# **Public Fund Universe Analysis**

Mendocino County Employees' Retirement Association

Period Ending December 31, 2017 Fund Number: 49

RVK

# **Firm Overview**



# **OVERVIEW**

RVK, Inc. ("RVK") was founded in 1985 and is one of the largest independent and employeeowned 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
- \$900+ billion Full-Retainer AUA
- **90+** Investment Professionals
- 60+ 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

# 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

- Manager Structure Analysis
- Risk Monitoring and Management
- Client Education
- Special Projects
- 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:

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ww.RVKInc.com 503-221-4200 Portland

New York Chicag

## Fund Number: 49 Participants

Alameda County Employees' Retirement Association Arlington County Employees' Retirement System Chicago Teachers' Pension Fund City of Fresno Retirement Systems City of Plano Other Post-Employment Benefits Trust Civilian Employees' Retirement System of the Police Department of Kansas City, Missouri Confederated Tribes of the Warm Springs Tribal Council Pension Fund County Employees' Annuity & Benefit Fund of Cook County **Employees Retirement System of Texas** Fire and Police Pension Association of Colorado Fort Worth Employees' Retirement Fund Georgia Division of Investment Services Illinois Municipal Retirement Fund Iowa Public Employees' Retirement System Kansas Public Employees' Retirement System Kern County Employees' Retirement Association Los Angeles County Employees Retirement Association Los Angeles Water & Power Employees Retirement Plan Maryland State Retirement and Pension System Merced County Employees' Retirement Association Montana Teachers' Retirement System Municipality of Anchorage Pre-Funding Program New York State Common Retirement Fund North Carolina 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

Anchorage Police & Fire Retirement System California State Teachers' Retirement System City of Austin Employees' Retirement System City of Milwaukee Employes' Retirement System City of Plano Retirement Security Plan Colorado Public Employees' Retirement Association

Contra Costa County Employees' Retirement Association District of Columbia Retirement Board Fire & Police Employees' Retirement System of Baltimore Florida State Board of Administration Fresno County Employees' Retirement Association Gila River Indian Community Retirement Plan Imperial County Employees' Retirement System Kansas City, Missouri Employees' Retirement System Kentucky Retirement Systems Los Angeles City Employees' Retirement System Los Angeles Fire and Police Pension System Marin County Employees' Retirement Association Mendocino County Employees' Retirement Association (49) Montana Public Employees' Retirement System Municipal Employees' Annuity and Benefit Fund of Chicago Nevada Public Employees' Retirement System Newport News Employees' Retirement Fund 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 Mateo County Employees' Retirement Association Sonoma County Employees' Retirement Association Stanislaus County Employees' Retirement Association State of New Jersey Pension Fund State Universities Retirement System of Illinois Teachers' Retirement System of the State of Illinois Texas Municipal Retirement System Tulare County Employees' Retirement Association Virginia Retirement System Wyoming Retirement System San Diego Transit Corporation Employees Retirement Santa Barbara County Employees' Retirement System South Dakota Retirement System State of Michigan Retirement Systems State Teachers Retirement System of Ohio Teachers' Retirement System of Louisiana Teachers' Retirement System of Kentucky The Navajo Nation Retirement Plan Ventura County Employees' Retirement Association West Virginia Investment Management Board



# As of December 31, 2017

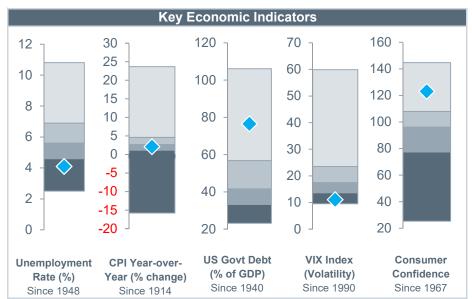
## Fourth Quarter Economic Environment

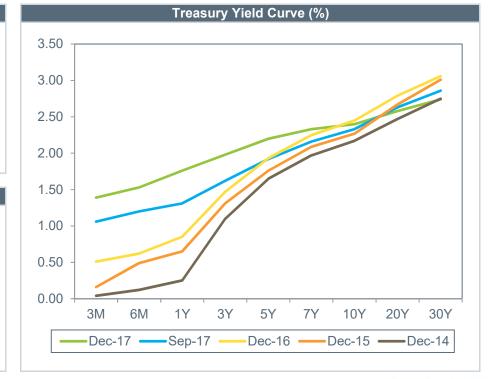
#### **Key Economic Indicators**

Price action across global financial markets continued to be driven by expectations of ongoing economic growth and generally accommodative central bank policies, with equity markets trading to record levels and global sovereign debt yields continuing to trade within recent ranges. The nominal Treasury curve continued to flatten over the quarter. Market participants suggest that recent and expected monetary policy actions, as well as expectations for increased Treasury issuance amidst fiscal stimulus policies, are driving short-maturity and mid-maturity yields higher. Comparatively, longer-dated yields proved stable, and reportedly continue to be heavily influenced by relatively modest expectations. Finally, the US dollar continued to depreciate over the quarter, weakening by 1% against major currencies amidst continued economic improvements across developed international and emerging markets. The depreciation over the quarter contributed to a total dollar depreciation of nearly 10% for the year.

Economic Indicators	Dec-17	Sep-17	Dec-16	Dec-14	20 Yr
Federal Funds Rate (%)	1.33	1.06	0.55	0.06	2.12
Breakeven Infl 1 Yr (%)	0.85	1.24	1.27	-0.21	N/A
Breakeven Infl 10 Yr (%)	1.98	1.85	1.97	1.68	N/A
CPI YoY (Headline) (%)	2.1	2.2	2.1	0.8	2.1
Unemployment Rate (%)	4.1	4.2	4.7	5.6	5.9
Real GDP YoY (%)	2.5	2.3	1.8	2.7	2.3
PMI - Manufacturing	59.3	60.2	54.3	54.7	52.4
USD Total Wtd Idx	87.47	88.10	95.72	85.07	86.73
WTI Crude Oil per Barrel (\$)	60.4	51.7	53.7	53.3	57.5
Gold Spot per Oz (\$)	1,303	1,280	1,152	1,185	831

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	6.64	21.83	21.83	15.79	8.50
Russell 2000	3.34	14.65	14.65	14.12	8.71
MSCI EAFE (Net)	4.23	25.03	25.03	7.90	1.94
MSCI EAFE SC (Net)	6.05	33.01	33.01	12.85	5.77
MSCI Emg Mkts (Net)	7.44	37.28	37.28	4.35	1.68
Bloomberg US Agg Bond	0.39	3.54	3.54	2.10	4.01
BofA ML 3 Mo US T-Bill	0.28	0.86	0.86	0.27	0.39
NCREIF ODCE (Gross)	2.07	7.62	7.62	11.53	5.03
Wilshire US REIT	1.70	4.18	4.18	9.35	7.28
HFRI FOF Comp	2.07	7.77	7.77	4.00	1.08
Bloomberg Cmdty (TR)	4.71	1.70	1.70	-8.45	-6.83





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.



# **US Equity Review**

# As of December 31, 2017

Fourth Quarter Review

# **Broad Market**

A small subset of companies particularly dominated broad market returns in 2017, with FAANG (Facebook, Amazon, Apple, Netflix, and Google), averaging returns of nearly 50% during 2017. As a result, many active managers with light or absent exposure to this lineup of companies experienced difficulty in keeping pace with their respective benchmarks.

# Market Cap

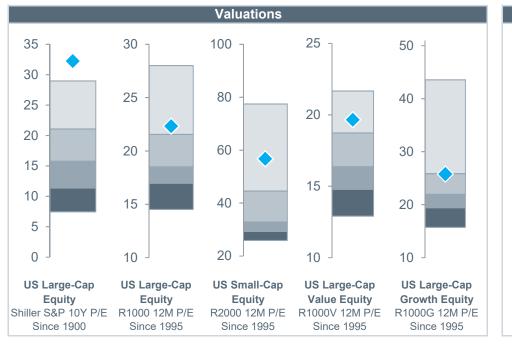
Large cap stocks outpaced small cap stocks for the quarter, with the Russell 1000 outperforming the Russell 2000 by 325 basis points.

# **Style and Sector**

Growth stocks led value stocks for the quarter, and the Russell 1000 Growth Index outperformed its value counterpart by 16.6% for the year. Consumer discretionary and tech stocks posted quarterly returns upwards of 9%, with tech stocks posting a 2017 return of nearly 39%.

Style and Capitalization Market Performance (%)





# S&P 500 Index Sector 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.



# **Non-US Equity Review**

# As of December 31, 2017

Fourth Quarter Review

# **Developed Markets**

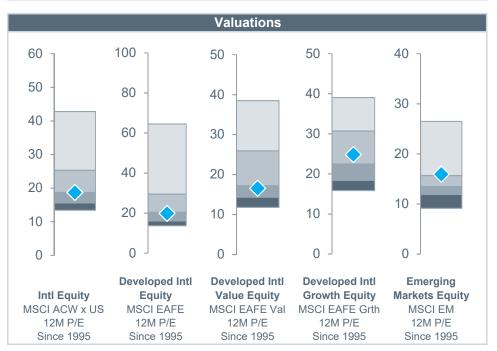
Developed international markets had a strong quarter, though they lagged the US market. However, they outpaced the domestic market for 2017. In 2017, the EAFE Index returned 25.03% vs. 21.13% for the Russell 3000 Index.

# **Emerging Markets**

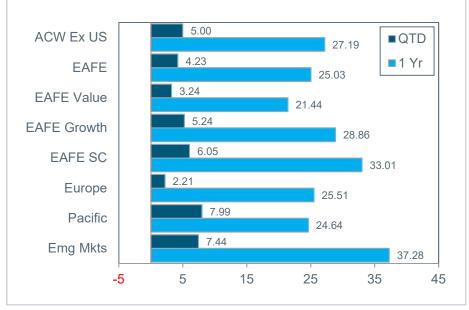
Emerging markets outperformed domestic and developed international markets for both the quarter and year, with the Emerging Markets Index outpacing the EAFE Index by 321 basis points for the quarter, and 1225 basis points for the year.

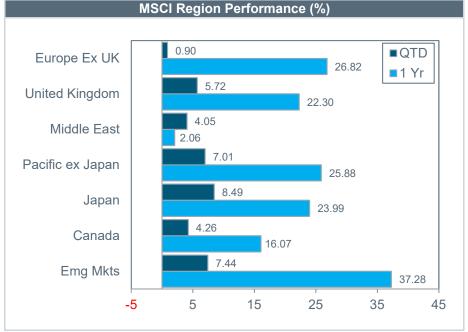
# Market Cap & Style

The outperformance of value stocks last year did not persist, with growth stocks solidly outperforming for the quarter and year. Small cap also outperformed large cap for both Q4 and 2017.



MSCI Style and Capitalization Market Performance (%)





# KVK

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.

# **Fixed Income Review**

#### Fourth Quarter Review

## **Broad Market**

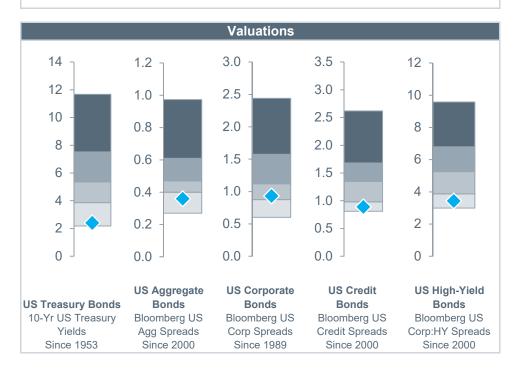
The flattening yield curve during the quarter and year detracted from the performance of short duration bonds, while contributing to the performance of long duration bonds. A flatter yield curve has caused some tactical investors and portfolio managers to shorten the duration of their portfolios as the perceived relative value of shorter-dated securities has increased.

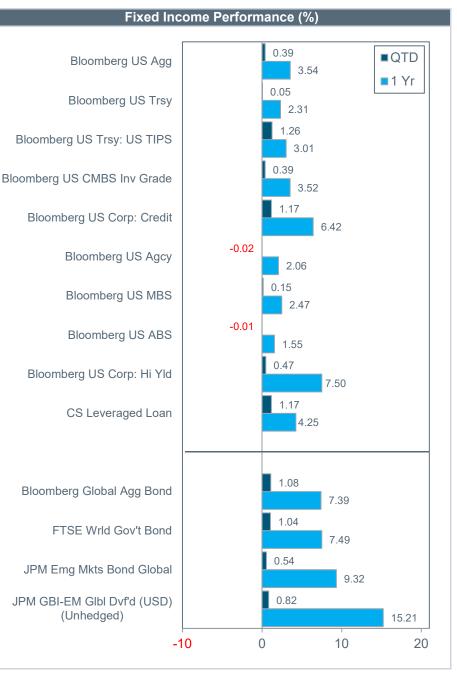
# **Credit Market**

Investment grade and high yield credit spreads started the year below longterm averages and continued to grind tighter.

# **Emerging Market Debt**

Non-US dollar denominated emerging market debt was the best performing sub-asset class within fixed income over the course of 2017, returning 15.21%. Important drivers of this performance included the improving fundamentals and stabilizing political environments experienced by many countries during the year.





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Valuation data courtesy of Bloomberg Professional Service.

Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.

# Fourth Quarter Review - Absolute Return

# **General Market - Hedge Funds**

Hedge funds largely provided positive performance, as most fundamentally oriented managers benefited from low inter-stock correlation and a positive return environment across most underlying global risk assets. Multi-Strategy manager returns were generally positive during the quarter, but suffered in November due to corporate merger scrutiny by the DoJ. The best performing broad hedge fund category for the year has been traditional Equity Long-Short (ELS).

# **General Market - Global Tactical Asset Allocation (GTAA)**

GTAA managers provided strong performance in Q4 to finish an already successful 2017. Global equity and global fixed income markets were broadly supportive during the quarter, providing a welcome backdrop for most multi-asset strategies. Although GTAA managers performed well in absolute terms, most modestly underperformed relatively to a static, undiversified blend of US 60/40. The modest underperformance of tactical managers relative to this static benchmark was generally pronounced for managers who adhere to value-oriented investment processes.

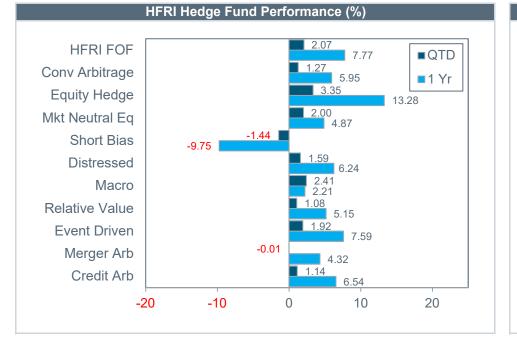


# **General Market - Diversified Inflation Strategies (DIS)**

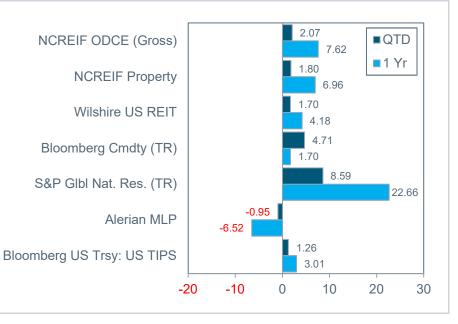
Performance for Diversified Inflation Strategies ("DIS") in Q4 ranged widely, with managers providing positive performance in a quarter where market-based measures of future expected inflation increased. Market expectations increased from 1.85% to 1.98% based on the 10 year Treasury break-evens.

# **General Market - Real Estate**

Real estate valuations remain healthy, supported by continuing strength in the overall economy. The core private real estate index, NCREIF-ODCE returned 2.1% during Q4, comprised of 1.1% income and 1.0% appreciation. Market participants characterized this as another quarter of normalizing returns reinforcing investor expectations of lower returns going forward as the market enters the later stages of the recovery. Investors in publicly traded real estate outperformed their private market counterparts during the quarter as measured by FTSE/NAREIT All REIT's index return of 2.4%.



