



Public Fund Universe Analysis

City of Milwaukee Employees' Retirement System

Period Ending June 30, 2018

Fund Number: 105



RVK Honored to Receive *Greenwich Quality Leader Award*

- **Greenwich Associates*** conducted interviews with over 1,000 senior professionals of large plan sponsors and ranked opinions of their investment consulting relationships on a series of key metrics, including, but not limited to:
 - Understanding Clients' Goals and Objectives
 - Advice on Long-term Asset Allocation
 - Proactive Advice and Innovative Ideas
 - Credibility with the Board and/or Investment Committee
 - Knowledge of Investment Managers
 - Advice on DC Plan Structure and Design
 - Client Satisfaction with Manager Recommendations
 - Responsiveness to Client Requests and Needs
 - Competitive Fees
- **RVK is grateful to be 1 of 3 firms among large US consultants to receive this award for 2017**



**As a valued client, we are humbled by your continued confidence and thankful for your support.
From all of us here at RVK, thank you for the opportunity to serve you!**

*Greenwich Associates is the leading provider of global market intelligence and advisory services to the financial services industry. They conduct an annual survey to institutional investors whereby approx. 1,200 respondents rank their respective investment consulting relationships on key metrics on a scale from 1 (poor) to 5 (excellent). The award is based upon Greenwich Associates' 2017 US Institutional Investors study.

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. In May 2018, RVK received a Greenwich *Quality Leader Award*, demonstrating our high level of client service.

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 are in control of our business policy, providing firm stability for 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
- Manager Structure Analysis
- Risk Monitoring and Management
- Client Education
- Special Projects

SPECIALTY CONSULTING SERVICES

- Real Estate Consulting Services
- Custody, Record keeper, Third-Party Administrator Searches
- Asset/Liability Studies
- Endowment Spending Policy Studies
- Securities Lending Reviews
- Pacing Studies
- Strategic Planning Reviews
- 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

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
Fresno County Employees' Retirement Association
Gila River Indian Community Retirement Plan
Imperial County Employees' Retirement System
Kansas City, Missouri Employees' Retirement System
Kern County Employees' Retirement Association
Los Angeles County Employees Retirement Association
Los Angeles Water & Power Employees Retirement Plan
Mendocino County Employees' Retirement Association
Montana Public Employees' Retirement System
Municipal Employees' Annuity and Benefit Fund of Chicago
Nevada Public Employees' Retirement System
Newport News Employees' 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 Mateo County Employees' Retirement Association

Anchorage Police & Fire Retirement System
California State Teachers' Retirement System
City of Austin Employees' Retirement System
City of Milwaukee Employees' Retirement System (Fund No. 105)
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
Fort Worth Employees' Retirement Fund
Georgia Division of Investment Services
Illinois Municipal Retirement Fund
Iowa Public Employees' Retirement System
Kansas Public Employees' 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 Teachers' Retirement System
Municipality of Anchorage Pre-Funding Program
New York State Common Retirement Fund
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 Diego Transit Corporation Employees Retirement

Sonoma County Employees' Retirement Association
Spokane Employees' Retirement System
State of Michigan Retirement Systems
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

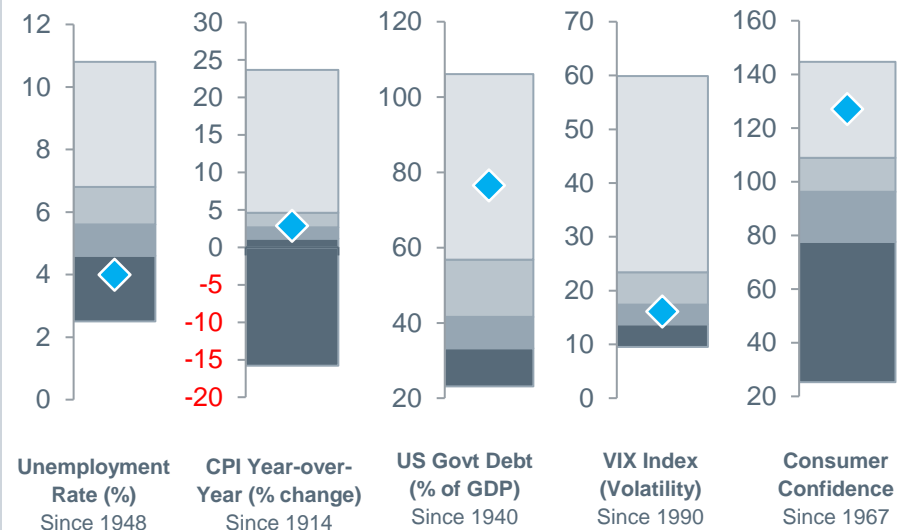
Santa Barbara County Employees' Retirement System
South Dakota Retirement System
Stanislaus County Employees' Retirement Association
State of New Jersey Pension Fund
State Universities Retirement System of Illinois
Teachers' Retirement System of the State of Illinois
The Navajo Nation Retirement Plan
Ventura County Employees' Retirement Association
West Virginia Investment Management Board

Second Quarter Economic Environment

Key Economic Indicators

The US dollar strengthened significantly relative to a trade weighted basket of currencies during the second quarter of 2018, reversing a trend of weakening that began over a year earlier. This tightening dollar liquidity environment and the escalating trade tensions between the United States and its global trading partners put significant pressure on non-US assets. Economic data released during the quarter continue to indicate a strong economic expansion in the United States. According to the Bureau of Economic Analysis, first quarter GDP grew at an annual rate of 2.0%. The heightened equity market volatility that characterized the first quarter of 2018 softened to a degree during Q2, as the S&P 500 produced three straight months of positive returns. Despite what appear to be relatively tight labor market conditions, wage growth has remained subdued. With this backdrop, the Federal Open Market Committee raised the Federal Funds rate to a range between 1.75% and 2.00% during its June meeting. The continued robust US economic activity also flowed through to heightened expectations for additional interest rate increases.

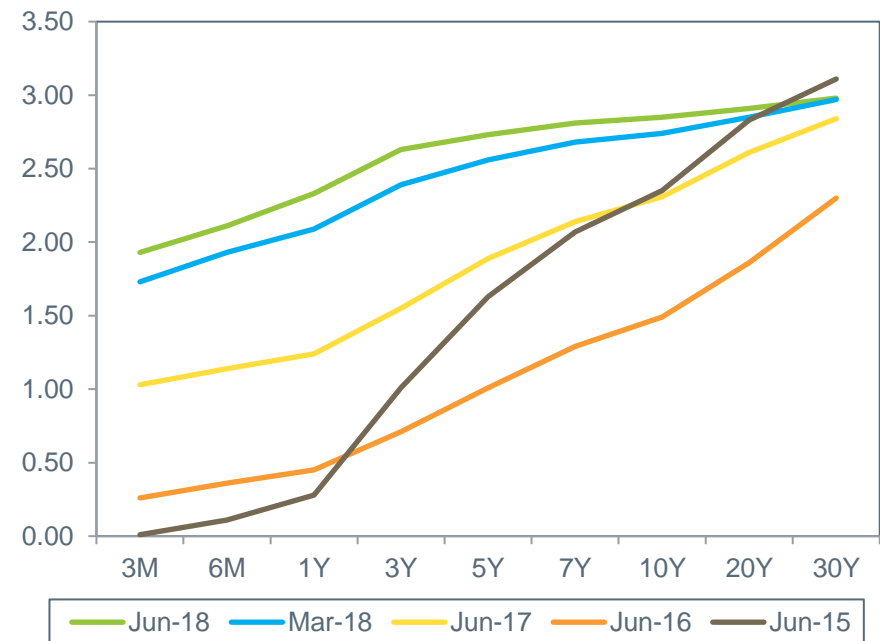
Key Economic Indicators



Economic Indicators	Jun-18	Mar-18	Jun-17	Jun-15	20 Yr
Federal Funds Rate (%)	1.91 ▲	1.68	1.06	0.08	2.02
Breakeven Infl. - 1 Yr (%)	1.42 ▼	2.23	0.72	0.73	N/A
Breakeven Infl. - 10 Yr (%)	2.13 ▲	2.06	1.74	1.89	N/A
CPI YoY (Headline) (%)	2.9 ▲	2.4	1.6	0.1	2.2
Unemployment Rate (%)	4.0 ▼	4.1	4.3	5.3	5.9
Real GDP YoY (%)	2.9 ▲	2.6	2.1	3.4	2.3
PMI - Manufacturing	60.2 ▲	59.3	56.7	52.3	52.5
USD Total Wtd Idx	89.97 ▲	86.37	90.49	89.82	86.45
WTI Crude Oil per Barrel (\$)	74.2 ▲	64.9	46.0	59.5	58.8
Gold Spot per Oz (\$)	1,253 ▼	1,326	1,242	1,172	856

Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	3.43	2.65	14.37	13.42	10.17
Russell 2000	7.75	7.66	17.57	12.46	10.60
MSCI EAFE (Net)	-1.24	-2.75	6.84	6.44	2.84
MSCI EAFE SC (Net)	-1.57	-1.33	12.45	11.32	6.81
MSCI Emg Mkts (Net)	-7.96	-6.66	8.20	5.01	2.26
Bloomberg US Agg Bond	-0.16	-1.62	-0.40	2.27	3.72
ICE BofAML 3 Mo US T-Bill	0.45	0.81	1.36	0.42	0.35
NCREIF ODCE (Gross)	2.05	4.30	8.44	11.04	5.29
Wilshire US REIT	9.73	1.52	3.88	8.42	7.81
HFRI FOF Comp	0.41	0.68	5.13	3.45	1.40
Bloomberg Comdty (TR)	0.40	0.00	7.35	-6.40	-9.04

Treasury Yield Curve (%)



Second Quarter Review

Broad Market

US equity markets delivered positive results across all market caps and styles for the quarter. The S&P 500 Index returned 3.4%, buoyed by strong performance in the energy sector as oil prices continued to rise throughout the quarter. Continuing a first quarter trend, technology and consumer discretionary sectors drove market performance as the S&P 500 Technology and Consumer Discretionary Indices returned 7.1% and 8.2%, respectively.

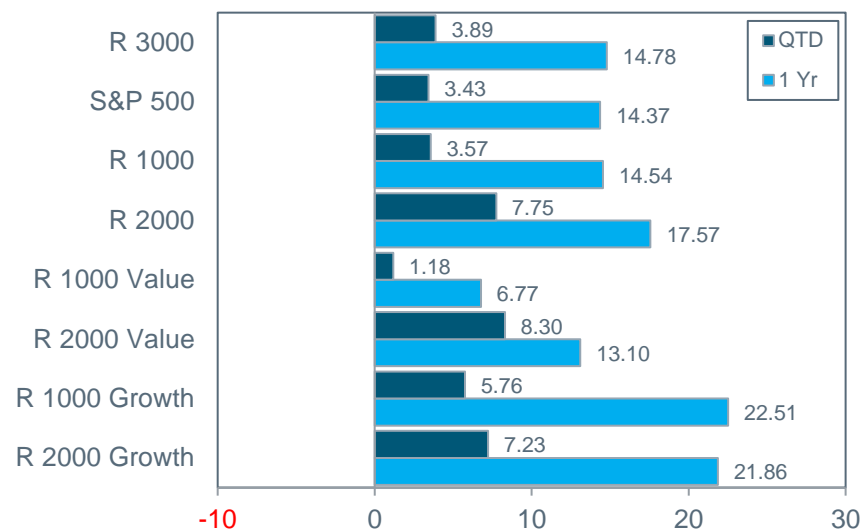
Market Cap

Increasing global trade tension pushed investors toward the more domestically-oriented small and micro cap segments of US equity markets and away from larger cap, multinational companies.

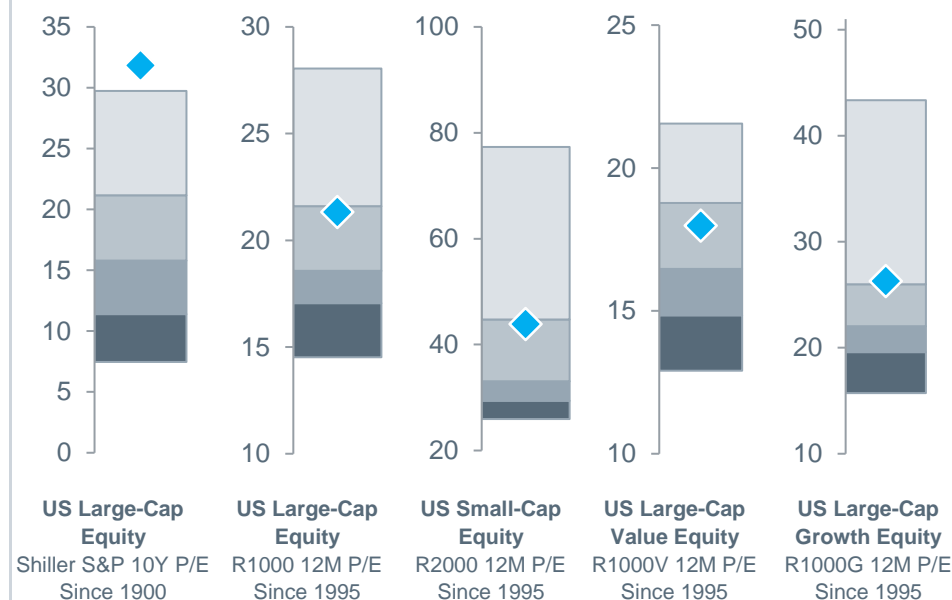
Style and Sector

Active large cap growth and value managers generally fared well as secular growth trends and continued strong corporate earnings provided a positive stock-picking environment.

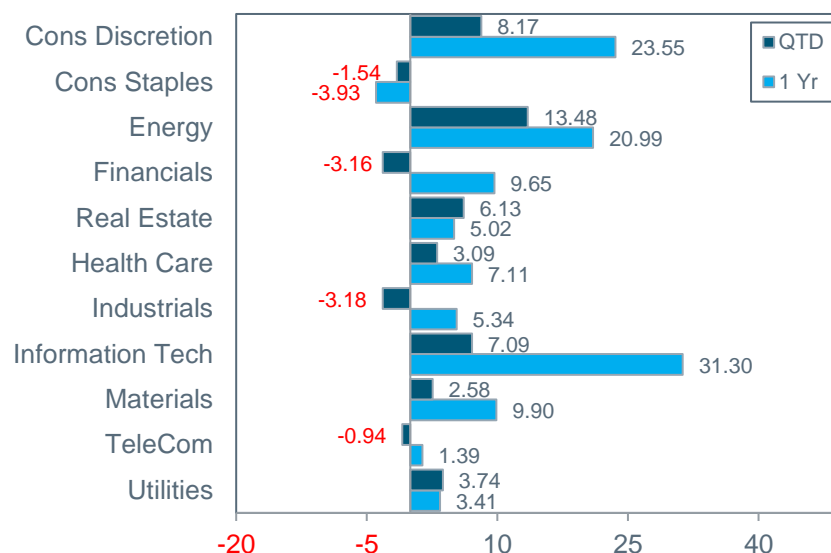
Style and Capitalization Market Performance (%)



Valuations



S&P 500 Index Sector Performance (%)



Second Quarter Review

Developed Markets

The tightening dollar liquidity environment and the escalating trade tensions between the US and its global trading partners put significant pressure on non-US assets. Emerging market equities fell 7.96% during the quarter. Developed international equities also declined, further exacerbating losses experienced in Q1.

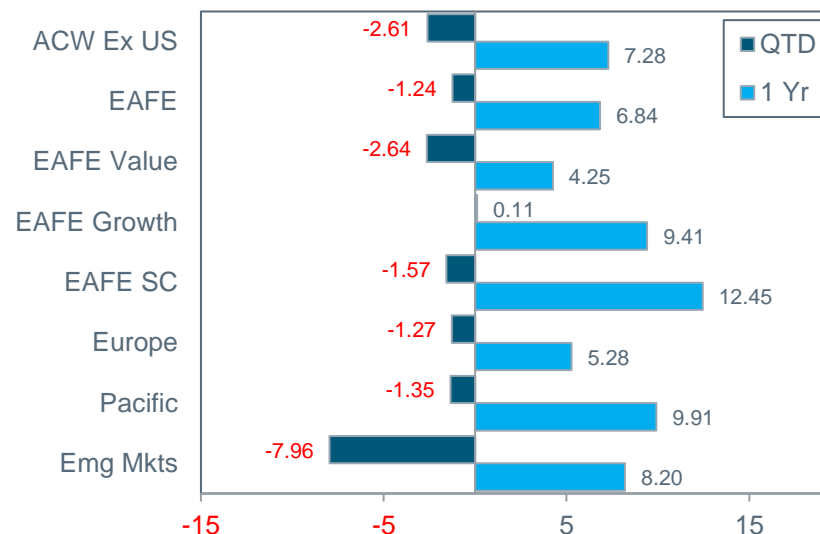
Emerging Markets

Emerging markets had a challenging quarter, making it by far the worst performing equity class this year. The MSCI Emerging Markets Index trailed the MSCI EAFE Index by 672 basis points during the quarter.

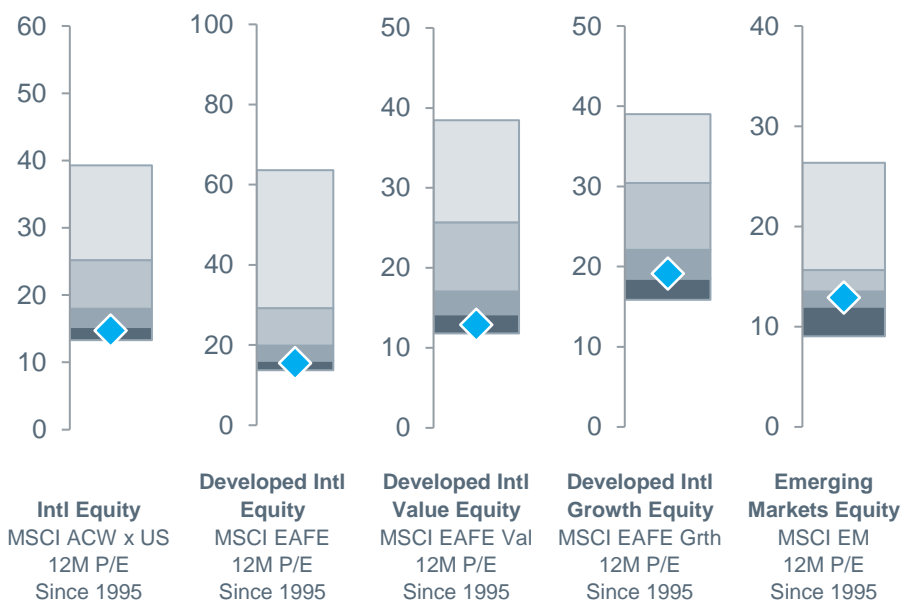
Market Cap & Style

While developed international growth stocks were slightly positive, value stocks brought down the overall market during the quarter. Small cap stocks fared worse than large cap stocks. Emerging markets growth stocks outperformed value stocks and large cap stocks outperformed small cap stocks.

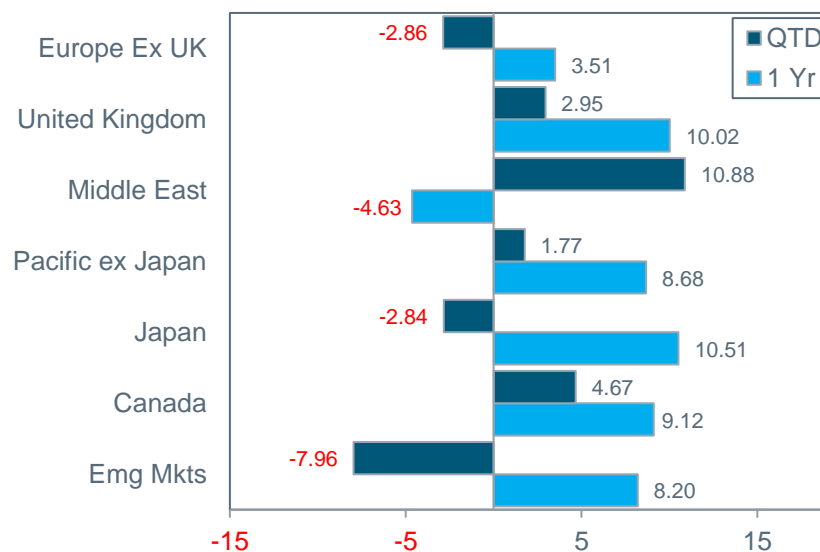
MSCI Style and Capitalization Market Performance (%)



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

The Federal Open Market Committee raised the Federal Funds rate to a range between 1.75% and 2.00% during its June meeting. The Bloomberg Barclays US Aggregate Bond Index posted a return of -0.16% as interest rates slightly increased and the Treasury yield curve flattened during the quarter.

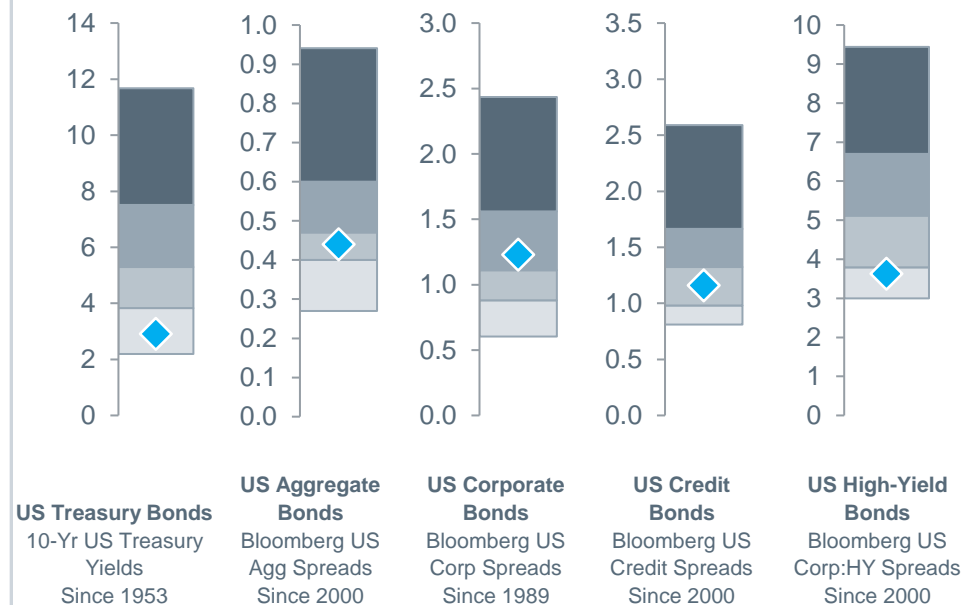
Credit Market

The option-adjusted spread on investment grade corporate bonds increased from 1.17% to 1.30%. The Bloomberg Barclays US Corporate Credit returned -0.98% for the quarter and underperformed the Bloomberg Barclays Corporate High Yield Index which returned 1.03%.

