



Public Fund Universe Analysis

Mendocino County Employees' Retirement Association

Period Ending June 30, 2017
Fund Number: 49



OVERVIEW

RVK, Inc. (“RVK”) was founded in 1985 and is one of the largest independent and employee-owned investment consulting firms in the US, providing world-class investment advice to institutional investors. We serve over 400 plans, including pension plans, defined contribution plans, endowments & foundations, insurance pools, and special purpose funds.

MISSION STATEMENT

To provide best-in-class investment consulting services to a wide array of sophisticated investors.

STRATEGIC INVESTMENT ADVICE WITH NO CONFLICTS OF INTEREST

RVK built its investment consulting practice on the principles of integrity, investment knowledge, client service, and our no conflicts of interest policy. We are exclusively focused on strategic investment consulting services and solely owned by active employees, enabling us to offer advice that is not influenced by other business activities. As a privately-held firm, with no affiliates or parent company, we provide informed and unbiased investment advice to our clients. We offer an extensive slate of consulting services and produce deliverables fully customized to meet each client’s needs.

KEY TENETS OF OUR CULTURE



RVK BY THE NUMBERS

- **30+** years of business
- **3** offices - Portland, Chicago, New York
- **\$800+** billion Full-Retainer AUA
- **90+** Investment Professionals
- **50+** Advanced Degrees and Certifications
- **100%** Employee Ownership
- **100%** Revenue Derived from Client Fees
- **100%** Non-Discretionary Services

GENERAL CONSULTING SERVICES

- Plan Evaluation
- Strategic Asset Allocation
- Investment Policy Development & Review
- Investment Manager Search & Selection
- Performance Analysis & Reporting
- Manager Structure Analysis
- Risk Monitoring and Management
- Client Education
- Special Projects

SPECIALTY CONSULTING SERVICES

- Strategic Planning Reviews
- Custody, Record keeper, Third-Party Administrator Searches
- Asset/Liability Studies
- Endowment Spending Policy Studies
- Securities Lending Reviews
- Pacing Studies
- Outsourced CIO (“OCIO”) Searches, Evaluation, and Ongoing Monitoring
- Directed Consulting Services
- Fee Reviews
- Defined Contribution Solutions Services
- Investment Operations Solutions
- Board and Investment Program Operational Reviews

FOR MORE INFORMATION ABOUT OUR SERVICES, PLEASE CONTACT:

Business.Development@RVKInc.com
503-221-4200

Participants

Alameda County Employees' Retirement Association	Anchorage Police & Fire Retirement System
Arlington County Employees' Retirement System	California State Teachers' Retirement System
City of Austin Employees' Retirement System	City of Fresno Retirement Systems
City of Milwaukee Employees' Retirement System	City of Plano Other Post-Employment Benefits Trust
City of Plano Retirement Security Plan	Civilian Employees' Retirement System of the Police Department of Kansas City, Missouri
Colorado Public Employees' Retirement Association	Confederated Tribes of the Warm Springs Tribal Council Pension Fund
Contra Costa County Employees' Retirement Association	County Employees' Annuity & Benefit Fund of Cook County
District of Columbia Retirement Board	Educational Employees' Supplementary Retirement System of Fairfax County
Employees Retirement System of Texas	Fire & Police Employees' Retirement System of Baltimore
Fire and Police Pension Association of Colorado	Florida State Board of Administration
Fort Worth Employees' Retirement Fund	Fresno County Employees' Retirement Association
Georgia Division of Investment Services	Gila River Indian Community Retirement Plan
Illinois Municipal Retirement Fund	Imperial County Employees' Retirement System
Iowa Public Employees' Retirement System	Kansas City, Missouri Employees' Retirement System
Kansas Public Employees' Retirement System	Kentucky Retirement Systems
Kentucky Teachers' Retirement System	Kern County Employees' Retirement Association
Los Angeles City Employees' Retirement System	Los Angeles County Employees Retirement Association
Los Angeles Fire and Police Pension System	Los Angeles Water & Power Employees Retirement Plan
Marin County Employees' Retirement Association	Maryland State Retirement and Pension System
Mendocino County Employees' Retirement Association (49)	Merced County Employees' Retirement Association
Montana Public Employees' Retirement System	Montana Teachers' Retirement System
Municipal Employees' Annuity and Benefit Fund of Chicago	Municipality of Anchorage Pre-Funding Program
Nebraska Investment Council	Nevada Public Employees' Retirement System
New York State Common Retirement Fund	Newport News Employees' Retirement Fund
North Carolina Retirement System	Ohio Public Employees' Retirement System
Orange County Employees' Retirement System	Pennsylvania Public School Employees' Retirement System
Pennsylvania State Employees' Retirement System	Police Retirement System of Kansas City, Missouri
Public Employees Retirement Association of New Mexico	Public School and Education ERS of Missouri
Sacramento County Employees' Retirement System	

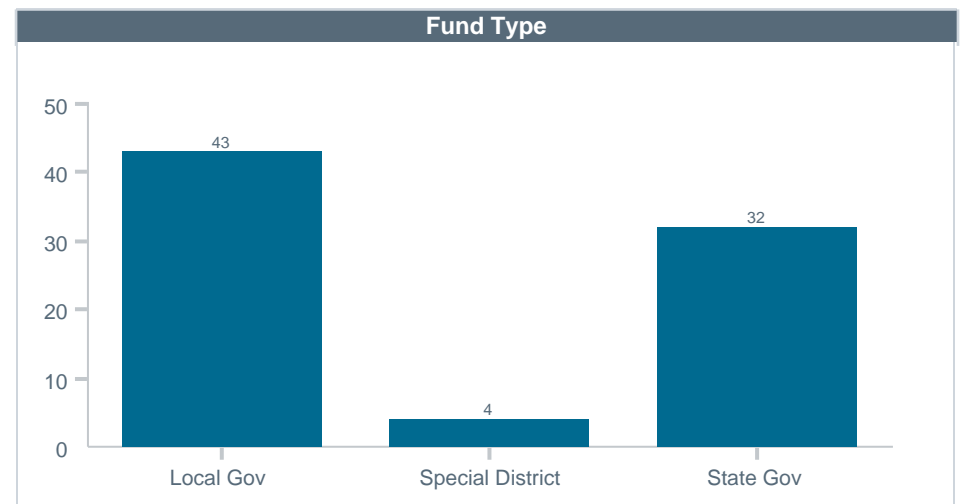
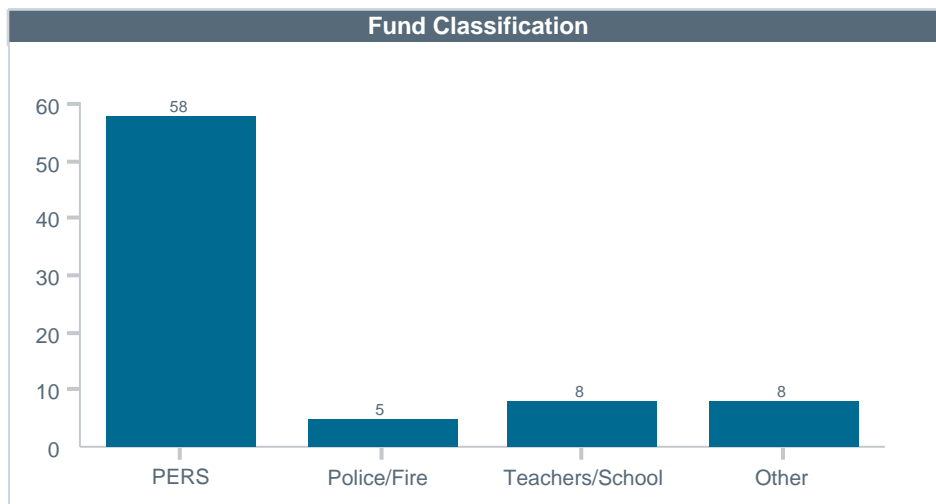
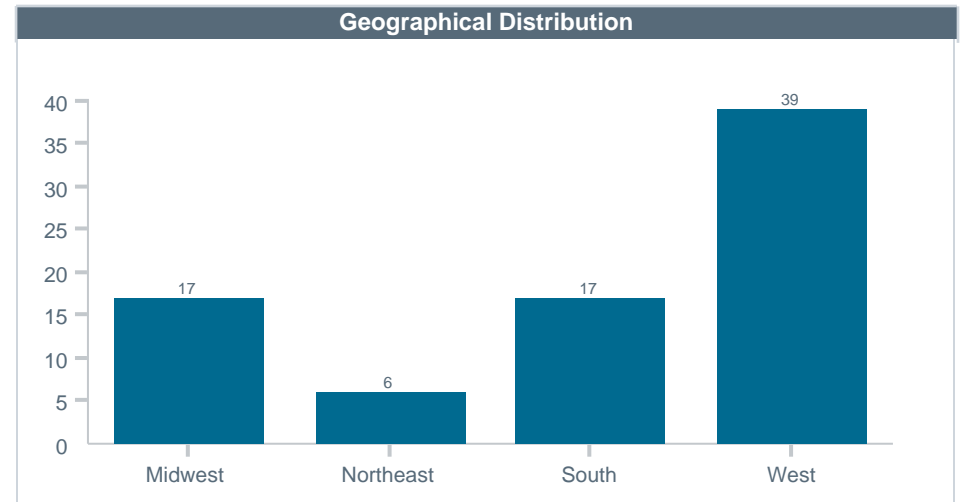
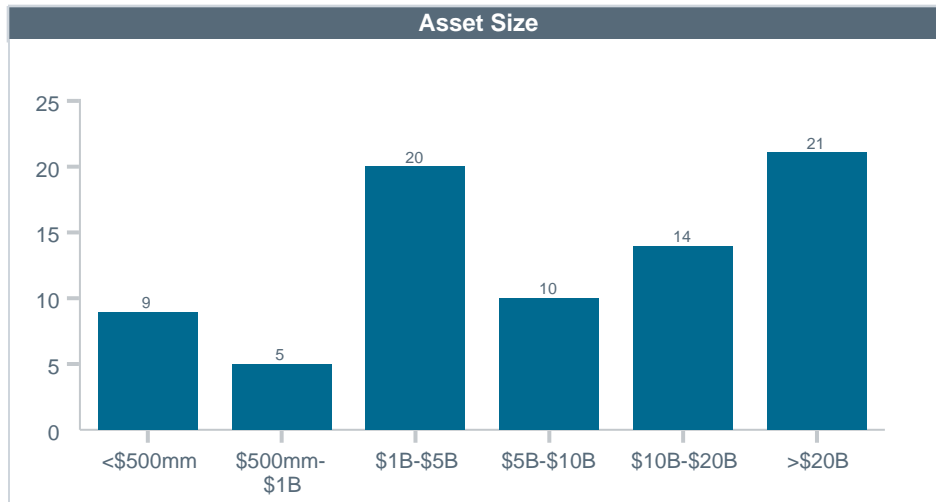


San Diego City Employees' Retirement System
San Diego Transit Corporation Employees Retirement
San Mateo County Employees' Retirement Association
Sonoma County Employees' Retirement Association
Stanislaus County Employees' Retirement Association
State Teachers Retirement System of Ohio
Teachers' Retirement System of Louisiana
Texas Municipal Retirement System
Tulare County Employees' Retirement Association
Virginia Retirement System
Wyoming Retirement System

San Bernardino County Employees' Retirement Association
San Diego County Employees Retirement Association
San Joaquin County Employees' Retirement Association
Santa Barbara County Employees' Retirement System
South Dakota Retirement System
State of Michigan Retirement Systems
State Universities Retirement System of Illinois
Teachers' Retirement System of the State of Illinois
The Navajo Nation Retirement Plan
Ventura County Employees' Retirement Association
West Virginia Investment Management Board

Report and Firm Summary

The following report is a compilation of data provided to RVK, Inc. by 79 public funds throughout the United States. We are a registered investment advisor with the Securities Exchange Commission under the Investment Advisors Act of 1940. Our firm provides investment consulting services to nearly 200 clients across more than 460 plans with total assets under advisement in excess of \$2.1 trillion. The confidentiality of participants is maintained by revealing the fund name only to each individual fund. For more information about services provided by RVK, please visit our website at www.RVKInc.com.

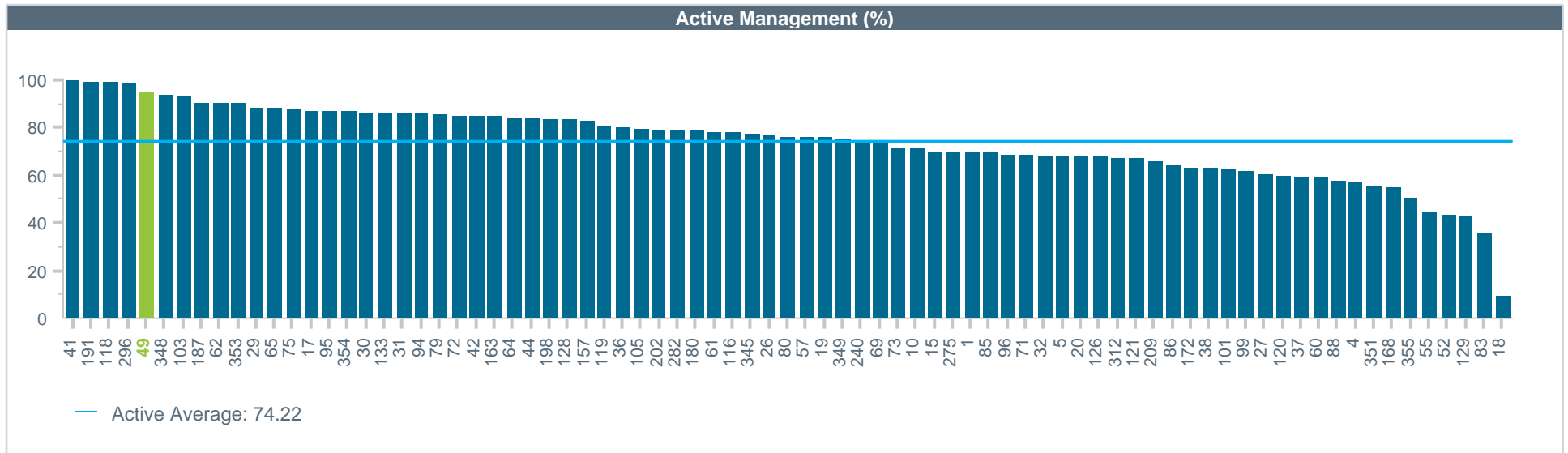
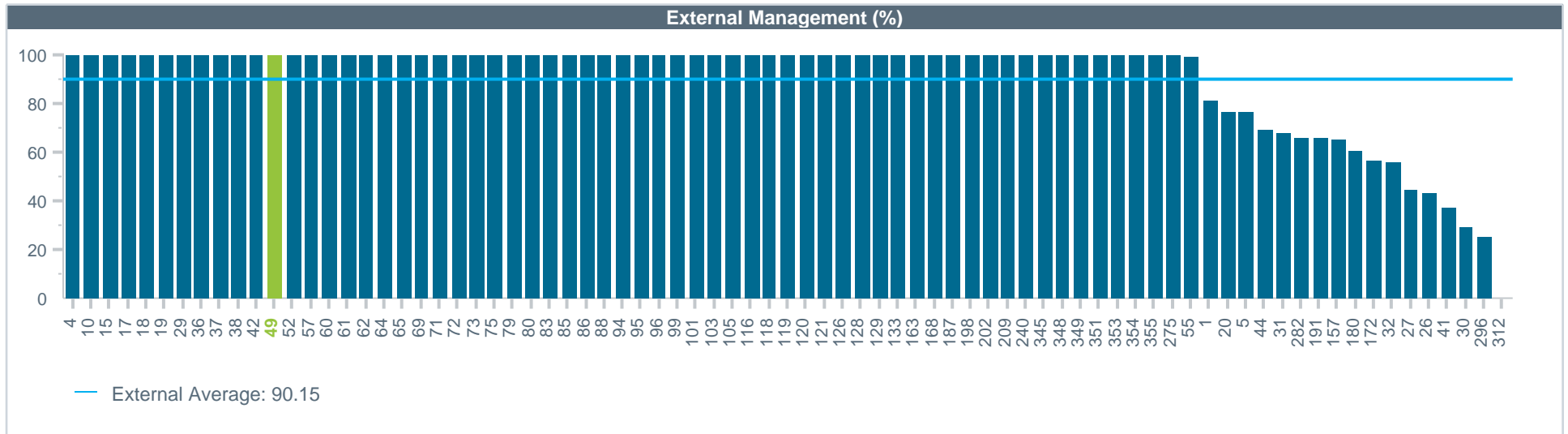


■ Universe: 79 funds



Portfolio Management

Percentage Externally Managed & Percentage Actively Managed



■ Mendocino County ERA



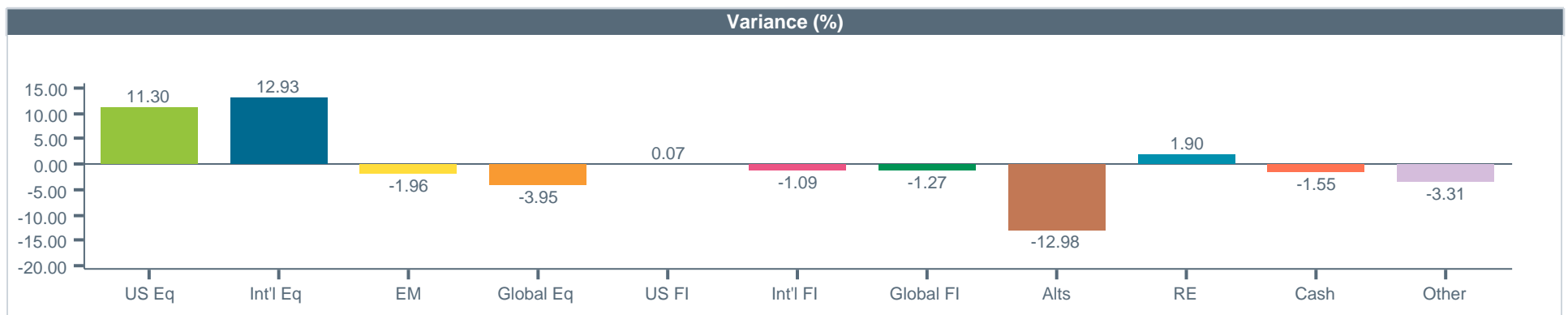
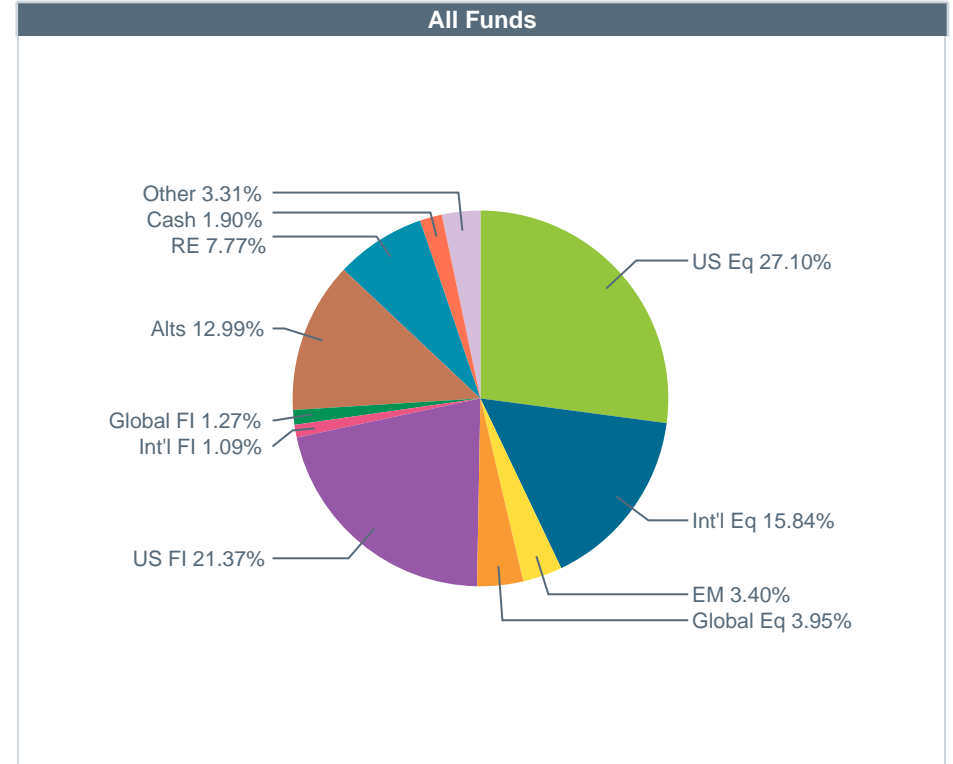
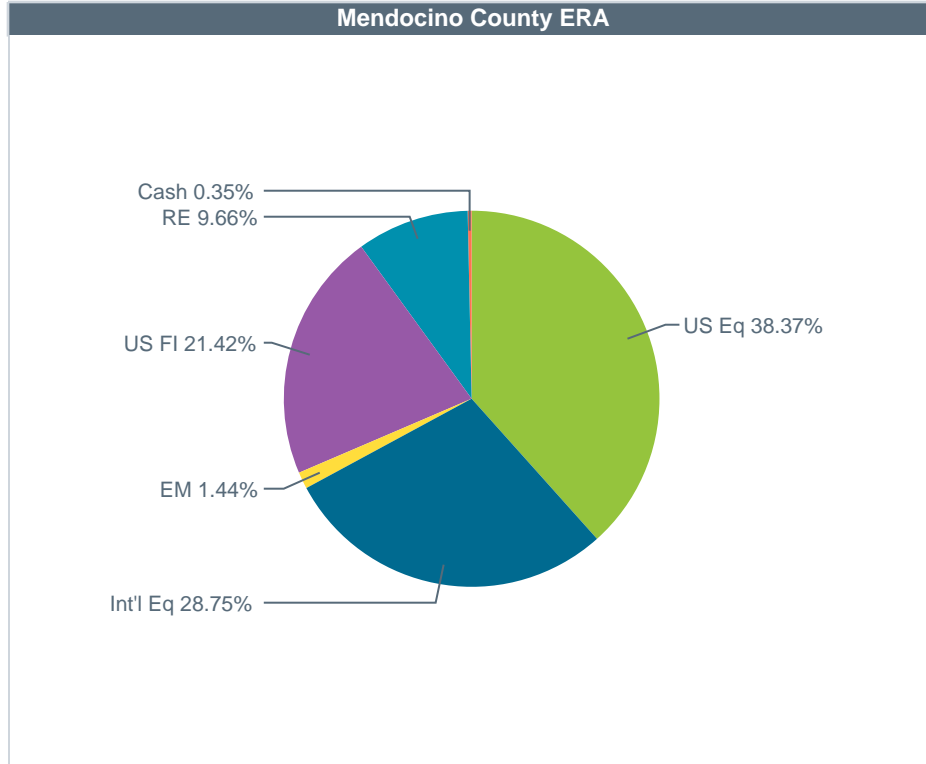
Asset Range	Actively Managed (%)	Passively Managed (%)	Externally Managed (%)	Internally Managed (%)
Over \$20B	74.88	25.12	75.88	24.12
\$10B-\$20B	70.66	29.34	84.00	16.00
\$5B-\$10B	71.13	28.87	97.67	2.33
\$1B-\$5B	74.13	25.87	98.83	1.17
\$500mm-\$1B	72.74	27.26	99.88	0.12
Under \$500mm	82.63	17.37	100.00	0.00
Mendocino County ERA	94.96	5.04	100.00	0.00

Portfolio (%)	Active Management		External Management	
	Public Fund Universe	Mendocino County ERA	Public Fund Universe	Mendocino County ERA
90 to 100	10	1	62	1
50 to 89	64	0	11	0
10 to 49	4	0	5	0
Less than 10	1	0	1	0
Total Funds Reporting	79	1	79	1



Asset Allocation

Mendocino County ERA vs. Average of All Funds

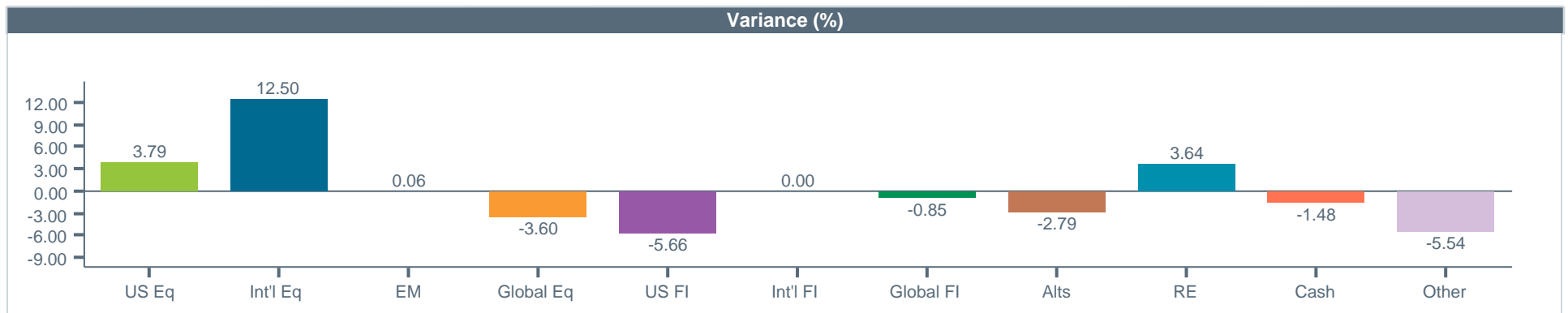
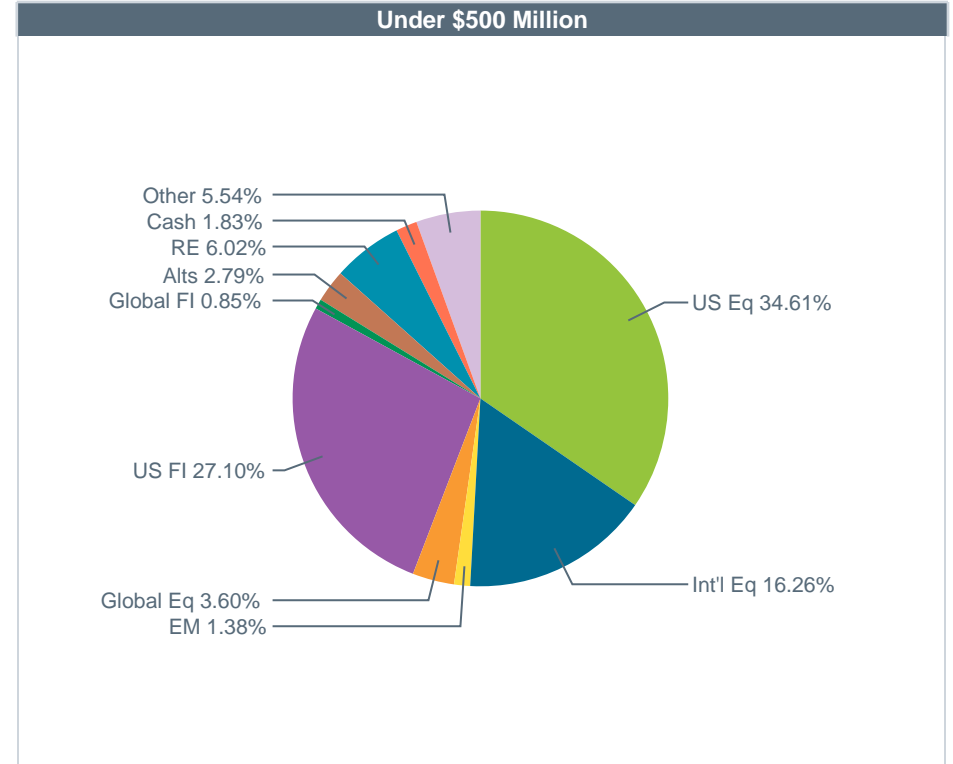
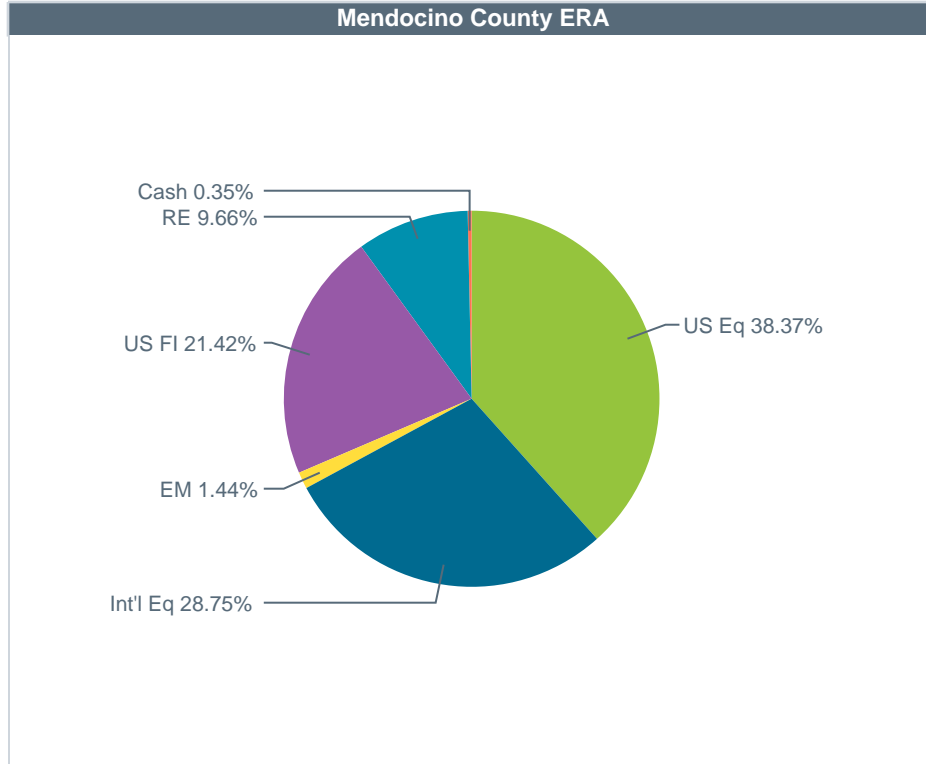


Allocations shown may not sum up to 100% exactly due to rounding.



