

City of Milwaukee Employees' Retirement System

Public Fund Universe Analysis

Period Ending June 30, 2015

Fund Number: 105



Celebrating 30 Years!

Trust ♦ Client Service ♦ Professional Expertise

RVK Overview

- **Established in 1985**, RVK provides clients with world-class investment advice and is one of the nation's largest and most trusted institutional investment consulting firms.
- **National firm** with headquarters in Portland, Oregon and offices in New York City (celebrating its 10th year in 2015!) and Chicago, serving nearly 200 clients across the U.S.
- **Since its inception**, RVK has maintained a strict, no conflicts of interest policy, ensuring a direct alignment of interests between RVK and its clients.

RVK by the Numbers

- **\$700+ billion** - Full Retainer Assets Under Advisement
- **99** - Investment Professionals
- **55** - Advanced Degrees and Certifications
- **100%** - Revenue Derived from Client Fees
- **100%** - Employee Ownership
- **100%** - Non-Discretionary Investment Consulting

Core Services

Strategic Asset Allocation

Investment Manager Research

Investment Policy Development

Proprietary Public Fund Research

Performance Analytics

Client Education & Training

Specialty Services

Governance & Regulatory Research

Customized Defined Contribution Solutions

Asset/Liability Studies

Custody & Recordkeeper Searches

Outsourced CIO Search & Monitoring

Dedicated Real Estate Consulting



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Participants

Alameda County Employees' Retirement Association

California Public Employees' Retirement System

Chicago Teachers' Pension Fund

City of Milwaukee Employees' Retirement System (105)

Civilian Employees' Retirement System of the Police Department of Kansas City, Missouri

Contra Costa County Employees' Retirement Association

District of Columbia Retirement Board

Employees Retirement System of Texas

Fire and Police Pension Association of Colorado

Florida State Board of Administration

Fresno County Employees' Retirement Association

Georgia Division of Investment Services

Illinois Municipal Retirement Fund

Imperial County Employees' Retirement System

Kansas Public Employees' Retirement System

Kentucky Teachers' Retirement System

Los Angeles City Employees' Retirement System

Los Angeles Fire and Police Pension System

Marin County Employees' Retirement Association

Merced County Employees' Retirement Association

Montana Public Employees' Retirement System

Nevada Public Employees' Retirement System

North Carolina Retirement System

Orange County Employees' Retirement System

Pennsylvania State Employees' Retirement System

Public Employees Retirement Association of New Mexico

Sacramento County Employees' Retirement System

San Diego City Employees' Retirement System

San Joaquin County Employees' Retirement Association

Arlington County Employees' Retirement System

California State Teachers' Retirement System

City of Fresno Retirement Systems

City of Phoenix Employees' Retirement System

Colorado Public Employees' Retirement Association

County Employees' Annuity & Benefit Fund of Cook County

Educational Employees' Supplementary Retirement System of Fairfax County

Fire & Police Employees' Retirement System of Baltimore

Fire and Police Pension Fund, San Antonio

Fort Worth Employees' Retirement Fund

Ft. Lauderdale General Employees' Retirement System

Gila River Indian Community Retirement Plan

Illinois State Board of Investment

Iowa Public Employees' Retirement System

Kentucky Retirement Systems

Kern County Employees' Retirement Association

Los Angeles County Employees Retirement Association

Los Angeles Water & Power Employees Retirement Plan

Mendocino County Employees' Retirement Association

Minnesota State Board of Investment

Montana Teachers' Retirement System

New York State Common Retirement Fund

Ohio Public Employees' Retirement System

Pennsylvania Public School Employees' Retirement System

Police Retirement System of Kansas City, Missouri

Public School and Education ERS of Missouri

San Bernardino County Employees' Retirement Association

San Diego County Employees Retirement Association



San Jose Police and Fire Department Retirement Plan
Santa Barbara County Employees' Retirement System
South Dakota Retirement System
State of Michigan Retirement Systems
State Retirement and Pension System of Maryland
State Universities Retirement System of Illinois
Teachers' Retirement System of the State of Illinois
The Navajo Nation Retirement Plan
Utah Retirement Systems
Virginia Retirement System
Wyoming Retirement System

San Jose Federated City Employees' Retirement System
San Mateo County Employees' Retirement Association
Sonoma County Employees' Retirement Association
Stanislaus County Employees' Retirement Association
State of New Jersey Pension Fund
State Teachers Retirement System of Ohio
Teachers' Retirement System of Louisiana
Texas Municipal Retirement System
Tulare County Employees' Retirement Association
Ventura County Employees' Retirement Association
West Virginia Investment Management Board

Second Quarter Economic Environment

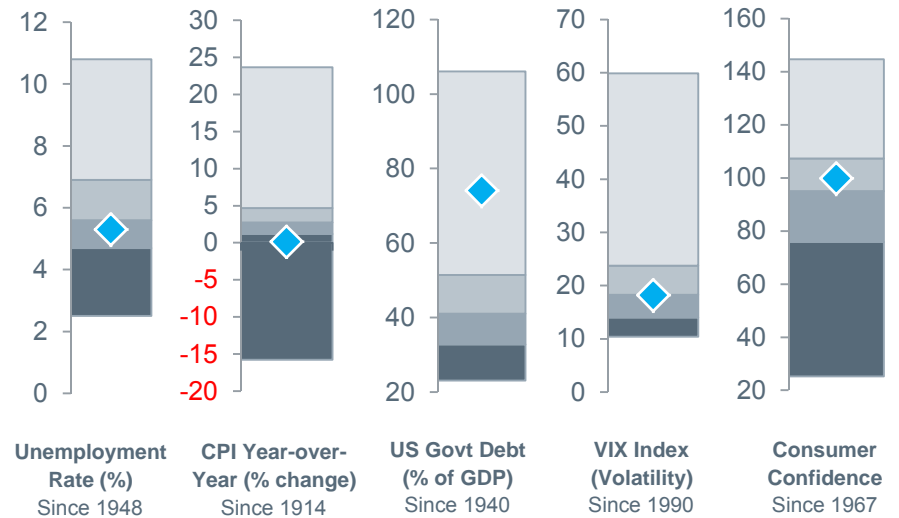
Key Economic Indicators

Market activity in the second quarter of 2015 saw the reversal of several major trends. First, US Dollar strength dissipated to a degree, as it sold off almost 3% relative to other developed currencies. Second, developed market interest rates, which had been trending lower and were negative in some markets, reversed sharply. Finally, oil prices, in part helped by weakness in the US Dollar, bounced off the Q1 lows and finished the second quarter higher. Relatively benign equity volatility in April and May gave way to heightened volatility in the second half of June, with investors fixated on Greece's debt situation and government intervention in China. Still, global equity markets generally finished the quarter with small gains. Uninspiring first half economic data across a number of categories was enough to convince the Federal Reserve to maintain interest rates at 0%. The Board cited below target inflation, softer GDP growth, and lower labor productivity as reasons to be wary of increasing rates. Economic data released during the second quarter was largely consistent with that view.

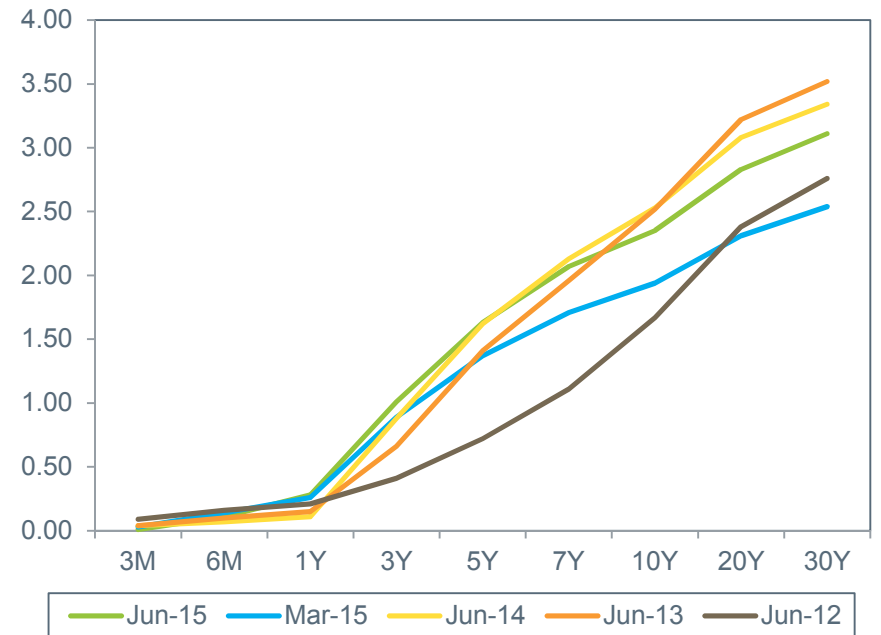
Economic Indicators	Jun-15	Mar-15	Jun-14	Jun-12	20 Yr
Federal Funds Rate (%)	0.08 ▲	0.06	0.09	0.09	2.74
Breakeven Infl. - 1 Yr (%)	0.73 ▼	1.46	1.46	-0.09	N/A
Breakeven Infl. - 10 Yr (%)	1.89 ▲	1.78	2.24	2.10	N/A
CPI YoY (Headline) (%)	0.1 ▲	-0.1	2.1	1.7	2.3
Unemployment Rate (%)	5.3 ▼	5.5	6.1	8.2	6.0
Real GDP YoY (%)	2.3 ▼	2.9	2.6	2.5	2.4
PMI - Manufacturing	53.50 ▲	51.50	55.70	51.30	52.00
USD Total Wtd Idx	89.94 ▼	92.06	75.73	74.50	86.43
WTI Crude Oil per Barrel (\$)	59 ▲	48	105	85	54
Gold Spot per Oz (\$)	1,172 ▼	1,184	1,327	1,597	723

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	0.28	1.23	7.42	17.34	7.89
Russell 2000	0.42	4.75	6.49	17.08	8.40
MSCI EAFE (Net)	0.62	5.52	-4.22	9.54	5.12
MSCI EAFE SC (Net)	4.34	10.15	-0.77	12.40	6.59
MSCI Emg Mkts (Net)	0.69	2.95	-5.12	3.69	8.11
Barclays US Agg Bond	-1.68	-0.10	1.86	3.35	4.44
BofA ML 3 Mo US T-Bill	0.01	0.01	0.02	0.08	1.42
NCREIF ODCE (Gross)	3.82	7.34	14.43	14.41	6.85
Wilshire US REIT	-9.93	-5.73	5.21	14.73	6.92
HFN FOF Multi-Strat	0.10	2.63	3.48	3.97	2.95
Bloomberg Cmdbt (TR)	4.66	-1.56	-23.71	-3.91	-2.62

Key Economic Indicators



Treasury Yield Curve (%)



Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service. Breakeven Inflation does not have 20 years of history; therefore, its 20-year average is shown as N/A.



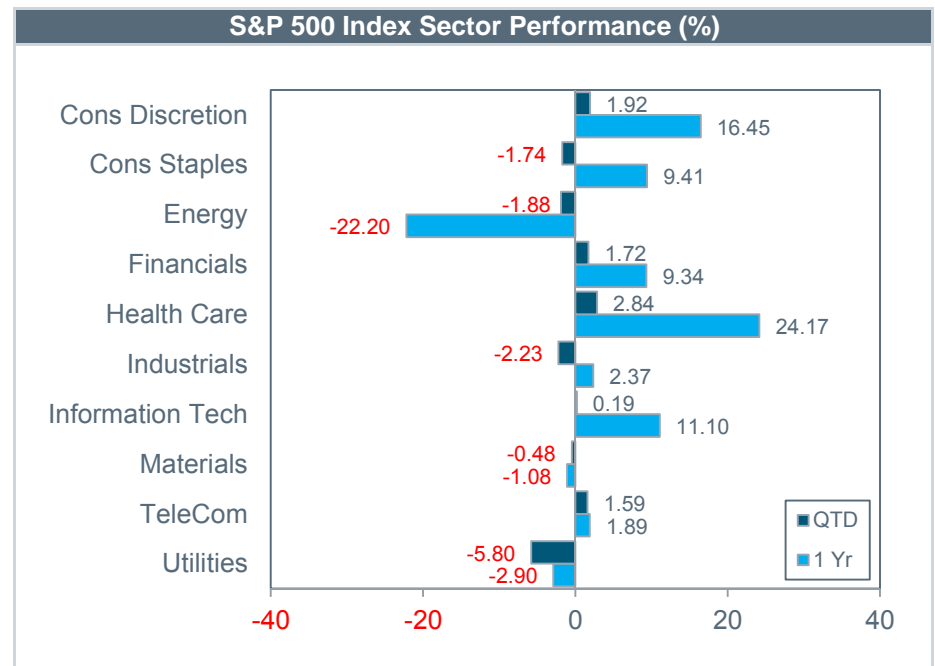
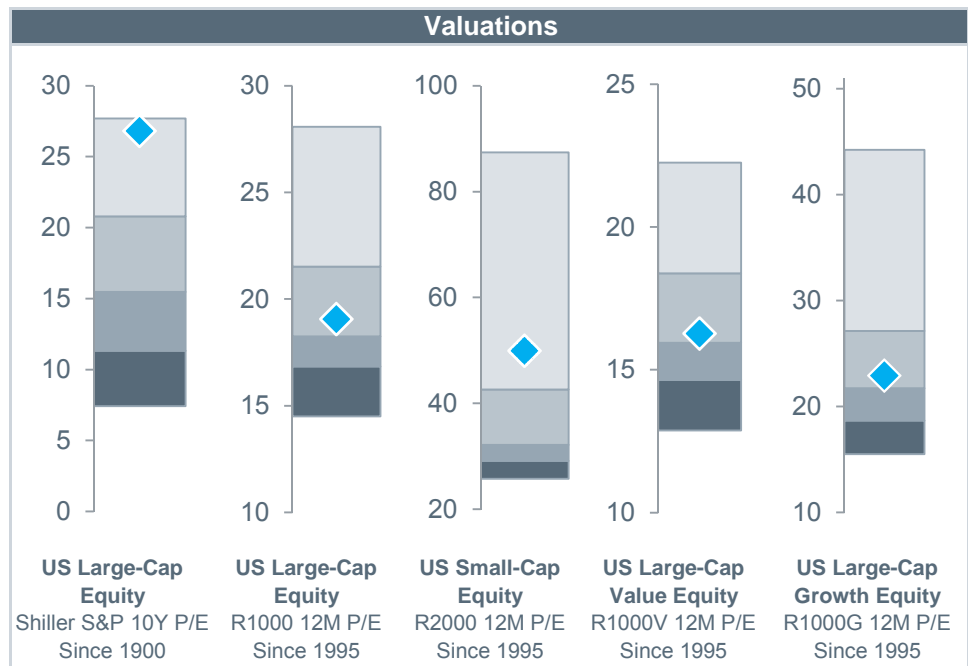
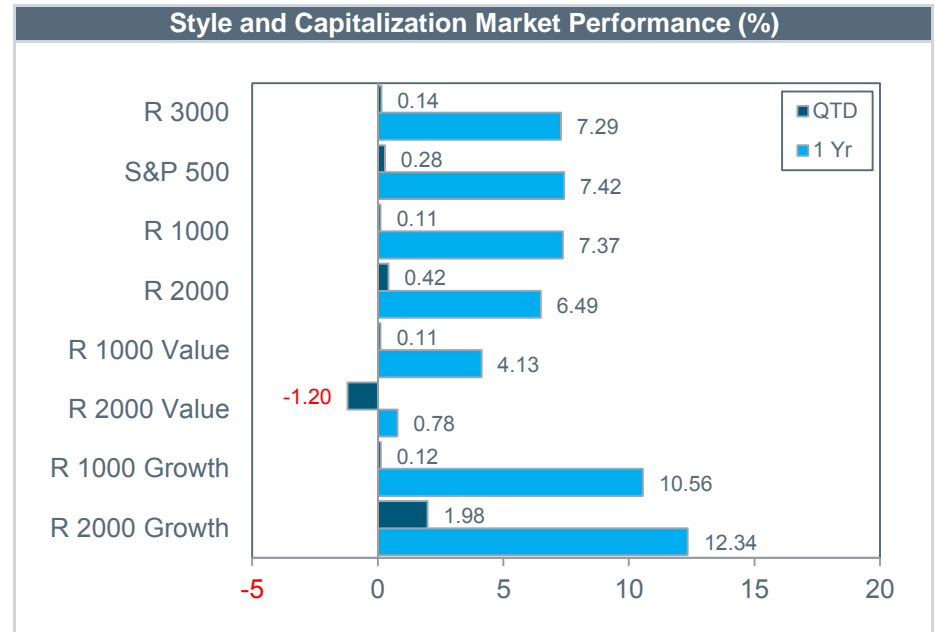
Second Quarter Review

Broad Market
 The US equity market ended the quarter relatively flat as market turmoil overseas impacted domestic markets in June and erased otherwise positive April and May performance.

Market Cap
 Large-cap stocks experienced mainly flat performance, while mid-cap stocks faced strong headwinds and ended in negative territory. Micro- and small-cap stocks were the top performers during the quarter.

Style
 The Russell 3000 Index finished the quarter returning 0.14%, with growth moderately outperforming value. Within the micro- and small-cap segments, growth outperformed value by 414 and 318 basis points, respectively.

Sector
 Investors with exposure to the consumer discretionary and health care sectors benefited from gains in those segments. The energy, industrials, REIT and utilities sectors posted notably negative performance.



Valuation data courtesy of Bloomberg Professional Service and Robert J. Shiller, Irrational Exuberance, Second Edition. P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.



Second Quarter Review

Broad Market

During the second quarter of 2015, international markets, both developed and emerging, outperformed the US markets by 48 and 55 bps, respectively.

Market Cap & Style

Within the developed markets, growth stocks continued to outperform value stocks; while within emerging markets, value stocks outperformed growth stocks. On average, small-cap stocks tended to outperform their larger-cap counterparts.

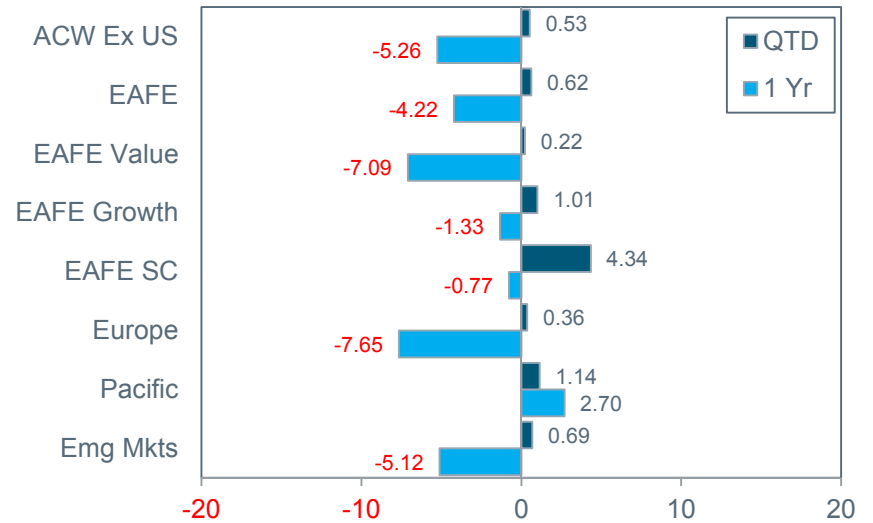
Developed Markets

The strongest contributor to performance for the quarter, as measured by the MSCI EAFE Index, was Japan. Japan reported 2.4% GDP growth for the previous quarter, giving some confidence that Abenomics has started to work.

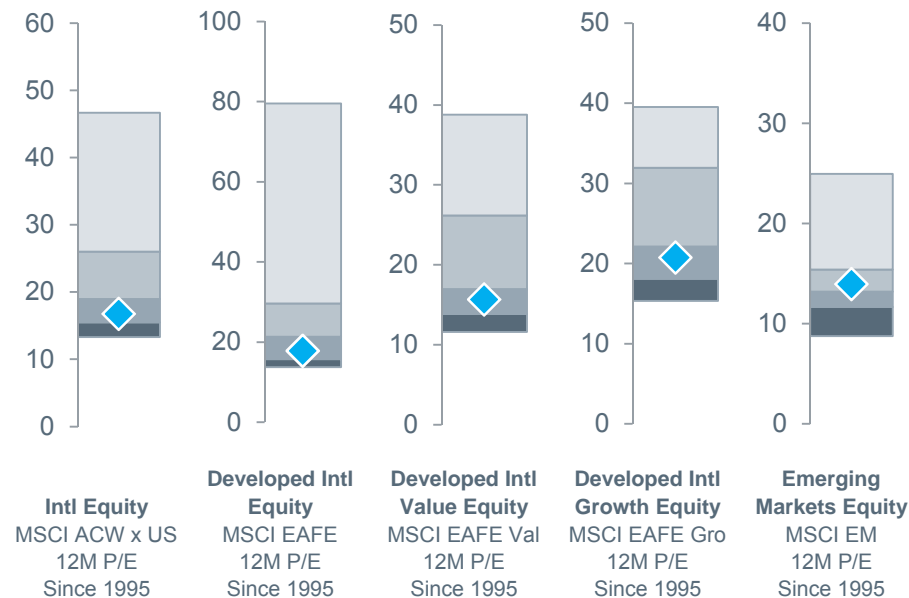
Emerging Markets

The emerging markets slightly outperformed their developed counterparts. Greece's debt crisis dominated the headlines yet its equity markets actually saw positive performance for the quarter. Over the past year, the Shanghai composite has risen over 150%, partially fueled by government intervention.

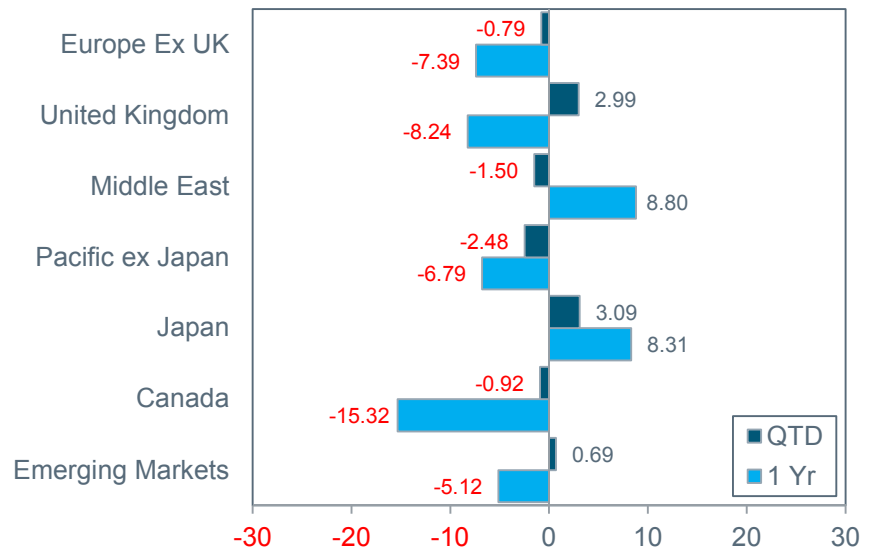
MSCI Style and Capitalization Market Performance (%)



Valuations



MSCI Region Performance (%)



Valuation data courtesy of Bloomberg Professional Service.

P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers. All returns are shown net of foreign taxes on dividends.



Second Quarter Review

Broad Market

Fixed income markets were down as rates rose and credit spreads widened. The Barclays US Aggregate Bond Index was down 1.68% posting negative returns for all three months of Q2 – the first 3-month negative run since 2008. Reduced liquidity in fixed income markets has led to higher market price volatility and increased trading costs.

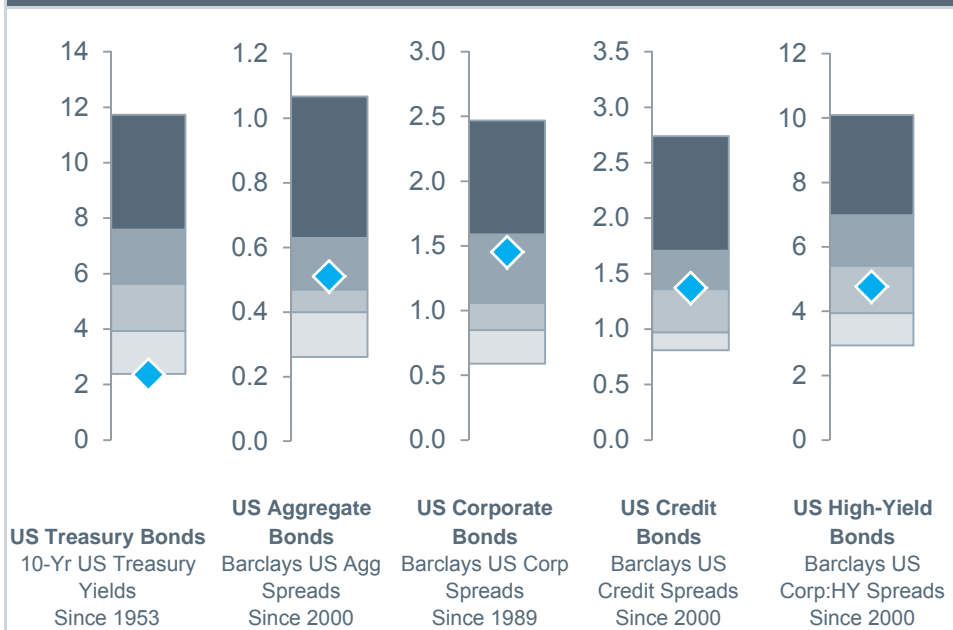
US Treasury Market

The 10- and 30-year Treasury yields rose by 40 and 57 basis points, respectively, in anticipation of a Fed funds rate hike. Long duration bonds suffered accordingly.

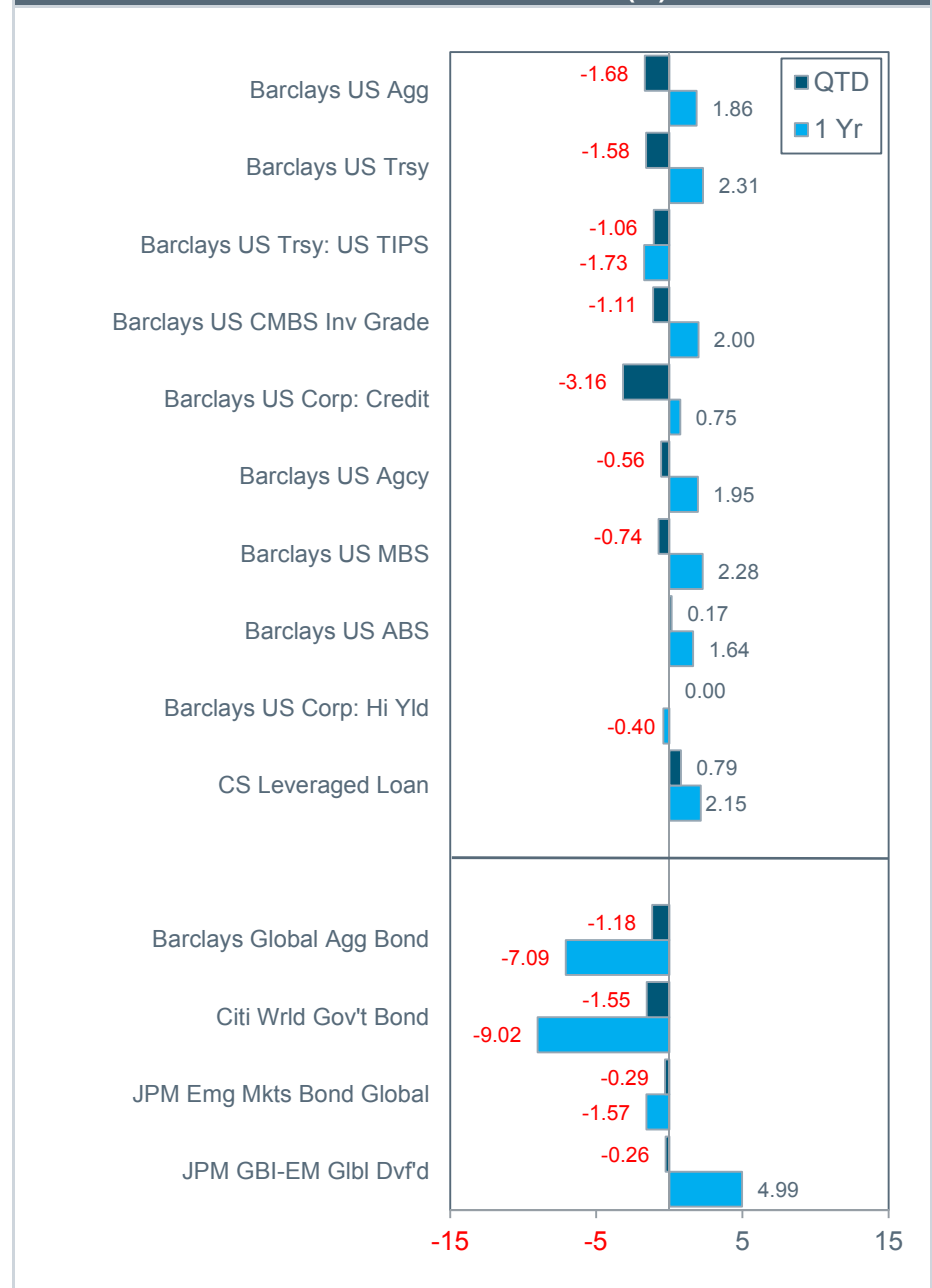
Foreign Currency

Government bond yields for many of the larger European countries bottomed out in April and climbed through the month of May and June as questions arose about whether Greece would be able to service its debt. Hard currency emerging market debt outperformed local currency for the ninth consecutive quarter.

