%	8%	36.74%	38%	18.10%	17%	-1.80%	41%
Category Average		-5.94%	--	25.01%	--	6.25%	--	-0.29%	--	7.51%	--	35.71%	--	15.05%	--	-3.12%	--
Russell Mid Cap Growth Index		-4.75%	--	25.27%	--	7.33%	--	-0.20%	--	11.90%	--	35.74%	--	15.81%	--	-1.65%	--
<b>SMALL VALUE</b> <span>453 funds in category</span>																	
Fidelity Advisor Small Cap Value Fund (I)	70 ■ FCVIX	-14.97%	43%	12.26%	21%	21.32%	77%	-1.64%	8%	6.62%	20%	37.16%	41%	20.06%	21%	-3.64%	47%
Category Average		-15.43%	--	9.26%	--	25.65%	--	-6.66%	--	3.85%	--	36.25%	--	16.39%	--	-4.18%	--
Russell 2000 Value Index		-12.86%	--	7.84%	--	31.74%	--	-7.47%	--	4.22%	--	34.52%	--	18.05%	--	-5.50%	--
<b>SMALL GROWTH</b> <span>697 funds in category</span>																	
Janus Henderson Venture Fund (N)	73 ■ JVTNX	-6.46%	57%	24.45%	39%	7.33%	76%	-0.66%	31%	10.50%	2%	42.07%	49%	17.32%	19%	2.20%	15%
Category Average		-5.63%	--	22.58%	--	11.34%	--	-2.03%	--	3.17%	--	41.92%	--	14.24%	--	-2.38%	--
Russell 2000 Growth Index		-9.31%	--	22.17%	--	11.32%	--	-1.38%	--	5.60%	--	43.30%	--	14.59%	--	-2.91%	--
<b>REAL ESTATE</b> <span>270 funds in category</span>																	
Cohen & Steers Institutional Realty Shares	81 ■ CSRIX	-3.99%	15%	7.45%	28%	5.91%	54%	5.23%	6%	30.18%	40%	3.46%	15%	15.91%	78%	6.25%	73%
Category Average		-6.24%	--	6.35%	--	6.63%	--	2.63%	--	28.73%	--	1.90%	--	17.82%	--	7.74%	--
S&P 1500 REIT Industry Index		-3.07%	--	8.55%	--	7.67%	--	3.86%	--	29.59%	--	1.92%	--	19.12%	--	9.86%	--

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Historical Performance (Previous 8 Years)

Fund Name	Ticker	2018	% Rank	2017	% Rank	2016	% Rank	2015	% Rank	2014	% Rank	2013	% Rank	2012	% Rank	2011	% Rank
<b>FOREIGN LARGE GROWTH</b> <span>466 funds in category</span>																	
American Funds EuroPacific Growth Fund (R6)	89  RERGX	-14.91%	52%	31.17%	50%	1.01%	22%	-0.48%	68%	-2.29%	32%	20.58%	50%	19.64%	47%	-13.31%	57%
Category Average		-14.46%	--	31.90%	--	-1.99%	--	1.35%	--	-3.66%	--	20.56%	--	19.11%	--	-11.79%	--
MSCI All Country World ex-US NR Index		-14.20%	--	27.19%	--	4.50%	--	-5.66%	--	-3.87%	--	15.29%	--	16.83%	--	-13.71%	--
<b>DIVERSIFIED EMERGING MKTS</b> <span>893 funds in category</span>																	
Invesco Oppenheimer Developing Mkts Fund (R6)	91  ODVIX	-11.79%	10%	35.33%	53%	7.38%	58%	-13.67%	52%	-4.39%	71%	8.85%	15%	21.43%	27%	-18.10%	35%
Category Average		-16.39%	--	35.16%	--	8.52%	--	-13.21%	--	-2.59%	--	0.59%	--	19.52%	--	-19.21%	--
MSCI Emerging Markets NR Index		-14.58%	--	37.28%	--	11.19%	--	-14.92%	--	-2.19%	--	-2.60%	--	18.22%	--	-18.42%	--
<b>COMMODITIES BROAD BASKET</b> <span>138 funds in category</span>																	
PIMCO Commodity RealReturn Stgy. Fund (I)	60  PCRIX	-13.77%	69%	2.70%	60%	14.54%	22%	-25.70%	66%	-18.06%	56%	-14.81%	91%	5.31%	1%	-7.56%	37%
Category Average		-12.27%	--	3.93%	--	12.48%	--	-24.11%	--	-18.60%	--	-8.53%	--	0.09%	--	-8.05%	--
S&P 500 Index		-4.38%	--	21.83%	--	11.96%	--	1.38%	--	13.69%	--	32.39%	--	16.00%	--	2.11%	--
<b>INTERMEDIATE CORE BOND</b> <span>1,081 funds in category</span>																	
Baird Aggregate Bond Fund (I)	98  BAGIX	-0.30%	36%	4.20%	35%	3.52%	40%	0.55%	22%	6.89%	9%	-1.25%	41%	7.92%	34%	7.85%	11%
Category Average		-0.57%	--	3.83%	--	3.32%	--	-0.22%	--	5.34%	--	-1.31%	--	6.93%	--	6.32%	--
Bloomberg Barclays U.S. Aggregate Bond Index		0.01%	--	3.54%	--	2.65%	--	0.55%	--	5.97%	--	-2.02%	--	4.21%	--	7.84%	--
<b>HIGH YIELD BOND</b> <span>727 funds in category</span>																	
Eaton Vance High Income Opport. Fund (I)	63  EIHIX	-3.06%	55%	6.54%	55%	12.84%	63%	-0.87%	12%	3.71%	8%	8.58%	19%	15.96%	31%	4.13%	34%
Category Average		-2.79%	--	6.66%	--	13.50%	--	-3.90%	--	1.39%	--	7.22%	--	14.90%	--	2.98%	--
Bloomberg Barclays U.S. Corporate High Yield Index		-2.08%	--	7.50%	--	17.13%	--	-4.47%	--	2.45%	--	7.44%	--	15.81%	--	4.98%	--
<b>INFLATION-PROTECTED BOND</b> <span>230 funds in category</span>																	
BlackRock Infla. Protected Bond Fund (K)	63  BPLBX	-1.81%	58%	3.14%	25%	4.29%	52%	-1.95%	48%	2.68%	42%	-7.98%	36%	7.08%	22%	11.95%	52%
Category Average		-1.62%	--	2.52%	--	4.48%	--	-2.16%	--	1.88%	--	-7.14%	--	6.33%	--	10.77%	--
Bloomberg Barclays U.S. Treasury TIPS Index		-1.26%	--	3.01%	--	4.68%	--	-1.44%	--	3.64%	--	-8.61%	--	6.98%	--	13.56%	--
<b>WORLD BOND</b> <span>338 funds in category</span>																	
Templeton Global Bond Fund (R6)	68  FBNRX	1.57%	13%	2.79%	82%	6.78%	8%	-3.91%	42%	1.97%	46%	2.36%	7%	15.81%	5%	-2.37%	97%
Category Average		-1.51%	--	6.92%	--	3.52%	--	-3.94%	--	2.14%	--	-2.19%	--	8.73%	--	3.46%	--
Bloomberg Barclays Global Aggregate Index		-1.20%	--	7.39%	--	2.09%	--	-3.15%	--	0.59%	--	-2.60%	--	4.32%	--	5.64%	--
<b>ALLOCATION--50% TO 70% EQUITY</b> <span>770 funds in category</span>																	
American Funds American Balanced Fund (R6)	100  RLBGX	-2.42%	6%	15.84%	15%	8.90%	20%	2.03%	5%	9.22%	20%	22.12%	9%	14.57%	8%	4.16%	8%
Category Average		-5.81%	--	13.59%	--	7.32%	--	-1.62%	--	6.66%	--	16.88%	--	11.86%	--	0.26%	--
S&P Target Risk Growth Index		-5.69%	--	16.04%	--	6.67%	--	-0.94%	--	6.30%	--	16.03%	--	11.44%	--	1.30%	--
<b>TARGET-DATE 2000-2010</b> <span>161 funds in category</span>																	
Schwab Target 2010 Index Fund	SWYAX	-2.27%	9%	9.48%	73%	--	--	--	--	--	--	--	--	--	--	--	--
Category Average		-3.38%	--	9.99%	--	6.00%	--	-0.94%	--	4.92%	--	10.55%	--	10.18%	--	0.92%	--
S&P Target Date 2010 Index		-3.10%	--	9.95%	--	5.82%	--	-0.21%	--	5.07%	--	9.42%	--	8.94%	--	2.61%	--

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Historical Performance (Previous 8 Years)