Asset Allocation

Mendocino County ERA vs. Average of Similar Size Funds

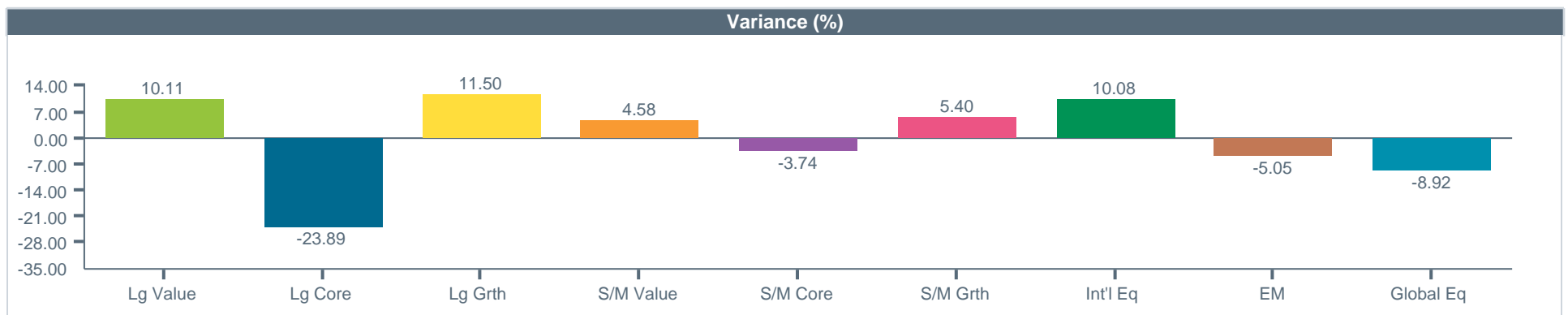
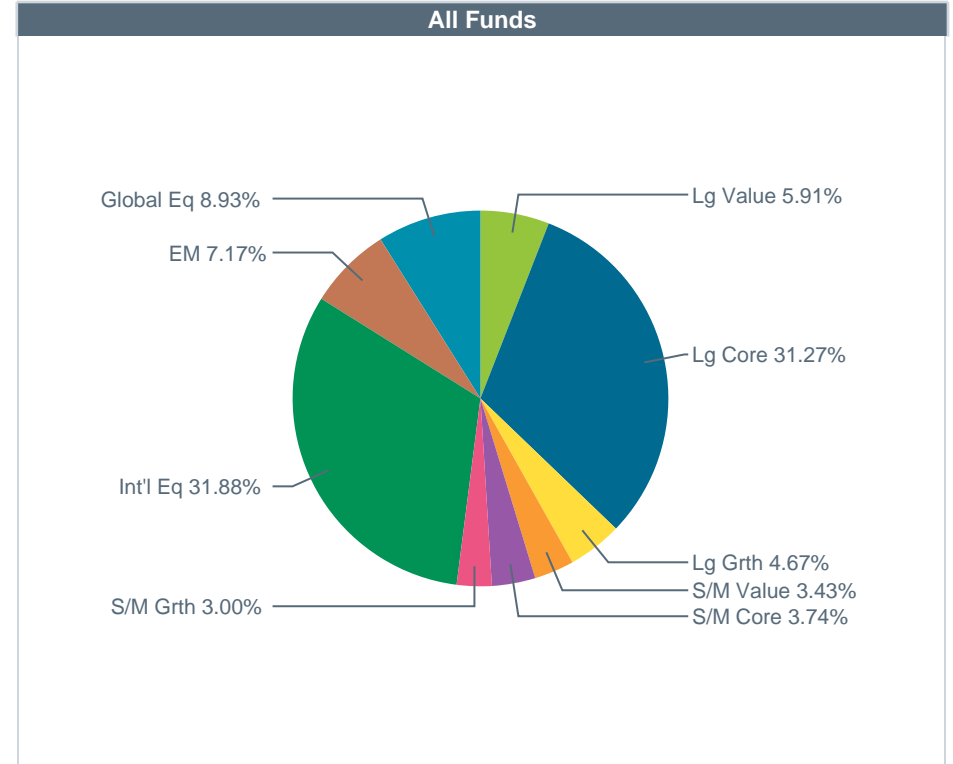
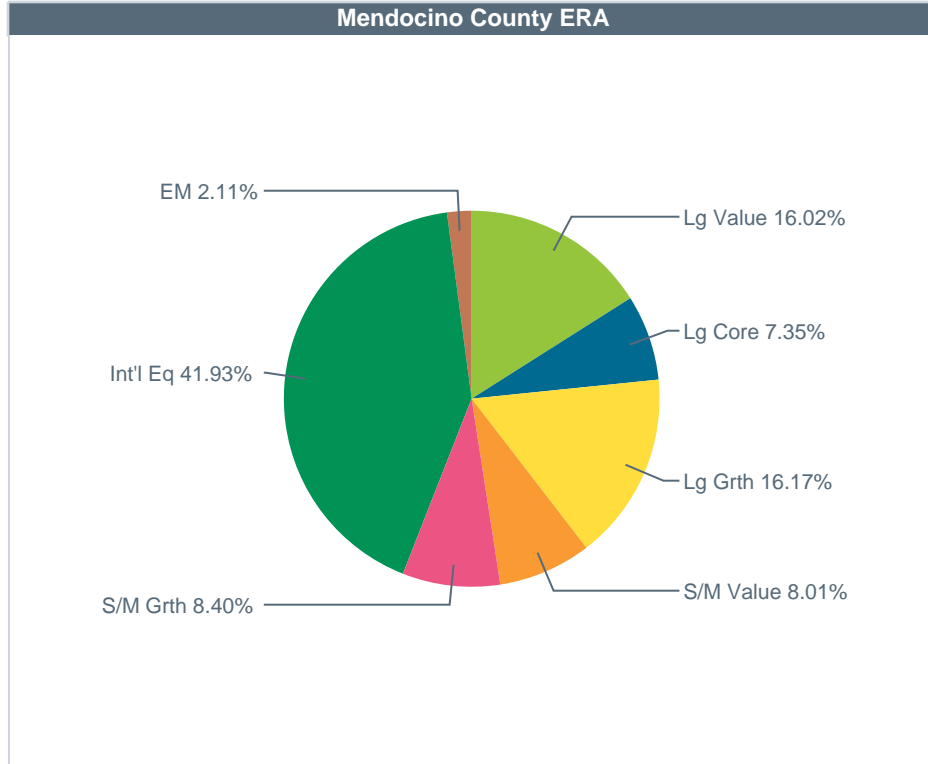


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Equity Style Allocation

Mendocino County ERA vs. Average of All Funds

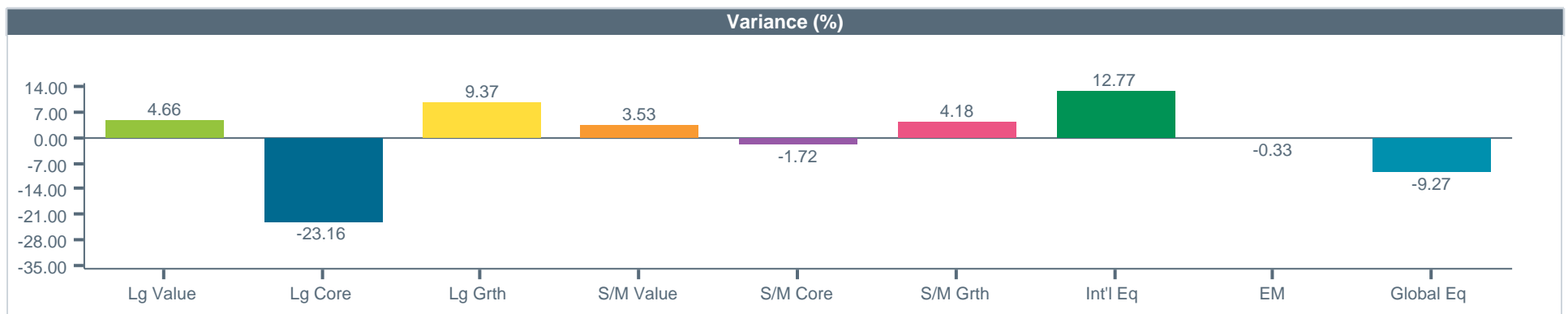
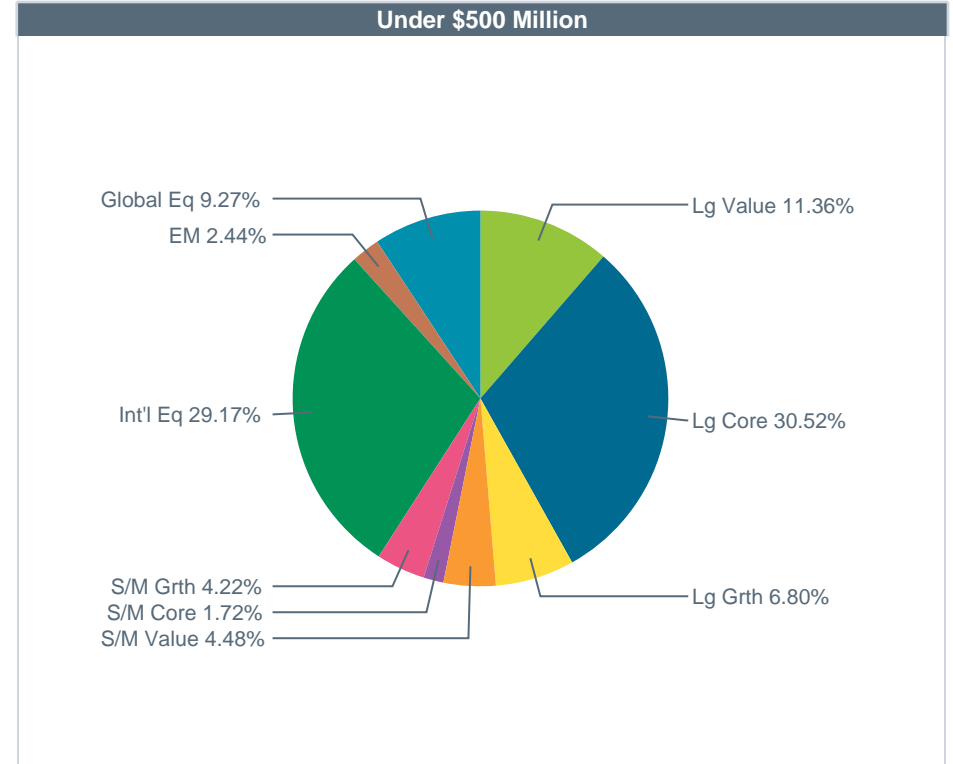
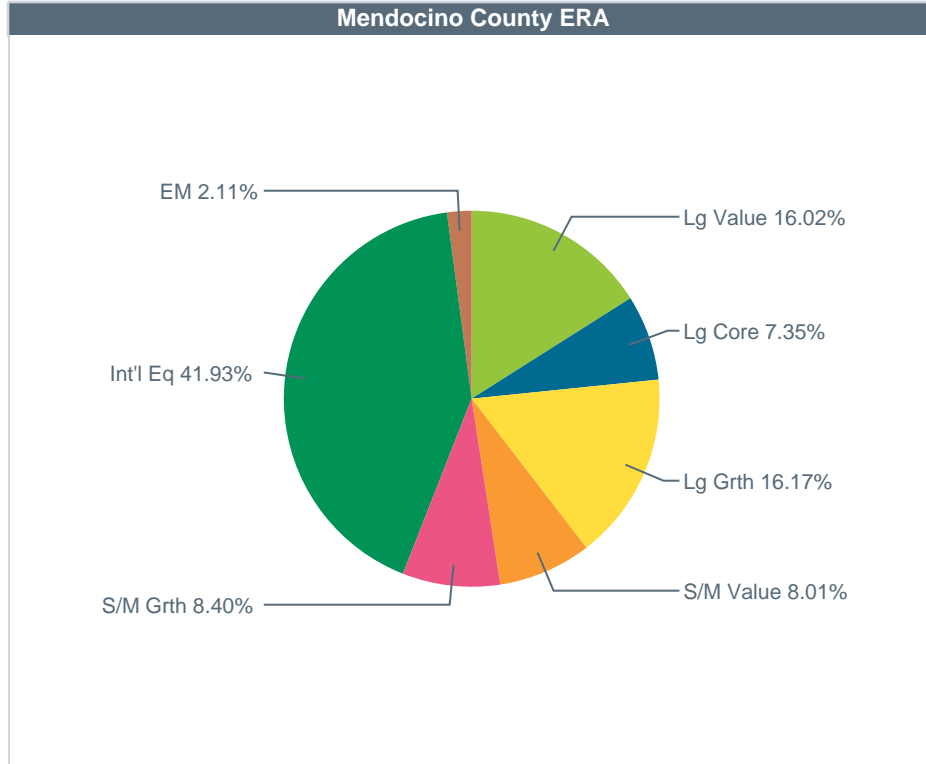


Allocations shown may not sum up to 100% exactly due to rounding.



Equity Style Allocation

Mendocino County ERA vs. Average of Similar Size Funds



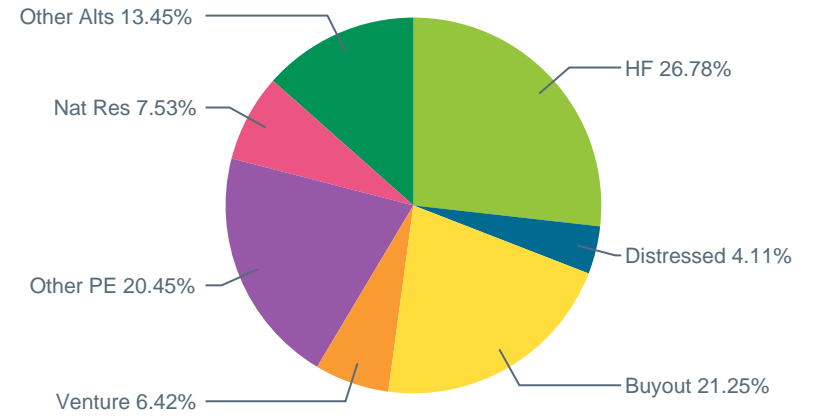
Allocations shown may not sum up to 100% exactly due to rounding.



Mendocino County ERA

All Funds

Mendocino County ERA does not have data for Alternatives Style Allocation



Variance (%)

Mendocino County ERA does not have data for Alternatives Style Allocation

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



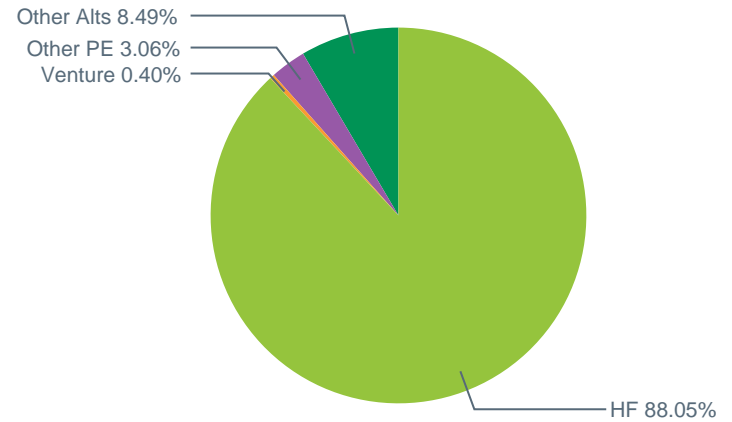
Alternatives Style Allocation

Mendocino County ERA vs. Average of Similar Size Funds

Mendocino County ERA

Under \$500 Million

Mendocino County ERA does not have data for Alternatives Style Allocation



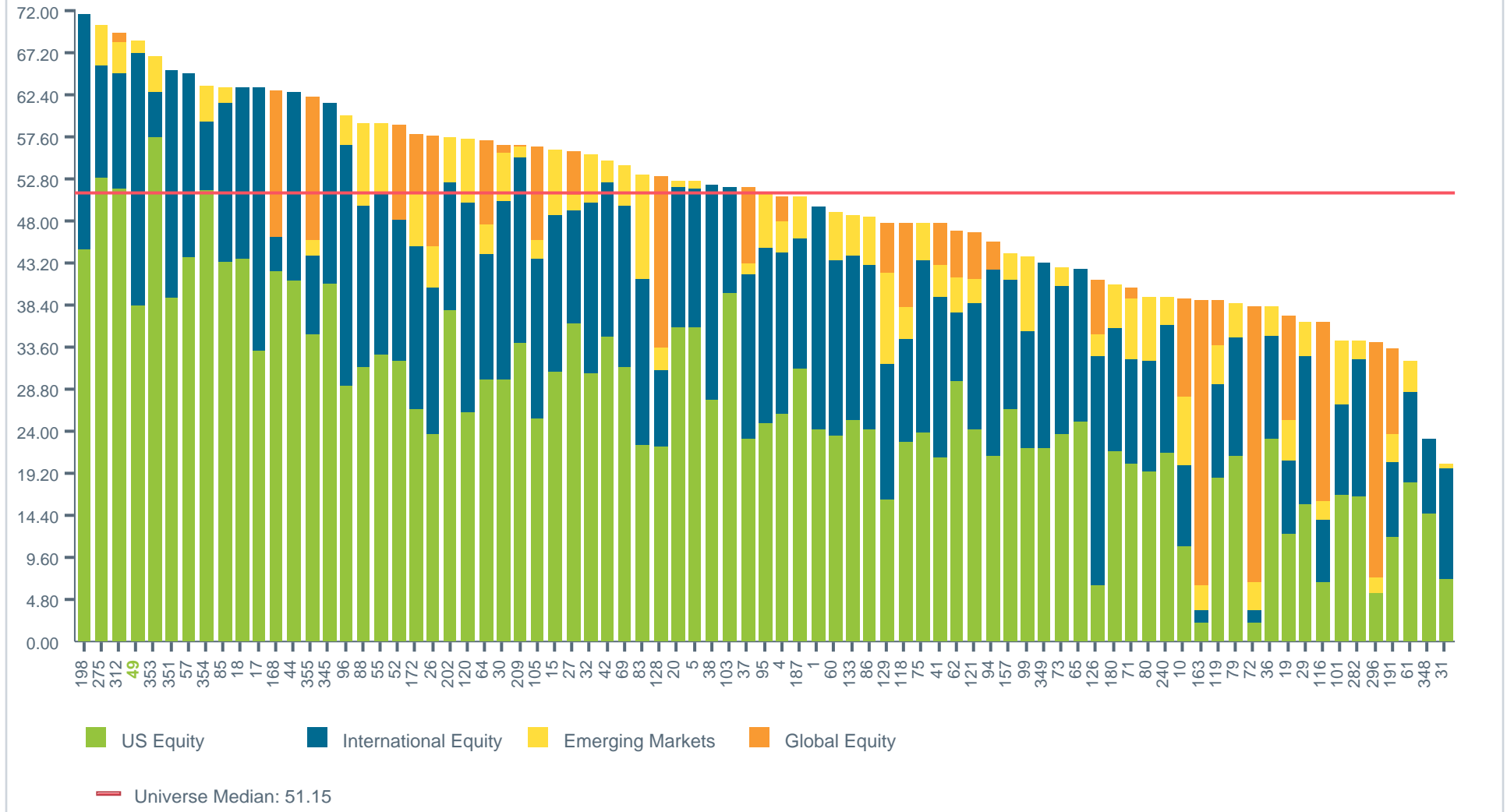
Variance (%)

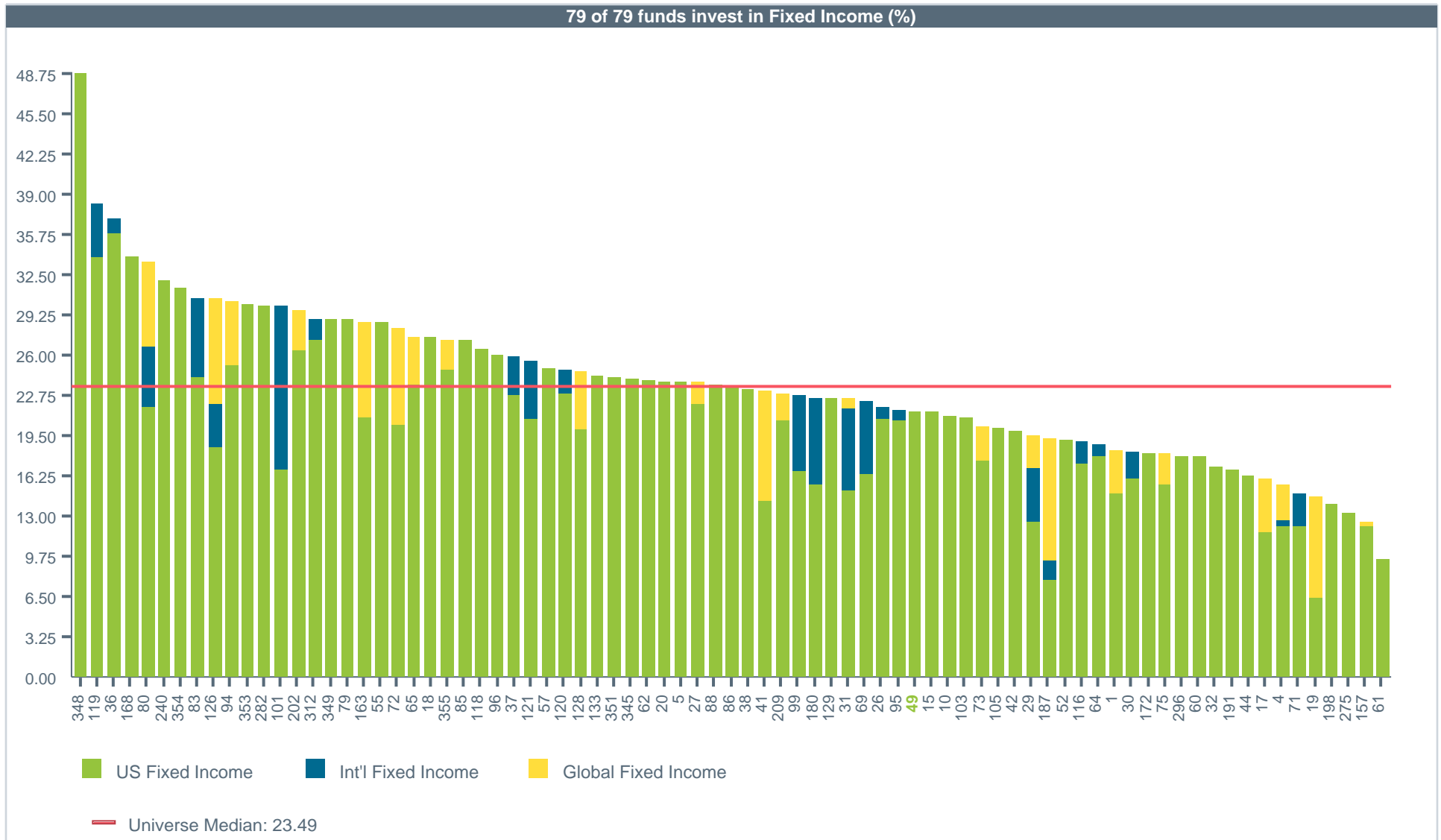
Mendocino County ERA does not have data for Alternatives Style Allocation

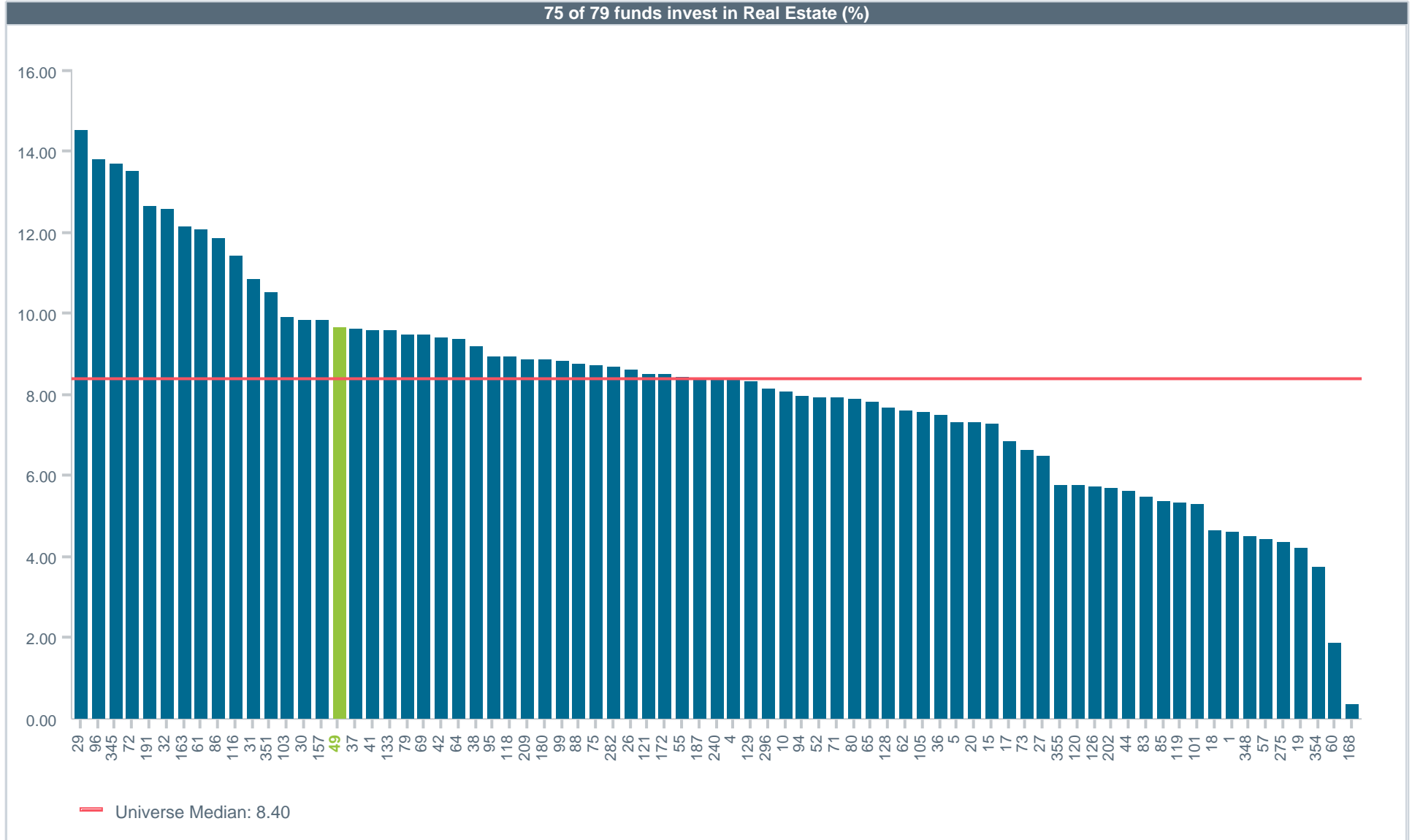
Allocations shown may not sum up to 100% exactly due to rounding.