Valuations



Fixed Income Performance (%)



Valuation data courtesy of Bloomberg Professional Service. Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.



Second Quarter Review - Absolute Return

General Market - Hedge Funds

Most hedge fund strategies generated positive returns in the second quarter, adding to gains realized in Q1. Long/Short equity funds in particular are having a strong 2015. Top tier managers have added alpha on both their long and short positions as they were able to capture the majority of equity market upside during the months of April and May, and protected capital well toward the end of June as markets sold off.

General Market - Global Tactical Asset Allocation (GTAA)

In April and May, most GTAA managers posted gains and outperformed a relatively-undiversified, US-centric 60/40 allocation; however, the majority posted losses for the quarter due to the volatility that occurred in June. In a break from performance characteristics of the past two quarters, valuation driven managers outperformed growth-oriented equity strategies. Thematic and/or secular focuses on yield-oriented holdings, however, were a key determinant in the underperformance of several managers as yield-sensitive equities, especially REITs, lagged.

Second Quarter Review - Real Assets

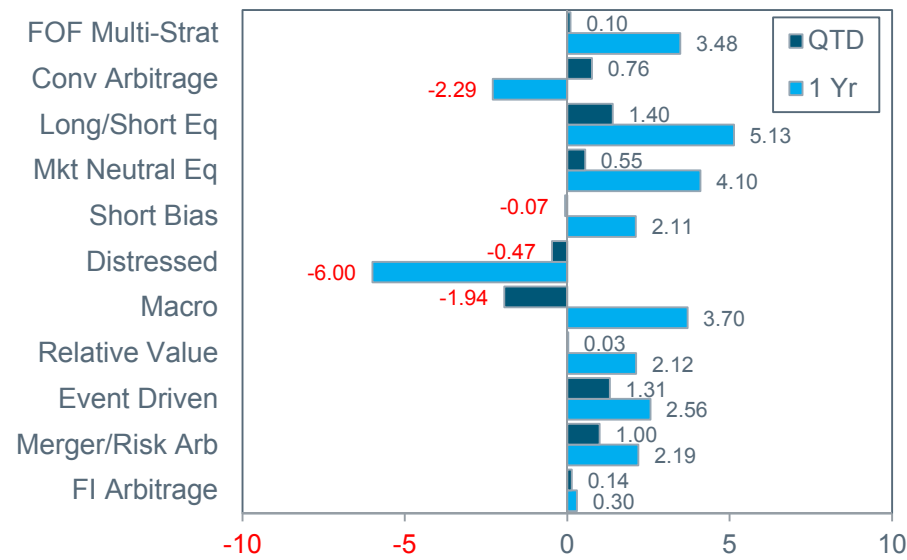
General Market - Diversified Inflation Strategies (DIS)

Even with low short-term inflation expectations, disparate measures of inflation, a difficult quarter for equities and rising real yields, most diversified inflation strategies outperformed a moderate duration TIPS allocation. Managers with larger energy and agricultural commodities exposures saw a key reversal of their underperformance from earlier in the year. Managers with larger US REIT equity allocations underperformed. Managers with larger TIPS exposures, especially those in longer duration securities, underperformed the broader group.

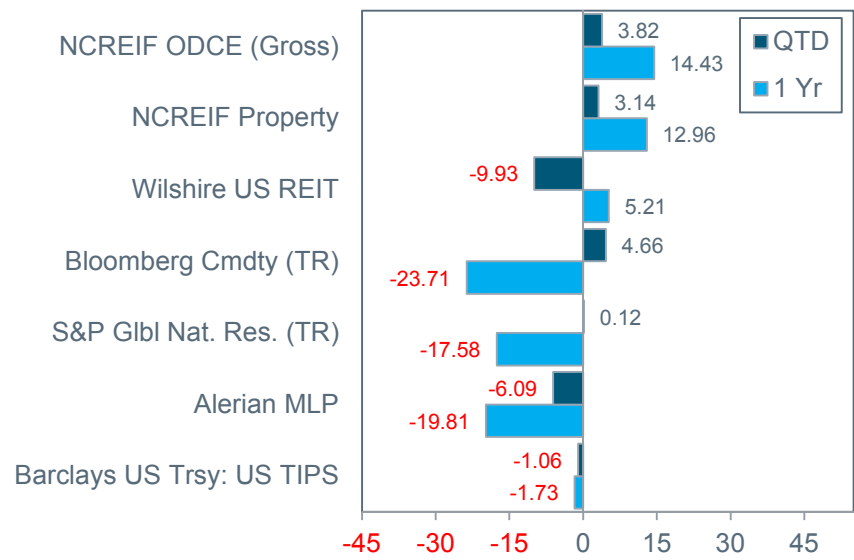
General Market - Real Estate

While real estate securities returns were hampered by rising long-term interest rates in Q2, as evidenced by a -8.93% return in the FTSE NAREIT All REITS Index, private real estate continued its run of strong, positive returns. Preliminary reports from the NCREIF ODCE Index show that US Core Real Estate returned 3.82% for the quarter and 14.43% for the trailing year, marking the 21st consecutive quarter of positive returns in this sector.

HFN Hedge Fund Performance (%)



Real Asset Performance (%)

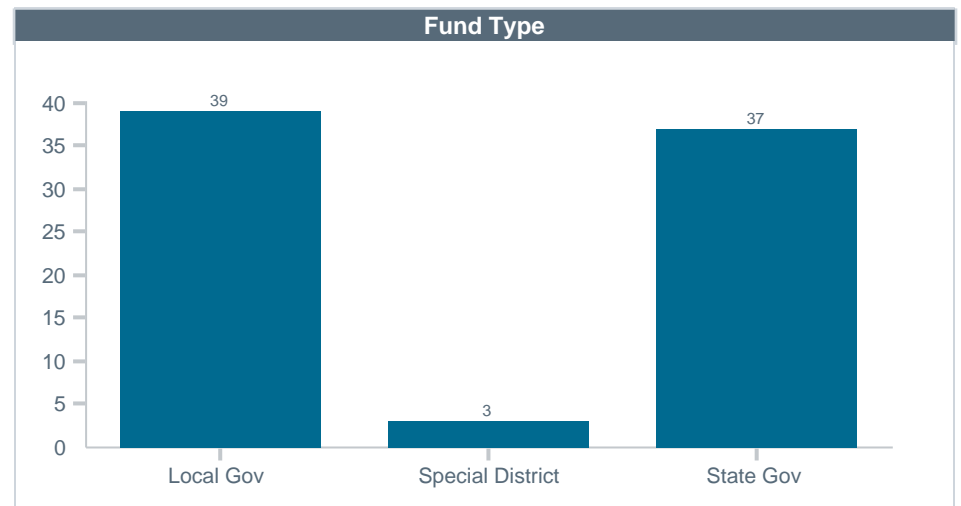
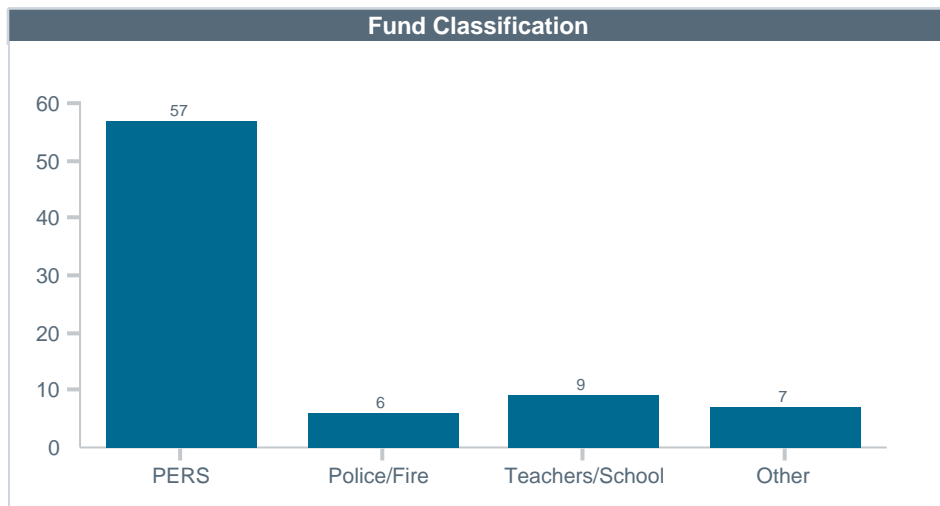
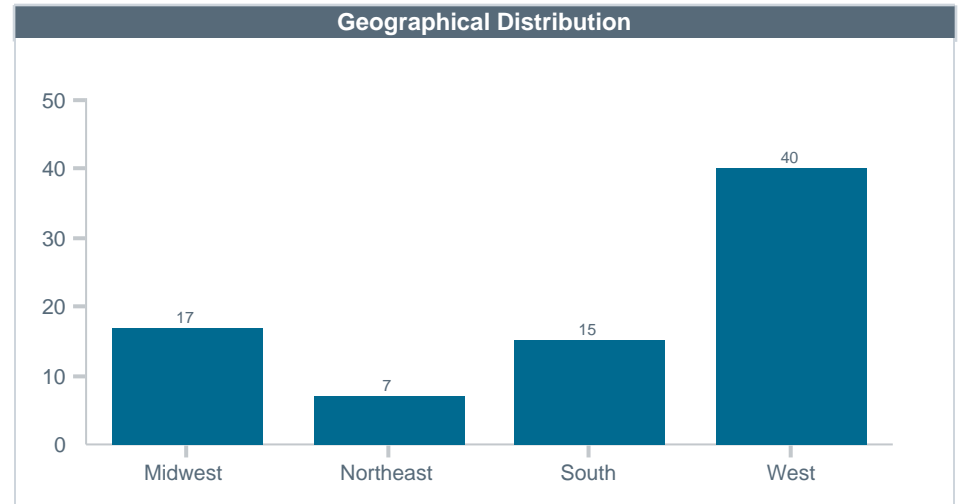
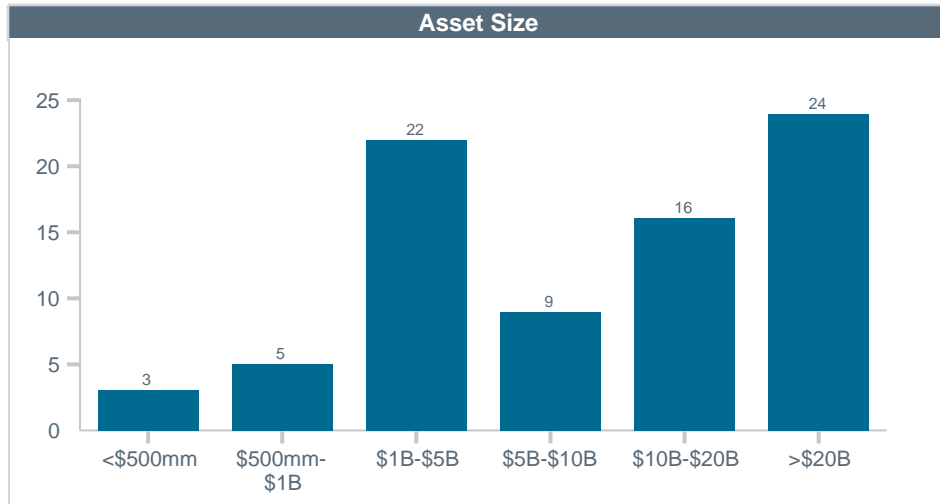


Annual Asset Class Performance

As of June 30, 2015

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	YTD
Best	12.35	25.91	61.34	33.16	34.00	35.97	39.38	8.44	78.51	28.60	22.49	20.00	38.82	31.78	10.15
	8.44	16.56	55.81	31.45	26.19	32.18	16.23	5.24	58.21	26.86	15.99	18.23	32.39	19.31	7.34
	7.89	14.81	47.25	25.55	21.39	26.34	15.97	2.06	46.78	22.04	13.56	17.59	29.30	13.69	5.52
	7.28	10.25	38.59	20.25	21.36	19.31	11.63	-2.35	31.78	18.88	9.24	17.32	22.78	12.50	4.75
	6.61	5.54	36.18	18.33	13.82	18.37	11.17	-10.01	28.60	16.83	7.84	16.34	13.94	5.97	2.95
	5.64	3.58	28.97	13.06	13.54	16.32	9.91	-20.47	27.18	16.36	4.98	16.00	9.10	4.89	2.63
	5.28	3.12	28.68	11.13	6.75	15.79	6.97	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	2.53
	4.42	1.78	23.93	10.88	5.33	11.85	6.60	-33.79	18.91	15.06	0.10	10.94	1.86	3.03	1.23
	2.49	-1.41	11.93	9.15	4.91	9.85	5.49	-35.65	11.41	10.16	-4.18	8.82	0.07	2.45	0.34
	-2.62	-6.17	9.28	8.56	4.55	4.85	5.00	-37.00	9.72	7.75	-5.55	6.98	-2.02	0.04	0.01
	-11.89	-7.83	8.39	8.46	3.07	4.33	1.87	-39.20	5.93	6.54	-12.14	4.80	-2.60	-2.19	-0.10
	-12.53	-15.94	5.87	6.79	2.84	2.71	1.45	-43.38	1.92	6.31	-13.32	4.21	-8.61	-4.90	-1.56
	-19.51	-20.48	4.10	4.34	2.74	2.07	-1.57	-47.01	0.21	4.77	-15.94	0.11	-8.83	-4.95	-4.47
Worst	-21.44	-22.10	1.15	1.33	2.43	0.41	-17.55	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-5.73
	S&P 500 - US Large Cap	R 2000 - US Small Cap	MSCI EAFE (Net) - Int'l Dev.	MSCI EAFE SC (Net) - Int'l SC	MSCI EM (Net) - Int'l Emg Mkts	Barclays US Agg Bond - FI	Barclays US Corp: Hi Yield - FI	Barclays US Trsy: US TIPS - FI	Barclays US Gov/Credit: Lng - FI	NCREIF ODCE (Gross) - Real Estate	Wilshire US REIT - REITs	HFN FOF Multi-Strat (Net) - ARS	Bloomberg Cmdty (TR) - Commod.	BofA ML 3 Mo T-Bill - Cash Equiv	



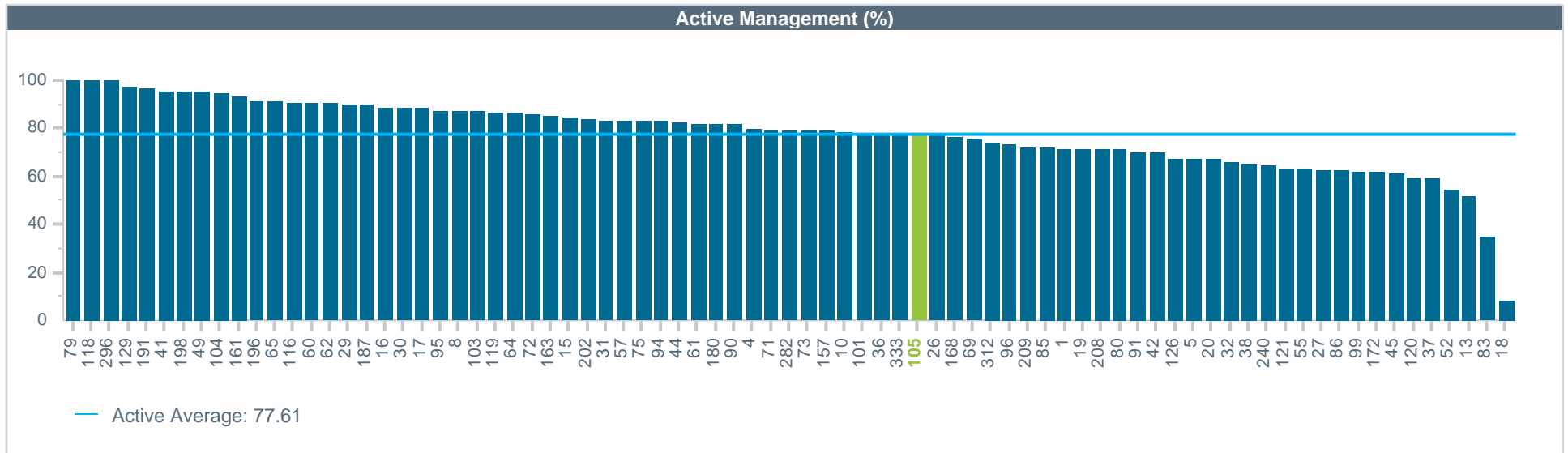
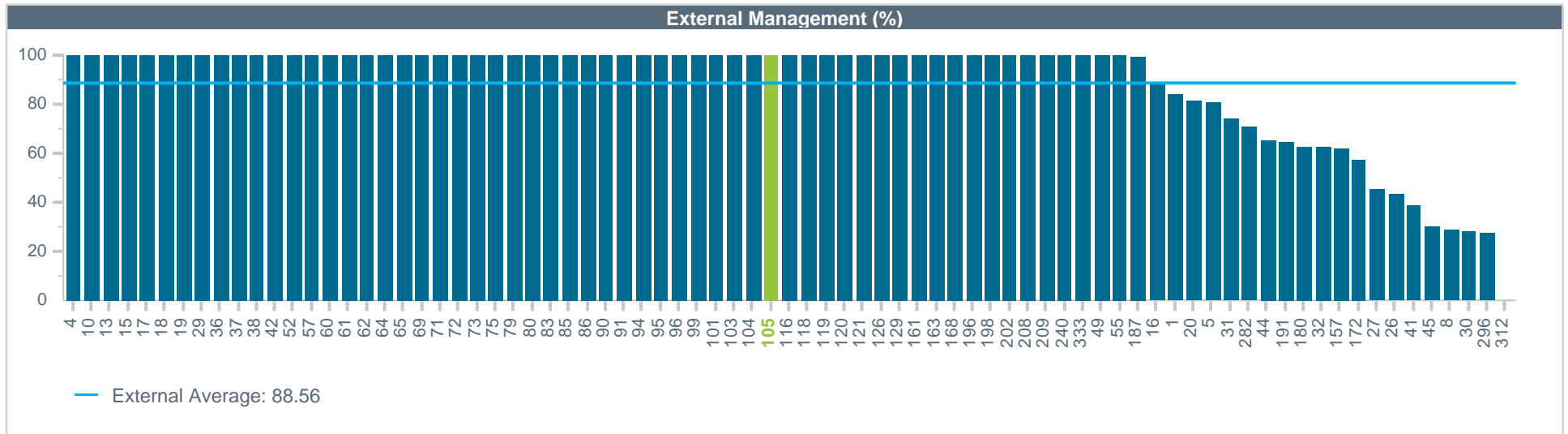


■ Universe: 79 funds



Portfolio Management

Percentage Externally Managed & Percentage Actively Managed



■ City of Milwaukee ERS



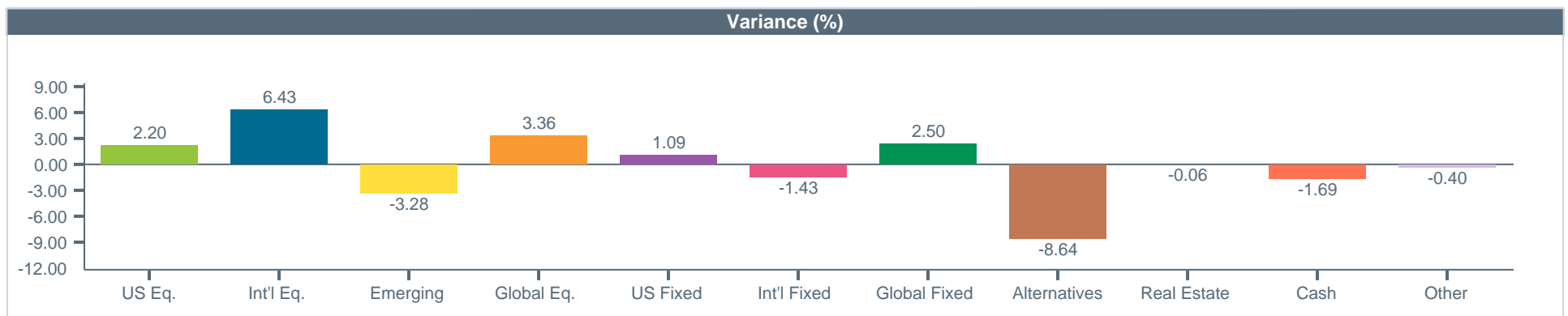
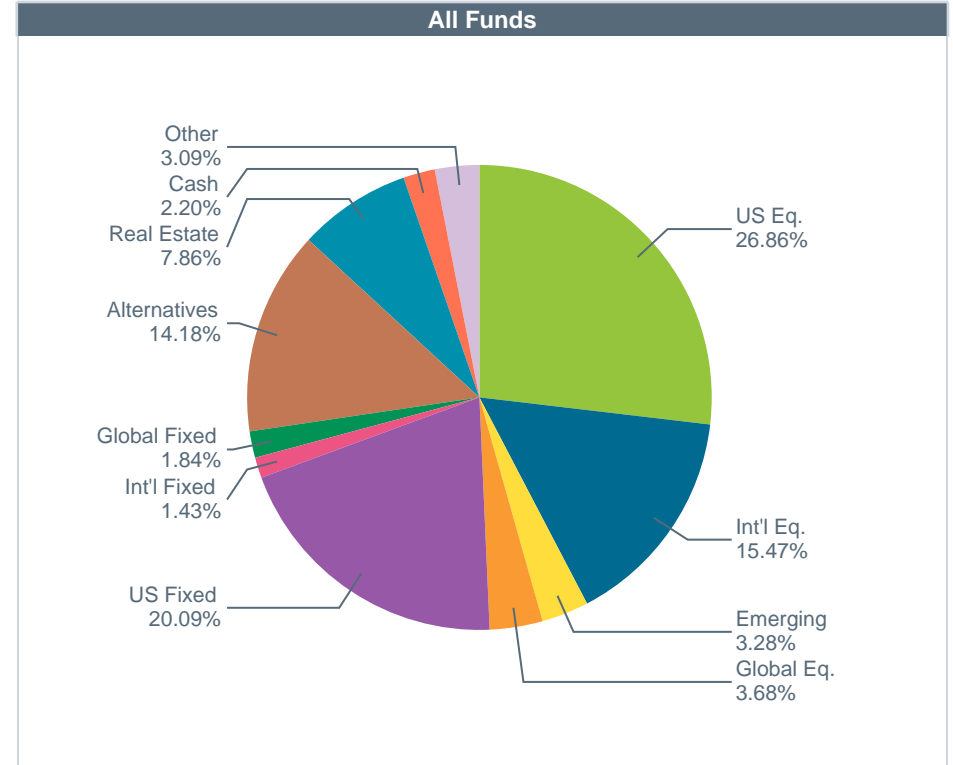
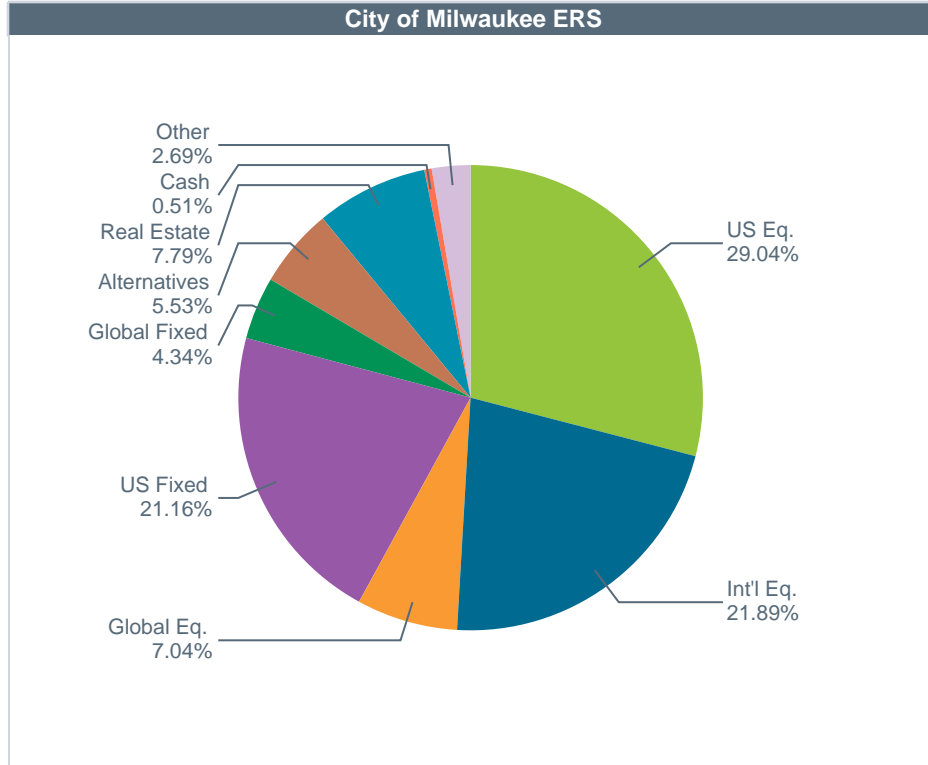
Asset Range	Actively Managed (%)	Passively Managed (%)	Externally Managed (%)	Internally Managed (%)
Over \$20B	75.32	24.68	73.24	26.76
\$10B-\$20B	75.57	24.43	86.04	13.96
\$5B-\$10B	75.30	24.70	97.90	2.10
\$1B-\$5B	79.45	20.55	99.14	0.86
\$500mm-\$1B	82.66	17.34	99.96	0.04
Under \$500mm	91.77	8.23	99.94	0.06
City of Milwaukee ERS	76.93	23.07	100.00	0.00

Portfolio (%)	Active Management		External Management	
	Public Fund Universe	City of Milwaukee ERS	Public Fund Universe	City of Milwaukee ERS
90 to 100	16	0	59	1
50 to 89	61	1	12	0
10 to 49	1	0	7	0
Less than 10	1	0	1	0
Total Funds Reporting	79	1	79	1



Asset Allocation

City of Milwaukee ERS vs. Average of All Funds

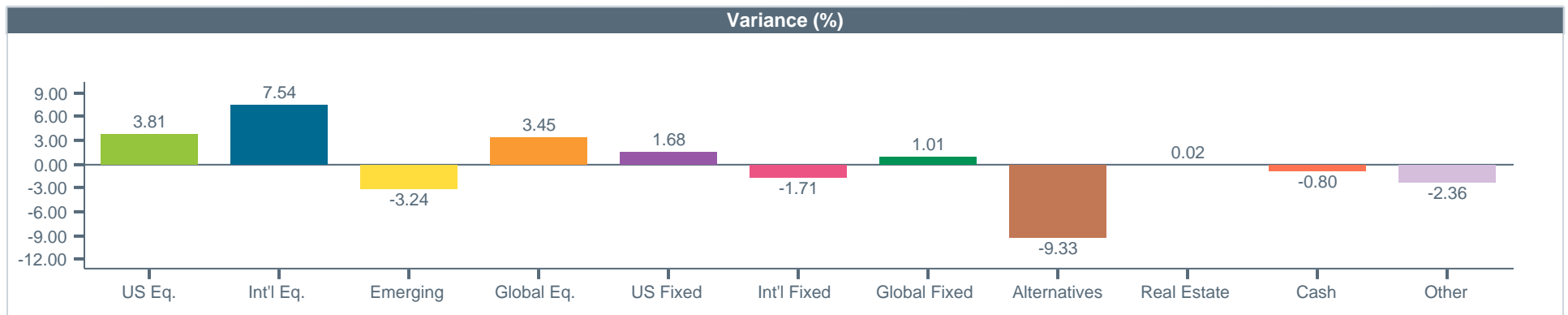
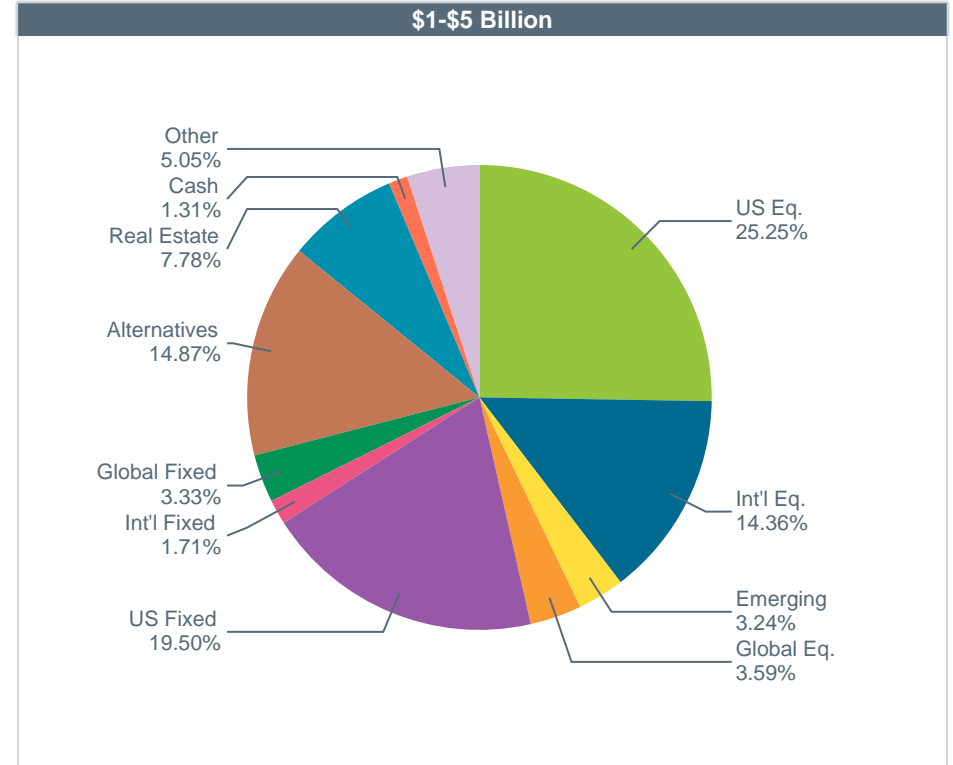
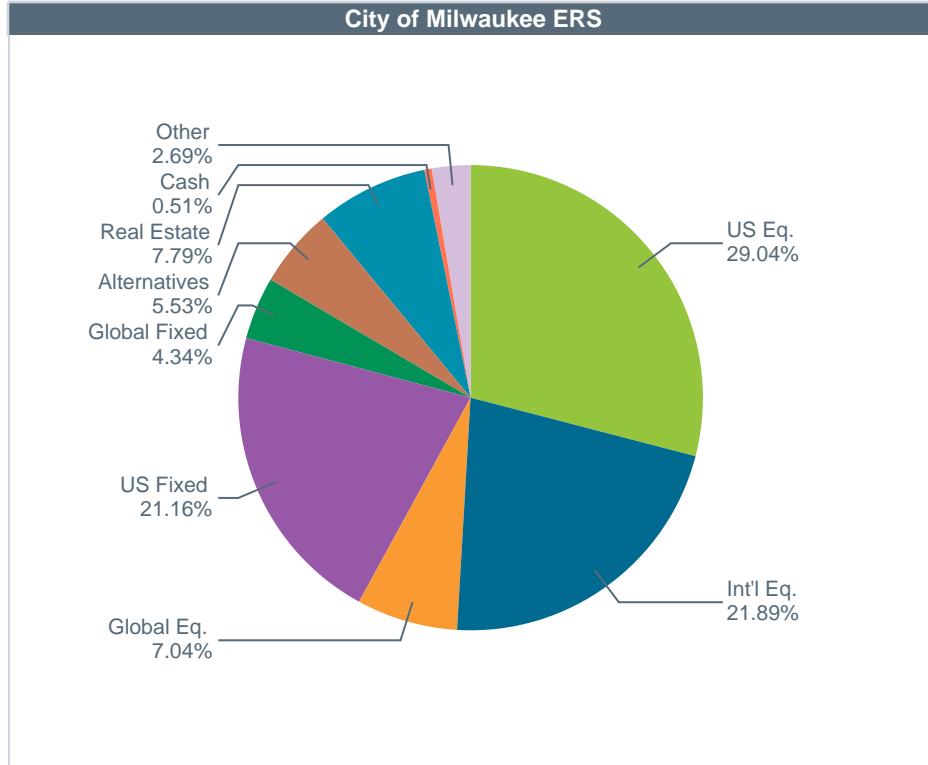


Allocations shown may not sum up to 100% exactly due to rounding.