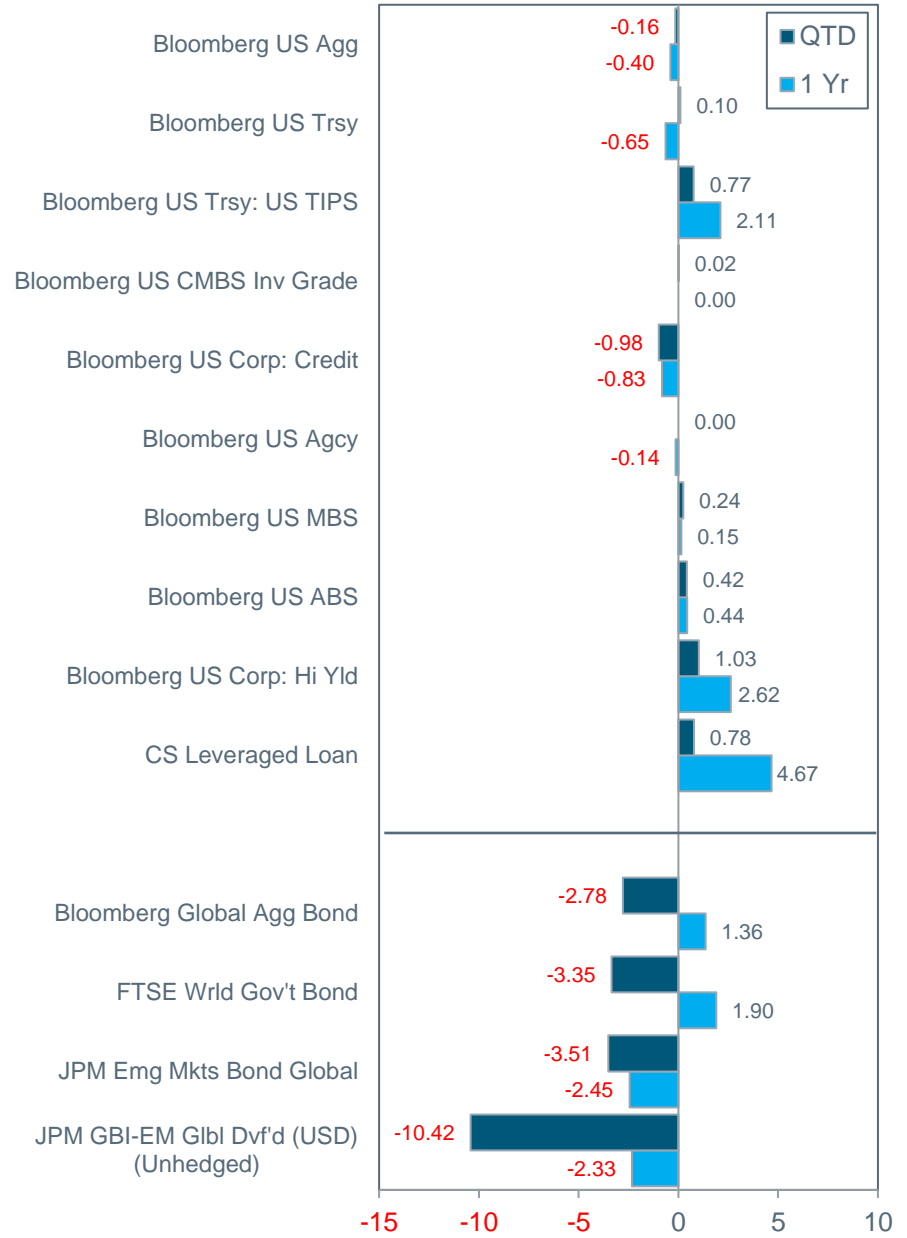
Emerging Market Debt

The JP Morgan GBI-EM Global Diversified Index returned -10.42% for the quarter. Strengthening of the US dollar, turmoil in Turkey and Argentina, and escalating trade wars are all factors leading to a large loss in emerging market debt.

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

Hedge funds produced marginally positive returns during the second quarter, building on the gains realized in Q1. Most FoHF managers have lowered net exposures and rotated away from traditional strategies such as long/short equity in favor of more diversifying exposures. Managers that have significant systematic macro or managed futures exposure have suffered as those strategies remain largely negative year-to-date.

General Market - Global Tactical Asset Allocation (GTAA)

GTAA managers mostly provided negative returns in the second quarter and most dramatically underperformed a static, US-centric 60/40 portfolio of stocks and bonds. Globally-oriented managers that rely on fundamental value based investment processes have increasingly allocated to emerging markets exposures, which are believed to be undervalued across asset classes. This positioning was a significant detractor during the quarter, as strong gains in the US dollar resulted in added pressure to certain emerging economies, leading to a difficult quarter for emerging markets equities and currencies.

Second Quarter Review - Real Assets

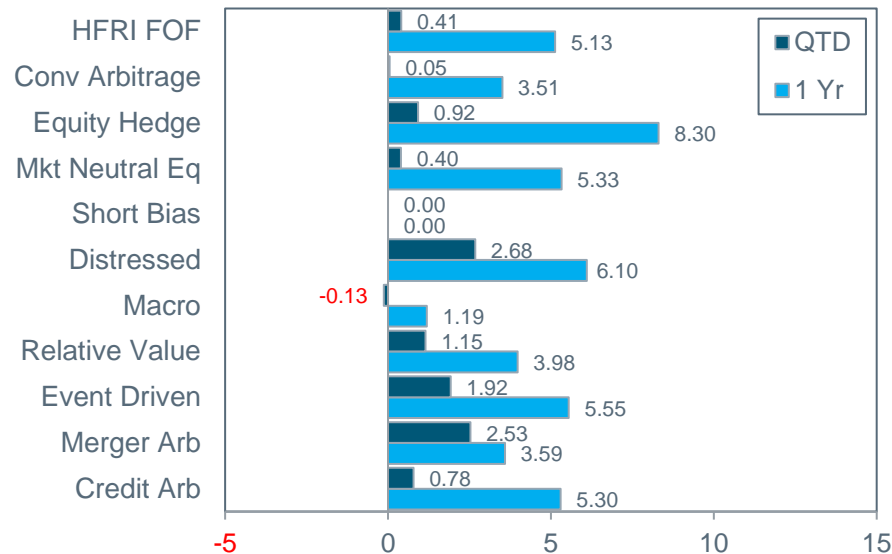
General Market - Diversified Inflation Strategies (DIS)

DIS portfolios mostly provided strong returns in Q2 as inflationary pressures persisted. Headline CPI increased to 2.90% YoY, and the spot price for West Texas Intermediate crude oil rose nearly 14% to \$74 per barrel over the quarter. In response, most other inflation-sensitive asset classes provided strong performance led by asset classes such as US REITs, energy related exposures in commodities, natural resources equities, MLPs, and global listed infrastructure.

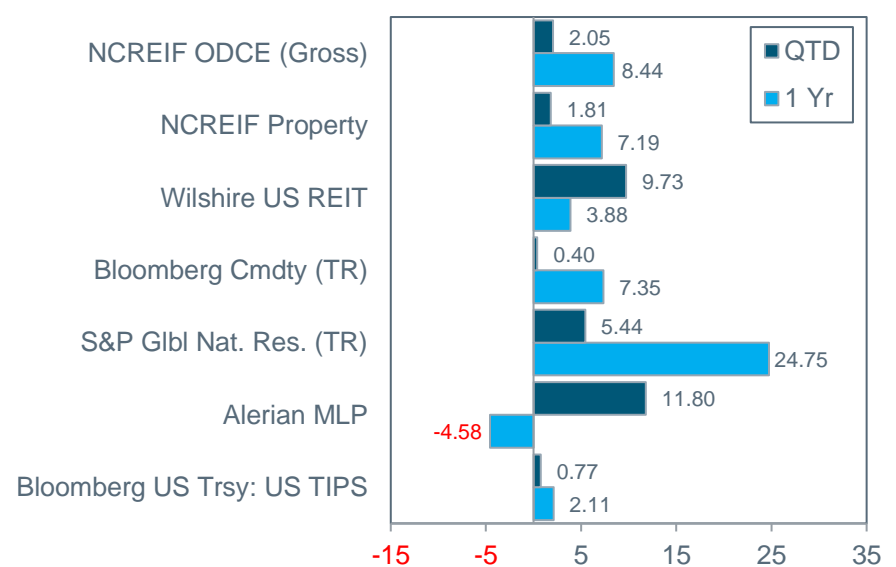
General Market - Real Estate

The core private real estate index, NCREIF-ODCE, returned 2.1% during Q2, with income and appreciation returns being about equal. This represented a slight decrease compared to last quarter's appreciation component of total return. Real estate valuations remain elevated, supported by continued strength in the overall economy with increases from personal consumption and business investment. The potential for increased discretionary spending by consumers due to the recent tax reform provides additional support for current valuations.

HFRI Hedge Fund Performance (%)



Real Asset Performance (%)

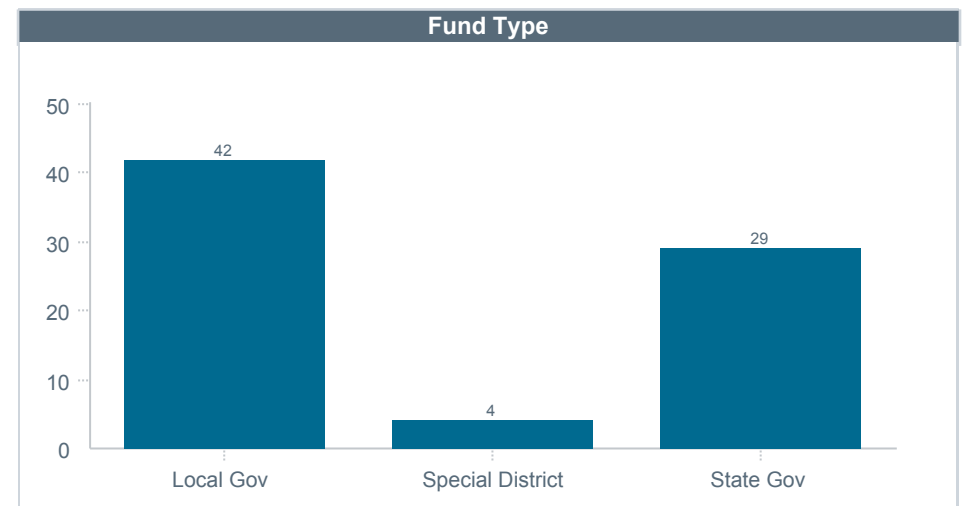
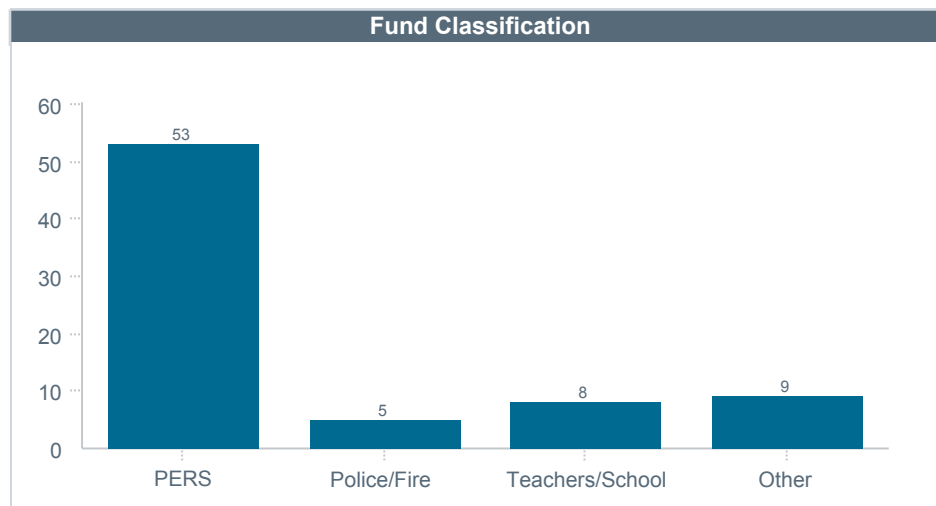
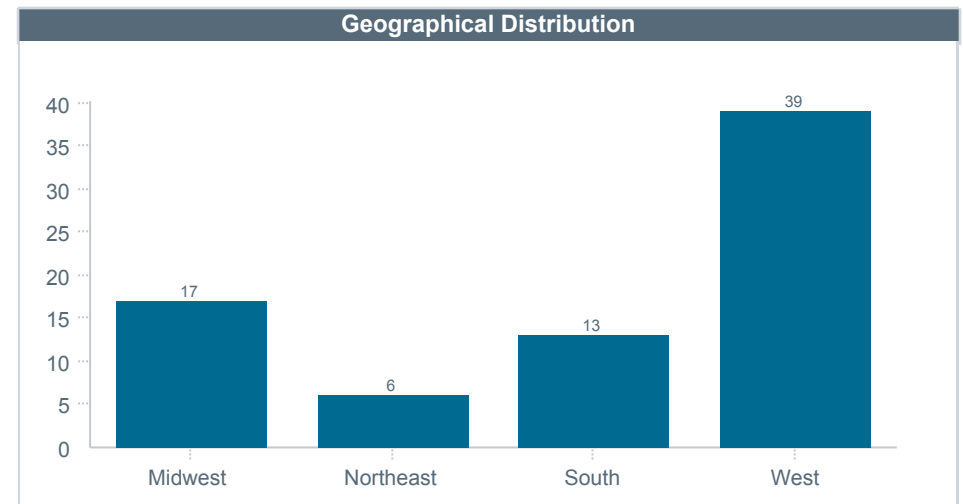
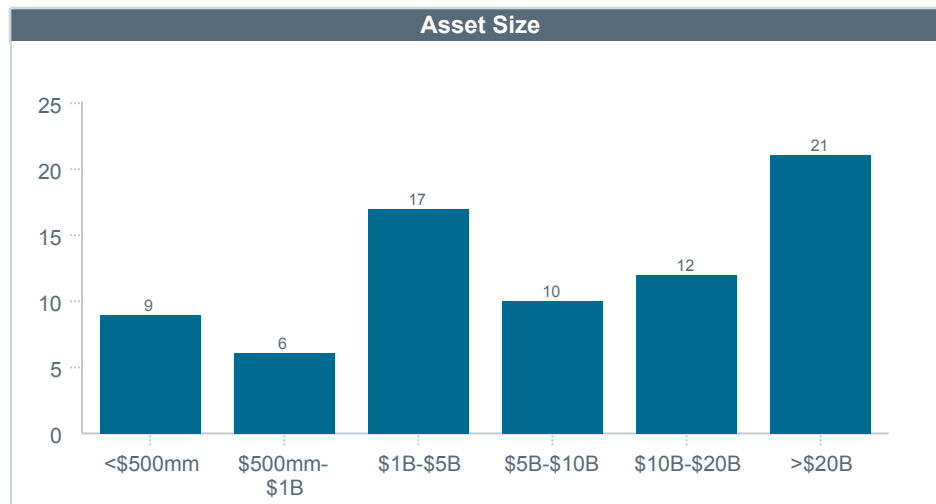


Annual Asset Class Performance

As of June 30, 2018

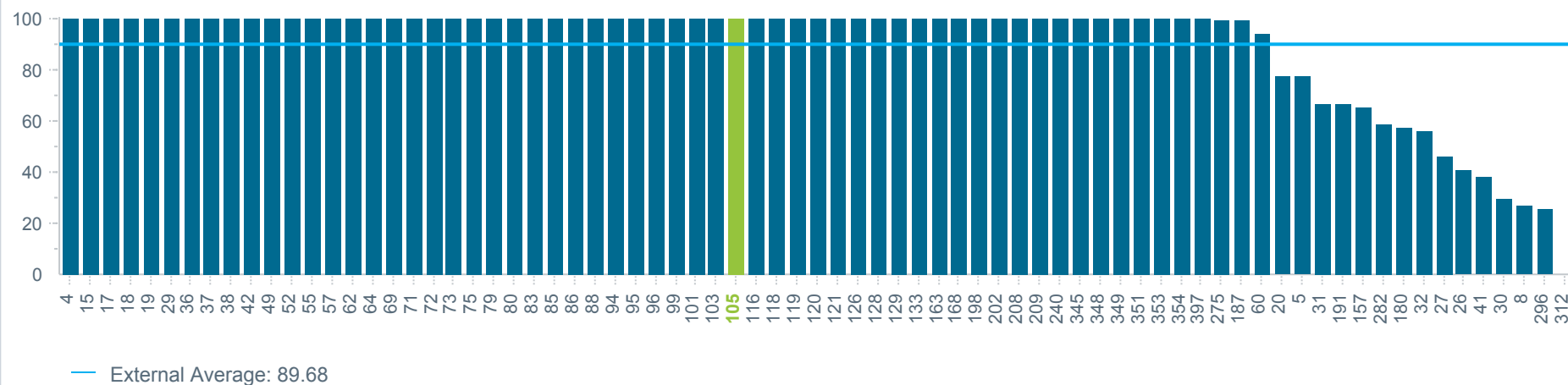
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD
<div>Best</div> <div>↑</div> <div>↓</div> <div>Worst</div>	33.16	34.00	35.97	39.38	8.44	78.51	28.60	22.49	20.00	38.82	31.78	15.02	21.31	37.28	7.66
	31.45	26.19	32.18	16.23	5.24	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	4.30
	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	2.65
	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	1.52
	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	0.81
	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	0.68
	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	0.16
	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	0.00
	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	-0.02
	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	-1.33
	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	-1.62
	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	-2.75
	4.34	2.74	2.07	-1.57	-47.01	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-4.98
	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	-6.66
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	Bloombrg US Agg Bond - FI	Bloombrg US Corp: Hi Yield - FI	Bloombrg US Trsy: US TIPS - FI	Bloombrg US Gov/Credit: Lng - FI	NCREIF ODCE (Gross) - Real Estate	Wilshire US 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.

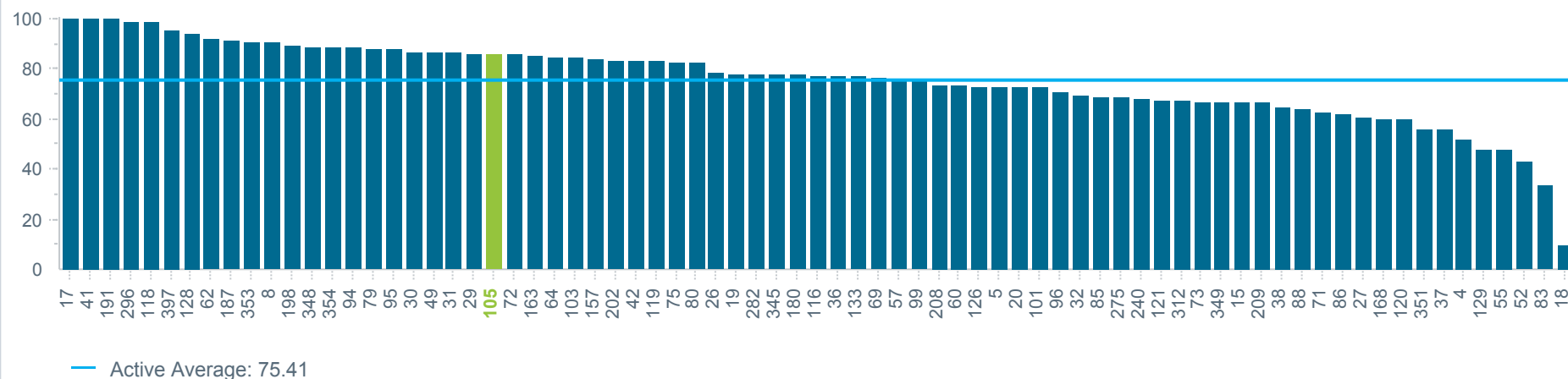


■ Universe: 75 funds

External Management (%)



Active Management (%)

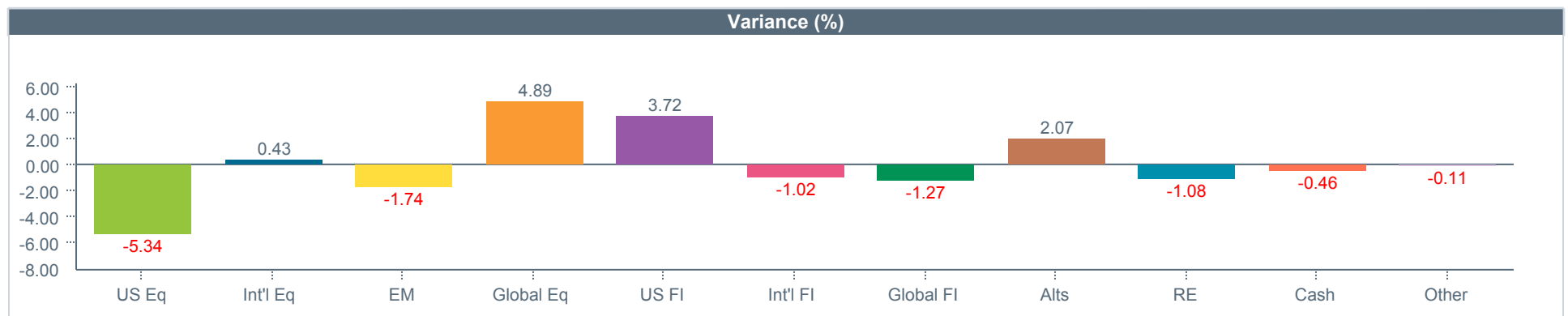
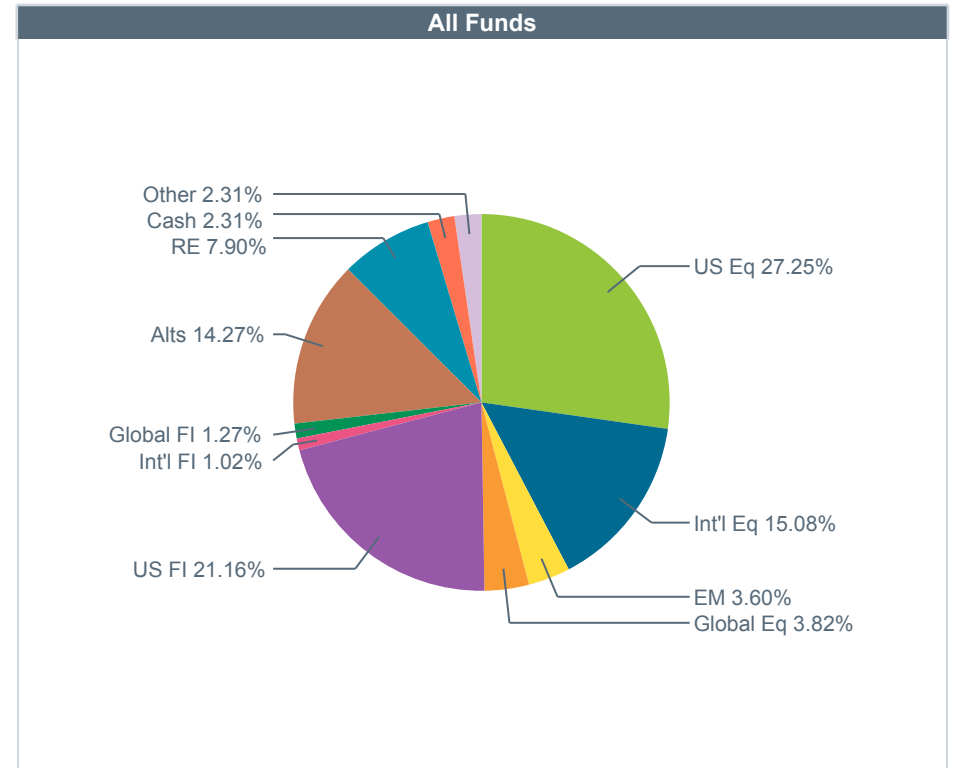
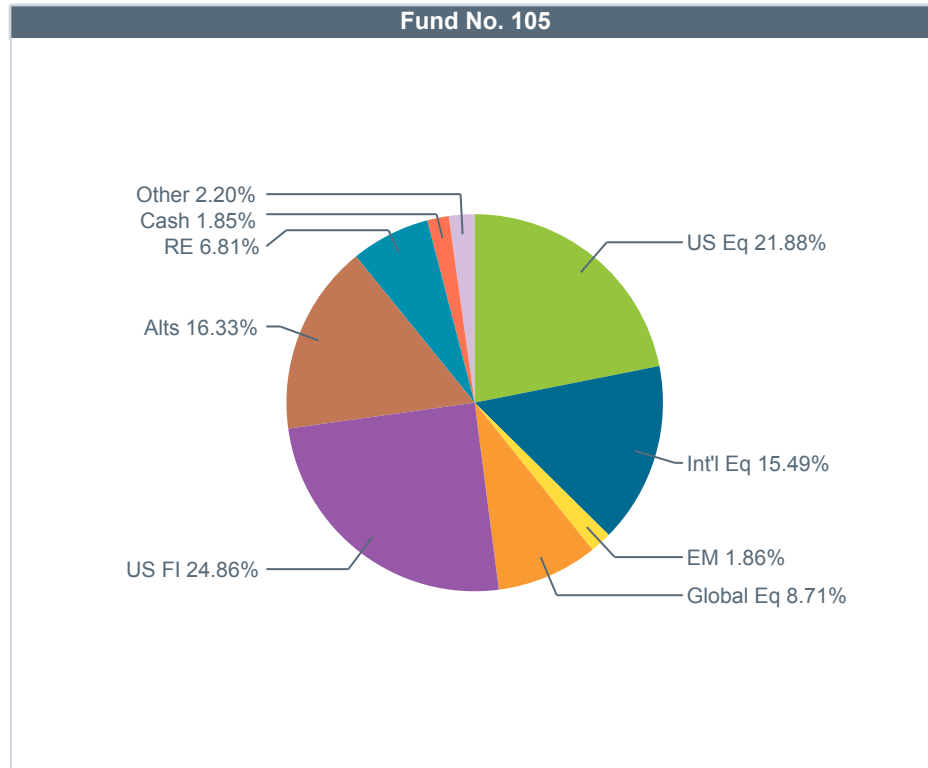