79 of 79 funds invest in Equity (%)

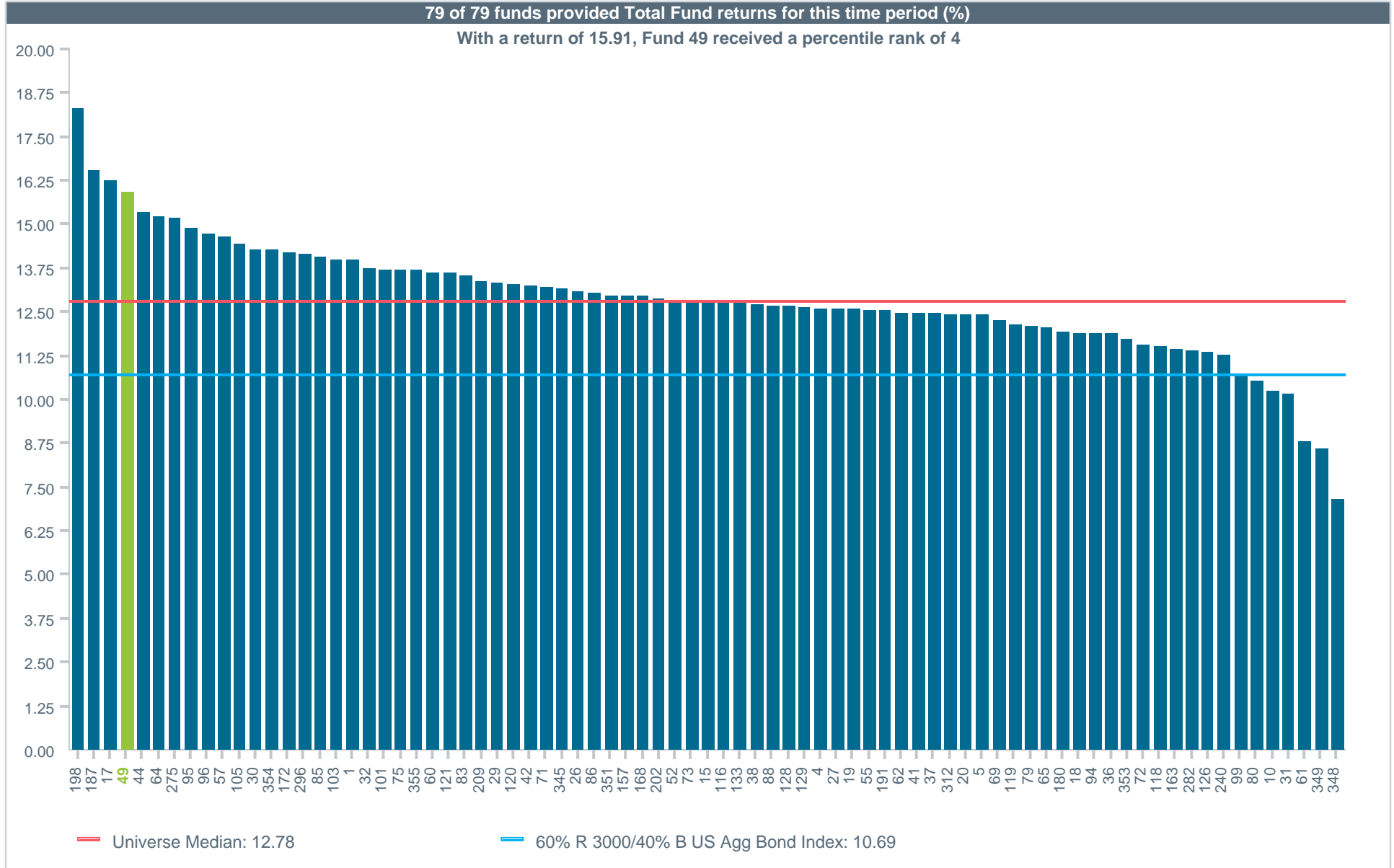






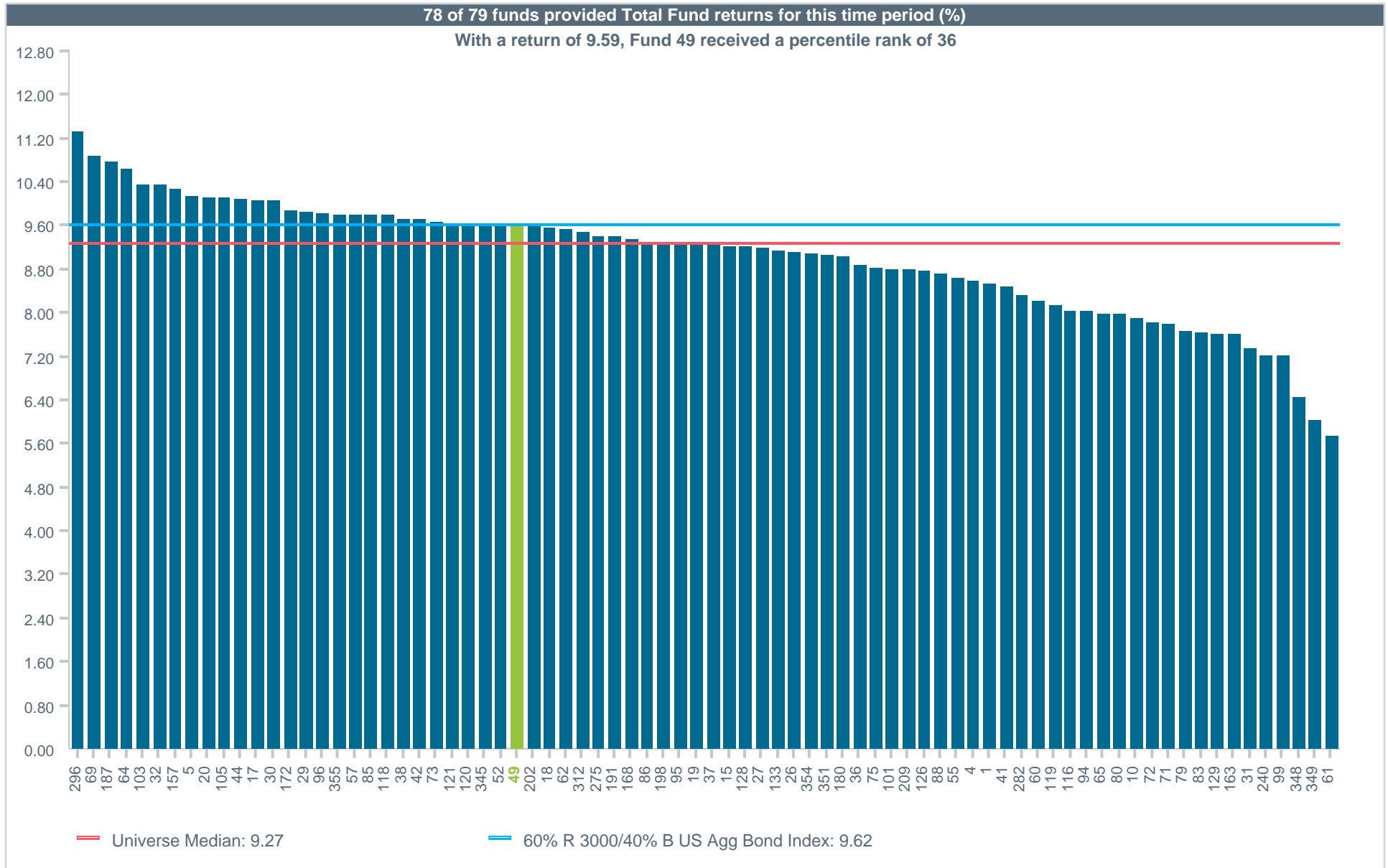
72 of 79 funds invest in Alternatives (%)





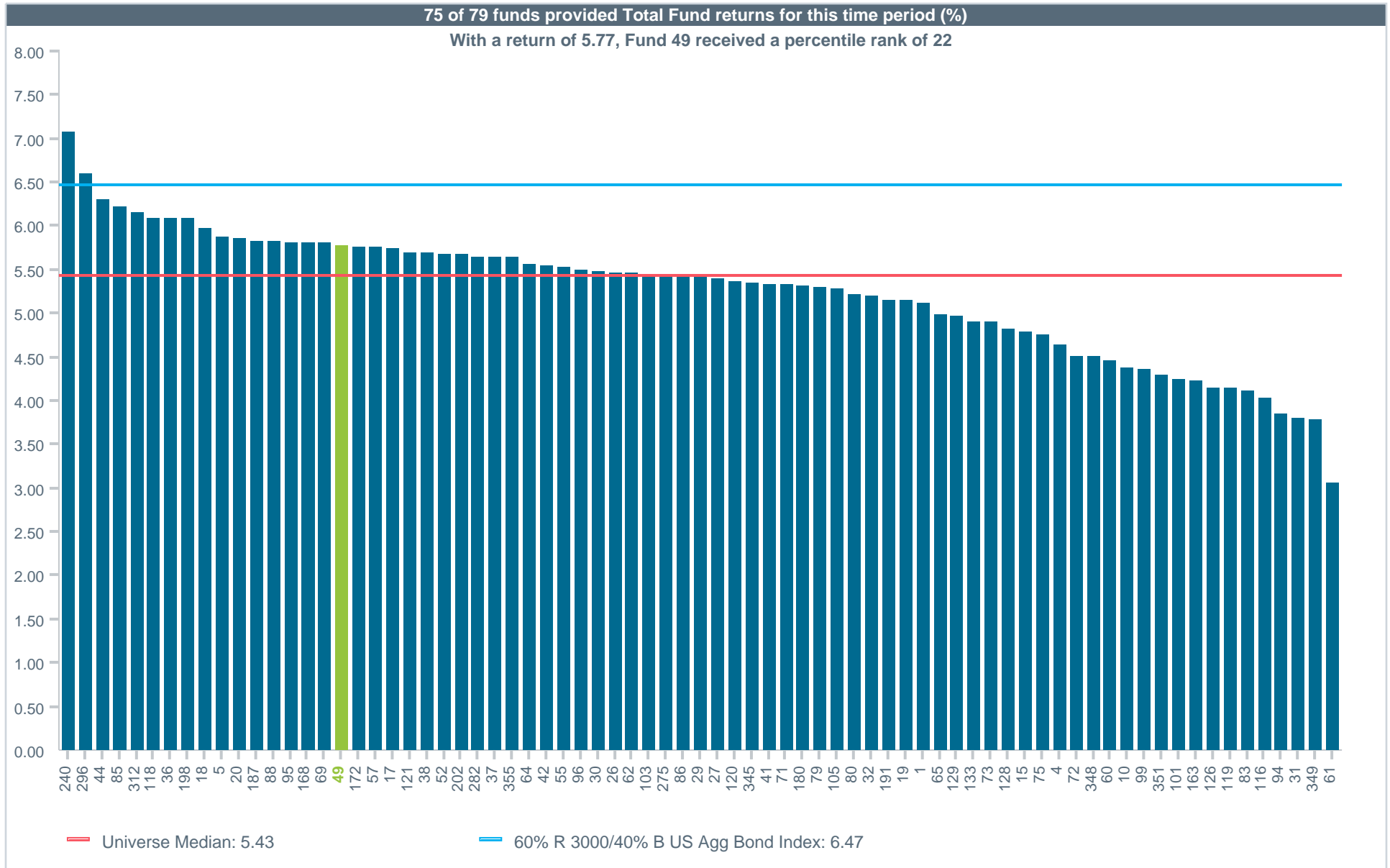
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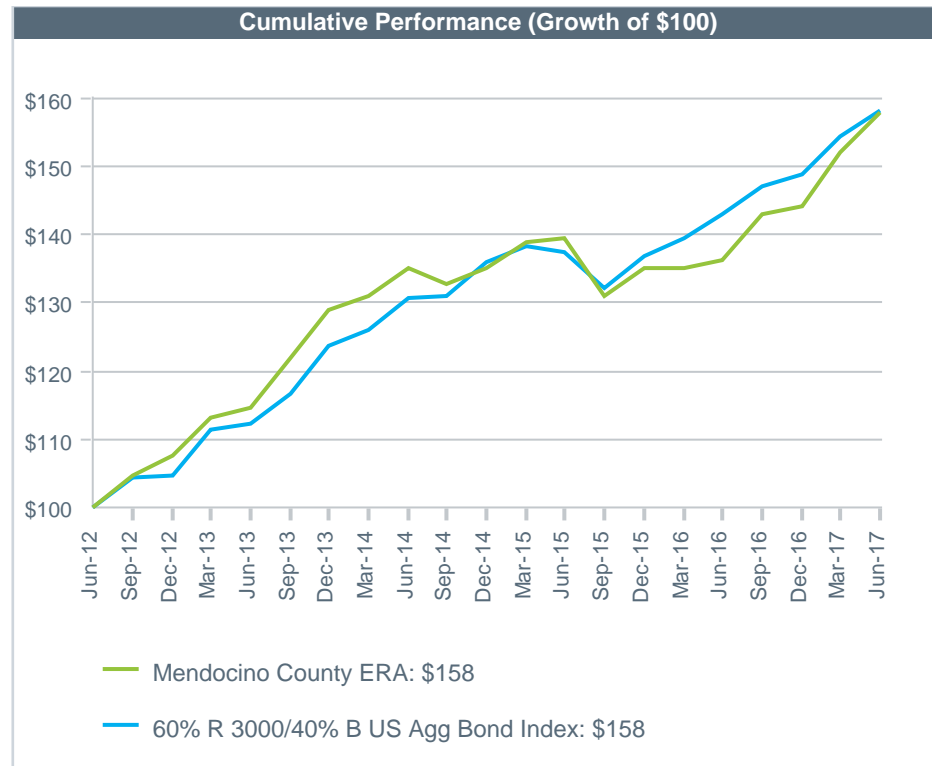
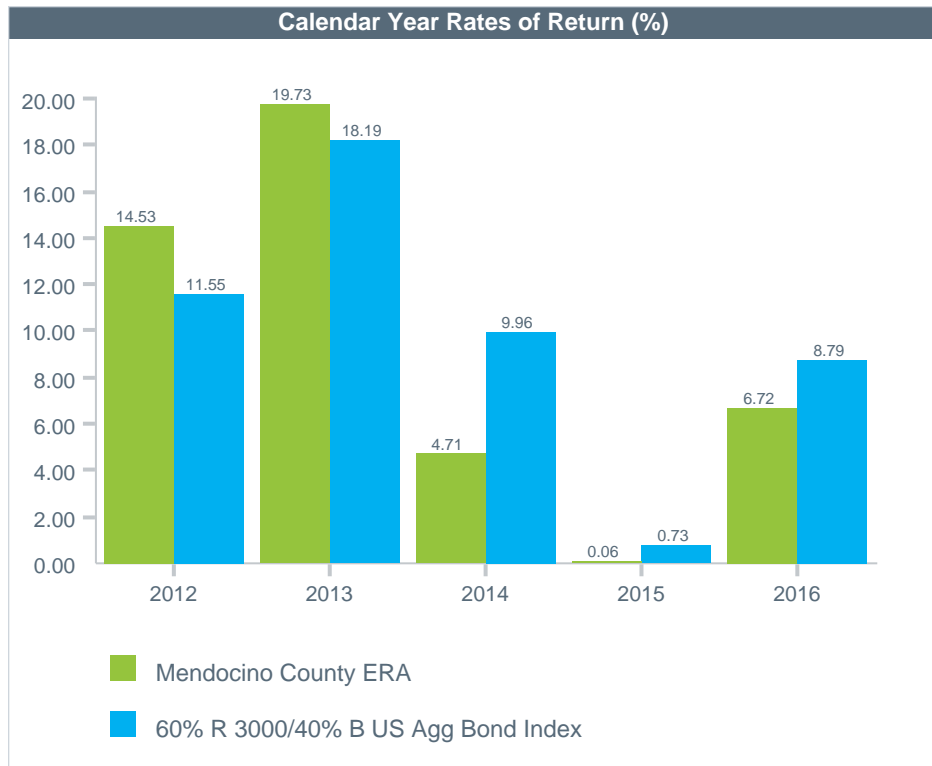


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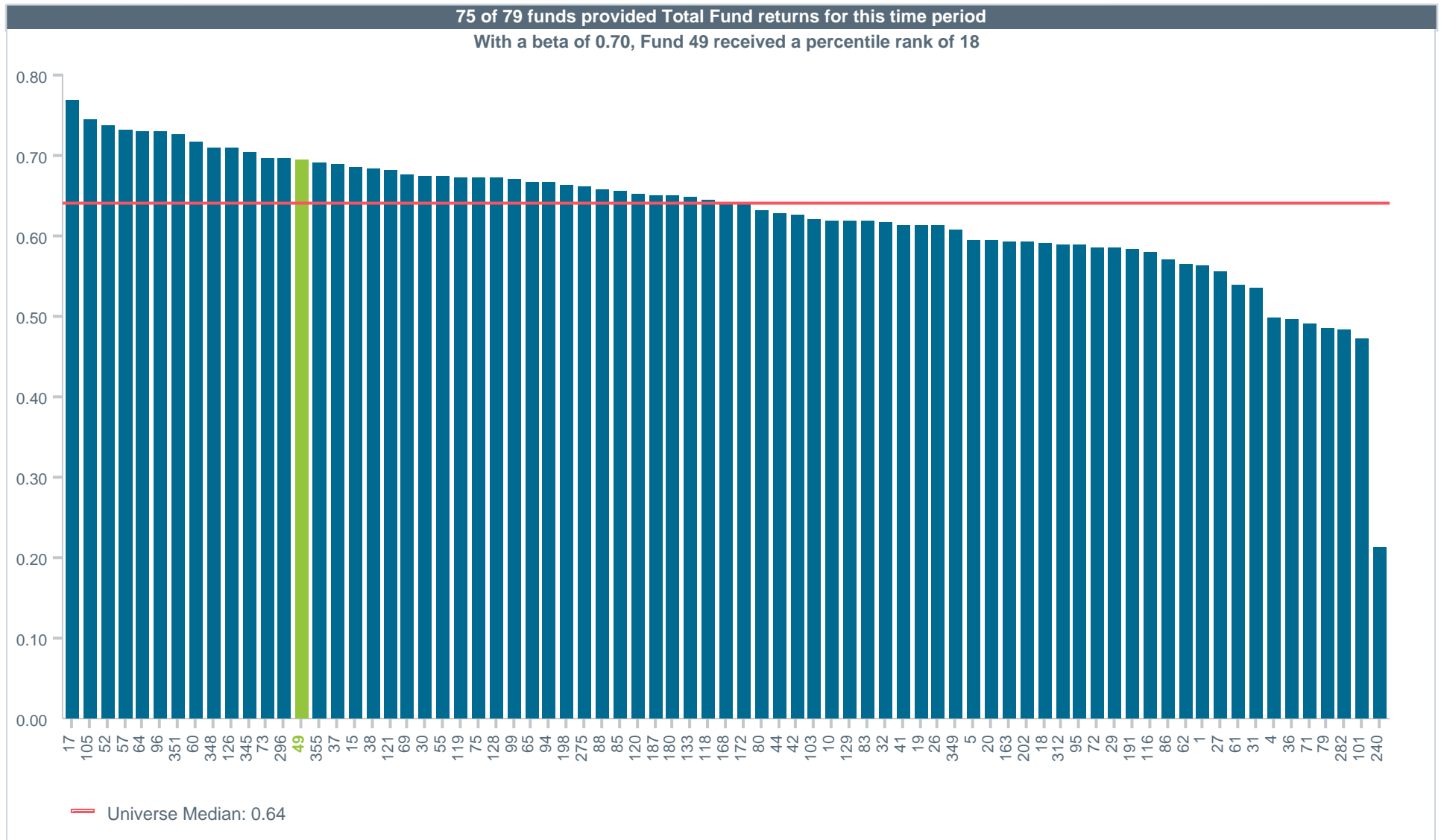
Total Return - Total Fund

Mendocino County ERA vs. 60% R 3000/40% B US Agg Bond Index



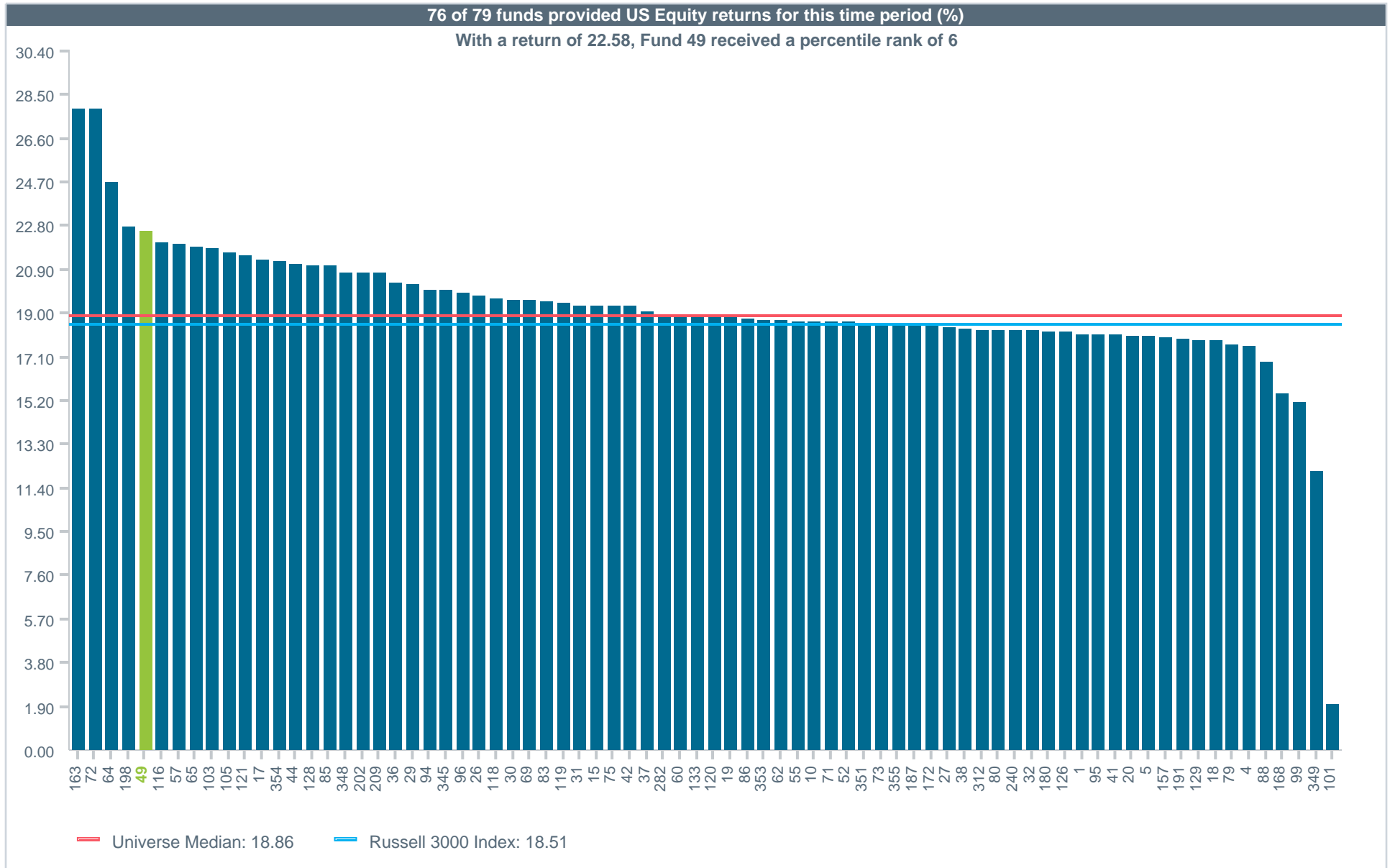
Annualized Returns (%)			
	1 Year	3 Years	5 Years
Mendocino County ERA	15.91	5.34	9.59
60% R 3000/40% B US Agg Bond Index	10.69	6.56	9.62
Variance	5.22	-1.22	-0.03