Asset Allocation

City of Milwaukee ERS vs. Average of Similar Size Funds

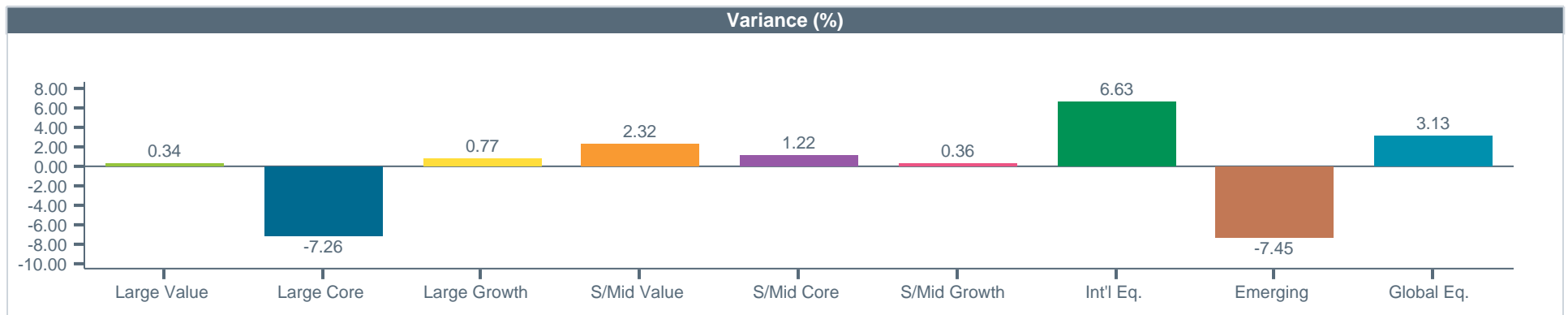
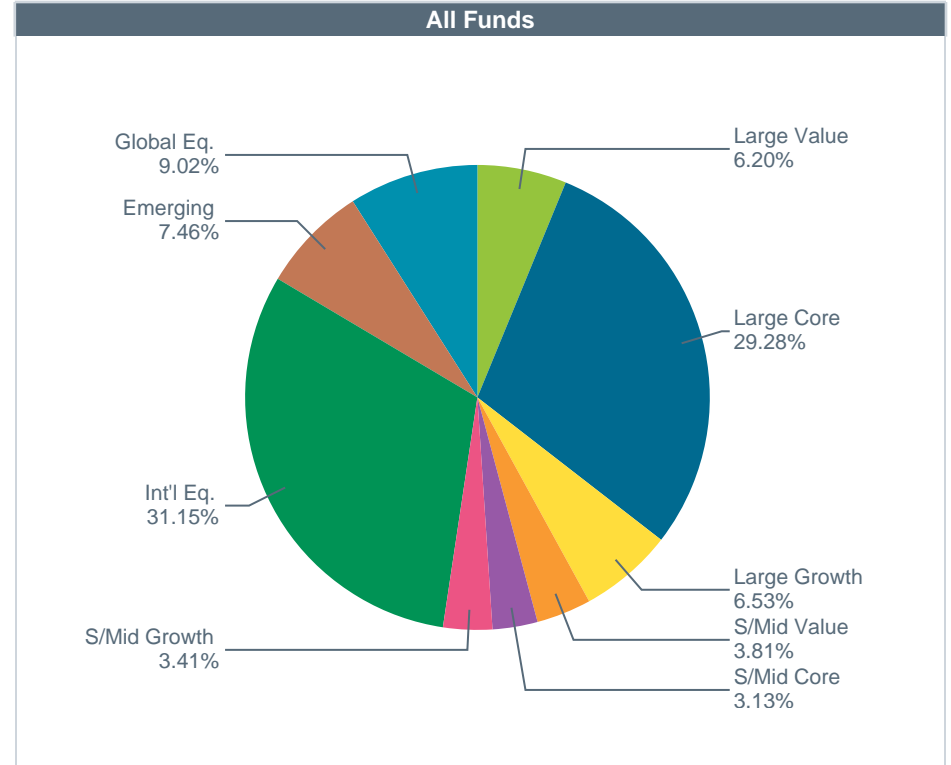
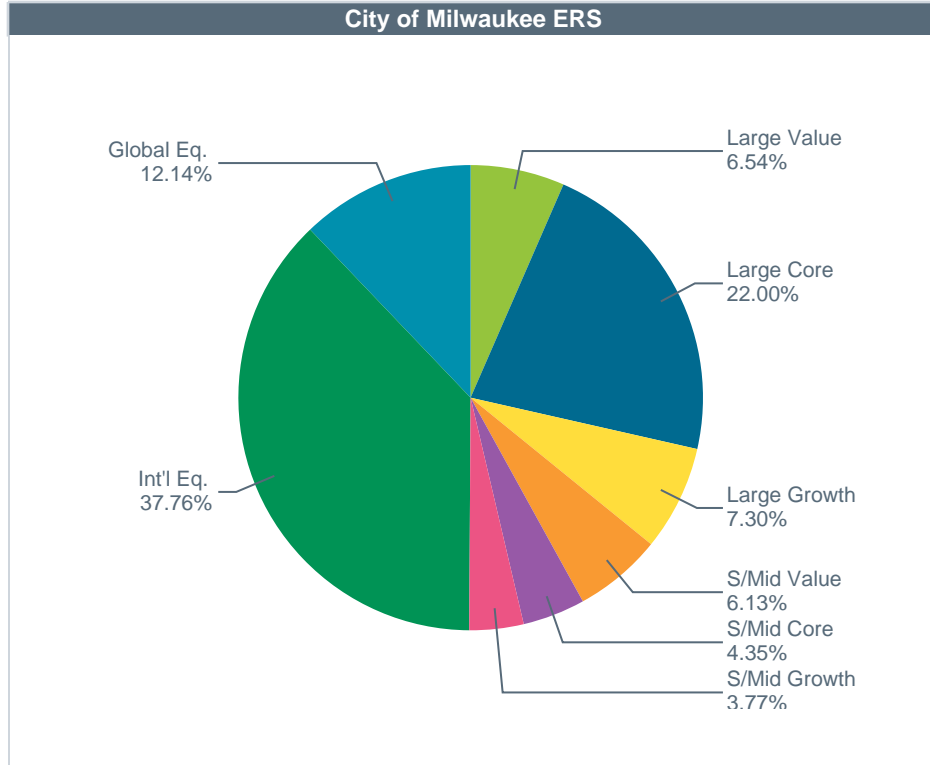


Allocations shown may not sum up to 100% exactly due to rounding.



Equity Style Allocation

City of Milwaukee ERS vs. Average of All Funds

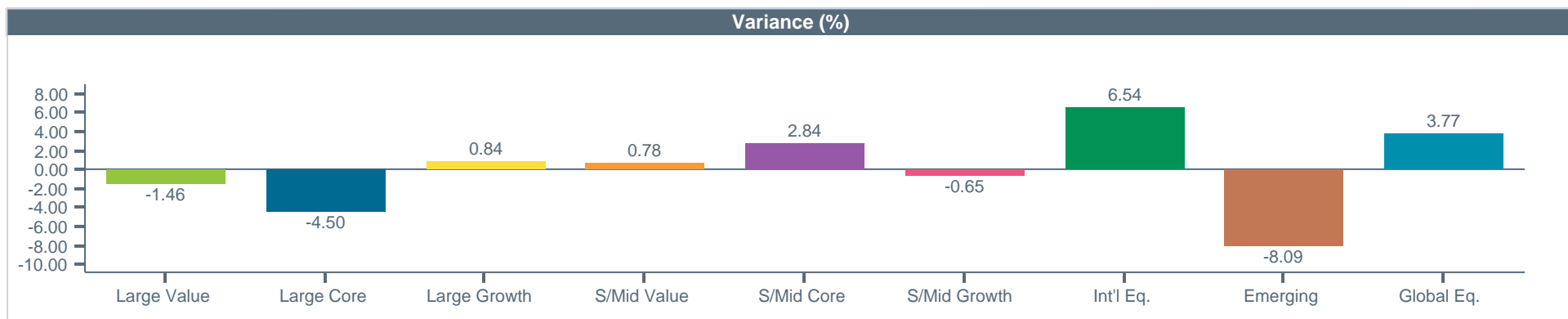
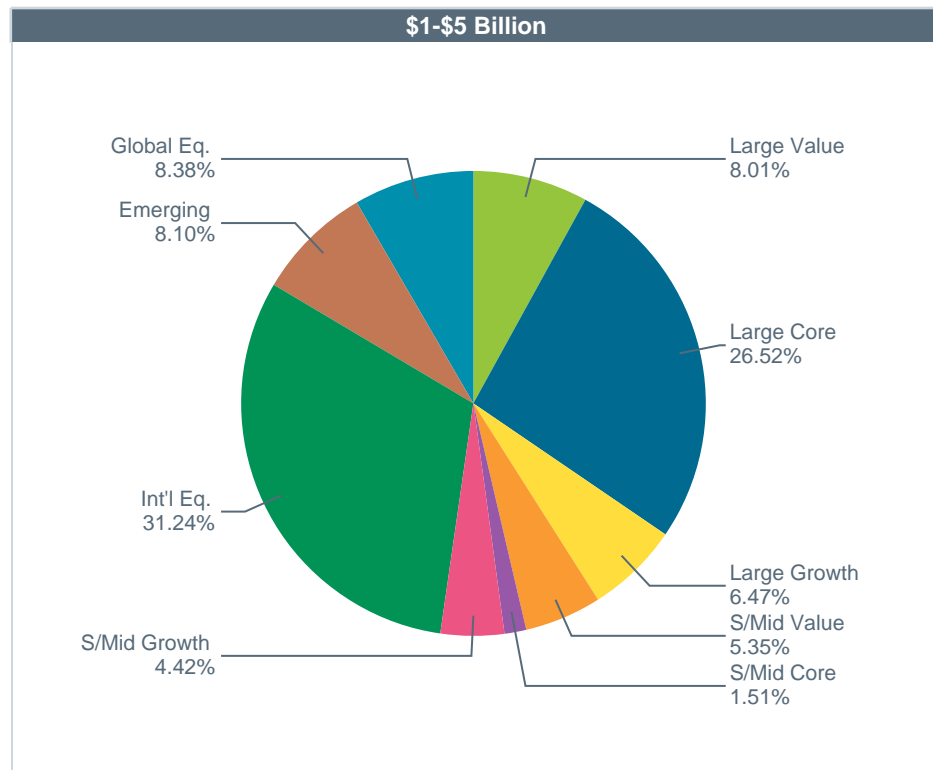
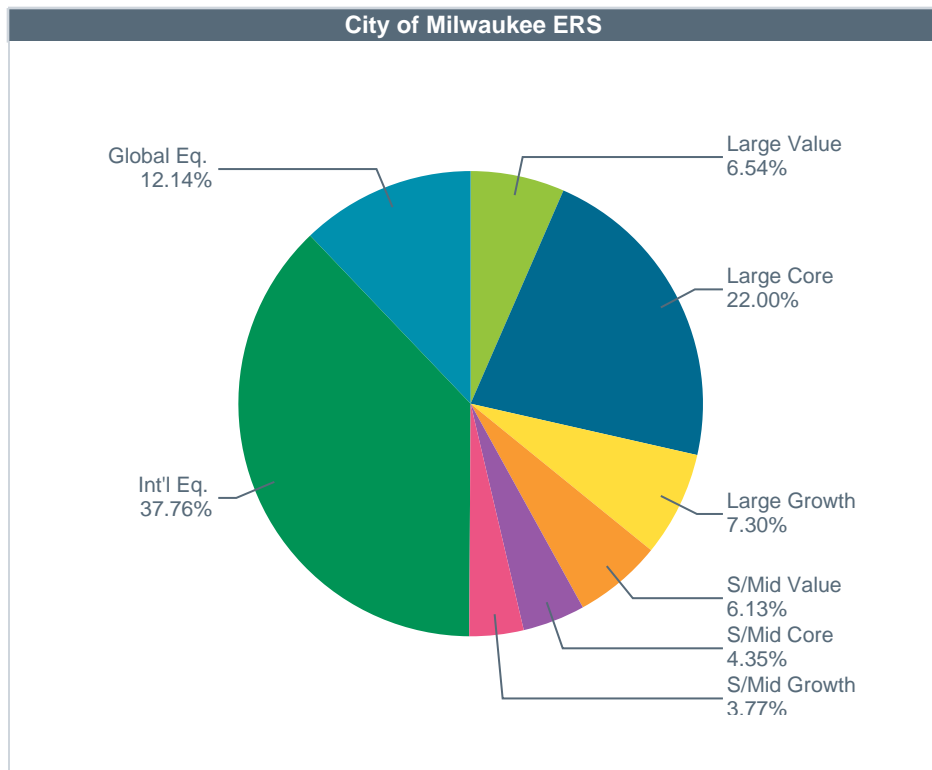


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Equity Style Allocation

City of Milwaukee ERS vs. Average of Similar Size Funds

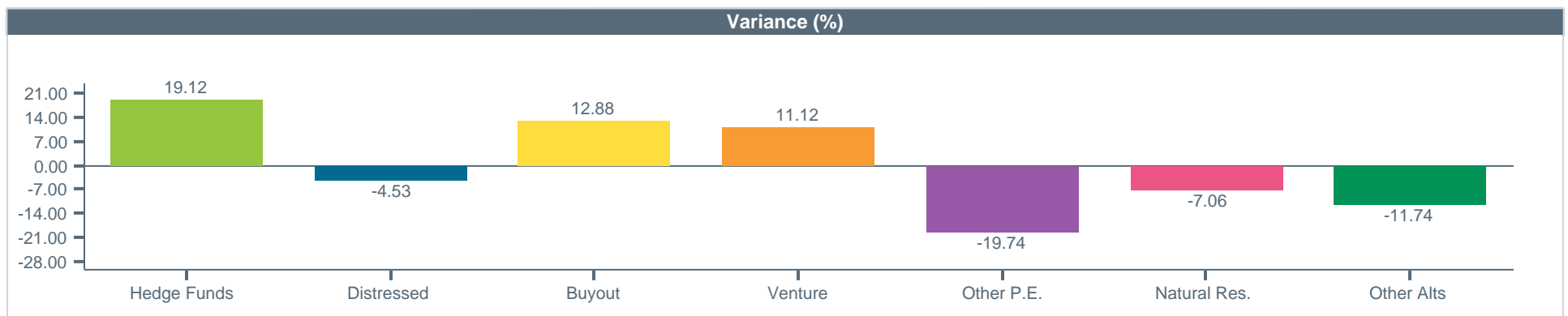
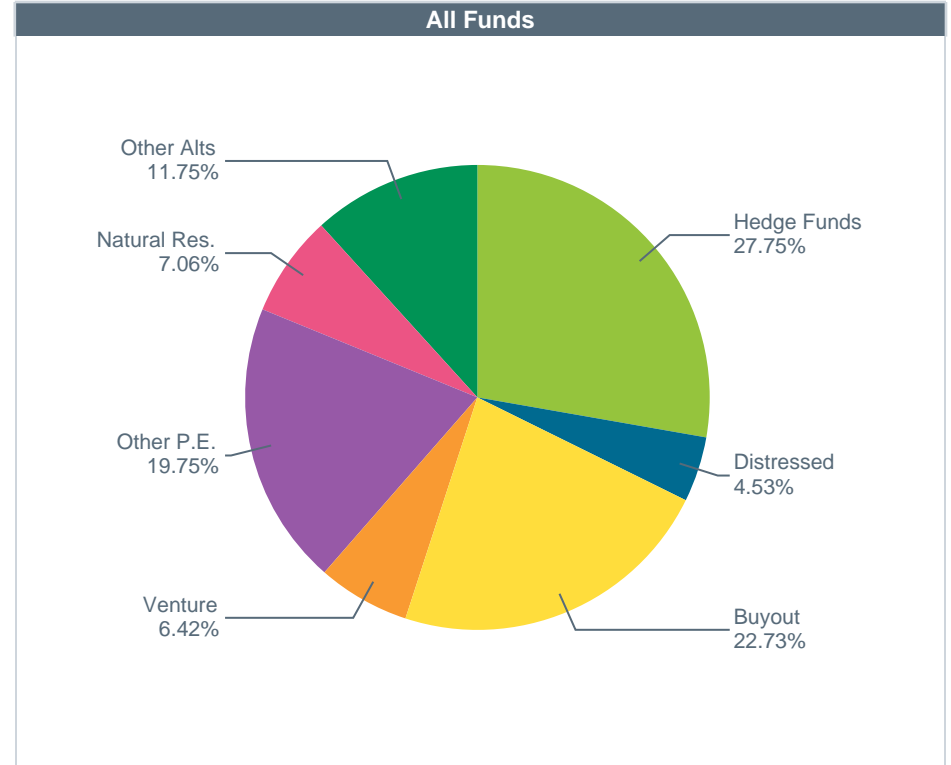
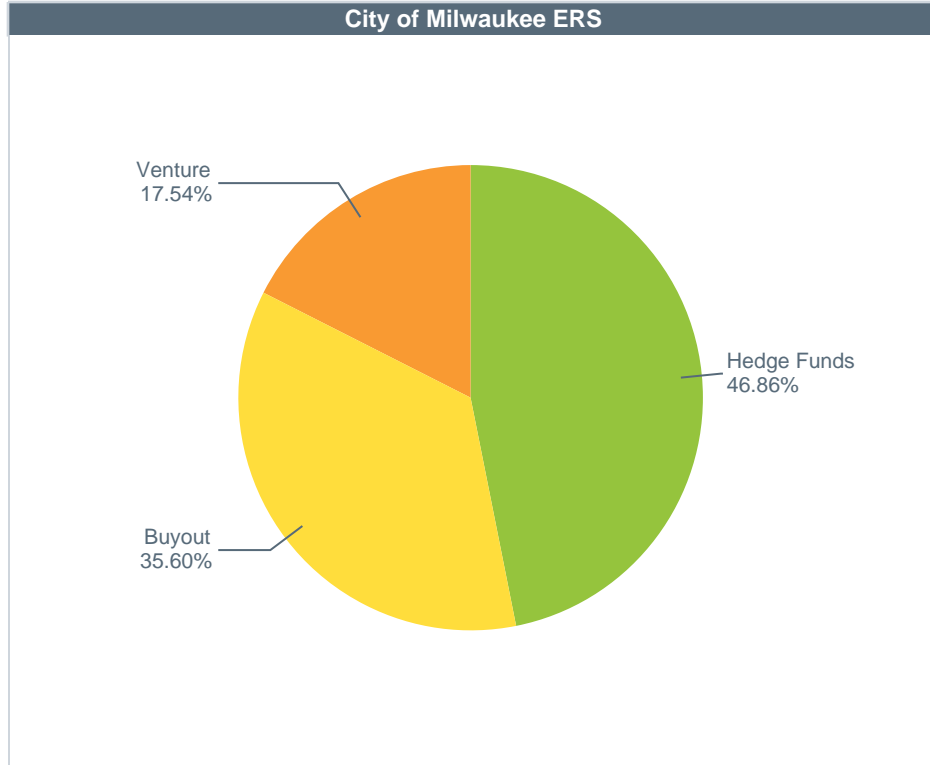


Allocations shown may not sum up to 100% exactly due to rounding.



Alternatives Style Allocation

City of Milwaukee ERS vs. Average of All Funds

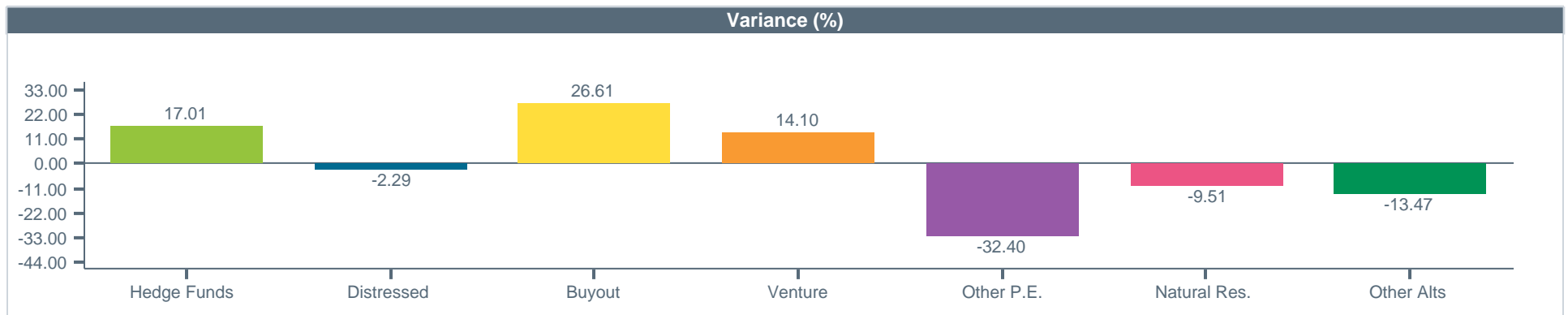
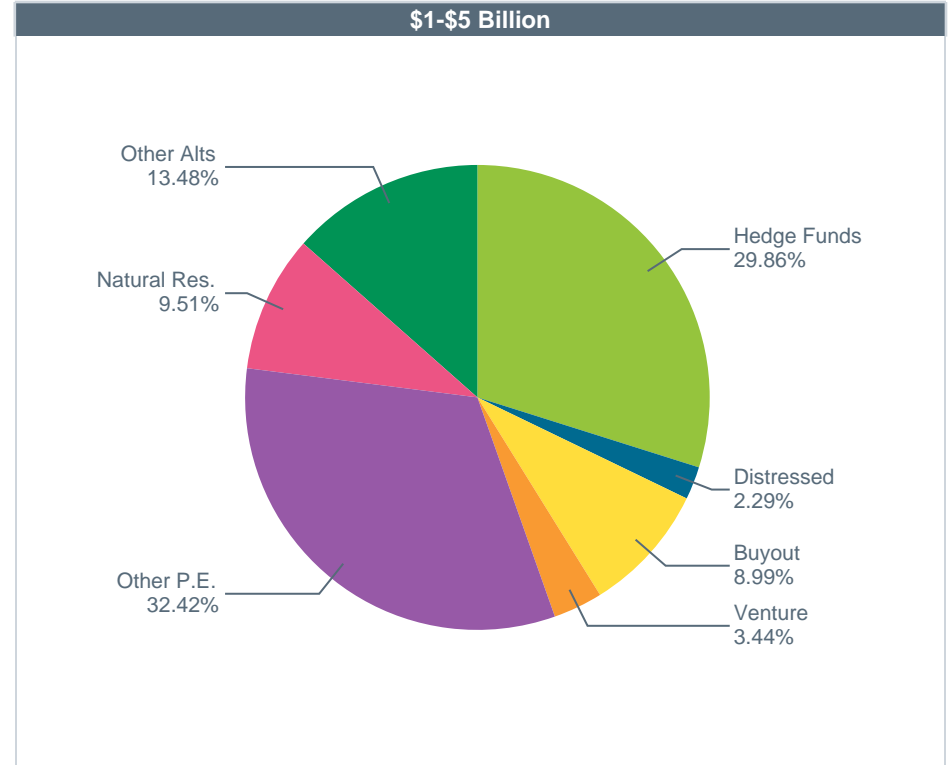
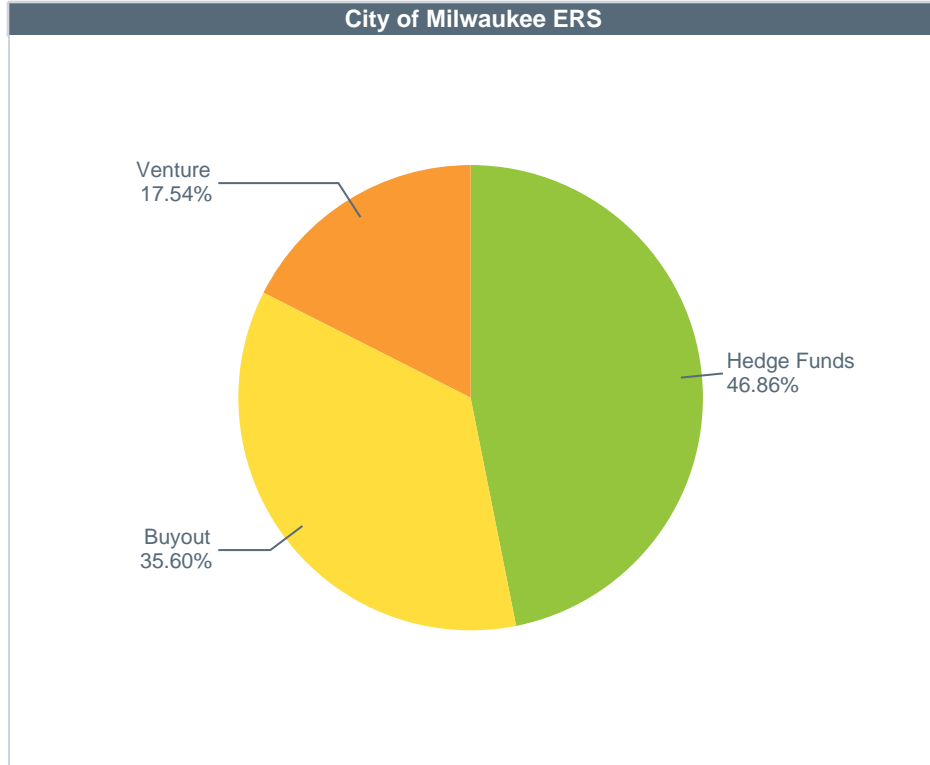


Allocations shown may not sum up to 100% exactly due to rounding.