# Real Asset Performance (%)





	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Best	61.34	33.16	34.00	35.97	39.38	8.44	78.51	28.60	22.49	20.00	38.82	2 31.78	15.02	21.31	37.28
Î	55.81	31.45	26.19	32.18	16.23	5.24	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01
	47.25	25.55	21.39	26.34	15.97	2.06	46.78	22.04	13.56	17.59	29.30	13.69	4.23	11.96	25.03
	38.59	20.25	21.36	19.31	11.63	-2.35	31.78	18.88	9.24	17.32	22.78	12.50	1.38	11.77	21.83
	36.18	18.33	13.82	18.37	11.17	-10.01	28.60	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65
	28.96	13.06	13.54	16.32	10.25	-21.37	27.17	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71
	28.68	11.14	7.49	15.79	6.97	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	7.24	7.77
	23.93	10.88	5.34	11.86	6.60	-33.79	18.91	15.06	0.10	10.94	1.86	3.37	-0.81	6.67	7.62
	11.61	9.15	4.91	10.39	5.49	-35.65	11.47	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50
	9.28	8.56	4.55	4.85	5.00	-37.00	11.41	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	4.18
	8.39	8.46	3.07	4.34	1.87	-39.20	5.93	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54
	5.88	6.86	2.84	2.72	1.45	-43.38	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01
	4.11	4.34	2.74	2.07	-1.57	-47.01	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	2 0.51	1.70
Worst	1.15	1.33	2.43	0.49	-17.55	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86
S&P 500 US Larg Cap		mall (Net)		ISCI EAFE SC (Net) - Int'l SC	MSCI EM (Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - Fl	Bloombrg US Corp: Hi Yield - Fl	Bloombrg US Trsy: US TIPS - FI	US Gov/Cre	OD	CE ss) -	Wilshire IS REIT - REITs	HFRI FOF Comp Index - ARS	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv

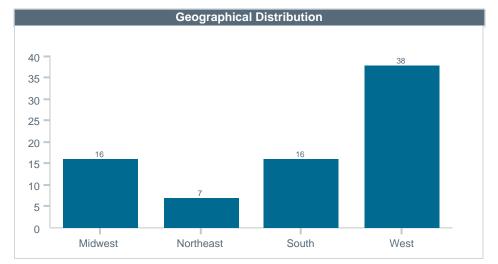
NCREIF ODCE (Gross) performance is reported quarterly; performance is shown N/A in interim-quarter months.

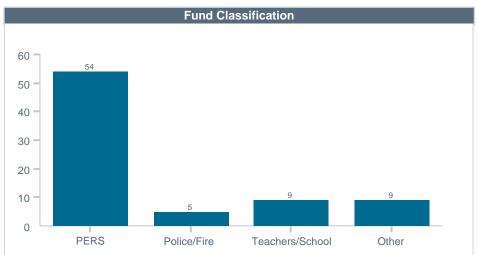


# As of December 31, 2017

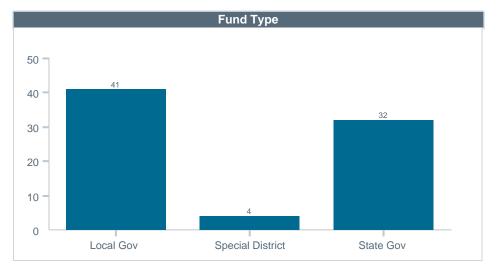
# Fund Number: 49 Universe Characteristics







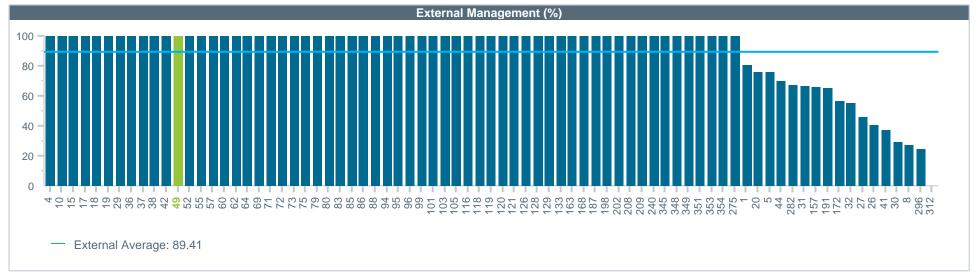
Universe: 77 funds

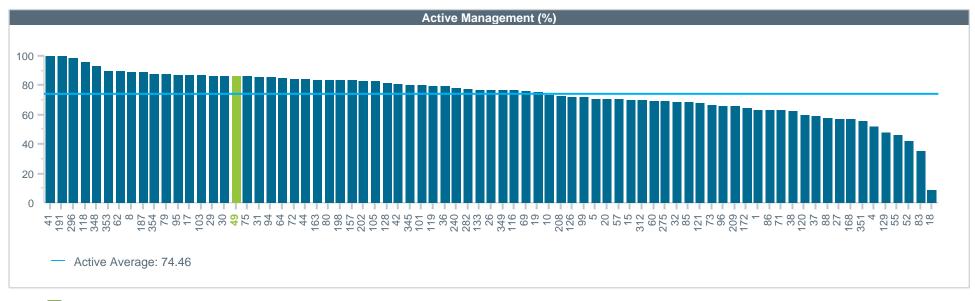




# **Portfolio Management**

Percentage Externally Managed & Percentage Actively Managed





Mendocino County ERA



# Fund Number: 49 Portfolio Management Statistics

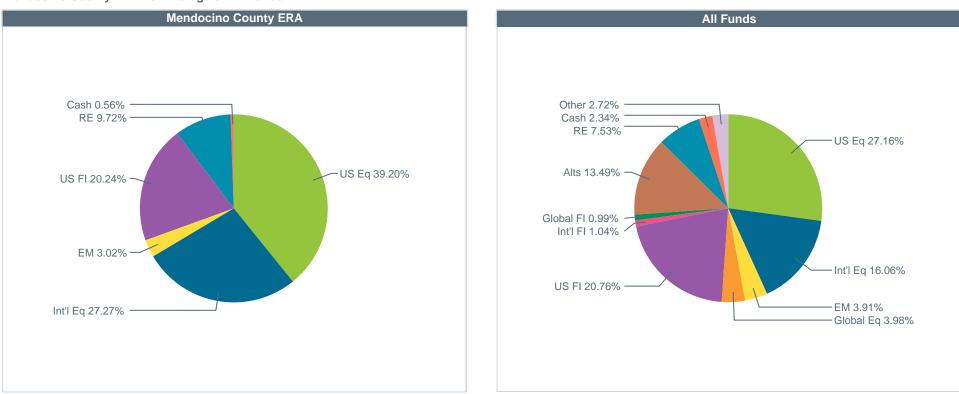
	Actively Managed (%)	Passively Managed (%)	Externally Managed (%)	Internally Managed (%)
Asset Range				
Over \$20B	74.84	25.16	74.18	25.82
\$10B-\$20B	71.94	28.06	84.98	15.02
\$5B-\$10B	72.84	27.16	97.83	2.17
\$1B-\$5B	74.14	25.86	98.51	1.49
\$500mm-\$1B	73.93	26.07	99.98	0.02
Under \$500mm	81.44	18.56	100.00	0.00
Mendocino County ERA	86.24	13.76	100.00	0.00

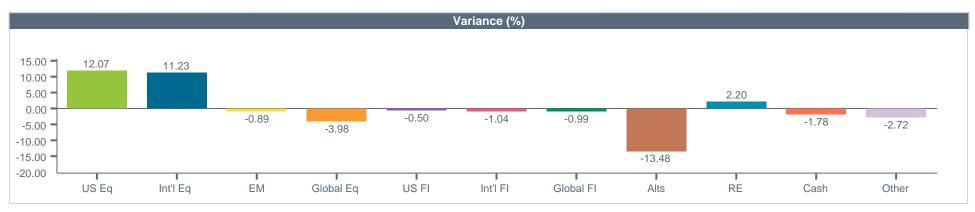
	Active Ma	nagement	External Ma	anagement
Portfolio (%)	Public Fund Universe	Mendocino County ERA	Public Fund Universe	Mendocino County ERA
90 to 100	6	0	60	1
50 to 89	66	1	10	0
10 to 49	4	0	6	0
Less than 10	1	0	1	0
Total Funds Reporting	77	1	77	1



## **Asset Allocation**

Mendocino County ERA vs. Average of All Funds

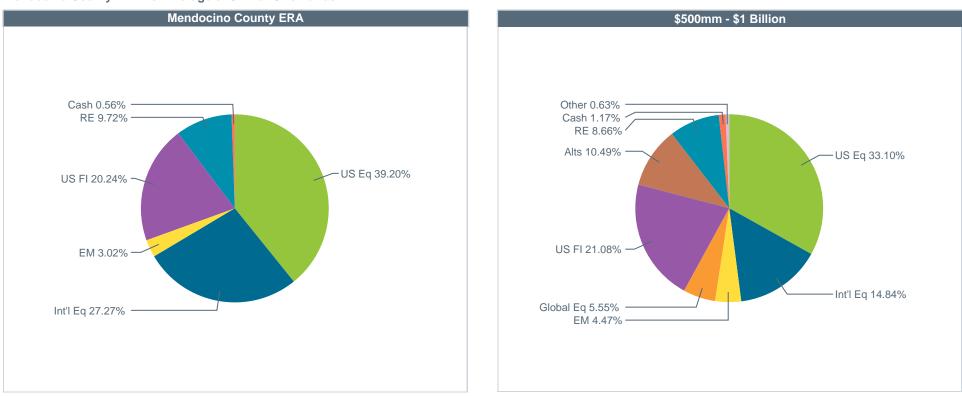


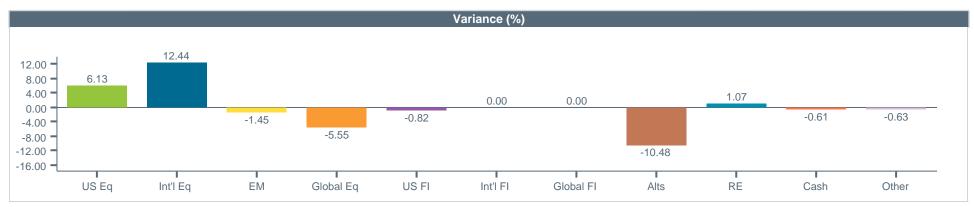




#### **Asset Allocation**

# Mendocino County ERA vs. Average of Similar Size Funds

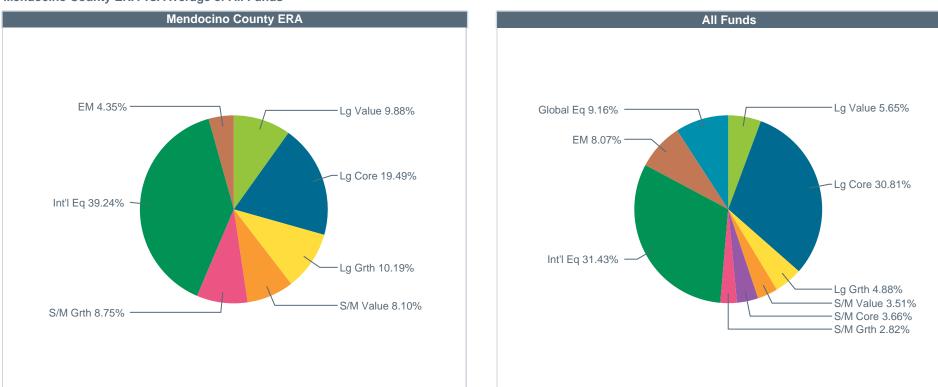


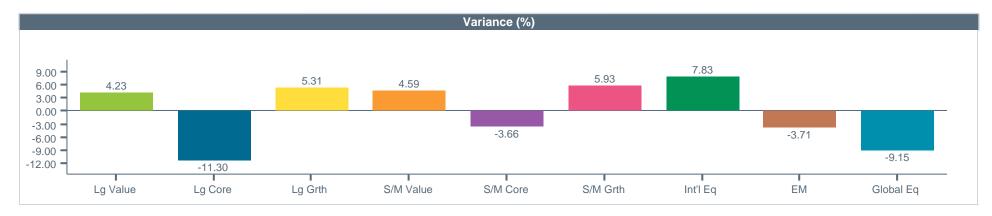




# Equity Style Allocation

Mendocino County ERA vs. Average of All Funds

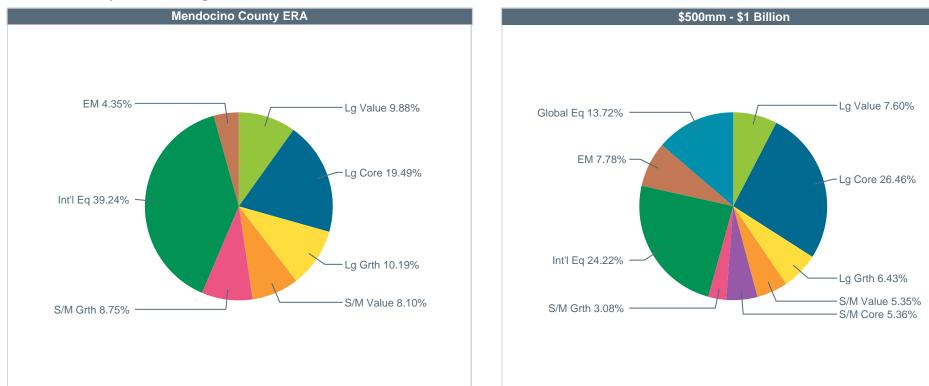


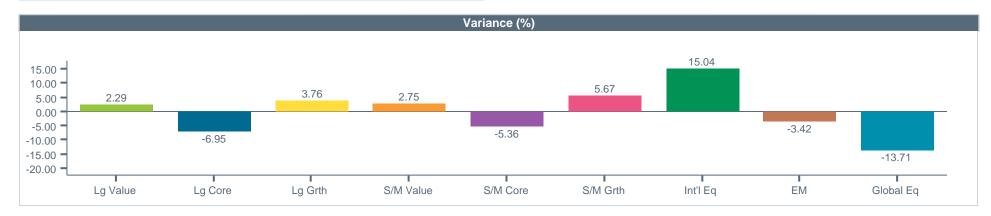




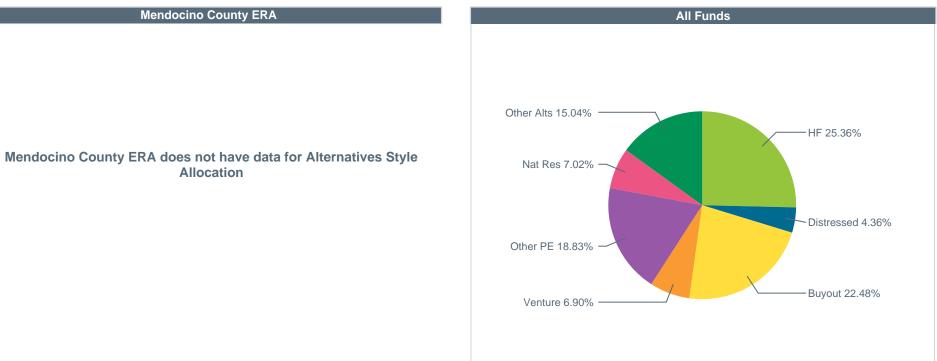
#### **Equity Style Allocation**

# Mendocino County ERA vs. Average of Similar Size Funds







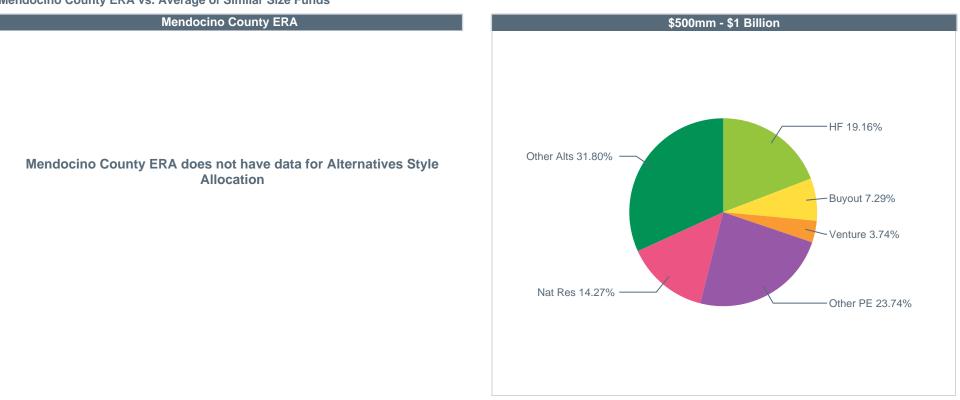


Variance (%)