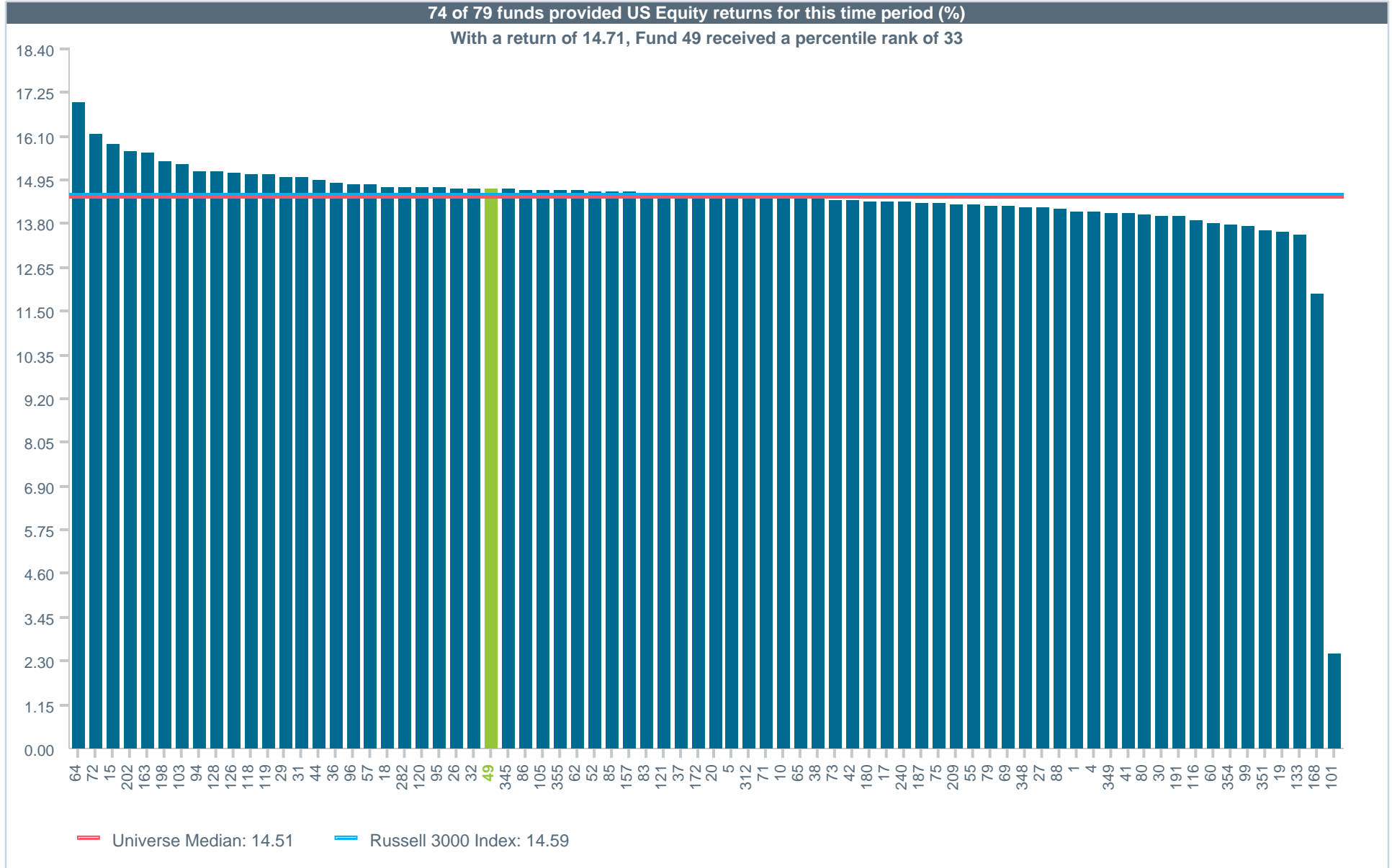
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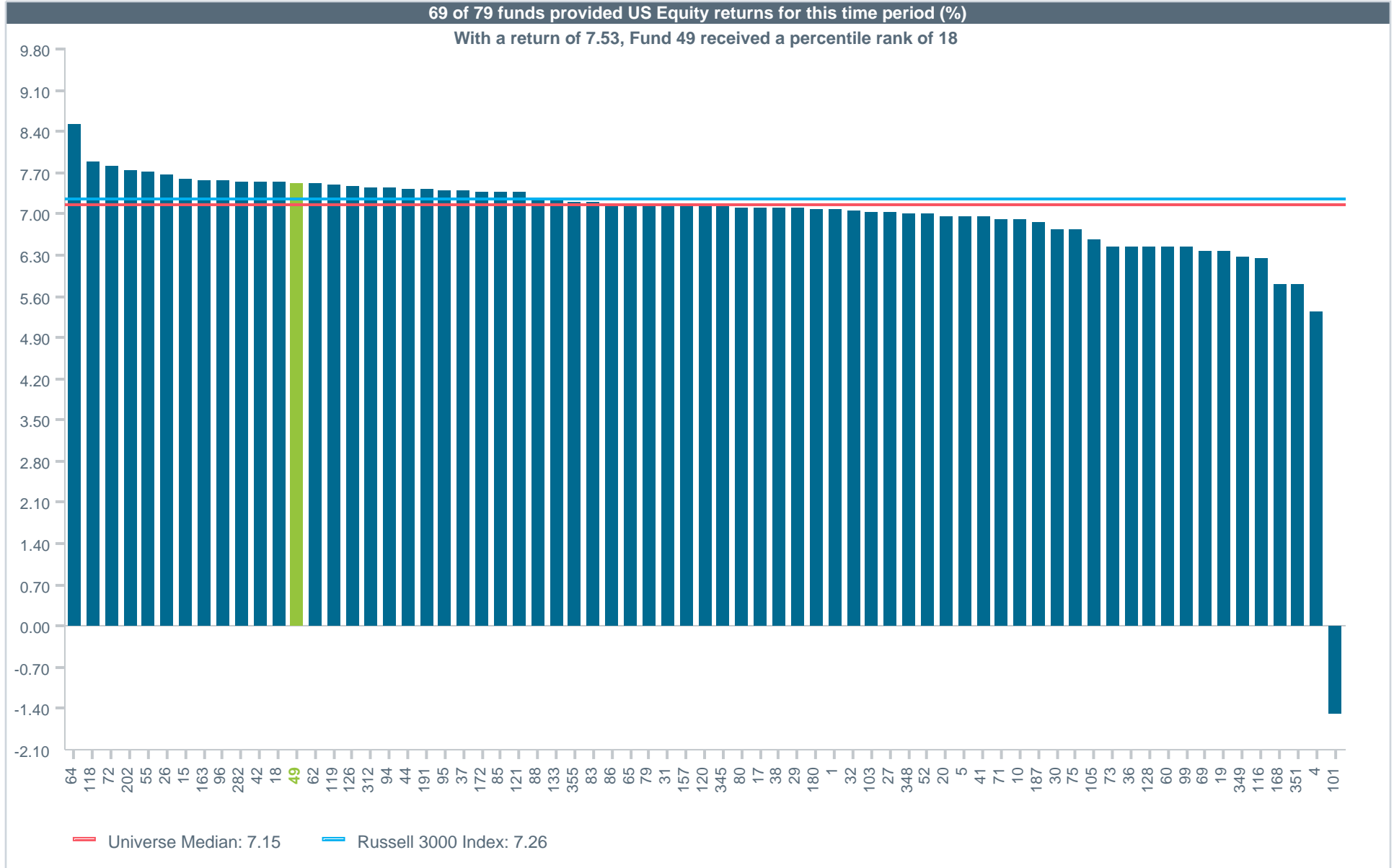
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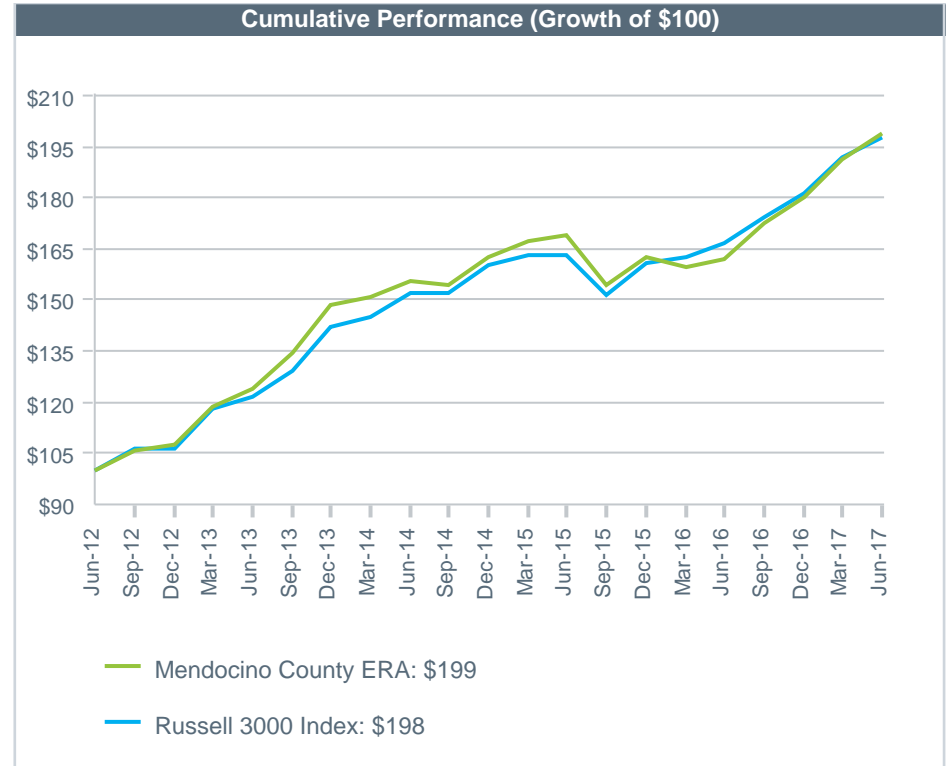
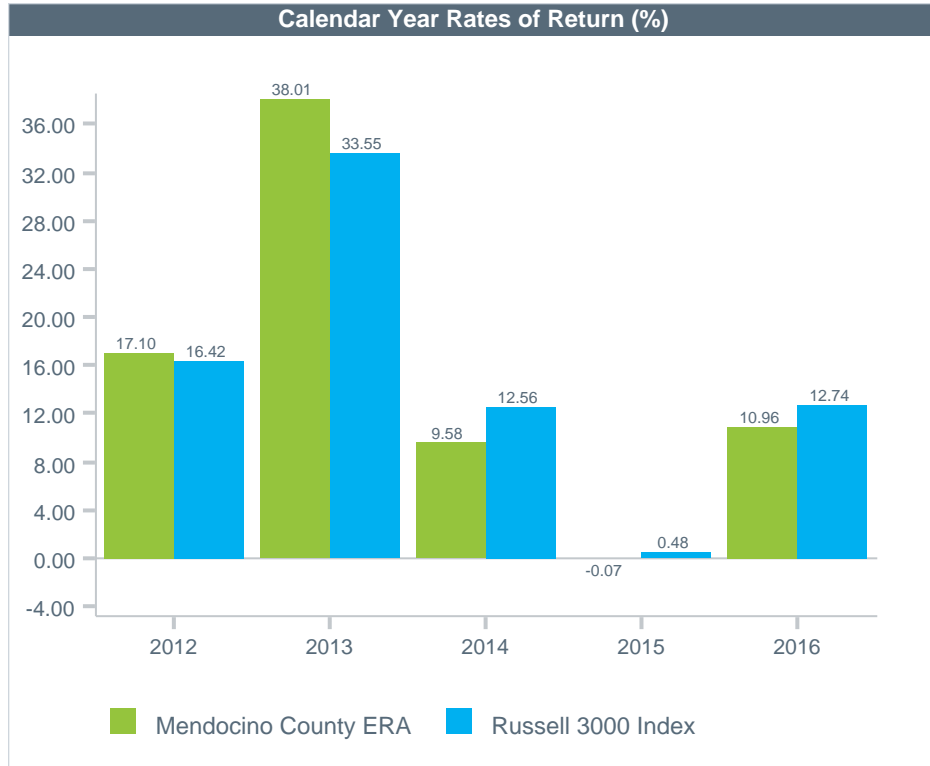


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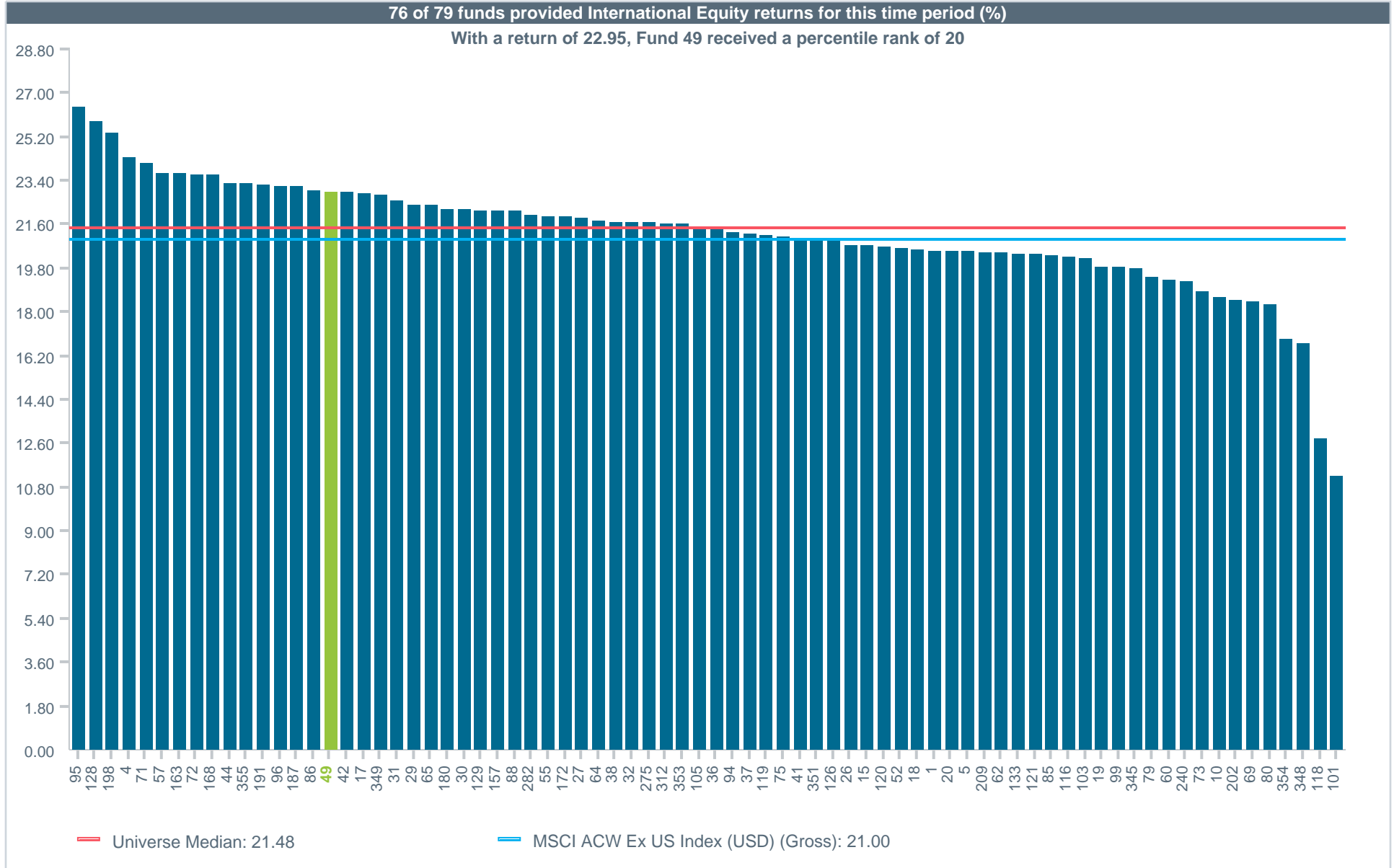
Total Return - US Equity

Mendocino County ERA vs. Russell 3000 Index



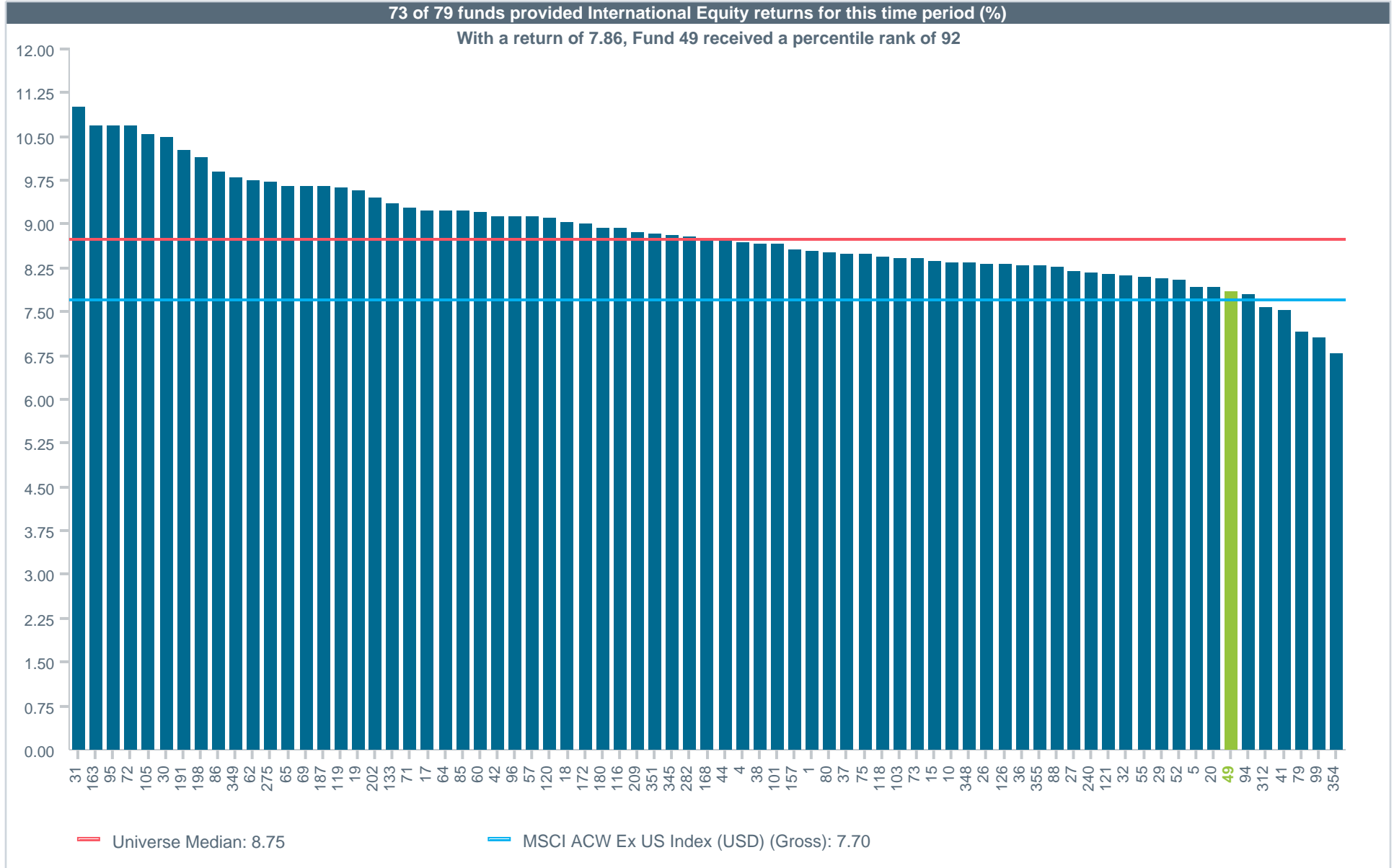
Annualized Returns (%)			
	1 Year	3 Years	5 Years
Mendocino County ERA	22.58	8.46	14.71
Russell 3000 Index	18.51	9.10	14.58
Variance	4.07	-0.64	0.13





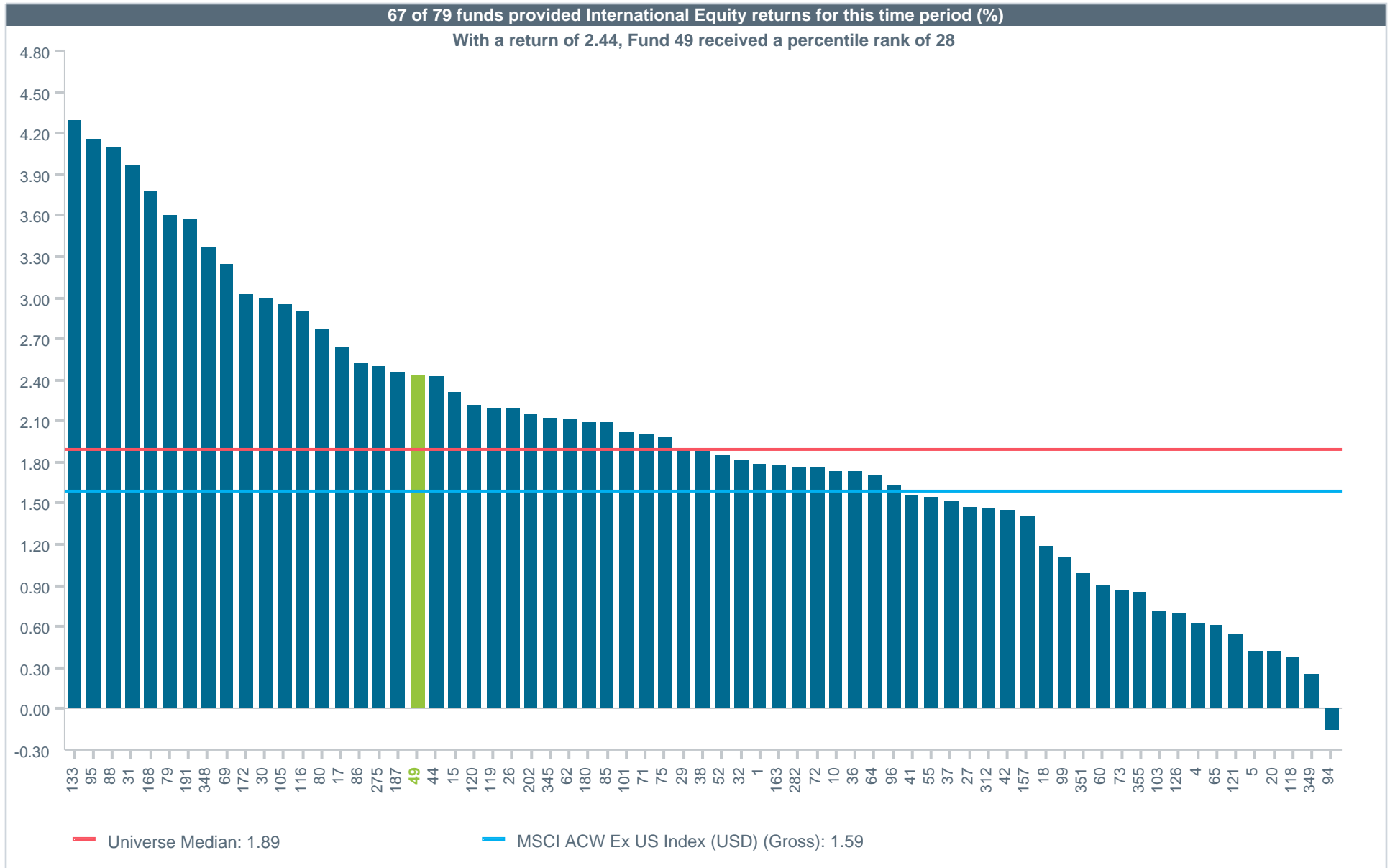
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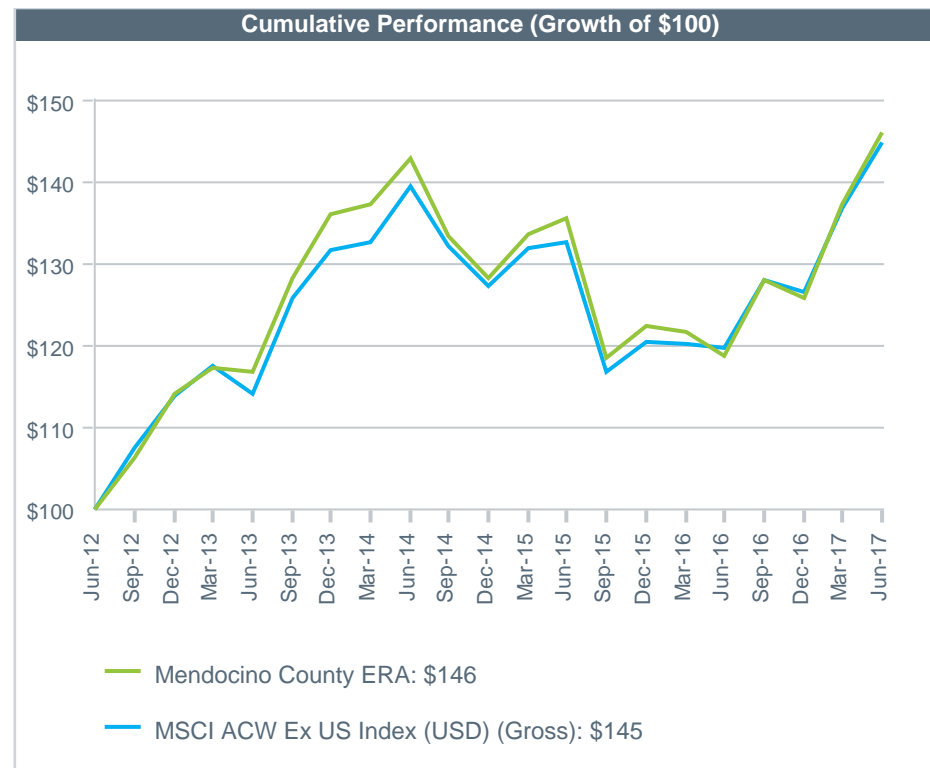
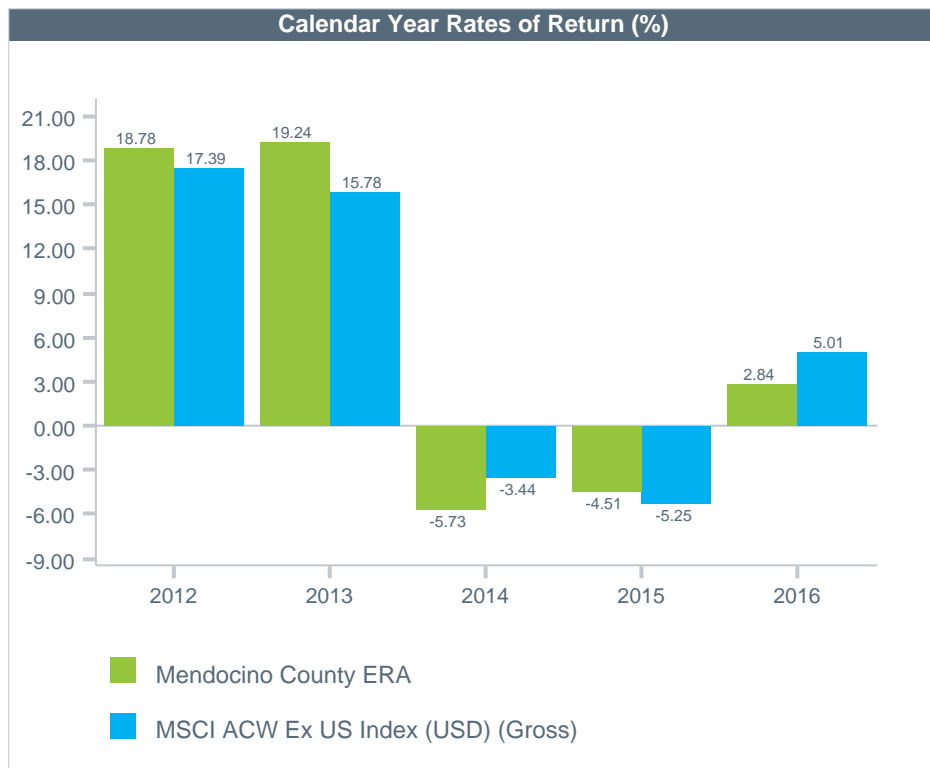


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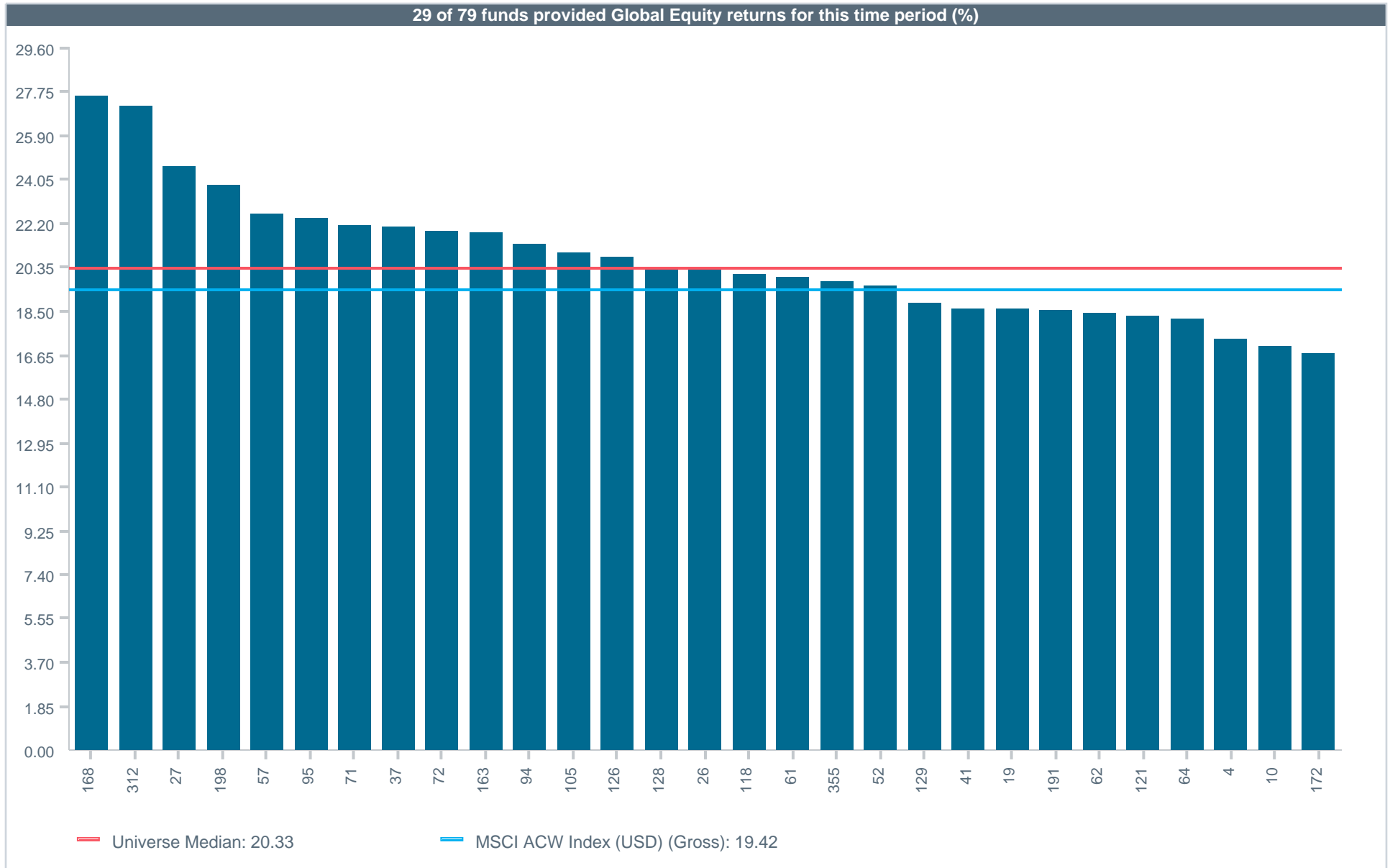
Total Return - International Equity

Mendocino County ERA vs. MSCI ACW Ex US Index (USD) (Gross)



Annualized Returns (%)			
	1 Year	3 Years	5 Years
Mendocino County ERA	22.95	0.73	7.86
MSCI ACW Ex US Index (USD) (Gross)	21.00	1.27	7.70
Variance	1.95	-0.54	0.16