Alternatives Style Allocation

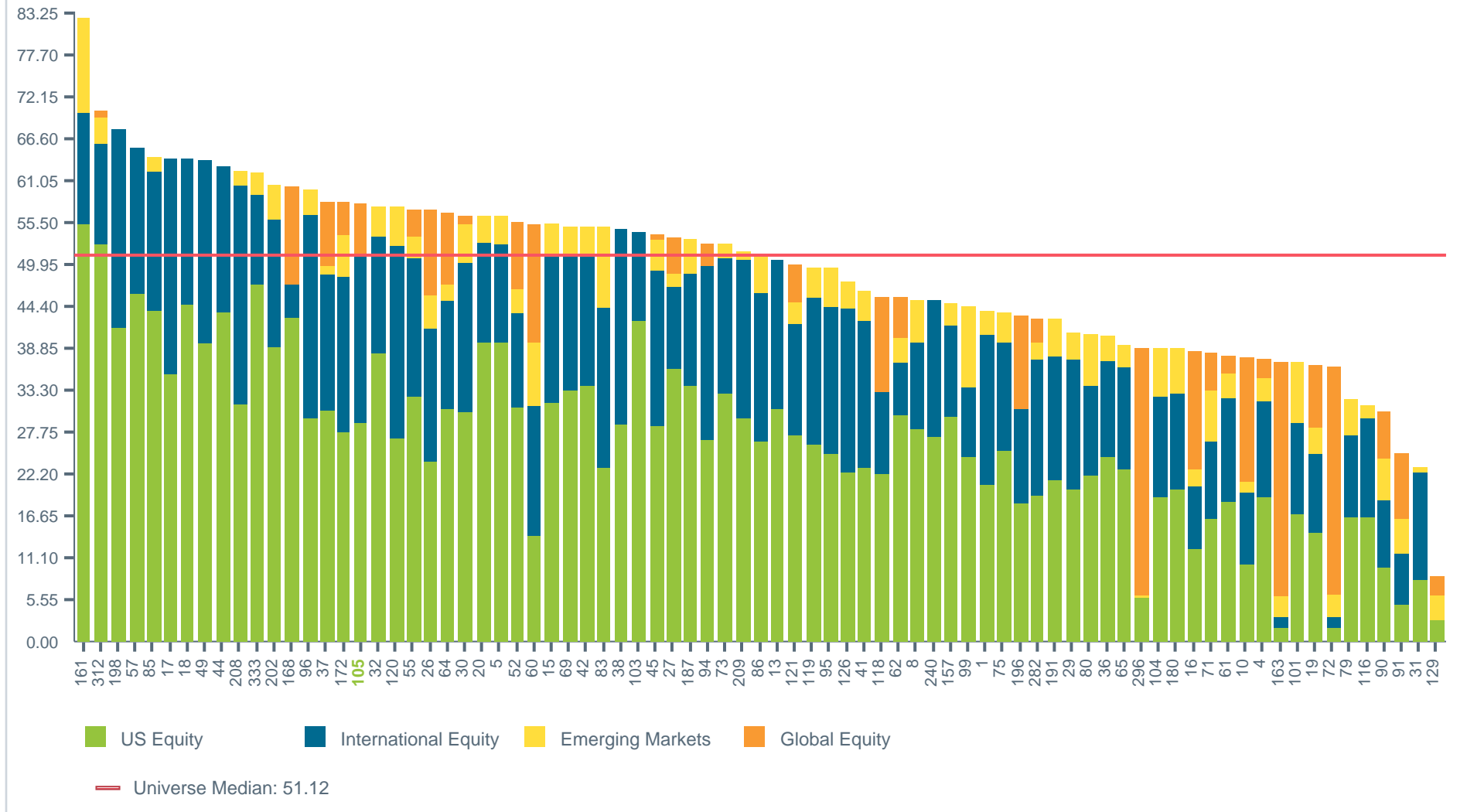
City of Milwaukee ERS vs. Average of Similar Size Funds

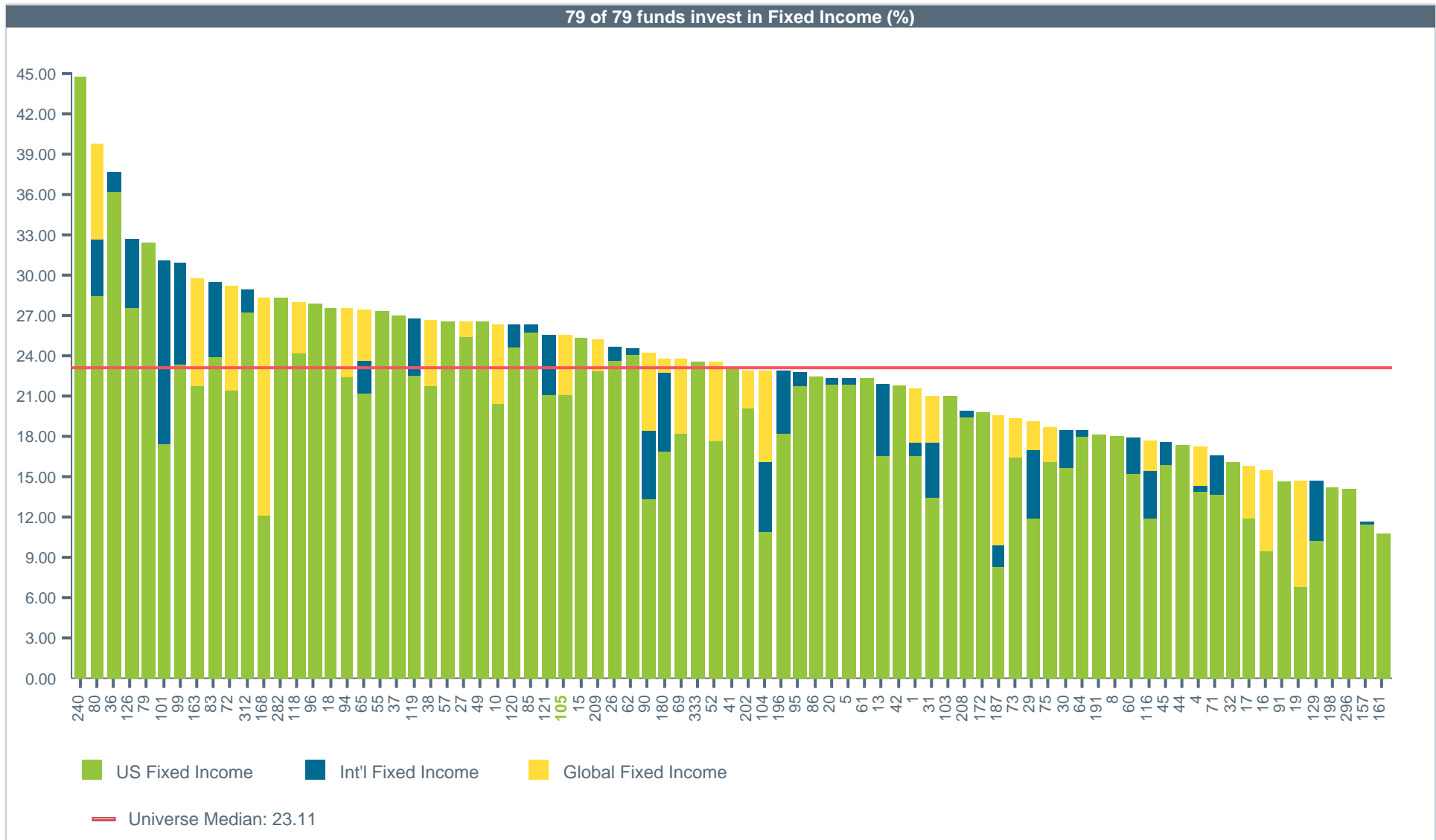


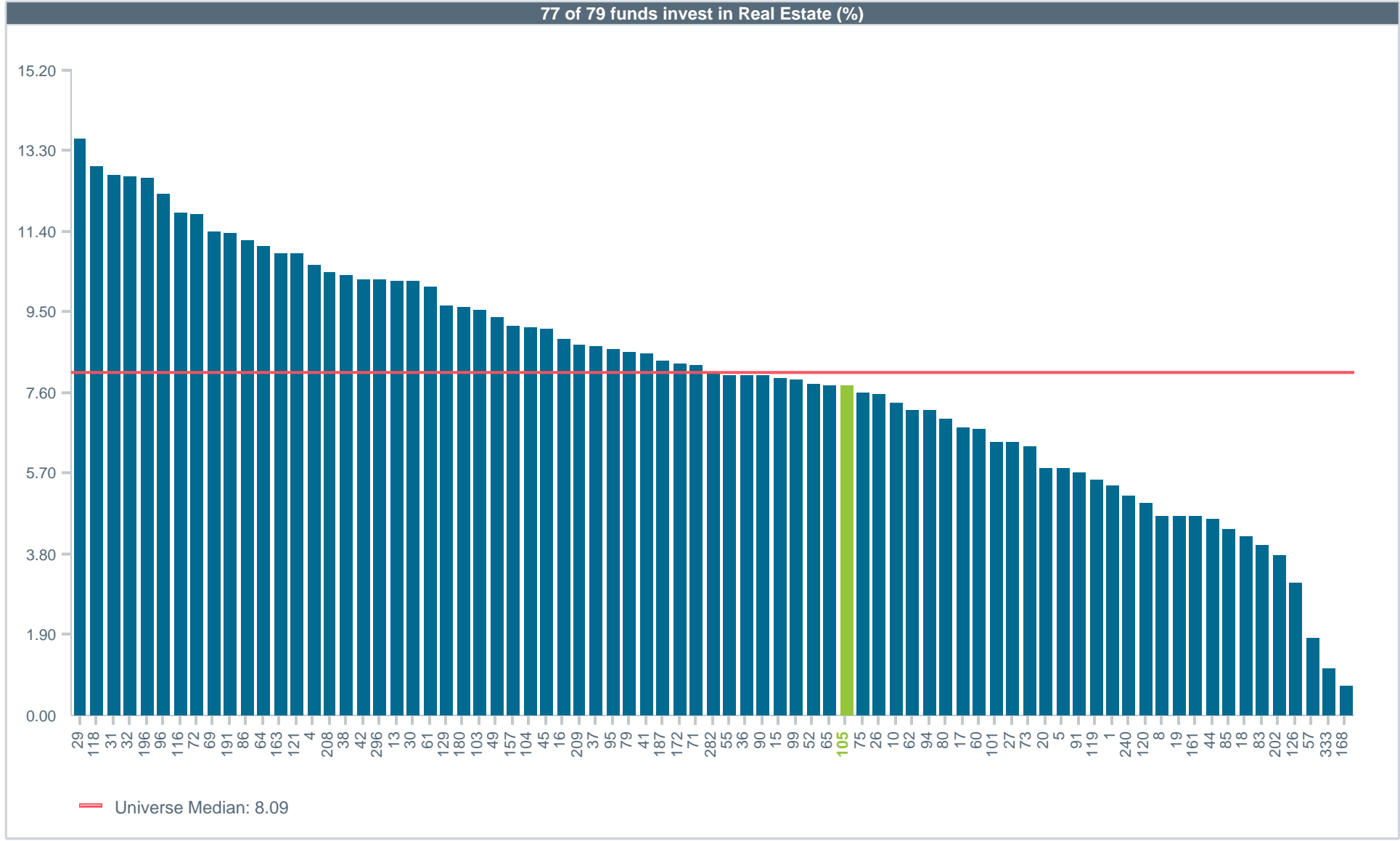
Allocations shown may not sum up to 100% exactly due to rounding.



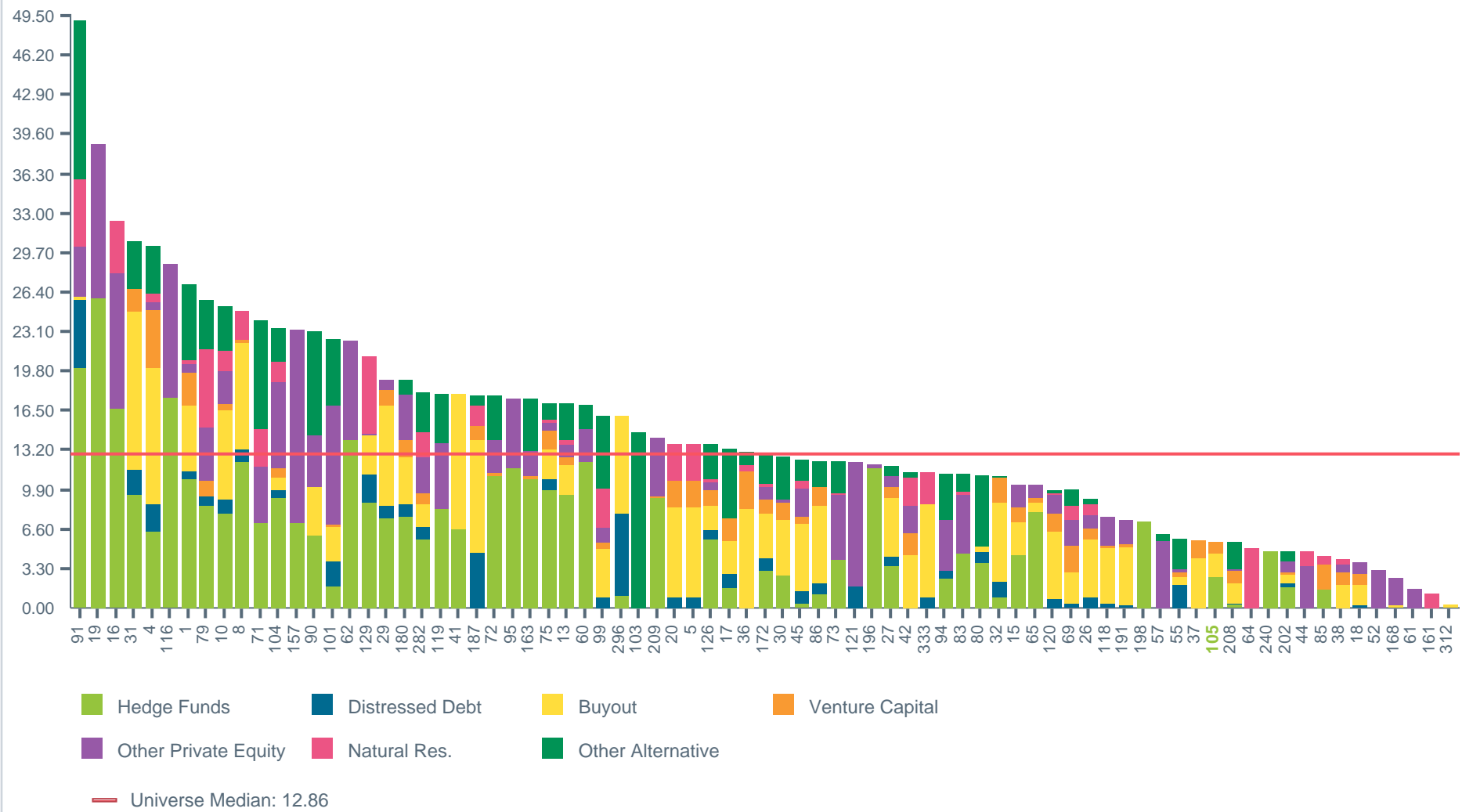
79 of 79 funds invest in Equity (%)

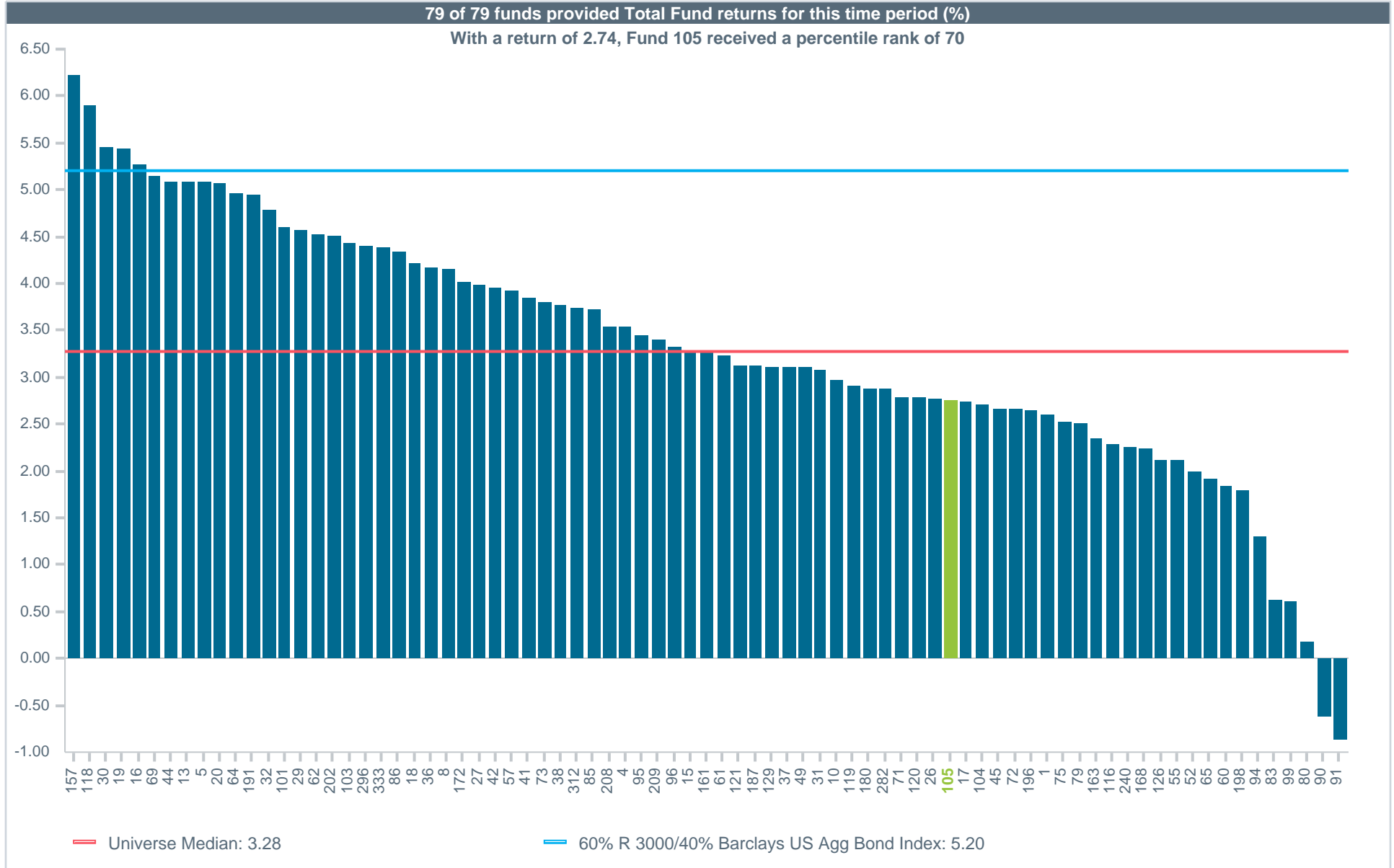






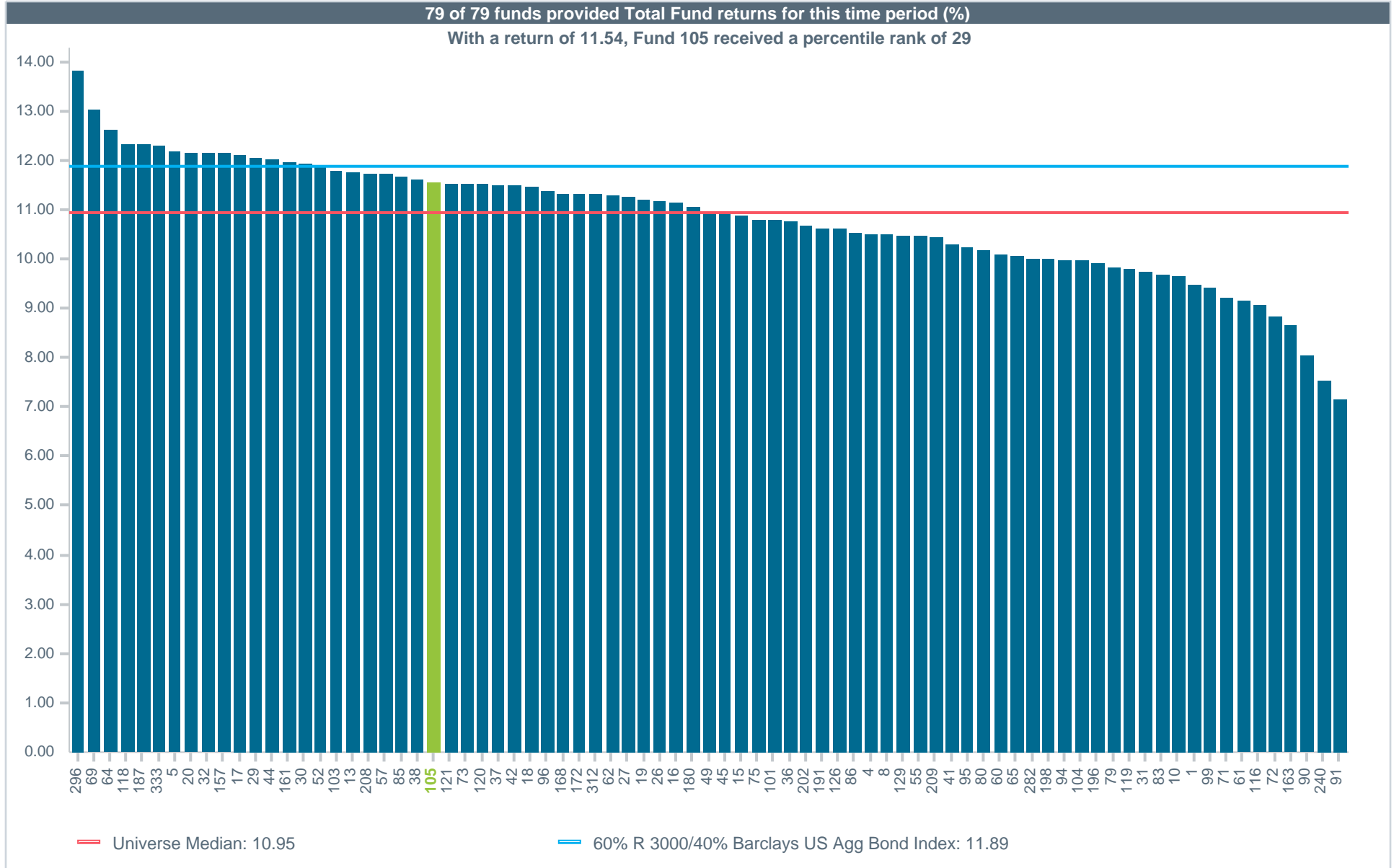
77 of 79 funds invest in Alternatives (%)





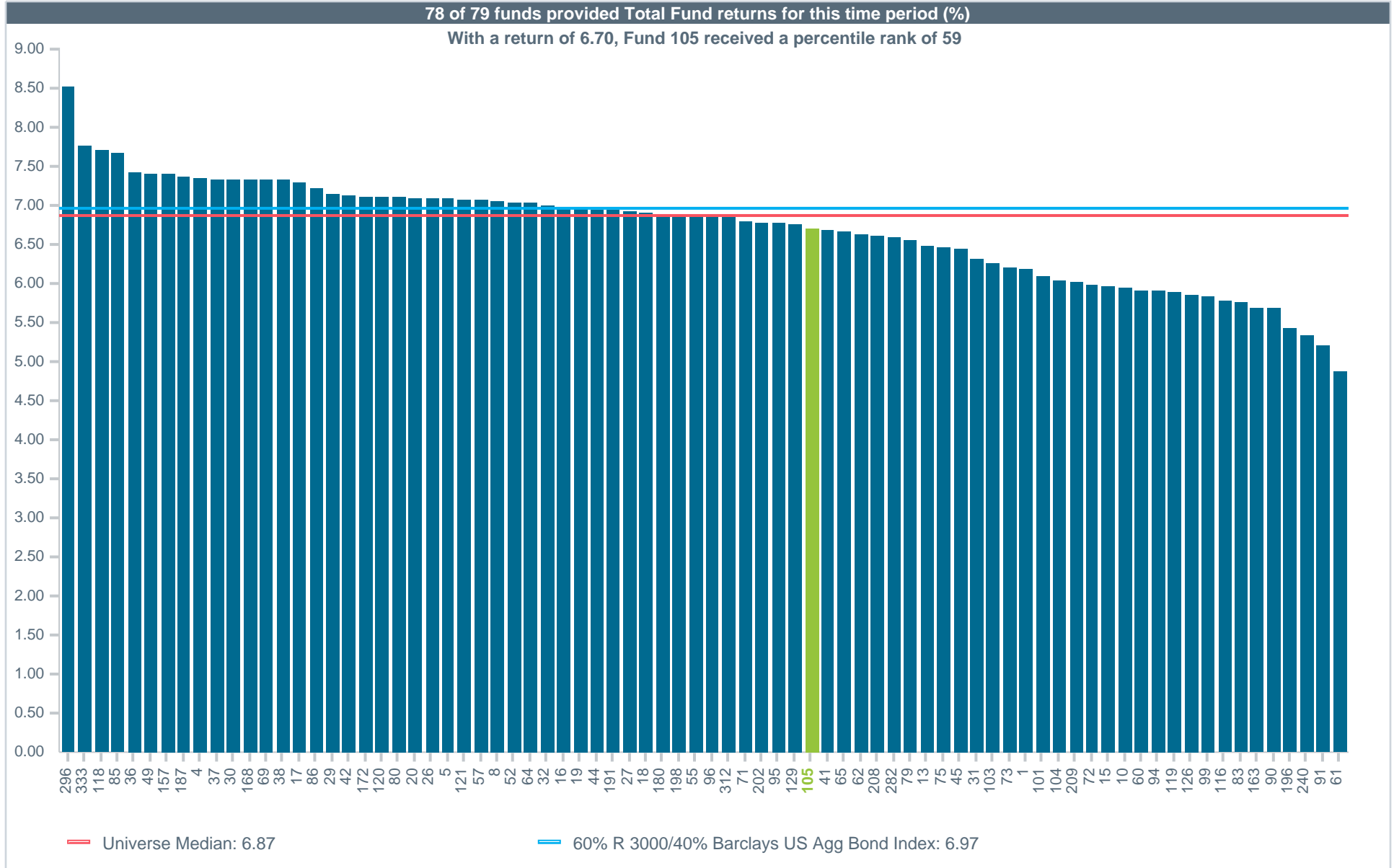
Funds with less history than the specified time period will not appear in the chart.





Funds with less history than the specified time period will not appear in the chart.



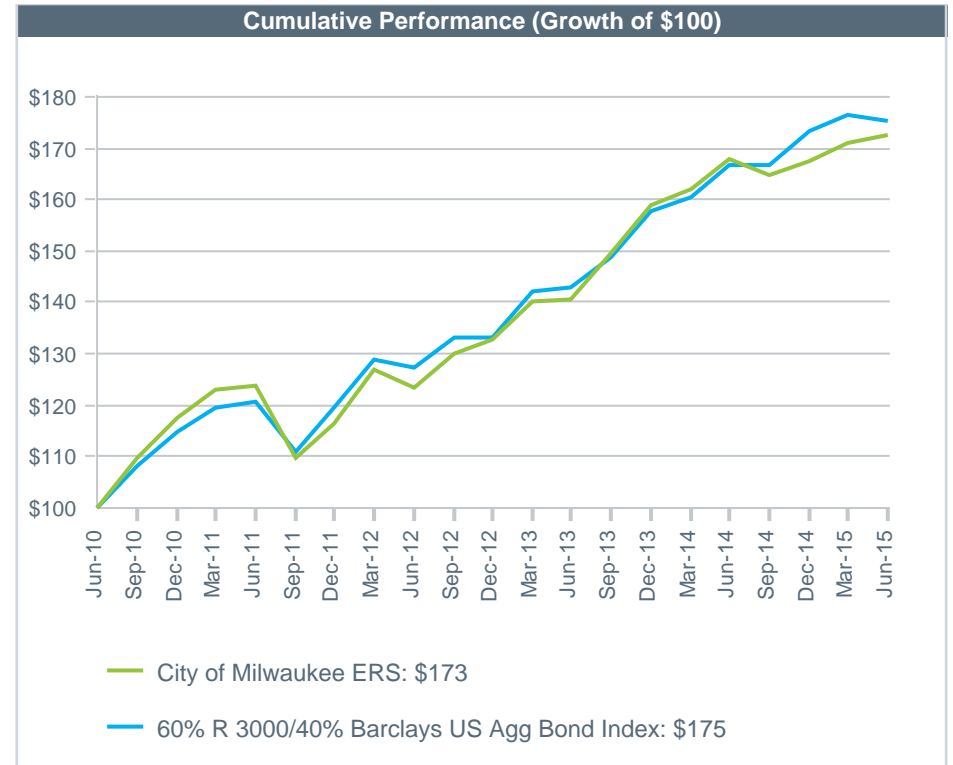
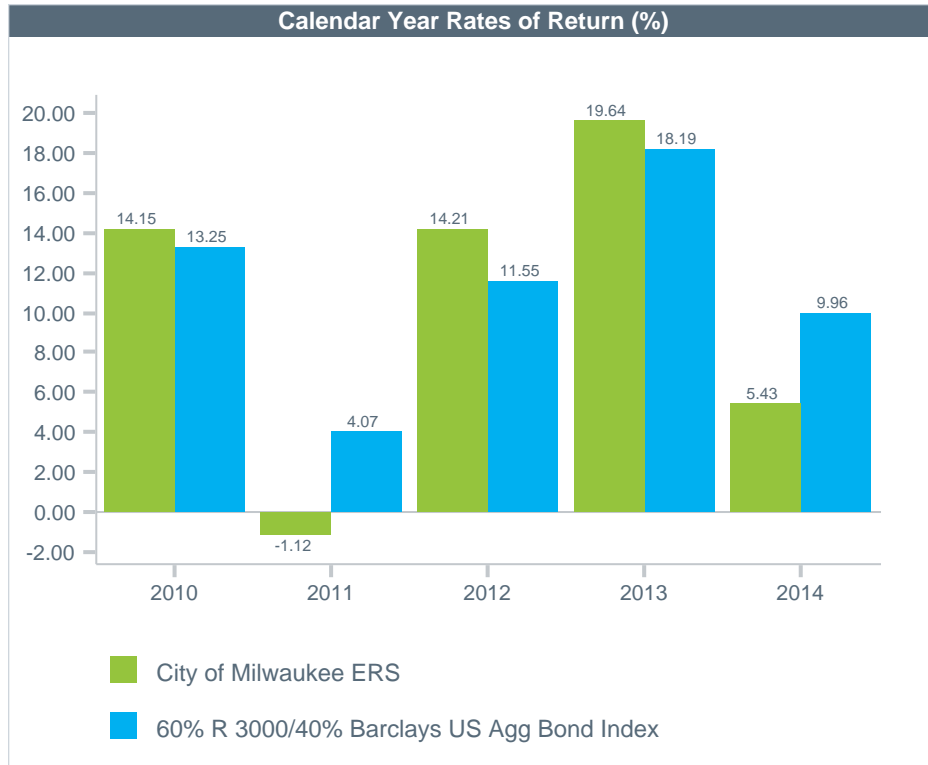


Funds with less history than the specified time period will not appear in the chart.