Fund Name	Ticker	2018	% Rank	2017	% Rank	2016	% Rank	2015	% Rank	2014	% Rank	2013	% Rank	2012	% Rank	2011	% Rank
TARGET-DATE 2020 <span>271 funds in category</span>																	
Schwab Target 2020 Index Fund	SWYLX	-3.09%	10%	12.10%	66%	--	--	--	--	--	--	--	--	--	--	--	--
Category Average		-4.55%	--	12.20%	--	6.23%	--	-1.22%	--	5.20%	--	12.84%	--	11.86%	--	0.36%	--
S&P Target Date 2020 Index		-4.16%	--	12.80%	--	7.22%	--	-0.19%	--	5.67%	--	14.76%	--	11.48%	--	0.58%	--
TARGET-DATE 2025 <span>247 funds in category</span>																	
Schwab Target 2025 Index Fund	SWYDX	-4.29%	18%	14.53%	60%	--	--	--	--	--	--	--	--	--	--	--	--
Category Average		-5.36%	--	14.49%	--	6.66%	--	-1.26%	--	5.39%	--	16.53%	--	13.19%	--	-1.50%	--
S&P Target Date 2025 Index		-5.02%	--	14.55%	--	7.82%	--	-0.25%	--	5.56%	--	17.03%	--	12.51%	--	-0.28%	--
TARGET-DATE 2030 <span>260 funds in category</span>																	
Schwab Target 2030 Index Fund	SWYEX	-5.08%	14%	16.21%	67%	--	--	--	--	--	--	--	--	--	--	--	--
Category Average		-6.39%	--	16.43%	--	7.32%	--	-1.42%	--	5.60%	--	17.94%	--	13.86%	--	-1.51%	--
S&P Target Date 2030 Index		-5.99%	--	16.19%	--	8.35%	--	-0.30%	--	5.64%	--	19.14%	--	13.43%	--	-1.17%	--
TARGET-DATE 2035 <span>242 funds in category</span>																	
Schwab Target 2035 Index Fund	SWYFX	-6.05%	18%	17.83%	74%	--	--	--	--	--	--	--	--	--	--	--	--
Category Average		-7.14%	--	18.48%	--	7.48%	--	-1.43%	--	5.59%	--	20.91%	--	14.74%	--	-3.07%	--
S&P Target Date 2035 Index		-6.88%	--	17.78%	--	8.85%	--	-0.35%	--	5.69%	--	20.84%	--	14.12%	--	-1.71%	--
TARGET-DATE 2040 <span>260 funds in category</span>																	
Schwab Target 2040 Index Fund	SWYGX	-6.63%	16%	19.11%	67%	--	--	--	--	--	--	--	--	--	--	--	--
Category Average		-7.89%	--	19.34%	--	7.94%	--	-1.57%	--	5.81%	--	21.05%	--	14.84%	--	-2.71%	--
S&P Target Date 2040 Index		-7.41%	--	18.87%	--	9.23%	--	-0.40%	--	5.69%	--	22.10%	--	14.69%	--	-2.17%	--
TARGET-DATE 2045 <span>242 funds in category</span>																	
Schwab Target 2045 Index Fund	SWYHX	-7.28%	21%	20.07%	64%	--	--	--	--	--	--	--	--	--	--	--	--
Category Average		-8.22%	--	20.40%	--	7.86%	--	-1.49%	--	5.72%	--	22.81%	--	15.31%	--	-3.59%	--
S&P Target Date 2045 Index		-7.74%	--	19.56%	--	9.54%	--	-0.46%	--	5.67%	--	23.14%	--	15.15%	--	-2.56%	--
TARGET-DATE 2050 <span>257 funds in category</span>																	
Schwab Target 2050 Index Fund	SWYMX	-7.58%	23%	20.48%	60%	--	--	--	--	--	--	--	--	--	--	--	--
Category Average		-8.51%	--	20.47%	--	8.18%	--	-1.65%	--	5.87%	--	22.09%	--	15.27%	--	-3.14%	--
S&P Target Date 2050 Index		-7.94%	--	20.18%	--	9.74%	--	-0.47%	--	5.69%	--	24.13%	--	15.49%	--	-2.87%	--
TARGET-DATE 2055 <span>241 funds in category</span>																	
Schwab Target 2055 Index Fund	SWYJX	-7.86%	32%	21.01%	56%	--	--	--	--	--	--	--	--	--	--	--	--
Category Average		-8.49%	--	20.96%	--	7.97%	--	-1.52%	--	5.73%	--	23.26%	--	15.72%	--	-4.20%	--
S&P Target Date 2055 Index		-7.97%	--	20.48%	--	9.94%	--	-0.54%	--	5.64%	--	24.96%	--	15.81%	--	-2.87%	--
TARGET-DATE 2060+ <span>236 funds in category</span>																	
Schwab Target 2060 Index Fund	SWYNX	-8.02%	33%	21.19%	55%	--	--	--	--	--	--	--	--	--	--	--	--
Category Average		-8.69%	--	21.13%	--	7.83%	--	-0.88%	--	5.53%	--	24.35%	--	--	--	--	--
S&P Target Date 2055 Index		-7.97%	--	20.48%	--	9.94%	--	-0.54%	--	5.64%	--	24.96%	--	15.81%	--	-2.87%	--

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Risk / Expense

Fund Name		Ticker	3 Year Std. Dev.	% Rank	5 Year Std. Dev.	% Rank	Gross Expense Ratio	% Rank	12b-1 Fee	Mgmt. Expense	Other Expenses
<b>LARGE VALUE</b>											1,256 funds in category
MFS Value Fund (R6)	91	MEIKX	11.12%	57%	11.31%	49%	0.48%	11%	--	0.46%	0.02%
<b>LARGE BLEND</b>											1,481 funds in category
American Funds Fundamental Investors (R6)	93	RFNGX	9.98%	13%	11.00%	26%	0.30%	12%	--	0.24%	0.06%
TIAA-CREF Social Choice Equity Fund (I)	89	TISCX	11.05%	54%	11.50%	59%	0.17%	7%	--	0.15%	0.02%
Vanguard 500 Index Fund (Adm)	91	VFIAX	10.73%	36%	11.18%	36%	0.04%	2%	--	0.03%	0.01%
<b>LARGE GROWTH</b>											1,430 funds in category
Calvert Equity Fund (I)	69	CEYIX	9.92%	1%	10.28%	2%	0.76%	24%	--	0.61%	0.15%
Franklin Growth Fund (R6)	87	FIFRX	11.88%	28%	11.63%	13%	0.48%	7%	--	0.44%	0.04%
<b>MID-CAP VALUE</b>											424 funds in category
Ariel Fund (I)	95	ARAIX	16.11%	95%	16.49%	97%	0.72%	18%	--	0.58%	0.14%
PGIM QMA Mid-Cap Value Fund (R6)	56	PMVQX	14.40%	84%	13.66%	70%	0.77%	21%	--	0.73%	0.04%
<b>MID-CAP BLEND</b>											468 funds in category
Parnassus Mid Cap Fund (I)	89	PFPMX	10.42%	3%	10.42%	2%	0.75%	28%	--	0.72%	0.03%
<b>MID-CAP GROWTH</b>											624 funds in category
JPMorgan Mid Cap Equity Fund (I)	70	VSNGX	12.46%	19%	12.78%	21%	1.01%	35%	--	0.65%	0.36%
<b>SMALL VALUE</b>											453 funds in category
Fidelity Advisor Small Cap Value Fund (I)	70	FCVIX	13.02%	5%	13.00%	7%	0.91%	19%	--	0.69%	0.22%
<b>SMALL GROWTH</b>											697 funds in category
Janus Henderson Venture Fund (N)	73	JVTNX	14.90%	21%	15.77%	32%	0.67%	6%	--	0.64%	0.03%
<b>REAL ESTATE</b>											270 funds in category
Cohen & Steers Institutional Realty Shares	81	CSRIX	13.08%	35%	14.08%	34%	0.77%	23%	--	0.75%	0.02%
<b>FOREIGN LARGE GROWTH</b>											466 funds in category
American Funds EuroPacific Growth Fund (R6)	89	RERGX	11.38%	38%	11.54%	32%	0.49%	4%	--	0.41%	0.08%
<b>DIVERSIFIED EMERGING MKTS</b>											893 funds in category
Invesco Oppenheimer Developing Mkts Fund (R6)	91	ODVIX	12.27%	25%	14.35%	41%	0.87%	14%	--	0.77%	0.10%
<b>COMMODITIES BROAD BASKET</b>											138 funds in category
PIMCO Commodity RealReturn Stgy. Fund (I)	60	PCRIX	10.77%	61%	13.32%	67%	1.39%	58%	--	0.74%	0.65%
<b>INTERMEDIATE CORE BOND</b>											1,081 funds in category
Baird Aggregate Bond Fund (I)	98	BAGIX	2.97%	75%	2.86%	71%	0.30%	7%	--	0.25%	0.05%
<b>HIGH YIELD BOND</b>											727 funds in category
Eaton Vance High Income Opport. Fund (I)	63	EIHIX	4.11%	33%	4.64%	24%	0.62%	14%	--	0.44%	0.18%
<b>INFLATION-PROTECTED BOND</b>											230 funds in category
BlackRock Infla. Protected Bond Fund (K)	63	BPLBX	2.91%	42%	3.50%	44%	0.40%	22%	--	0.24%	0.16%
<b>WORLD BOND</b>											338 funds in category
Templeton Global Bond Fund (R6)	68	FBNRX	5.90%	69%	6.13%	74%	0.63%	18%	--	0.48%	0.15%
<b>ALLOCATION--50% TO 70% EQUITY</b>											770 funds in category
American Funds American Balanced Fund (R6)	100	RLBGX	6.16%	17%	6.92%	24%	0.28%	2%	--	0.22%	0.06%

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Risk / Expense

Fund Name	Ticker	3 Year Std. Dev.	% Rank	5 Year Std. Dev.	% Rank	Gross Expense Ratio	% Rank	12b-1 Fee	Mgmt. Expense	Other Expenses
<b>TARGET-DATE 2000-2010</b>										161 funds in category
Schwab Target 2010 Index Fund	SWYAX	--	--	--	--	0.13%	1%	--	0.08%	0.05%
<b>TARGET-DATE 2020</b>										271 funds in category
Schwab Target 2020 Index Fund	SWYLY	--	--	--	--	0.13%	2%	--	0.08%	0.05%
<b>TARGET-DATE 2025</b>										247 funds in category
Schwab Target 2025 Index Fund	SWYDX	--	--	--	--	0.12%	1%	--	0.08%	0.04%
<b>TARGET-DATE 2030</b>										260 funds in category
Schwab Target 2030 Index Fund	SWYEX	--	--	--	--	0.12%	1%	--	0.08%	0.04%
<b>TARGET-DATE 2035</b>										242 funds in category
Schwab Target 2035 Index Fund	SWYFX	--	--	--	--	0.12%	1%	--	0.08%	0.04%
<b>TARGET-DATE 2040</b>										260 funds in category
Schwab Target 2040 Index Fund	SWYGX	--	--	--	--	0.12%	1%	--	0.08%	0.04%
<b>TARGET-DATE 2045</b>										242 funds in category
Schwab Target 2045 Index Fund	SWYHX	--	--	--	--	0.13%	2%	--	0.08%	0.05%
<b>TARGET-DATE 2050</b>										257 funds in category
Schwab Target 2050 Index Fund	SWYMX	--	--	--	--	0.13%	1%	--	0.08%	0.05%
<b>TARGET-DATE 2055</b>										241 funds in category
Schwab Target 2055 Index Fund	SWYJX	--	--	--	--	0.13%	1%	--	0.08%	0.05%
<b>TARGET-DATE 2060+</b>										236 funds in category
Schwab Target 2060 Index Fund	SWYNX	--	--	--	--	0.13%	2%	--	0.08%	0.05%



# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Morningstar Statistics

Fund Name		Ticker	3 Year Mstar Return	3 Year Mstar Risk	3 Year Mstar Rating	5 Year Mstar Return	5 Year Mstar Risk	5 Year Mstar Rating	10 Year Mstar Return	10 Year Mstar Risk	10 Year Mstar Rating	Overall Mstar Rating
<b>LARGE VALUE</b>											1,256 funds in category	
MFS Value Fund (R6)	91	MEIKX	Average	Average	3 stars	Above Avg.	Average	4 stars	Average	Average	3 stars	3 stars
<b>LARGE BLEND</b>											1,481 funds in category	
American Funds Fundamental Investors (R6)	93	RFNGX	Above Avg.	Below Avg.	4 stars	Above Avg.	Below Avg.	4 stars	Average	Average	3 stars	4 stars
TIAA-CREF Social Choice Equity Fund (I)	89	TISCX	Above Avg.	Average	4 stars	Average	Average	3 stars	Above Avg.	Average	3 stars	3 stars
Vanguard 500 Index Fund (Adm)	91	VFIAX	Above Avg.	Average	4 stars	High	Average	5 stars	Above Avg.	Average	5 stars	5 stars
<b>LARGE GROWTH</b>											1,430 funds in category	
Calvert Equity Fund (I)	69	CEYIX	Above Avg.	Low	4 stars	Above Avg.	Low	4 stars	Average	Low	4 stars	4 stars
Franklin Growth Fund (R6)	87	FIFRX	Average	Average	3 stars	Average	Below Avg.	3 stars	Average	Below Avg.	3 stars	3 stars
<b>MID-CAP VALUE</b>											424 funds in category	
Ariel Fund (I)	95	ARAIX	High	High	4 stars	High	High	4 stars	High	High	5 stars	4 stars
PGIM QMA Mid-Cap Value Fund (R6)	56	PMVQX	Below Avg.	Above Avg.	2 stars	Below Avg.	Average	2 stars	Average	Average	3 stars	2 stars
<b>MID-CAP BLEND</b>											468 funds in category	
Parnassus Mid Cap Fund (I)	89	PFPMX	Above Avg.	Low	5 stars	High	Low	5 stars	Above Avg.	Low	5 stars	5 stars
<b>MID-CAP GROWTH</b>											624 funds in category	
JPMorgan Mid Cap Equity Fund (I)	70	VSNGX	Below Avg.	Below Avg.	2 stars	Average	Below Avg.	3 stars	Average	Below Avg.	4 stars	3 stars
<b>SMALL VALUE</b>											453 funds in category	
Fidelity Advisor Small Cap Value Fund (I)	70	FCVIX	Below Avg.	Low	3 stars	Above Avg.	Low	4 stars	Above Avg.	Below Avg.	5 stars	4 stars
<b>SMALL GROWTH</b>											697 funds in category	
Janus Henderson Venture Fund (N)	73	JVTNX	Average	Below Avg.	3 stars	Above Avg.	Average	5 stars	High	Below Avg.	5 stars	4 stars
<b>REAL ESTATE</b>											270 funds in category	
Cohen & Steers Institutional Realty Shares	81	CSRIX	Above Avg.	Average	4 stars	Above Avg.	Average	4 stars	Above Avg.	Average	4 stars	4 stars
<b>FOREIGN LARGE GROWTH</b>											466 funds in category	
American Funds EuroPacific Growth Fund (R6)	89	RERGX	Above Avg.	Average	4 stars	Average	Average	3 stars	Average	Below Avg.	3 stars	3 stars
<b>DIVERSIFIED EMERGING MKTS</b>											893 funds in category	
Invesco Oppenheimer Developing Mkts Fund (R6)	91	ODVIX	Above Avg.	Below Avg.	4 stars	Above Avg.	Average	4 stars	High	Below Avg.	5 stars	4 stars
<b>COMMODITIES BROAD BASKET</b>											138 funds in category	
PIMCO Commodity RealReturn Styg. Fund (I)	60	PCRIX	Average	Average	3 stars	Average	Above Avg.	3 stars	High	Average	5 stars	4 stars
<b>INTERMEDIATE CORE BOND</b>											1,081 funds in category	
Baird Aggregate Bond Fund (I)	98	BAGIX	Average	Above Avg.	3 stars	Above Avg.	Above Avg.	4 stars	Above Avg.	Average	4 stars	4 stars
<b>HIGH YIELD BOND</b>											727 funds in category	
Eaton Vance High Income Opport. Fund (I)	63	EIHIX	Average	Average	3 stars	Above Avg.	Below Avg.	4 stars	High	Average	5 stars	4 stars
<b>INFLATION-PROTECTED BOND</b>											230 funds in category	
BlackRock Infla. Protected Bond Fund (K)	63	BPLBX	Average	Average	3 stars	Average	Average	3 stars	Average	Below Avg.	3 stars	3 stars
<b>WORLD BOND</b>											338 funds in category	
Templeton Global Bond Fund (R6)	68	FBNRX	High	Above Avg.	5 stars	Above Avg.	Above Avg.	4 stars	Above Avg.	Above Avg.	4 stars	4 stars
<b>ALLOCATION--50% TO 70% EQUITY</b>											770 funds in category	
American Funds American Balanced Fund (R6)	100	RLBGX	Above Avg.	Below Avg.	5 stars	High	Below Avg.	5 stars	High	Below Avg.	5 stars	5 stars

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Morningstar Statistics

Fund Name	Ticker	3 Year Mstar Return	3 Year Mstar Risk	3 Year Mstar Rating	5 Year Mstar Return	5 Year Mstar Risk	5 Year Mstar Rating	10 Year Mstar Return	10 Year Mstar Risk	10 Year Mstar Rating	Overall Mstar Rating
<b>TARGET-DATE 2000-2010</b>											161 funds in category
Schwab Target 2010 Index Fund	SWYAX	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2020</b>											271 funds in category
Schwab Target 2020 Index Fund	SWYLY	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2025</b>											247 funds in category
Schwab Target 2025 Index Fund	SWYDY	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2030</b>											260 funds in category
Schwab Target 2030 Index Fund	SWYEX	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2035</b>											242 funds in category
Schwab Target 2035 Index Fund	SWYFX	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2040</b>											260 funds in category
Schwab Target 2040 Index Fund	SWYGX	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2045</b>											242 funds in category
Schwab Target 2045 Index Fund	SWYHY	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2050</b>											257 funds in category
Schwab Target 2050 Index Fund	SWYMY	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2055</b>											241 funds in category
Schwab Target 2055 Index Fund	SWYJX	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2060+</b>											236 funds in category
Schwab Target 2060 Index Fund	SWYNY	--	--	--	--	--	--	--	--	--	--

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Management

Fund Name		Ticker	Inception	Product History	Total Assets (\$mil)	Average Market Cap (\$mil)	Manager	Manager Tenure	Number of Holdings	Turnover Ratio	% Rank	% In Top 10	Style Drift Score	
								✓						
LARGE VALUE												1,256 funds in category		
MFS Value Fund (R6)	91	■	MEIKX	01/02/1996	23.2	\$46,476.95	\$77,955.02	Steven Gorham	17.2	90	11%	8%	27.88%	0
LARGE BLEND												1,481 funds in category		
American Funds Fundamental Investors (R6)	93	■	RFNGX	08/01/1978	40.7	\$98,637.12	\$98,227.39	Dina Perry	26.1	254	34%	44%	24.52%	0
TIAA-CREF Social Choice Equity Fund (I)	89	■	TISCX	07/01/1999	19.7	\$4,279.06	\$48,695.40	Philip Campagna	13.3	756	29%	38%	16.69%	0
Vanguard 500 Index Fund (Adm)	91	■	VFIAX	08/31/1976	42.6	\$459,652.72	\$105,160.44	Donald Butler	2.9	516	4%	8%	21.17%	0
LARGE GROWTH												1,430 funds in category		
Calvert Equity Fund (I)	69	■	CEYIX	08/24/1987	31.6	\$2,656.83	\$68,857.43	Team Management	3.8	86	18%	14%	42.55%	0
Franklin Growth Fund (R6)	87	■	FIFRX	04/01/1948	71	\$15,621.96	\$70,524.47	Serena Perin Vinton	10.3	133	6.05%	4%	25.42%	0
MID-CAP VALUE												424 funds in category		
Ariel Fund (I)	95	■	ARAIX	11/06/1986	32.4	\$2,231.14	\$6,352.19	John Rogers	32.4	43	19%	8%	33.56%	1
PGIM QMA Mid-Cap Value Fund (R6)	56	■	PMVQX	08/19/1998	20.6	\$710.90	\$9,496.36	Stern/Courtney	4.9	161	78%	81%	12.13%	0
MID-CAP BLEND												468 funds in category		
Parnassus Mid Cap Fund (I)	89	■	PFPMX	04/29/2005	13.9	\$3,403.49	\$14,954.80	Matthew Gershuny	10.5	40	31.52%	37%	36.32%	0
MID-CAP GROWTH												624 funds in category		
JPMorgan Mid Cap Equity Fund (I)	70	■	VSNGX	12/31/1996	22.2	\$2,754.18	\$15,486.24	Jonathan Simon	16.3	199	31%	29%	11.93%	0
SMALL VALUE												453 funds in category		
Fidelity Advisor Small Cap Value Fund (I)	70	■	FCVIX	11/03/2004	14.4	\$2,111.88	\$2,225.62	Derek Janssen	6.2	80	55%	58%	22.98%	0
SMALL GROWTH												697 funds in category		
Janus Henderson Venture Fund (N)	73	■	JVTNX	04/30/1985	33.9	\$3,452.49	\$2,911.65	Jonathan Coleman	5.9	125	28%	18%	19.25%	0
REAL ESTATE												270 funds in category		
Cohen & Steers Institutional Realty Shares	81	■	CSRIX	02/14/2000	19.1	\$3,229.45	\$14,782.18	John Cheigh	11.5	46	68%	62%	50.37%	0
FOREIGN LARGE GROWTH												466 funds in category		
American Funds EuroPacific Growth Fund (R6)	89	■	RERGX	04/16/1984	35	\$156,505.58	\$43,954.74	Mark Denning	27.3	342	29%	27%	20.95%	0
DIVERSIFIED EMERGING MKTS												893 funds in category		
Invesco Oppenheimer Developing Mkts Fund (R6)	91	■	ODVIX	11/18/1996	22.4	\$40,713.14	\$39,623.11	Justin Leverenz	11.9	95	36%	38%	38.48%	0
COMMODITIES BROAD BASKET												138 funds in category		
PIMCO Commodity RealReturn Stgy. Fund (I)	60	■	PCRIX	06/28/2002	16.8	\$5,236.97	--	Mihir Worah	11.3	898	148%	94%	112.04%	0
INTERMEDIATE CORE BOND												1,081 funds in category		
Baird Aggregate Bond Fund (I)	98	■	BAGIX	09/29/2000	18.5	\$18,799.26	--	Management Team	18.5	1151	24%	8%	21.56%	0
HIGH YIELD BOND												727 funds in category		
Eaton Vance High Income Opport. Fund (I)	63	■	EIHIX	08/19/1986	32.6	\$938.58	\$3,638.48	Michael Weilheimer	23.3	420	39%	34%	9.41%	0
INFLATION-PROTECTED BOND												230 funds in category		
BlackRock Infla. Protected Bond Fund (K)	63	■	BPLBX	06/28/2004	14.8	\$2,107.45	--	Christopher Allen	2.1	142	176%	93%	37.85%	0
WORLD BOND												338 funds in category		
Templeton Global Bond Fund (R6)	68	■	FBNRX	09/18/1986	32.5	\$33,838.00	--	Michael Hasenstab	17.3	141	19.86%	2%	29.74%	0

✓ The checked column denotes that the field is being monitored for this plan. Shaded values indicate that the value did not meet the criteria.