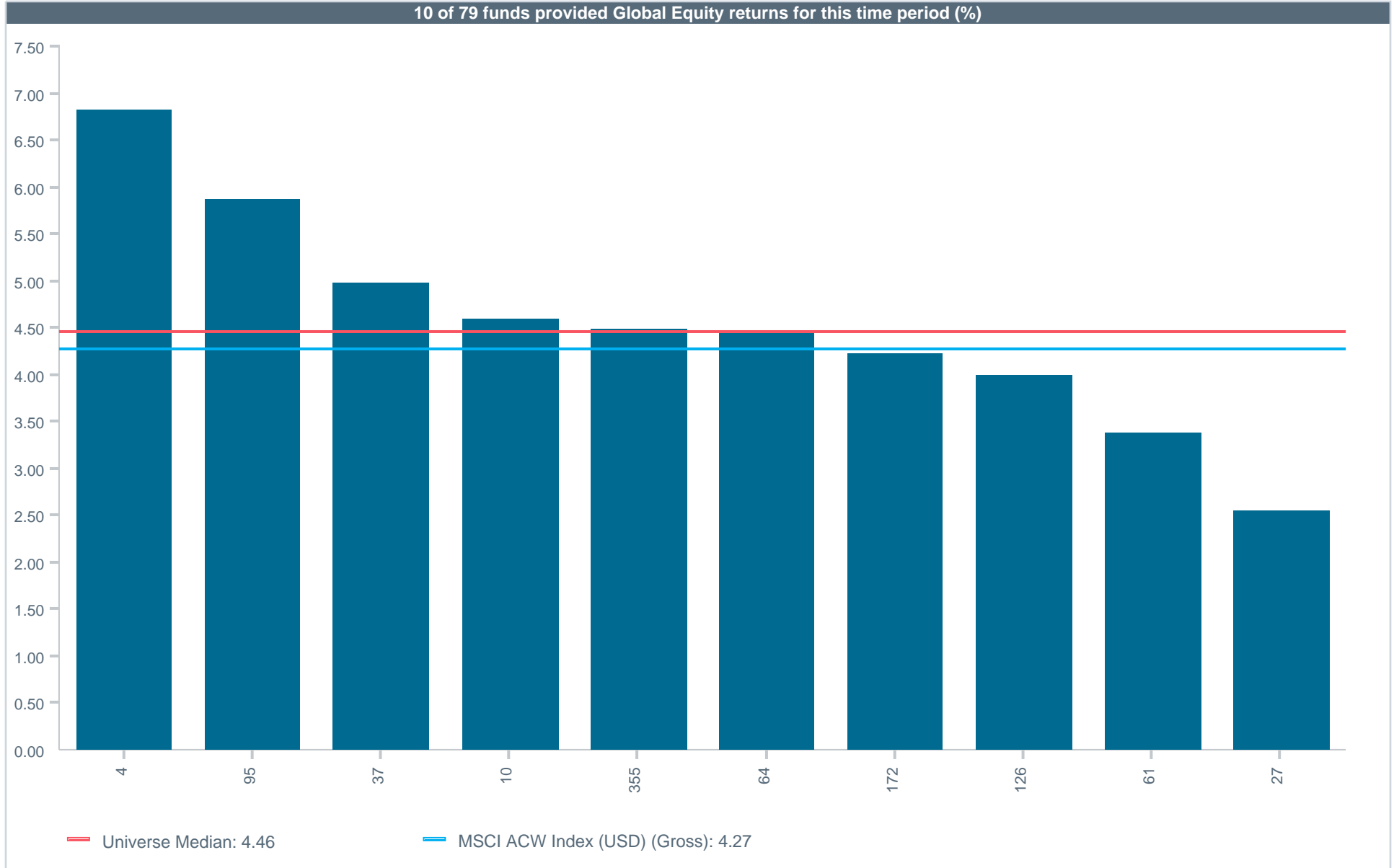
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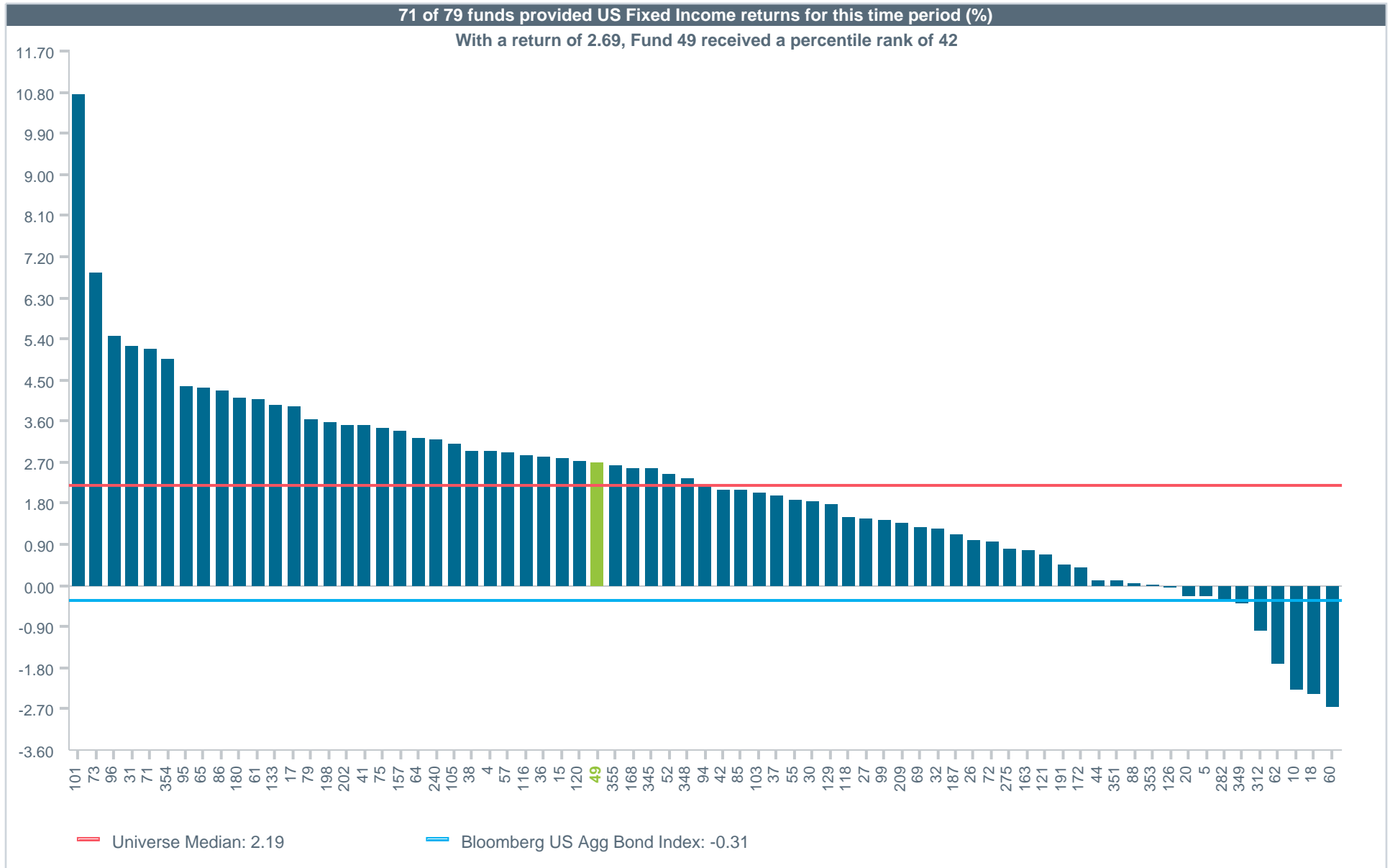
Total Return - Global Equity

Mendocino County ERA vs. MSCI ACW Index (USD) (Gross)

Calendar Year Rates of Return (%)	Cumulative Performance (Growth of \$100)
<p>Mendocino County ERA does not have return data for Global Equity</p>	

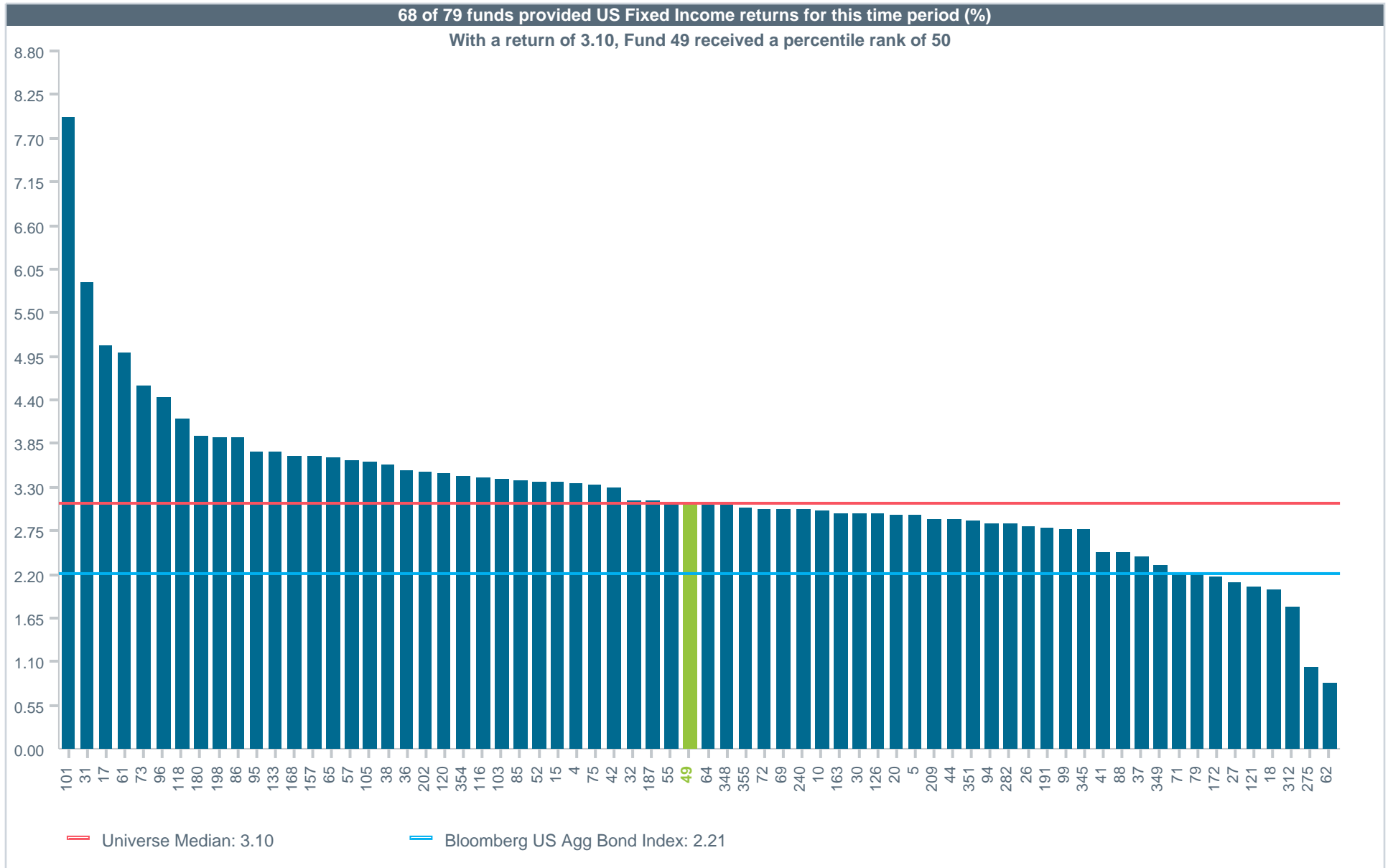
Annualized Returns (%)			
	1 Year	3 Years	5 Years
Mendocino County ERA	N/A	N/A	N/A
MSCI ACW Index (USD) (Gross)	N/A	N/A	N/A
Variance	N/A	N/A	N/A





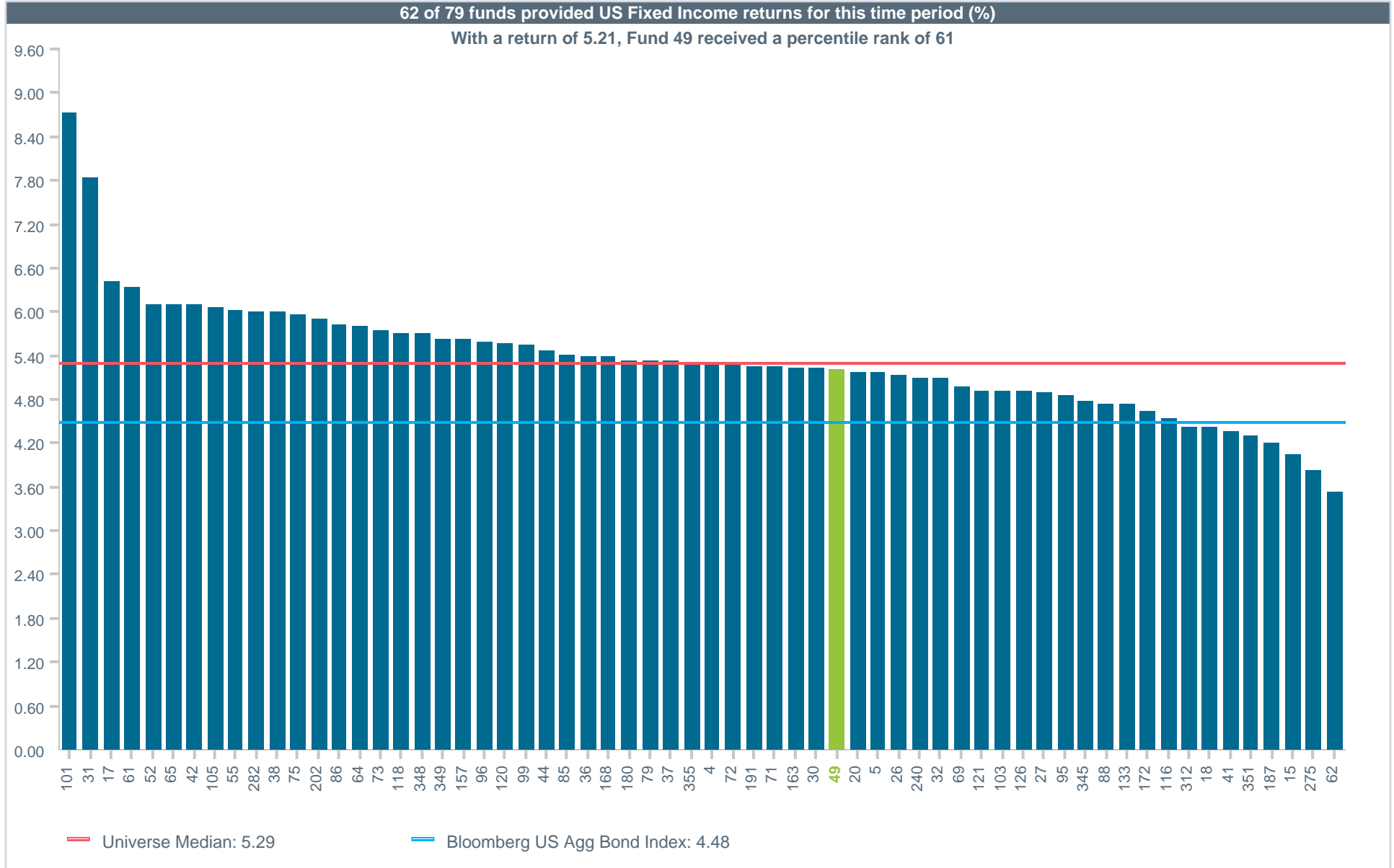
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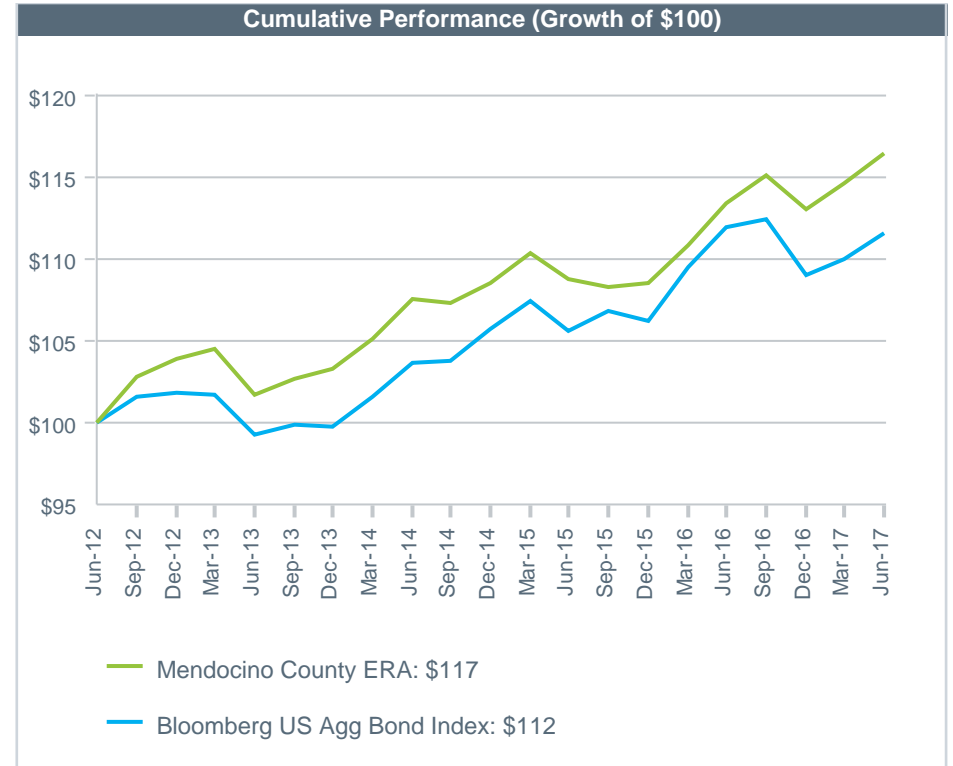
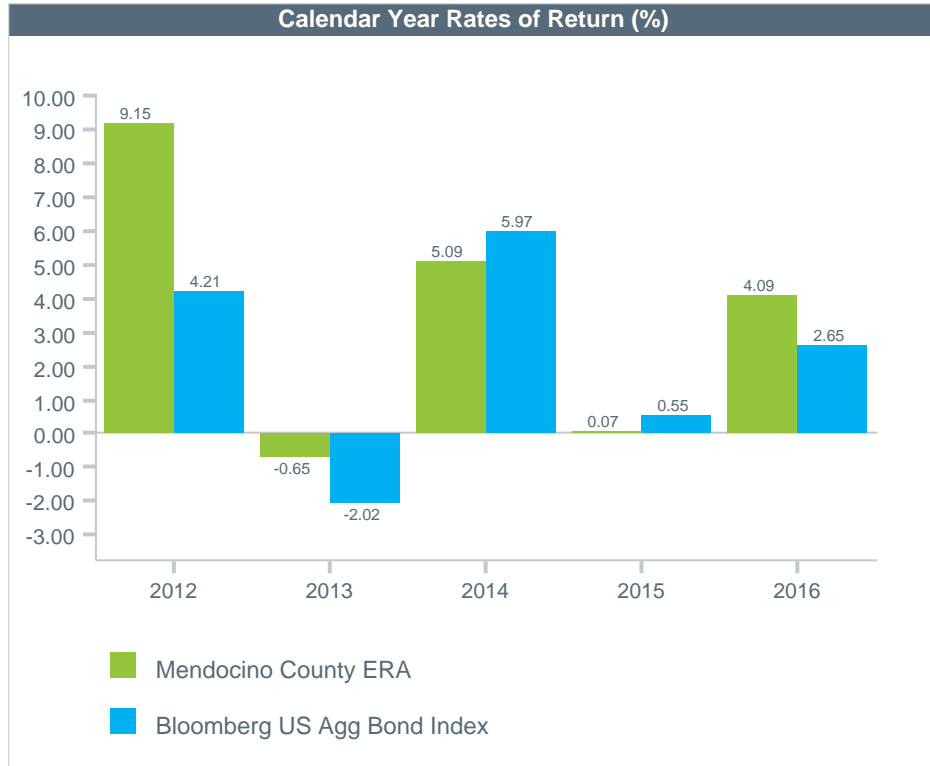


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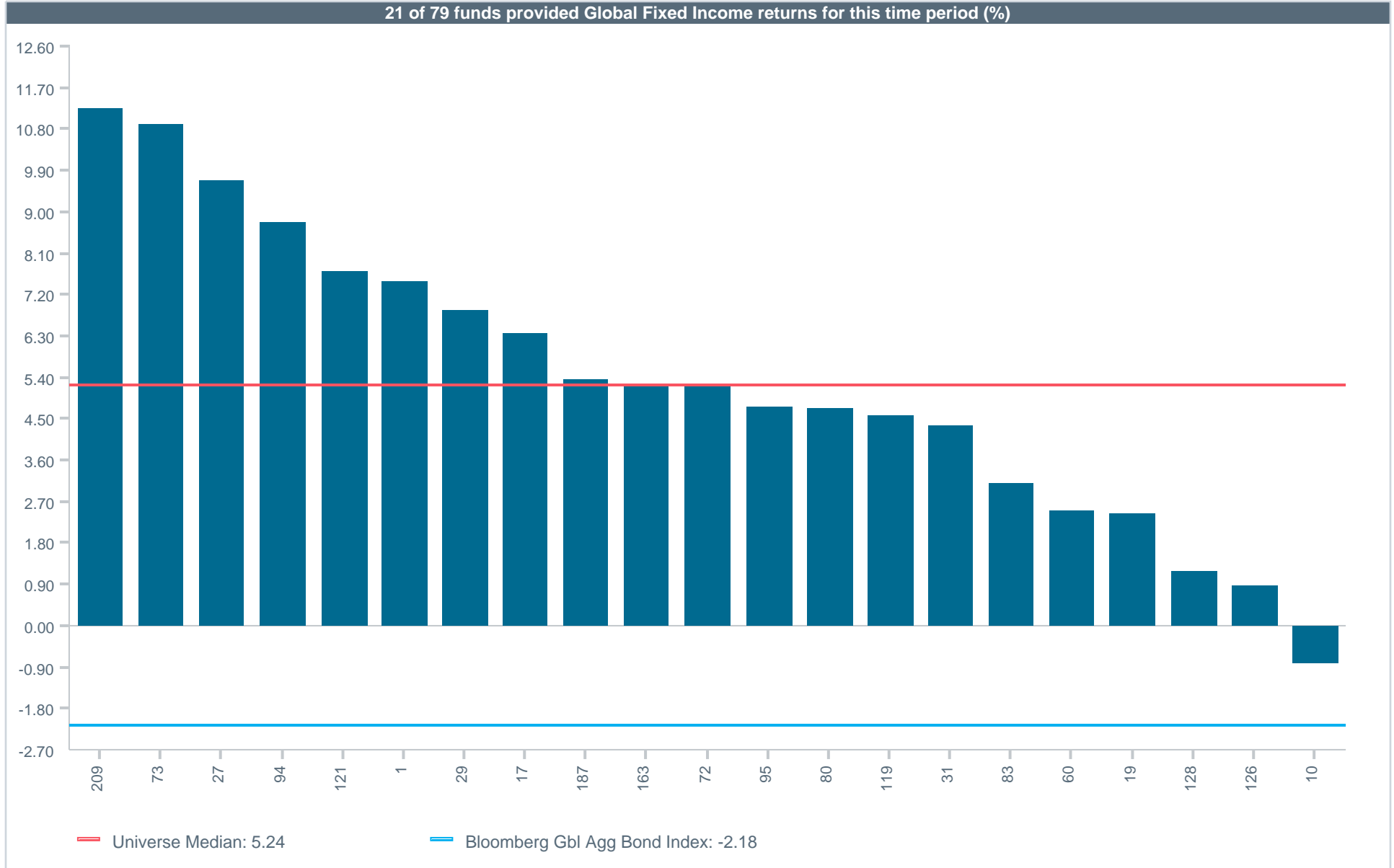
Total Return - US Fixed Income

Mendocino County ERA vs. Bloomberg US Agg Bond Index



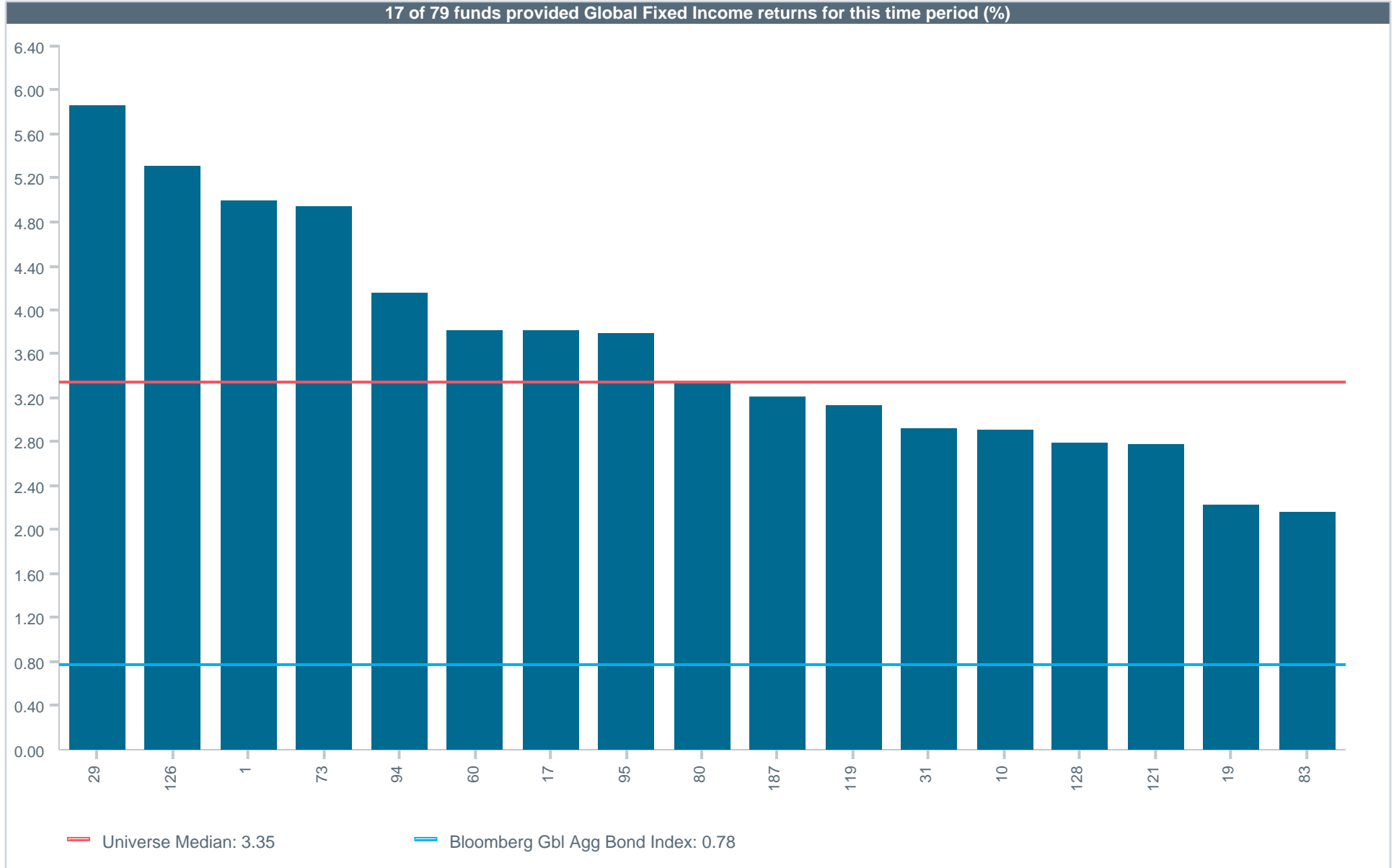
Annualized Returns (%)			
	1 Year	3 Years	5 Years
Mendocino County ERA	2.69	2.71	3.10
Bloomberg US Agg Bond Index	-0.31	2.48	2.21
Variance	3.00	0.23	0.89