■ Fund No. 105

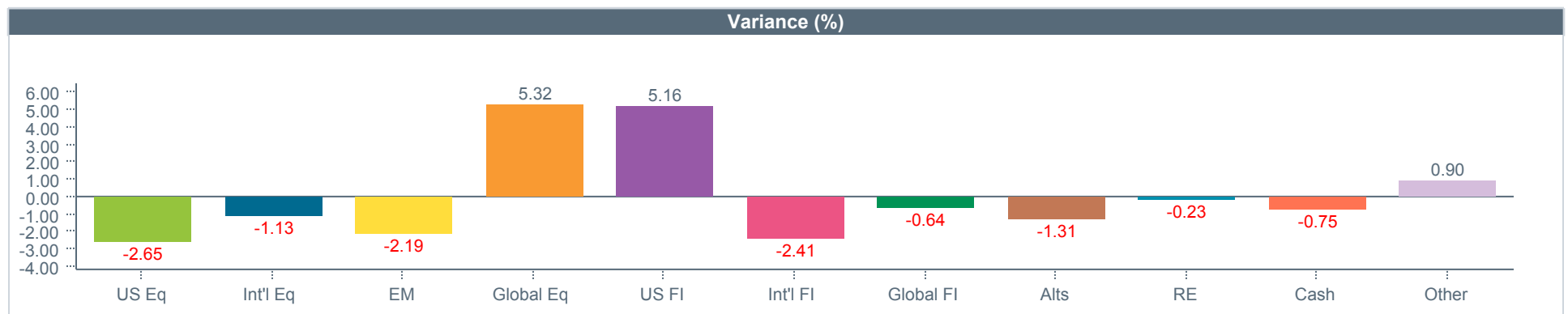
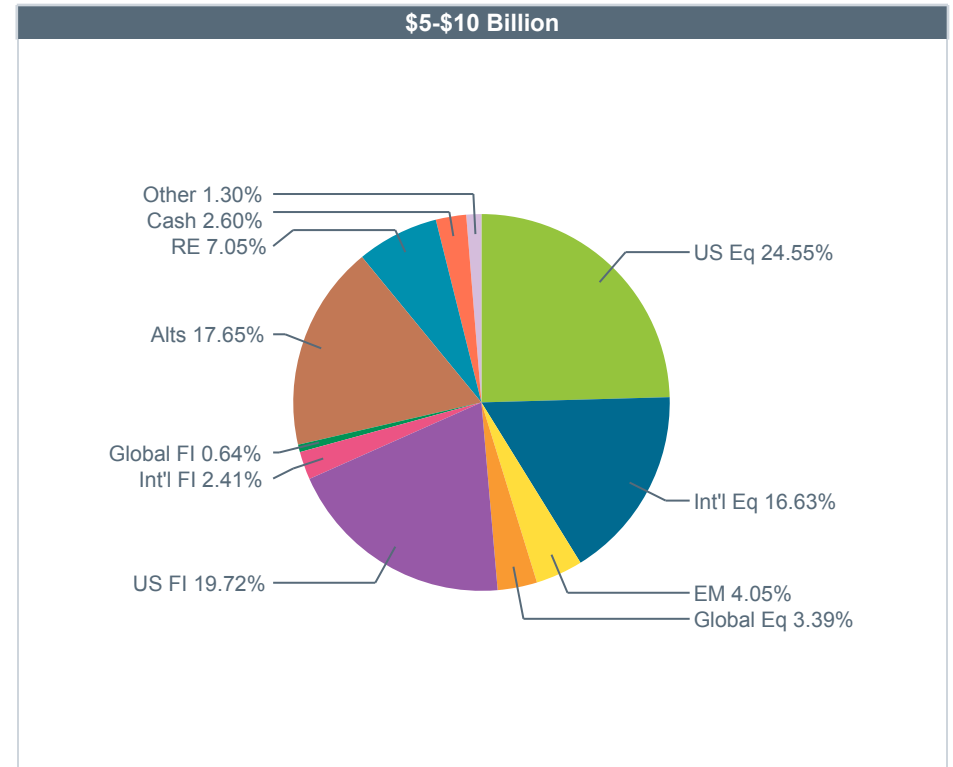
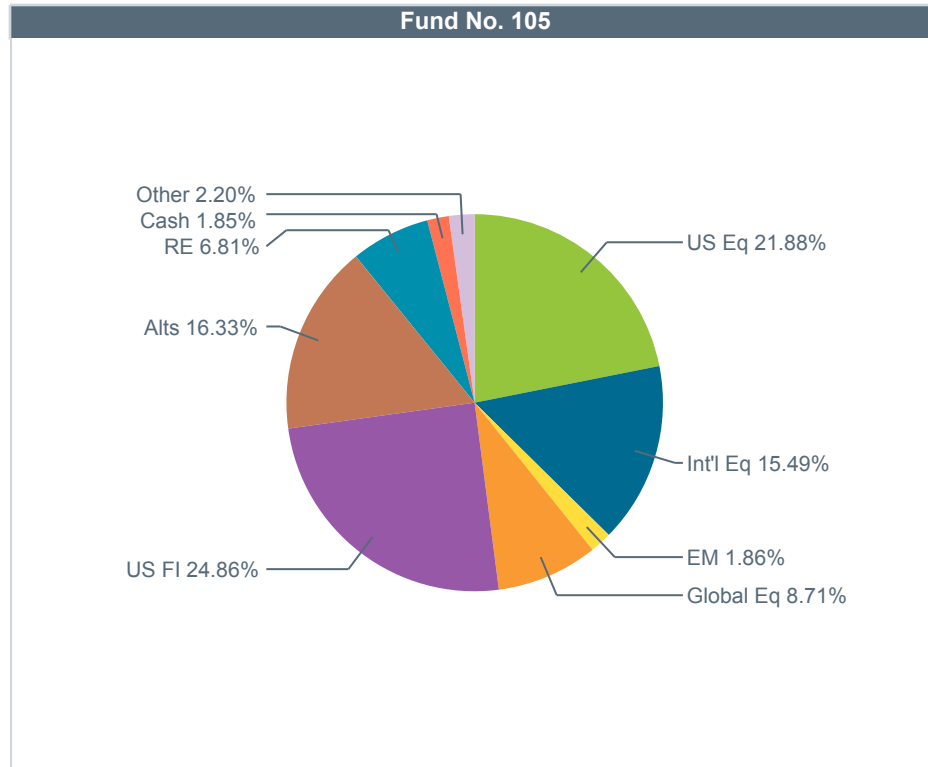
Asset Range	Actively Managed (%)	Passively Managed (%)	Externally Managed (%)	Internally Managed (%)
Over \$20B	76.10	23.90	73.89	26.11
\$10B-\$20B	70.01	29.99	85.43	14.57
\$5B-\$10B	72.93	27.07	97.18	2.82
\$1B-\$5B	77.21	22.79	98.68	1.32
\$500mm-\$1B	73.15	26.85	99.94	0.06
Under \$500mm	81.84	18.16	100.00	0.00
Fund No. 105	85.72	14.28	100.00	0.00

Percentages shown for asset ranges are representative of the average allocation.

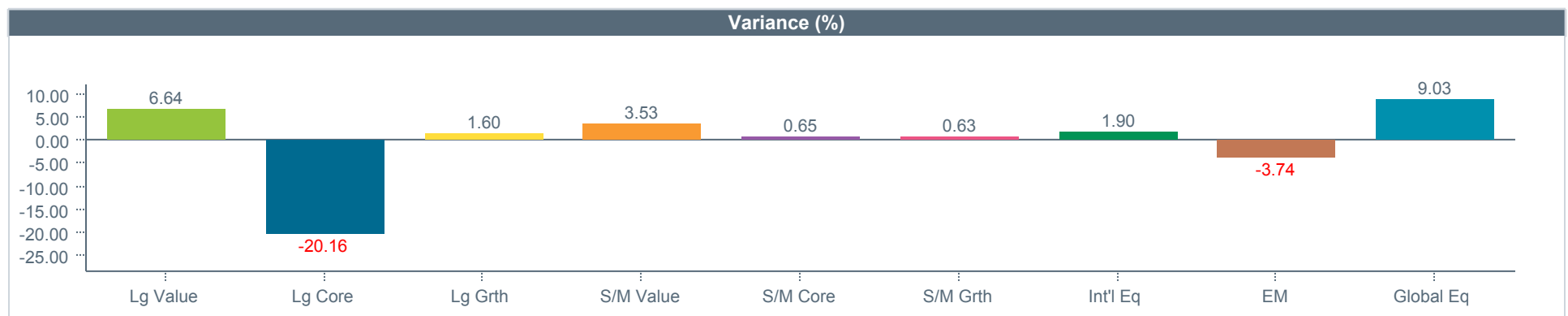
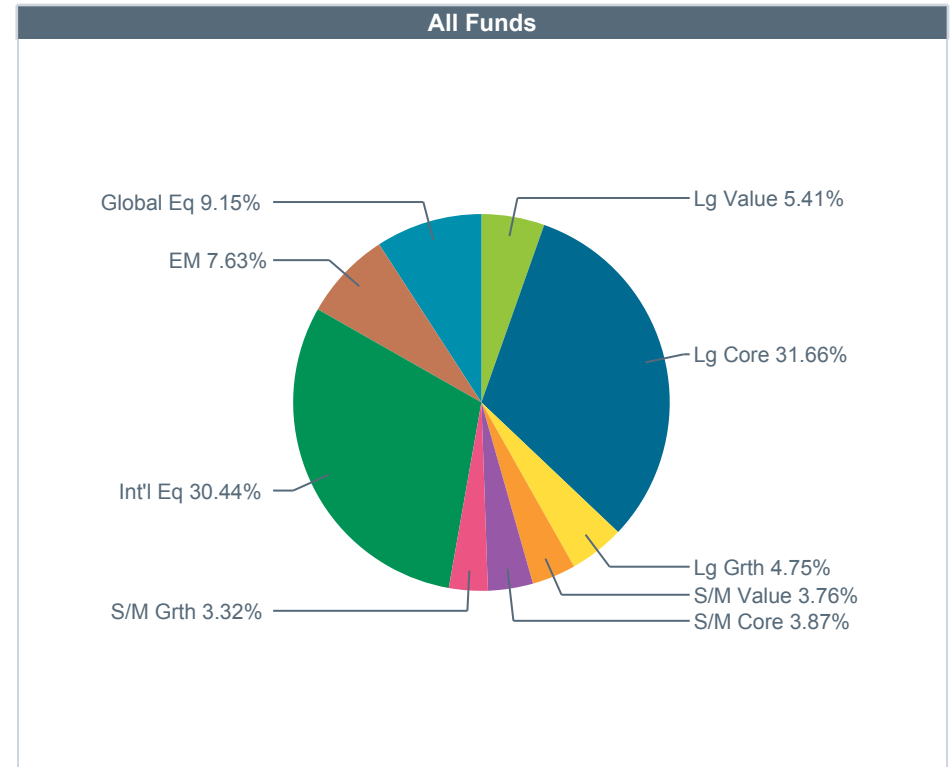
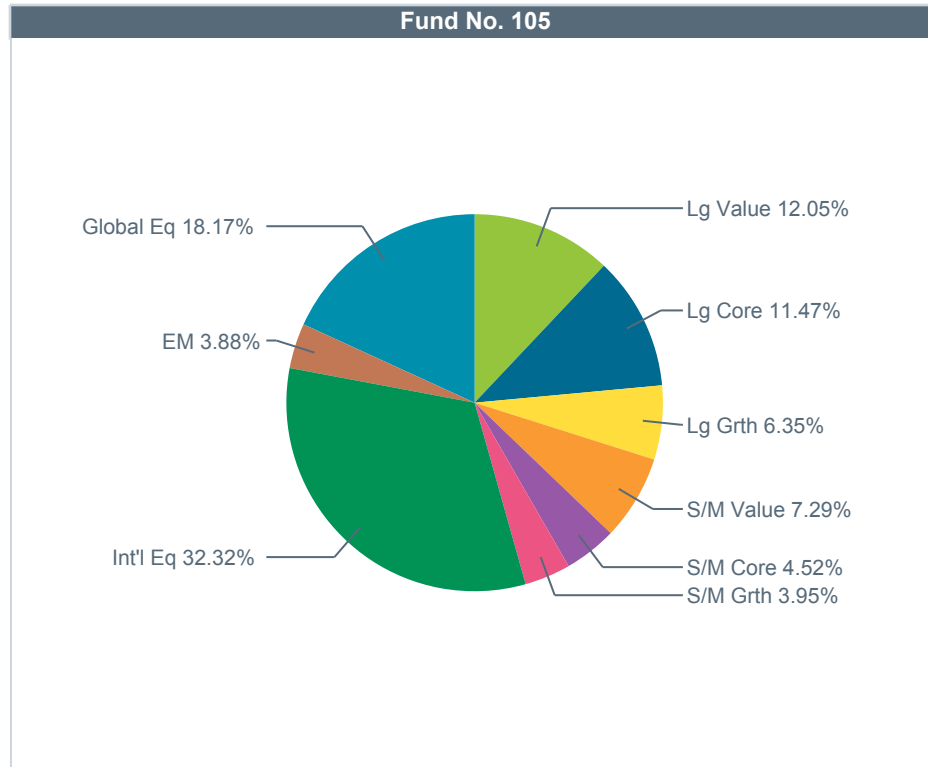
Portfolio (%)	Active Management		External Management	
	Public Fund Universe	Fund No. 105	Public Fund Universe	Fund No. 105
90 to 100	11	0	60	1
50 to 89	59	1	8	0
10 to 49	4	0	6	0
Less than 10	1	0	1	0
Total Funds Reporting	75	1	75	1



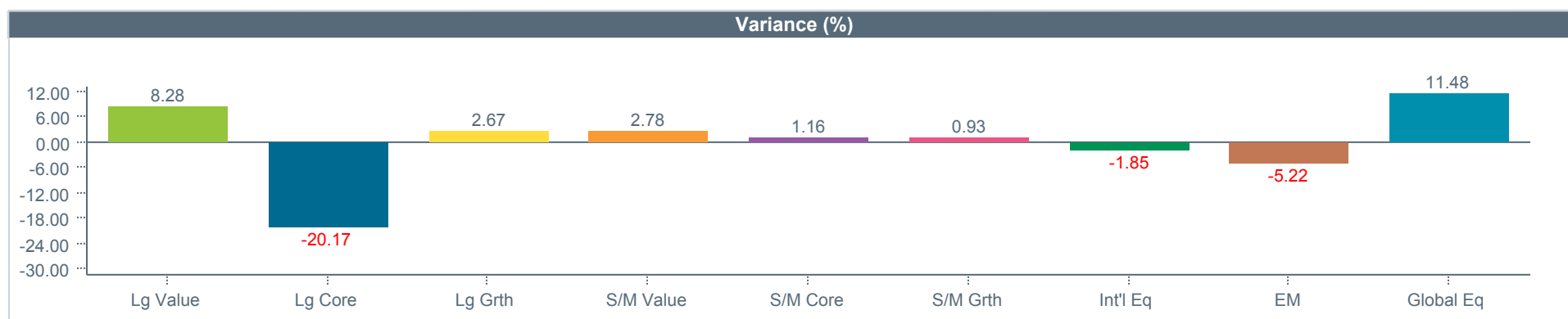
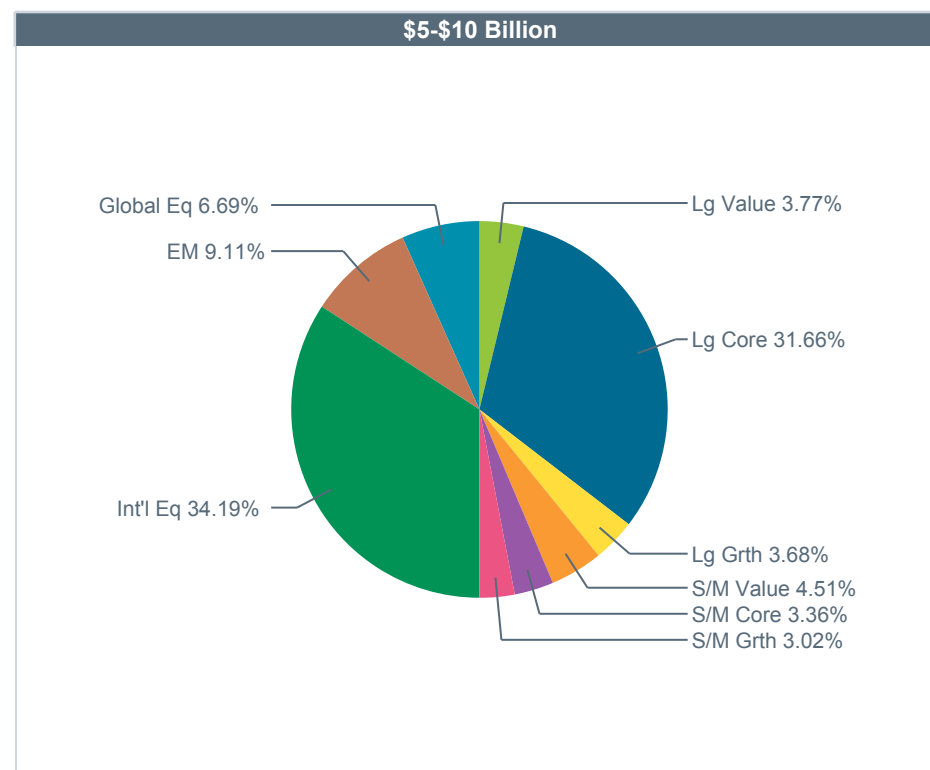
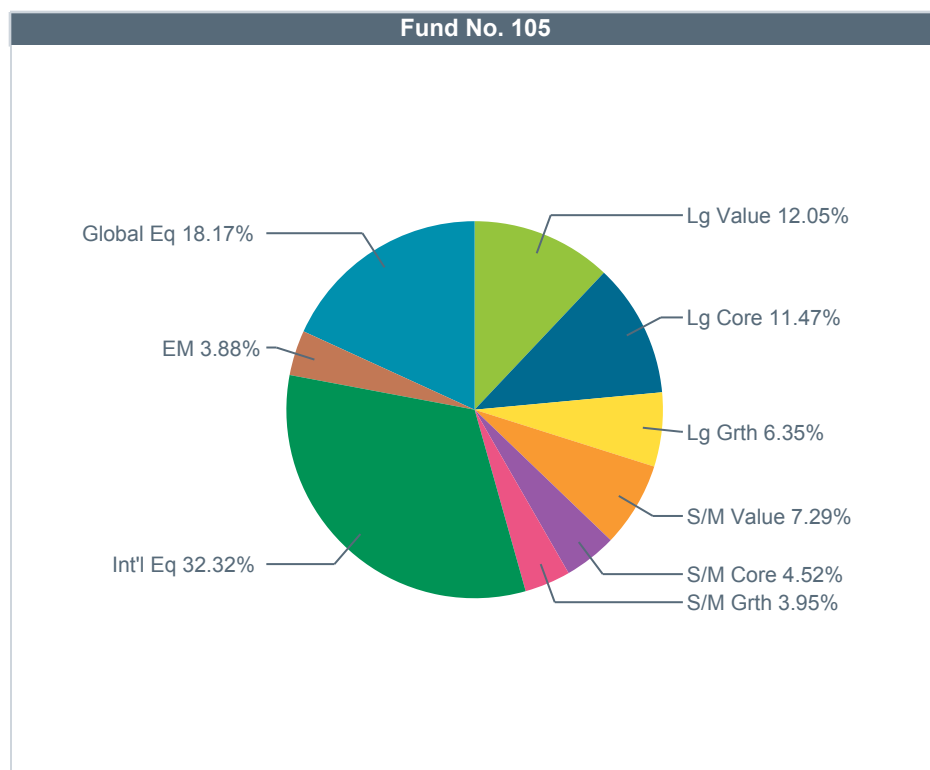
Allocations shown may not sum up to 100% exactly due to rounding.