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Management

Fund Name	Ticker	Inception	Product History	Total Assets (\$mil)	Average Market Cap (\$mil)	Manager	Manager Tenure	Number of Holdings	Turnover Ratio	% Rank	% In Top 10	Style Drift Score	
							✓						
ALLOCATION--50% TO 70% EQUITY											770 funds in category		
American Funds American Balanced Fund (R6)	100 <div><div></div></div>	RLBGX	07/25/1975	43.7	\$140,179.86	\$116,815.02	John Smet	22.3	1675	72%	76%	18.83%	0
TARGET-DATE 2000-2010											161 funds in category		
Schwab Target 2010 Index Fund	SWYAX	08/25/2016	2.6	\$25.45	\$52,941.97	Zifan Tang	2.6	10	28%	56%	93.09%	0	
TARGET-DATE 2020											271 funds in category		
Schwab Target 2020 Index Fund	SWYLYX	08/25/2016	2.6	\$129.66	\$50,682.23	Zifan Tang	2.6	10	21%	41%	93.30%	0	
TARGET-DATE 2025											247 funds in category		
Schwab Target 2025 Index Fund	SWYDX	08/25/2016	2.6	\$153.83	\$49,193.88	Zifan Tang	2.6	10	14%	15%	95.62%	0	
TARGET-DATE 2030											260 funds in category		
Schwab Target 2030 Index Fund	SWYEX	08/25/2016	2.6	\$201.15	\$48,020.68	Zifan Tang	2.6	11	8%	10%	96.74%	0	
TARGET-DATE 2035											242 funds in category		
Schwab Target 2035 Index Fund	SWYFX	08/25/2016	2.6	\$126.10	\$46,439.06	Zifan Tang	2.6	10	14%	17%	97.85%	0	
TARGET-DATE 2040											260 funds in category		
Schwab Target 2040 Index Fund	SWYGX	08/25/2016	2.6	\$142.75	\$45,254.73	Zifan Tang	2.6	10	15%	20%	98.17%	0	
TARGET-DATE 2045											242 funds in category		
Schwab Target 2045 Index Fund	SWYHX	08/25/2016	2.6	\$84.08	\$44,409.04	Zifan Tang	2.6	10	11%	11%	98.89%	0	
TARGET-DATE 2050											257 funds in category		
Schwab Target 2050 Index Fund	SWYMX	08/25/2016	2.6	\$88.55	\$43,866.48	Zifan Tang	2.6	10	15%	25%	99.25%	0	
TARGET-DATE 2055											241 funds in category		
Schwab Target 2055 Index Fund	SWYJX	08/25/2016	2.6	\$50.31	\$43,410.89	Zifan Tang	2.6	9	23%	51%	99.32%	0	
TARGET-DATE 2060+											236 funds in category		
Schwab Target 2060 Index Fund	SWYNX	08/25/2016	2.6	\$58.33	\$43,031.91	Zifan Tang	2.6	9	19%	31%	99.56%	0	

✓ The checked column denotes that the field is being monitored for this plan. Shaded values indicate that the value did not meet the criteria.

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Additional Statistics (3 Year)

Fund Name	Ticker	3 Year Sharpe	% Rank	3 Year Alpha	% Rank	3 Year Beta	% Rank	3 Year R Square	% Rank	3 Year Sortino	% Rank	3 Year Treynor	% Rank	3 Year Info Ratio	% Rank
			✓		✓			✓							
<b>LARGE VALUE</b>															1,256 funds in category
MFS Value Fund (R6)	91 ■ MEIKX	0.82%	47%	-2.54%	50%	0.97%	60%	87.86%	37%	1.21%	48%	9.24%	49%	-0.83%	53%
<b>LARGE BLEND</b>															1,481 funds in category
American Funds Fundamental Investors (R6)	93 ■ RFNGX	1.18%	6%	1.01%	6%	0.90%	14%	93.40%	59%	1.78%	6%	13.43%	6%	-0.04%	15%
TIAA-CREF Social Choice Equity Fund (I)	89 ■ TISCX	1.07%	29%	-0.41%	33%	1.02%	63%	97.92%	25%	1.57%	32%	11.75%	32%	-0.15%	21%
Vanguard 500 Index Fund (Adm)	91 ■ VFIAX	1.11%	14%	-0.04%	19%	1.00%	52%	100.00%	1%	1.64%	16%	12.18%	18%	-4.37%	95%
<b>LARGE GROWTH</b>															1,430 funds in category
Calvert Equity Fund (I)	69 ■ CEYIX	1.50%	2%	4.69%	7%	0.84%	2%	84.30%	55%	2.70%	2%	18.39%	4%	0.78%	18%
Franklin Growth Fund (R6)	87 ■ FIFRX	1.18%	33%	1.03%	50%	1.08%	53%	95.00%	5%	1.76%	47%	13.26%	48%	0.75%	20%
<b>MID-CAP VALUE</b>															424 funds in category
Ariel Fund (I)	95 ■ ARAIX	0.66%	35%	-5.35%	52%	1.33%	97%	78.86%	63%	1.00%	30%	7.45%	36%	-0.28%	4%
PGIM QMA Mid-Cap Value Fund (R6)	56 ■ PMVQX	0.41%	87%	-7.99%	85%	1.15%	71%	73.78%	89%	0.62%	83%	4.37%	86%	-0.95%	61%
<b>MID-CAP BLEND</b>															468 funds in category
Parnassus Mid Cap Fund (I)	89 ■ PFPMX	1.05%	3%	0.45%	3%	0.87%	3%	80.90%	69%	1.58%	5%	12.66%	3%	-0.25%	13%
<b>MID-CAP GROWTH</b>															624 funds in category
JPMorgan Mid Cap Equity Fund (I)	70 ■ VSNEX	0.88%	69%	-2.23%	72%	1.10%	31%	89.92%	6%	1.34%	68%	9.86%	73%	-0.34%	83%
<b>SMALL VALUE</b>															453 funds in category
Fidelity Advisor Small Cap Value Fund (I)	70 ■ FCVIX	0.50%	45%	-5.66%	36%	1.02%	10%	70.47%	18%	0.74%	52%	5.88%	45%	-0.88%	95%
<b>SMALL GROWTH</b>															697 funds in category
Janus Henderson Venture Fund (N)	73 ■ JVTNX	1.00%	40%	0.12%	45%	1.23%	32%	78.58%	17%	1.48%	48%	12.11%	45%	0.36%	44%
<b>REAL ESTATE</b>															270 funds in category
Cohen & Steers Institutional Realty Shares	81 ■ CSRIX	0.50%	18%	-0.29%	20%	0.73%	68%	31.23%	28%	0.81%	18%	8.16%	19%	-0.31%	15%
<b>FOREIGN LARGE GROWTH</b>															466 funds in category
American Funds EuroPacific Growth Fund (R6)	89 ■ RERGX	0.73%	27%	1.00%	32%	1.03%	67%	92.04%	5%	1.12%	23%	7.78%	32%	0.38%	22%
<b>DIVERSIFIED EMERGING MKTS</b>															893 funds in category
Invesco Oppenheimer Developing Mkts Fund (R6)	91 ■ ODIVX	0.87%	9%	3.57%	15%	1.00%	37%	74.93%	12%	1.40%	15%	10.47%	14%	0.60%	12%
<b>COMMODITIES BROAD BASKET</b>															138 funds in category
PIMCO Commodity RealReturn Stgy. Fund (I)	60 ■ PCRIX	0.20%	46%	-0.94%	47%	0.79%	70%	85.20%	42%	0.32%	45%	2.06%	43%	-0.32%	48%
<b>INTERMEDIATE CORE BOND</b>															1,081 funds in category
Baird Aggregate Bond Fund (I)	98 ■ BAGIX	0.43%	44%	0.51%	43%	1.00%	86%	99.08%	7%	0.65%	43%	1.26%	46%	1.84%	1%
<b>HIGH YIELD BOND</b>															727 funds in category
Eaton Vance High Income Opport. Fund (I)	63 ■ EIHIX	1.23%	63%	4.96%	66%	0.21%	34%	2.15%	66%	2.43%	68%	25.17%	39%	0.95%	68%
<b>INFLATION-PROTECTED BOND</b>															230 funds in category
BlackRock Infla. Protected Bond Fund (K)	63 ■ BPLBX	0.14%	36%	-0.23%	41%	0.82%	50%	68.02%	37%	0.20%	36%	0.44%	34%	-0.22%	38%
<b>WORLD BOND</b>															338 funds in category
Templeton Global Bond Fund (R6)	68 ■ FBNRX	0.53%	27%	3.61%	3%	-0.62%	2%	9.39%	94%	0.89%	26%	-4.94%	96%	0.31%	29%

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# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Additional Statistics (3 Year)

Fund Name	Ticker	3 Year Sharpe	% Rank	3 Year Alpha	% Rank	3 Year Beta	% Rank	3 Year R Square	% Rank	3 Year Sortino	% Rank	3 Year Treynor	% Rank	3 Year Info Ratio	% Rank
			✓		✓			✓							
<b>ALLOCATION--50% TO 70% EQUITY</b>														770 funds in category	
American Funds American Balanced Fund (R6)	100 ■ RLBGX	1.26%	4%	1.33%	5%	0.97%	20%	93.37%	44%	1.85%	6%	8.21%	5%	0.77%	5%
<b>TARGET-DATE 2000-2010</b>														161 funds in category	
Schwab Target 2010 Index Fund	SWYAX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2020</b>														271 funds in category	
Schwab Target 2020 Index Fund	SWYLY	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2025</b>														247 funds in category	
Schwab Target 2025 Index Fund	SWYDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2030</b>														260 funds in category	
Schwab Target 2030 Index Fund	SWYEX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2035</b>														242 funds in category	
Schwab Target 2035 Index Fund	SWYFX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2040</b>														260 funds in category	
Schwab Target 2040 Index Fund	SWYGX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2045</b>														242 funds in category	
Schwab Target 2045 Index Fund	SWYHX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2050</b>														257 funds in category	
Schwab Target 2050 Index Fund	SWYMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2055</b>														241 funds in category	
Schwab Target 2055 Index Fund	SWYJX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2060+</b>														236 funds in category	
Schwab Target 2060 Index Fund	SWYNX	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Additional Statistics (5 Year)