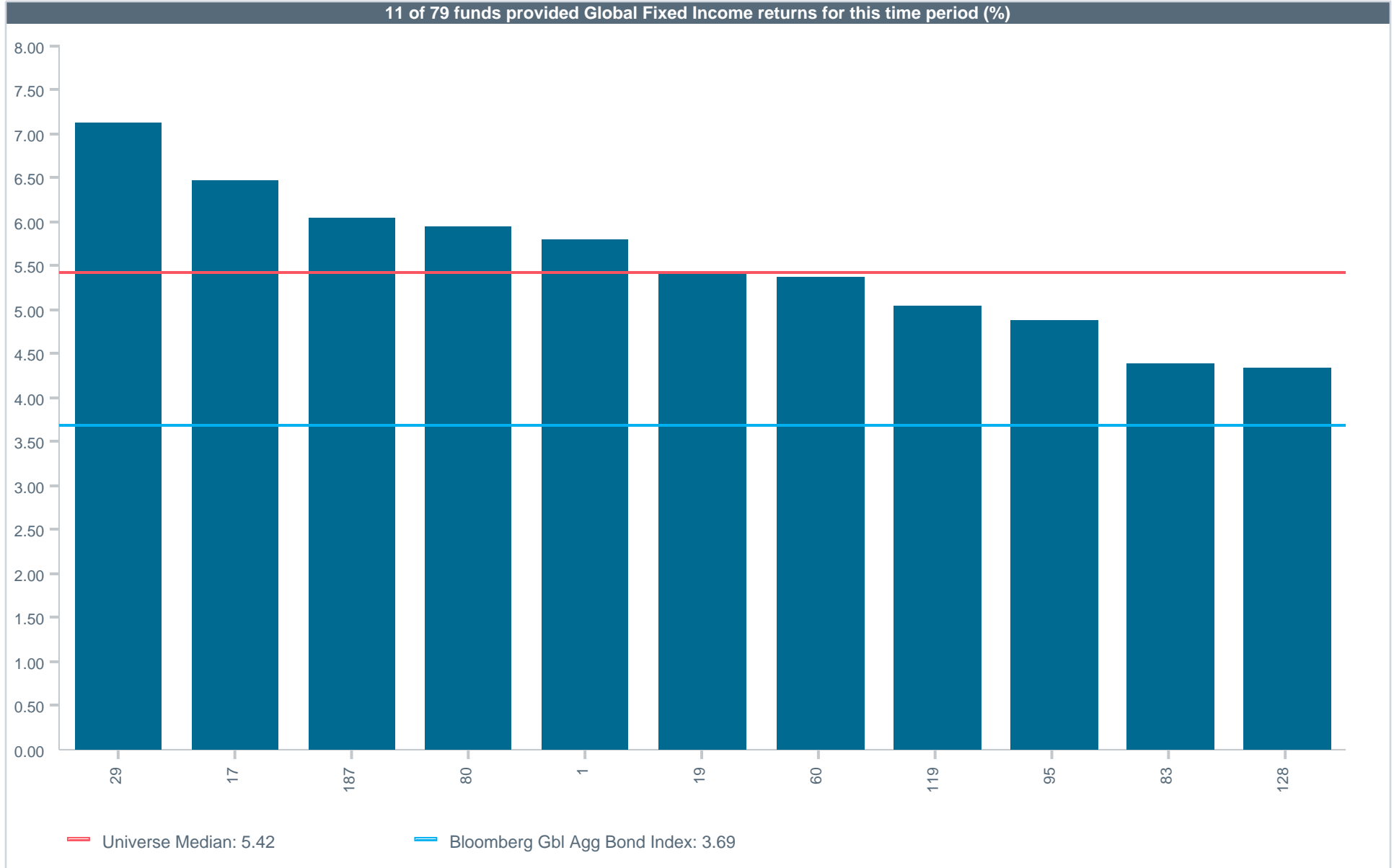
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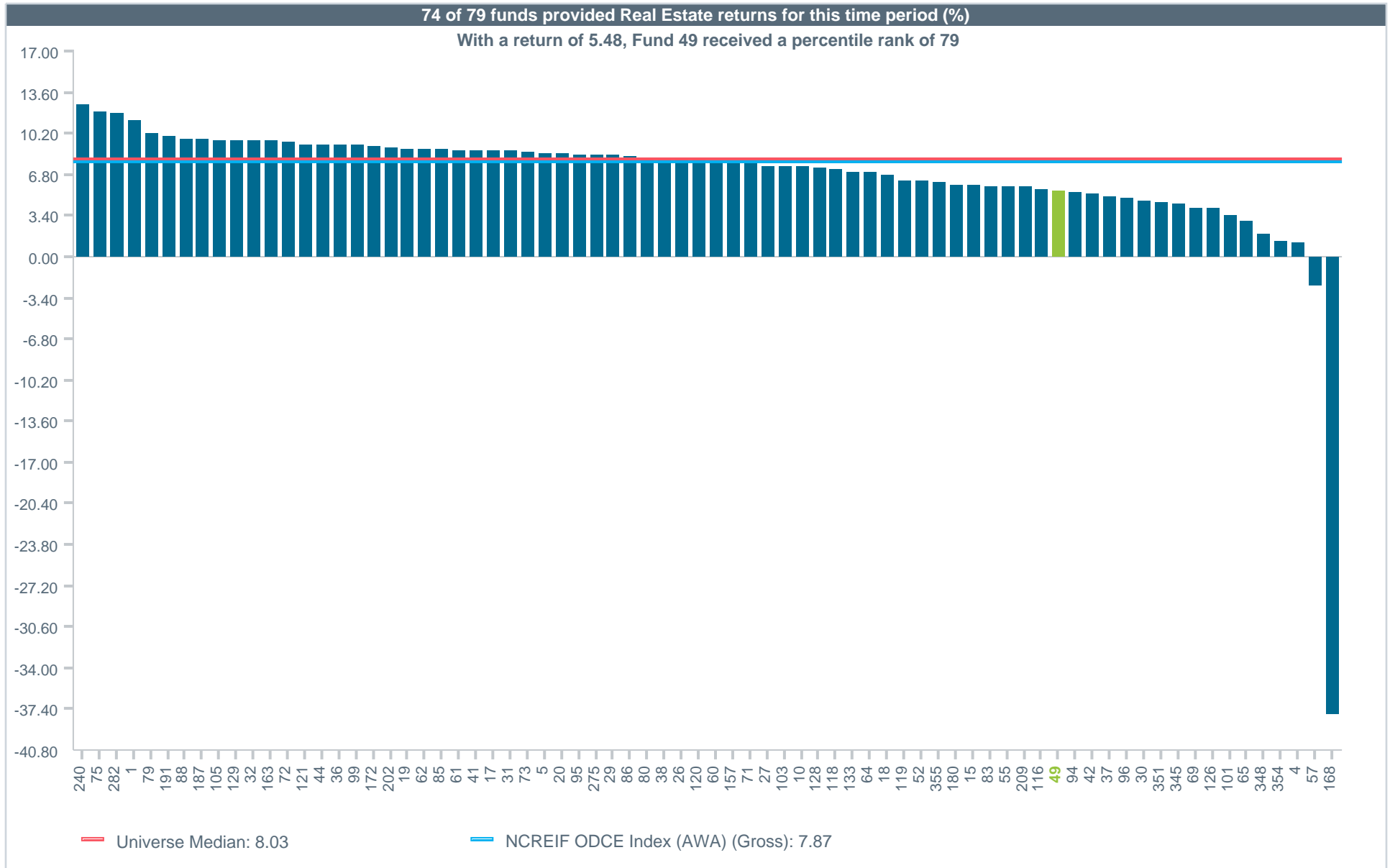
Total Return - Global Fixed Income

Mendocino County ERA vs. Bloomberg Gbl Agg Bond Index

Calendar Year Rates of Return (%)	Cumulative Performance (Growth of \$100)
<p>Mendocino County ERA does not have return data for Global Fixed Income</p>	

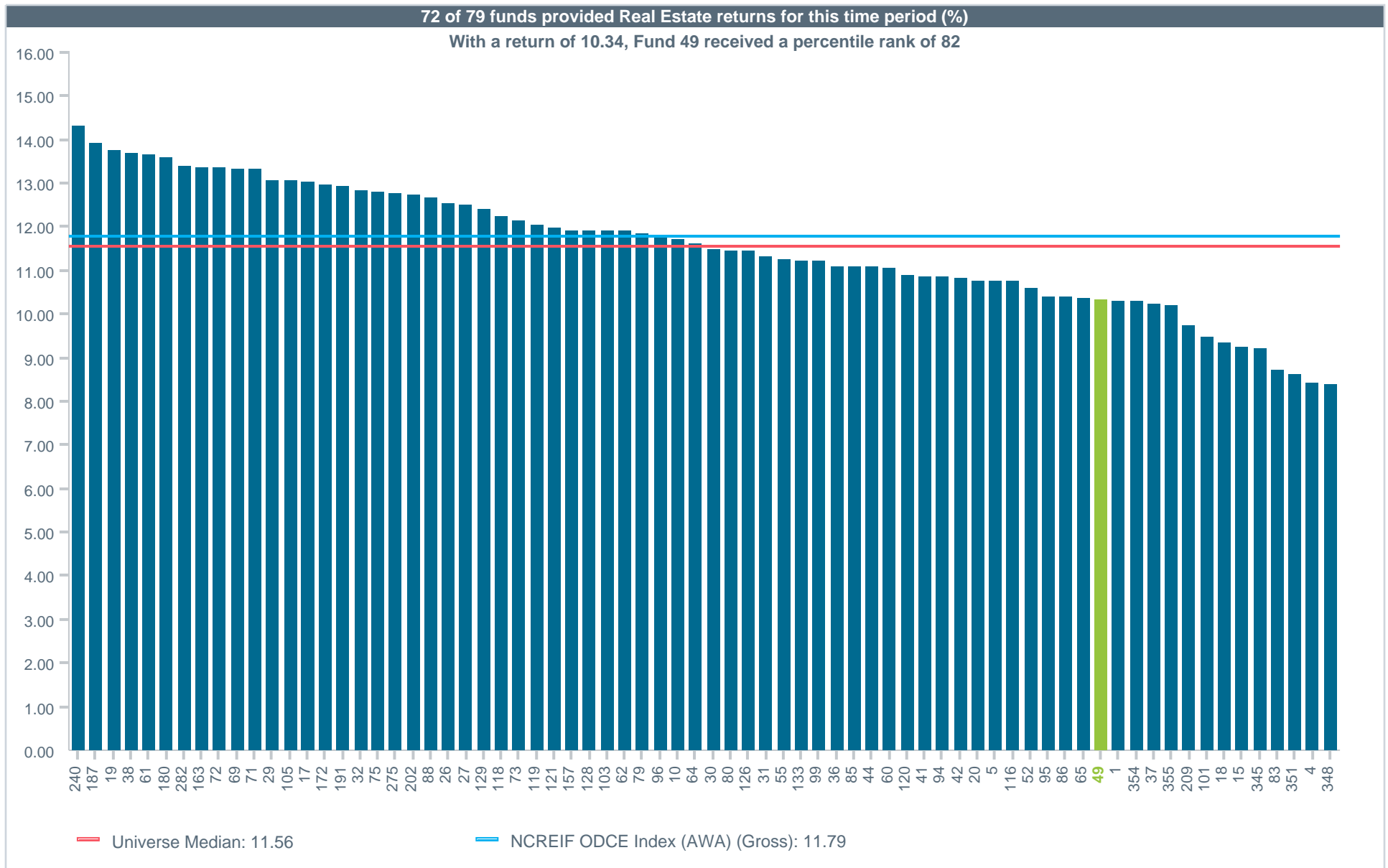
Annualized Returns (%)			
	1 Year	3 Years	5 Years
Mendocino County ERA	N/A	N/A	N/A
Bloomberg Gbl Agg Bond Index	N/A	N/A	N/A
Variance	N/A	N/A	N/A





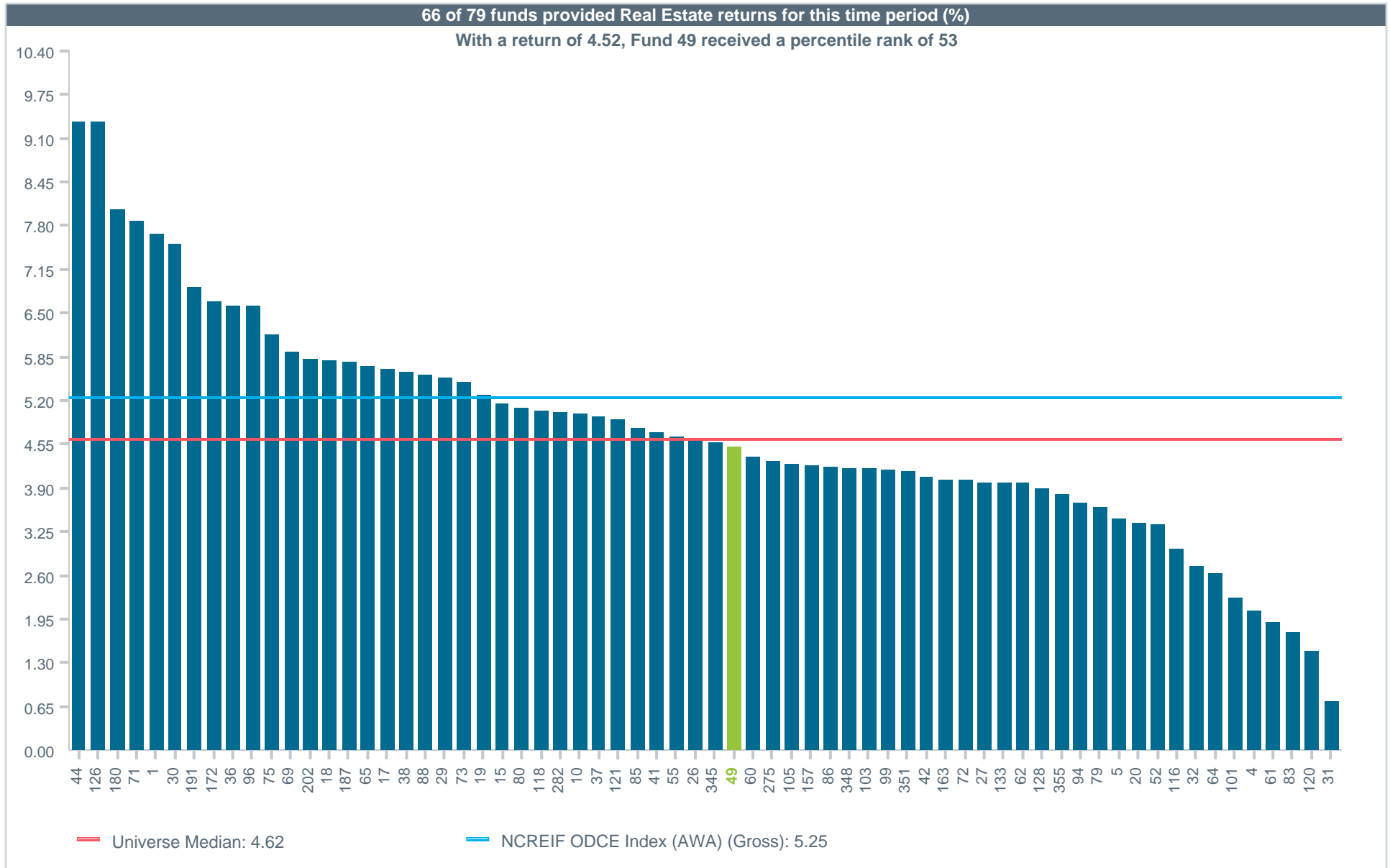
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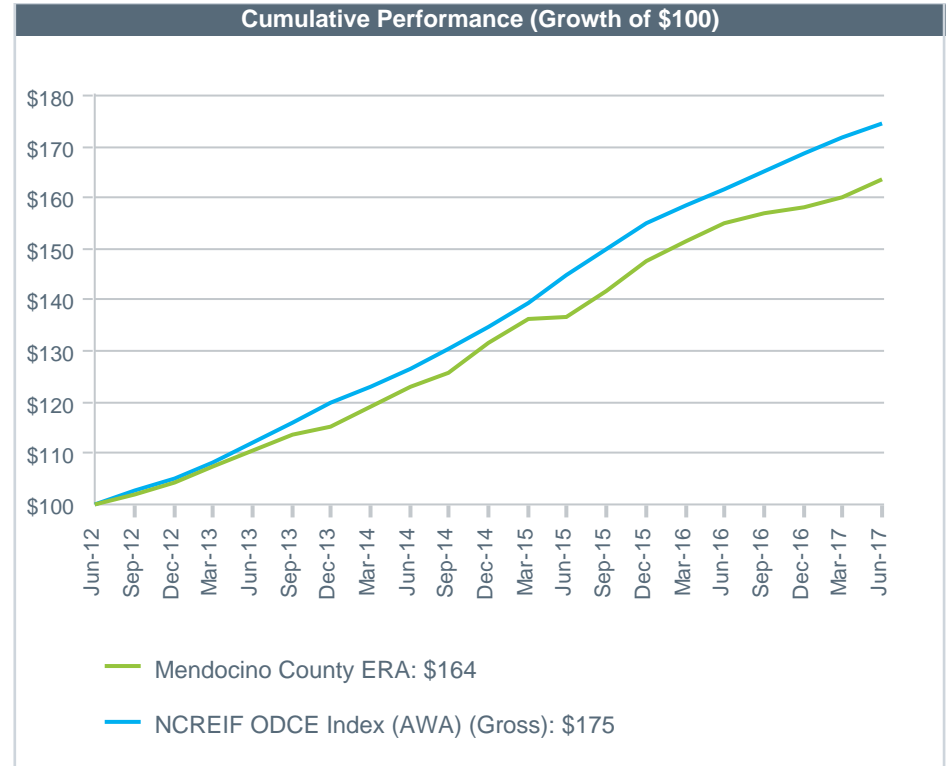
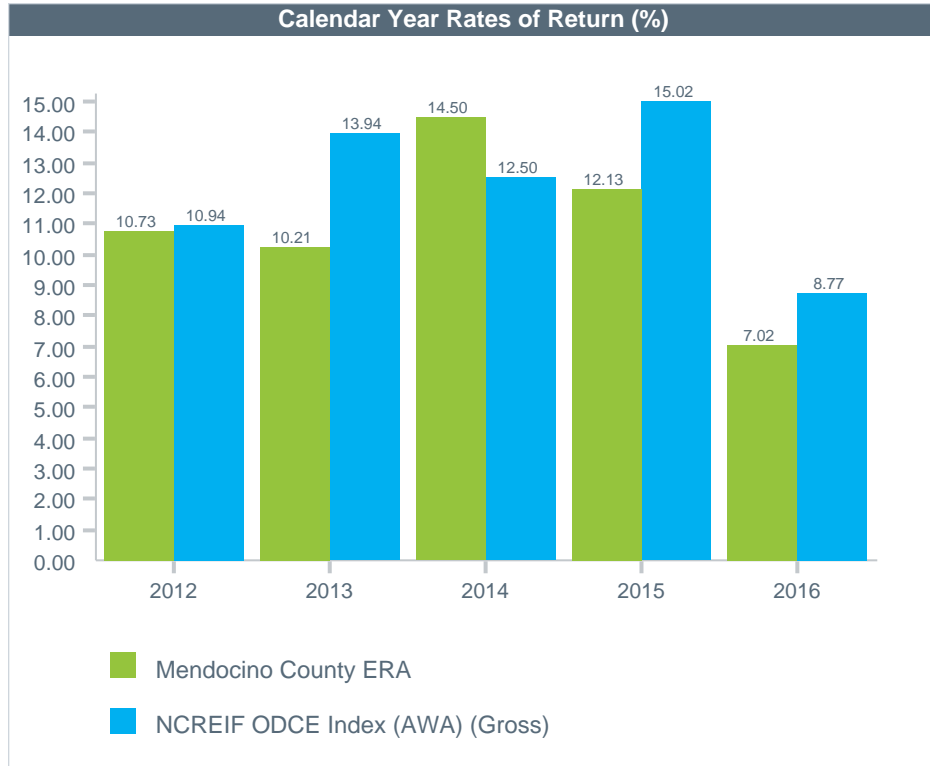


Funds with less history than the specified time period will not appear in the chart.



Total Return - Real Estate

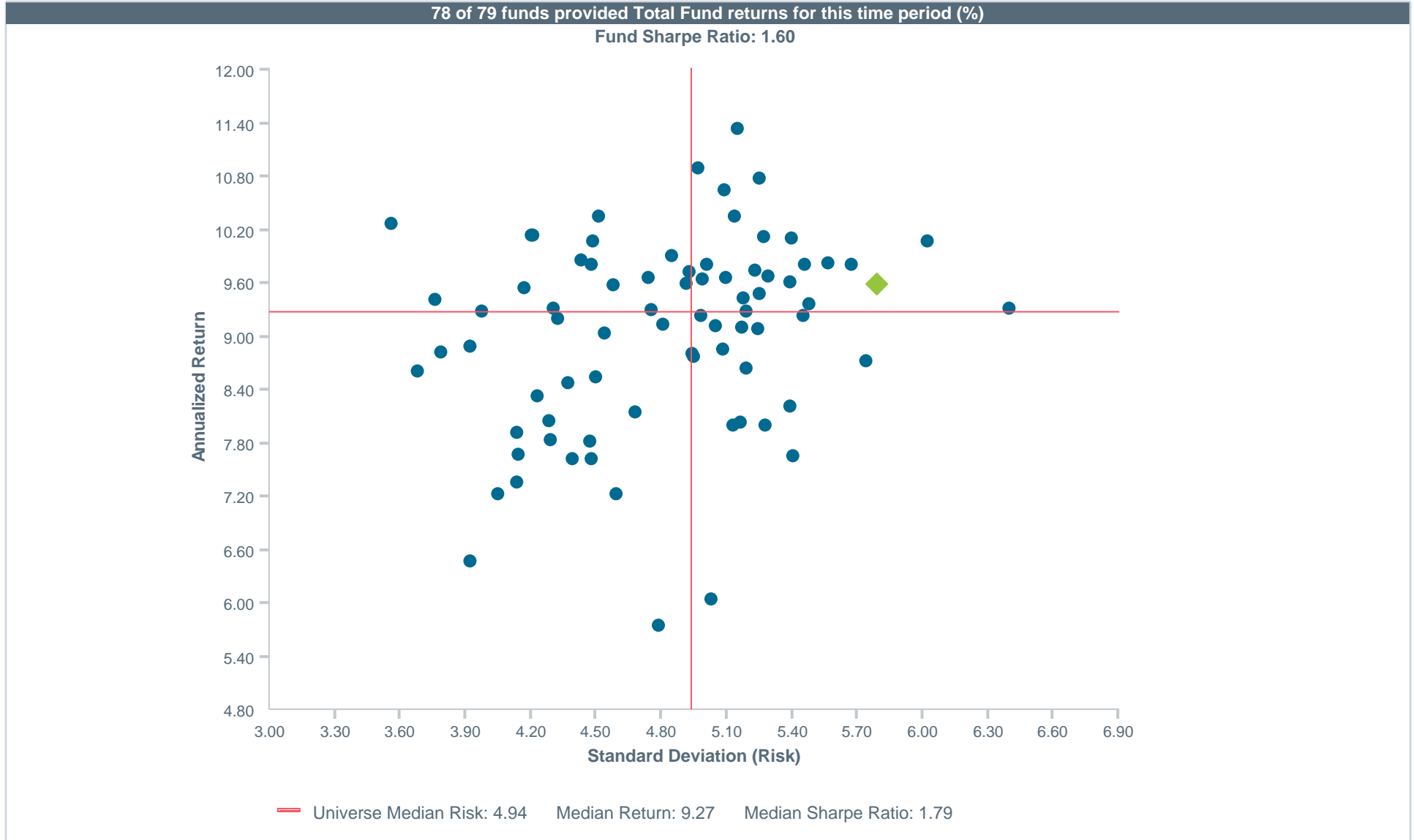
Mendocino County ERA vs. NCREIF ODCE Index (AWA) (Gross)



Annualized Returns (%)			
	1 Year	3 Years	5 Years
Mendocino County ERA	5.48	9.94	10.34
NCREIF ODCE Index (AWA) (Gross)	7.87	11.34	11.79
Variance	-2.39	-1.40	-1.45



5 Year Annualized Total Fund Returns vs. Standard Deviation

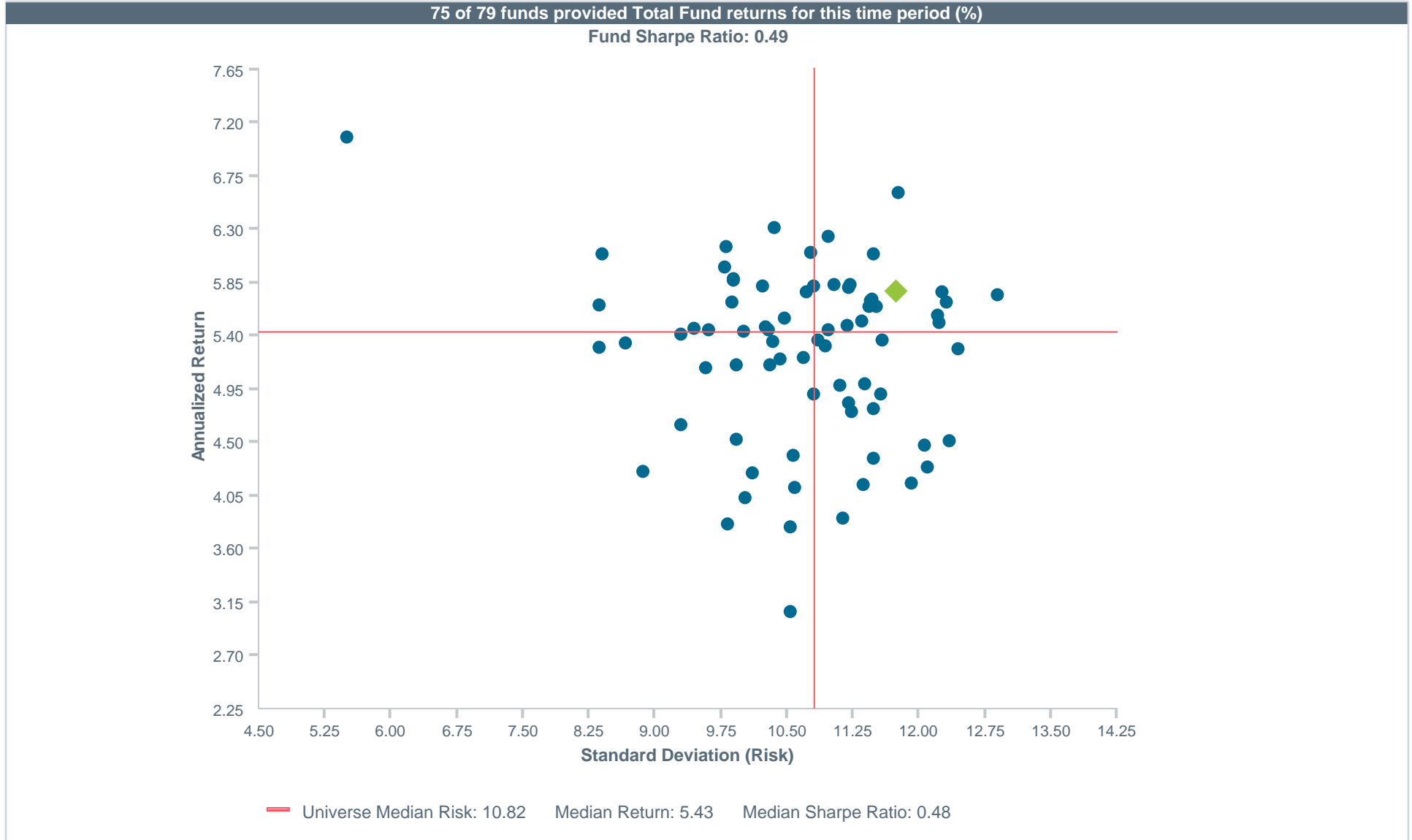


Funds with less history than the specified time period will not appear in the chart.