# Mendocino County ERA does not have data for Alternatives Style Allocation



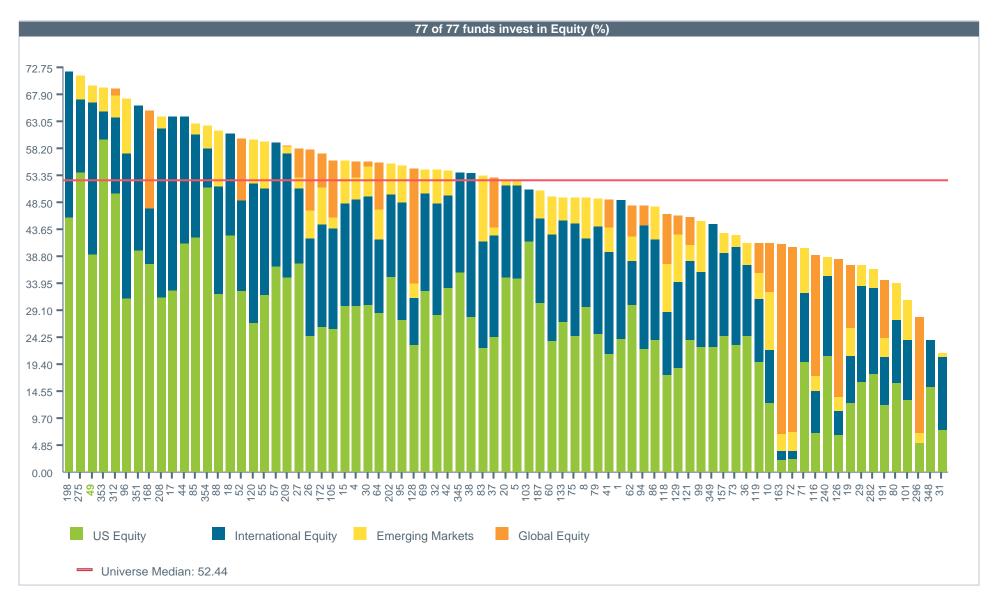
Alternatives Style Allocation Mendocino County ERA vs. Average of Similar Size Funds



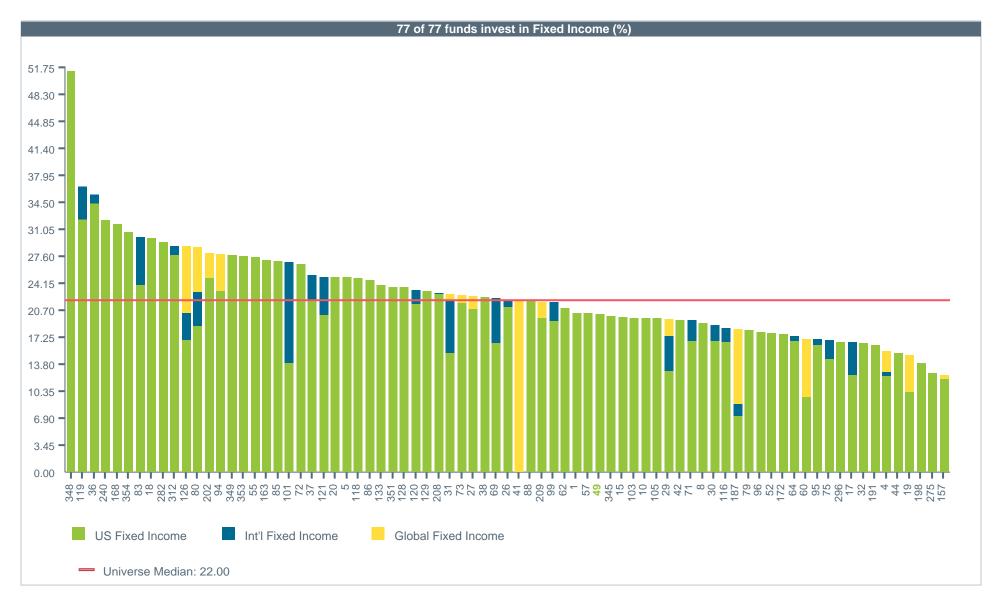
Variance (%)

# Mendocino County ERA does not have data for Alternatives Style Allocation

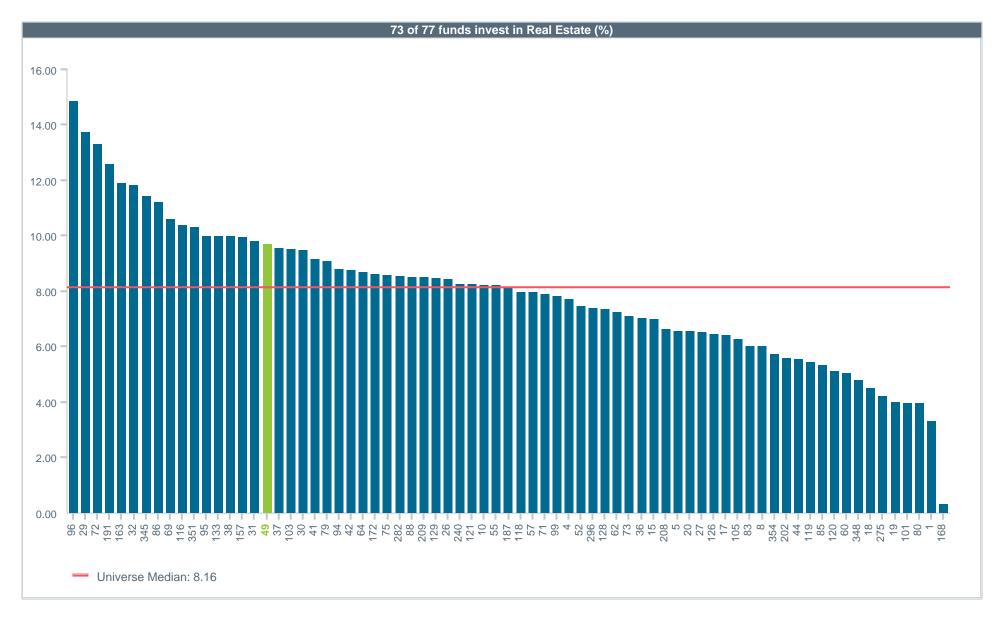




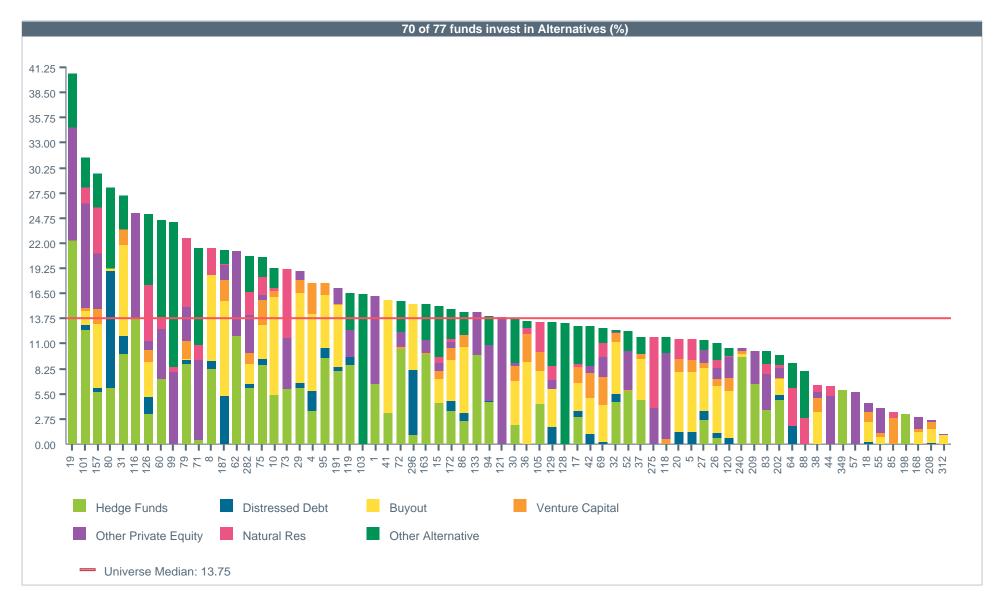






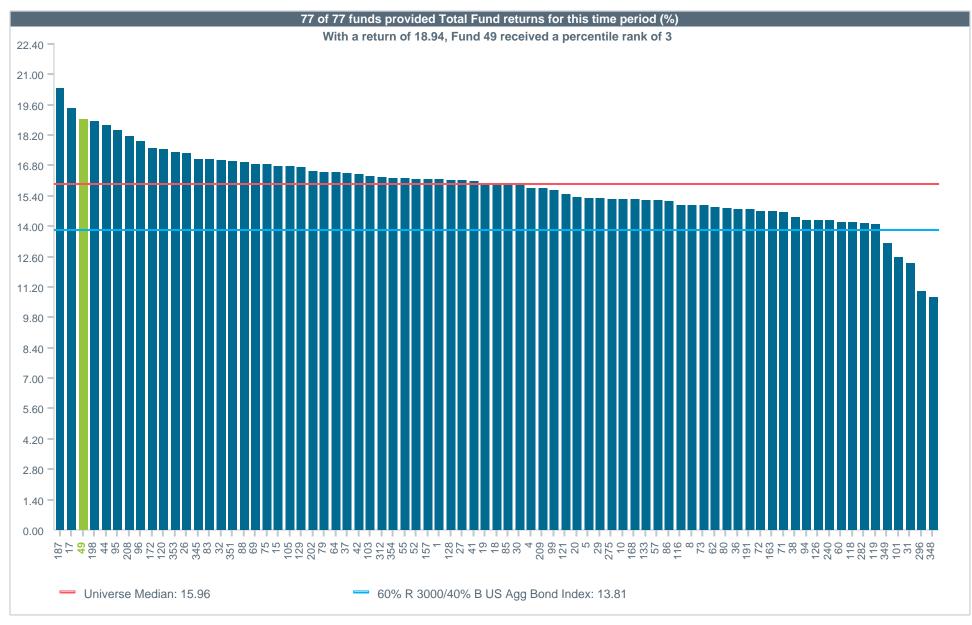






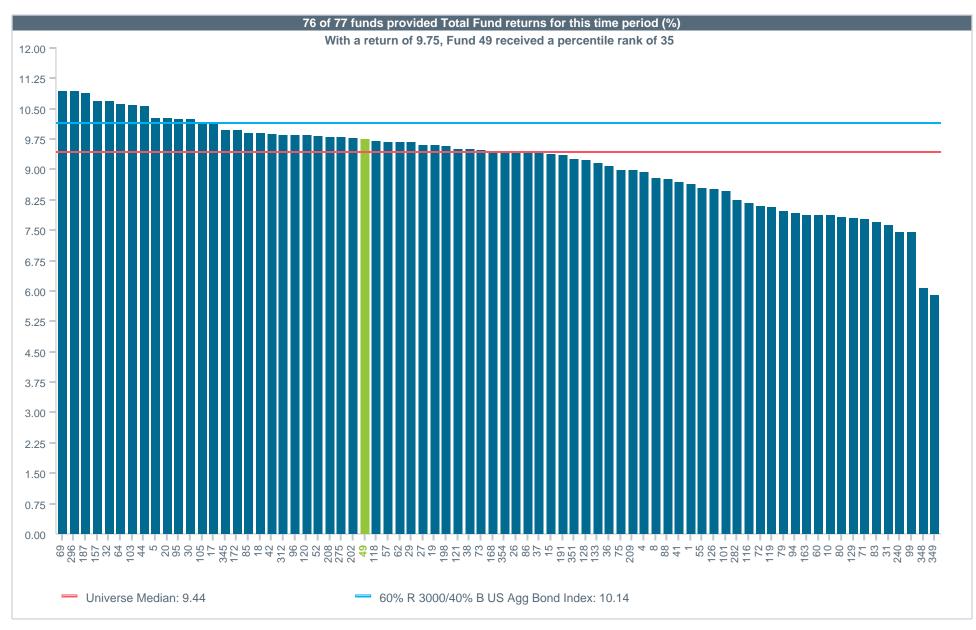


1 Year Annualized Total Fund Returns





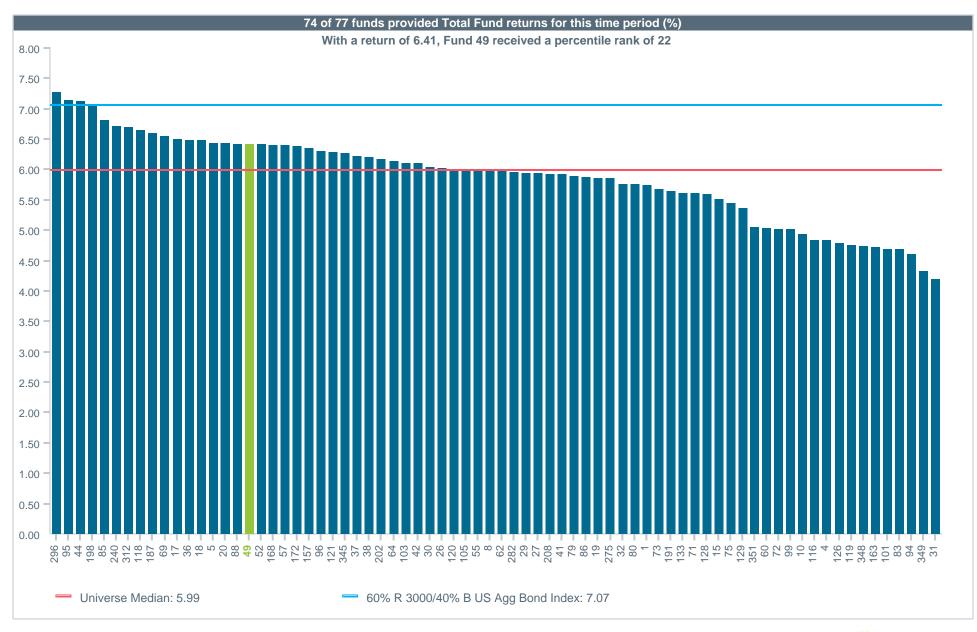
# Fund Number: 49 5 Year Annualized Total Fund Returns





# Fund Number: 49 10 Year Annualized Total Fund Returns

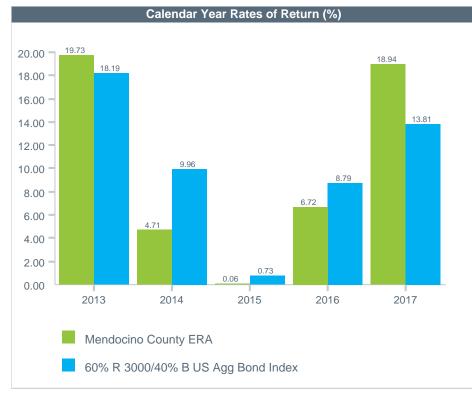
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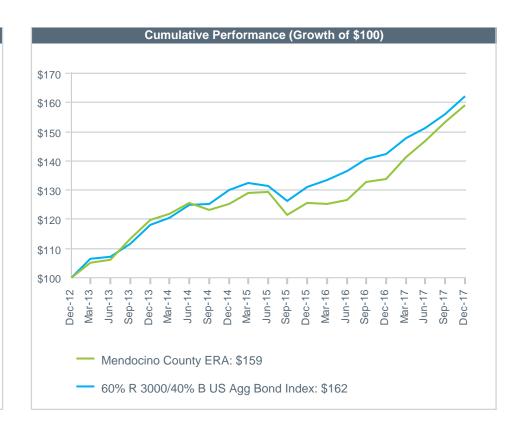