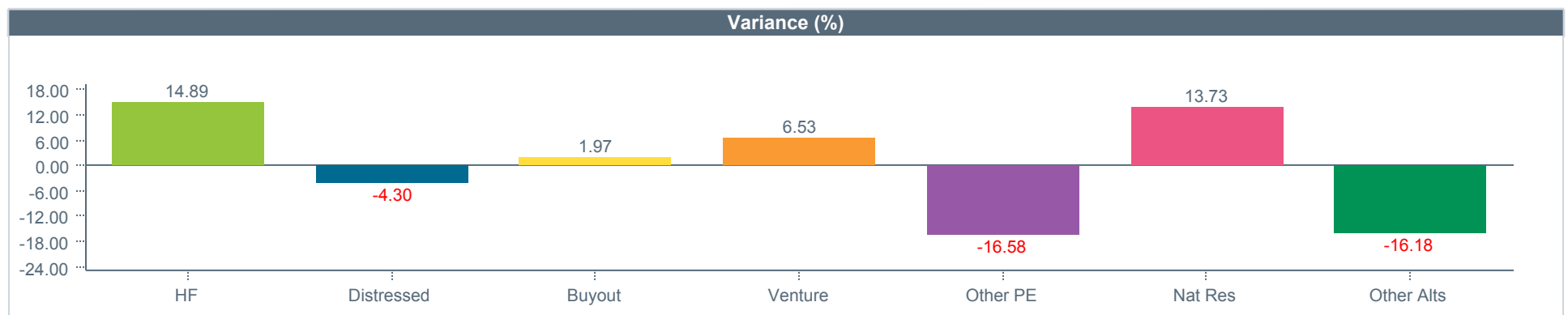
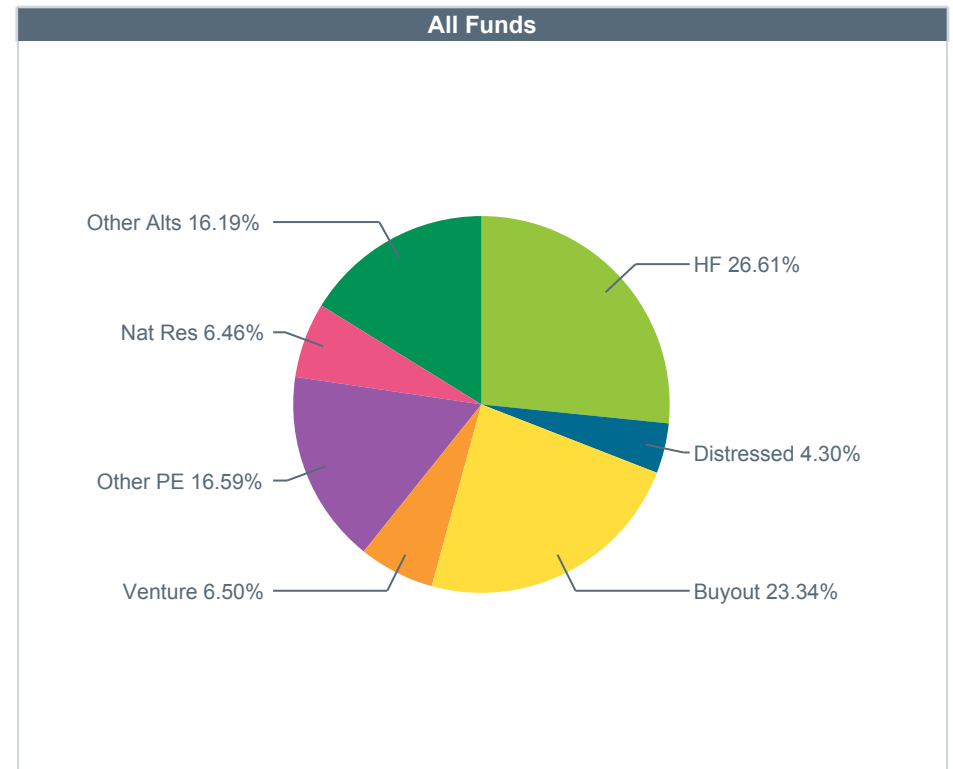
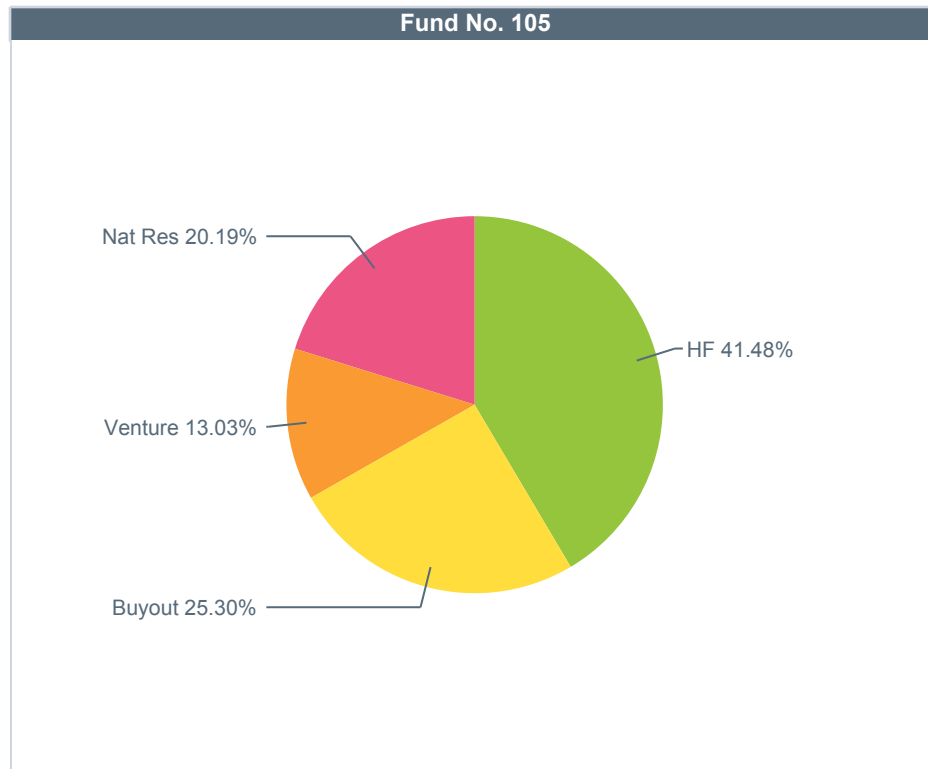
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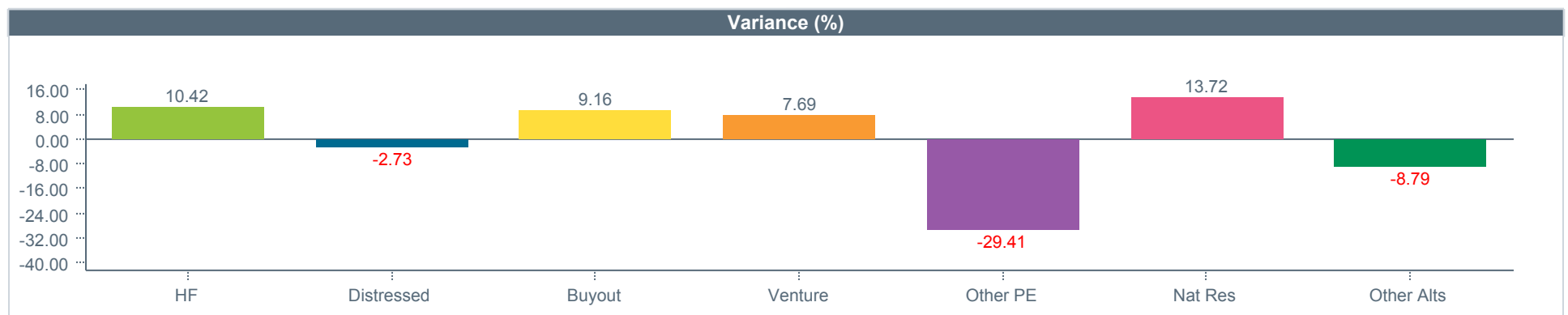
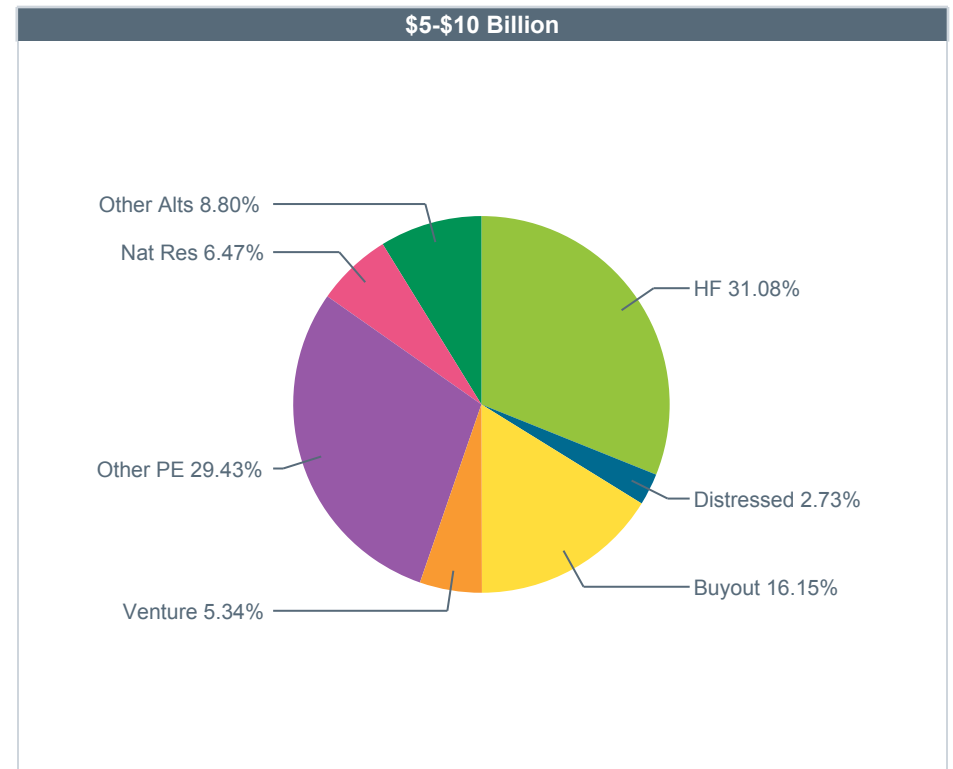
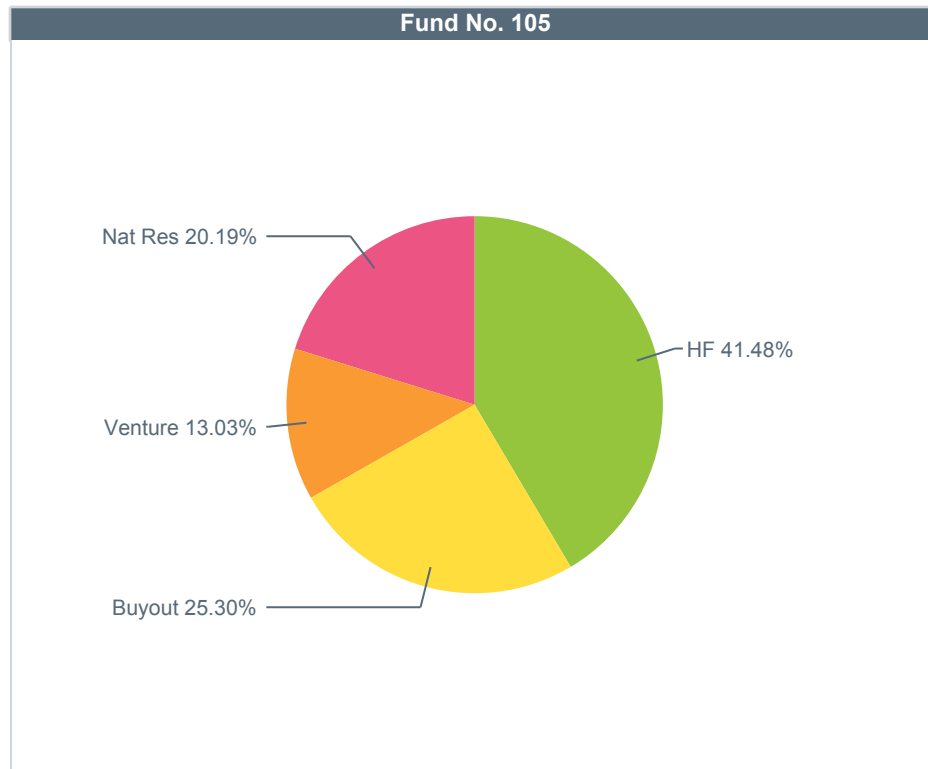
Allocations shown may not sum up to 100% exactly due to rounding.



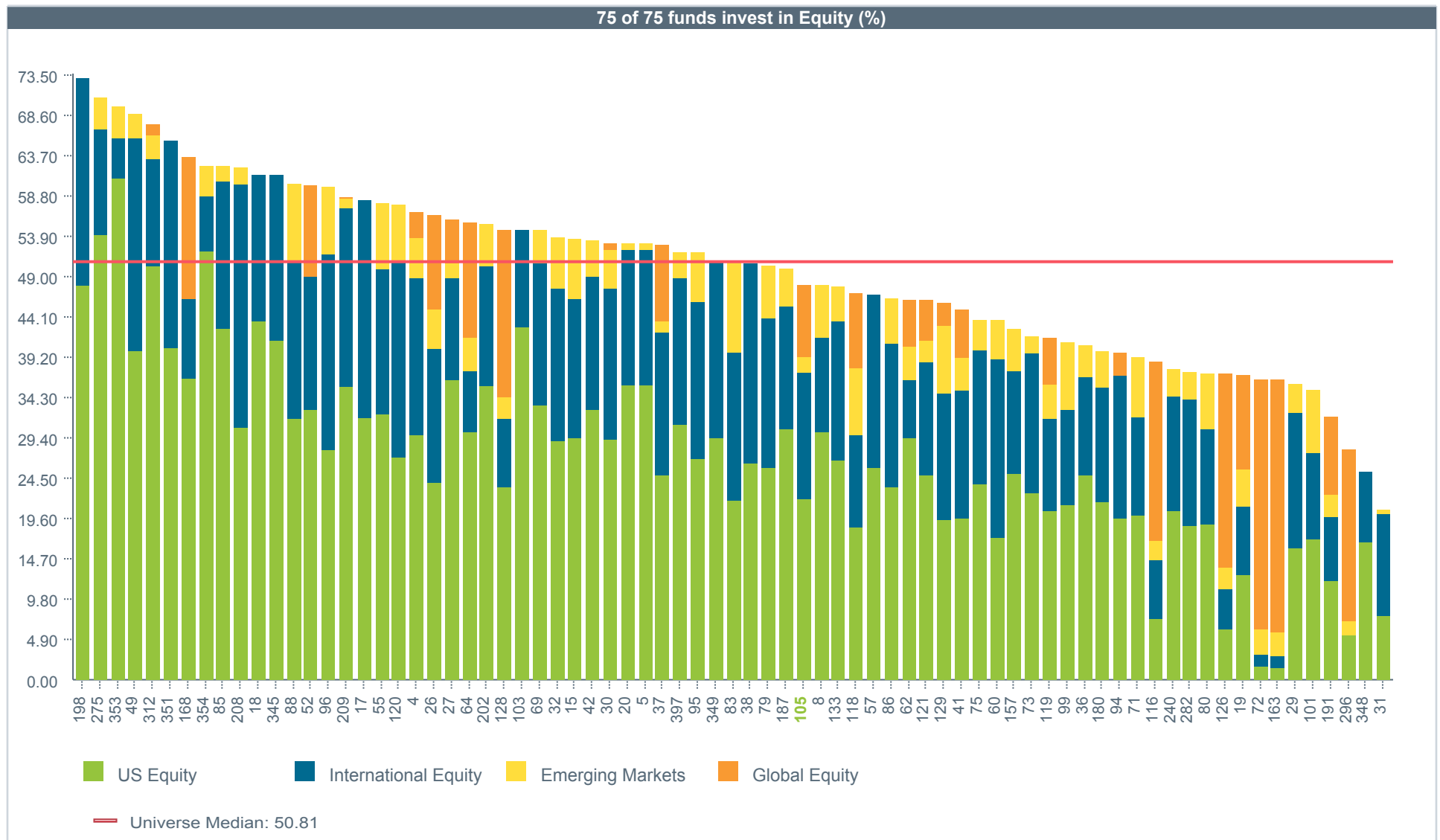
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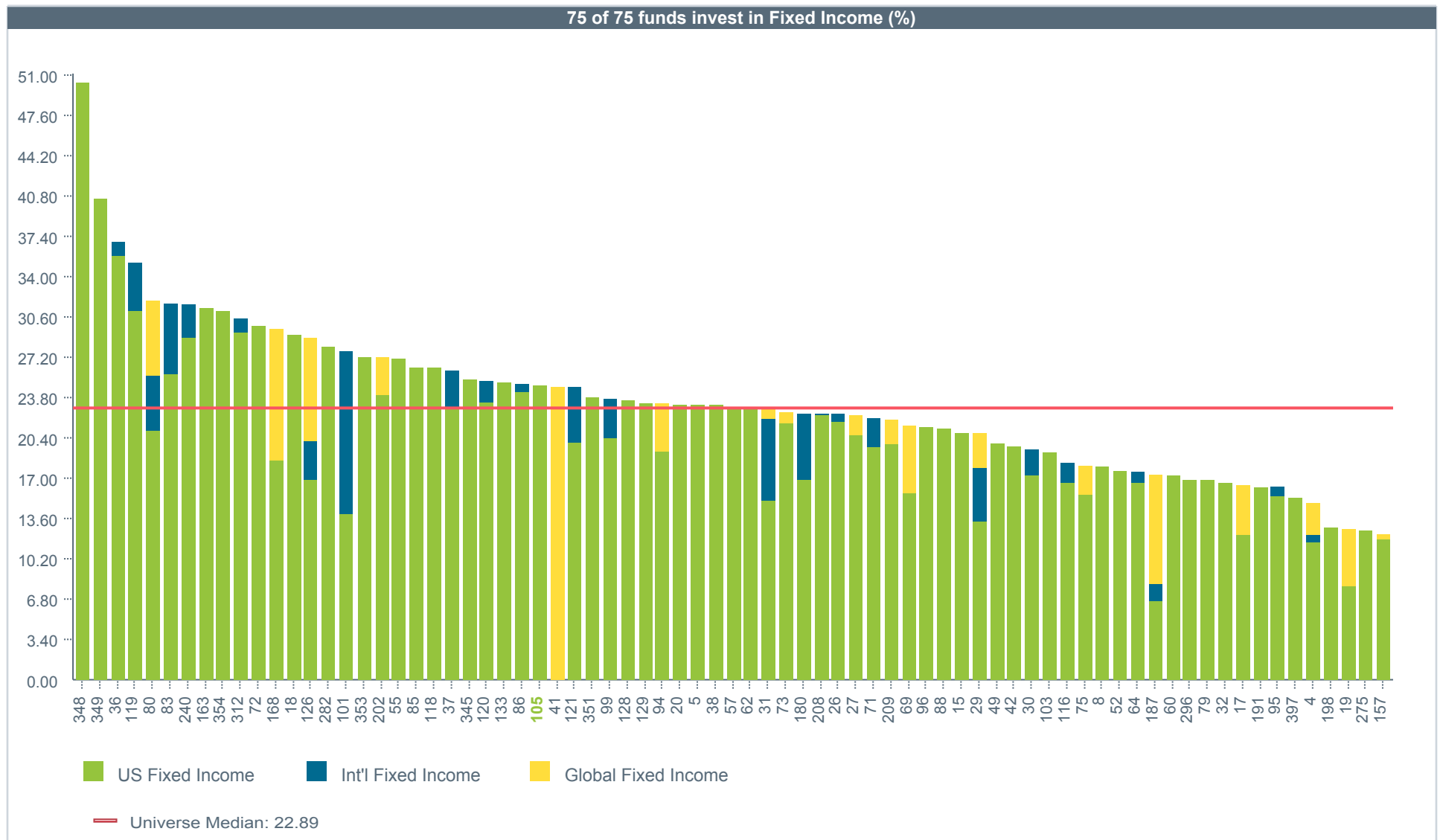


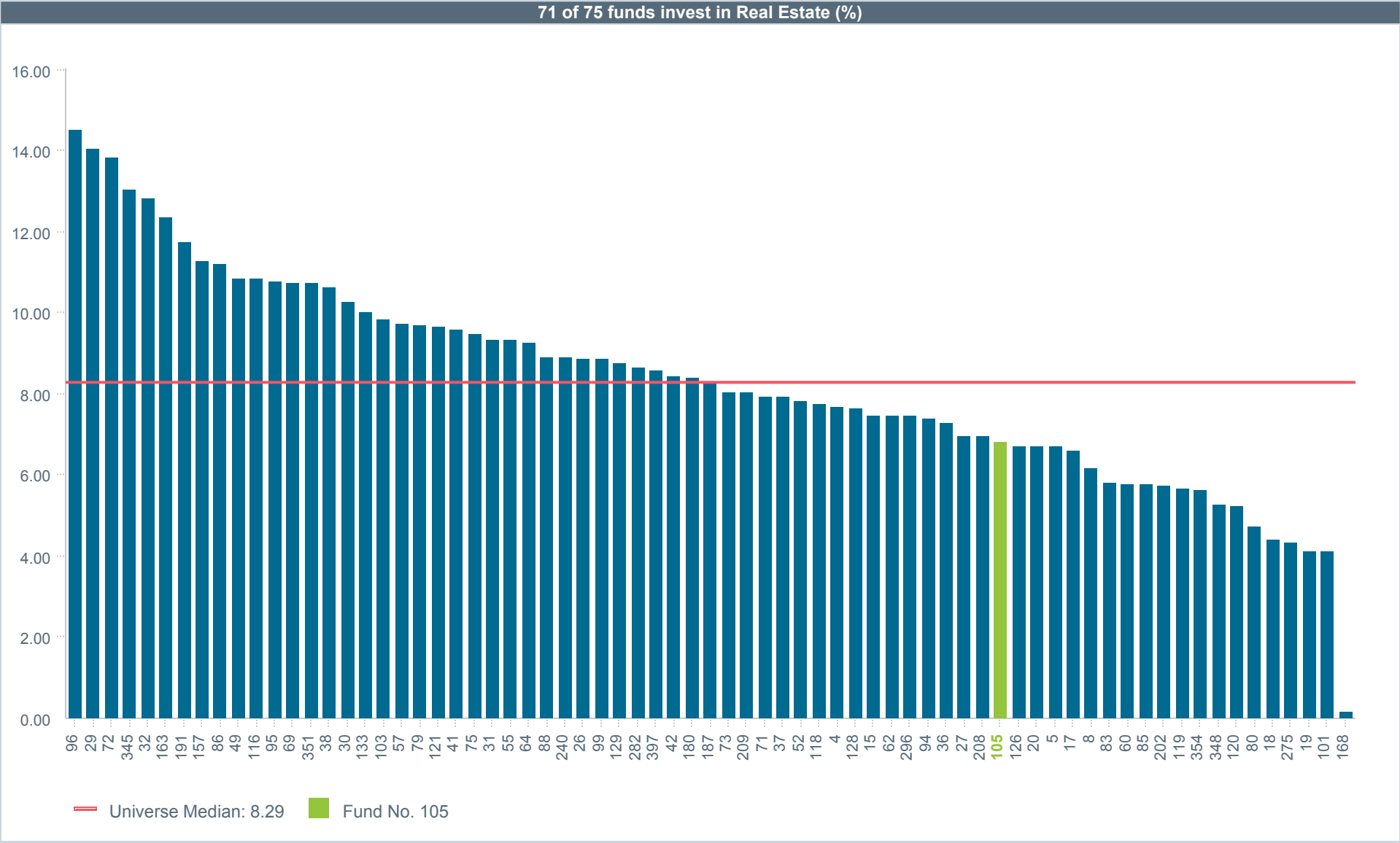
Allocations shown may not sum up to 100% exactly due to rounding.