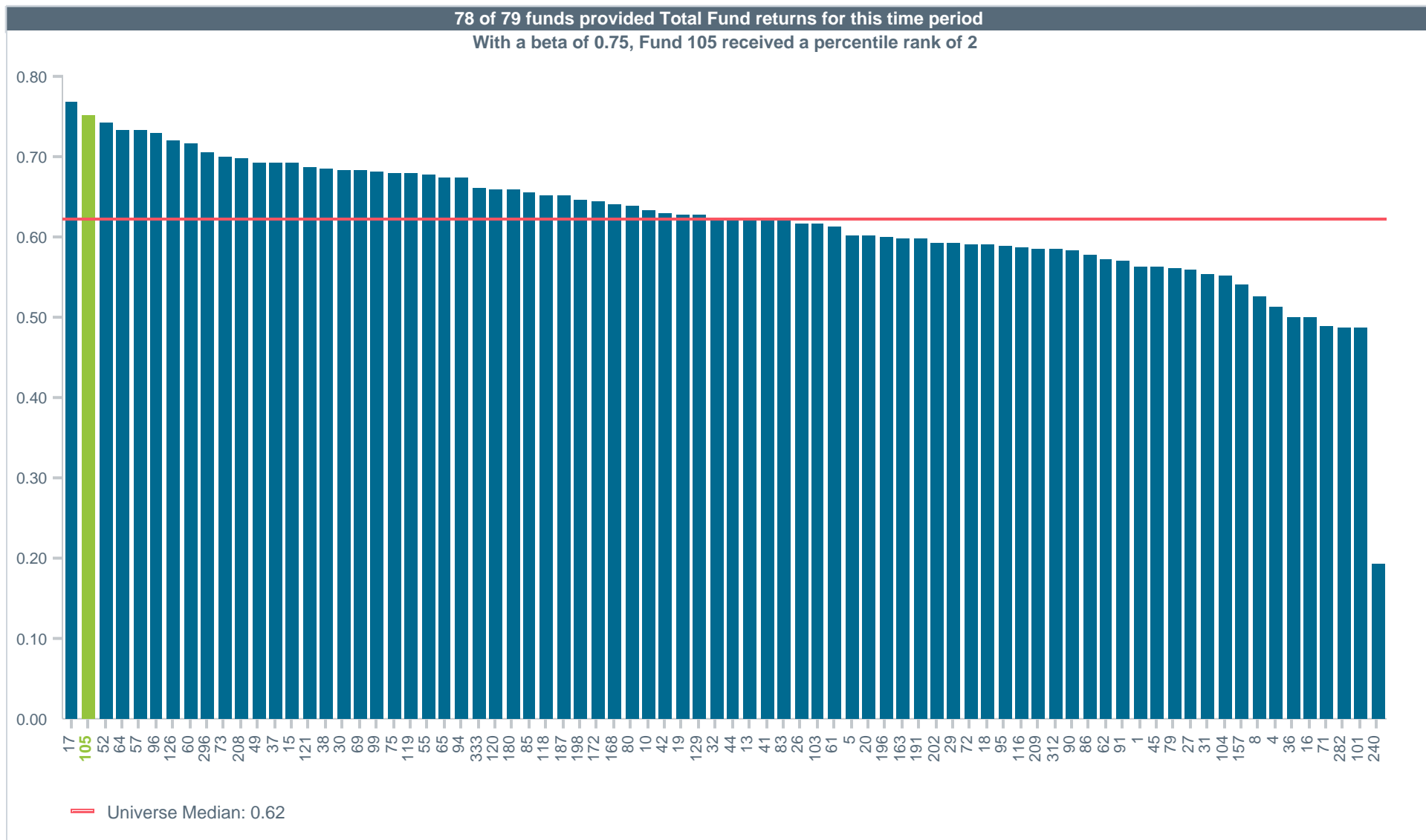
Total Return - Total Fund

City of Milwaukee ERS vs. 60% R 3000/40% Barclays US Agg Bond Index



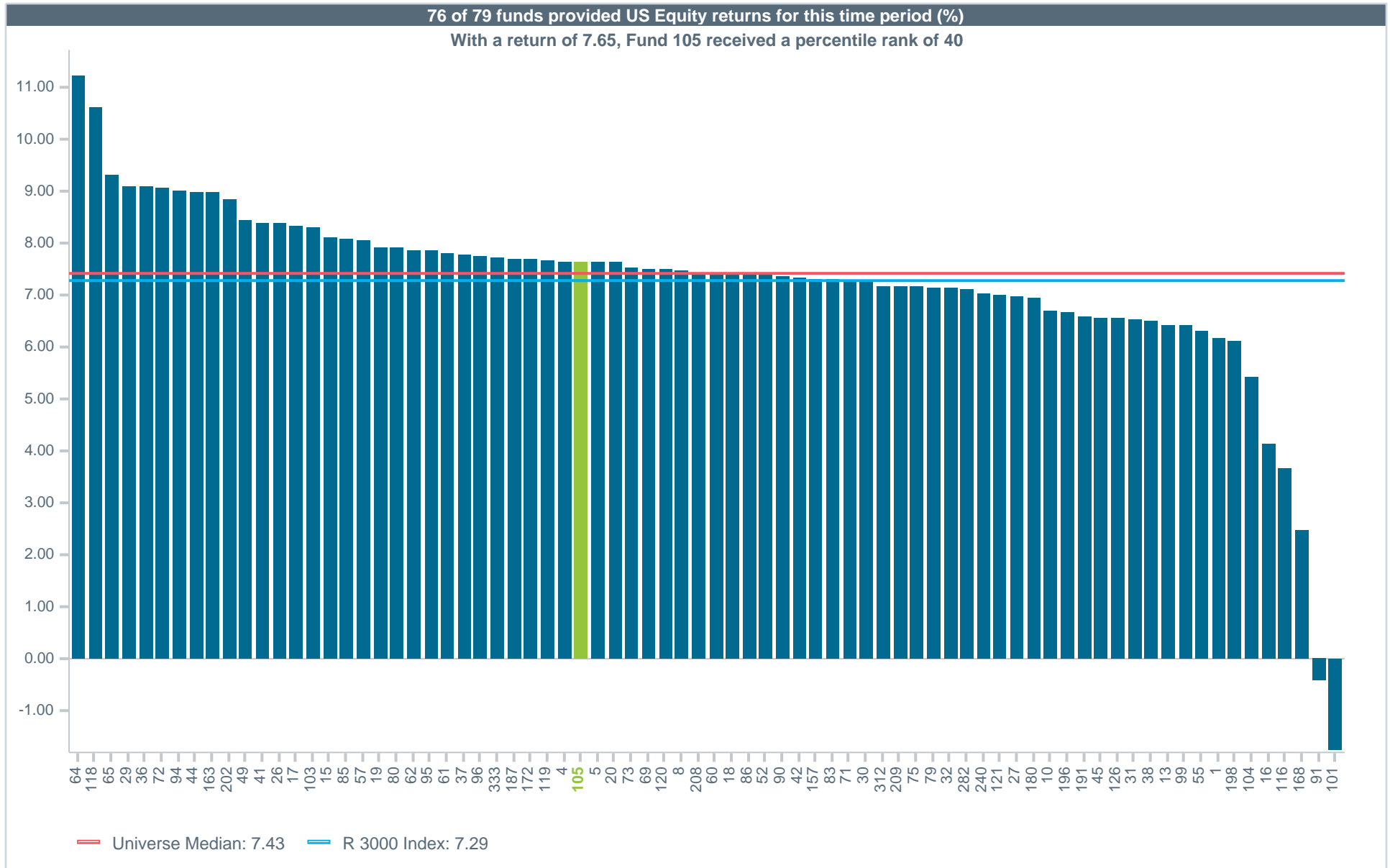
Annualized Returns (%)			
	1 Year	3 Years	5 Years
City of Milwaukee ERS	2.74	11.89	11.54
60% R 3000/40% Barclays US Agg Bond Index	5.20	11.22	11.89
Variance	-2.46	0.67	-0.35





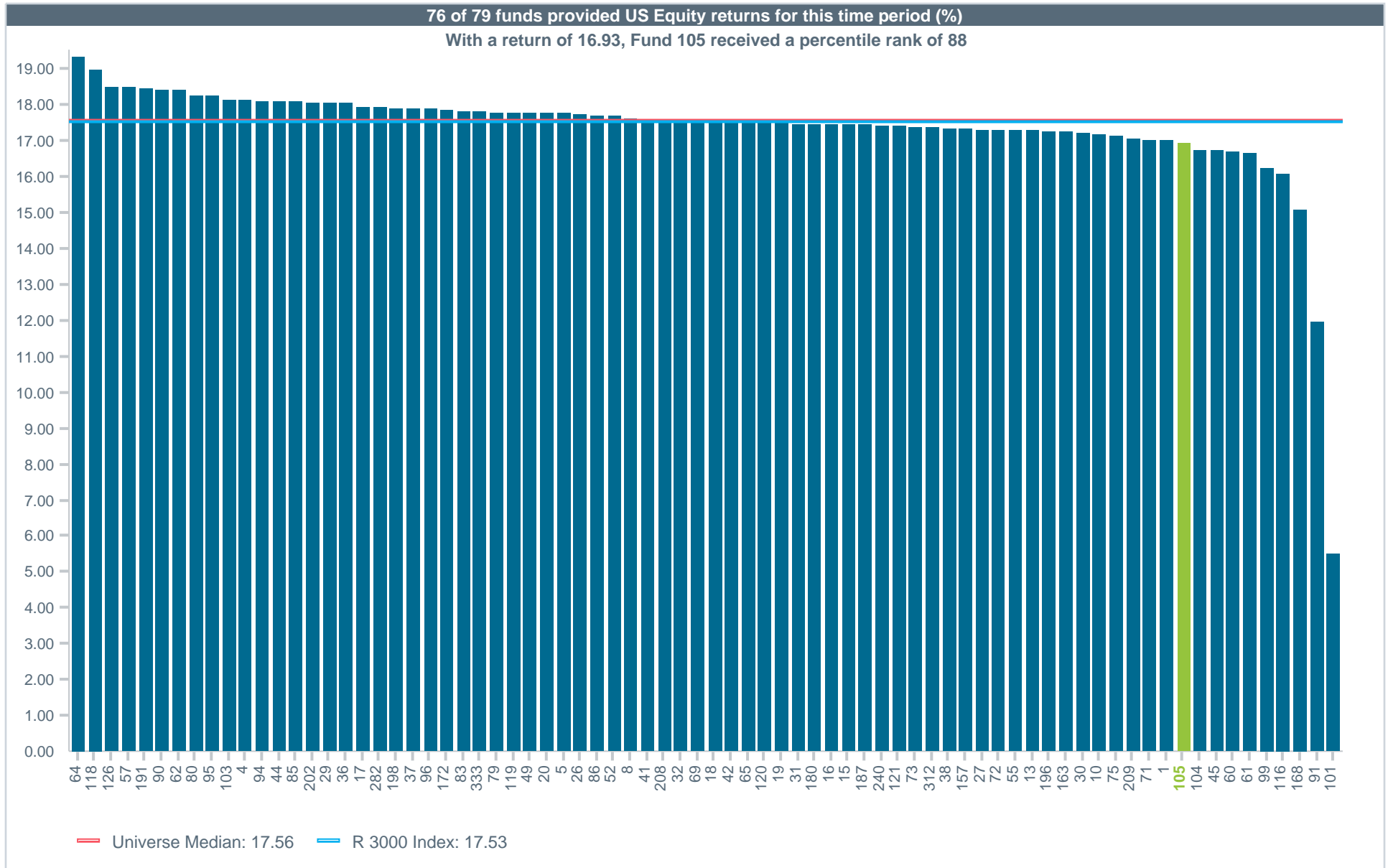
Funds with less history than the specified time period will not appear in the chart. Benchmark used is the S&P 500 Index (Cap Wtd).





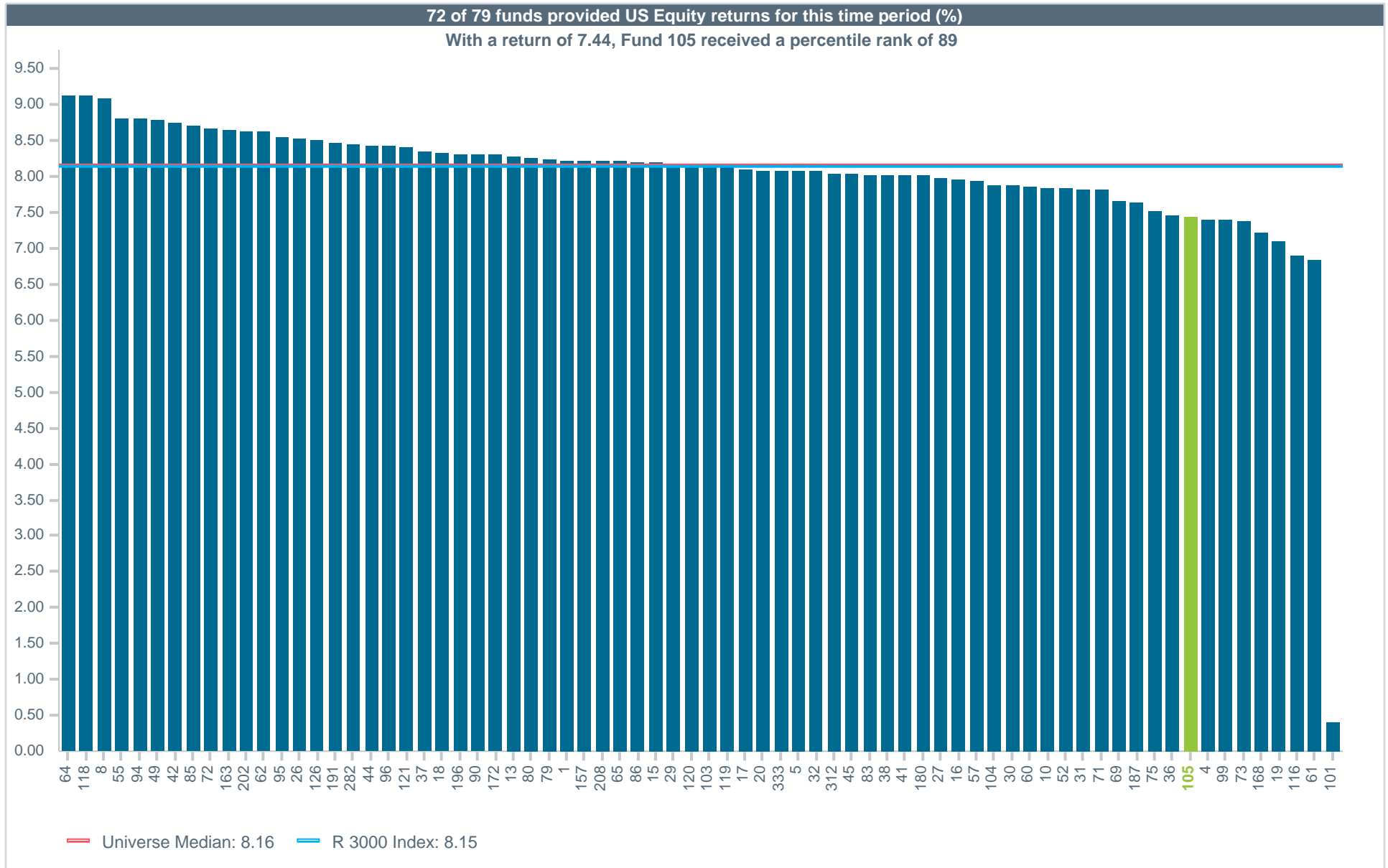
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Funds with less history than the specified time period will not appear in the chart.



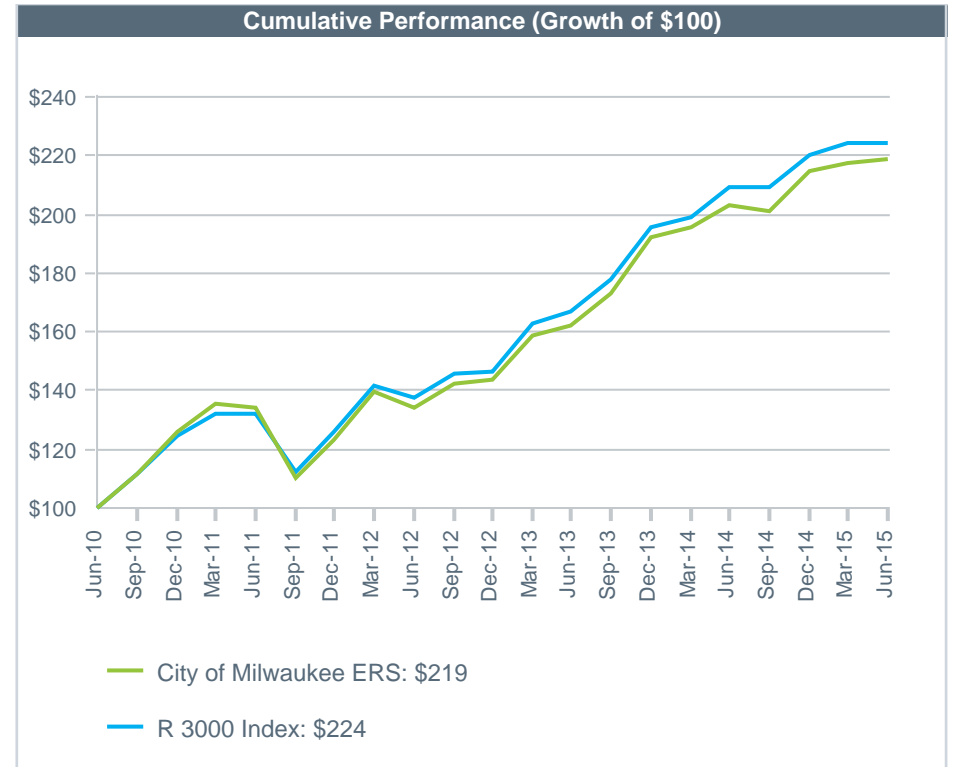
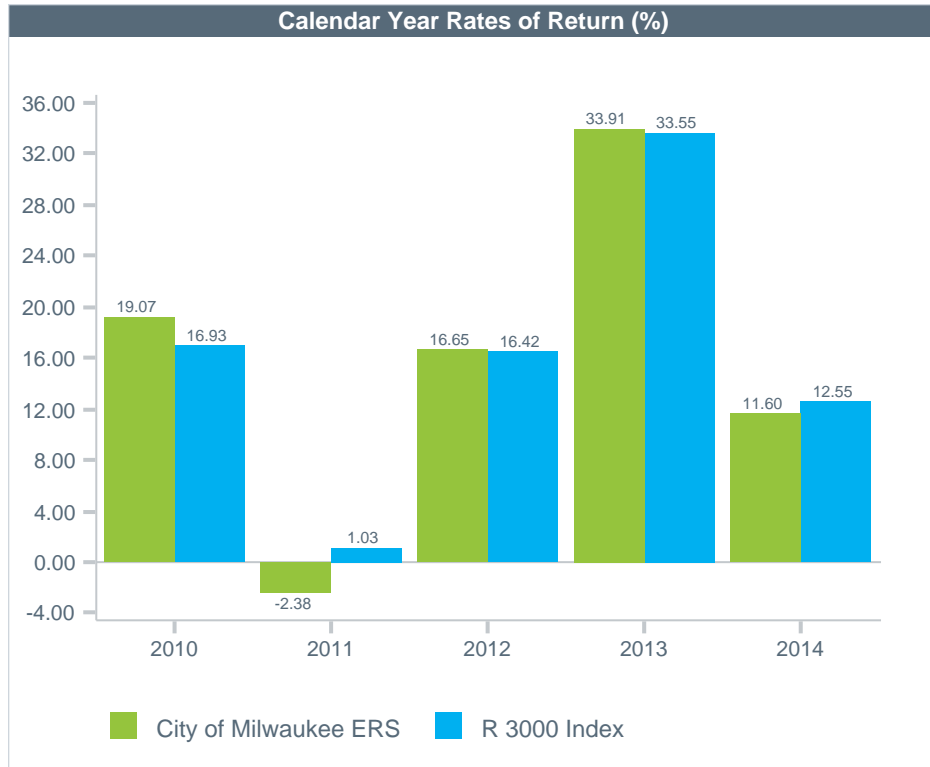


Funds with less history than the specified time period will not appear in the chart.



Total Return - US Equity

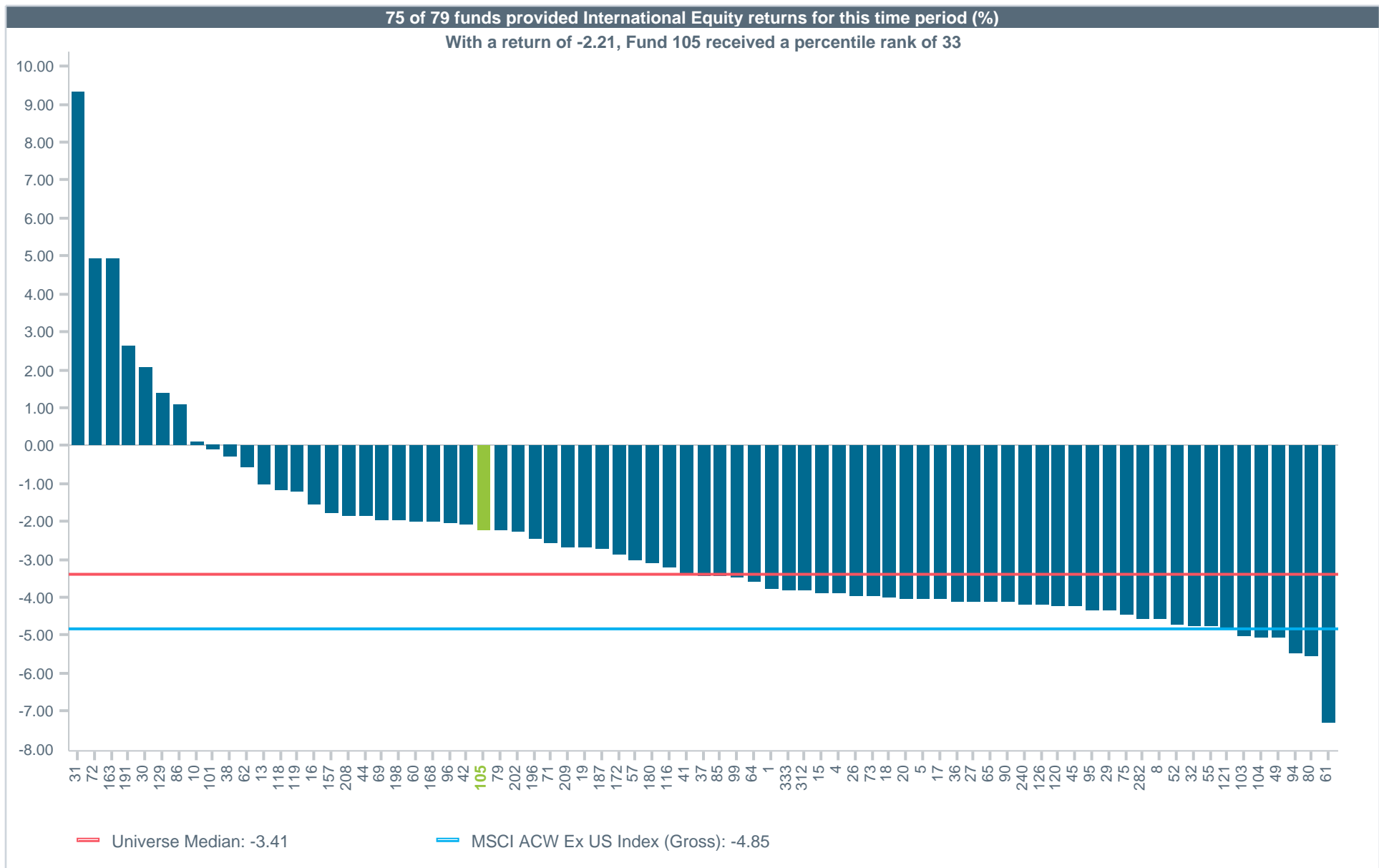
City of Milwaukee ERS vs. R 3000 Index



Annualized Returns (%)			
	1 Year	3 Years	5 Years
City of Milwaukee ERS	7.65	17.74	16.93
R 3000 Index	7.29	17.73	17.53
Variance	0.36	0.01	-0.60



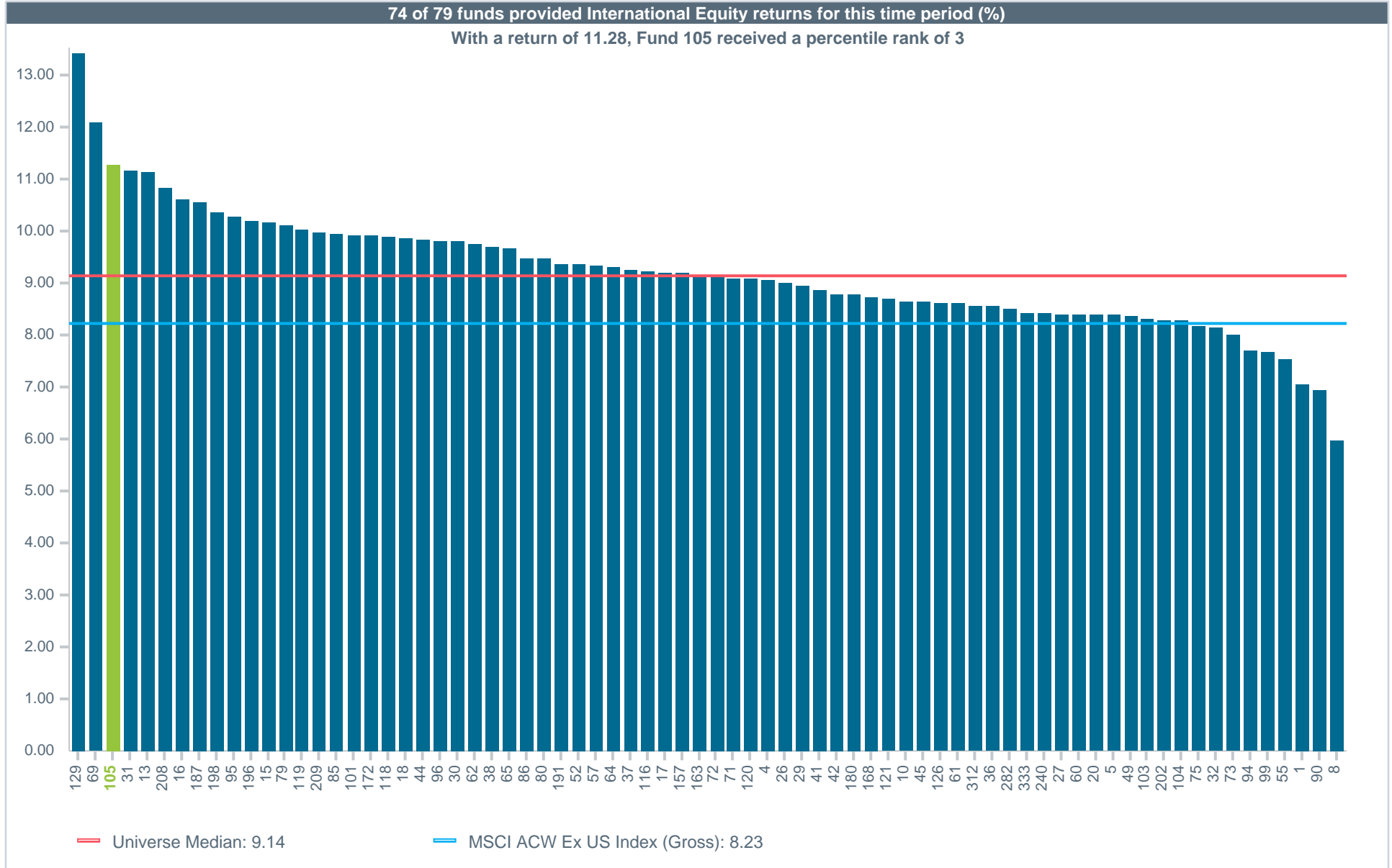
1 Year Annualized International Equity Returns



Funds with less history than the specified time period will not appear in the chart.