Fund Name	Ticker	5 Year Sharpe	% Rank	5 Year Alpha	% Rank	5 Year Beta	% Rank	5 Year R Square	% Rank	5 Year Sortino	% Rank	5 Year Treynor	% Rank	5 Year Info Ratio	% Rank
															✓
<b>LARGE VALUE</b>															1,256 funds in category
MFS Value Fund (R6)	91 ■ MEIKX	0.69%	25%	-2.07%	28%	0.97%	56%	92.05%	26%	1.08%	25%	7.74%	27%	-0.81%	33%
<b>LARGE BLEND</b>															1,481 funds in category
American Funds Fundamental Investors (R6)	93 ■ RFNGX	0.90%	12%	0.08%	10%	0.96%	26%	95.38%	50%	1.47%	8%	10.18%	10%	-0.14%	11%
TIAA-CREF Social Choice Equity Fund (I)	89 ■ TISCX	0.78%	45%	-1.41%	49%	1.02%	69%	98.00%	23%	1.21%	46%	8.57%	48%	-0.85%	57%
Vanguard 500 Index Fund (Adm)	91 ■ VFIAX	0.91%	8%	-0.03%	12%	1.00%	53%	100.00%	1%	1.44%	9%	10.07%	12%	-3.11%	93%
<b>LARGE GROWTH</b>															1,430 funds in category
Calvert Equity Fund (I)	69 ■ CEYIX	1.19%	2%	3.38%	5%	0.86%	3%	88.95%	40%	2.19%	1%	14.38%	3%	0.62%	11%
Franklin Growth Fund (R6)	87 ■ FIFRX	0.99%	17%	1.23%	32%	1.01%	21%	94.35%	6%	1.55%	31%	11.40%	29%	0.51%	19%
<b>MID-CAP VALUE</b>															424 funds in category
Ariel Fund (I)	95 ■ ARAIX	0.51%	29%	-5.16%	47%	1.33%	98%	81.52%	52%	0.80%	25%	5.55%	33%	-0.34%	4%
PGIM QMA Mid-Cap Value Fund (R6)	56 ■ PMVQX	0.36%	67%	-5.92%	65%	1.06%	59%	75.57%	84%	0.55%	65%	3.88%	66%	-0.88%	48%
<b>MID-CAP BLEND</b>															468 funds in category
Parnassus Mid Cap Fund (I)	89 ■ PPFMX	0.90%	1%	0.75%	1%	0.85%	4%	83.04%	30%	1.44%	1%	10.99%	1%	-0.17%	2%
<b>MID-CAP GROWTH</b>															624 funds in category
JPMorgan Mid Cap Equity Fund (I)	70 ■ VSNEX	0.68%	43%	-2.16%	50%	1.06%	30%	86.23%	12%	1.03%	43%	7.74%	50%	-0.40%	69%
<b>SMALL VALUE</b>															453 funds in category
Fidelity Advisor Small Cap Value Fund (I)	70 ■ FCVIX	0.46%	13%	-3.70%	10%	0.94%	9%	65.69%	38%	0.67%	16%	5.57%	13%	-0.63%	41%
<b>SMALL GROWTH</b>															697 funds in category
Janus Henderson Venture Fund (N)	73 ■ JVTNX	0.70%	11%	-1.36%	18%	1.22%	58%	75.02%	9%	1.05%	13%	8.52%	16%	0.04%	14%
<b>REAL ESTATE</b>															270 funds in category
Cohen & Steers Institutional Realty Shares	81 ■ CSRIX	0.68%	18%	5.62%	14%	0.65%	63%	26.37%	37%	1.18%	13%	13.84%	19%	0.27%	13%
<b>FOREIGN LARGE GROWTH</b>															466 funds in category
American Funds EuroPacific Growth Fund (R6)	89 ■ RERGX	0.35%	35%	1.81%	37%	0.91%	51%	90.30%	12%	0.52%	34%	3.79%	37%	0.45%	29%
<b>DIVERSIFIED EMERGING MKTS</b>															893 funds in category
Invesco Oppenheimer Developing Mkts Fund (R6)	91 ■ ODVIX	0.28%	29%	1.42%	30%	1.06%	55%	79.44%	6%	0.42%	31%	2.90%	30%	0.20%	26%
<b>COMMODITIES BROAD BASKET</b>															138 funds in category
PIMCO Commodity RealReturn Stgy. Fund (I)	60 ■ PCRIX	-0.69%	46%	-0.95%	45%	0.83%	76%	89.82%	38%	-0.84%	52%	-11.72%	42%	0.19%	56%
<b>INTERMEDIATE CORE BOND</b>															1,081 funds in category
Baird Aggregate Bond Fund (I)	98 ■ BAGIX	0.81%	21%	0.39%	28%	1.00%	88%	98.73%	8%	1.37%	19%	2.34%	30%	1.21%	1%
<b>HIGH YIELD BOND</b>															727 funds in category
Eaton Vance High Income Opport. Fund (I)	63 ■ EIHIX	0.80%	12%	3.18%	12%	0.28%	60%	3.05%	35%	1.40%	13%	13.11%	31%	0.36%	9%
<b>INFLATION-PROTECTED BOND</b>															230 funds in category
BlackRock Infla. Protected Bond Fund (K)	63 ■ BPLBX	0.21%	34%	-1.09%	54%	0.94%	46%	59.15%	48%	0.32%	34%	0.73%	41%	-0.56%	43%
<b>WORLD BOND</b>															338 funds in category
Templeton Global Bond Fund (R6)	68 ■ FBNRX	0.23%	39%	2.04%	5%	-0.33%	4%	2.42%	95%	0.35%	38%	-3.68%	97%	-0.10%	24%

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# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Additional Statistics (5 Year)

Fund Name	Ticker	5 Year Sharpe	% Rank	5 Year Alpha	% Rank	5 Year Beta	% Rank	5 Year R Square	% Rank	5 Year Sortino	% Rank	5 Year Treynor	% Rank	5 Year Info Ratio	% Rank
															✓
<b>ALLOCATION--50% TO 70% EQUITY</b>														770 funds in category	
American Funds American Balanced Fund (R6)	100 ■ RLBGX	1.01%	3%	2.34%	4%	0.99%	22%	90.88%	65%	1.64%	4%	7.08%	4%	1.16%	2%
<b>TARGET-DATE 2000-2010</b>														161 funds in category	
Schwab Target 2010 Index Fund	SWYAX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2020</b>														271 funds in category	
Schwab Target 2020 Index Fund	SWYLY	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2025</b>														247 funds in category	
Schwab Target 2025 Index Fund	SWYDX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2030</b>														260 funds in category	
Schwab Target 2030 Index Fund	SWYEX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2035</b>														242 funds in category	
Schwab Target 2035 Index Fund	SWYFX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2040</b>														260 funds in category	
Schwab Target 2040 Index Fund	SWYGX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2045</b>														242 funds in category	
Schwab Target 2045 Index Fund	SWYHX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2050</b>														257 funds in category	
Schwab Target 2050 Index Fund	SWYMX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2055</b>														241 funds in category	
Schwab Target 2055 Index Fund	SWYJX	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>TARGET-DATE 2060+</b>														236 funds in category	
Schwab Target 2060 Index Fund	SWYNX	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Additional Statistics (Best Fit)

Fund Name		Ticker	Best Fit Alpha	% Rank	Best Fit Beta	% Rank	Best Fit R Square	% Rank
<b>LARGE VALUE</b> 1,256 funds in category								
MFS Value Fund (R6)	91	MEIKX	-0.32%	45%	1.02%	64%	95.68%	29%
<b>LARGE BLEND</b> 1,481 funds in category								
American Funds Fundamental Investors (R6)	93	RFNGX	1.74%	4%	1.01%	65%	95.07%	55%
TIAA-CREF Social Choice Equity Fund (I)	89	TISCX	-0.10%	27%	0.99%	40%	99.07%	19%
Vanguard 500 Index Fund (Adm)	91	VFIAX	-0.04%	25%	1.00%	59%	100.00%	1%
<b>LARGE GROWTH</b> 1,430 funds in category								
Calvert Equity Fund (I)	69	CEYIX	3.48%	4%	0.73%	1%	87.56%	88%
Franklin Growth Fund (R6)	87	FIFRX	0.10%	37%	0.94%	22%	95.40%	39%
<b>MID-CAP VALUE</b> 424 funds in category								
Ariel Fund (I)	95	ARAIX	-3.33%	64%	1.22%	96%	86.27%	90%
PGIM QMA Mid-Cap Value Fund (R6)	56	PMVQX	-5.24%	85%	1.16%	88%	95.12%	24%
<b>MID-CAP BLEND</b> 468 funds in category								
Parnassus Mid Cap Fund (I)	89	PFPMX	3.06%	3%	0.79%	10%	90.28%	72%
<b>MID-CAP GROWTH</b> 624 funds in category								
JPMorgan Mid Cap Equity Fund (I)	70	VSNGX	-0.50%	48%	1.00%	58%	97.34%	6%
<b>SMALL VALUE</b> 453 funds in category								
Fidelity Advisor Small Cap Value Fund (I)	70	FCVIX	-1.46%	40%	0.85%	11%	93.35%	78%
<b>SMALL GROWTH</b> 697 funds in category								
Janus Henderson Venture Fund (N)	73	JVTNX	0.78%	56%	0.91%	22%	96.72%	20%
<b>REAL ESTATE</b> 270 funds in category								
Cohen & Steers Institutional Realty Shares	81	CSRIX	4.48%	9%	0.98%	56%	98.10%	41%
<b>FOREIGN LARGE GROWTH</b> 466 funds in category								
American Funds EuroPacific Growth Fund (R6)	89	REGX	0.89%	28%	1.00%	48%	94.01%	16%
<b>DIVERSIFIED EMERGING MKTS</b> 893 funds in category								
Invesco Oppenheimer Developing Mkts Fund (R6)	91	ODVIX	1.19%	18%	0.87%	23%	89.91%	49%
<b>COMMODITIES BROAD BASKET</b> 138 funds in category								
PIMCO Commodity RealReturn Stgy. Fund (I)	60	PCRIX	0.67%	25%	1.07%	93%	96.89%	26%
<b>INTERMEDIATE CORE BOND</b> 1,081 funds in category								
Baird Aggregate Bond Fund (I)	98	BAGIX	0.51%	24%	1.00%	86%	99.08%	7%
<b>HIGH YIELD BOND</b> 727 funds in category								
Eaton Vance High Income Opport. Fund (I)	63	EIHIX	-1.11%	65%	0.87%	35%	95.11%	45%
<b>INFLATION-PROTECTED BOND</b> 230 funds in category								
BlackRock Infla. Protected Bond Fund (K)	63	BPLBX	-0.03%	28%	0.95%	46%	98.08%	20%
<b>WORLD BOND</b> 338 funds in category								
Templeton Global Bond Fund (R6)	68	FBNRX	1.51%	20%	0.14%	3%	28.33%	99%
<b>ALLOCATION--50% TO 70% EQUITY</b> 770 funds in category								
American Funds American Balanced Fund (R6)	100	RLBGX	1.44%	6%	0.74%	39%	93.77%	69%

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Additional Statistics (Best Fit)

Fund Name	Ticker	Best Fit Alpha	% Rank	Best Fit Beta	% Rank	Best Fit R Square	% Rank
<b>TARGET-DATE 2000-2010</b>							161 funds in category
Schwab Target 2010 Index Fund	SWYAX	--	--	--	--	--	--
<b>TARGET-DATE 2020</b>							271 funds in category
Schwab Target 2020 Index Fund	SWYLY	--	--	--	--	--	--
<b>TARGET-DATE 2025</b>							247 funds in category
Schwab Target 2025 Index Fund	SWYDX	--	--	--	--	--	--
<b>TARGET-DATE 2030</b>							260 funds in category
Schwab Target 2030 Index Fund	SWYEX	--	--	--	--	--	--
<b>TARGET-DATE 2035</b>							242 funds in category
Schwab Target 2035 Index Fund	SWYFX	--	--	--	--	--	--
<b>TARGET-DATE 2040</b>							260 funds in category
Schwab Target 2040 Index Fund	SWYGX	--	--	--	--	--	--
<b>TARGET-DATE 2045</b>							242 funds in category
Schwab Target 2045 Index Fund	SWYHX	--	--	--	--	--	--
<b>TARGET-DATE 2050</b>							257 funds in category
Schwab Target 2050 Index Fund	SWYMX	--	--	--	--	--	--
<b>TARGET-DATE 2055</b>							241 funds in category
Schwab Target 2055 Index Fund	SWYJX	--	--	--	--	--	--
<b>TARGET-DATE 2060+</b>							236 funds in category
Schwab Target 2060 Index Fund	SWYNX	--	--	--	--	--	--