# As of December 31, 2017

**Total Return - Total Fund** 

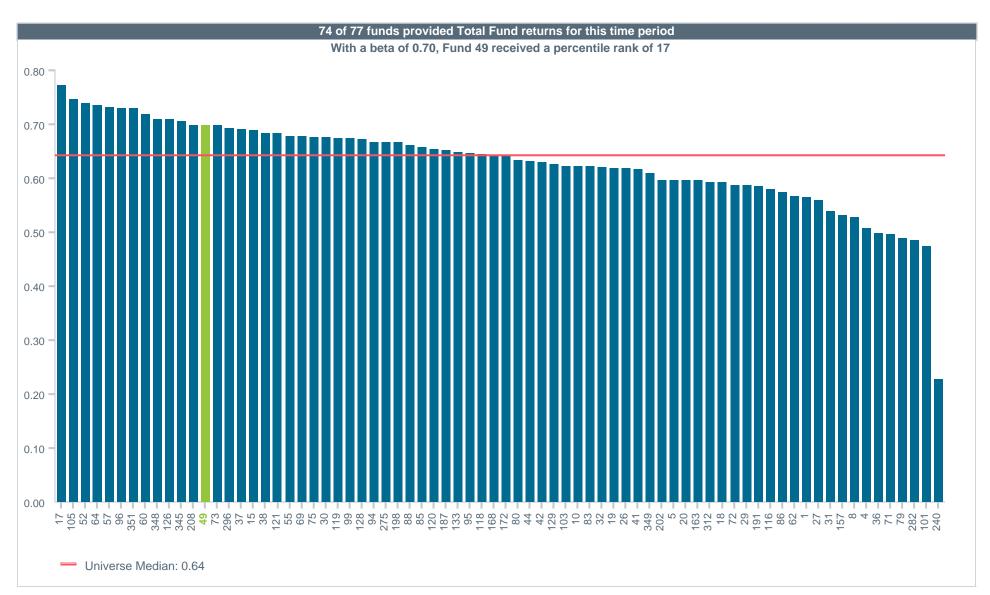
# Mendocino County ERA vs. 60% R 3000/40% B US Agg Bond Index





		Annualized Retur	ns (%)
	1 Year	3 Years	5 Years
Mendocino County ERA	18.94	8.29	9.75
60% R 3000/40% B US Agg Bond Index	13.81	7.64	10.14
Variance	5.13	0.65	-0.39

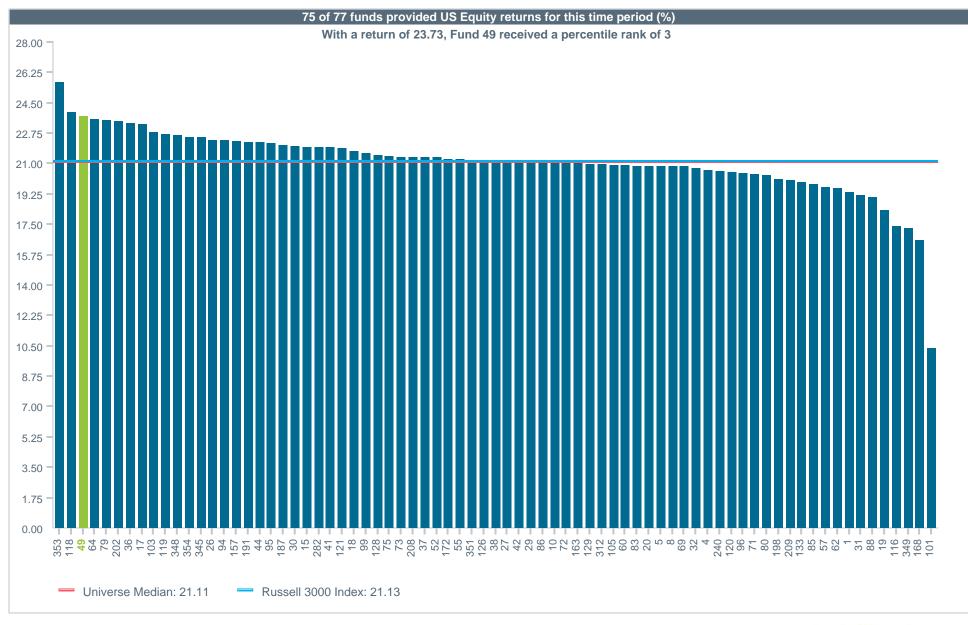




Funds with less history than the specified time period will not appear in the chart. Benchmark used is the S&P 500 Index (Cap Wtd).

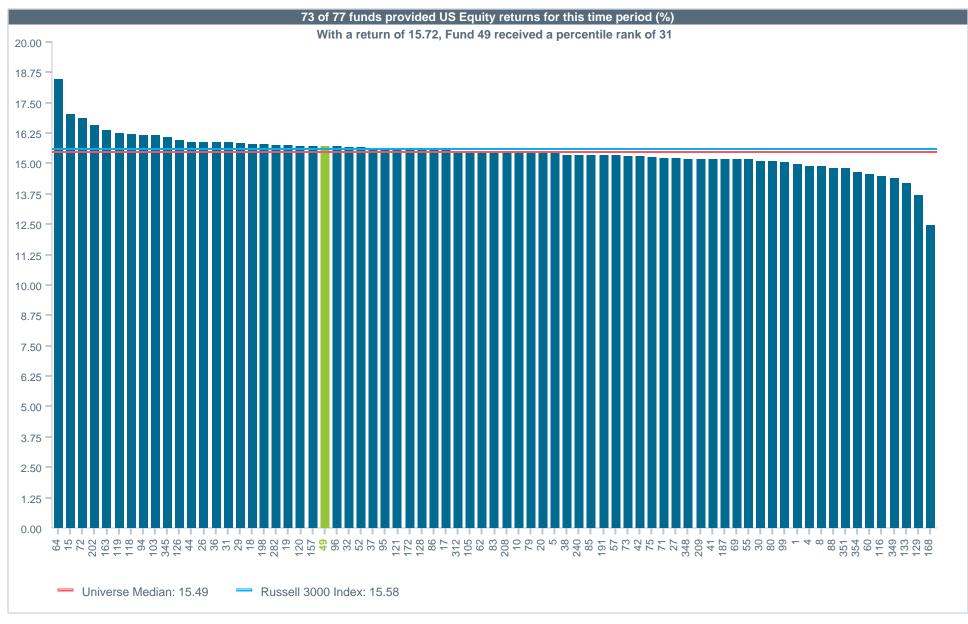


# Fund Number: 49 1 Year Annualized US Equity Returns

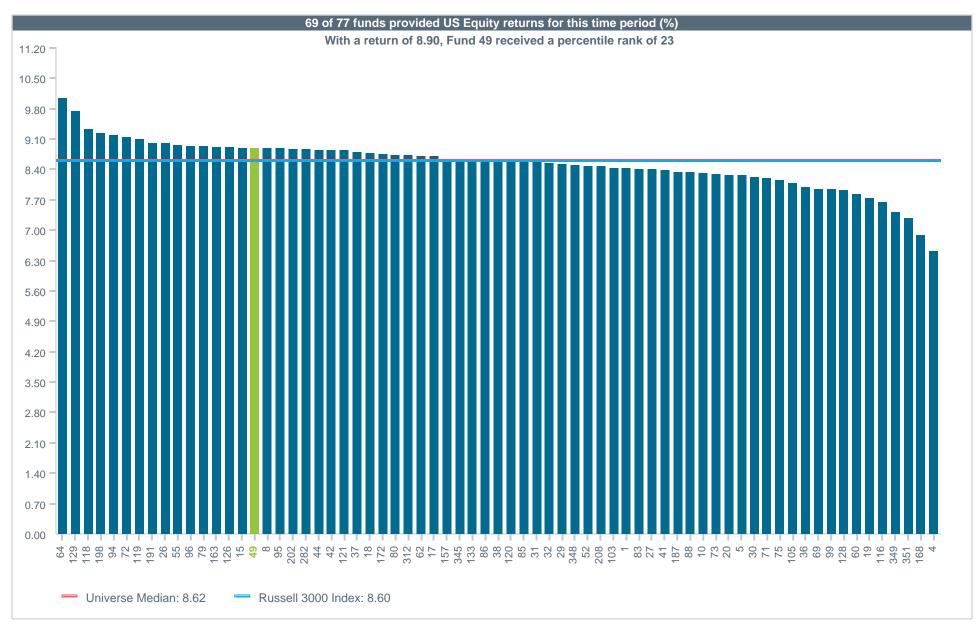




# Fund Number: 49 5 Year Annualized US Equity Returns



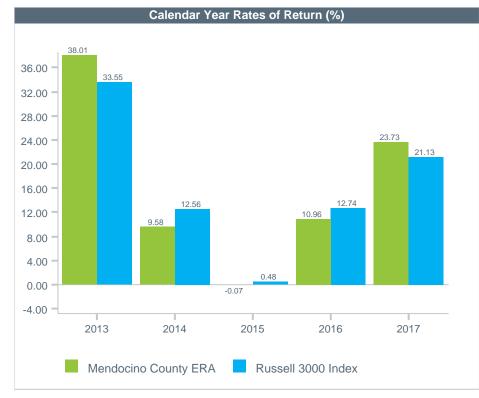


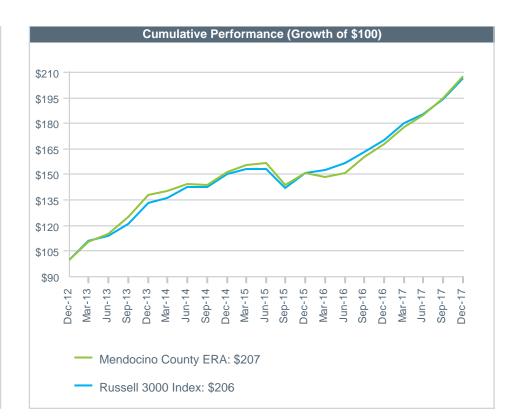




**Total Return - US Equity** 

Mendocino County ERA vs. Russell 3000 Index





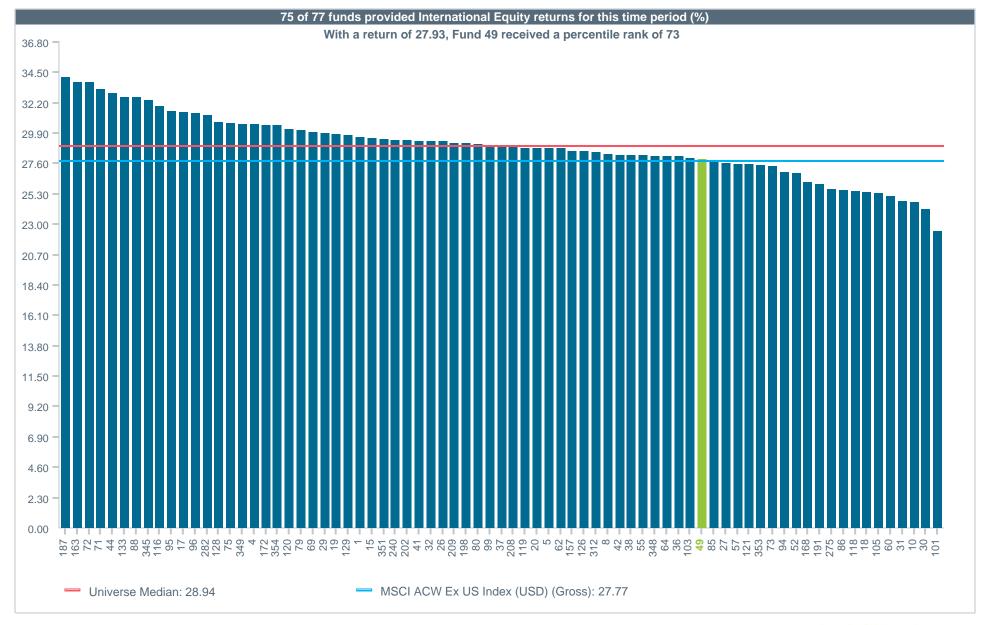
		Annualized Return	ns (%)
	1 Year	3 Years	5 Years
Mendocino County ERA	23.73	11.11	15.72
Russell 3000 Index	21.13	11.12	15.58
Variance	2.60	-0.01	0.14



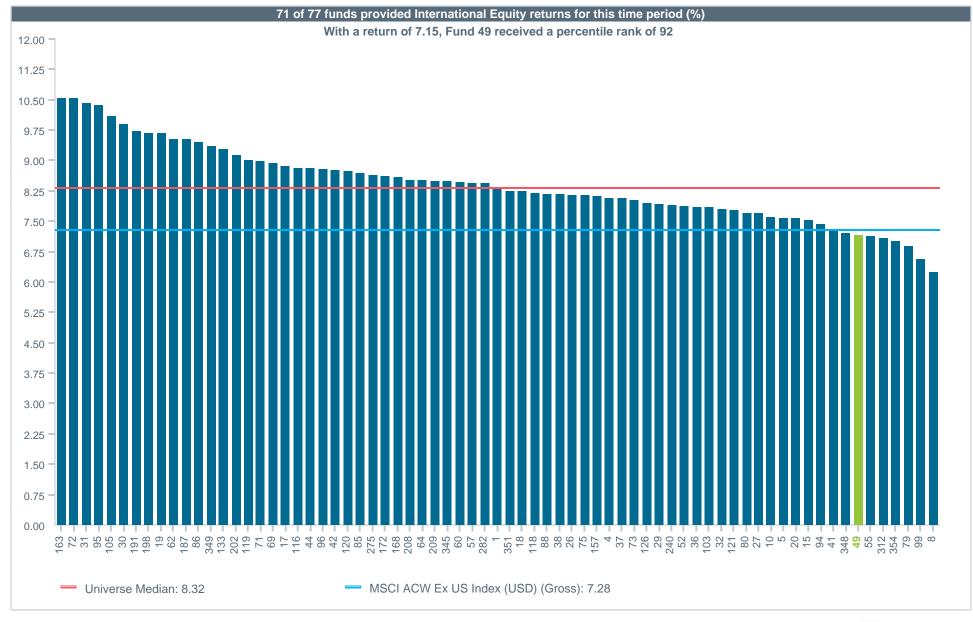
#### As of December 31, 2017

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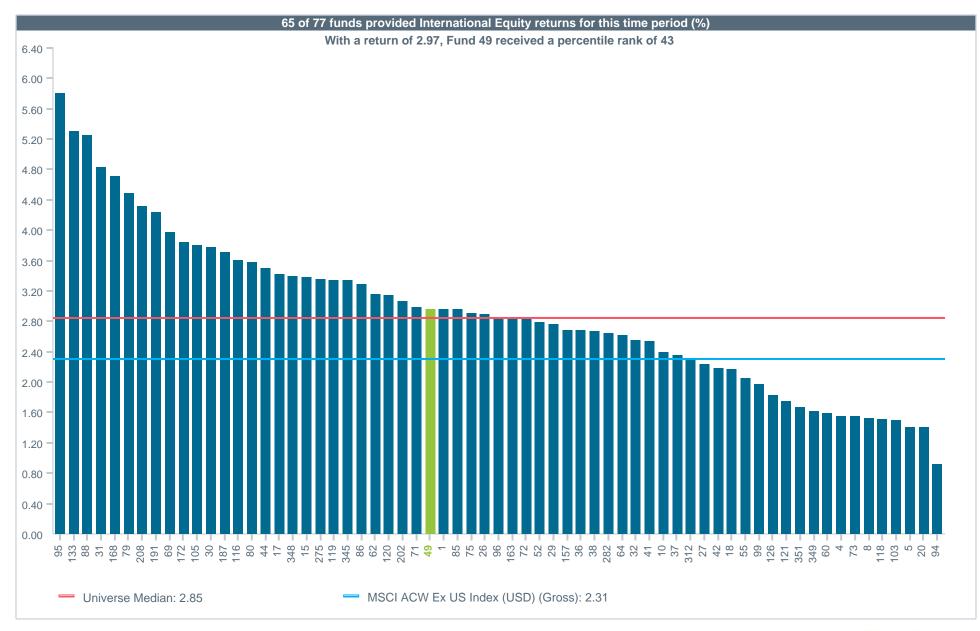
#### Fund Number: 49 1 Year Annualized International Equity Returns