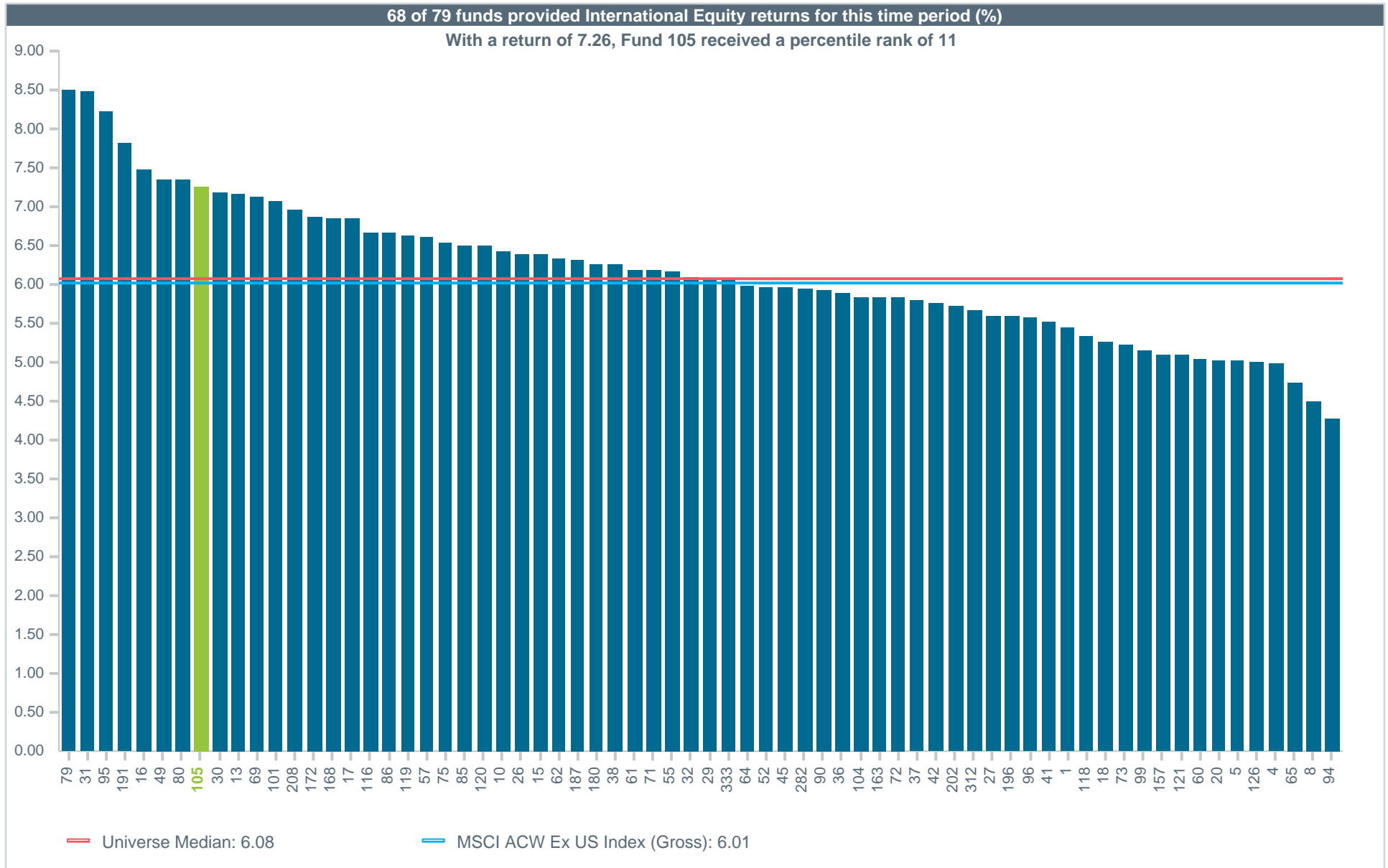


5 Year Annualized International Equity Returns



Funds with less history than the specified time period will not appear in the chart.



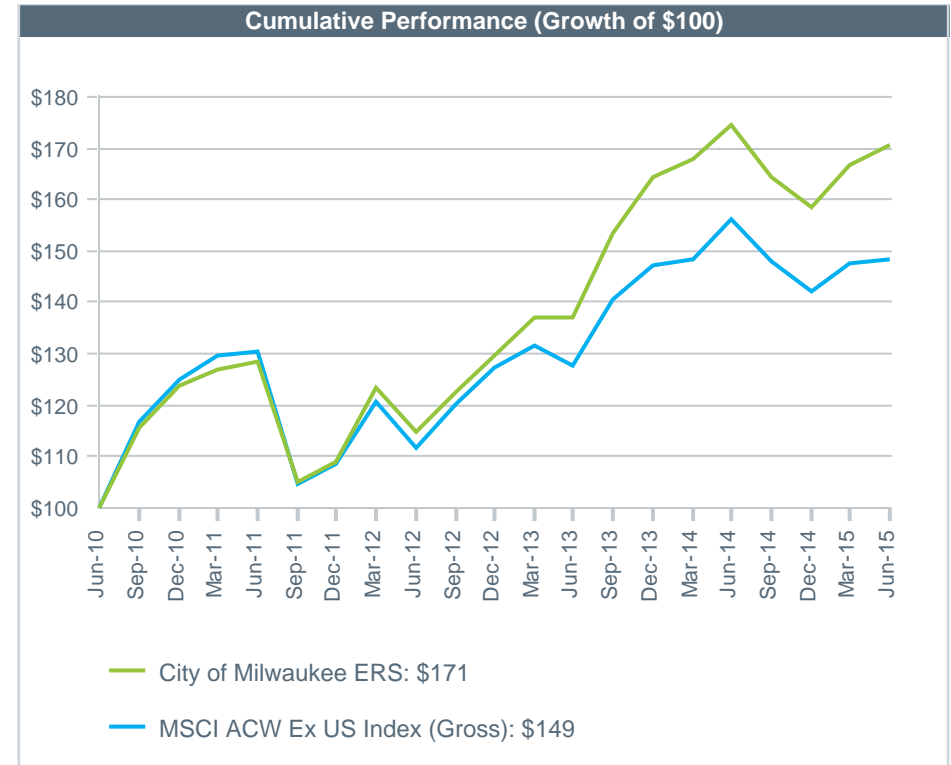
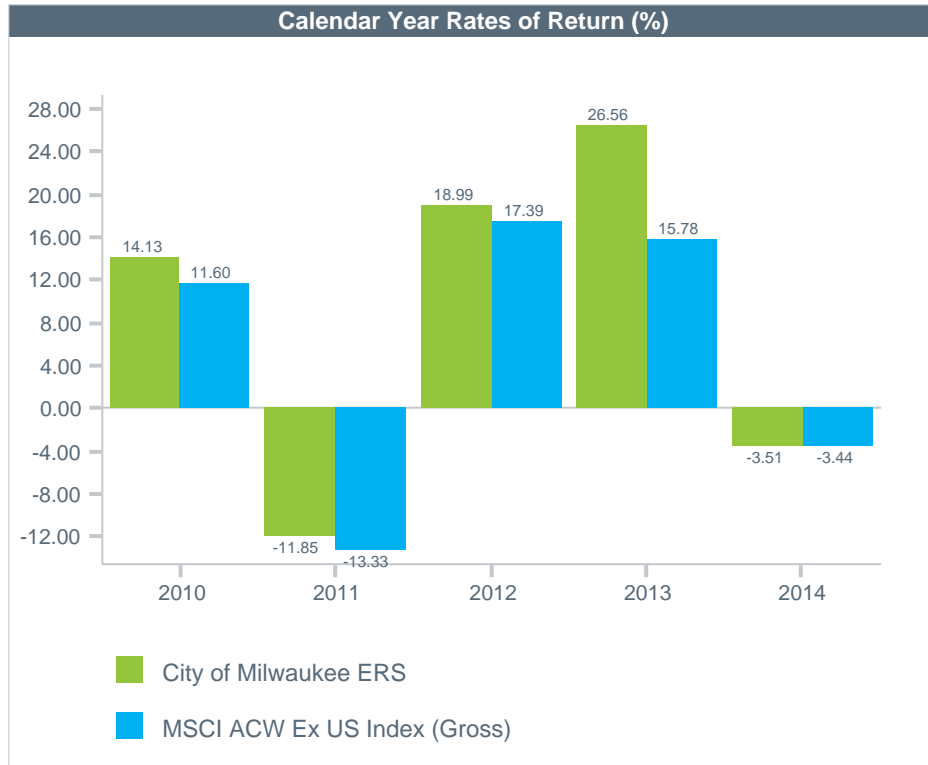


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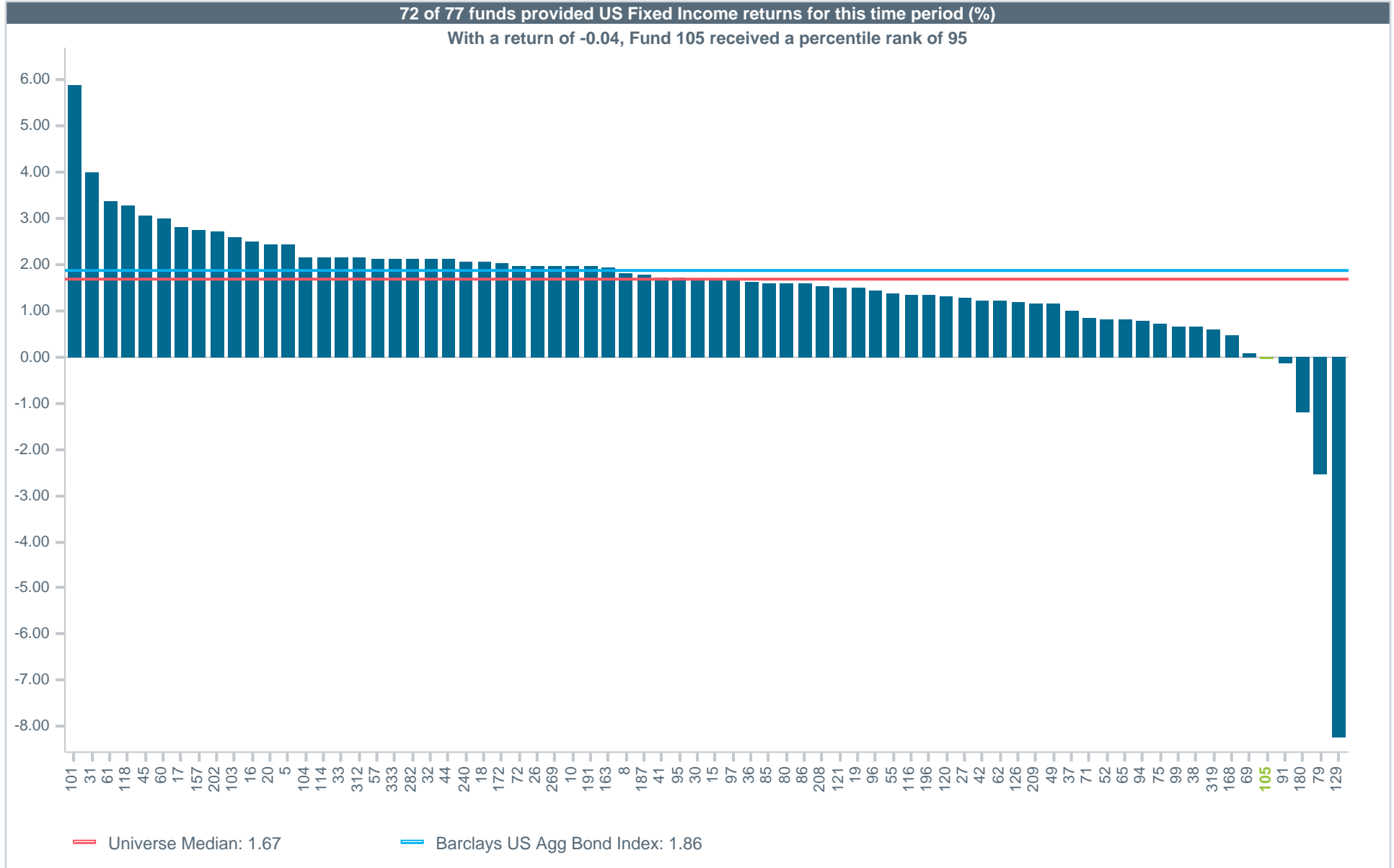
Total Return - International Equity

City of Milwaukee ERS vs. MSCI ACW Ex US Index (Gross)



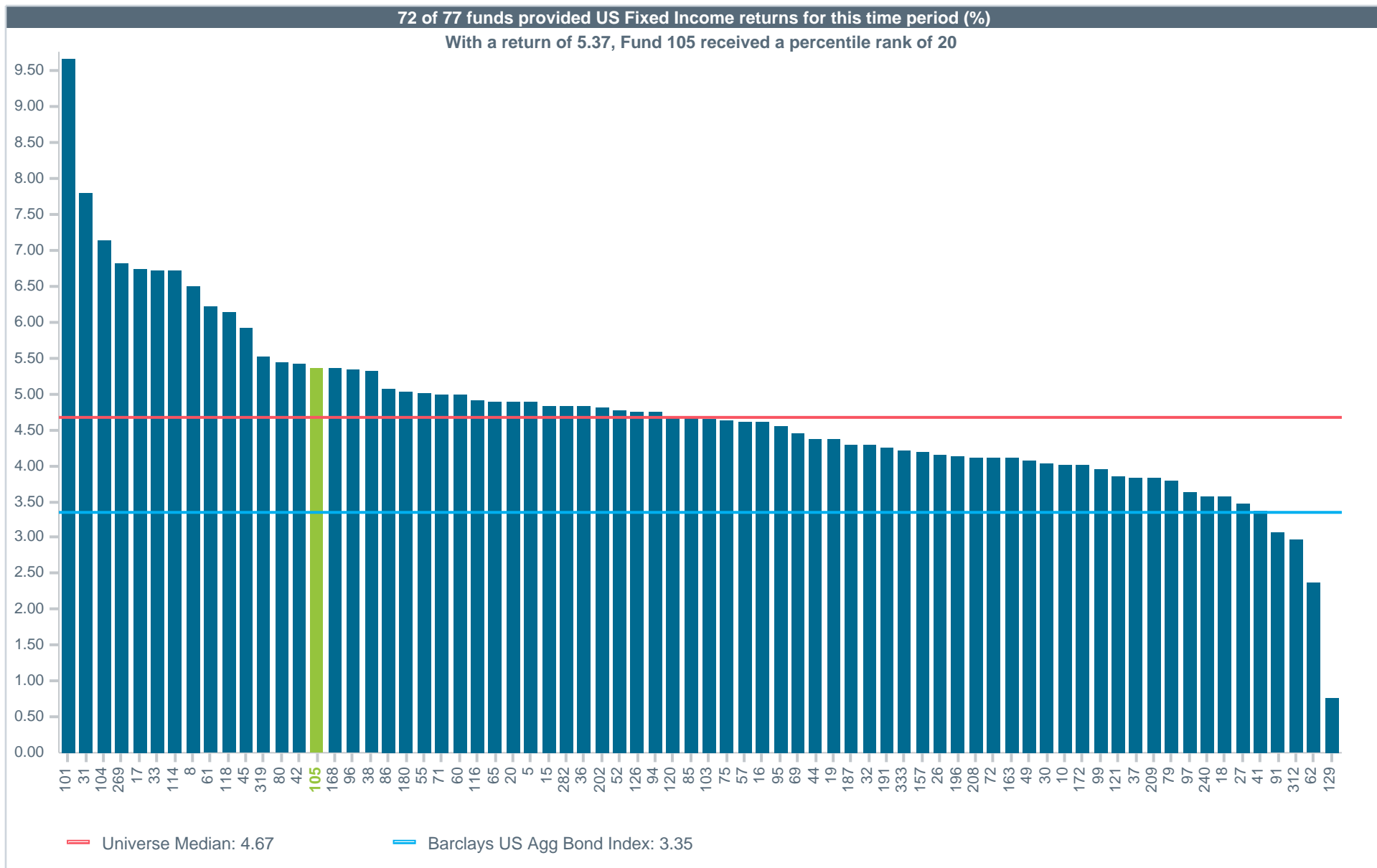
Annualized Returns (%)			
	1 Year	3 Years	5 Years
City of Milwaukee ERS	-2.21	14.18	11.28
MSCI ACW Ex US Index (Gross)	-4.85	9.92	8.23
Variance	2.64	4.26	3.05





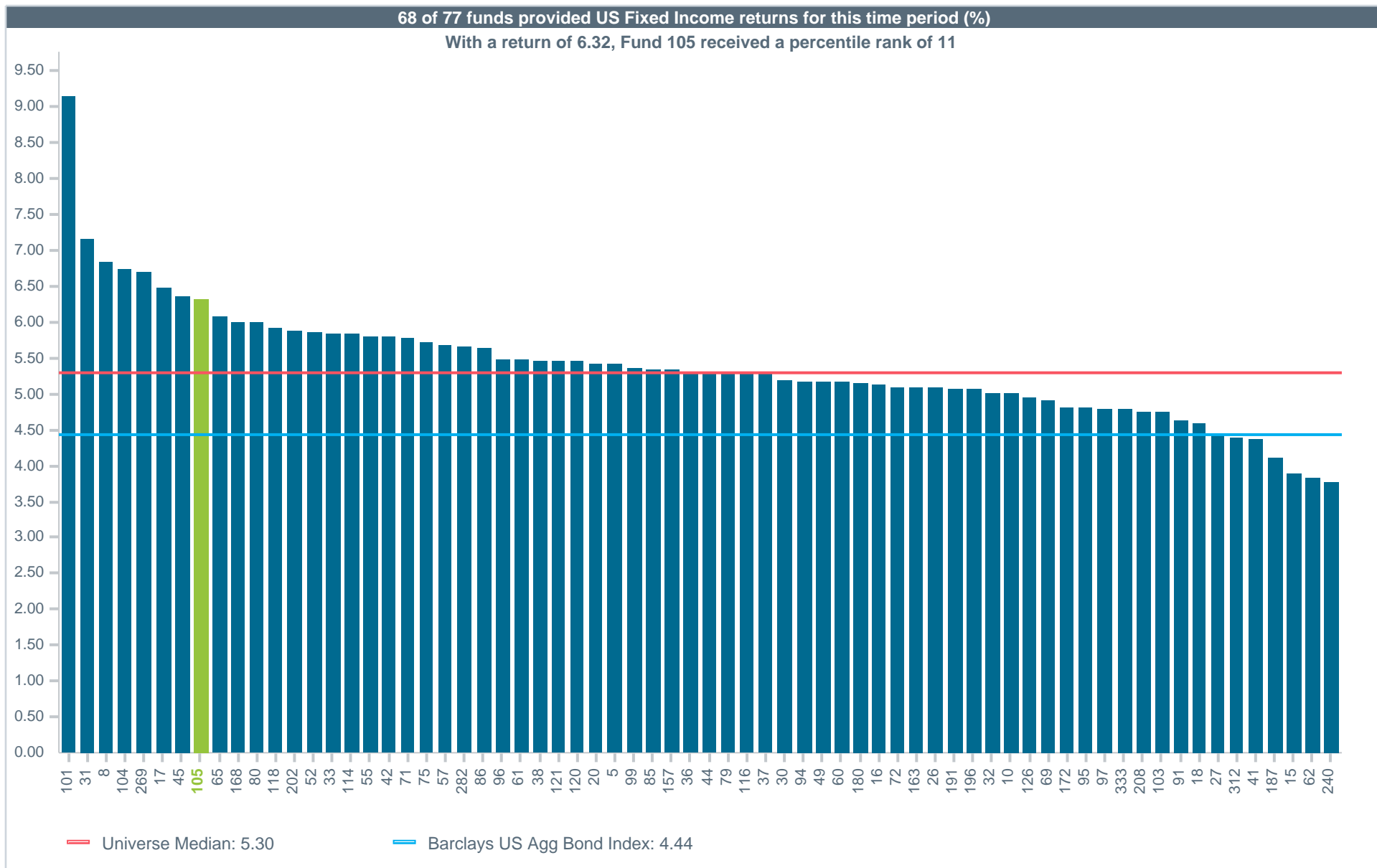
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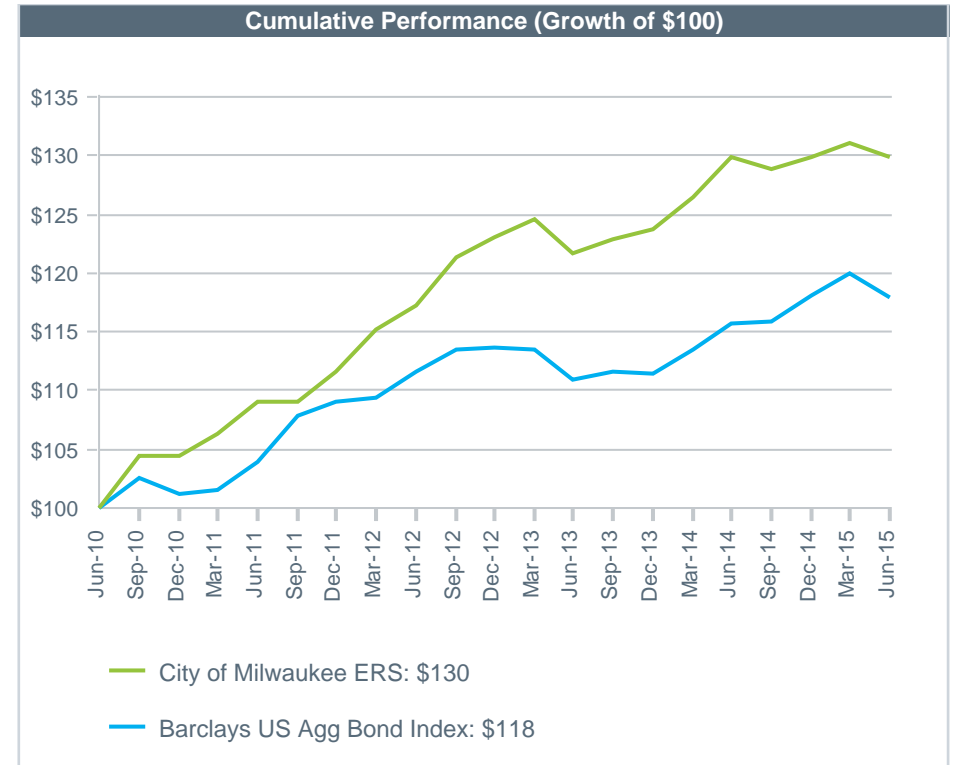
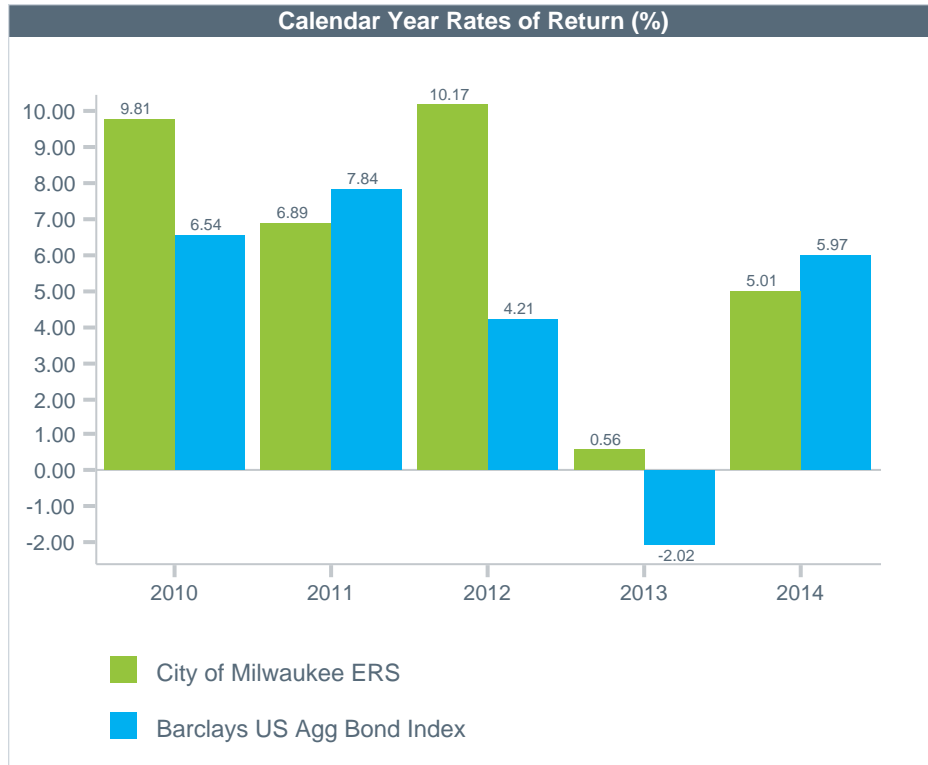


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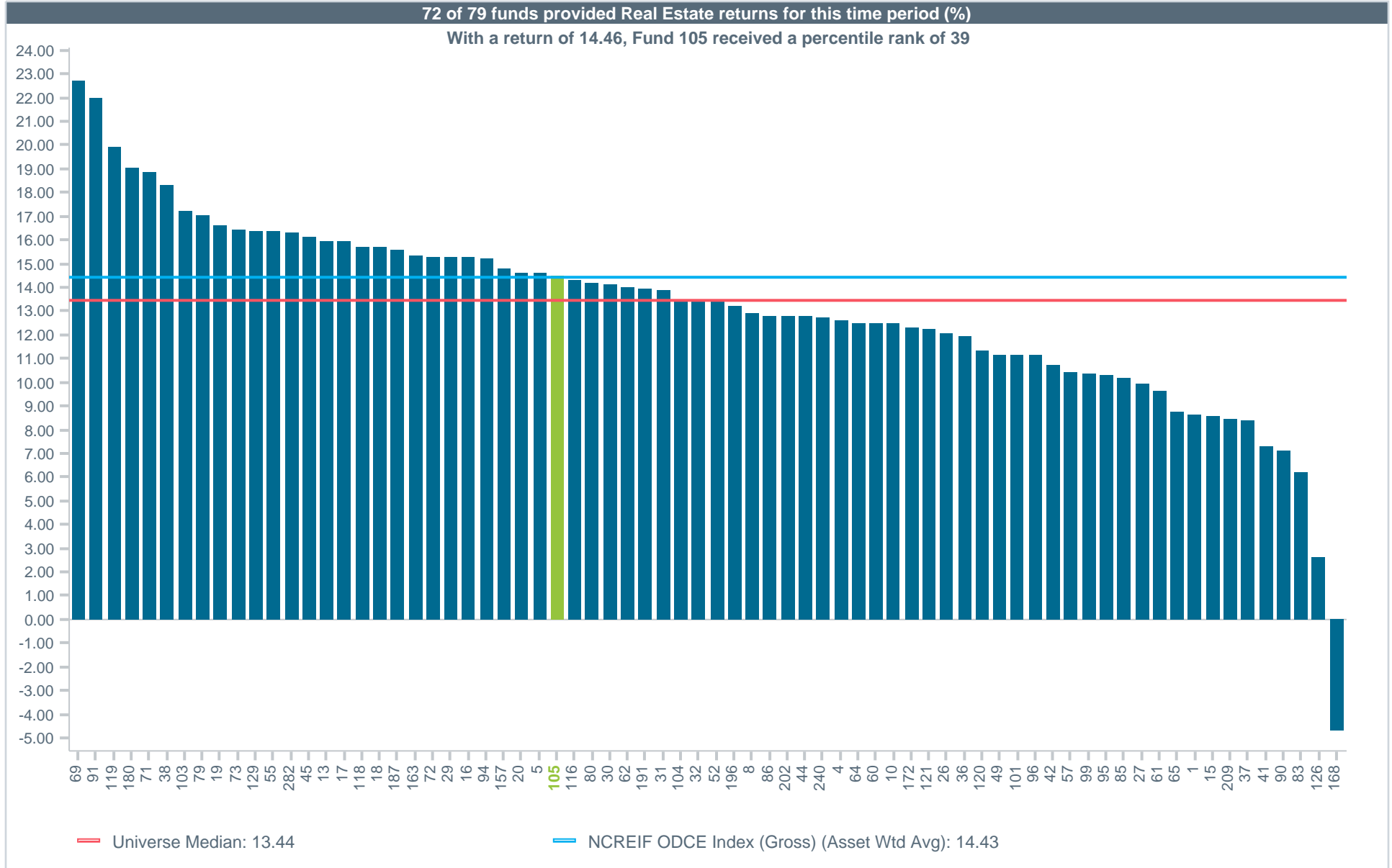
Total Return - US Fixed Income