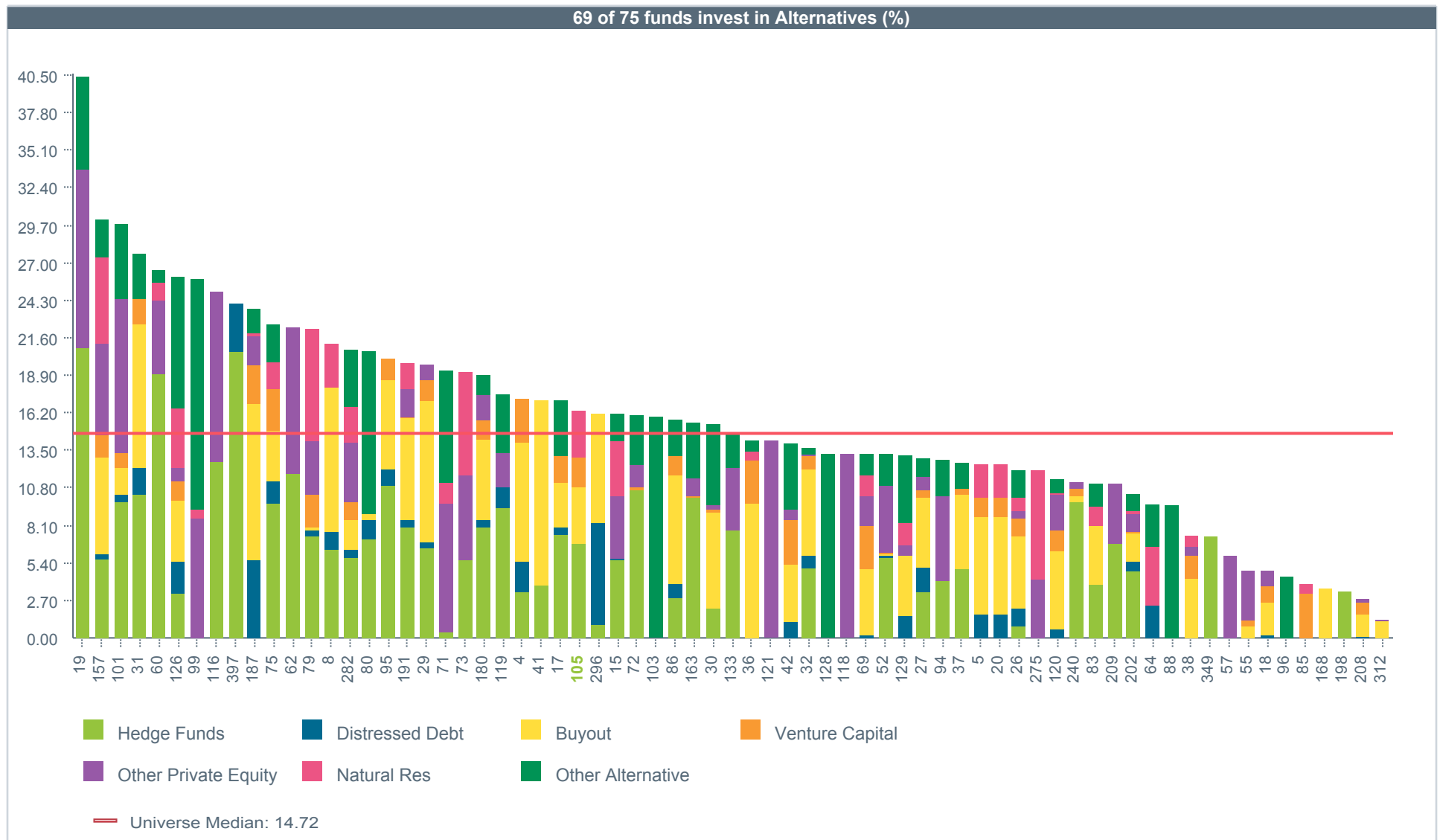


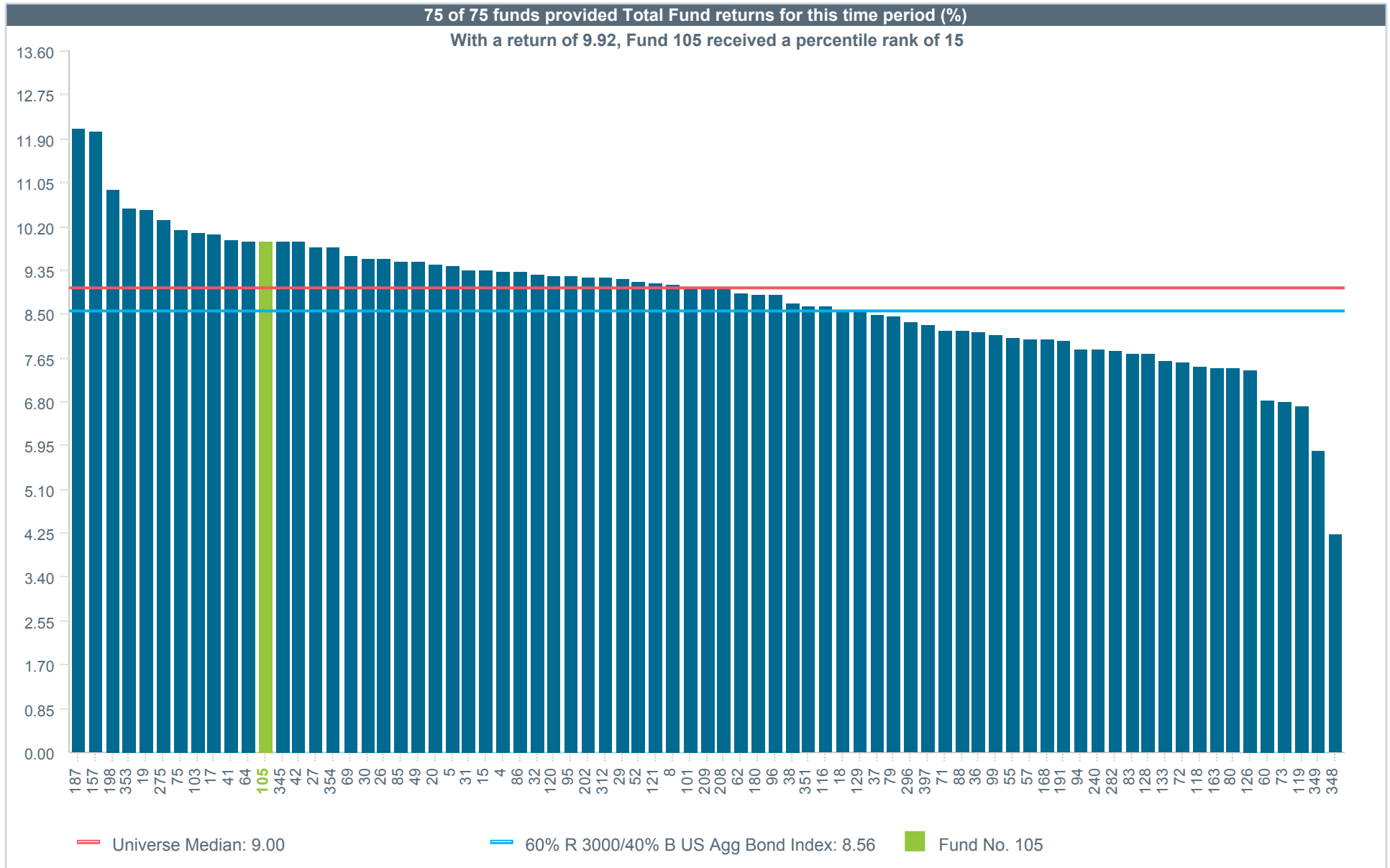
Allocations shown may not sum up to 100% exactly due to rounding.





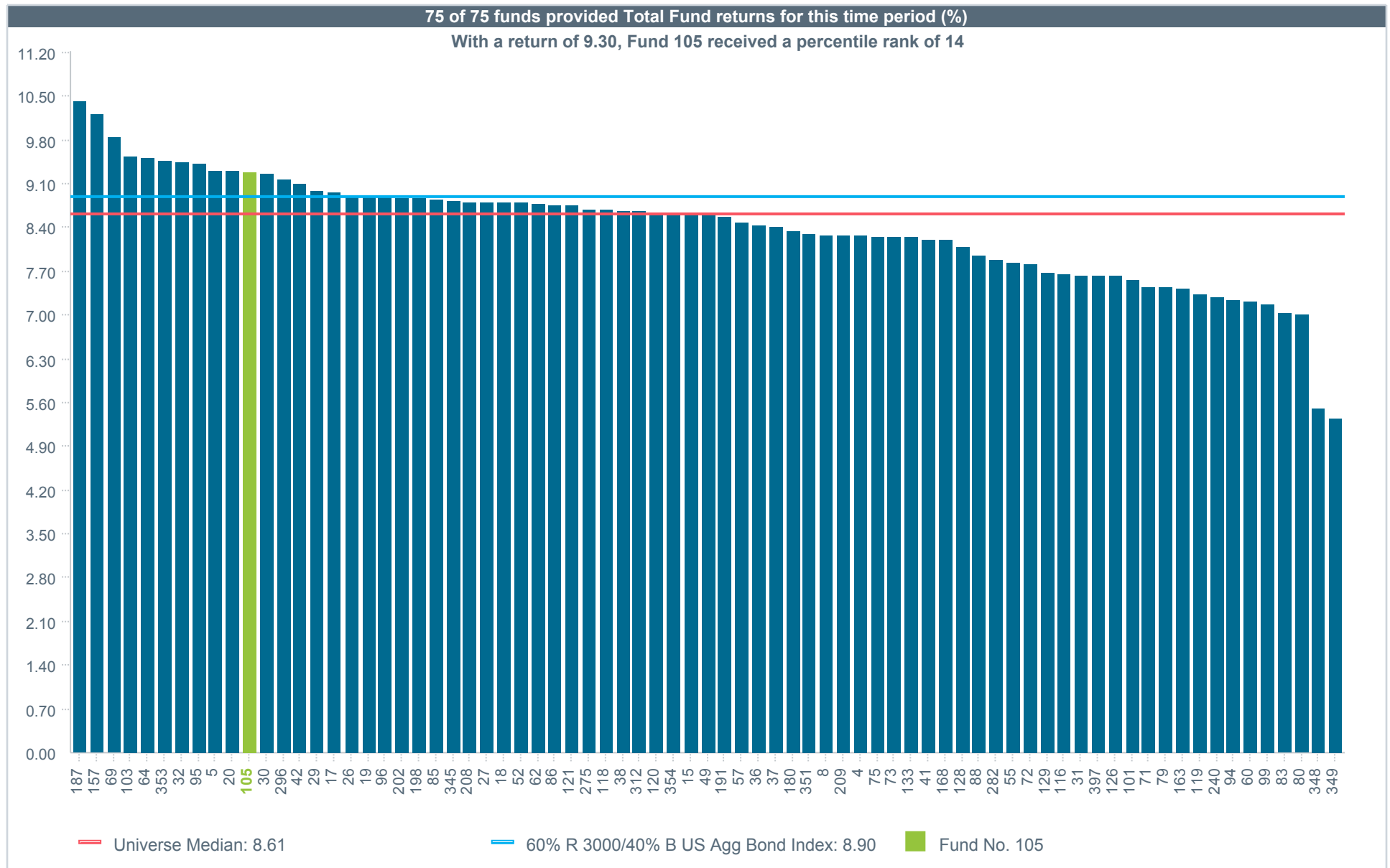




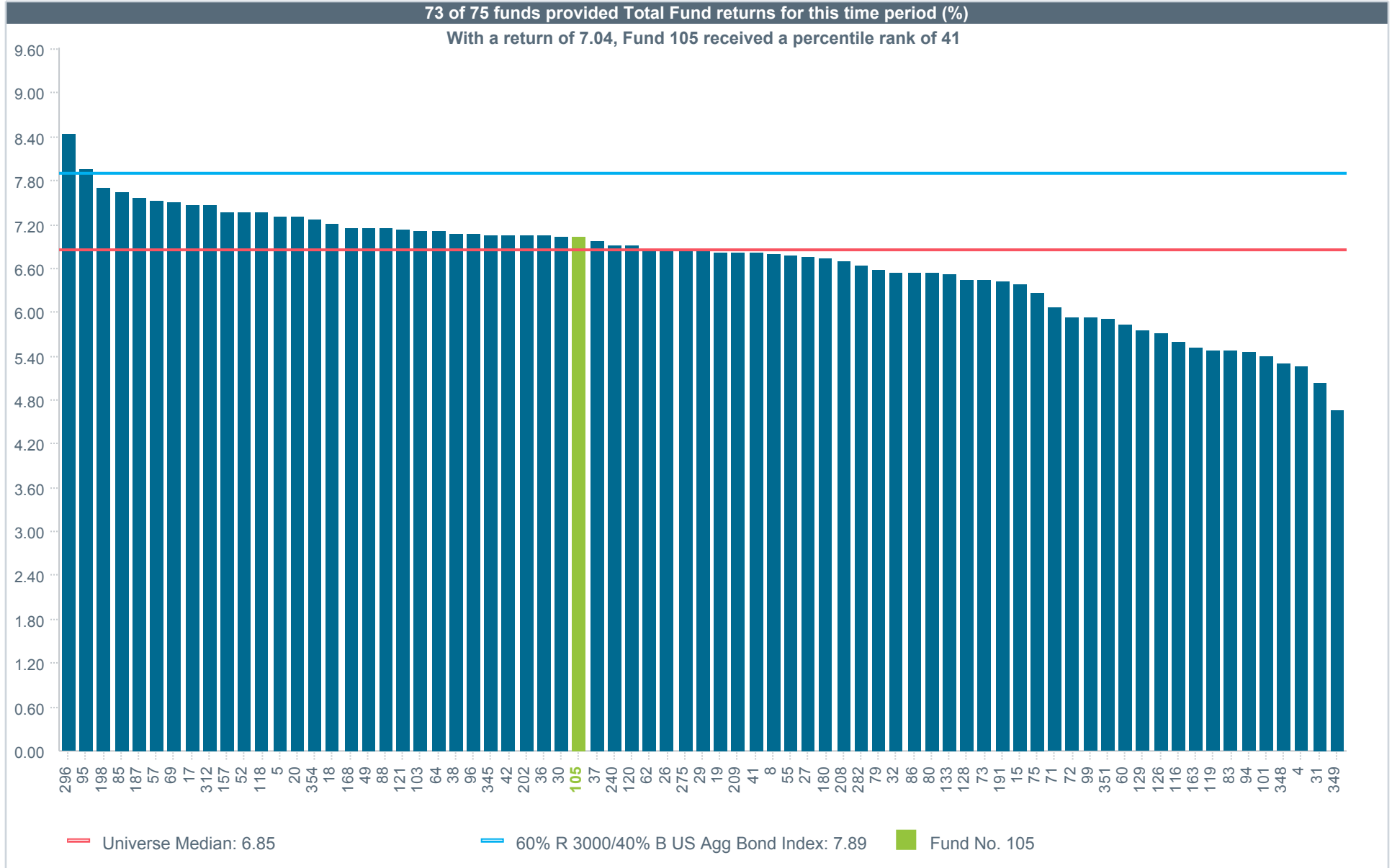


Funds with less history than the specified time period will not appear in the chart.





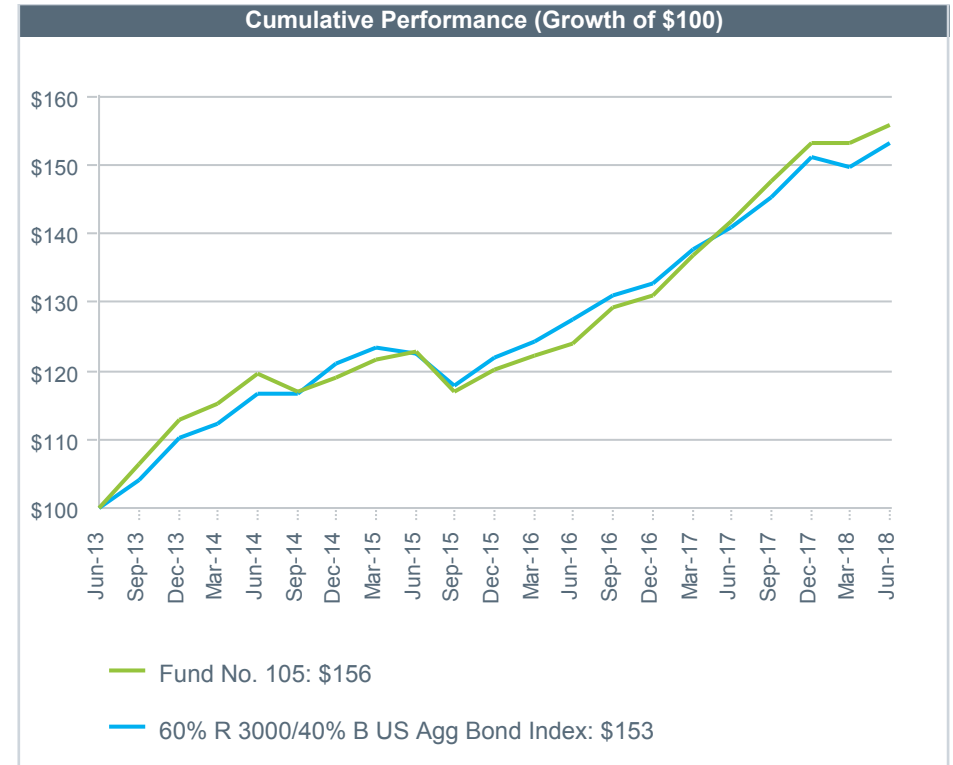
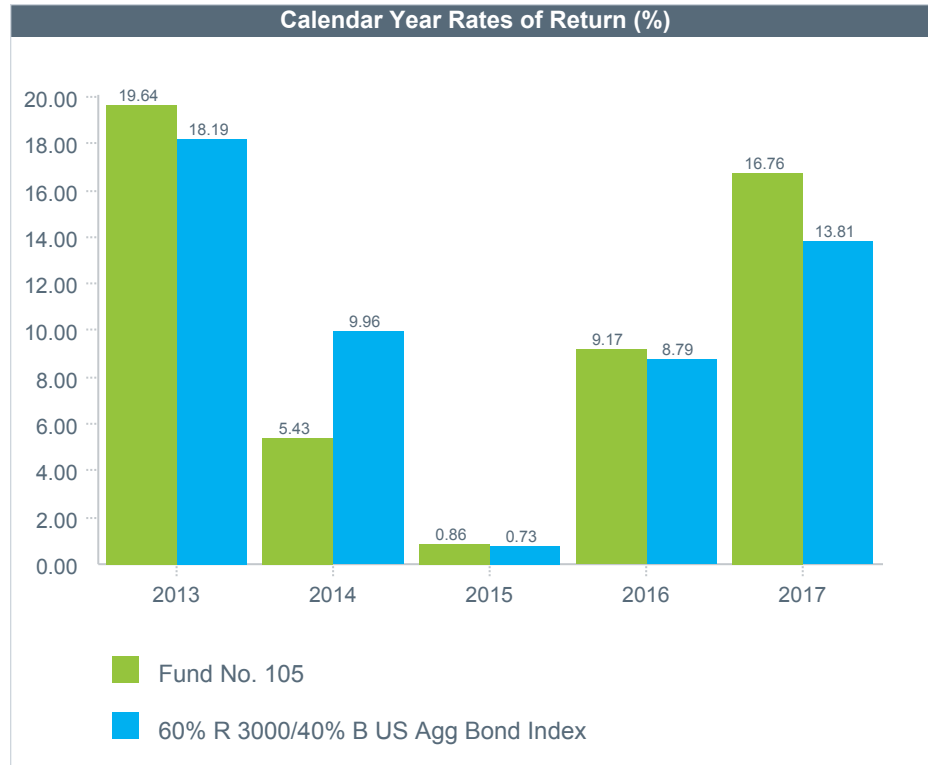
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Funds with less history than the specified time period will not appear in the chart.

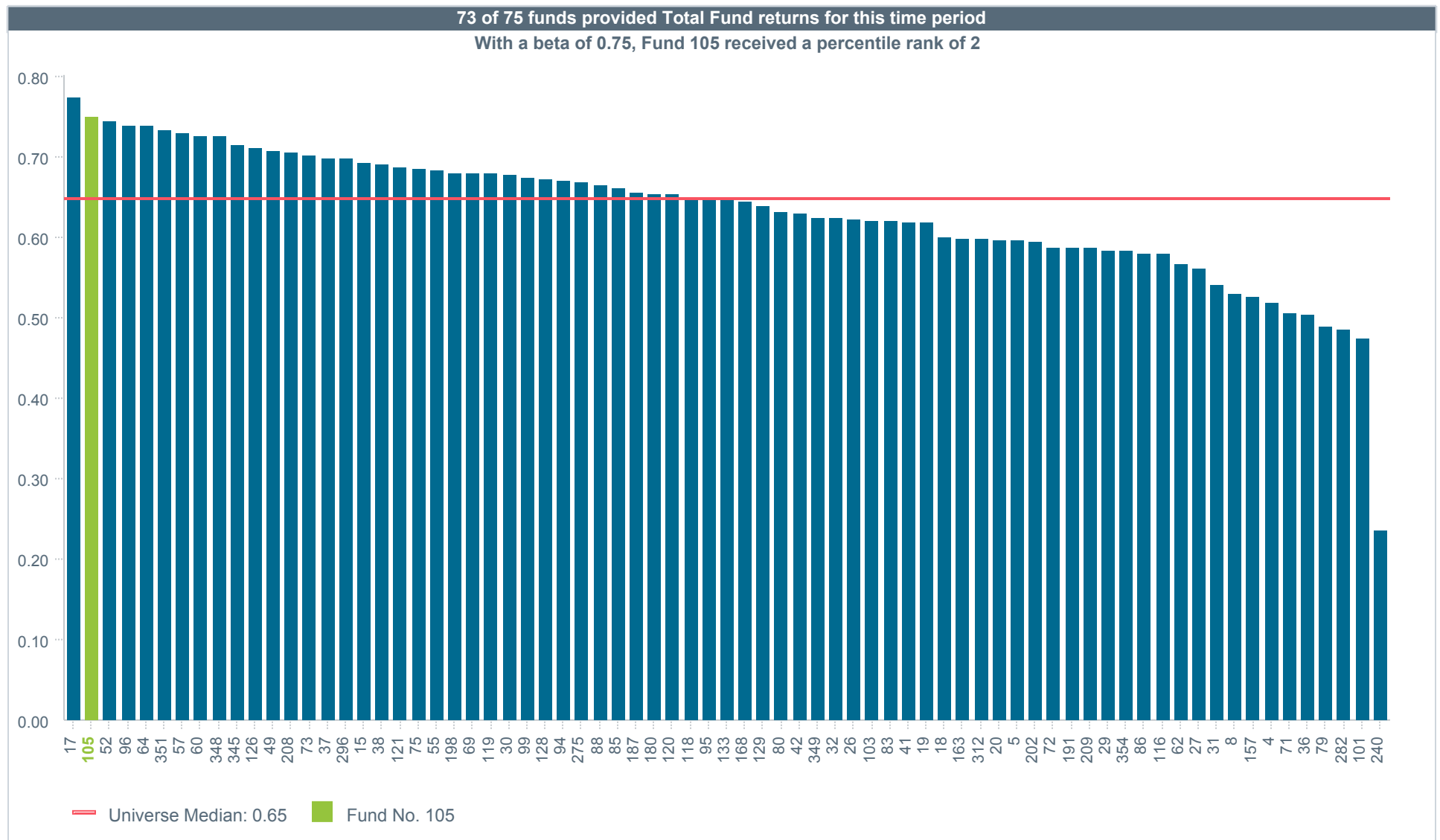
Total Return - Total Fund
Fund No. 105 vs. 60% R 3000/40% B US Agg Bond Index