## Fund Number: 49 5 Year Annualized International Equity Returns



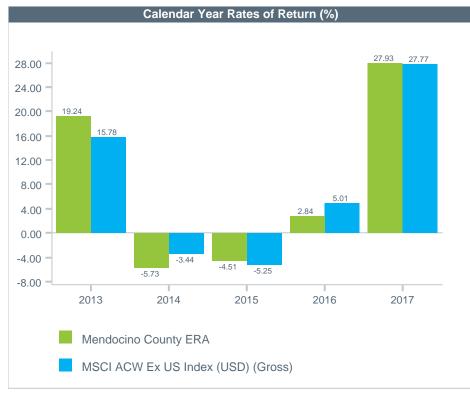


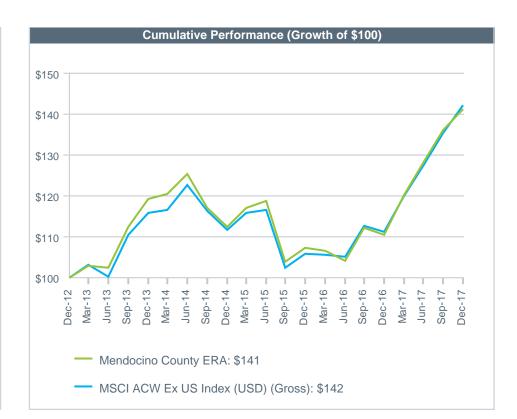




**Total Return - International Equity** 

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

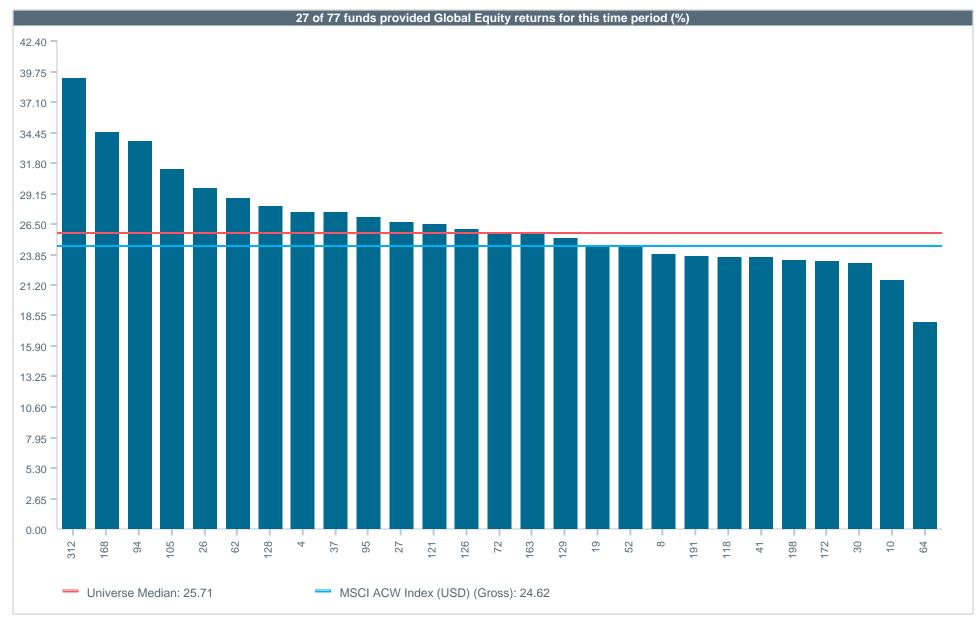




Annualized Returns (%)						
	1 Year	3 Years	5 Years			
Mendocino County ERA	27.93	7.91	7.15			
MSCI ACW Ex US Index (USD) (Gross)	27.77	8.33	7.28			
Variance	0.16	-0.42	-0.13			

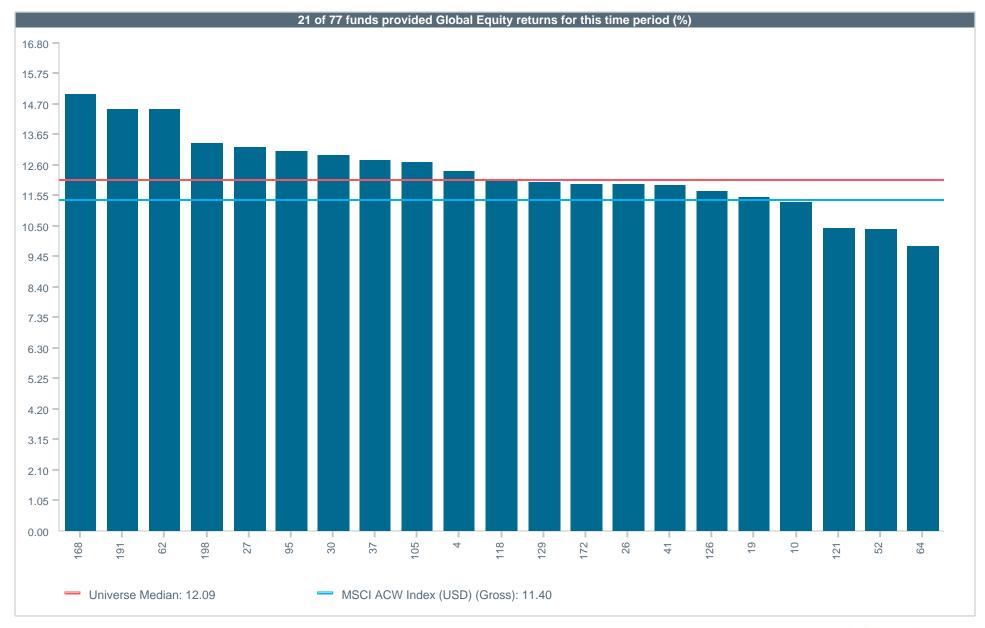


1 Year Annualized Global Equity Returns



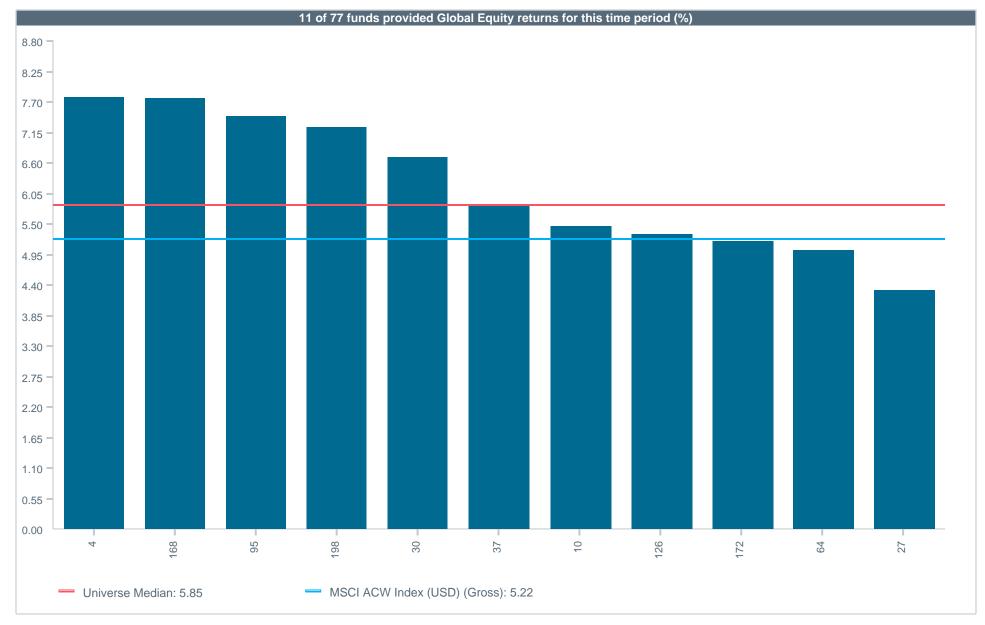


## Fund Number: 49 5 Year Annualized Global Equity Returns











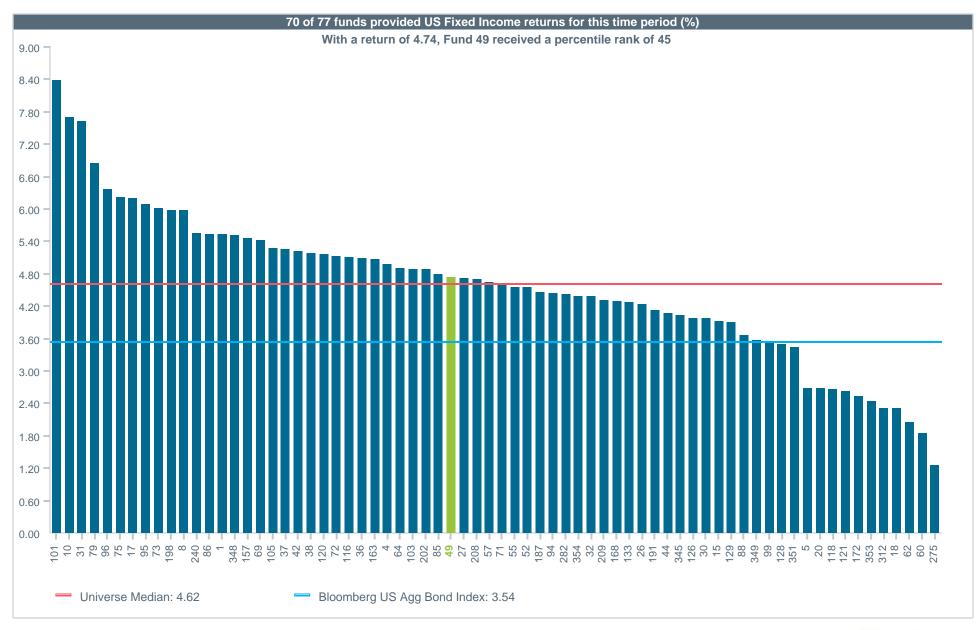
Total Return - Global Equity

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

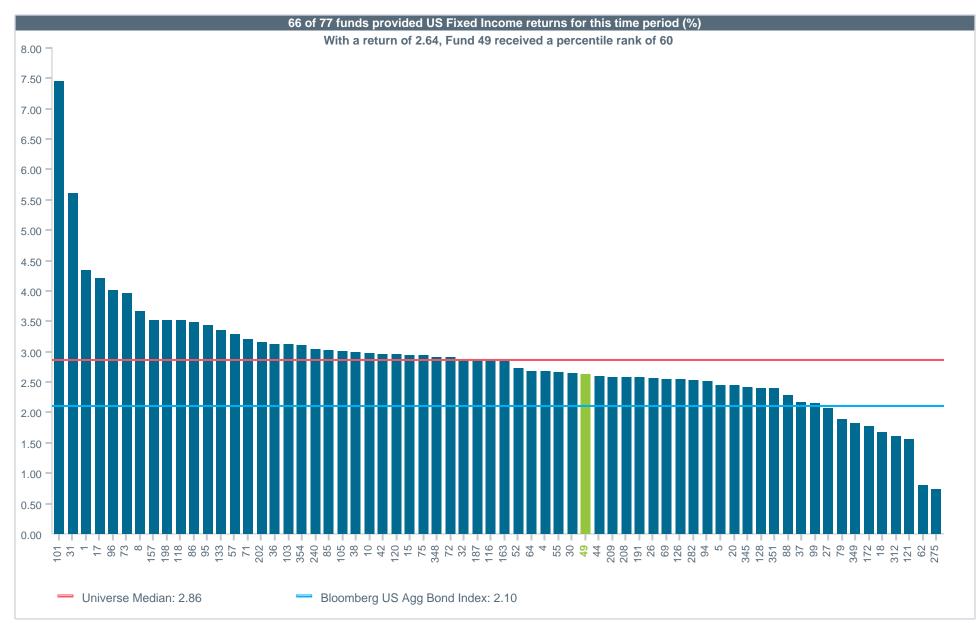
Calendar Year Rates of Return (%)	Cumulative Performance (Growth of \$100)
Mendocino County ERA does n	not have return data for Global Equity

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			

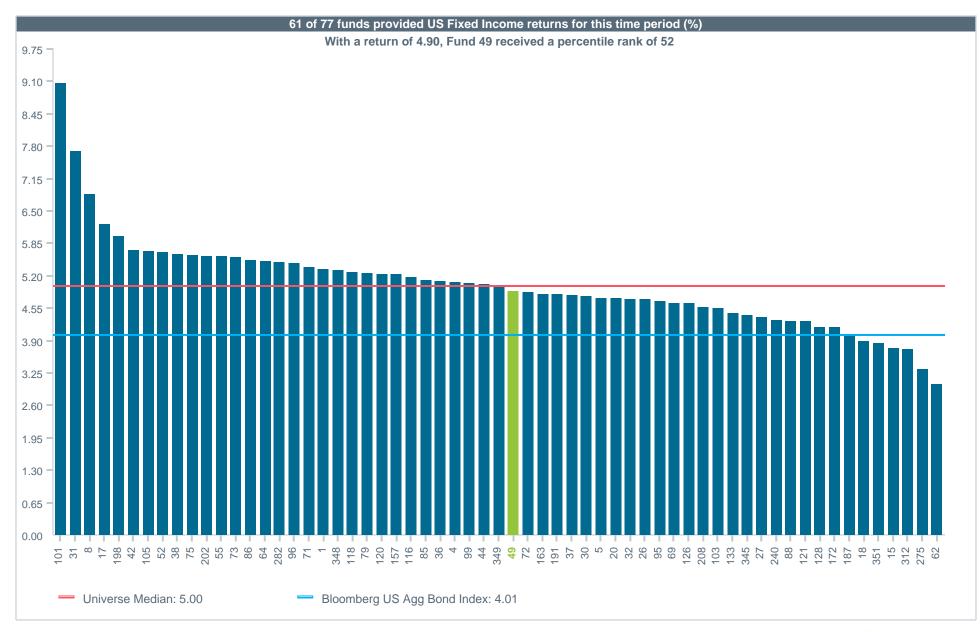








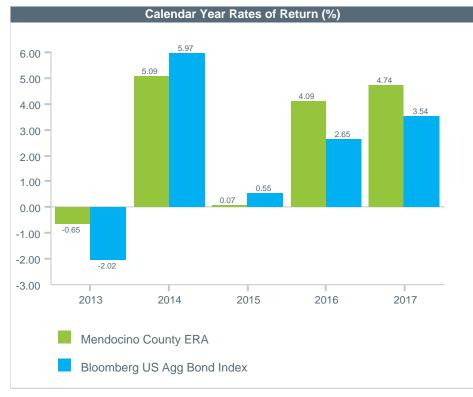






**Total Return - US Fixed Income** 

## Mendocino County ERA vs. Bloomberg US Agg Bond Index

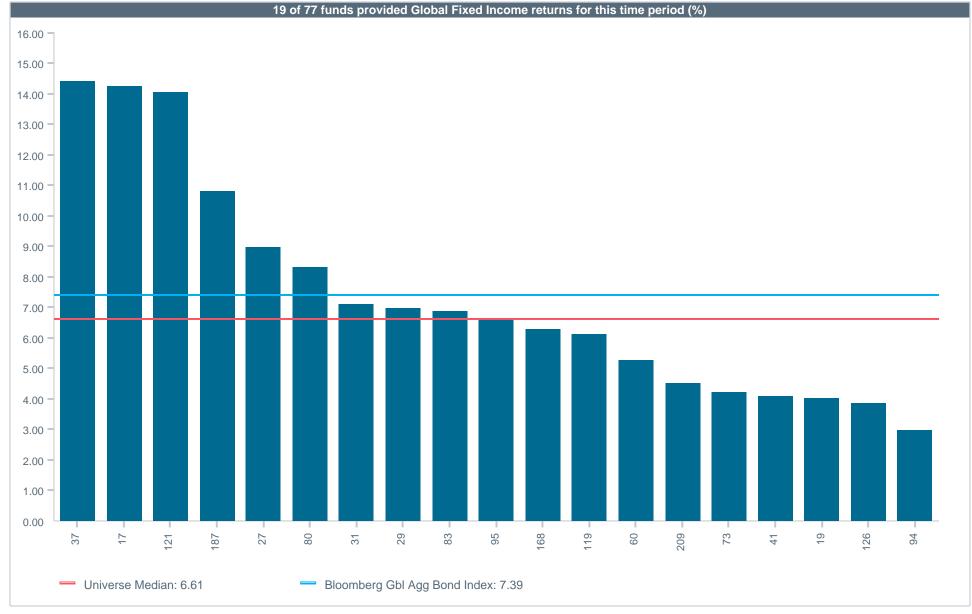




Annualized Returns (%)						
	1 Year	3 Years	5 Years			
Mendocino County ERA	4.74	2.95	2.64			
Bloomberg US Agg Bond Index	3.54	2.24	2.10			
Variance	1.20	0.71	0.54			