City of Milwaukee ERS vs. Barclays US Agg Bond Index



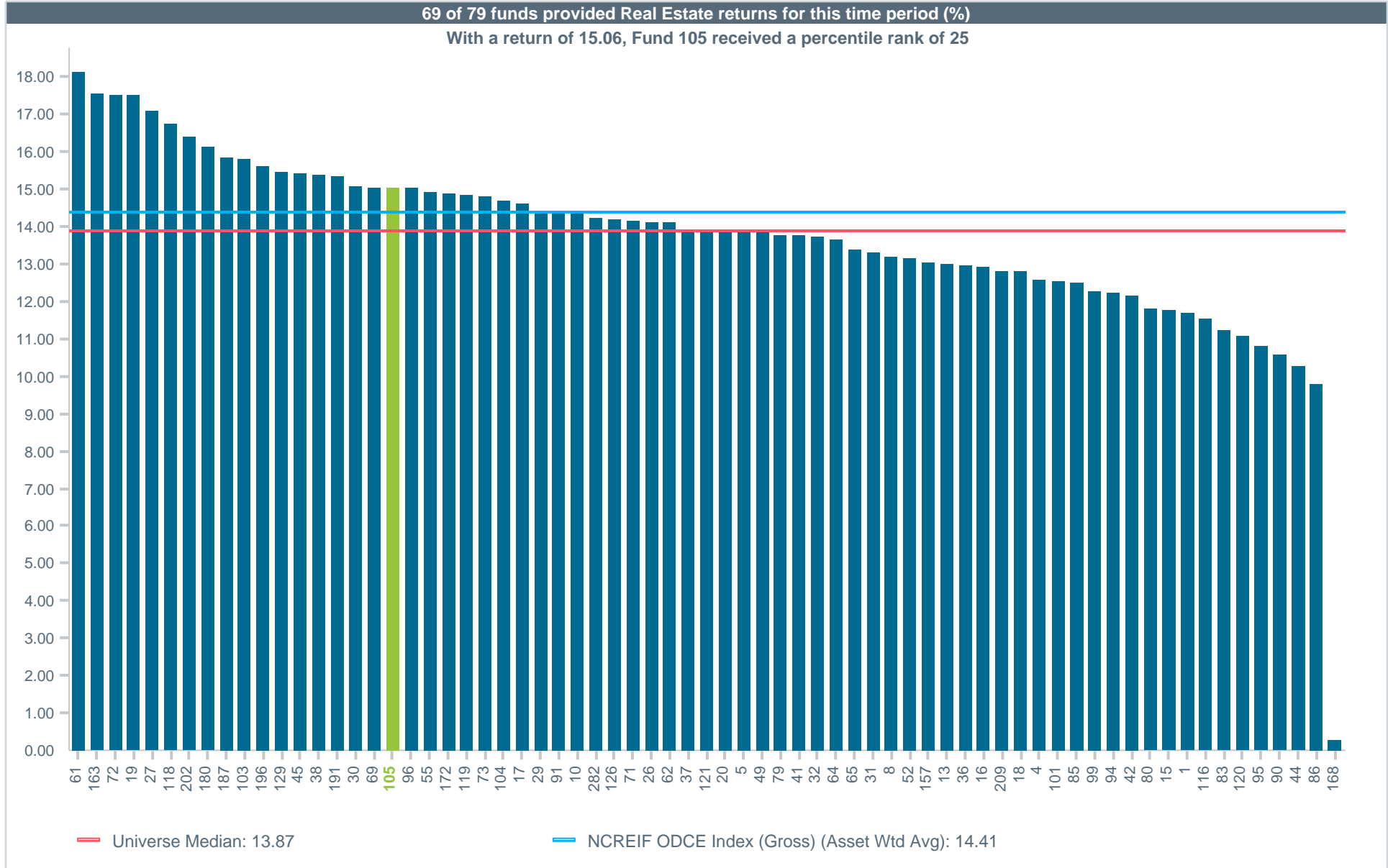
Annualized Returns (%)			
	1 Year	3 Years	5 Years
City of Milwaukee ERS	-0.04	3.46	5.37
Barclays US Agg Bond Index	1.86	1.83	3.35
Variance	-1.90	1.63	2.02





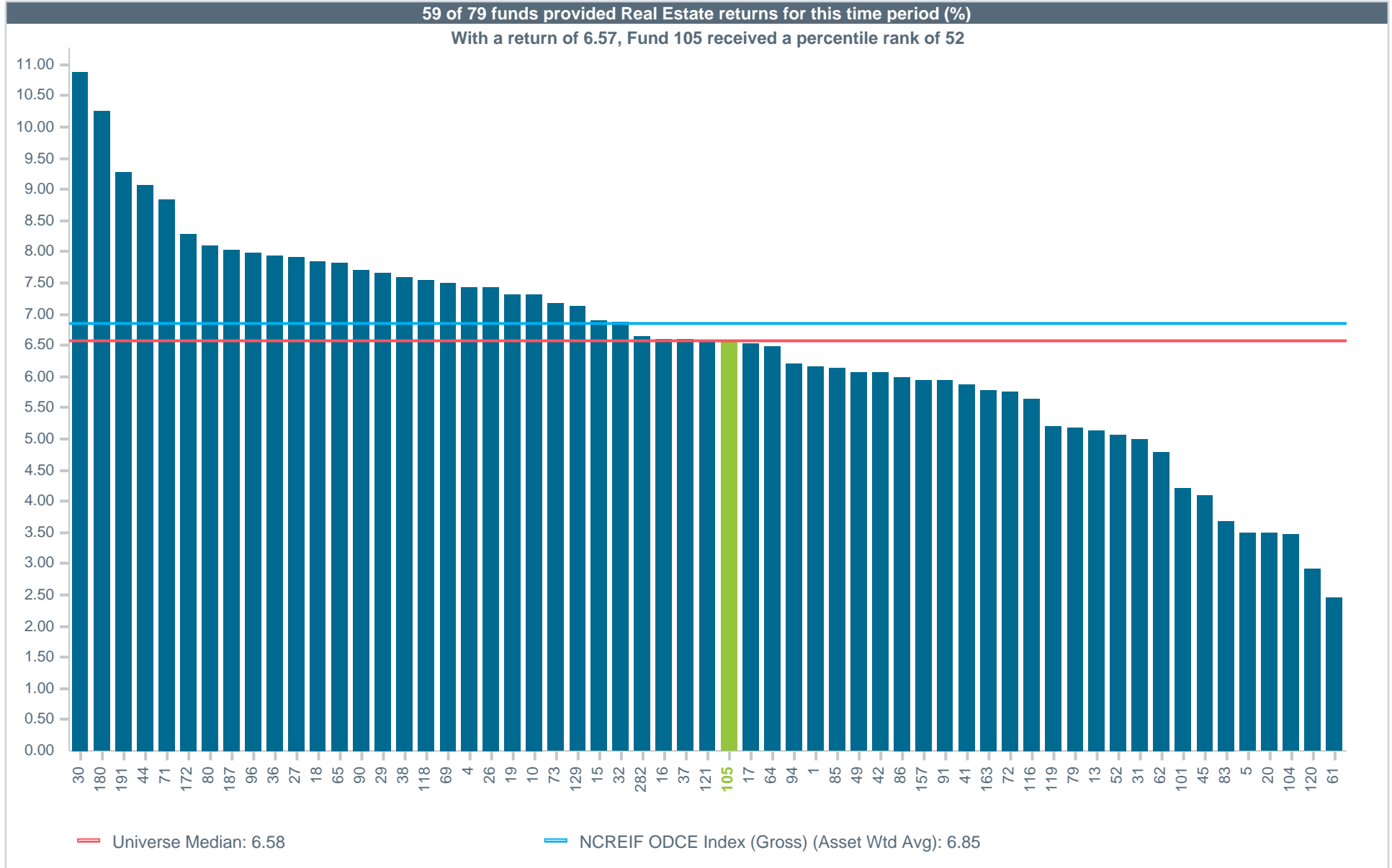
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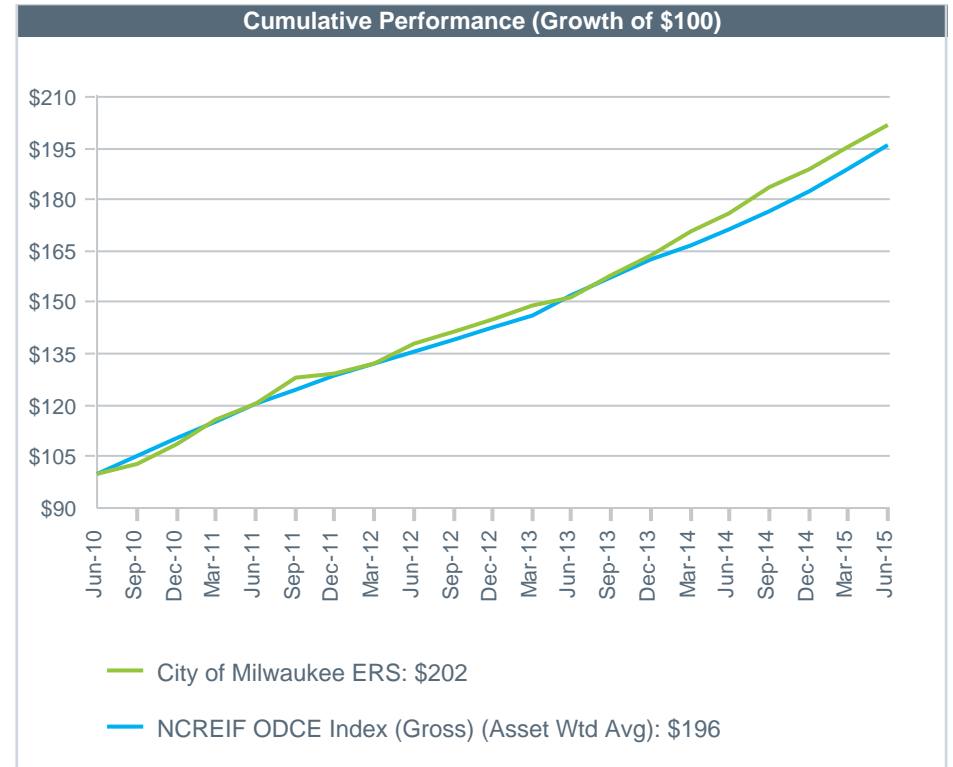
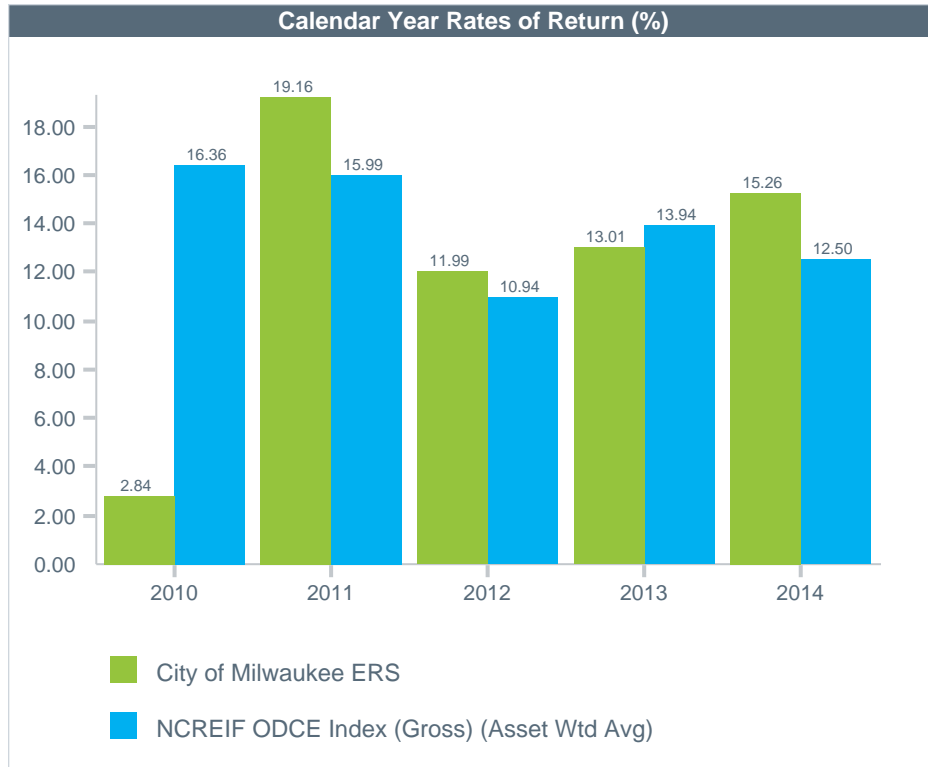


Funds with less history than the specified time period will not appear in the chart.



Total Return - Real Estate

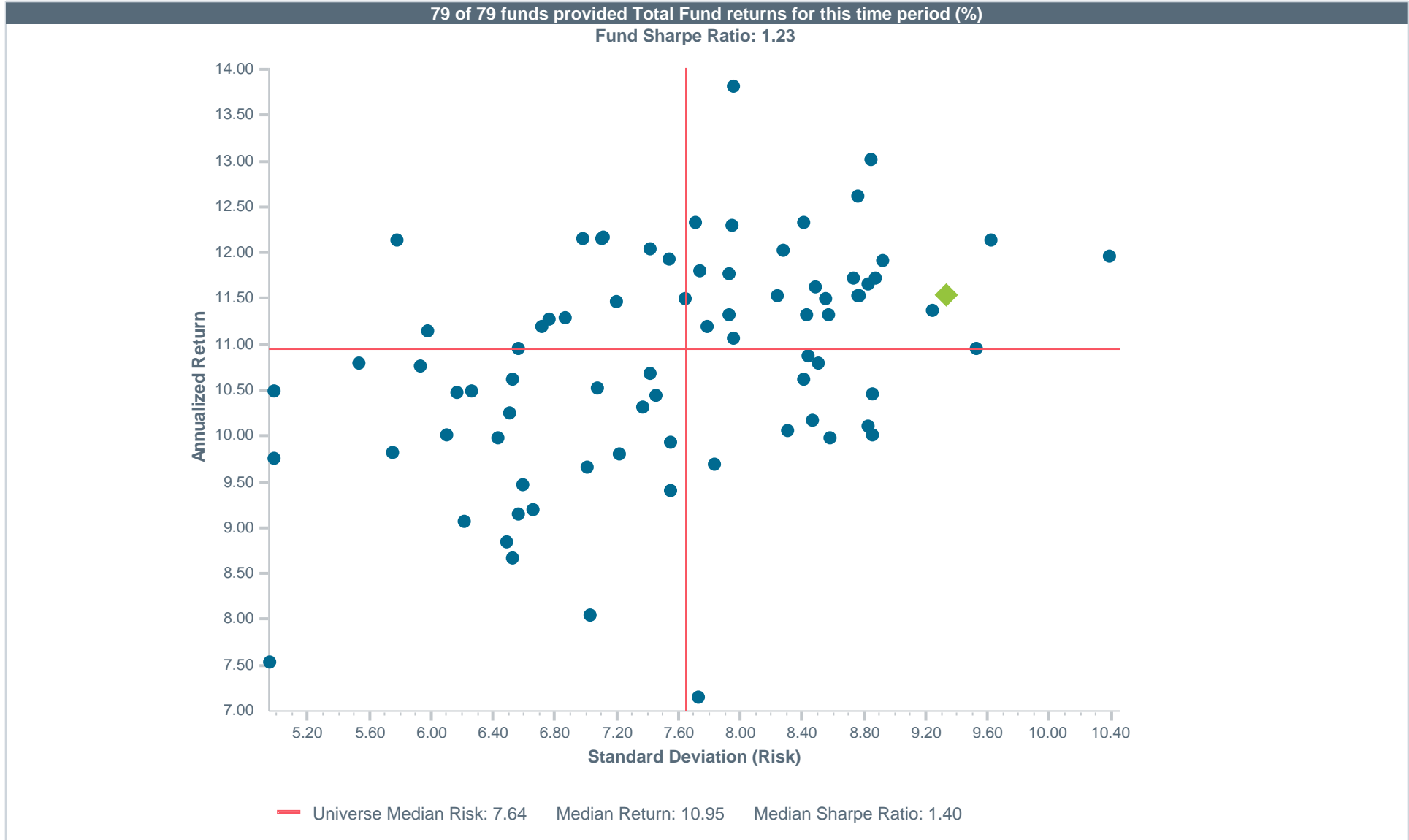
City of Milwaukee ERS vs. NCREIF ODCE Index (Gross) (Asset Wtd Avg)



Annualized Returns (%)			
	1 Year	3 Years	5 Years
City of Milwaukee ERS	14.46	13.44	15.06
NCREIF ODCE Index (Gross) (Asset Wtd Avg)	14.43	13.11	14.41
Variance	0.03	0.33	0.65