As of June 30, 2018

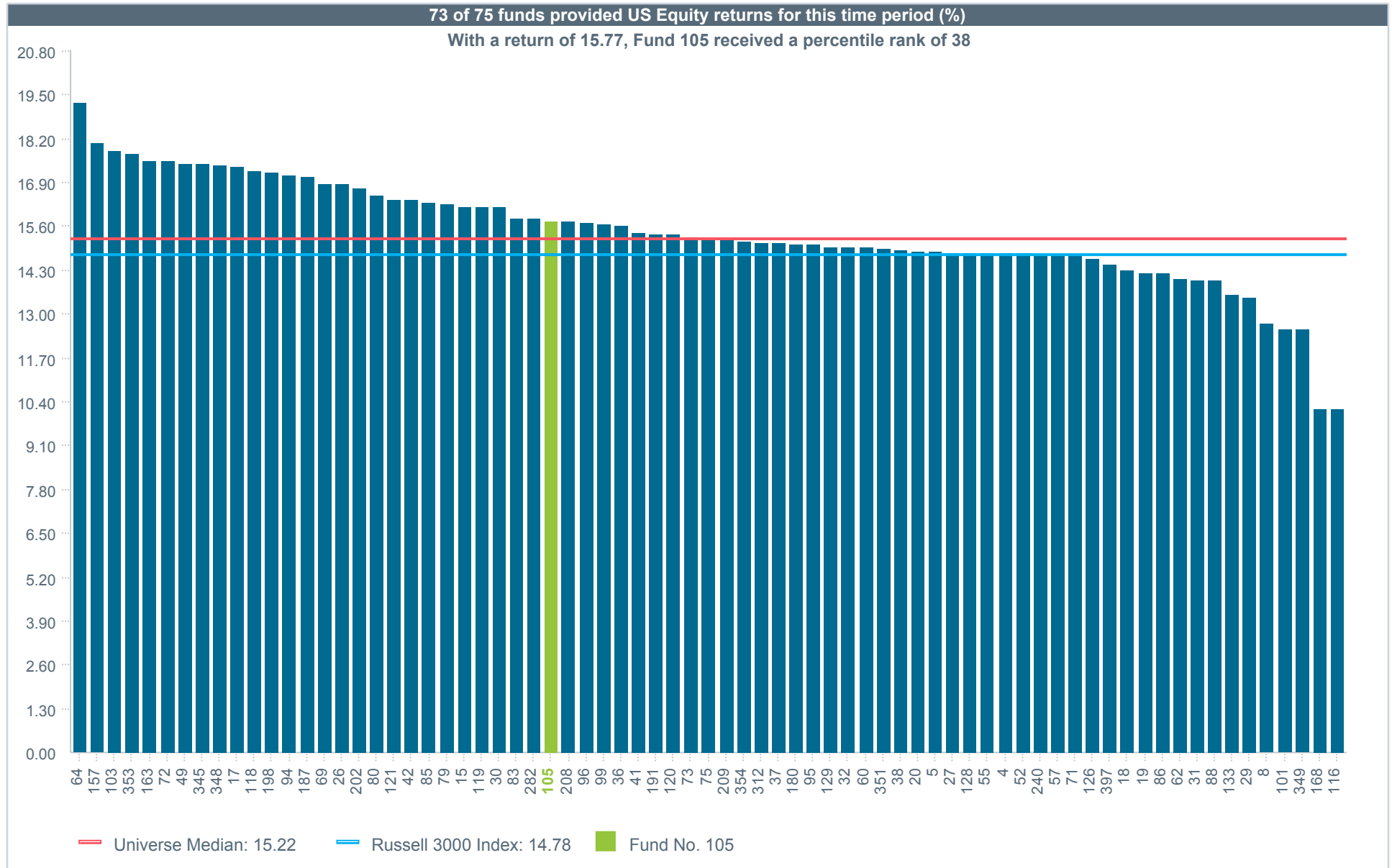


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 105	9.92	8.30	9.30
60% R 3000/40% B US Agg Bond Index	8.56	7.69	8.90
Variance	1.36	0.61	0.40

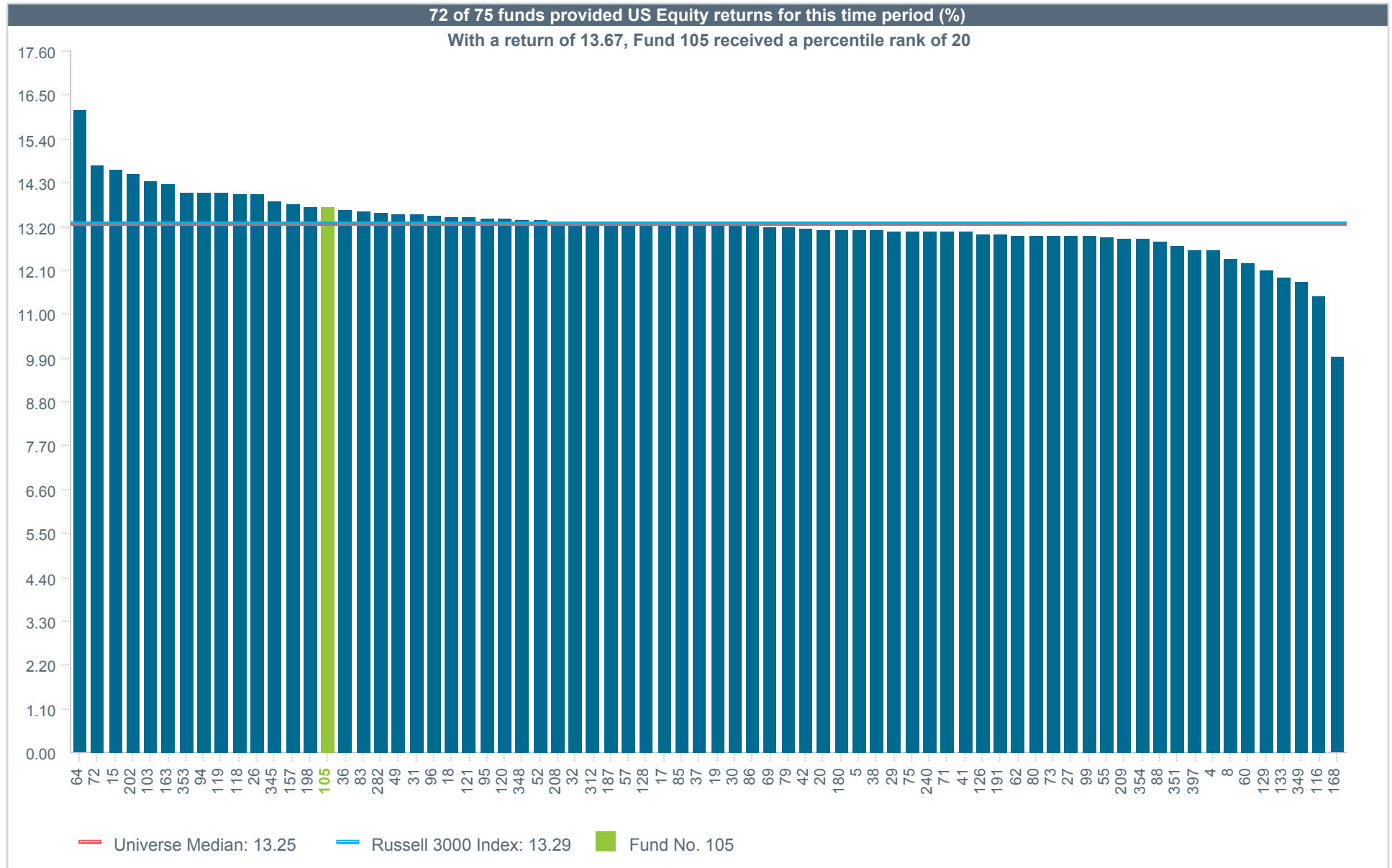




Funds with less history than the specified time period will not appear in the chart. Benchmark used is the S&P 500 Index (Cap Wtd).

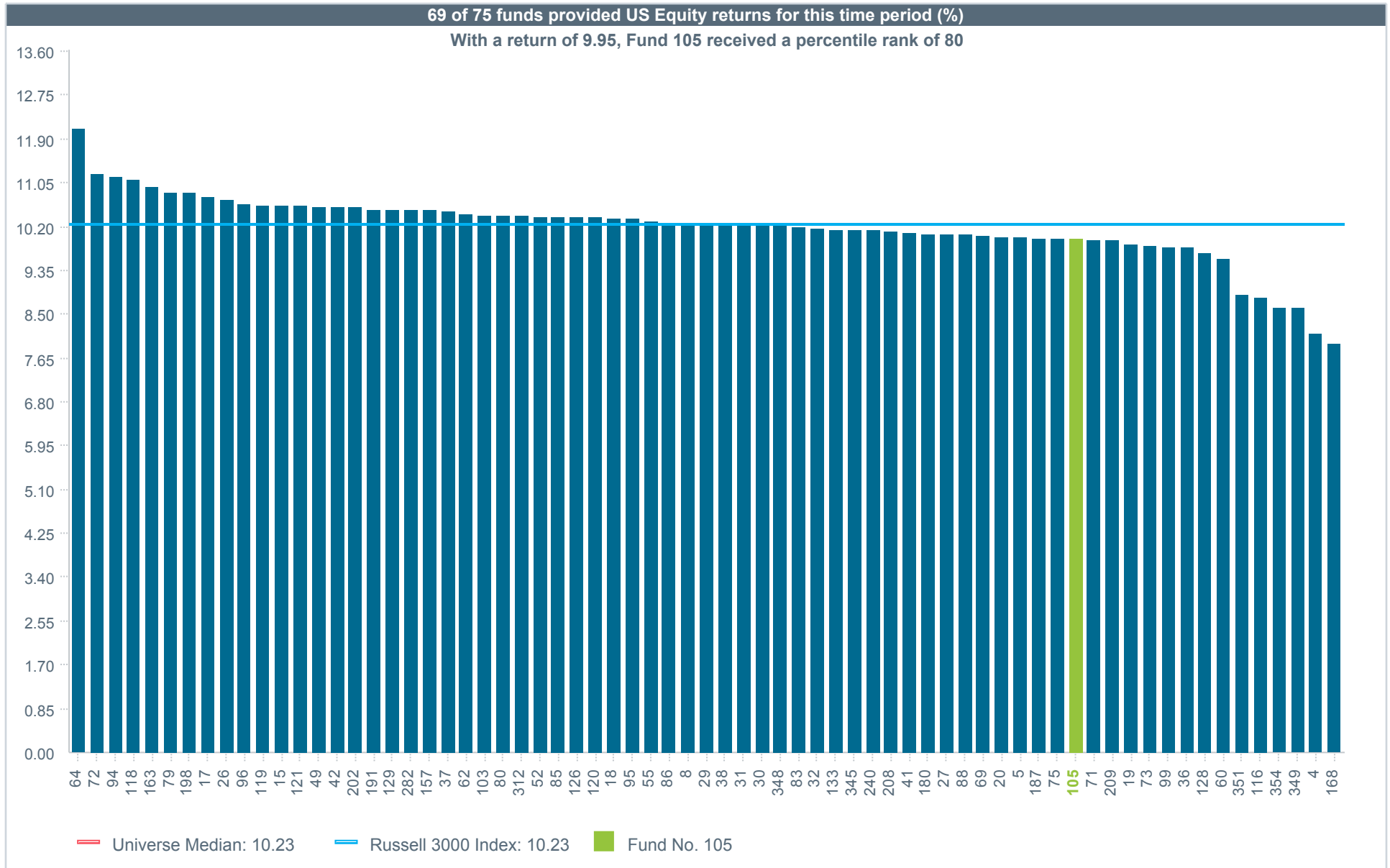


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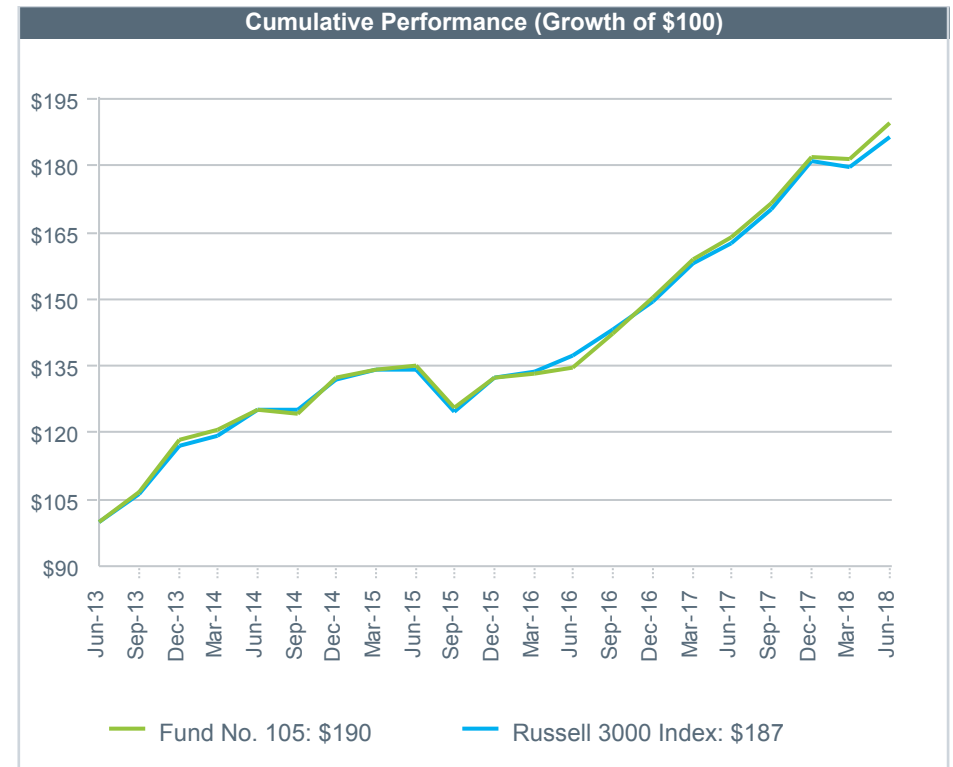
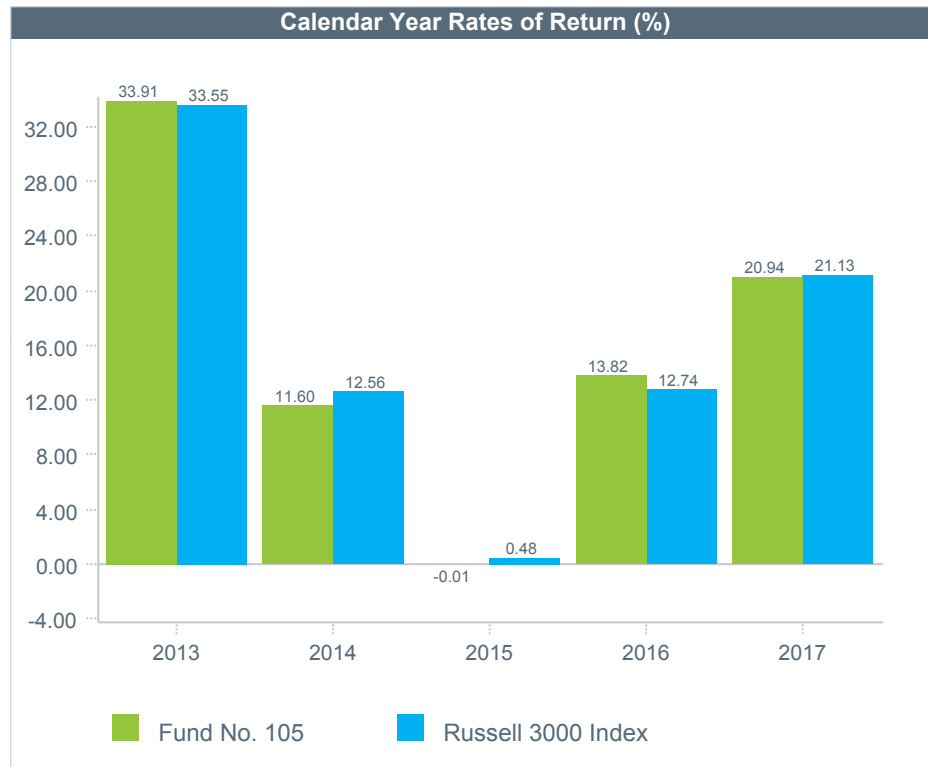




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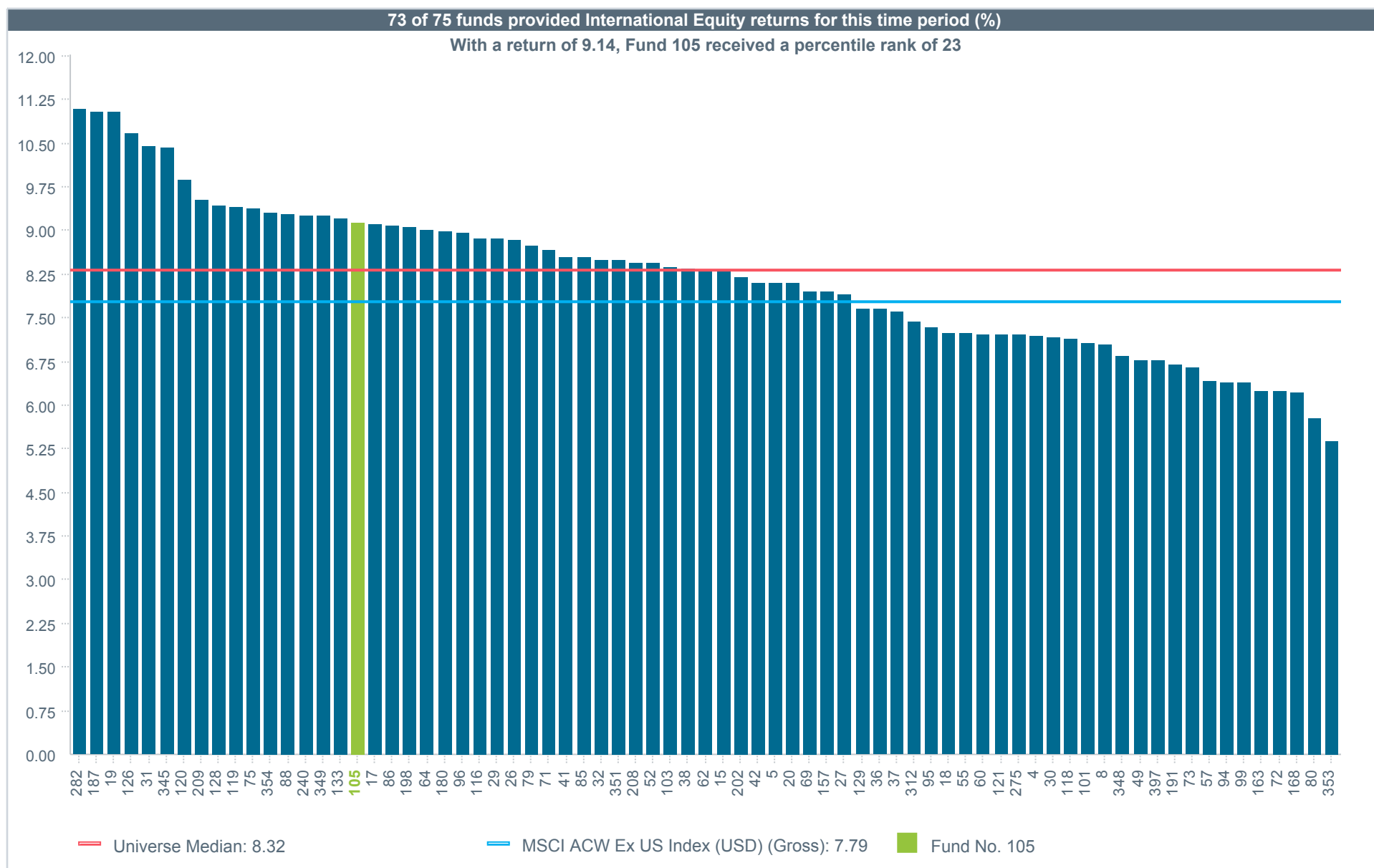
Total Return - US Equity
Fund No. 105 vs. Russell 3000 Index

As of June 30, 2018



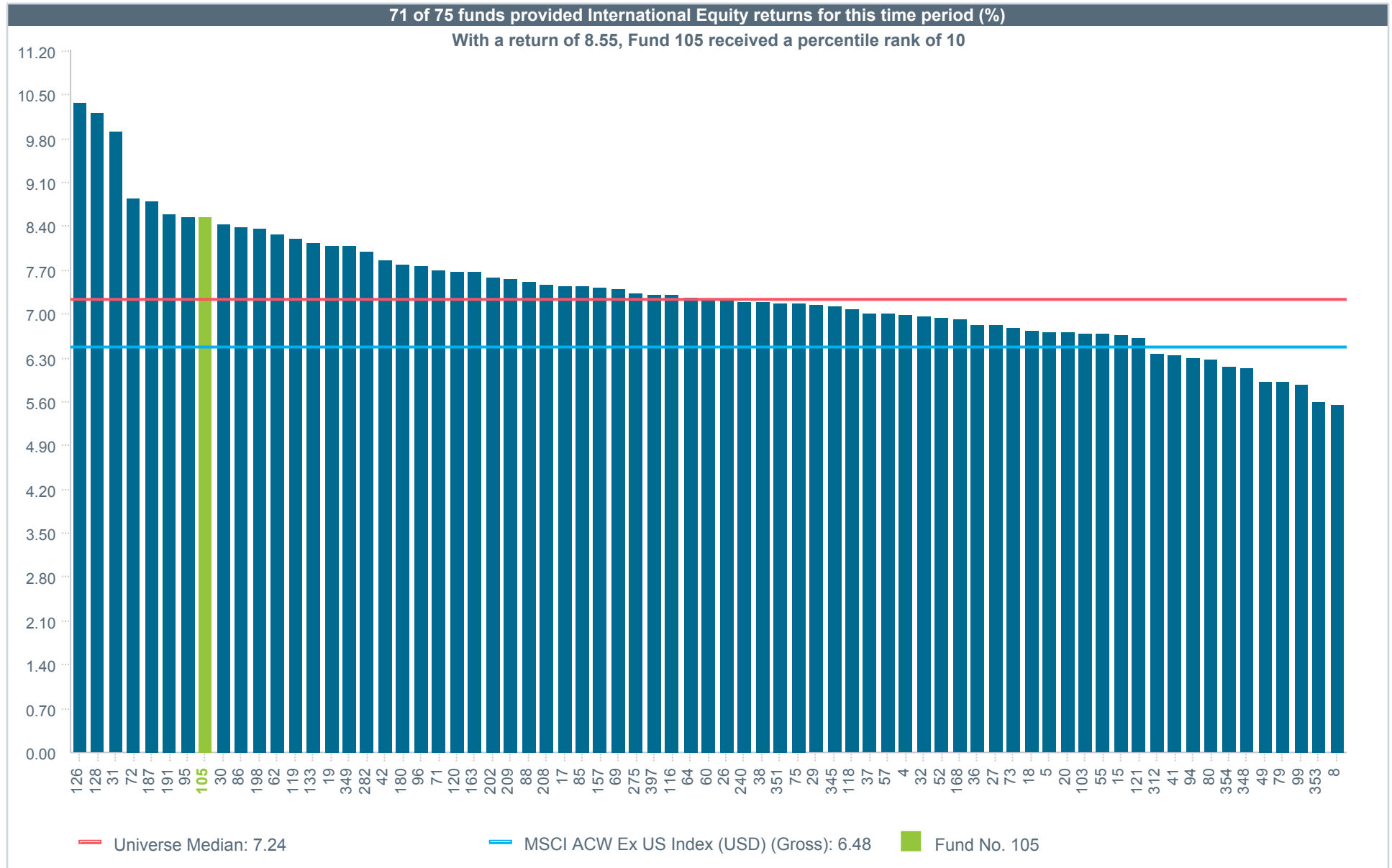
Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 105	15.77	12.06	13.67
Russell 3000 Index	14.78	11.58	13.29
Variance	0.99	0.48	0.38