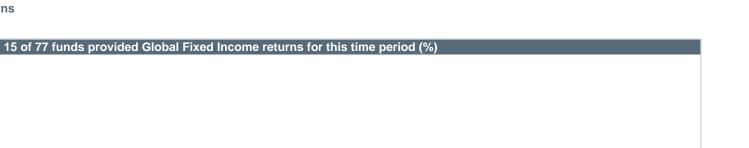


1 Year Annualized Global Fixed Income Returns





5.25 -



## 4.90 4.55 4.20 3.85 3.50 3.15 2.80 2.45 2.10 1.75 1.40 1.05 0.70 0.35 0.00 119 -95 126 80 73 187 94 19 29 60 17 31 41 83 121

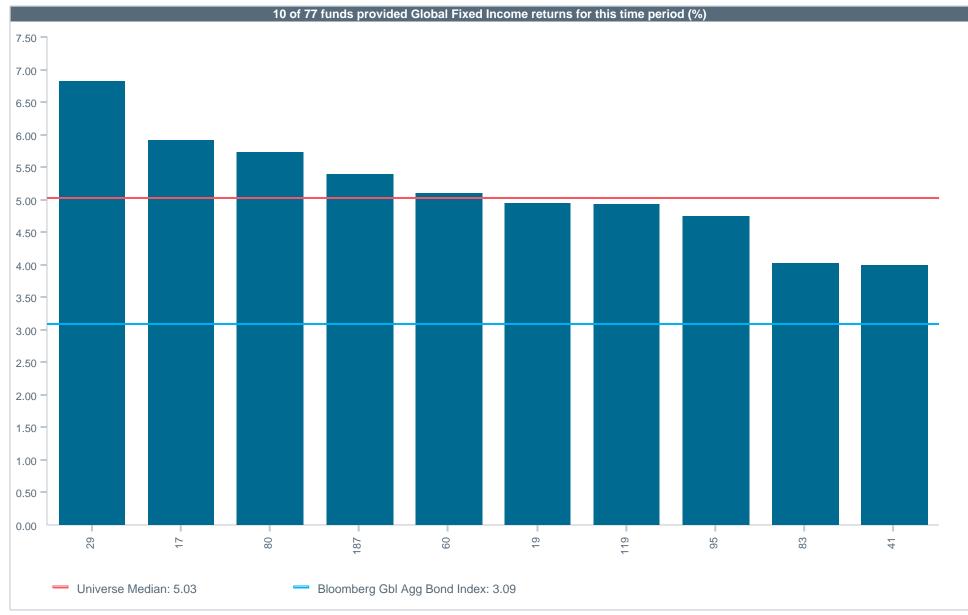
Bloomberg Gbl Agg Bond Index: 0.79

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

Universe Median: 2.48



## Fund Number: 49 10 Year Annualized Global Fixed Income Returns





**Total Return - Global Fixed Income** 

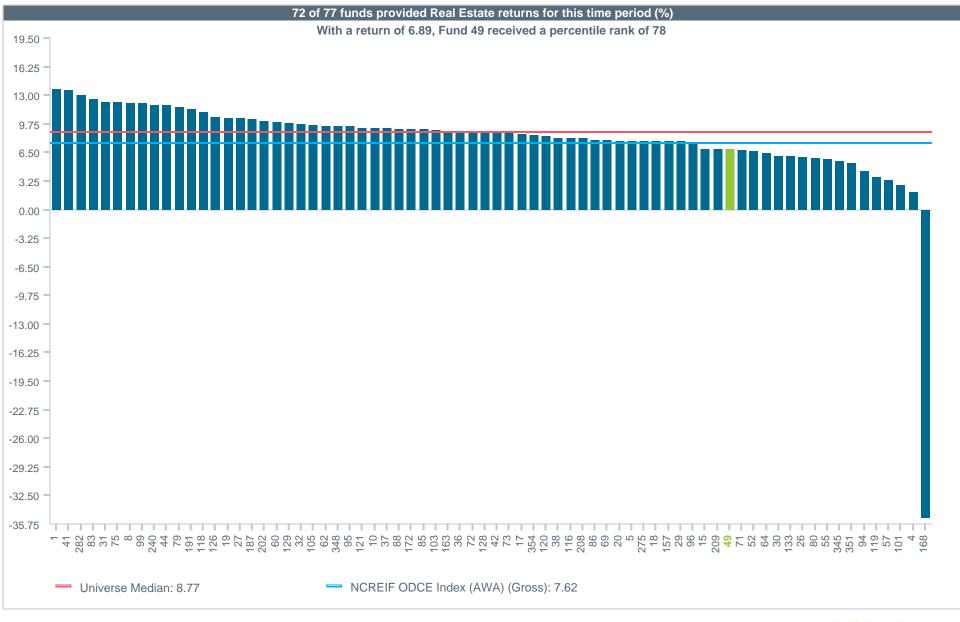
Mendocino County ERA vs. Bloomberg Gbl Agg Bond Index

Mendocino County ERA does not have return data for Global Fixed Income	Calendar Year Rate	s of Return (%)		Cumulative Performance (Growth of \$100)
Mendocino County ERA does not have return data for Global Fixed Income				
Mendocino County ERA does not have return data for Global Fixed Income				
Mendocino County ERA does not have return data for Global Fixed Income				
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Mendocino County ERA does not have return data for Global Fixed Income				
Mendocino County ERA does not have return data for Global Fixed Income				
Mendocino county LKA does not have return data for clobal rixed income		Mendocino County ERA does not	have	return data for Global Fixed Income
		Mendocino County ENA does not	Ilave	

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			

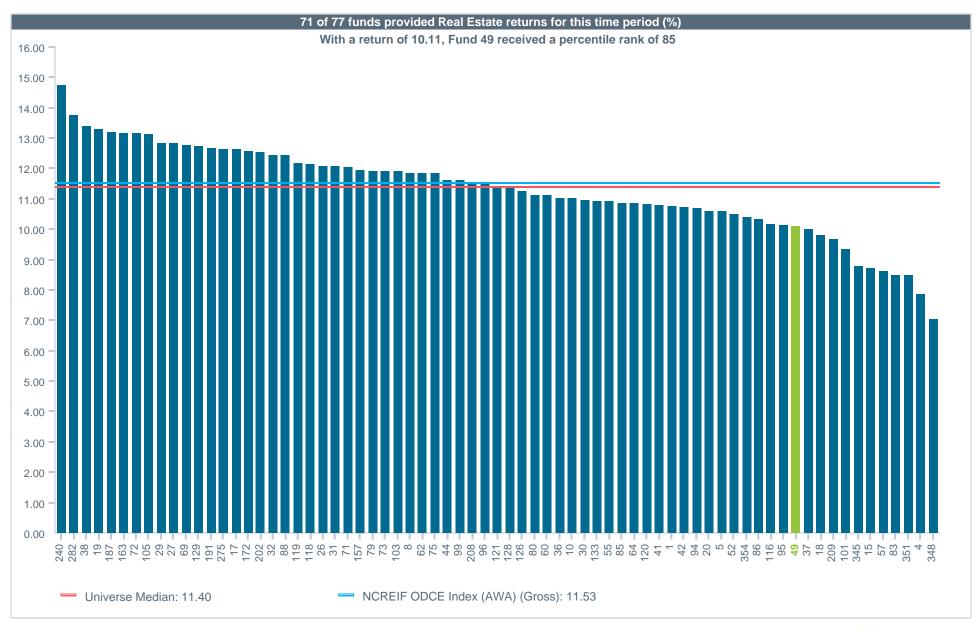


## Fund Number: 49 1 Year Annualized Real Estate Returns

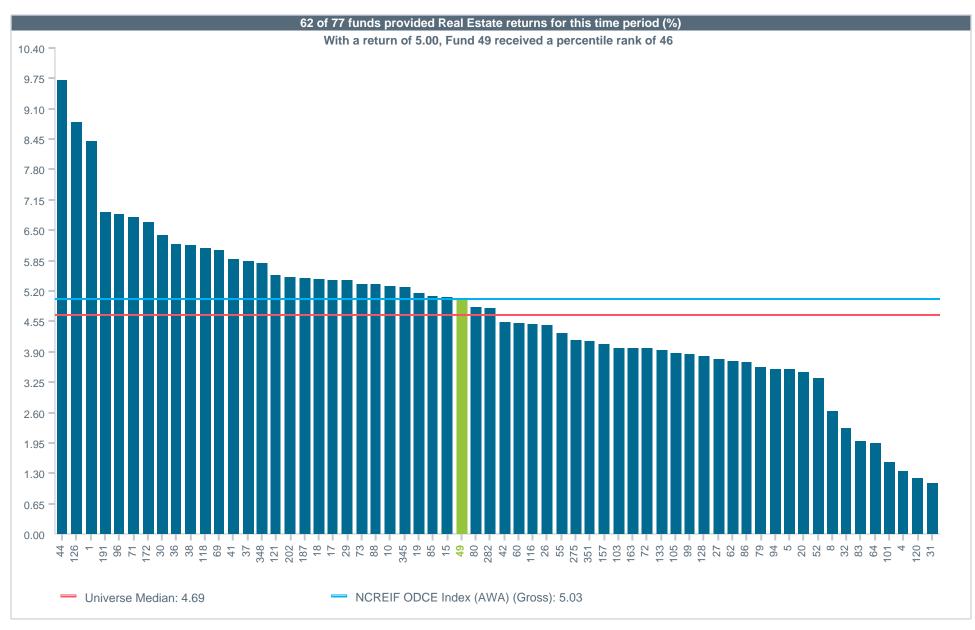




## Fund Number: 49 5 Year Annualized Real Estate Returns





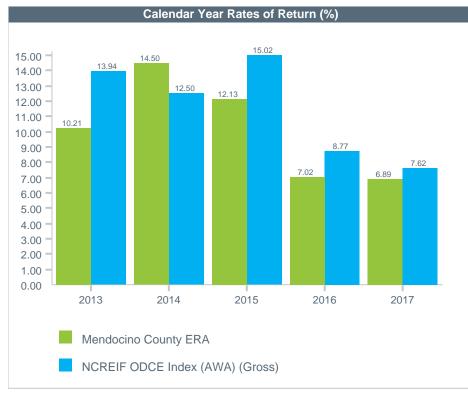


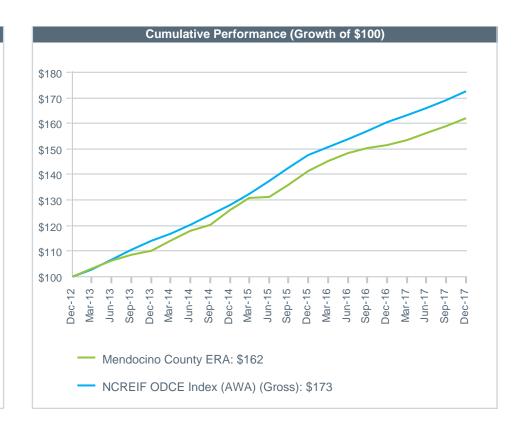


## As of December 31, 2017

#### **Total Return - Real Estate**

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



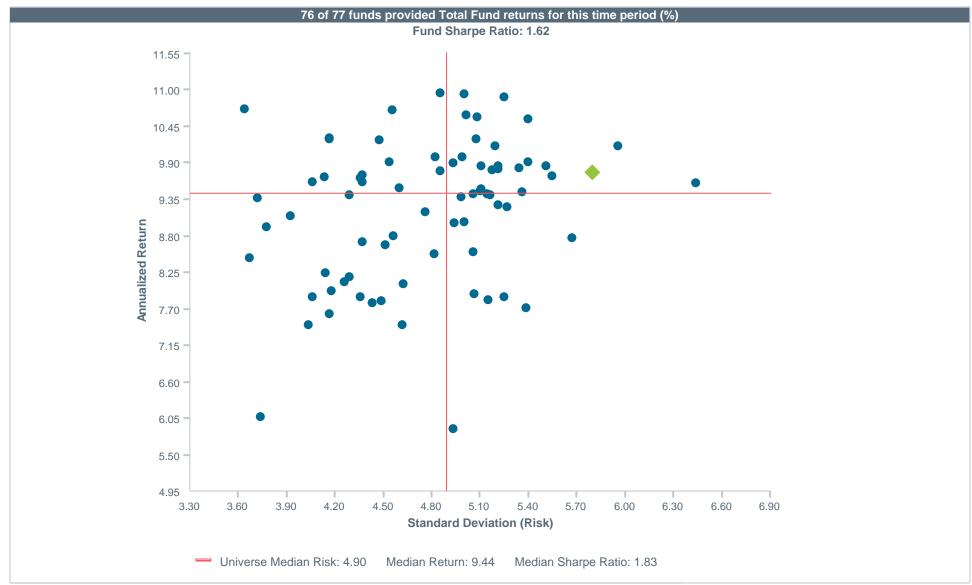


Annualized Returns (%)						
	1 Year	3 Years	5 Years			
Mendocino County ERA	6.89	8.65	10.11			
NCREIF ODCE Index (AWA) (Gross)	7.62	10.42	11.53			
Variance	-0.73	-1.77	-1.42			



**Risk/Return Analysis** 

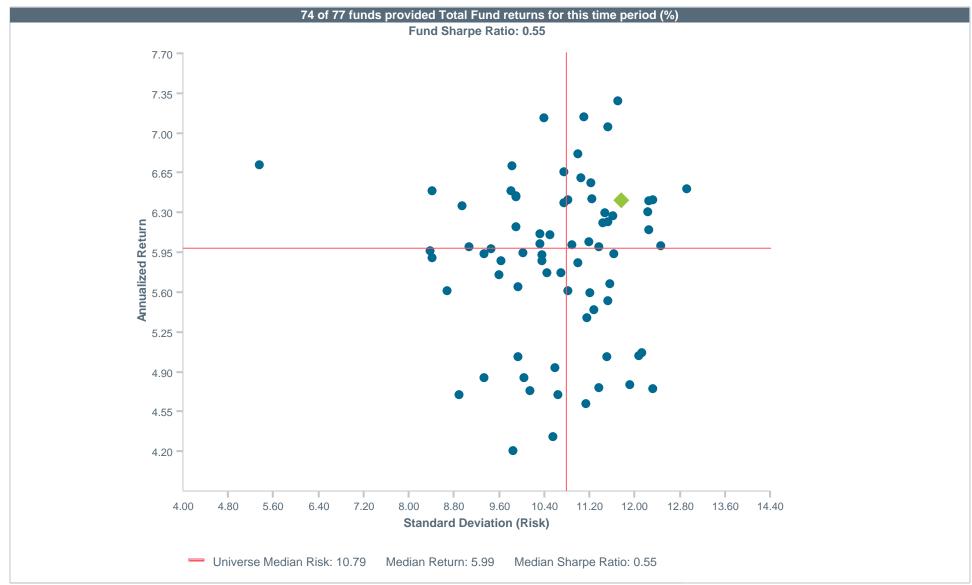
5 Year Annualized Total Fund Returns vs. Standard Deviation