5 Year Annualized Total Fund Returns vs. Standard Deviation



Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

10 Year Annualized Total Fund Returns vs. Standard Deviation

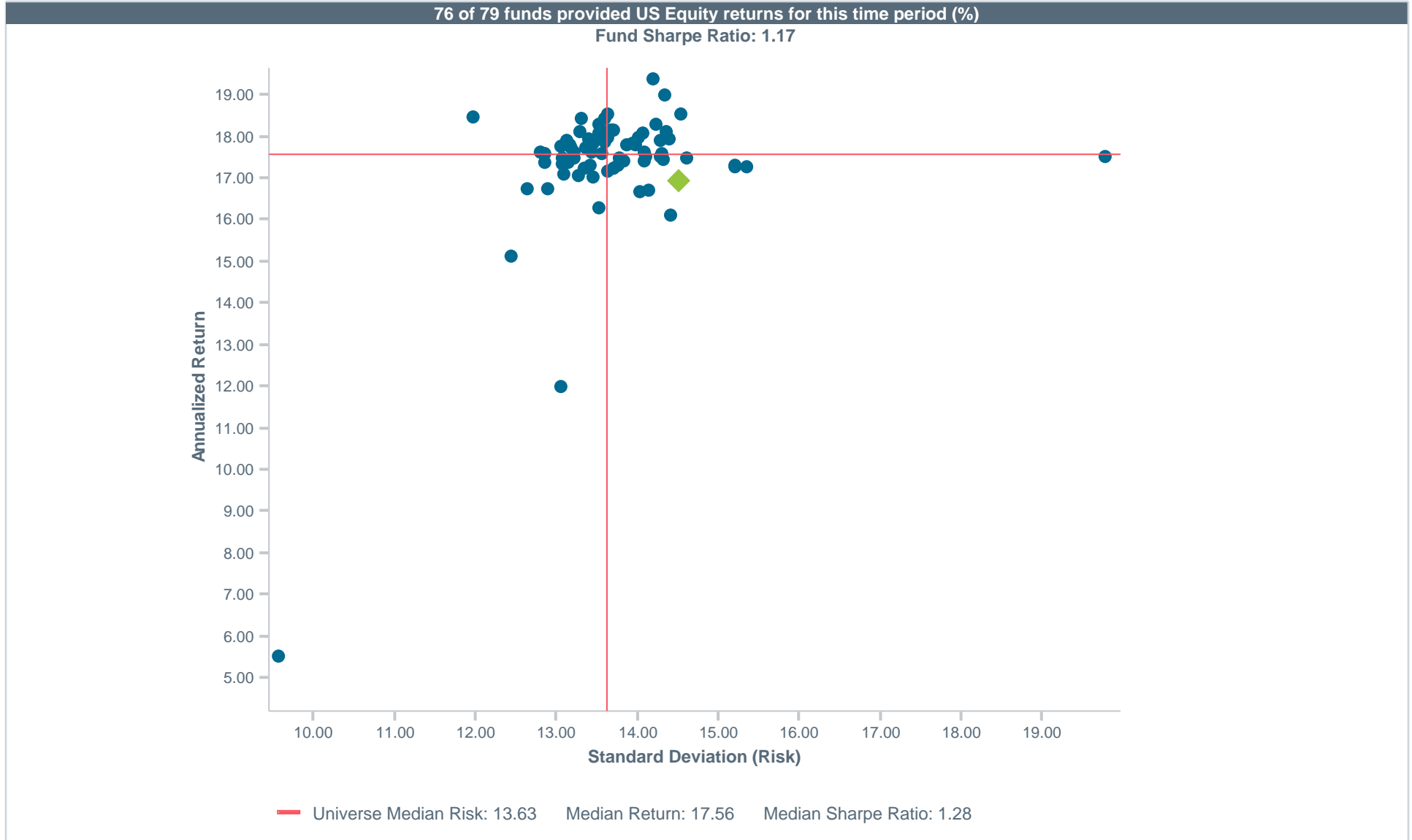


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

5 Year Annualized US Equity Returns vs. Standard Deviation



Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

10 Year Annualized US Equity Returns vs. Standard Deviation



Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

5 Year Annualized International Equity Returns vs. Standard Deviation

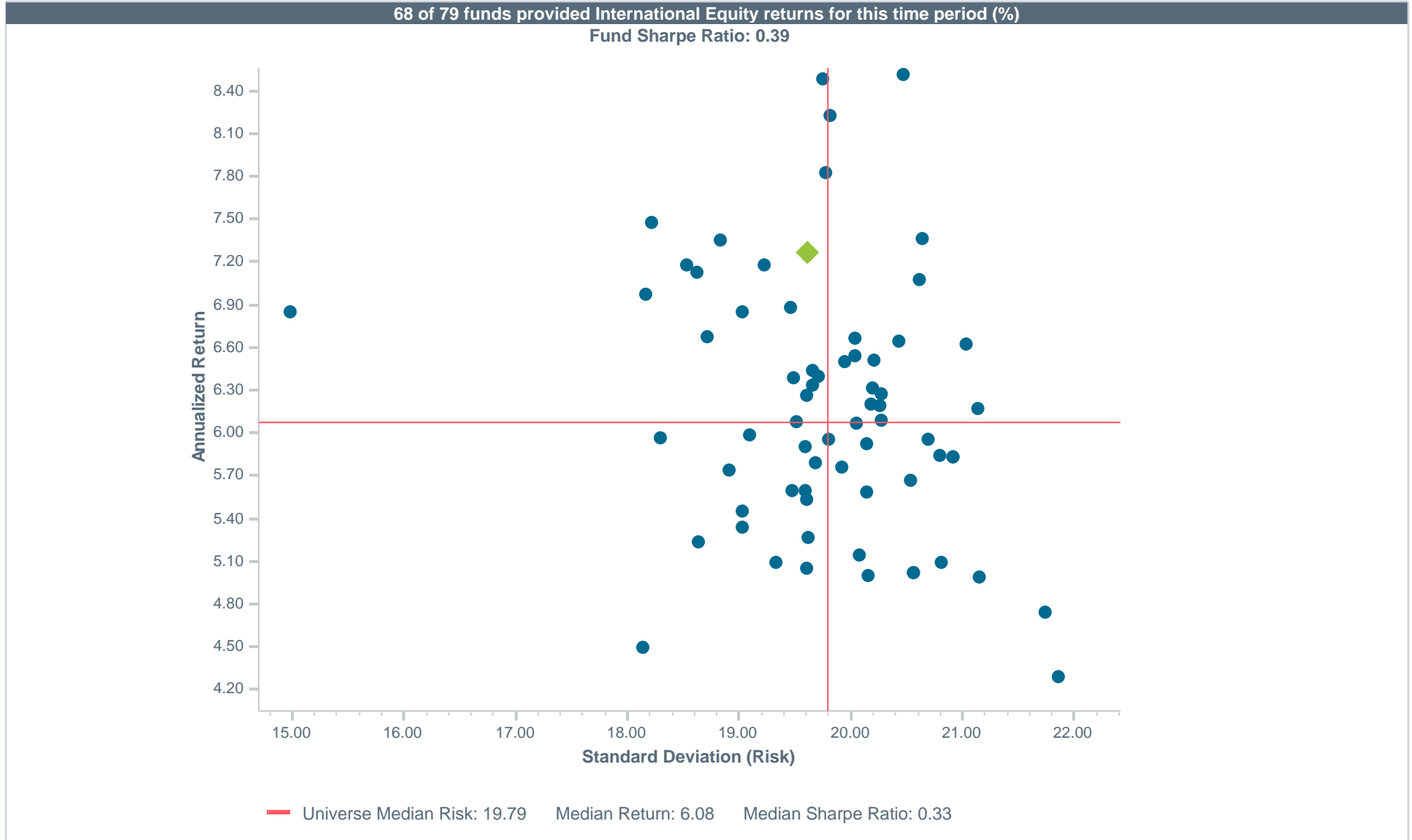


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

10 Year Annualized International Equity Returns vs. Standard Deviation

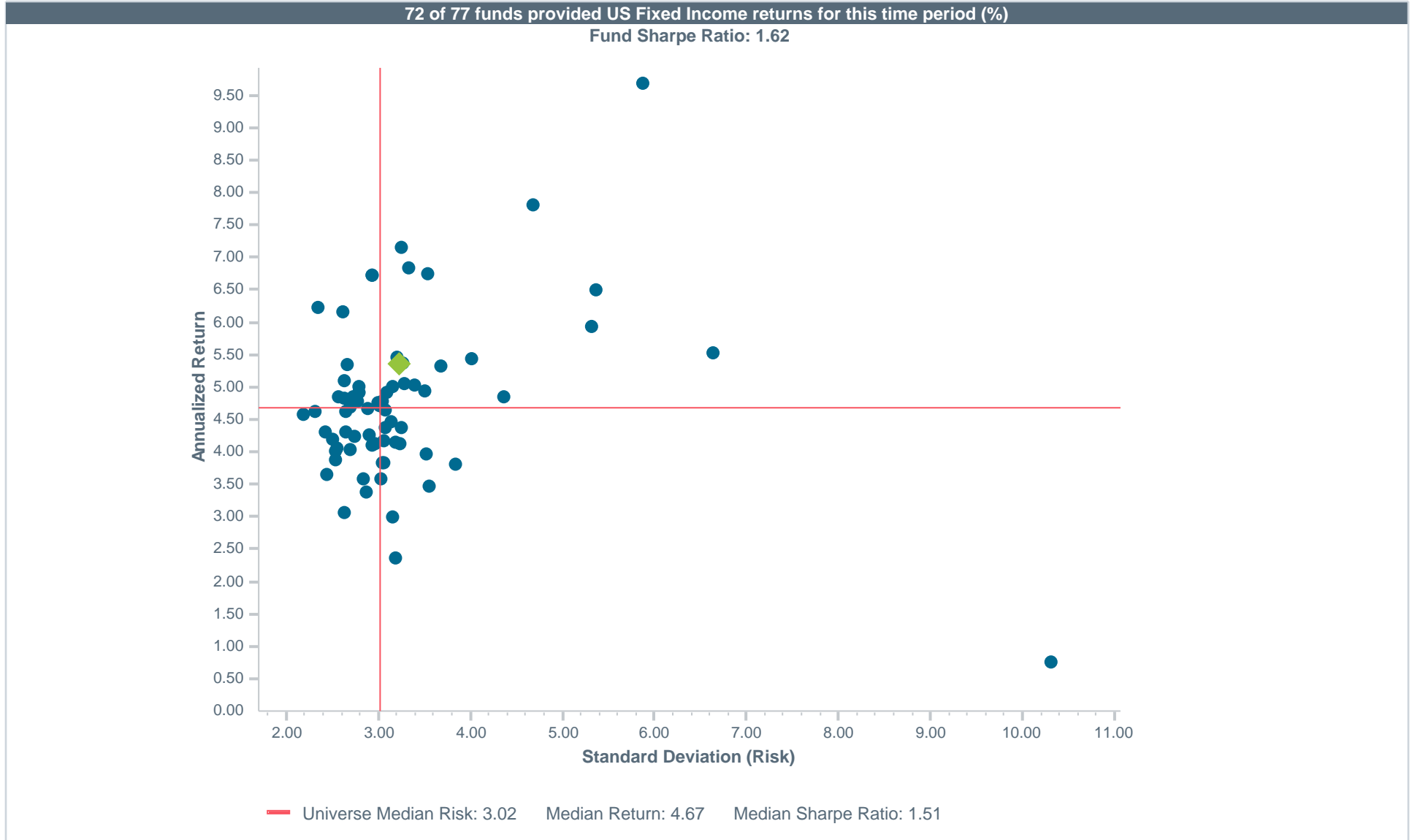


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Risk/Return Analysis

5 Year Annualized US Fixed Income Returns vs. Standard Deviation

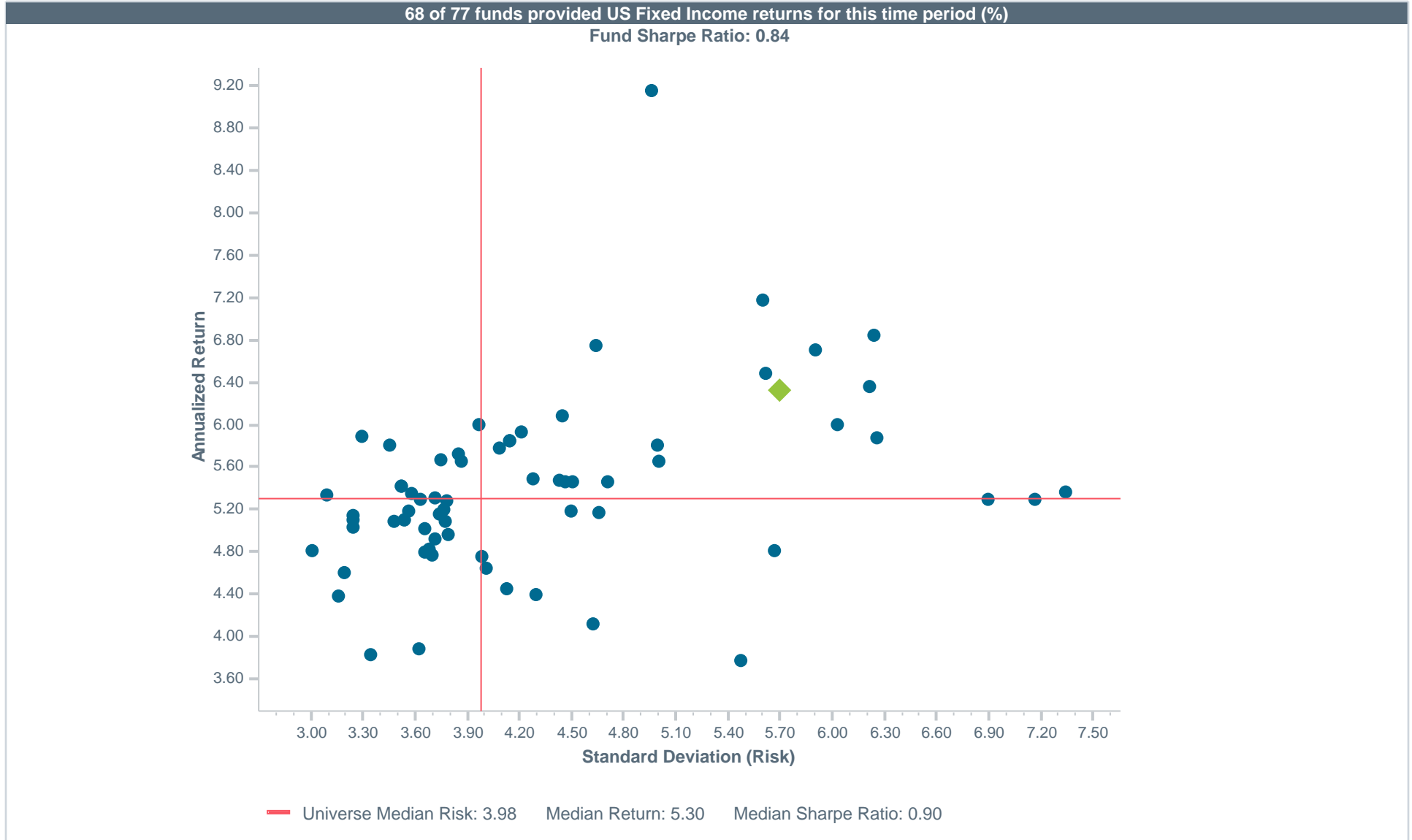


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Risk/Return Analysis

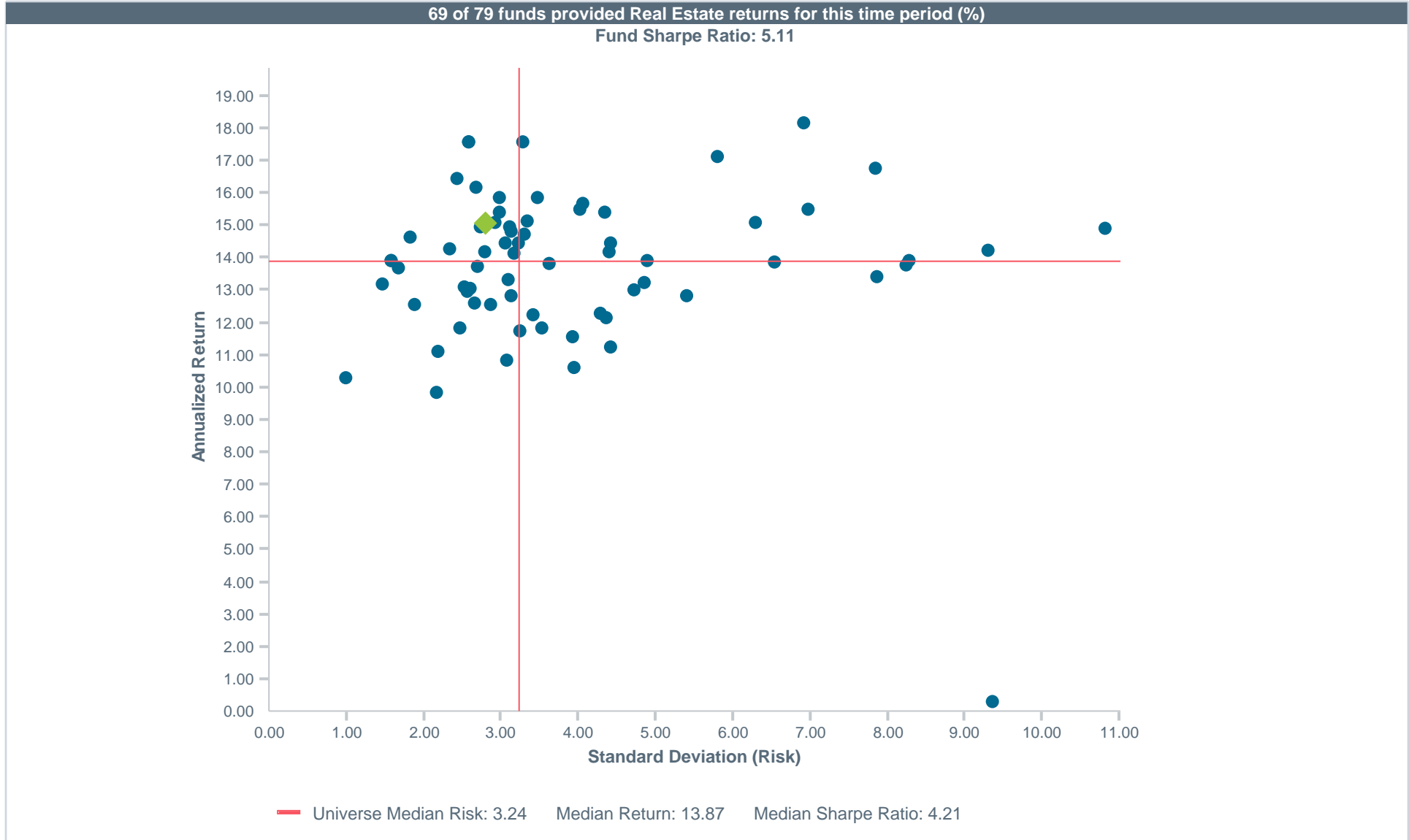
10 Year Annualized US Fixed Income Returns vs. Standard Deviation



Funds with less history than the specified time period will not appear in the chart.



5 Year Annualized Real Estate Returns vs. Standard Deviation

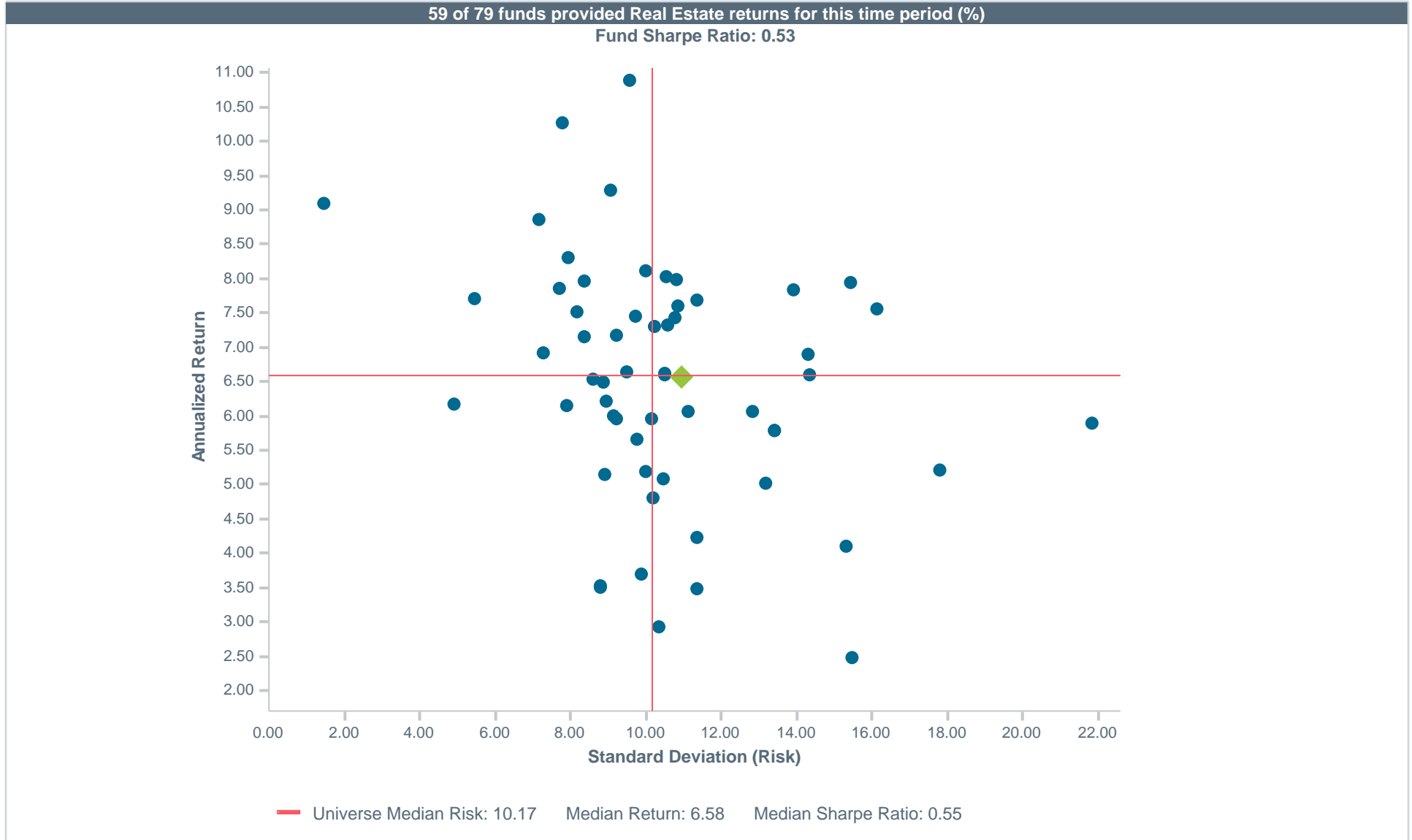


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

10 Year Annualized Real Estate Returns vs. Standard Deviation

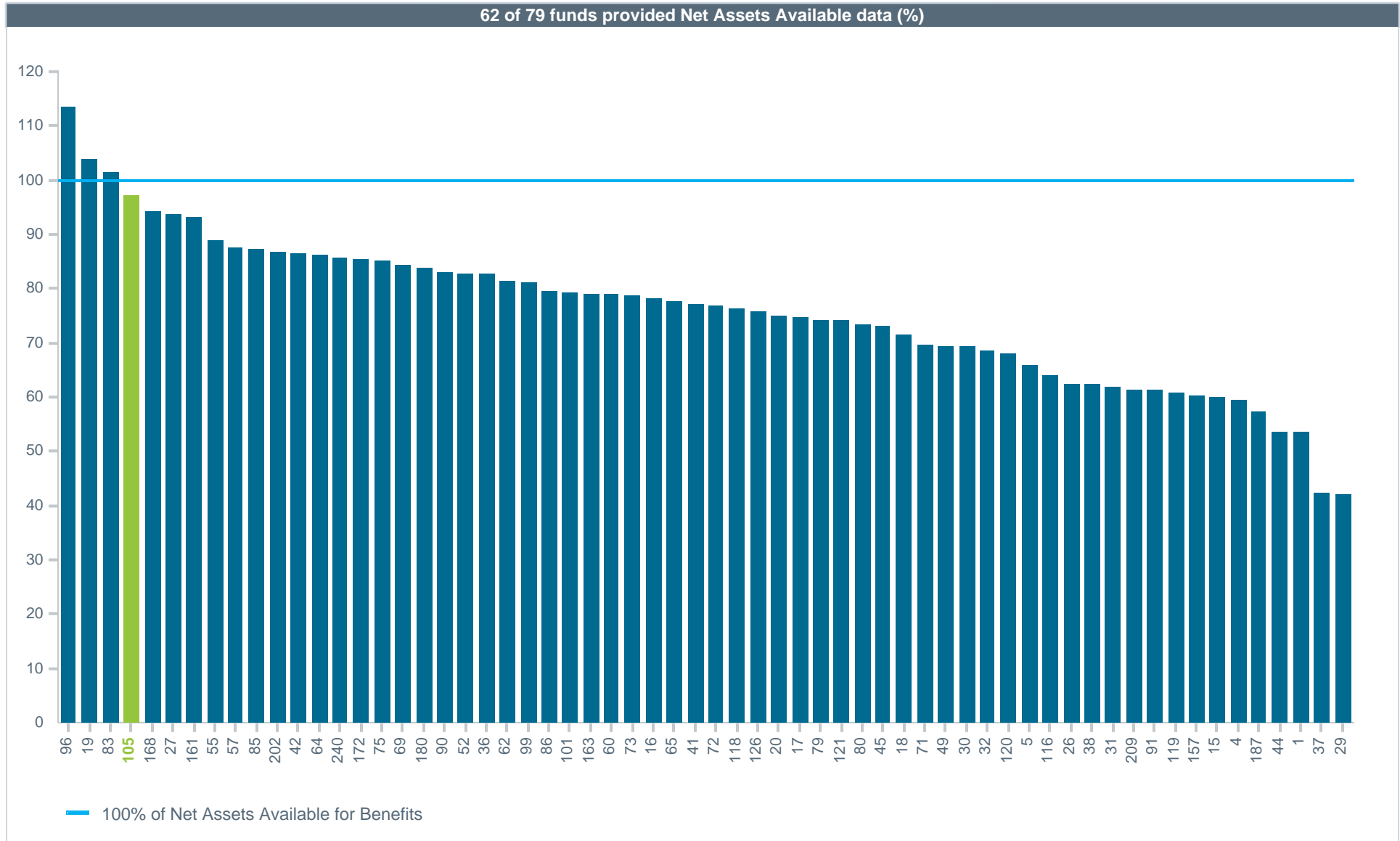


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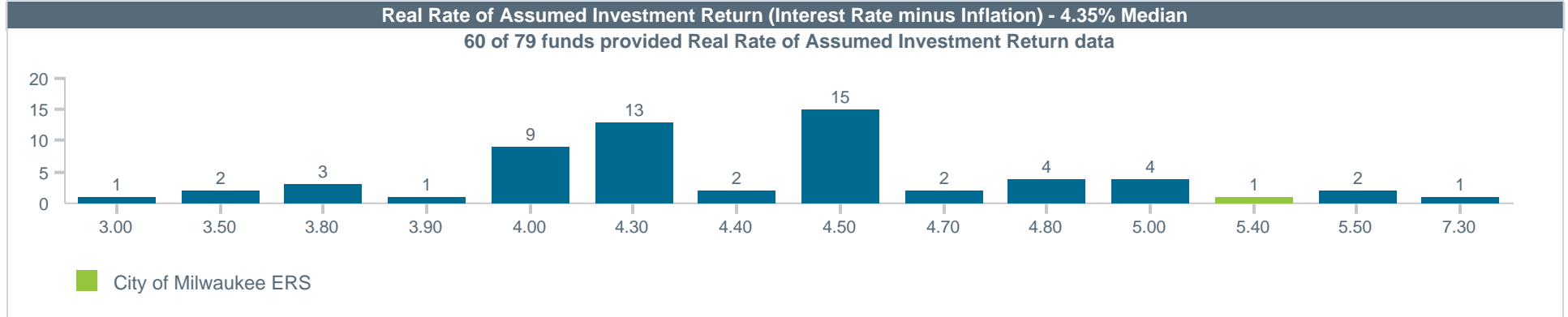
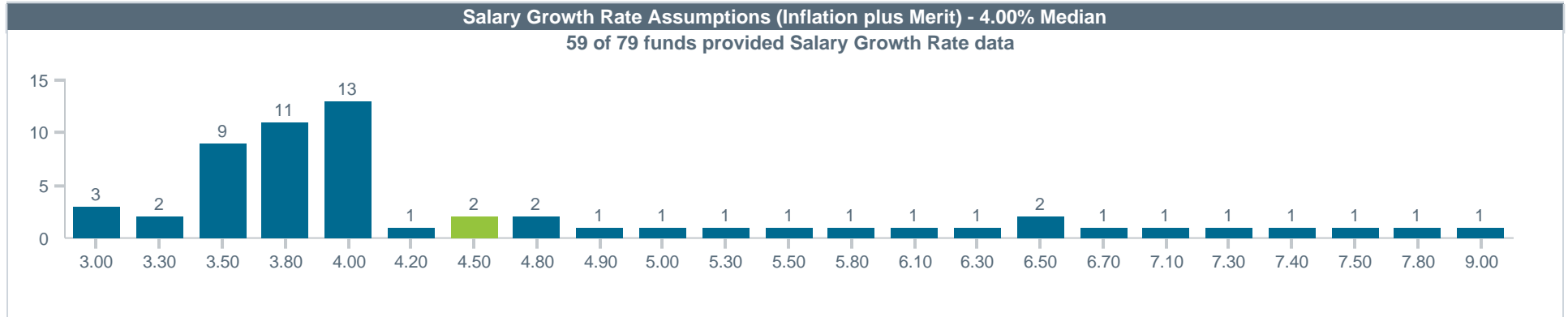
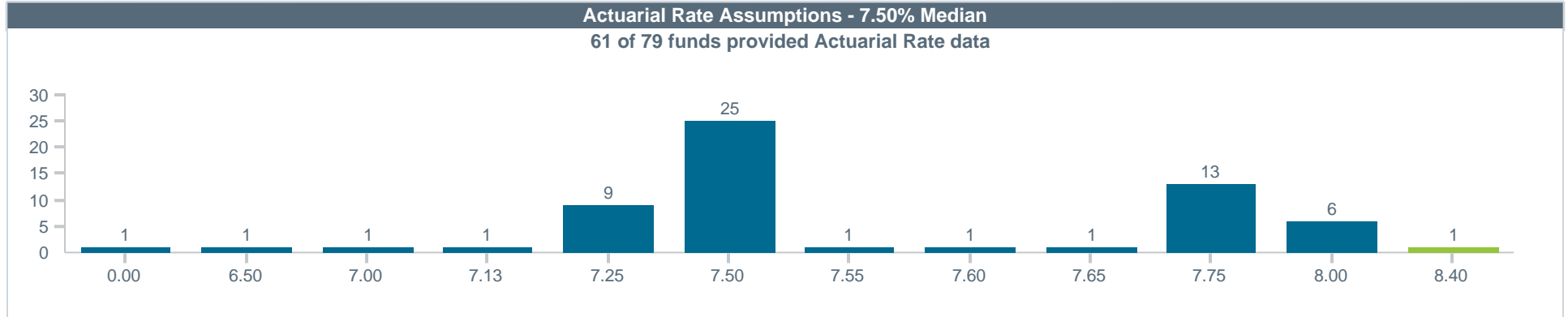
Net Assets Available For Benefits

Expressed as a Percentage of the Pension Benefit Obligation



Funds that did not provide data will not appear in the chart.

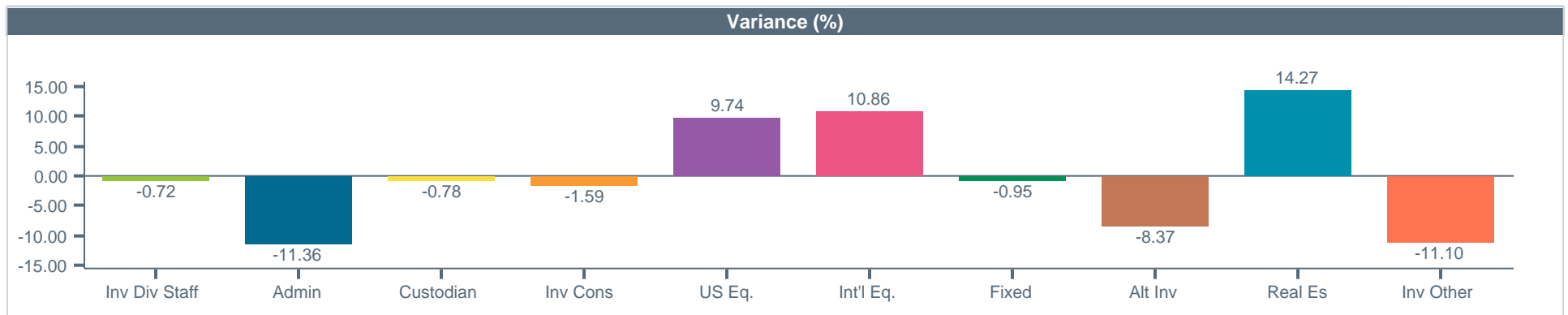
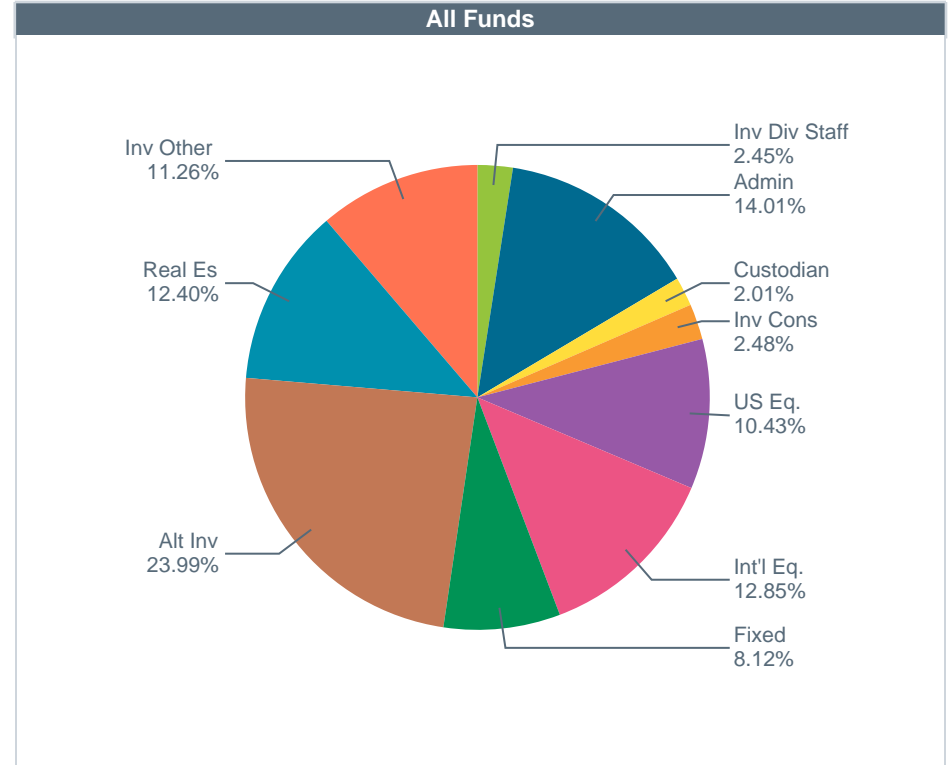
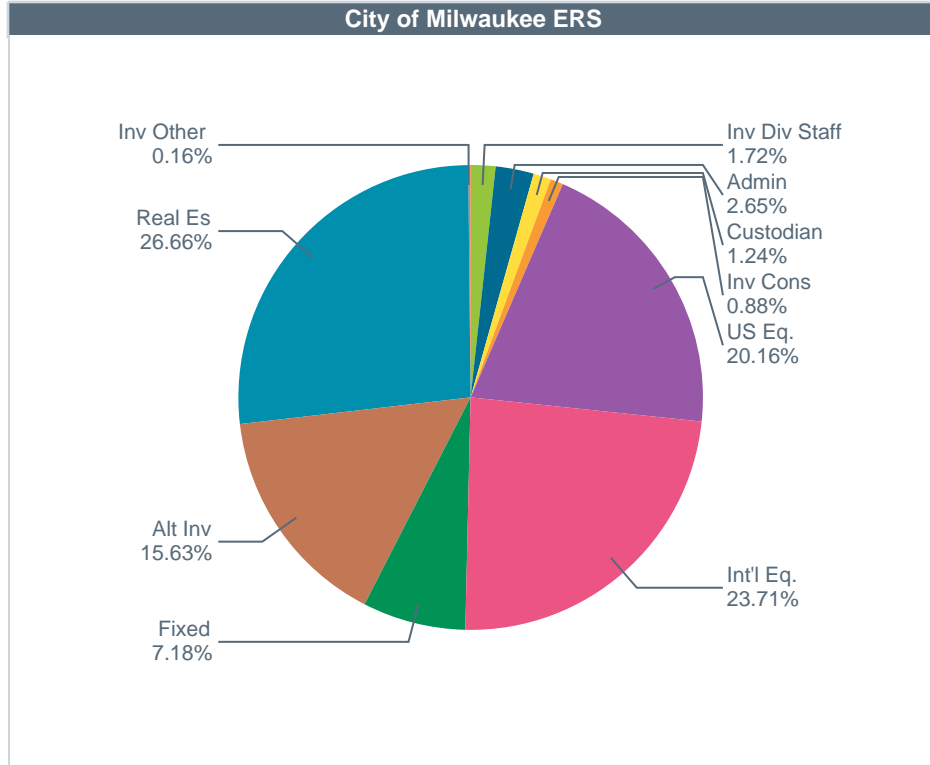




Funds that did not provide data will not appear in the chart.



Total Administrative and Investment Fees
City of Milwaukee ERS vs. All Funds



Allocations shown may not sum up to 100% exactly due to rounding.



Total Fund Fee Summary in Basis Points

City of Milwaukee ERS vs. Average by Asset Range

62 of 79 funds provided fee data for this time period

Administrative Expenses	City of Milwaukee ERS	Under \$500 Million	\$500mm - \$1 Billion	\$1 - \$5 Billion	\$5 - \$10 Billion	\$10 - \$20 Billion	Over \$20 Billion
Internal Inv. Div. Staff	0.84	1.16	0.00	1.83	0.68	0.71	1.56
Actuary	0.32	2.43	1.28	0.56	0.26	0.15	0.09
Legal	0.32	1.61	0.46	0.94	0.48	0.24	0.17
Consultant	0.00	0.18	0.14	0.24	0.42	0.11	0.11
Audit	0.15	0.91	0.62	0.20	0.10	0.15	0.05
Other Professional	0.13	0.02	1.49	0.25	0.41	0.16	0.56
General Administrative	0.37	10.67	11.19	7.84	5.58	3.39	2.77
Total Administrative Expenses	2.13	16.98	15.19	11.85	7.93	4.92	5.32
Investment Expenses	City of Milwaukee ERS	Under \$500 Million	\$500mm - \$1 Billion	\$1 - \$5 Billion	\$5 - \$10 Billion	\$10 - \$20 Billion	Over \$20 Billion
Custodial	0.60	2.09	3.21	1.58	0.59	0.67	0.30
Investment Consulting	0.43	2.59	1.91	1.72	0.84	1.56	0.44
Domestic Equity	9.83	1.52	10.38	7.14	6.79	4.82	2.55
International Equity	11.56	1.80	8.93	7.74	7.83	6.83	4.58
Fixed Income	3.50	3.70	5.76	5.34	4.86	3.21	3.00
Real Estate	12.99	3.60	5.36	5.55	8.45	5.65	7.08
Other Investment Management	0.08	8.42	5.00	4.48	3.52	7.18	6.42
Total Investment Expenses (ex. Alt Inv)	38.99	23.72	40.55	33.56	32.88	29.91	24.38
Alternative Investments	7.62	8.10	6.80	9.83	16.20	10.44	15.65
Total Investment Expenses	46.61	31.82	47.35	43.39	49.08	40.35	40.03
Total Expenses	48.74	48.80	62.53	55.25	57.01	45.28	45.34

Expressed in basis points on total fund assets. Funds that did not provide fee data will not appear in the table.



Miscellaneous Comments

- Performance shown is gross of fees, with the exception of the following:
 - **Funds 31 and 49:** Performance shown is net of fees.
 - **Funds 5 and 20:** Performance shown is net of fees, except for Total Fund performance.
- Performance shown is calculated using quarterly performance provided by participating public funds.
- Performance shown may differ from a fund's actual performance due to rounding.
- Net Assets Available for Benefit includes funding percentage valuation as of dates between June 2014 and June 2015.
- Allocations shown reflect dedicated managers/mandates rather than actual exposure.

Glossary of Terms

Beta - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

Return - Compounded rate of return for the period.

%Return - The time-weighted rate of return of a portfolio for a specified time period.

Sharpe Ratio - Represents the excess rate of return over the risk-free return (i.e., BofA ML 3 Mo US T-Bill Index), divided by the standard deviation of the excess return. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

Standard Deviation - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period. Calculation is based on quarterly periodicity.

PORTLAND

CHICAGO

NEW YORK

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