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Asset Allocation

Fund Name		Ticker	Domestic Stock	Foreign Stock	Domestic Bond	Foreign Bond	Convertibles	Preferreds	Cash	Other	As Of Date
<b>LARGE VALUE</b>											
MFS Value Fund (R6)	91	MEIKX	91.87%	7.20%	0%	0%	0%	0%	0.92%	0%	04/30/2019
<b>LARGE BLEND</b>											
American Funds Fundamental Investors (R6)	93	RFNGX	77.08%	17.20%	0%	0%	0%	0%	5.72%	0%	03/31/2019
TIAA-CREF Social Choice Equity Fund (I)	89	TISCX	97.81%	1.46%	0%	0%	0%	0%	0.72%	0%	04/30/2019
Vanguard 500 Index Fund (Adm)	91	VFIAX	98.50%	0.91%	0%	0%	0%	0%	0.60%	0%	05/31/2019
<b>LARGE GROWTH</b>											
Calvert Equity Fund (I)	69	CEYIX	92.86%	4.12%	0.58%	0%	0%	0.08%	2.23%	0.14%	04/30/2019
Franklin Growth Fund (R6)	87	FIFRX	93.81%	4.13%	0%	0%	0%	0%	2.06%	0%	04/30/2019
<b>MID-CAP VALUE</b>											
Ariel Fund (I)	95	ARAIX	92.65%	0%	0%	0%	0%	0%	7.35%	0%	03/31/2019
PGIM QMA Mid-Cap Value Fund (R6)	56	PMVQX	98.34%	1.35%	0%	0%	0%	0%	0.31%	0%	03/31/2019
<b>MID-CAP BLEND</b>											
Parnassus Mid Cap Fund (I)	89	PFPMX	91.04%	3.70%	0%	0%	0%	0%	5.26%	0%	05/31/2019
<b>MID-CAP GROWTH</b>											
JPMorgan Mid Cap Equity Fund (I)	70	VSNGX	94.21%	2.06%	0%	0%	0%	0%	3.73%	0%	04/30/2019
<b>SMALL VALUE</b>											
Fidelity Advisor Small Cap Value Fund (I)	70	FCVIX	84.40%	11.27%	0.47%	0%	0%	0%	3.86%	0%	01/31/2019
<b>SMALL GROWTH</b>											
Janus Henderson Venture Fund (N)	73	JVTNX	90.47%	8.24%	0%	0%	0%	0%	1.29%	0%	03/31/2019
<b>REAL ESTATE</b>											
Cohen & Steers Institutional Realty Shares	81	CSRIX	99.21%	0%	0%	0%	0%	0%	0.79%	0%	03/31/2019
<b>FOREIGN LARGE GROWTH</b>											
American Funds EuroPacific Growth Fund (R6)	89	RERGX	1.33%	92.22%	0.06%	0.16%	0.03%	0%	6.14%	0.06%	03/31/2019
<b>DIVERSIFIED EMERGING MKTS</b>											
Invesco Oppenheimer Developing Mkts Fund (R6)	91	ODVIX	0.61%	90.42%	0%	0%	0%	1.34%	5.04%	2.59%	04/30/2019
<b>COMMODITIES BROAD BASKET</b>											
PIMCO Commodity RealReturn Stgy. Fund (I)	60	PCRIX	--	--	--	--	--	--	--	--	--
<b>INTERMEDIATE CORE BOND</b>											
Baird Aggregate Bond Fund (I)	98	BAGIX	0%	0%	80.38%	12.17%	1.31%	0%	6.14%	0%	03/31/2019
<b>HIGH YIELD BOND</b>											
Eaton Vance High Income Opport. Fund (I)	63	EIHIX	1.59%	0.17%	77.14%	16.25%	0%	0.52%	4.33%	0%	04/30/2019
<b>INFLATION-PROTECTED BOND</b>											
BlackRock Infla. Protected Bond Fund (K)	63	BPLBX	--	--	--	--	--	--	--	--	--
<b>WORLD BOND</b>											
Templeton Global Bond Fund (R6)	68	FBNRX	--	--	--	--	--	--	--	--	--

# PERFORMANCE REPORT

CITY OF MADISON  
CITY OF MADISON 457 DEFERRED COMPENSATION PLAN  
FOR PERIOD ENDING 31 MARCH 2019

## Asset Allocation

Fund Name	Ticker	Domestic Stock	Foreign Stock	Domestic Bond	Foreign Bond	Convertibles	Preferreds	Cash	Other	As Of Date
<b>ALLOCATION--50% TO 70% EQUITY</b>										
American Funds American Balanced Fund (R6)	100 ■ RLBGX	53.76%	8.31%	28.92%	3.04%	0.10%	0.11%	5.76%	0%	03/31/2019
<b>TARGET-DATE 2000-2010</b>										
Schwab Target 2010 Index Fund	SWYAX	26.54%	9.64%	52.84%	2.96%	0.07%	0%	7.94%	0.01%	04/30/2019
<b>TARGET-DATE 2020</b>										
Schwab Target 2020 Index Fund	SWYLY	30.49%	12.76%	46.56%	2.73%	0.06%	0%	7.38%	0.02%	04/30/2019
<b>TARGET-DATE 2025</b>										
Schwab Target 2025 Index Fund	SWYDY	39.14%	17.48%	35.26%	2.34%	0.05%	0%	5.70%	0.02%	04/30/2019
<b>TARGET-DATE 2030</b>										
Schwab Target 2030 Index Fund	SWYEX	45.18%	21.29%	27.00%	1.96%	0.05%	0%	4.50%	0.02%	04/30/2019
<b>TARGET-DATE 2035</b>										
Schwab Target 2035 Index Fund	SWYFY	50.76%	24.68%	20.99%	1.54%	0.04%	0%	1.97%	0.02%	04/30/2019
<b>TARGET-DATE 2040</b>										
Schwab Target 2040 Index Fund	SWYGY	54.06%	27.24%	14.89%	1.11%	0.03%	0%	2.65%	0.02%	04/30/2019
<b>TARGET-DATE 2045</b>										
Schwab Target 2045 Index Fund	SWYHY	57.26%	29.69%	10.28%	0.77%	0.02%	0%	1.96%	0.02%	04/30/2019
<b>TARGET-DATE 2050</b>										
Schwab Target 2050 Index Fund	SWYMY	59.13%	31.23%	7.67%	0.58%	0.01%	0%	1.35%	0.02%	04/30/2019
<b>TARGET-DATE 2055</b>										
Schwab Target 2055 Index Fund	SWYJY	60.27%	32.50%	5.67%	0.43%	0.01%	0%	1.09%	0.03%	04/30/2019
<b>TARGET-DATE 2060+</b>										
Schwab Target 2060 Index Fund	SWYNY	61.45%	33.44%	4.01%	0.30%	0.01%	0%	0.76%	0.03%	04/30/2019

## Investment Categories

EQUITY			
Domestic			
	Value	Blend	Growth
Large	MEIKX	RFNGX TISCX VFIAX	CEYIX FIFRX
Medium	ARAIX PMVQX	PFPMX	VSNGX
Small	FCVIX		JVTNX
Global			
Foreign			
	ODVIX REGX		
Specialty			
	CSRIX PCRIX		

FIXED INCOME			
Domestic			
	Short	Intermediate	Long
High		BAGIX BPLBX	
Medium			
Low	EIHIX		
Global			
	FBNRX		

OTHER			
Balanced		Target	
RLBGX	SWYAX	SWYJX	
	SWYDX	SWYLY	
	SWYEX	SWYMX	
	SWYFX	SWYNX	
	SWYGX		
	SWYHX		
Cash Equivalent			

## Notes

This grid provides a visual representation of the categories covered by the plan's investments. For domestic equity funds, the vertical axis shows the market capitalization of the fund's investments, and the horizontal axis shows the investment style. For domestic fixed income funds, the vertical axis shows the average credit quality of the bonds owned, and the horizontal axis shows interest rate sensitivity as measured by a bond's duration. Global, foreign, and specialty equity funds, as well as global fixed income funds, are also represented in the category grid. Three "Other" categories are displayed to distinguish balanced, target and cash investment types.

Category assignment is based on information provided by Morningstar, your plan representative, or other sources, and may not always be consistent with information provided in the fund's prospectus.

## Fund References

ARAIX	Ariel Fund (I)	Mid-Cap Value
BAGIX	Baird Aggregate Bond Fund (I)	Intermediate Core Bond
BPLBX	BlackRock Infla. Protected Bond Fund (K)	Inflation-Protected Bond
CEYIX	Calvert Equity Fund (I)	Large Growth
CSRIX	Cohen & Steers Institutional Realty Shares	Real Estate
EIHIX	Eaton Vance High Income Opport. Fund (I)	High Yield Bond
FBNRX	Templeton Global Bond Fund (R6)	World Bond
FCVIX	Fidelity Advisor Small Cap Value Fund (I)	Small Value
FIFRX	Franklin Growth Fund (R6)	Large Growth
JVTNX	Janus Henderson Venture Fund (N)	Small Growth
MEIKX	MFS Value Fund (R6)	Large Value
ODVIX	Invesco Oppenheimer Developing Mkts Fund (R6)	Diversified Emerging Mkts
PCRIX	PIMCO Commodity RealReturn Stgy. Fund (I)	Commodities Broad Basket
PFPMX	Parnassus Mid Cap Fund (I)	Mid-Cap Blend
PMVQX	PGIM QMA Mid-Cap Value Fund (R6)	Mid-Cap Value
REGX	American Funds EuroPacific Growth Fund (R6)	Foreign Large Growth
RFNGX	American Funds Fundamental Investors (R6)	Large Blend
RLBGX	American Funds American Balanced Fund (R6)	Allocation--50% to 70% Equity
SWYAX	Schwab Target 2010 Index Fund	Target-Date 2000-2010
SWYDX	Schwab Target 2025 Index Fund	Target-Date 2025
SWYEX	Schwab Target 2030 Index Fund	Target-Date 2030
SWYFX	Schwab Target 2035 Index Fund	Target-Date 2035
SWYGX	Schwab Target 2040 Index Fund	Target-Date 2040
SWYHX	Schwab Target 2045 Index Fund	Target-Date 2045
SWYJX	Schwab Target 2055 Index Fund	Target-Date 2055
SWYLY	Schwab Target 2020 Index Fund	Target-Date 2020
SWYMX	Schwab Target 2050 Index Fund	Target-Date 2050
SWYNX	Schwab Target 2060 Index Fund	Target-Date 2060+
TISCX	TIAA-CREF Social Choice Equity Fund (I)	Large Blend
VFIAX	Vanguard 500 Index Fund (Adm)	Large Blend
VSNGX	JPMorgan Mid Cap Equity Fund (I)	Mid-Cap Growth

## DEFINITIONS

**Alpha** is a measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. A positive alpha figure indicates the portfolio has performed better than its beta would predict. In contrast, a negative alpha indicates the portfolio has underperformed, given the expectations established by beta.

**Asset Classes** are the broad groupings of similar Morningstar categories and include Stock, Bond, Blended, and Cash/Stable Value.