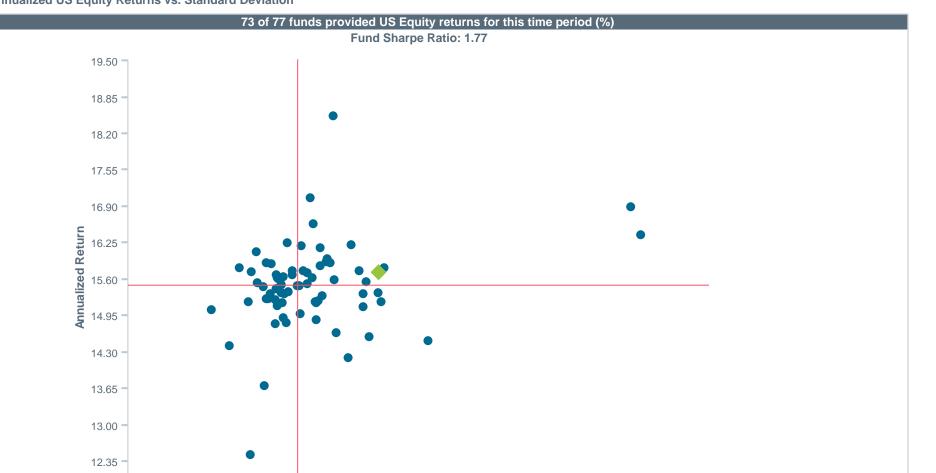


**Risk/Return Analysis** 

10 Year Annualized Total Fund Returns vs. Standard Deviation







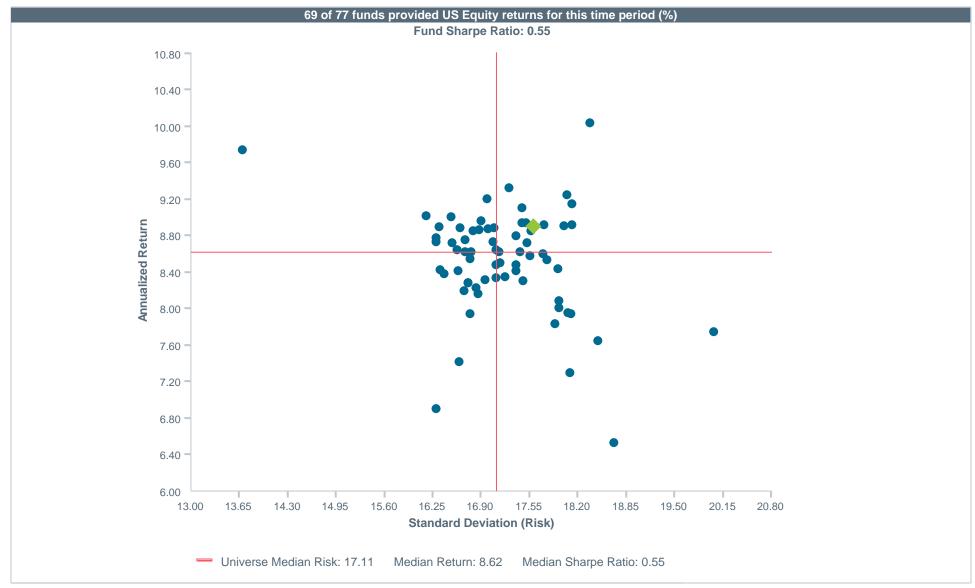
11.70 6.40 6.80 7.20 7.60 8.00 8.40 8.80 9.20 9.60 10.00 10.40 10.80 11.20 Standard Deviation (Risk)

Universe Median Risk: 7.80 Median Return: 15.49 Median Sharpe Ratio: 1.89



**Risk/Return Analysis** 

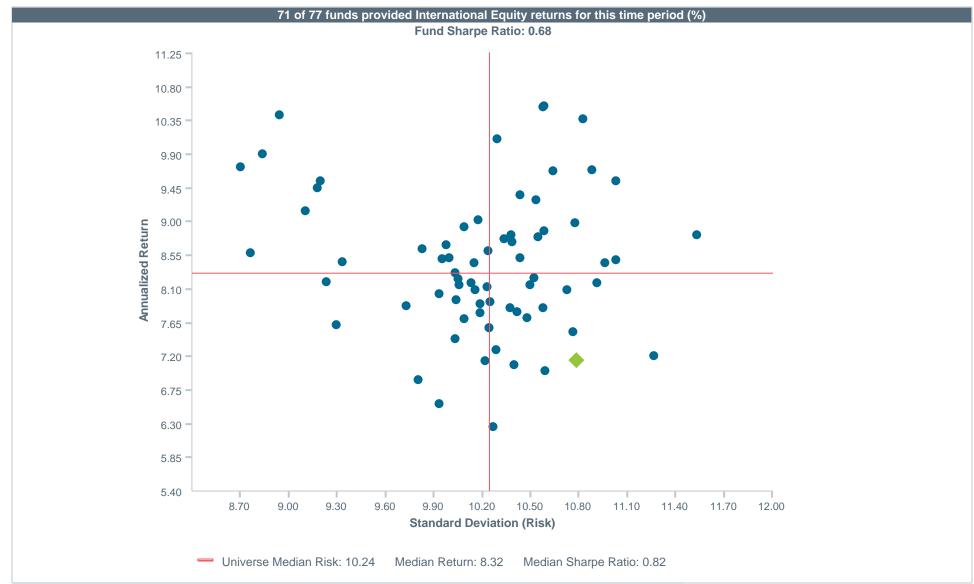
10 Year Annualized US Equity Returns vs. Standard Deviation





**Risk/Return Analysis** 

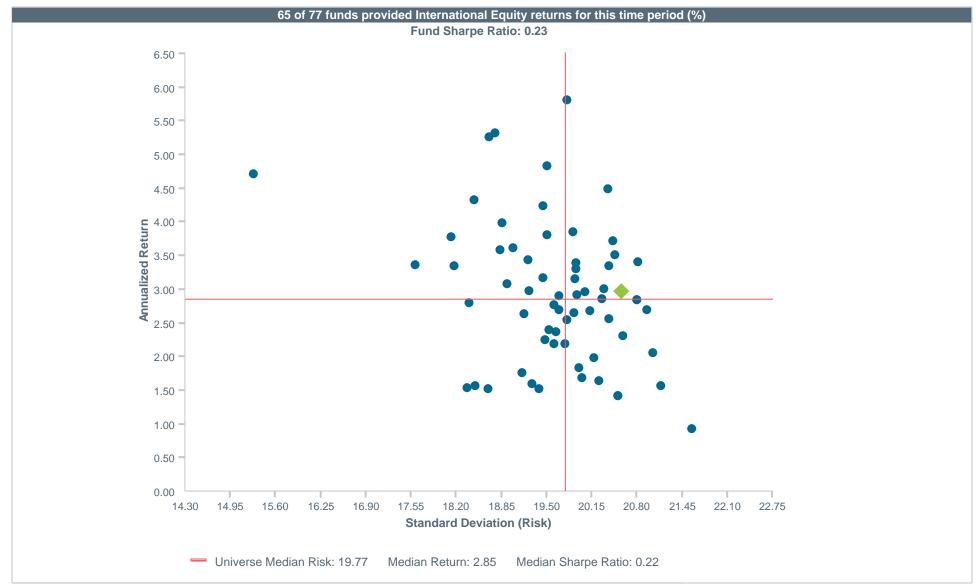
5 Year Annualized International Equity Returns vs. Standard Deviation





**Risk/Return Analysis** 

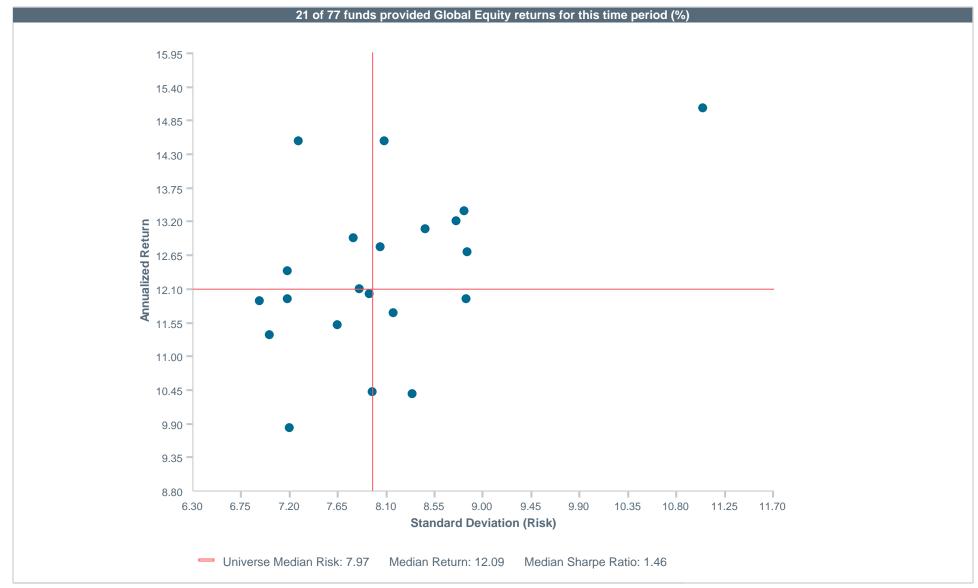
10 Year Annualized International Equity Returns vs. Standard Deviation





**Risk/Return Analysis** 

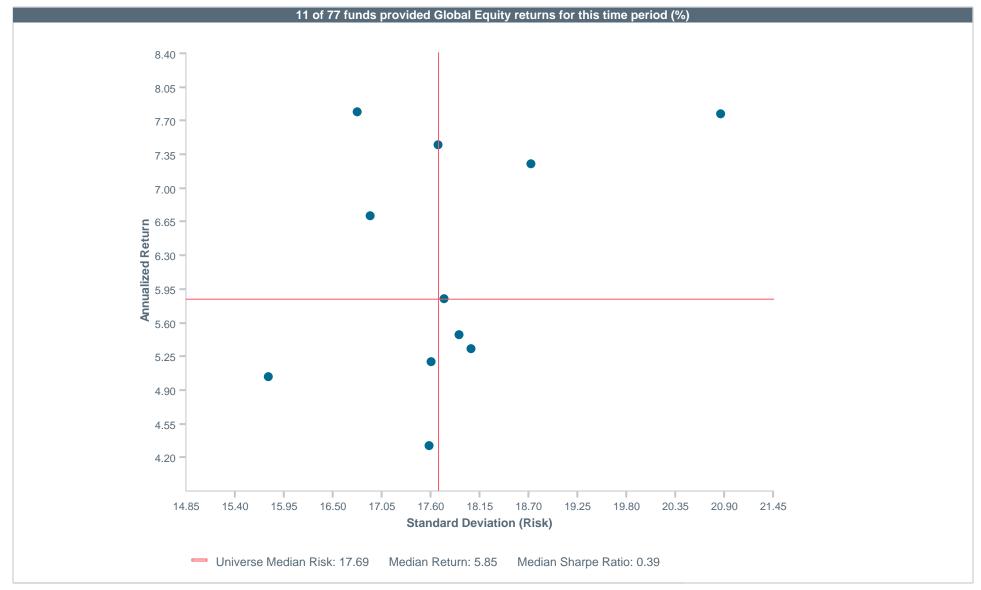
5 Year Annualized Global Equity Returns vs. Standard Deviation





**Risk/Return Analysis** 

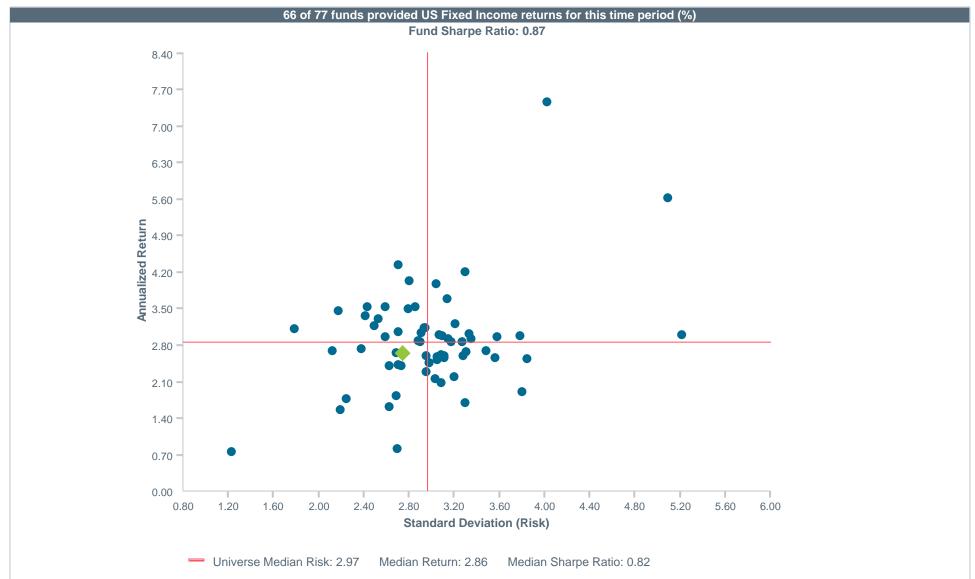
10 Year Annualized Global Equity Returns vs. Standard Deviation





#### **Risk/Return Analysis**

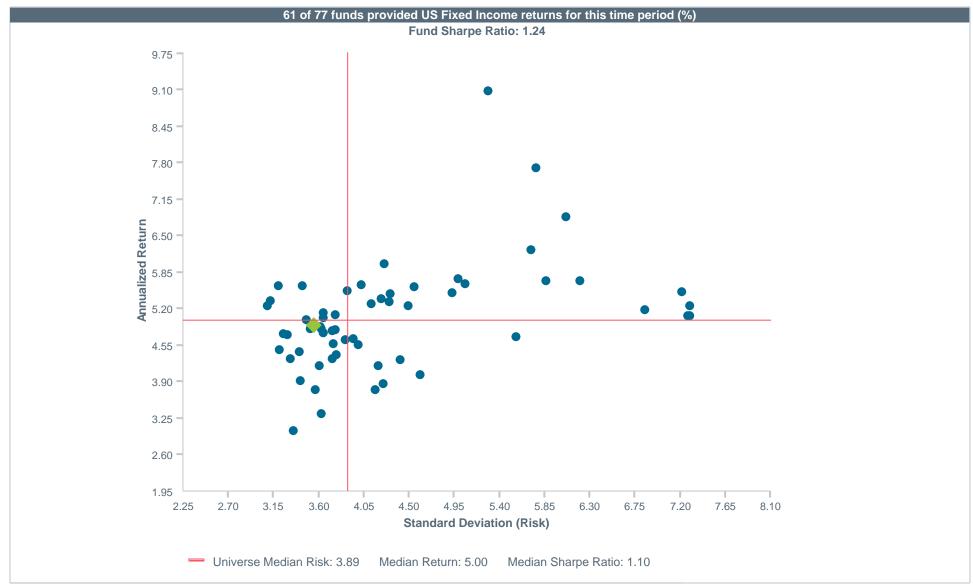
5 Year Annualized US Fixed Income Returns vs. Standard Deviation