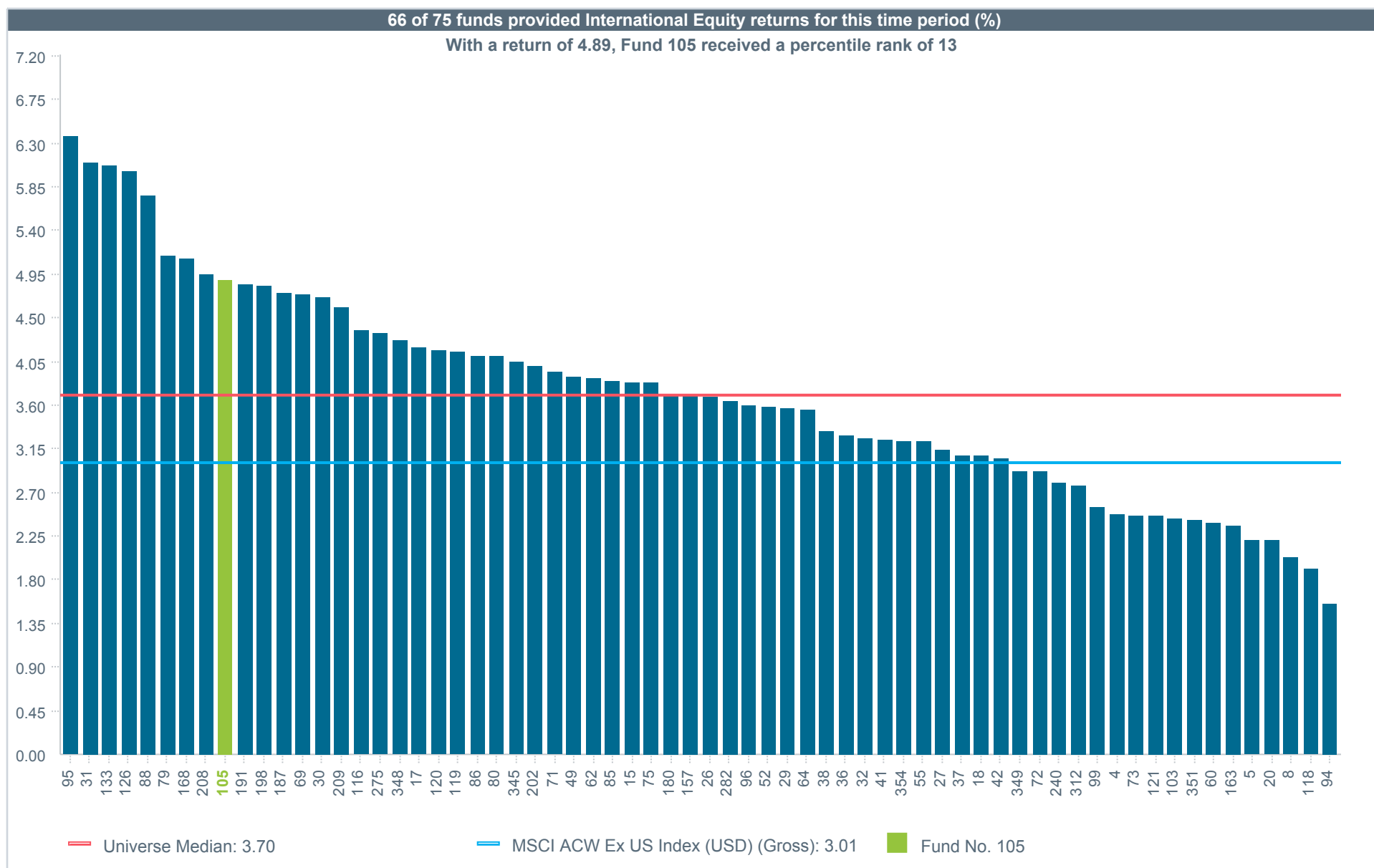


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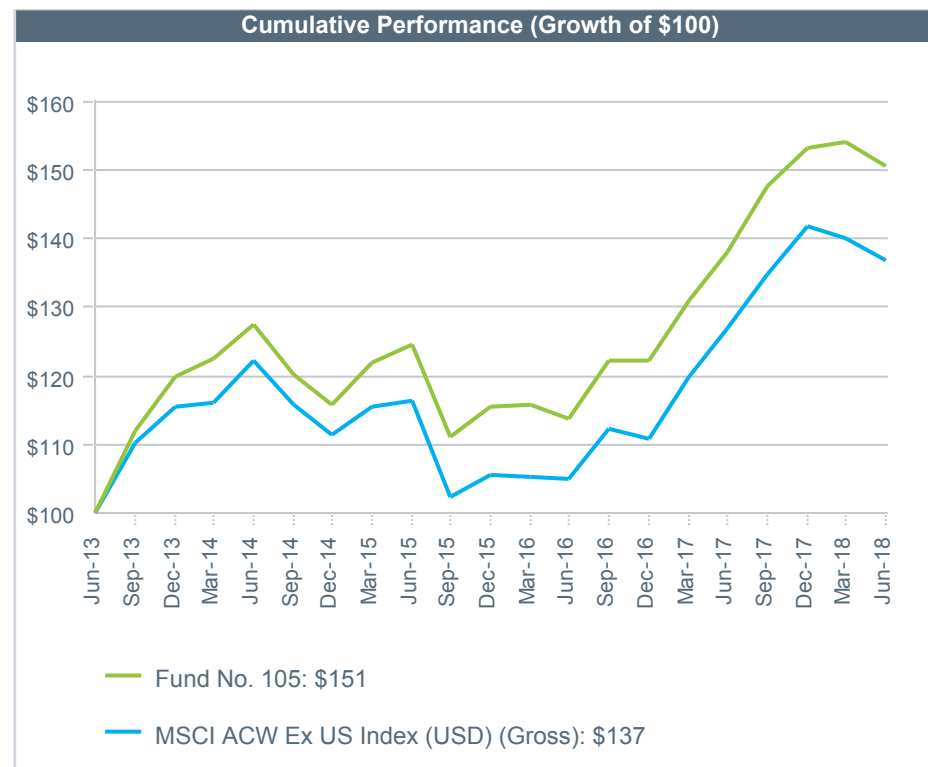
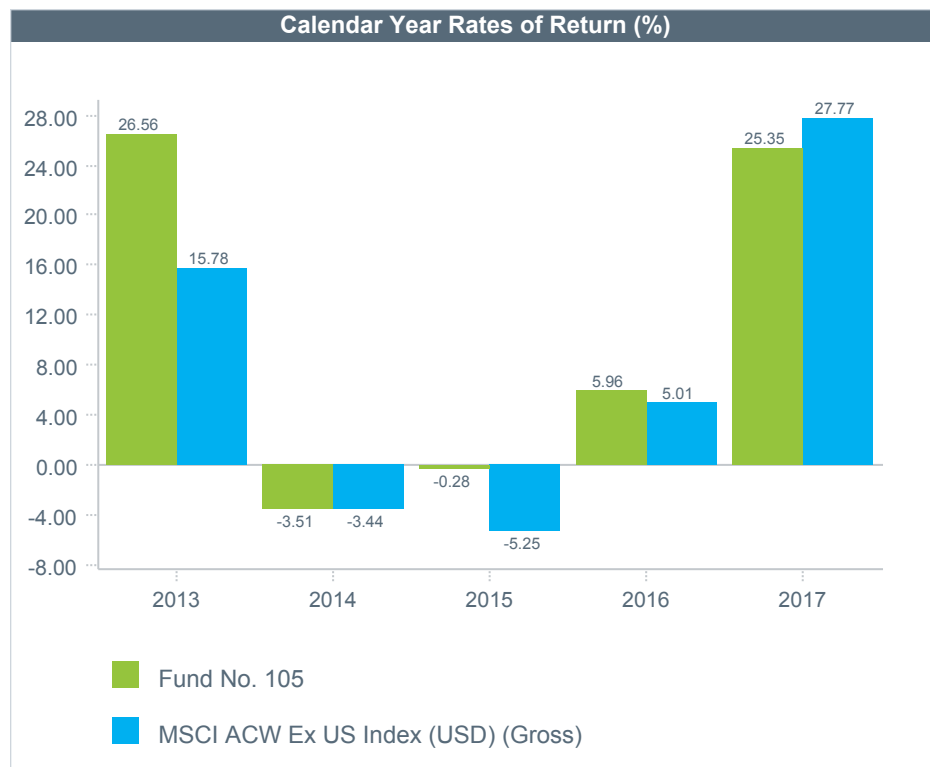
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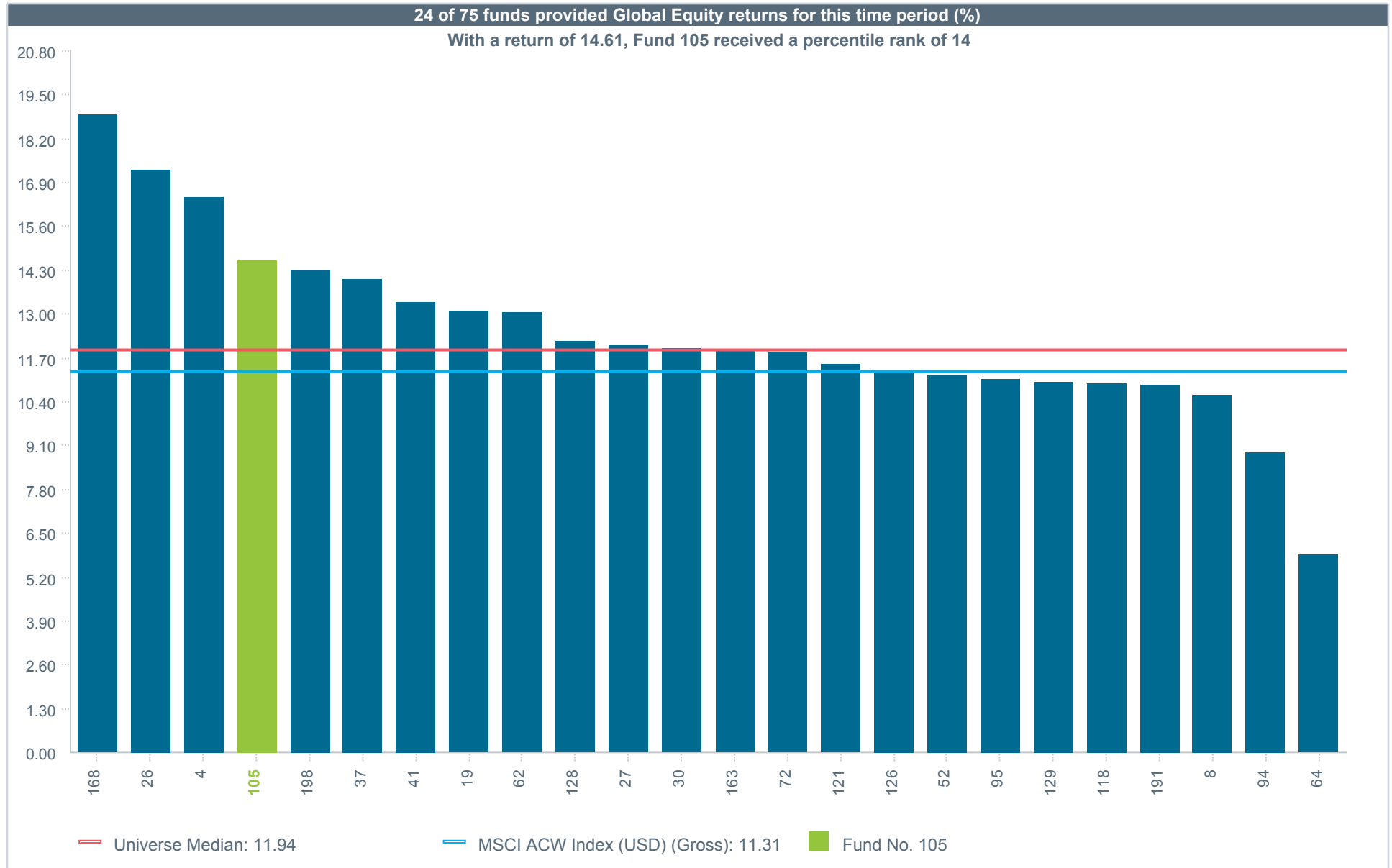
Total Return - International Equity
Fund No. 105 vs. MSCI ACW Ex US Index (USD) (Gross)

As of June 30, 2018

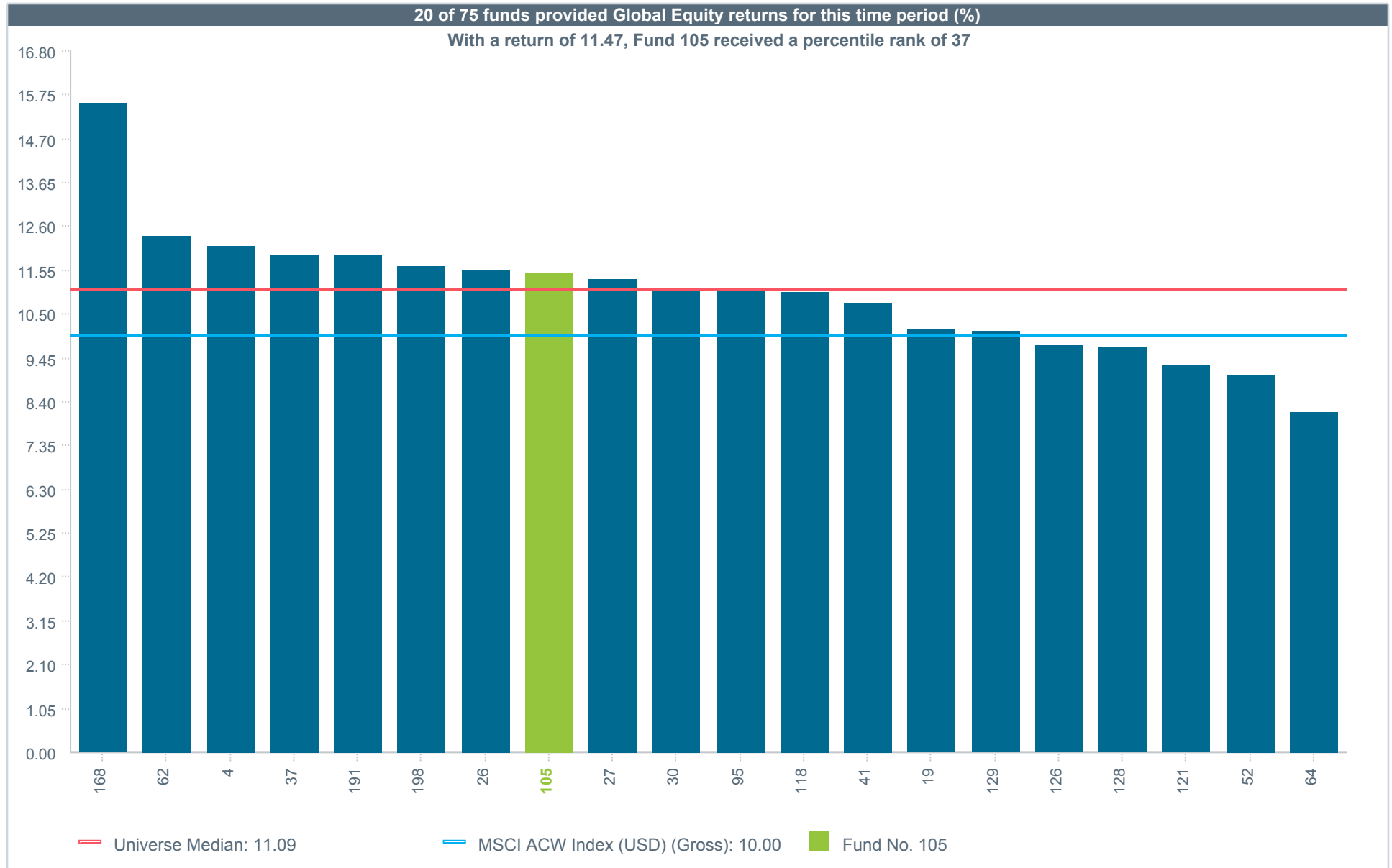


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 105	9.14	6.56	8.55
MSCI ACW Ex US Index (USD) (Gross)	7.79	5.56	6.48
Variance	1.35	1.00	2.07

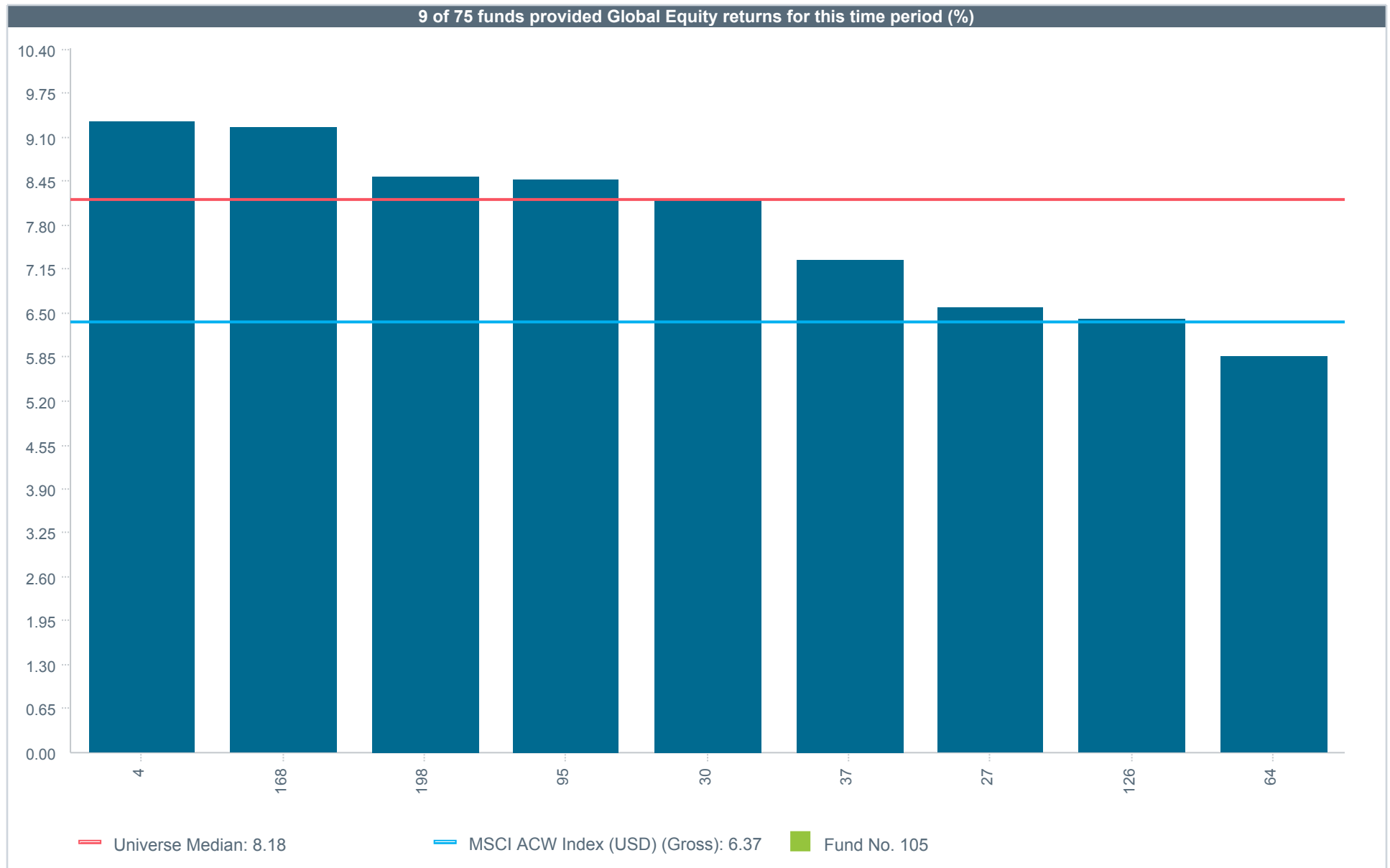




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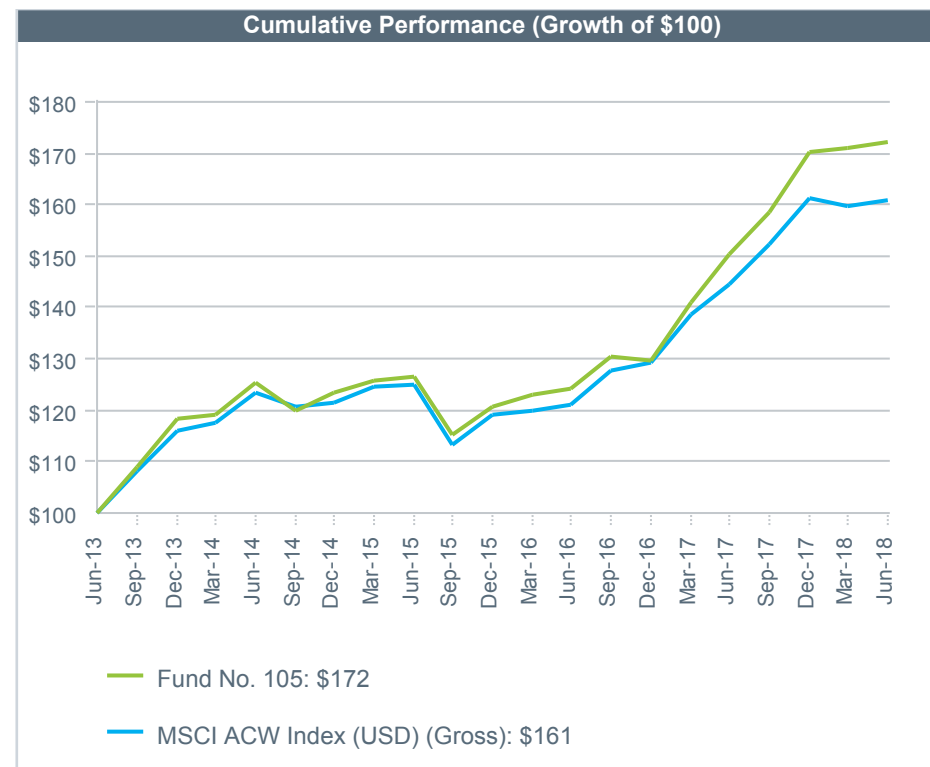
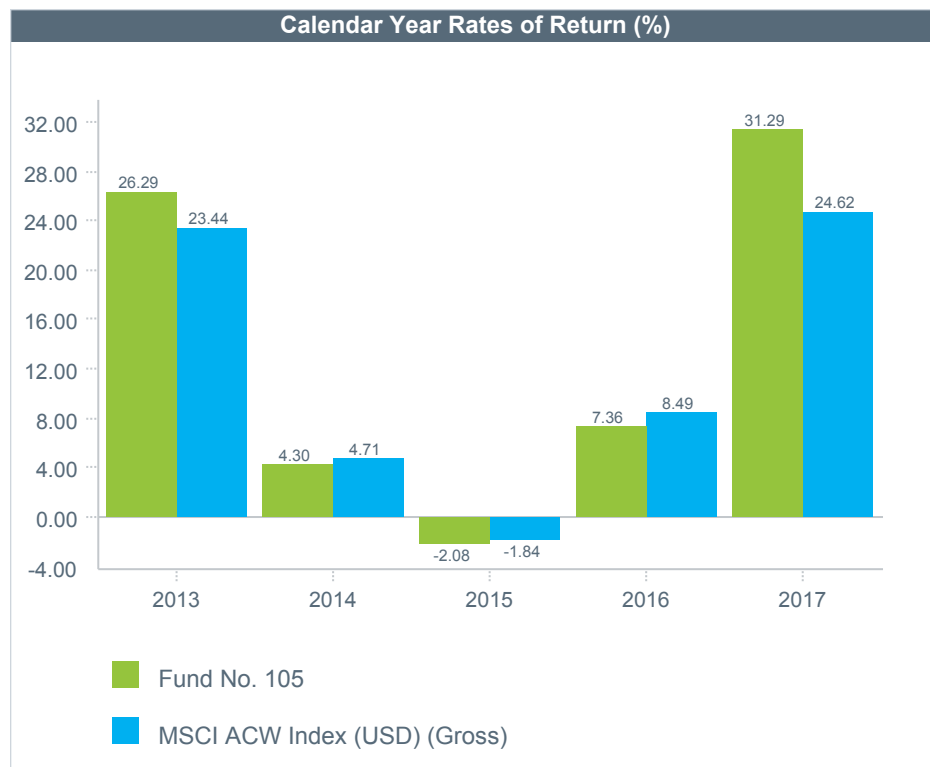
Funds with less history than the specified time period will not appear in the chart.