**Average Market Capitalization** – Morningstar defines the overall "size" of a stock fund's portfolio as the geometric mean of the market capitalization for all of the stocks it owns. It's calculated by raising the market capitalization of each stock to a power equal to that stock's stake in the portfolio. The resulting numbers are multiplied together to produce the geometric mean of the market caps of the stocks in the portfolio, which is reported as average market capitalization. This number is different from the fund's median market cap--the capitalization of the median stock in its portfolio. The geometric mean better identifies the portfolio's "center of gravity." That is, it provides more accurate insight into how market trends (as defined by capitalization) might affect the portfolio.

**Benchmark** is the index against which funds within a category are compared.

**Beta** is a measure of a fund's sensitivity to market movements. The beta of the market is 1.00 by definition. Morningstar calculates beta by comparing a fund's excess return over Treasury bills to the market's excess return over Treasury bills, so a beta of 1.10 shows that the fund has performed 10% better than its benchmark index in up markets and 10% worse in down markets, assuming all other factors remain constant. Conversely, a beta of 0.85 indicates that the fund's excess return is expected to perform 15% worse than the market's excess return during up markets and 15% better during down markets.

**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 new and has no portfolio, Morningstar estimates where the Fund will fall before assigning a more permanent category. When necessary, Morningstar may change a category assignment based on current information.

**Category Average** provides the simple average of all fund returns within a particular Morningstar category.

**Expense Ratio** is the percentage of fund assets paid for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's net asset value (NAV). Sales charges are not included in the expense ratio. The net expense ratio reflects the expenses currently being charged by a fund, taking into account any applicable expense and fee waivers. The gross expense ratio does not reflect any fee or expense waivers that may be in effect.

**Information Ratio** is a risk-adjusted performance measure and excess return and risk relative to a specific benchmark index.

**Manager Tenure** indicates the period of time the lead manager has been managing the fund portfolio. For funds without a lead manager, tenure of the manager who has been with the fund the longest is reported. In the case of multiple lead managers, the tenure of the lead manager with the longest tenure is reported.

**Morningstar Rating™** is based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a funds' monthly performance (including the effects of sales charges, loads, and redemption fees), placing more emphasis on downward variations and rewarding consistent performance. The top 10% of funds in each category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The **Overall Morningstar Rating** for a fund is derived from a weighted average of the performance figures associated with its three-, five-, and ten-year (if applicable) Morningstar Rating metrics. Funds with less than three years of performance history are not rated.

**Morningstar Return** is an assessment of a fund's excess return over a risk-free rate (the return of the 90-day Treasury bill) in comparison to similar funds. In each Morningstar Category, the top 10% of funds earn a High Morningstar Return, the next 22.5% Above Average, the middle 35% Average, the next 22.5% Below Average, and the bottom 10% Low. Morningstar Return is measured for up to three time periods (three-, five-, and 10-years). These separate measures are then weighted and averaged to produce an overall measure for the fund. Funds with less than three years of performance history are not rated.

**Morningstar Risk** is an assessment of the variations in a fund's monthly returns, with an emphasis on downside variations, in comparison to similar funds. In each Morningstar Category, the 10% of funds with the lowest measured risk are described as Low Risk, the next 22.5% Below Average, the middle 35% Average, the next 22.5% Above Average, and the top 10% High. Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the fund. Funds with less than three years of performance history are not rated.



## DEFINITIONS

**Peers** include all of the funds that comprise a Morningstar category.

**R-squared** reflects the percentage of a fund's movements that can be explained by movements in its benchmark index. An R-squared of 100 indicates that all movements of a fund can be explained by movements in the index. Thus, index funds that invest only in S&P 500 stocks will have an R-squared very close to 100. Conversely, a low R-squared indicates that very few of the fund's movements can be explained by movements in its benchmark index. An R-squared measure of 35, for example, means that only 35% of the fund's movements can be explained by movements in the benchmark index.

**Rankings** — returns and statistics for each fund are ranked relative to the returns and statistics for all other funds in each category.

**Sharpe Ratio** is a risk-adjusted measure developed by Nobel Laureate William Sharpe. It is calculated by using standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe Ratio, the better the portfolio's historical risk-adjusted performance. It can be used to compare two portfolios directly on how much excess return each portfolio achieved for a certain level of risk.

**Sortino Ratio** is similar to the Sharpe Ratio except it uses downside risk (downside deviation) in the denominator. Since upside variability is not necessary undesirable, the Sortino ratio is sometimes preferable to a Sharpe ratio. It measures the annualized rate of return for a given level of downside risk.

**Standard Deviation** is the statistical measurement of dispersion about an average, which depicts how widely a stock or portfolio's returns varied over a certain period of time. Investors use the standard deviation of historical performance to try to predict the range of returns that is most likely for a given investment. When a stock or portfolio has a high standard deviation, the predicted range of performance is wide, implying greater volatility.

**Style Drift Score** is the number of times the Morningstar category for a fund has changed during the previous 36 months. This number includes Morningstar changes due to changes in fund composition and administrative changes that occur when Morningstar adds, removes, or modifies a category.

**Total Assets** is the sum of net assets from all share classes of a single fund.

**Total Return** is determined each month by taking the change in monthly net asset value, reinvesting all income and capital gains distributions during that month, and dividing by the starting net asset value. Reinvestments are made using the actual reinvestment net asset value, and daily payoffs are reinvested monthly. Morningstar does not adjust total returns for sales charges. Total return does account for management, administrative, 12b-1 fees and other costs taken out of fund assets. Returns for periods longer than one year are expressed as annualized returns.

**Treynor Ratio** is a measurement of the returns earned in excess of that which could have been earned on a riskless investment (i.e. Treasury Bill) per each unit of market risk assumed. The Treynor ratio (sometimes called reward-to-volatility ratio) relates excess return over the risk-free rate to the additional risk taken; however systematic risk instead of total risk is used. The higher the Treynor ratio, the better the performance under analysis.

**Turnover Ratio** is a measure of the fund's trading activity which is computed by taking the lesser of purchases or sales (excluding all securities with maturities of less than one year) and dividing by average monthly net assets. A turnover ratio of 100% or more does not necessarily suggest that all securities in the portfolio have been traded. In practical terms, the resulting percentage loosely represents the percentage of the portfolio's holdings that have changed over the past year.

## CATEGORIES

Morningstar categories identify funds based on their actual investment styles as measured by their underlying portfolio holdings over a three-year period. If a fund does not have a portfolio history, Morningstar originally estimates its category identification before giving it a more permanent category assignment. Morningstar defines the driving principles behind its category classification system as:

- Individual portfolios within a category invest in similar types of securities and, therefore, share the same risk factors,
- Individual portfolios within a category can, in general, be expected to behave more similarly to one another than to portfolios outside the category,
- The aggregate performance of different categories differs materially over time,
- Categories have enough constituents to form the basis for reasonable peer group comparisons, and
- The distinctions between categories are meaningful to investors and assist in their pursuit of investing goals.

## STOCK FUNDS

Funds that primarily invest in U.S. stocks and other equity securities are generally subdivided based on market capitalization and position on the growth-value spectrum, but also include specialty funds that invest predominantly in one market sector.

### Market Capitalization:

- **Large-Cap Funds** invest primarily in companies that rank in the top 70% of the capitalization of the U.S. equity market.
- **Mid-Cap Funds** focus on medium-size companies or own a mix of small-, mid- and large-cap stocks. The mid-cap range for market capitalization typically falls between \$1 billion and \$8 billion and represents 20% of the capitalization of the U.S. equity market.
- **Small-Cap Funds** invest primarily in companies that rank in the bottom 10% of the capitalization of the U.S. equity market.

### Growth-Value Spectrum:

Funds are assigned an overall style through an asset-weighted average of the value/growth scores of the stocks in the portfolio.

- **Value Funds** include a predominance of stocks with low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow).
- **Blend Funds** hold portfolios in which neither growth nor value characteristics predominate.
- **Growth Funds** include a predominance of stocks with fast growth measures (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields).

### International Funds

**International Stock Funds** that do not specialize in particular regions are categorized as Foreign Funds and further classified according to market capitalization and value/growth characteristics:

- **Foreign Large Funds** primarily invest in stocks that have market caps in the top 70% of each economically integrated market (such as Europe or Asia ex-Japan). Most of these portfolios divide their assets among a dozen or more developed markets, including Japan, Britain, France, and Germany. These portfolios typically have less than 20% of assets invested in U.S. stocks.
- **Foreign Small/Mid Funds** primarily invest in stocks that fall in the bottom 30% of each economically integrated market (such as Europe or Asia ex-Japan). These portfolios typically will have less than 20% of assets invested in U.S. stocks.



## CATEGORIES

## STOCK FUNDS (cont.)

**Foreign Large Funds** may be classified as value, blend or growth funds, while Foreign Small/Mid Funds are categorized as either growth or value funds:

- **Value funds** primarily hold stocks with low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow).
- **Blend funds** hold portfolios in which neither growth nor value characteristics predominate.
- **Growth funds** primarily hold stocks with fast growth measures (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields).

More specialized international equity funds include:

- **Europe Stock Funds** invest at least 70% of total assets in equities and at least 75% of stocks in Europe. Many of these funds emphasize the region's larger and more developed markets, including Britain, the Netherlands, Germany, France, and Switzerland. Many also invest in the region's smaller markets, including the emerging markets of eastern Europe.
- **Latin America Stock Funds** invest at least 70% of total assets in equities and invest at least 75% of stock assets in Latin America. Most of these funds strongly favor the area's large markets, specifically Brazil, Mexico, and Argentina. Smaller markets such as Peru or Columbia generally aren't as well represented in these funds.
- **China Region Funds** invest at least 70% of total assets in equities and invest at least 75% of stock assets in one specific region or a combination of China, Taiwan, and/or Hong Kong.
- **India Equity Funds** invest at least 70% of total assets in equities and invest at least 75% of stock assets in India.
- **Diversified Emerging Markets Funds** invest at least 70% of total assets in equities and invest at least 50% of stock assets in emerging markets. These funds tend to divide their assets among 20 or more nations, although they tend to focus on the emerging markets of Asia and Latin America rather than on those of the Middle East, Africa, or Europe.
- **Diversified Pacific/Asia Funds** invest at least 70% of total assets in equities and invest at least 75% of stock assets in Pacific countries, including at least 10% in Japan. These funds have a wider investment range than other Asia-oriented portfolios. These funds can invest throughout the Pacific Rim, including Australia and New Zealand. As a result, country weightings for these portfolios vary tremendously, though most retain some exposure to Japan and Hong Kong.
- **Pacific/Asia (ex Japan) Stock Funds** invest at least 70% of total assets in equities and at least 75% of stock assets in Pacific countries, with less than 10% in Japan. Most of these funds focus on export-oriented nations such as Hong Kong, Singapore, Taiwan, and Korea.
- **Japan Stock Funds** invest at least 70% of total assets in equities and at least 75% of stock assets in Japan. The Japanese stock market is one of the largest in the world, so Japan Stock Funds holdings vary significantly. Some funds concentrate on Japan's larger companies, while others concentrate on smaller firms.
- **World Large Stock Funds** have few geographical limitations. It is common for these funds to invest the majority of their assets in developed markets, with the remainder divided among the globe's smaller markets. These funds typically have 20%-60% of assets in U.S. stocks.
- **World Small/Mid Stock Funds** have few geographical limitations. It is common for these funds to invest the majority of their assets in developed markets, with the remainder divided among the globe's smaller markets. These funds typically have 20%-60% of assets in U.S. stocks.
- **Global Real Estate Funds** invest primarily in non-U.S. real estate securities, but may also invest in U.S. real estate securities. These portfolios may include debt & equity securities, convertible securities, and securities issued by real estate investment trust and REIT-like entities and by real estate operating companies.
- **Miscellaneous Region** stock portfolios invest in countries or smaller regions that do not have their own category. They typically have a narrow geographical range.