**Risk/Return Analysis** 

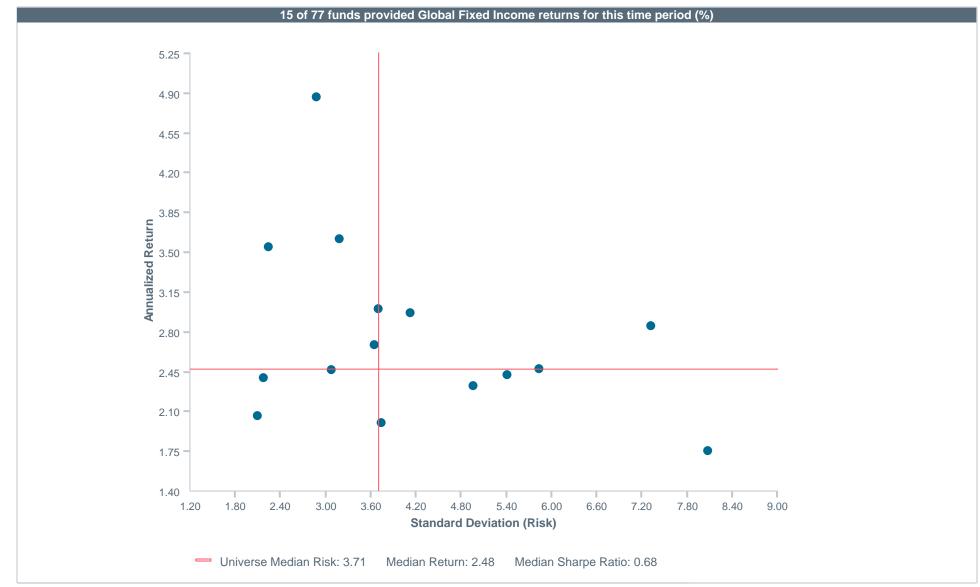
10 Year Annualized US Fixed Income Returns vs. Standard Deviation



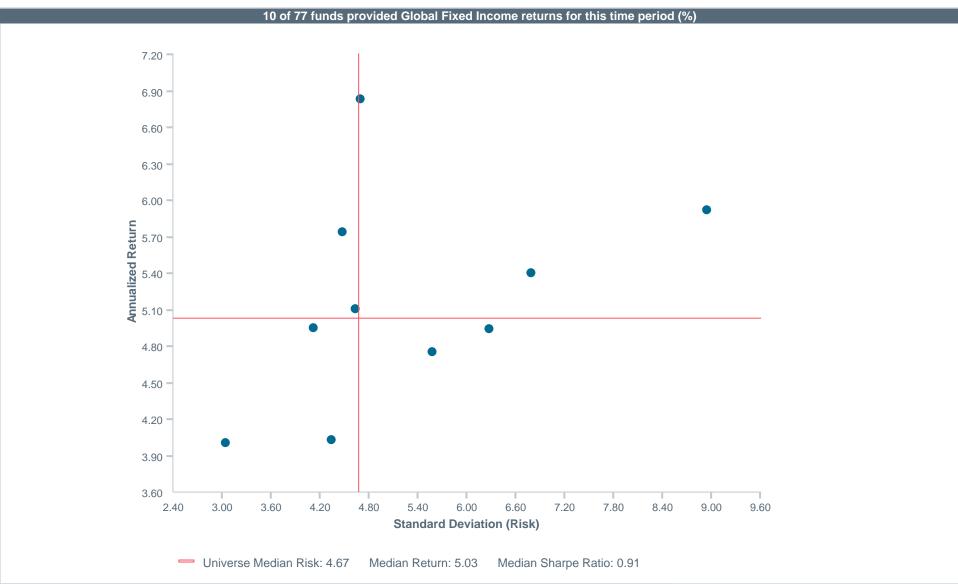


**Risk/Return Analysis** 

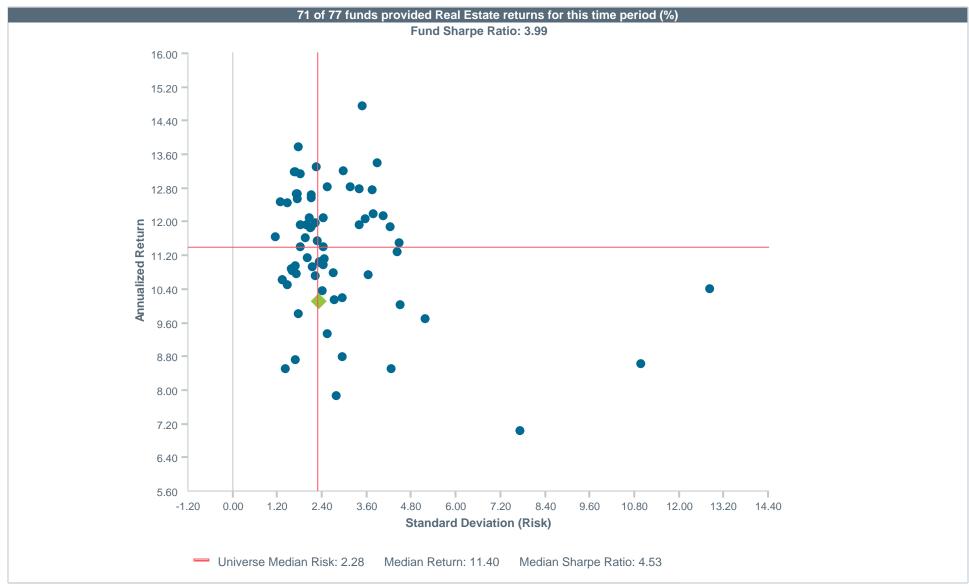
5 Year Annualized Global Fixed Income Returns vs. Standard Deviation









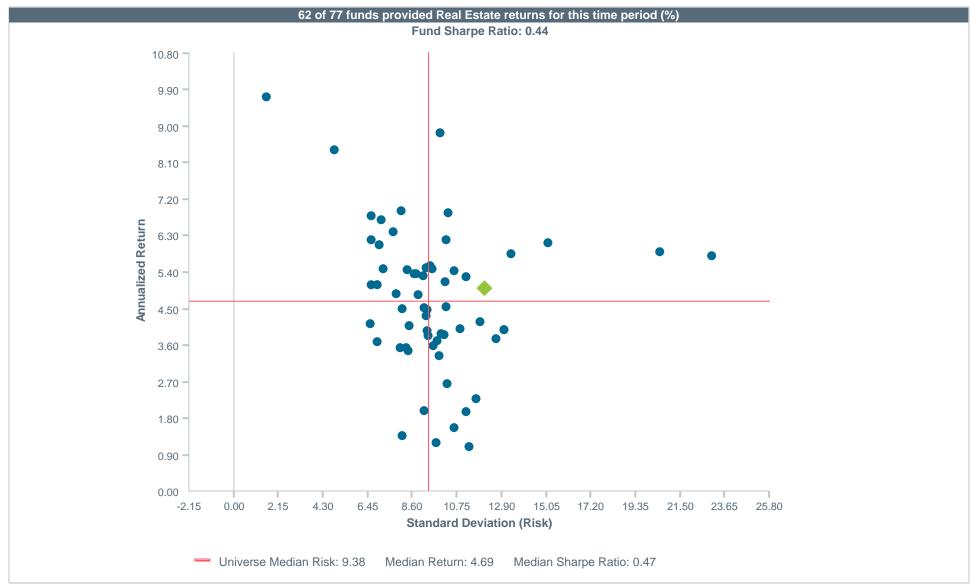






**Risk/Return Analysis** 

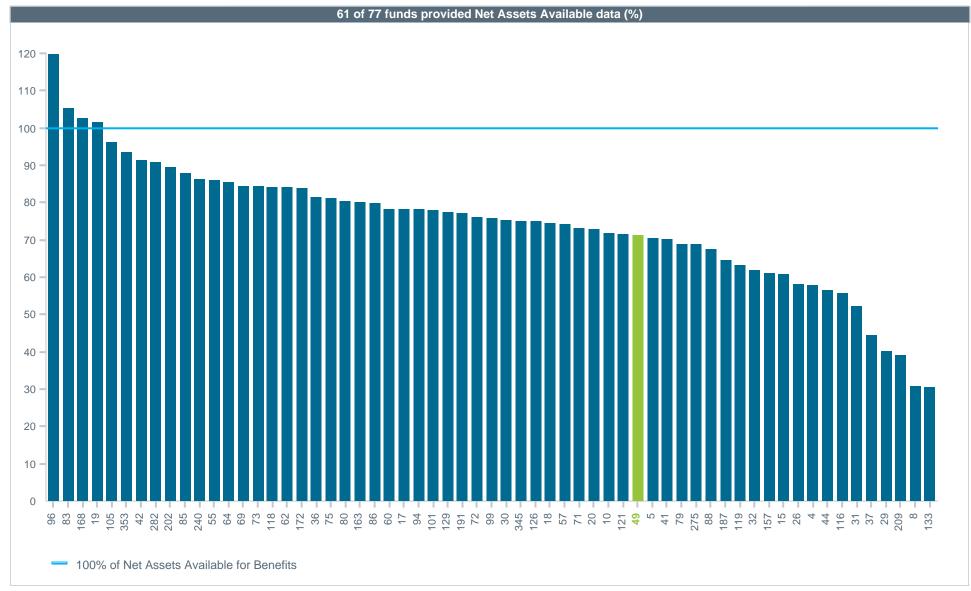
10 Year Annualized Real Estate Returns vs. Standard Deviation



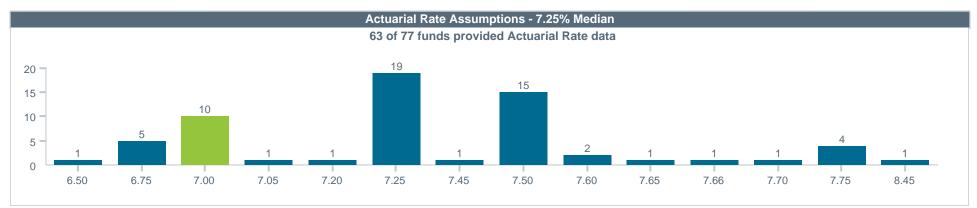


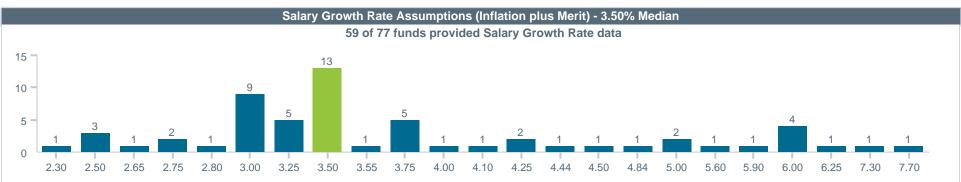
Net Assets Available For Benefits

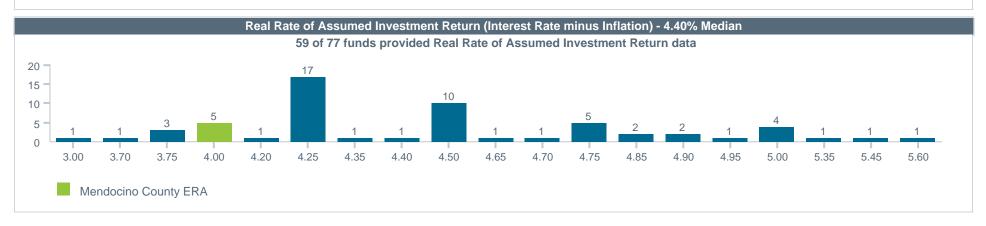
Expressed as a Percentage of the Pension Benefit Obligation









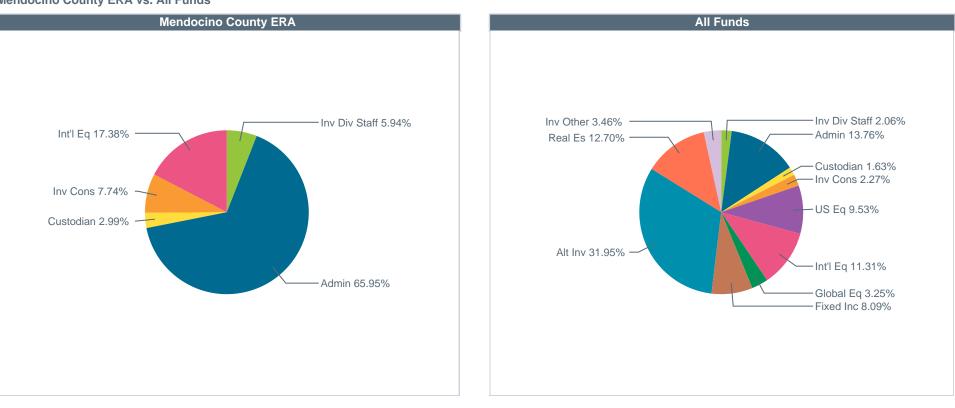


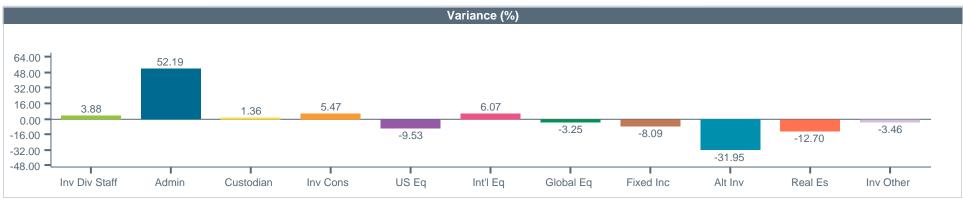
Funds that did not provide data will not appear in the chart.



**Total Administrative and Investment Fees** 

Mendocino County ERA vs. All Funds





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



## Total Fund Fee Summary in Basis Points Mendocino County ERA vs. Average by Asset Range 59 of 77 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	2.21	0.00	0.44	0.85	0.96	0.71	1.80
Actuary	2.76	2.73	1.75	0.46	0.33	0.10	0.12
Legal	1.45	0.22	1.52	0.53	0.25	0.21	0.24
Consultant	0.00	0.17	0.06	0.52	0.38	0.16	0.27
Audit	0.79	0.63	0.66	0.24	0.10	0.07	0.06
Other Professional	0.00	0.02	4.00	1.32	0.48	0.79	0.67
General Administrative	19.54	3.91	9.20	4.90	6.29	3.28	3.37
Total Administrative Expenses	26.75	7.68	17.63	8.81	8.79	5.32	6.52

Investment Expenses	Mendocino County ERA	Under \$500 Million	\$500mm - \$1 Billion	\$1 - \$5 Billion	\$5 - \$10 Billion	\$10 - \$20 Billion	Over \$20 Billion
Custodial	1.11	2.55	2.11	1.13	0.73	0.49	0.29
Investment Consulting	2.88	1.92	2.64	1.98	1.06	0.60	0.36
US Equity	0.00	8.73	5.90	6.44	6.67	4.15	2.67
International Equity	6.47	5.82	5.32	7.48	6.36	6.18	4.12
Global Equity	0.00	5.35	2.09	2.27	2.56	0.35	1.09
Fixed Income	0.00	5.63	4.55	5.85	3.18	2.33	3.93
Real Estate	0.00	10.57	6.27	5.87	8.99	5.42	6.54
Other Investment Management	0.00	0.00	0.01	1.06	4.23	3.02	1.42
Total Investment Expenses (ex. Alt Inv)	10.46	40.58	28.90	32.09	33.78	22.55	20.43
Alternative Investments	0.00	7.36	6.23	14.51	26.26	12.90	20.52
Total Investment Expenses	10.46	47.94	35.13	46.60	60.04	35.45	40.95
Total Expenses	37.21	55.61	52.76	55.41	68.83	40.77	47.47

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 77 participants in the 2017Q4 Public Fund Report, 38 participants provided a reply to the GIPS Compliance Survey. Of those participants, 6 answered 'Yes, Currently Comply', 3 answered 'Yes, Considering', and 28 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.

	Currently Include	Considering	Not Considering	Unsure at this Time
<ul> <li>Internal investment department compensation/benefits</li> </ul>	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
<ul> <li>Investment research services (100% or pro-rata determination)</li> </ul>	6	0	3	4
<ul> <li>Investment consulting fees (general investment consulting and project fees; 100% or pro-rata determination)</li> </ul>	9	0	3	2
Pro-rata data valuation fees	4	1	3	5
<ul> <li>Pro-rata overhead indirectly related to asset management (building and utilities fees to support internal management team)</li> </ul>	5	0	4	3



## Miscellaneous Comments

- Performance shown is gross of fees, with the exception of the following:
  - Funds 8, 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 55, 75, and 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 December 2016 and December 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.
  - Fund 121: Performance shown for Global Fixed Income includes 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., ICE BofAML 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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