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

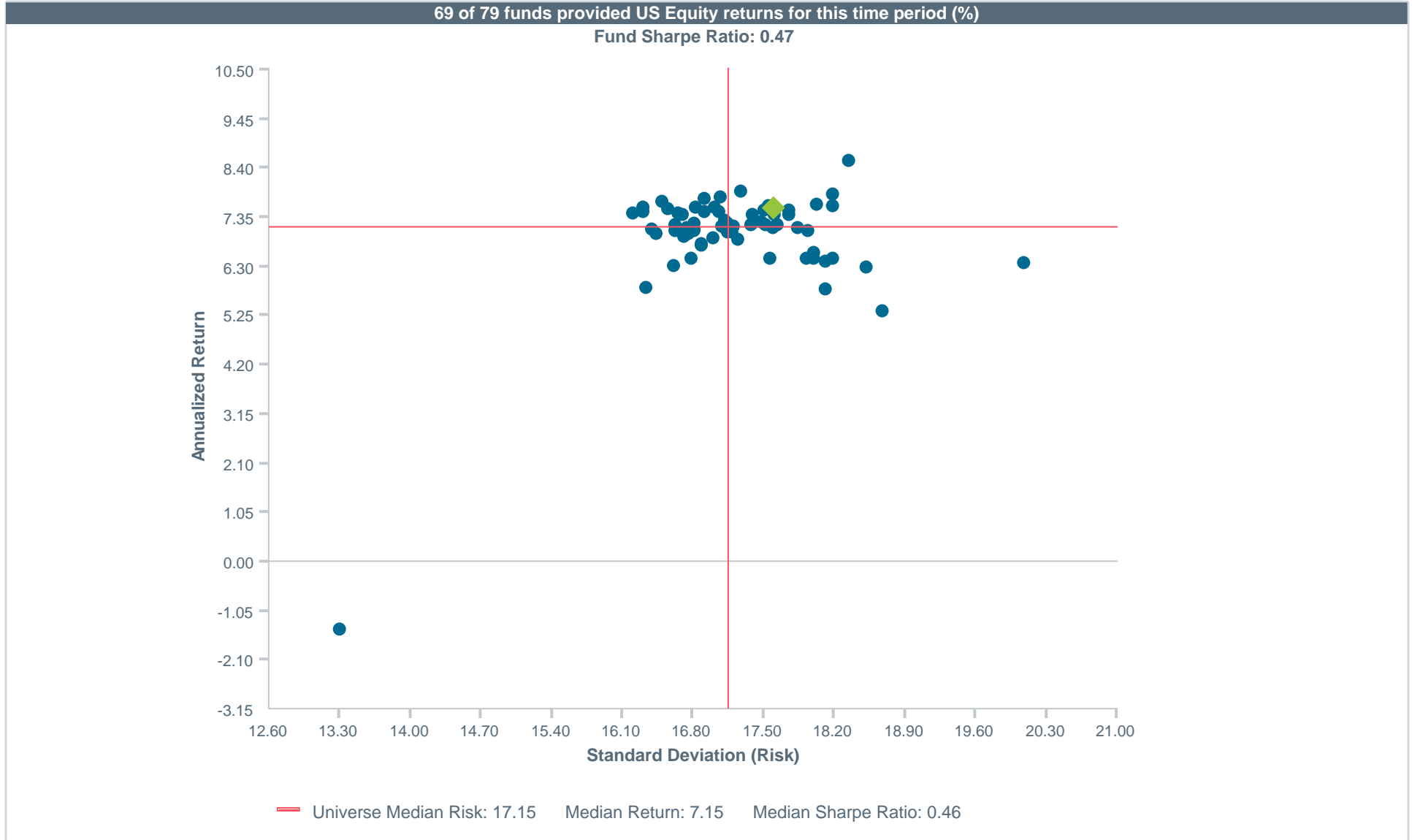


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

10 Year Annualized US Equity Returns vs. Standard Deviation

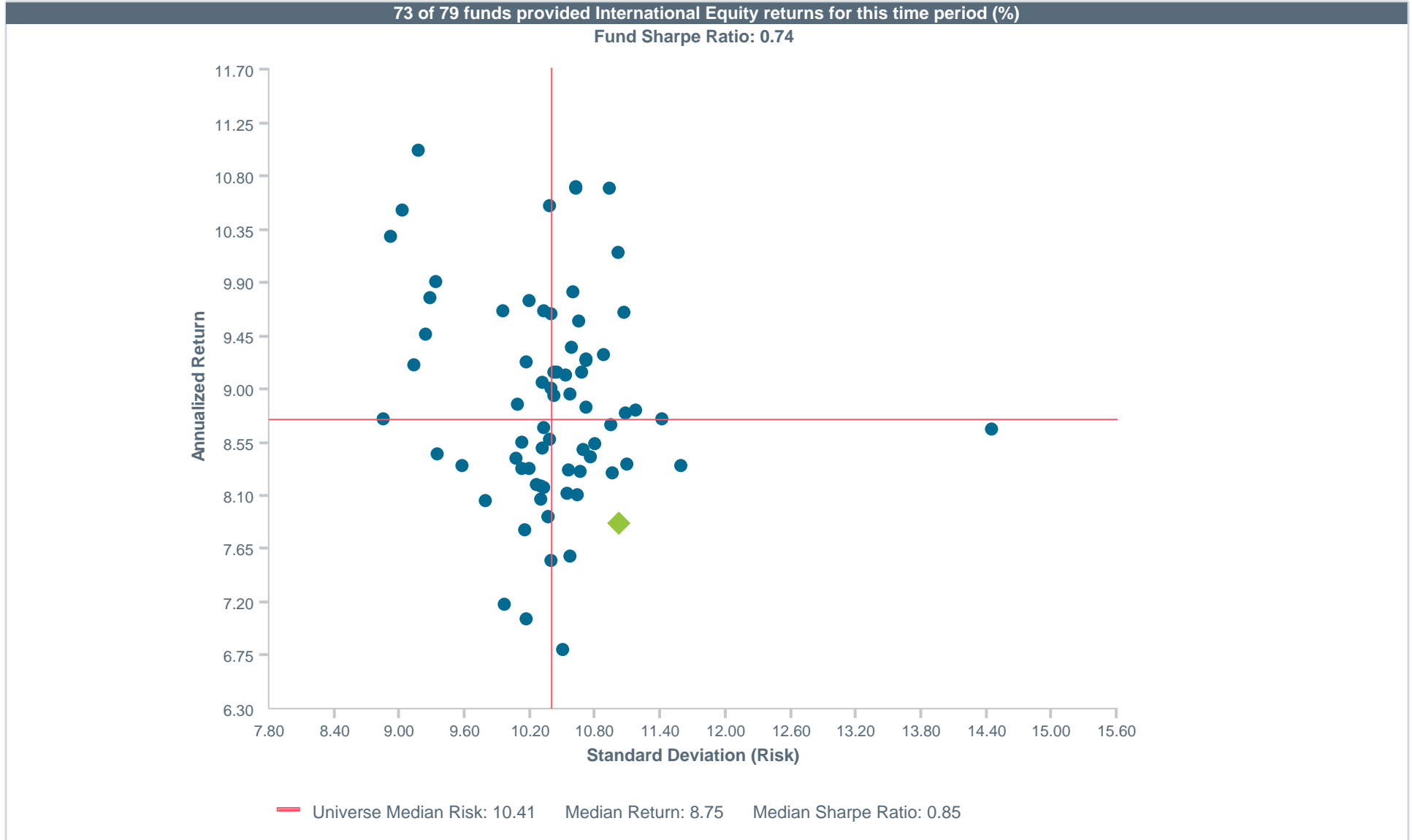


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

5 Year Annualized International Equity Returns vs. Standard Deviation

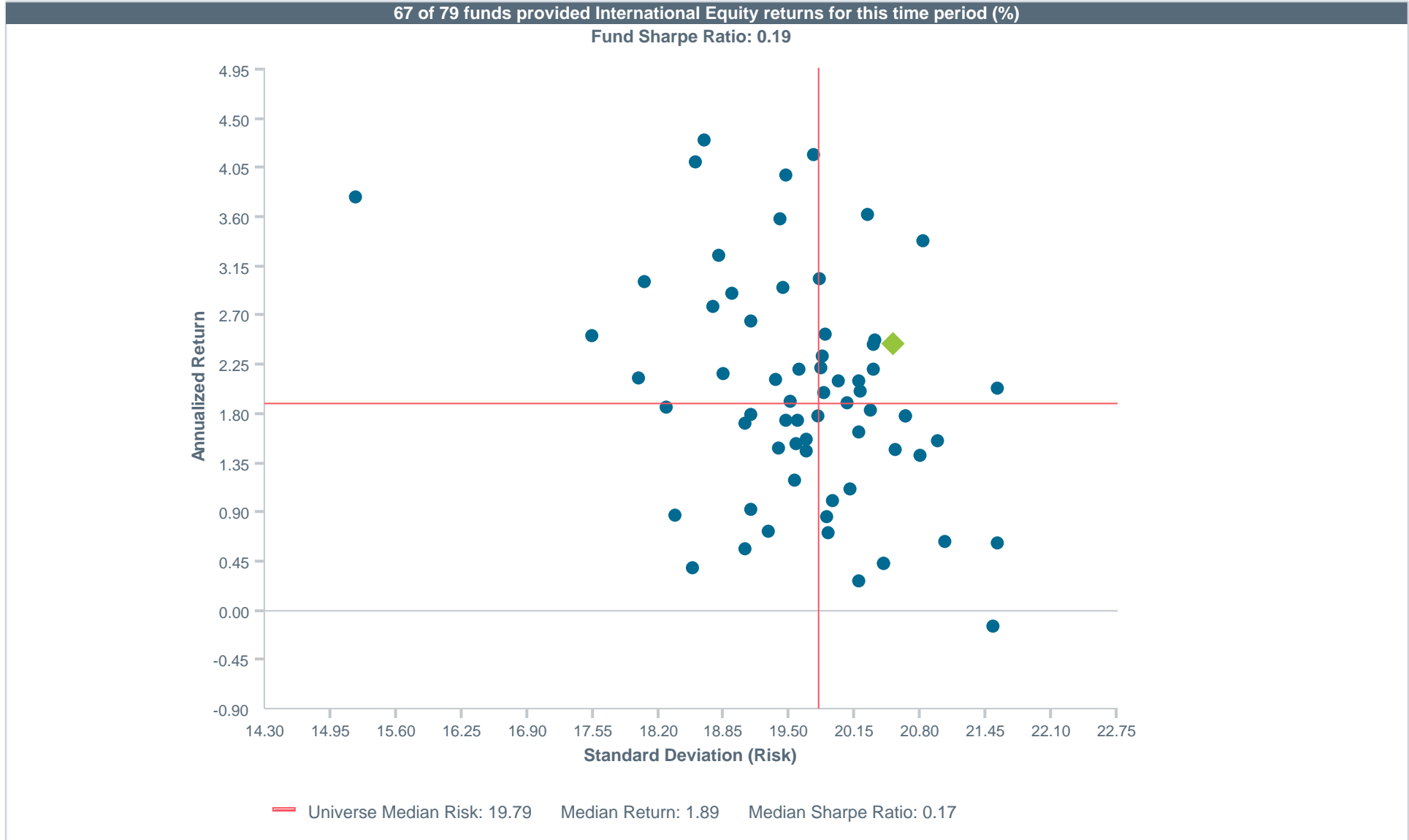


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

10 Year Annualized International Equity Returns vs. Standard Deviation

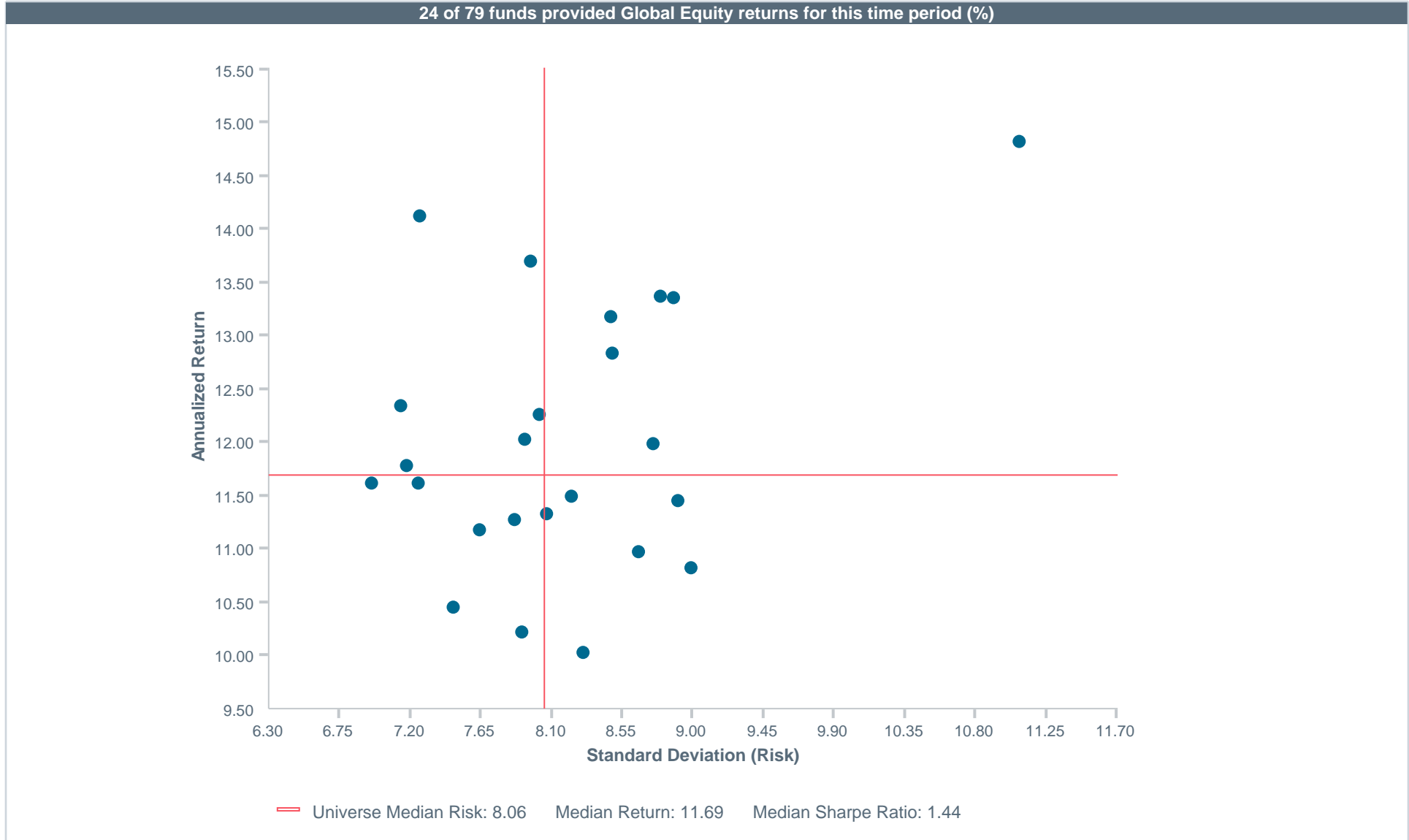


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

5 Year Annualized Global Equity Returns vs. Standard Deviation

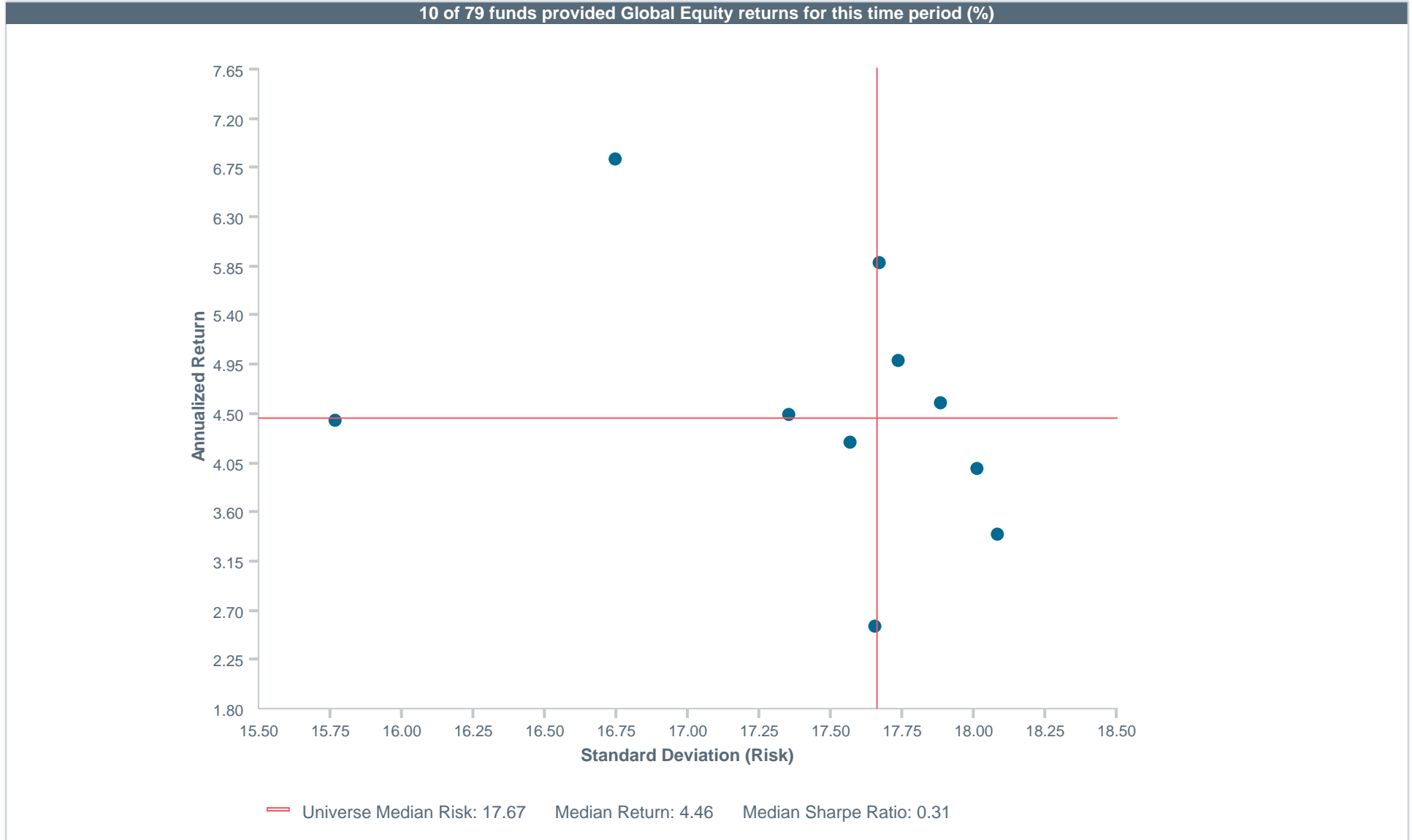


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

10 Year Annualized Global Equity Returns vs. Standard Deviation

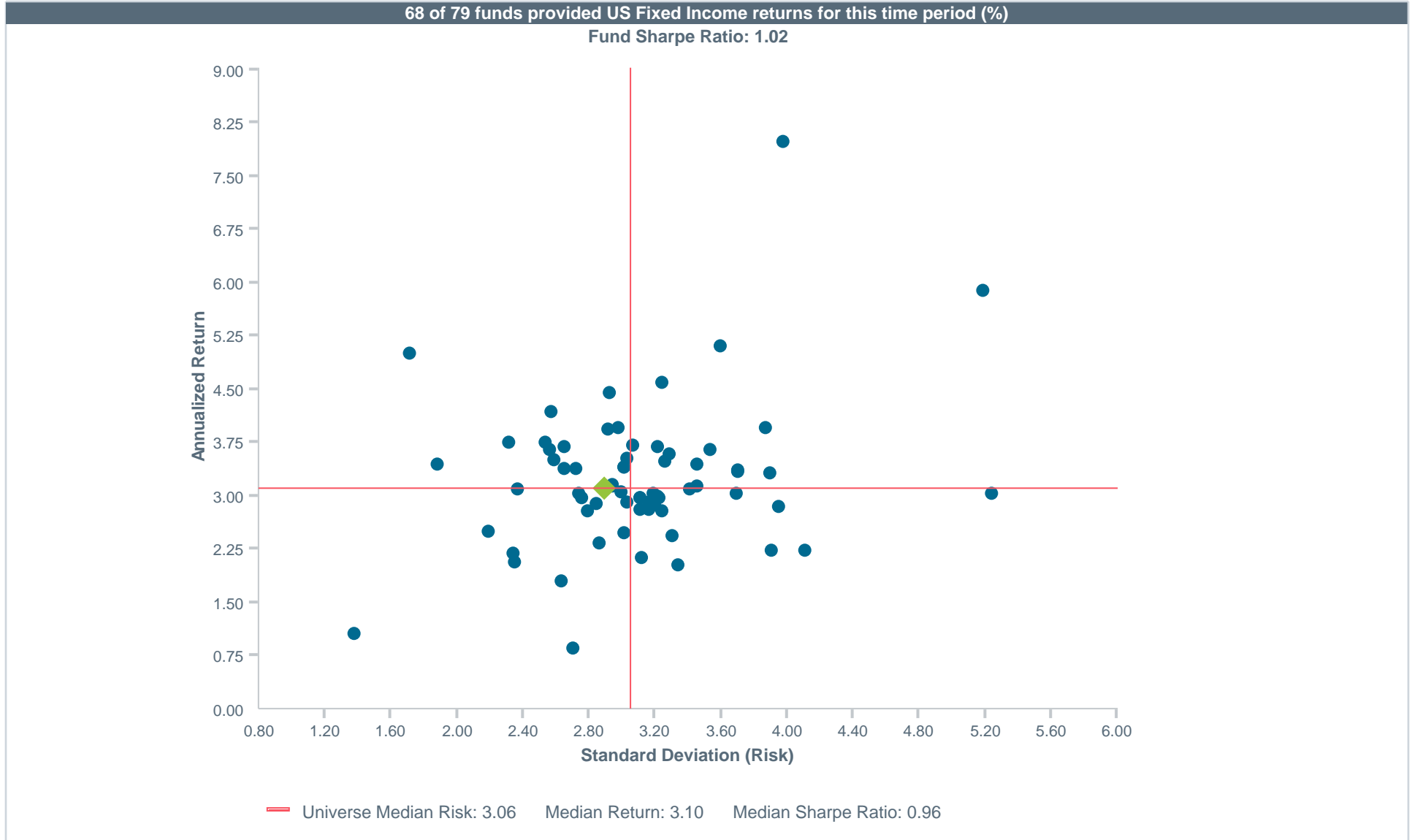


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

5 Year Annualized US Fixed Income Returns vs. Standard Deviation

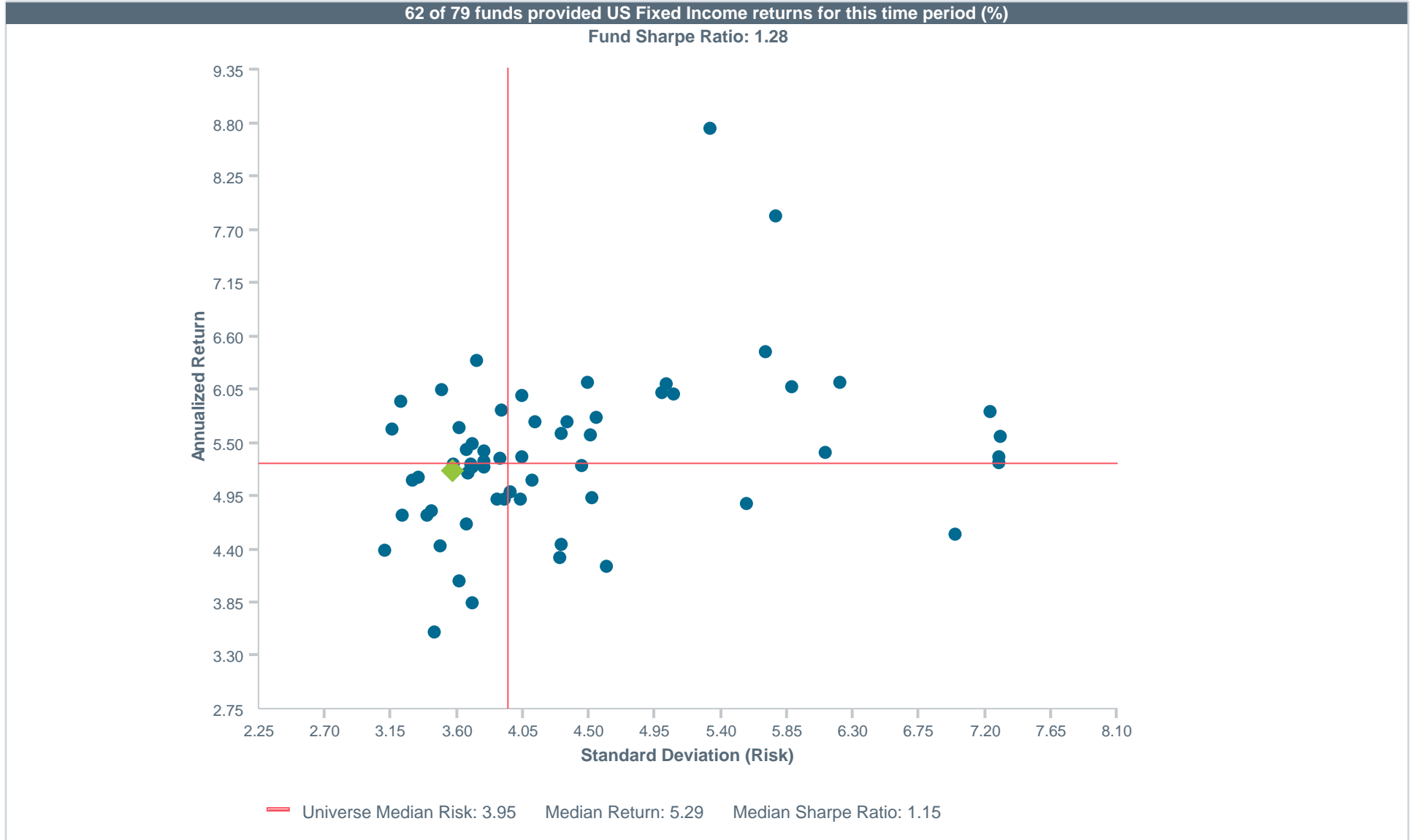


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

10 Year Annualized US Fixed Income Returns vs. Standard Deviation

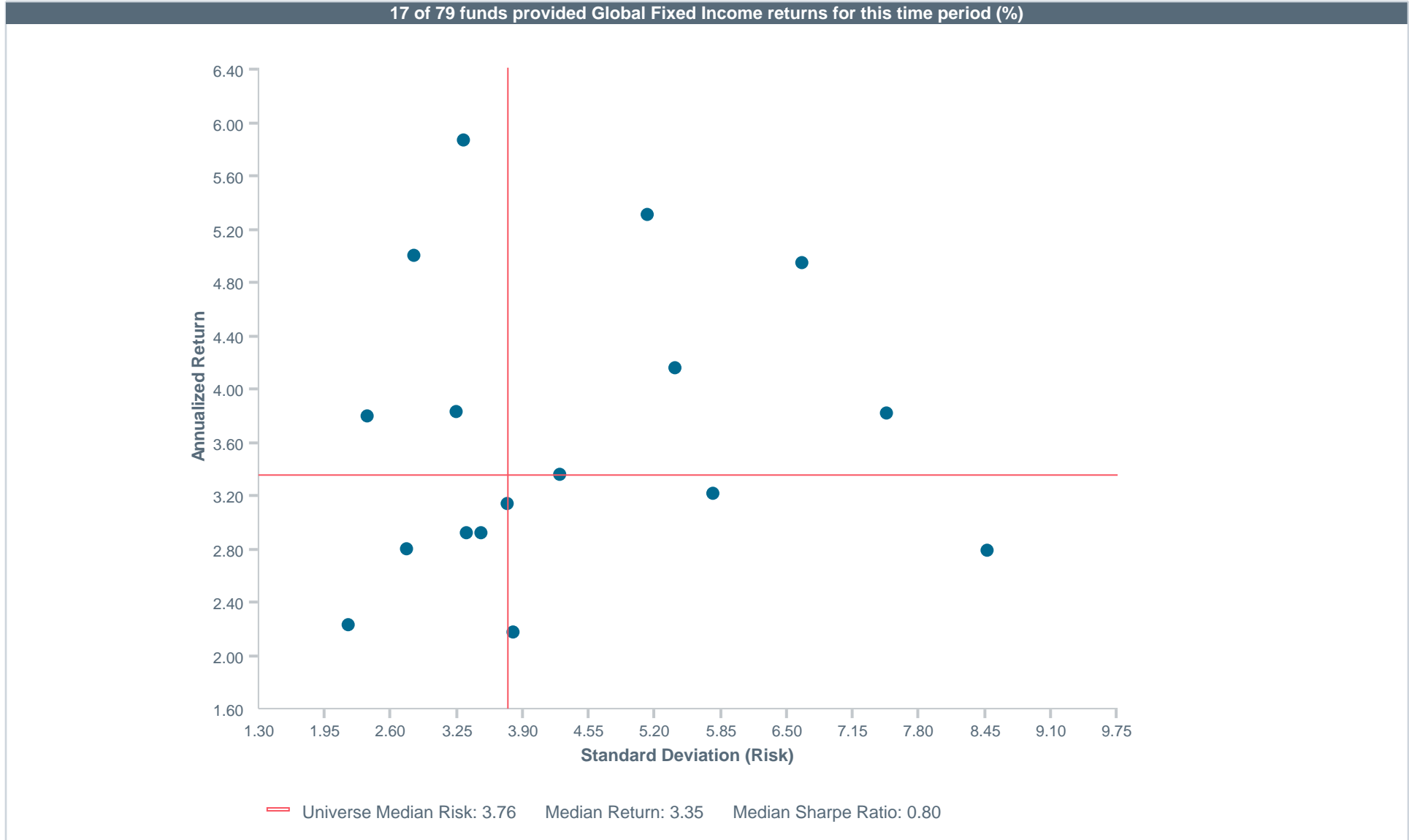


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

5 Year Annualized Global Fixed Income Returns vs. Standard Deviation



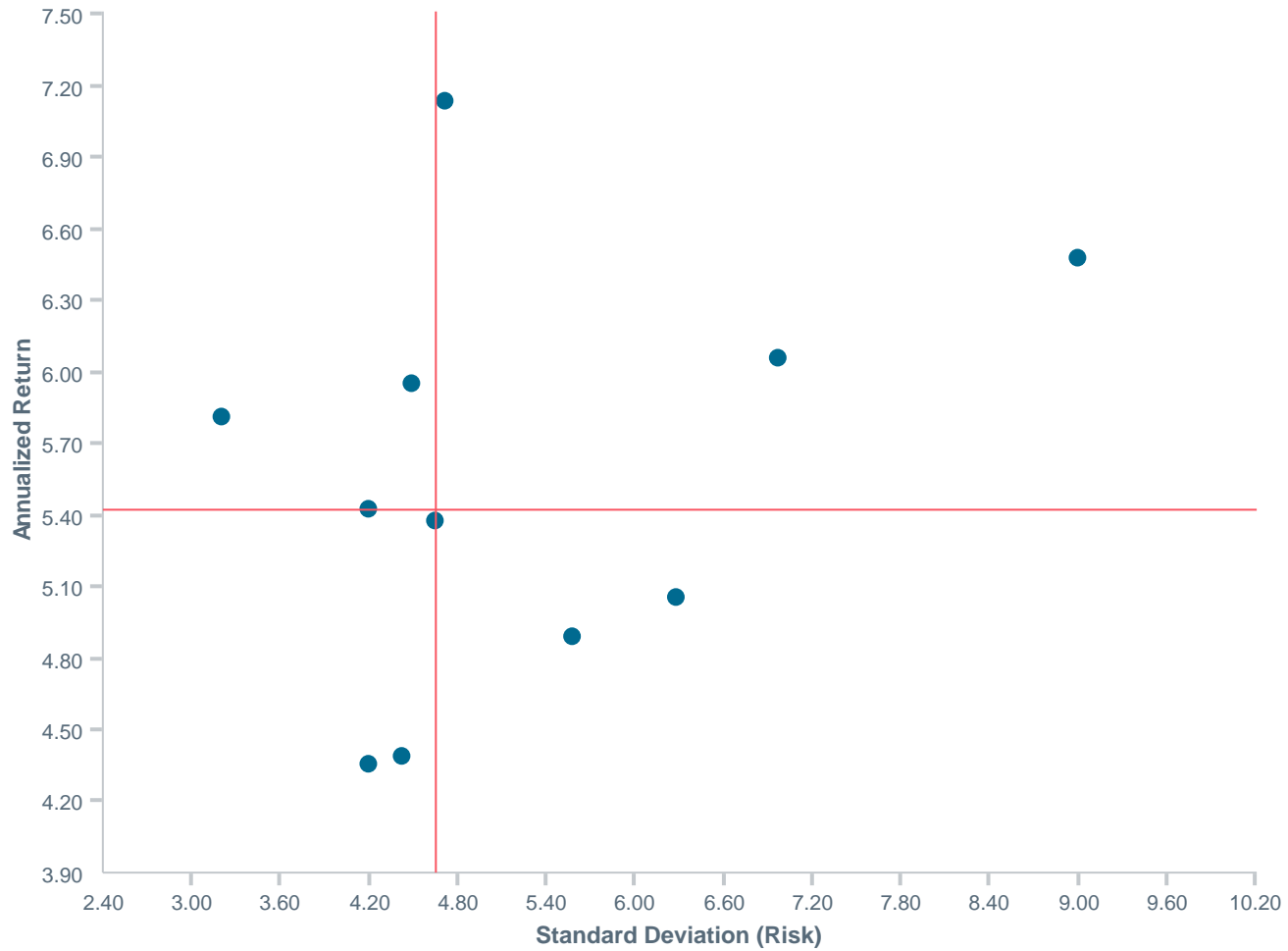
Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis

10 Year Annualized Global Fixed Income Returns vs. Standard Deviation

11 of 79 funds provided Global Fixed Income returns for this time period (%)



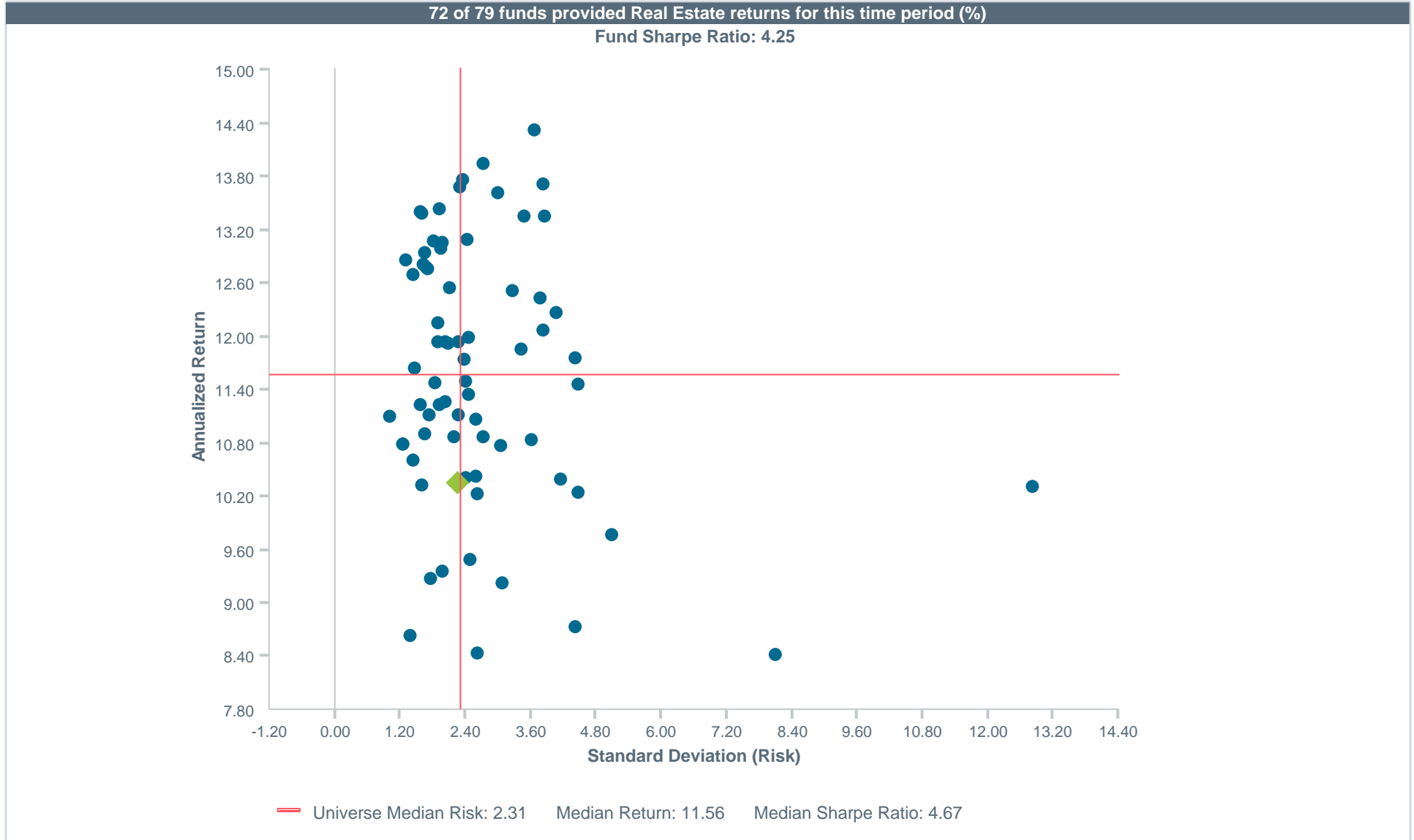
— Universe Median Risk: 4.65 Median Return: 5.42 Median Sharpe Ratio: 0.87

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



Risk/Return Analysis

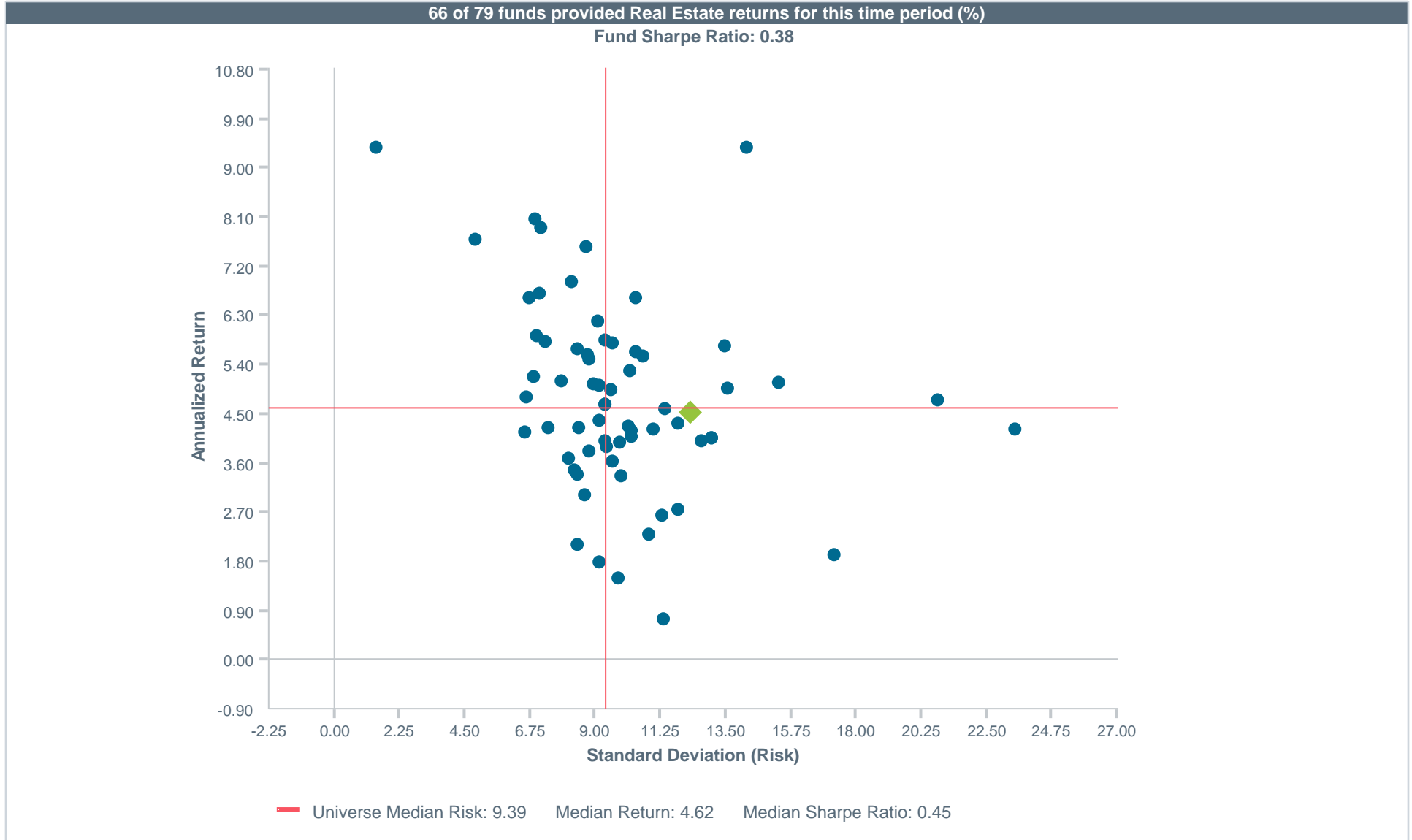
5 Year Annualized Real Estate Returns vs. Standard Deviation



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



10 Year Annualized Real Estate Returns vs. Standard Deviation

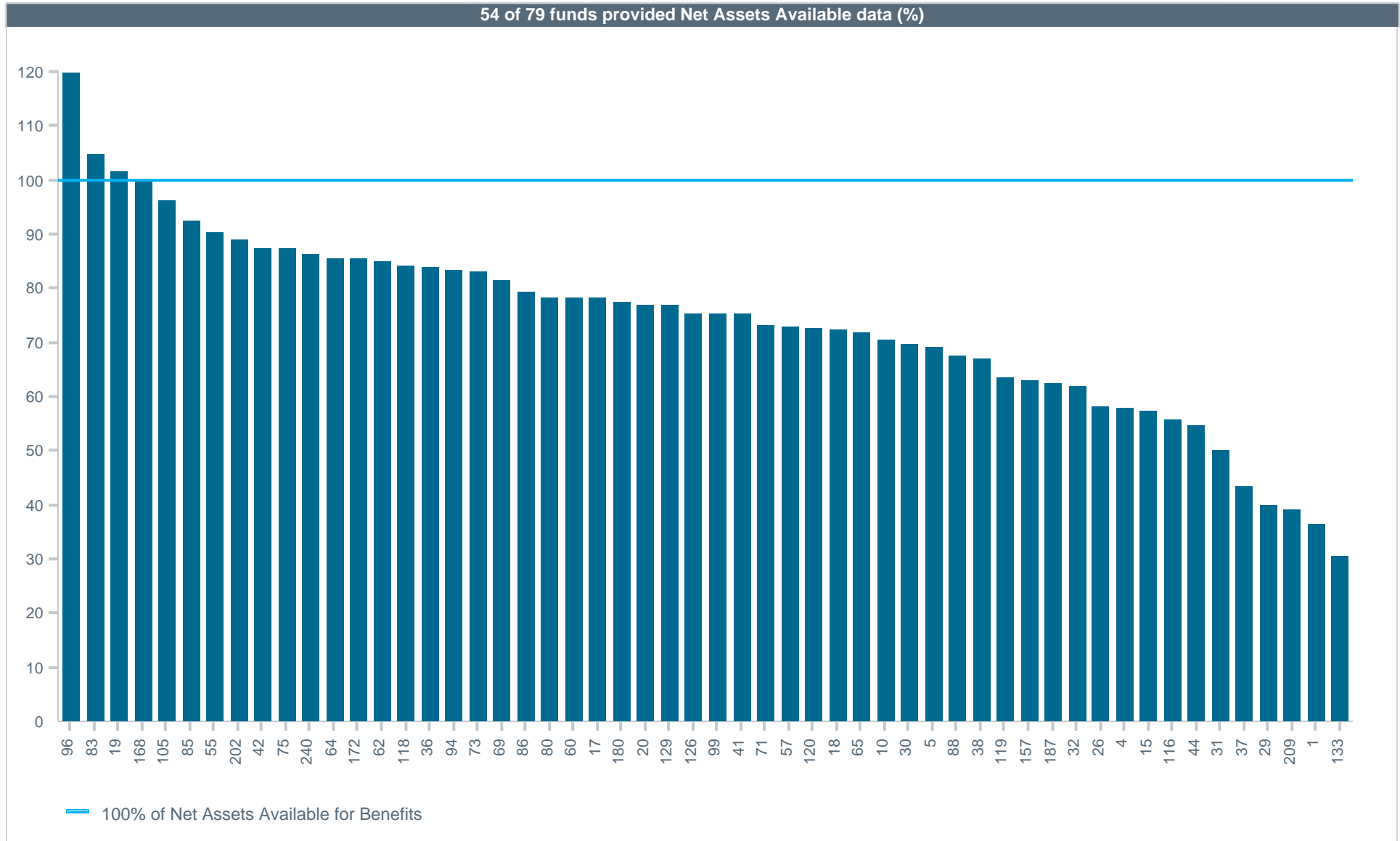


Funds with less history than the specified time period will not appear in the chart.



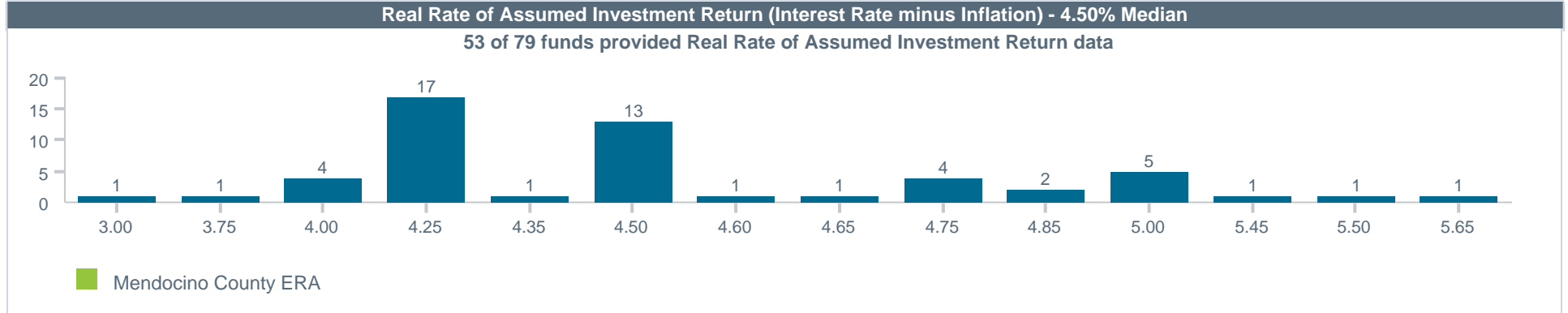
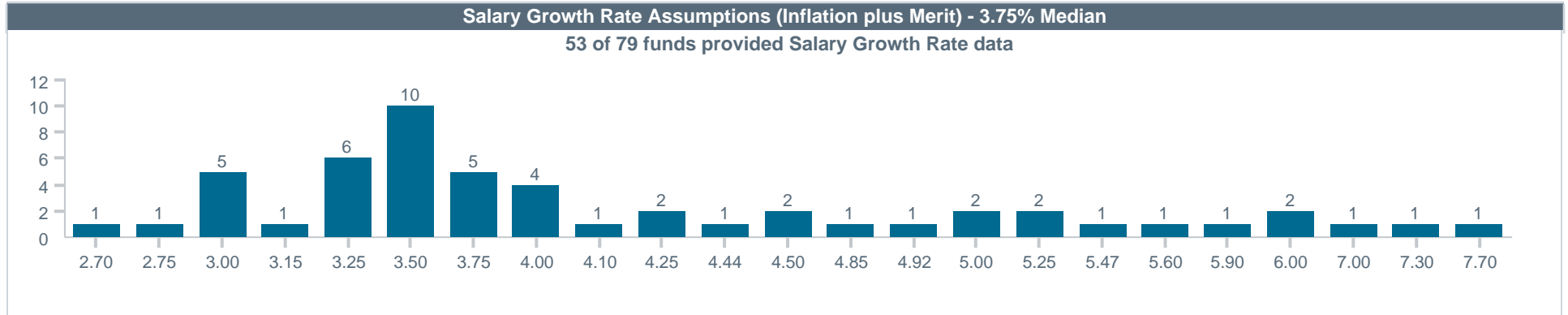
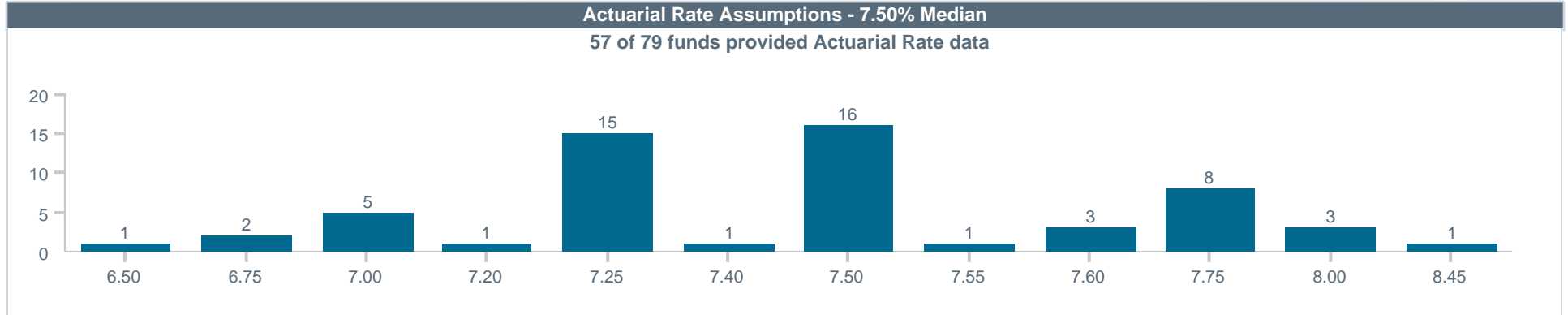
Net Assets Available For Benefits

Expressed as a Percentage of the Pension Benefit Obligation



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

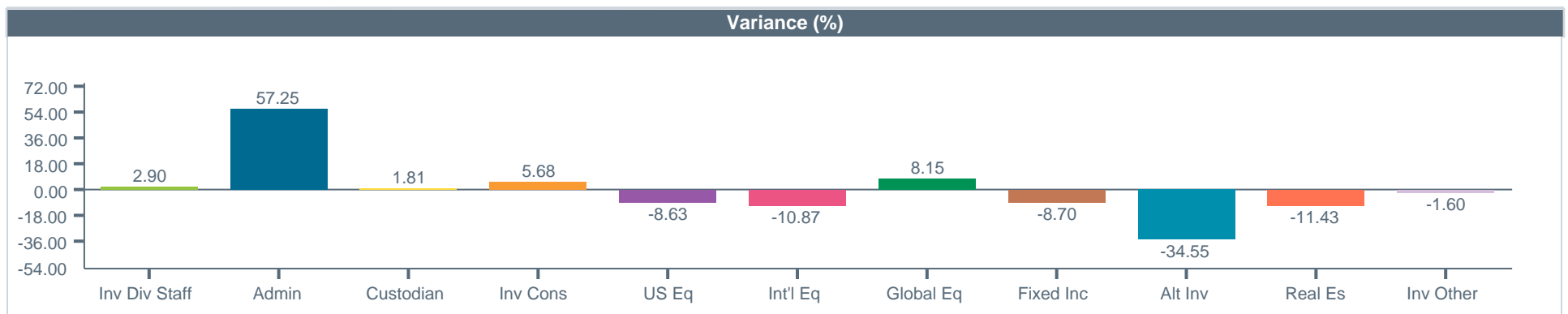
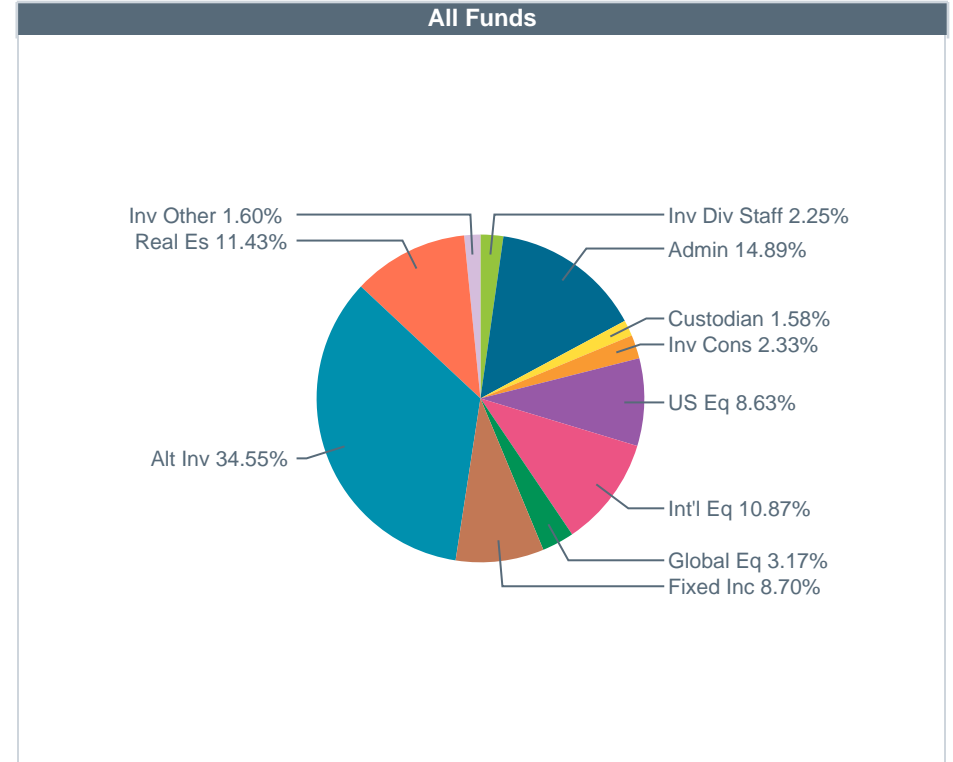
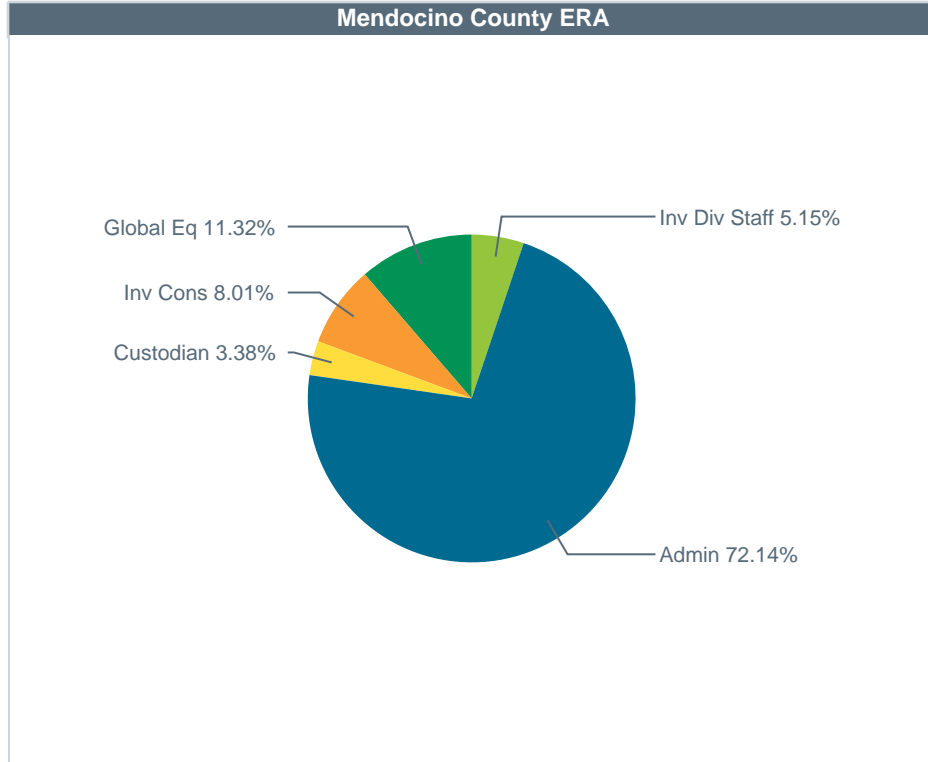




Funds that did not provide data will not appear in the chart.



**Total Administrative and Investment Fees
Mendocino County ERA vs. All Funds**



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



Fund Number: 49

As of June 30, 2017

Total Fund Fee Summary in Basis Points

Mendocino County ERA vs. Average by Asset Range

56 of 79 funds provided fee data for this time period

Administrative Expenses	Mendocino County ERA	Under \$500 Million	\$500mm - \$1 Billion	\$1 - \$5 Billion	\$5 - \$10 Billion	\$10 - \$20 Billion	Over \$20 Billion
Internal Inv. Div. Staff	1.96	1.96	0.00	0.91	0.63	0.85	2.04
Actuary	3.25	3.25	1.80	0.54	0.24	0.13	0.11
Legal	1.45	1.45	1.18	0.68	0.20	0.31	0.15
Consultant	0.00	0.00	0.25	0.26	0.07	0.12	0.13
Audit	0.92	0.92	0.64	0.21	0.11	0.06	0.07
Other Professional	0.00	0.00	1.73	0.27	0.60	0.43	0.77
General Administrative	21.89	21.89	13.74	7.42	6.46	4.47	3.30
Total Administrative Expenses	29.48	29.48	19.34	10.28	8.32	6.37	6.57
Investment Expenses	Mendocino County ERA	Under \$500 Million	\$500mm - \$1 Billion	\$1 - \$5 Billion	\$5 - \$10 Billion	\$10 - \$20 Billion	Over \$20 Billion
Custodial	1.29	1.29	3.03	1.16	0.71	0.55	0.30
Investment Consulting	3.05	3.05	2.40	2.22	0.69	0.70	0.45
US Equity	0.00	0.00	7.38	6.66	6.35	3.26	2.19
International Equity	0.00	0.00	6.71	7.62	5.29	5.68	4.20
Global Equity	4.32	4.32	1.00	2.43	2.29	1.11	0.95
Fixed Income	0.00	0.00	5.32	6.07	3.24	4.42	3.80
Real Estate	0.00	0.00	5.98	5.73	7.86	4.49	6.77
Other Investment Management	0.00	0.00	0.00	0.38	0.07	0.88	1.78
Total Investment Expenses (ex. Alt Inv)	8.66	8.66	31.81	32.28	26.49	21.10	20.42
Alternative Investments	0.00	0.00	3.98	18.11	23.98	14.10	21.73
Total Investment Expenses	8.66	8.66	35.79	50.39	50.46	35.20	42.15
Total Expenses	38.14	38.14	55.13	60.67	58.78	41.57	48.73

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



GIPS Compliance Survey Summary

Q1. Are you currently claiming compliance or considering compliance with the CFA Institute's Guidance Statement on the Application of the Global Investment Performance Standards (GIPS) to Asset Owners, effective January 1, 2015?

Of the 79 participants in the 2017Q2 Public Fund Report, 51 participants provided a reply to the GIPS Compliance Survey. Of those participants, 6 answered "Yes, Currently Comply", 4 answered "Yes, Considering", and 41 answered "Not Considering".

Q2. According to the GIPS standards, asset owner net of fees performance must reflect internal as well as external investment costs, and such net of all fee performance is required to be calculated and presented to fund oversight committees/Boards. Please identify which, if any, of the following costs you are currently including or will consider including in net performance that is in compliance with the GIPS standards.

	<u>Currently Include</u>	<u>Considering</u>	<u>Not Considering</u>	<u>Unsure at this Time</u>
• Internal investment department compensation/benefits	7	1	3	2
• Allocation of non-investment department expenses (human resources, communications, technology, performance measurement, and compliance to support internal management team)	7	1	3	2
• Investment research services (100% or pro-rata determination)	6	0	3	4
• Investment consulting fees (general investment consulting and project fees; 100% or pro-rata determination)	8	0	3	2
• Pro-rata data valuation fees	4	1	3	5
• Pro-rata overhead indirectly related to asset management (building and utilities fees to support internal management team)	5	0	4	3

Miscellaneous Comments

- Performance shown is gross of fees, with the exception of the following:
 - **Funds 31, 49, 350, 351, and 355:** Performance shown is net of fees.
 - **Funds 5 and 20:** Performance shown is net of fees, except for Total Fund performance.
 - **Fund 85:** Performance shown for Real Estate is net of fees.
- 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 2016 and June 2017.
- Allocations shown reflect dedicated managers/mandates rather than actual exposure, with the exception of the following:
 - **Fund 61:** Performance shown for Global Equity includes US and Non-US exposure.
 - **Funds 1, 29, and 119:** Performance shown for Global Fixed Income includes US and Non-US exposure.
 - **Funds 4, 42, and 64:** Performance shown for US Fixed Income includes US and Non-US 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 given period.

Sharpe Ratio - Represents the excess rate of return over the risk-free return (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return to the risk free asset. 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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