## CATEGORIES

### STOCK FUNDS (cont.)

#### Sector Funds:

**Sector Funds** invest primarily in stocks of companies within a specific sector of the market and are classified by their stated investment objective. Covered sectors include: Communications, Financial, Health, Natural Resources, Real Estate, Technology, Utilities, Consumer Cyclical, Consumer Defensive, Industrials, Infrastructure and Miscellaneous Sectors.

#### Alternative Funds:

**Long-Short Funds** include funds that hold sizable stakes in both long and short positions in equity and debt securities and related futures. Some of these portfolios are market neutral, which means that they divide their exposure equally between long and short positions in an attempt to earn a modest return that is not tied to the market's fortunes. Other portfolios that are not market neutral will shift their exposure to long and short positions depending upon their macro outlook or the opportunities they uncover through research. Alternative funds also include precious metals portfolios that focus on mining stocks. Covered strategies include Bear Market, Single Currency, Multicurrency, Long-Short Equity, Long-Short Credit, Market Neutral, Multialternative, Managed Futures, Volatility and Equity Precious Metals.

**Commodity Funds** invest primarily in equity securities and related derivatives of various commodity markets. Covered markets include: Agriculture, Broad Basket, Energy, Industrial Metals, Miscellaneous, and Precious Metals.

**Trading Funds** seek returns that are equal to a fixed multiple of the short-term returns of an equity, debt, or commodity index. Trading Funds are designed for active traders and are not suitable for long-term investors. Covered strategies include Trading-Leveraged Commodities, Debt, and Equity; Trading-Inverse Commodities, Debt, and Equity; Trading-Miscellaneous; and Option-Based.

### BLENDED FUNDS

Blended (Balanced) Funds usually provide a blend of capital appreciation and income by investing in a combination of stocks, bonds, and cash. Blended funds also include Target-Date and Lifestyle Funds.

- **Allocation Funds** seek to provide both income and capital appreciation by investing in multiple asset classes, including stocks, bonds, and cash. These portfolios are dominated by domestic holdings and designed to have an equity exposure within a specified range.
- **World Allocation Funds** invest in stocks, bonds, and cash. While World Allocation Funds explore the whole world, most focus on the U.S., Canada, Japan, and the larger markets in Europe. These funds typically have at least 10% of assets in bonds, less than 70% of assets in stocks, and at least 40% of assets in non-U.S. stocks or bonds.
- **Tactical Allocation Funds** seek to provide capital appreciation and income by actively shifting allocations between asset classes. These portfolios have material shifts across equity regions and bond sectors on a frequent basis.



## CATEGORIES

### BLENDABLE FUNDS (cont.)

**Target-Date Funds** provide a diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind for retirement or another goal. These funds aim to provide investors with an optimal level of return and risk, based solely on the target date. Over time, management adjusts the allocation among asset classes to more conservative mixes as the target date approaches, following a preset glide path. A target-date fund is part of a series of funds offering multiple retirement dates to investors.

**Convertible Funds** are designed to offer some of the capital-appreciation potential of stock funds while also supplying some of the safety and yield of bond funds. To do so, they focus on convertible bonds and convertible preferred stocks. Convertible bonds allow investors to convert the bonds into shares of stock, usually at a preset price. These securities thus act a bit like stocks and a bit like bonds.

### BOND FUNDS

Bond Funds invest primarily in fixed-income securities.

**Government Funds** have at least 90% of their bond holdings invested in bonds backed by the U.S. government or by government-linked agencies, and are further divided by duration:

- **Long Funds** invest in securities with a duration of greater than 6 years or (if duration is unavailable) an average effective maturity of greater than or equal to 10 years.
- **Intermediate Funds** invest in securities with a duration of 3.5 to 6 years or (if duration is unavailable) an average effective maturity of 4 to 10 years.
- **Short Funds** invest in securities with a duration of 1 to 3.5 or (if duration is unavailable) an average effective maturity of 1 to 4 years.

**Long-Term Bond Funds** invest primarily in corporate and other investment-grade U.S. fixed-income issues with a duration greater than 6 years or (if duration is unavailable) an average effective maturity greater than 10 years.

**Intermediate-Term Bond Funds** invest primarily in corporate and other investment-grade U.S. fixed-income issues with a duration of 3.5 to 6 years or (if duration is unavailable) an average effective maturity of 4 to 10 years.

**Short-Term Bond Funds** invest primarily in corporate and other investment-grade U.S. fixed-income issues with a duration of 1 to 3.5 years or (if duration is unavailable) an average effective maturity of 1 to 4 years.

**Ultrashort Bond Funds** invest primarily in investment-grade U.S. fixed-income issues with a duration of less than 1 year or (if duration is unavailable) an average effective maturity of less than 1 year. This category includes corporate and government bond funds, but excludes international, convertible, multisector, and high yield bond funds.

**Corporate Bond Funds** concentrate on bonds issued by corporations. These tend to have more credit risk than government or agency-backed bonds. These portfolios hold more than 65% of assets in corporate bonds, hold less than 40% of assets in foreign bonds, hold less than 35% of assets in high yield bonds, and have an effective duration greater than 75% of the securities in the Morningstar Core Bond Index.

**Bank Loan Funds** primarily invest in floating-rate bank loans and floating-rate investment-grade securities instead of bonds. In exchange for their credit risk, these loans offer high interest payments that typically float above a common short-term benchmark such as the London Interbank Offered Rate, or LIBOR.

**Muni Bond Funds** primarily invest in bonds issued by state and/or local governments to fund public projects. The income from such bonds is generally free from federal taxes and, in certain cases, from state taxes in the issuing state. Given the variety of states and municipalities, the duration and quality of the Muni Bond Funds can vary significantly.

## CATEGORIES

### BOND FUNDS (cont.)

**High Yield Bond Funds** concentrate on lower-quality bonds. These funds primarily invest in U.S. high-income fixed-income securities where at least 65% or more of bond assets are not rated or are rated by a major agency at the level of BB (considered speculative for taxable bonds) and below.

**Multisector Bond Funds** seek income by diversifying their assets among several fixed-income sectors, usually U.S. government obligations, U.S. corporate bonds, foreign bonds, and high-yield U.S. debt securities. These funds typically hold 35% to 65% of bond assets in securities that are not rated or are rated by a major agency at the level of BB (considered speculative for taxable bonds) and below.

**Inflation-Protected Bond Funds** primarily invest in debt securities that adjust their principal values in line with the rate of inflation. These bonds can be issued by any organization, but the U.S. Treasury is currently the largest issuer of these types of securities.

**World Bond Funds** invest 40% or more of their assets in foreign bonds. These portfolios invest primarily in investment-grade rated issues, but their strategies can vary. Some follow a conservative approach, sticking with high-quality bonds from developed markets and/or hedging foreign currency exposure back to the U.S. dollar. Others are more adventurous, owning some lower-quality bonds from developed or emerging markets and/or taking meaningful foreign currency risk. Some portfolios invest exclusively outside the U.S., while others regularly invest in both U.S. and non-U.S. bonds.

**Emerging Markets Bond Funds** invest more than 65% of assets in foreign bonds from developing countries. The largest portion of the emerging-markets bond market comes from Latin America, followed by Eastern Europe, Africa, the Middle East, and Asia make up the rest.

**Emerging Markets Local Currency Bond Funds** invest more than 65% of their assets in foreign bonds from developing countries in the local currency. Funds in this category have a mandate to maintain exposure to currencies of emerging markets. The largest portion of the emerging-markets bond market comes from Latin America, followed by Eastern Europe, Africa, the Middle East, and Asia.

**Nontraditional Bond Funds** pursue strategies divergent in one or more ways from conventional practice in the broader bond-fund universe. Funds within this category often will use credit default swaps and other fixed income derivatives to a significant level within their portfolios.

**Preferred Stock Funds** concentrate on preferred stocks and perpetual bonds. These portfolios tend to have more credit risk than government or agency-backed bonds and effective durations longer than other bond portfolios. These portfolios hold more than 65% of assets in preferred stocks and perpetual bonds.

### CASH/STABLE VALUE FUNDS

**Taxable Money Market Funds** invest in short-term money market securities to provide a level of current income consistent with the preservation of capital. These funds do not designate themselves as Prime in Form N-MFP.

**Prime Money Market** invest in short-term money market securities in order to provide a level of current income that is consistent with the preservation of capital. These funds designate themselves as Prime in Form N-MFP.

**Tax-Free Money Market Funds** invest in short-term municipal money market securities that are often exempt from some federal and state taxes. These funds provide current income and aim to preserve capital. These funds do not designate themselves as Prime in Form N-MFP.

**Non-40 Act Money Market Funds** invest in short-term money market securities in order to provide a level of current income that is consistent with the preservation of capital. These funds are not subject to 2a-7 regulations under the Investment Company Act of 1940. This category is used only in Morningstar's custom fund, separate account, and collective investment trust databases.

**Stable Value Funds** typically invest in guaranteed investment contracts (GICs) and Synthetic GICs. Traditional GICs are contracts between insurance firms and a retirement plan guaranteeing investors a fixed rate of return. The more common synthetic GICs are high-quality, short- to intermediate-term bonds that are bound by insurance "wrappers." If a stable value portfolio falls below the rate of return set by the wrapper, the insurer pays the difference, keeping the fund stable.

The following statistics are not available for Money Market and Stable Value Funds: Alpha, Beta, R-squared, Treynor Ratio, Turnover Ratio, Morningstar Risk 3-Year and Morningstar Rating 3-Year.

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The portfolio manager is the individual (or individuals) responsible for the overall fund strategy, as well as the buying and selling decisions of the securities in a fund's portfolio. If one manager is considered the lead manager for the fund, that individual's name, along with the individual's tenure, is listed. If more than one manager is designated as a lead manager, the lead manager with the longest tenure is listed. If no manager is identified as lead manager, the manager with the longest tenure is listed.

Total Assets displayed include the assets for all share classes of a fund. Total Assets are reported as of the end of the most recent month available to Morningstar.

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Morningstar groups funds in categories based on the fund's underlying portfolio holdings (portfolio statistics and compositions over the past three years). If a fund is new, Morningstar will estimate where the fund will fall until a more permanent category can be assigned. A fund's category may change based on current information.

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