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

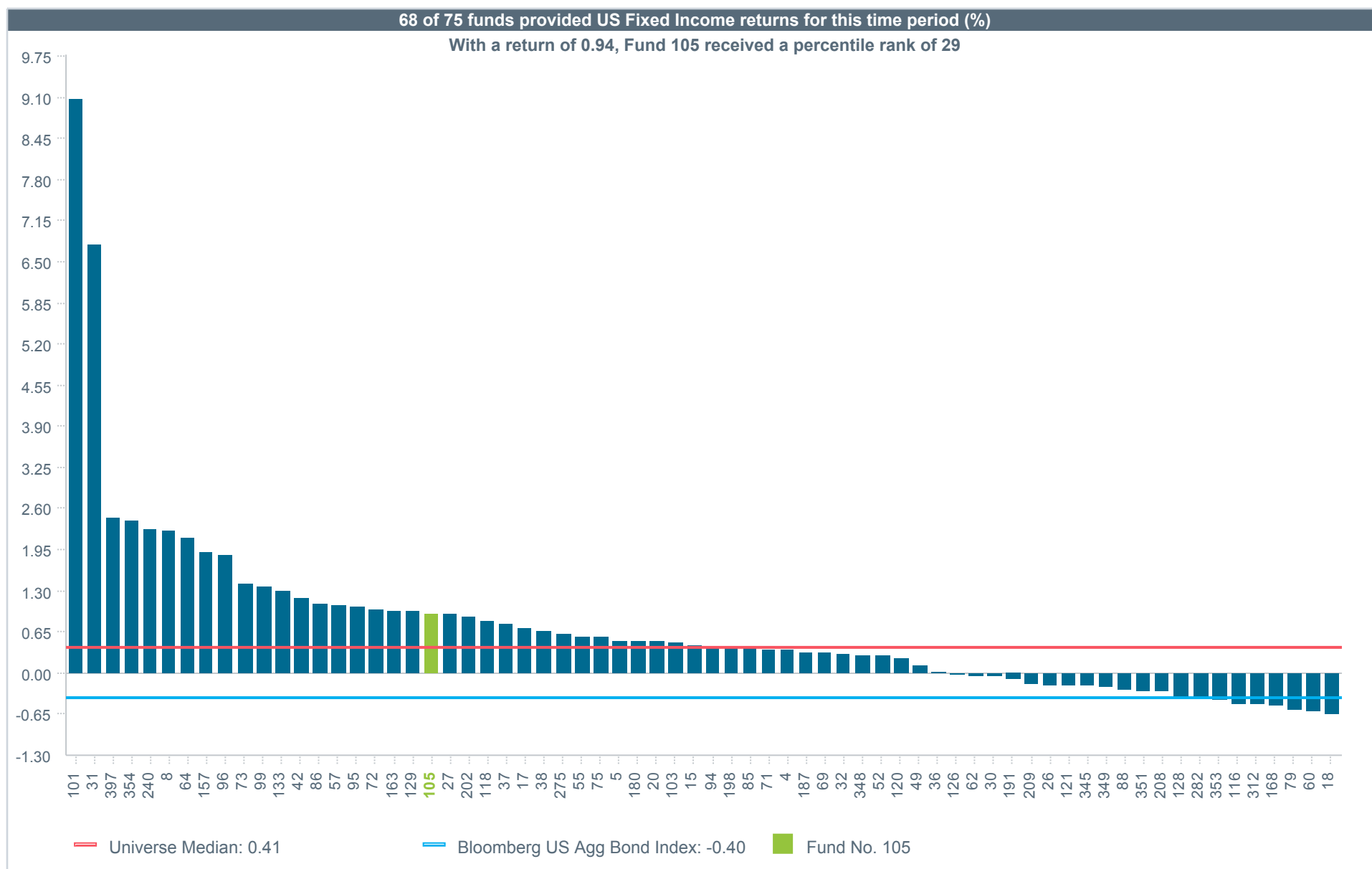
Total Return - Global Equity
Fund No. 105 vs. MSCI ACW Index (USD) (Gross)

As of June 30, 2018

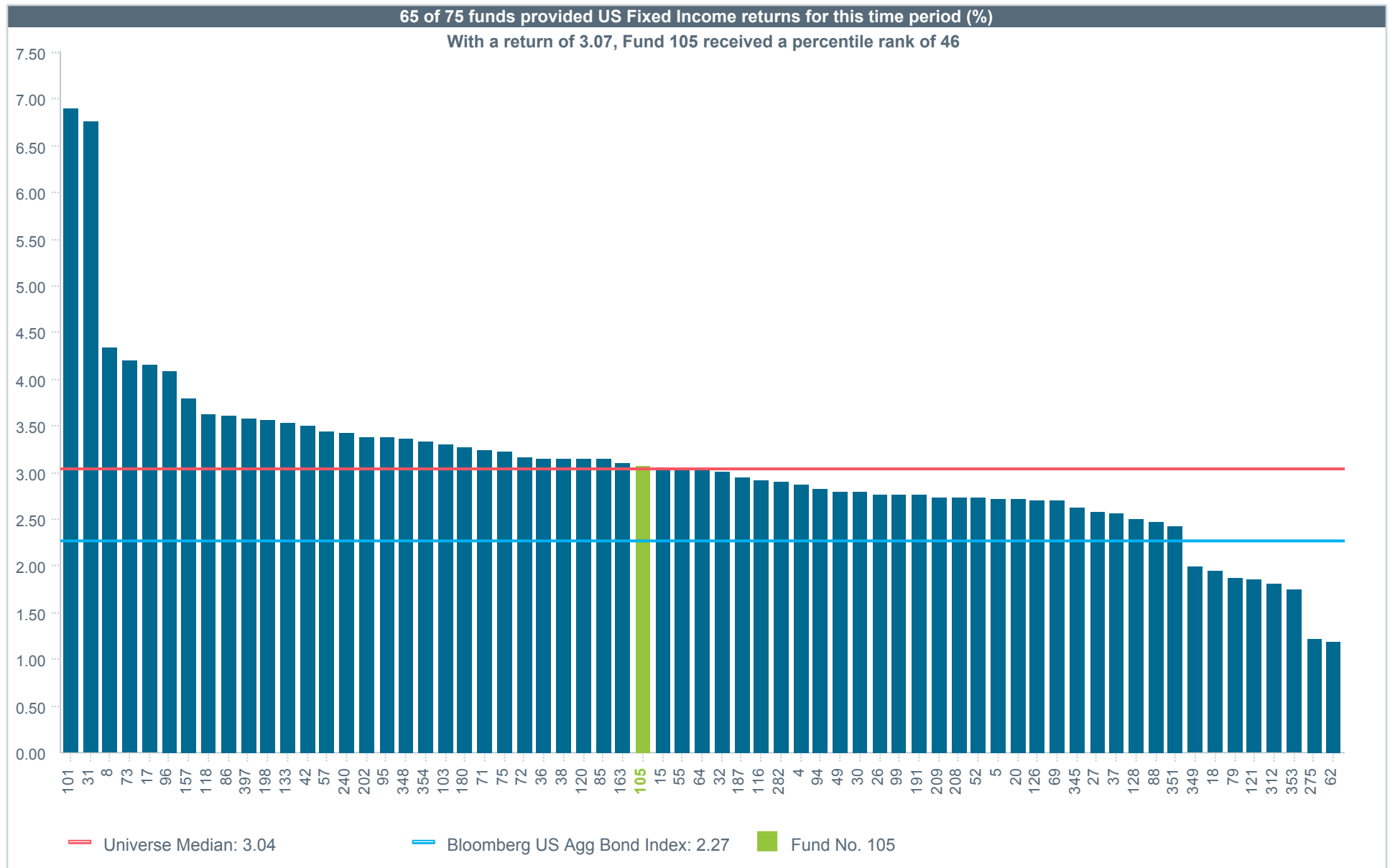


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 105	14.61	10.80	11.47
MSCI ACW Index (USD) (Gross)	11.31	8.78	10.00
Variance	3.30	2.02	1.47

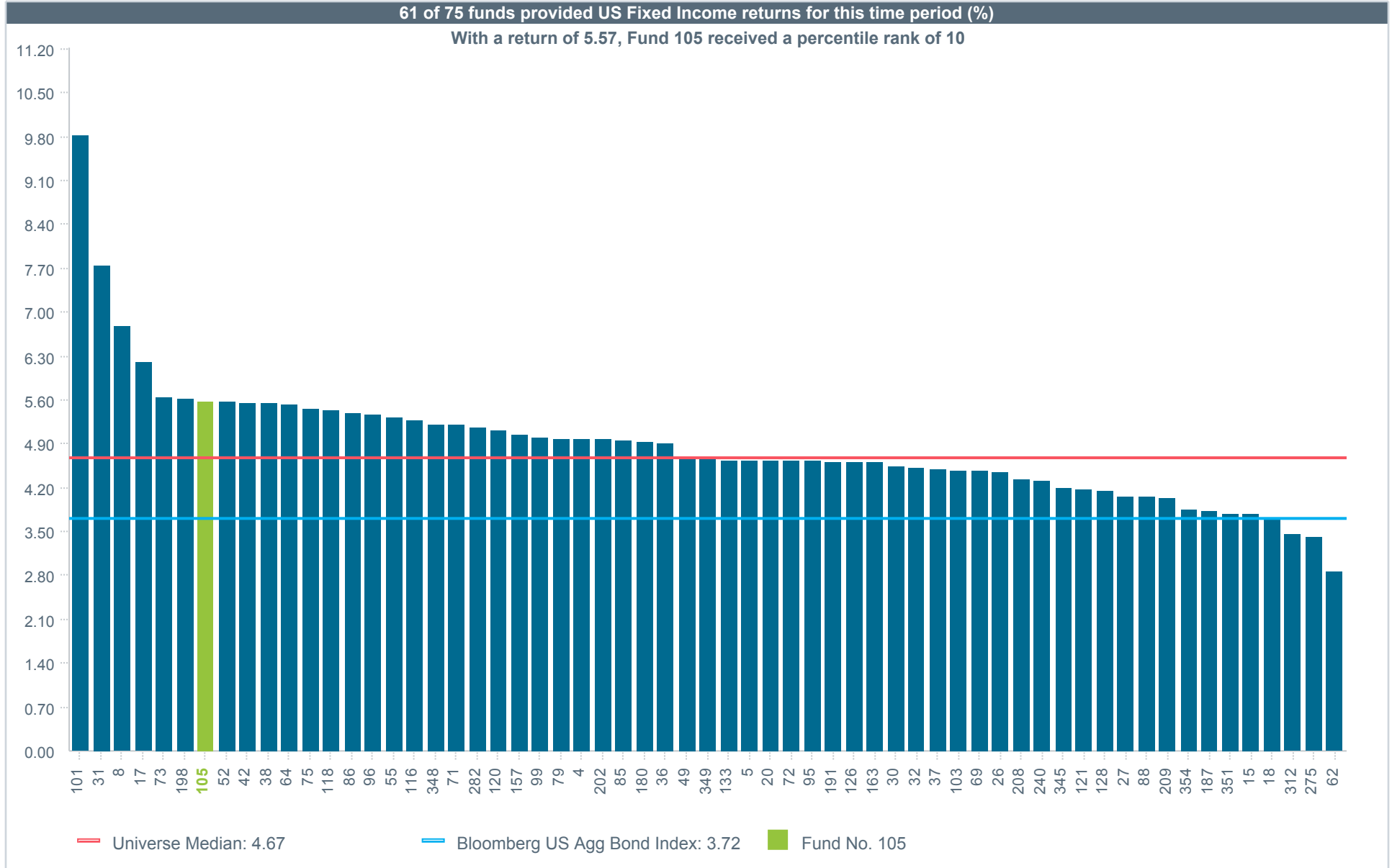




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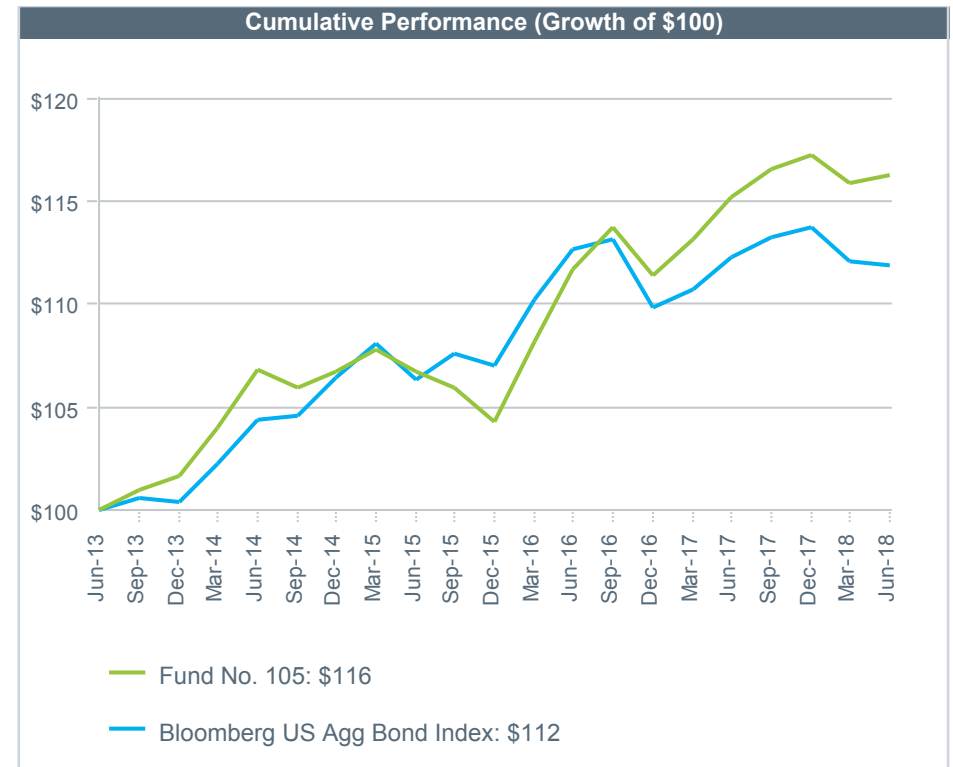
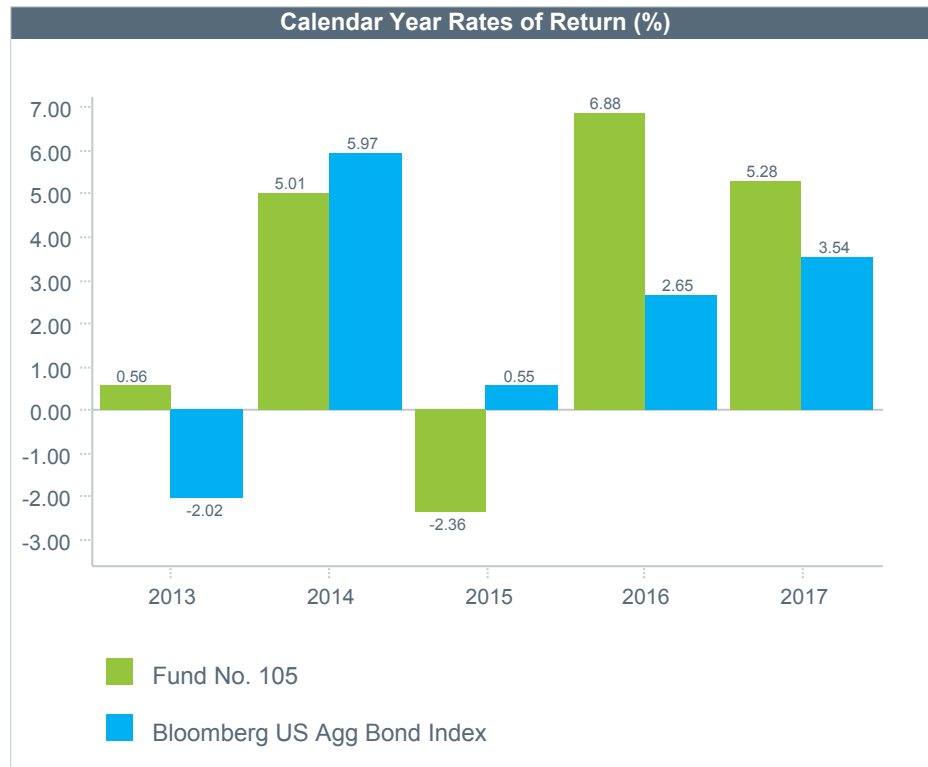
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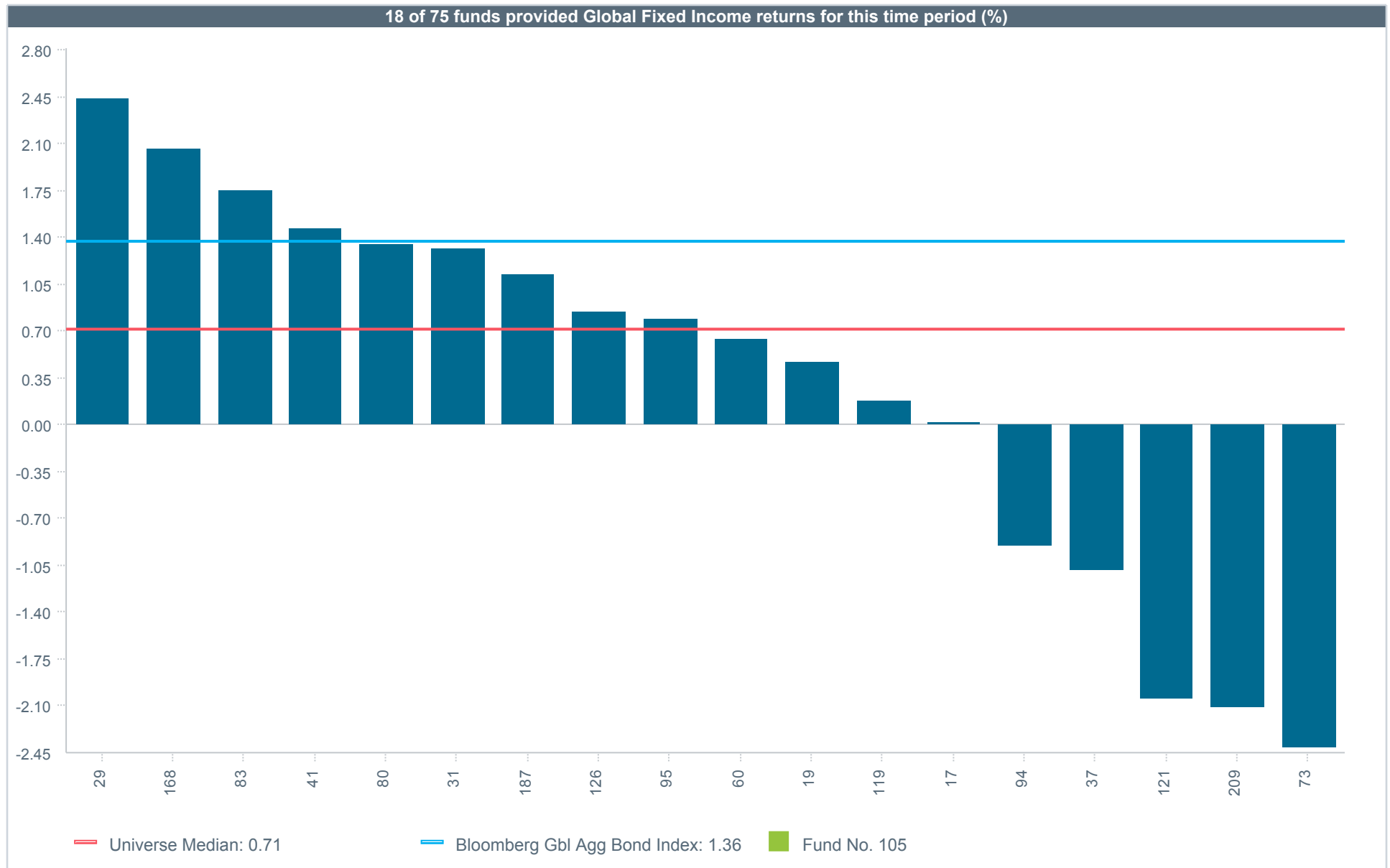
Total Return - US Fixed Income
Fund No. 105 vs. Bloomberg US Agg Bond Index

As of June 30, 2018

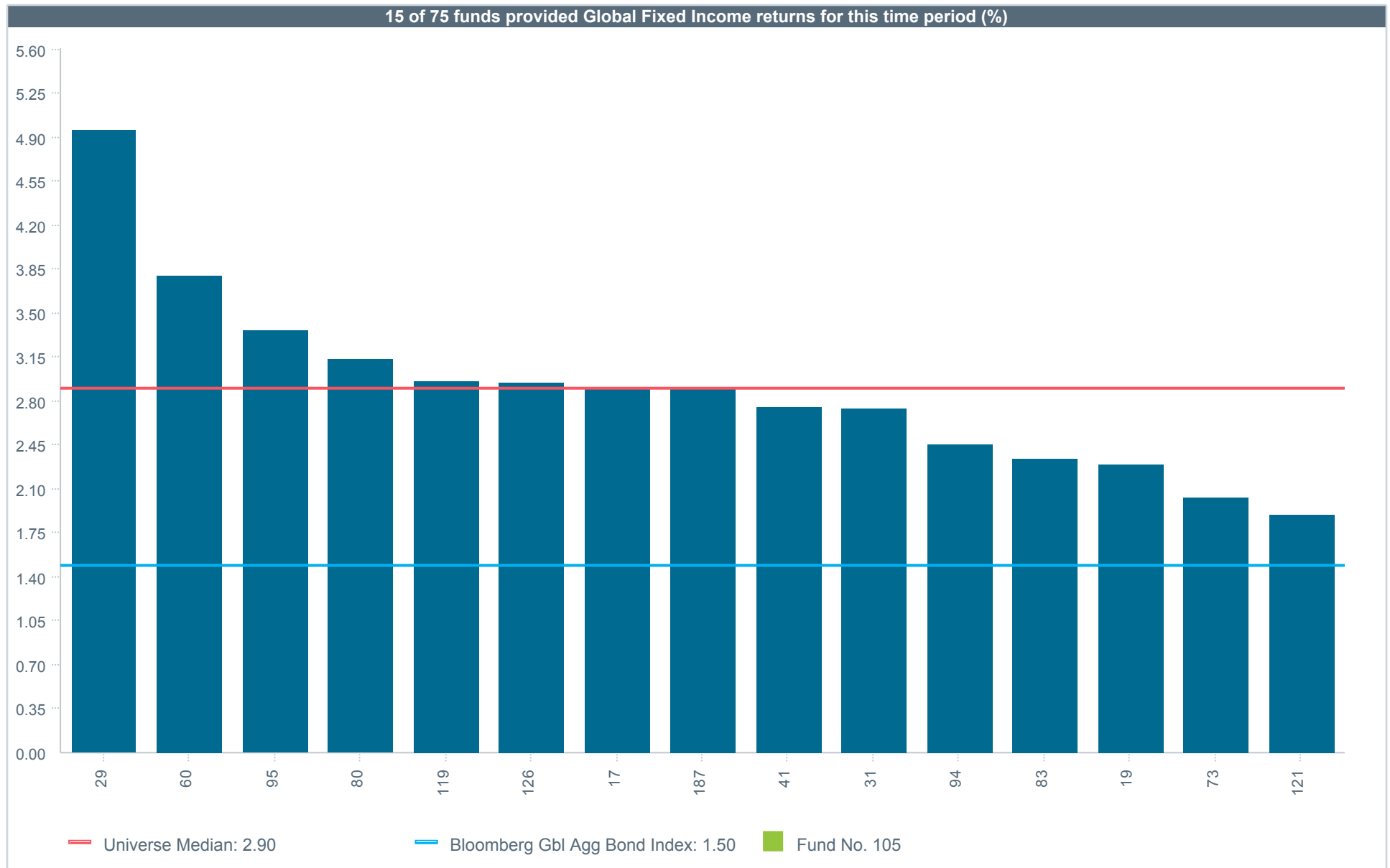


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 105	0.94	2.89	3.07
Bloomberg US Agg Bond Index	-0.40	1.72	2.27
Variance	1.34	1.17	0.80

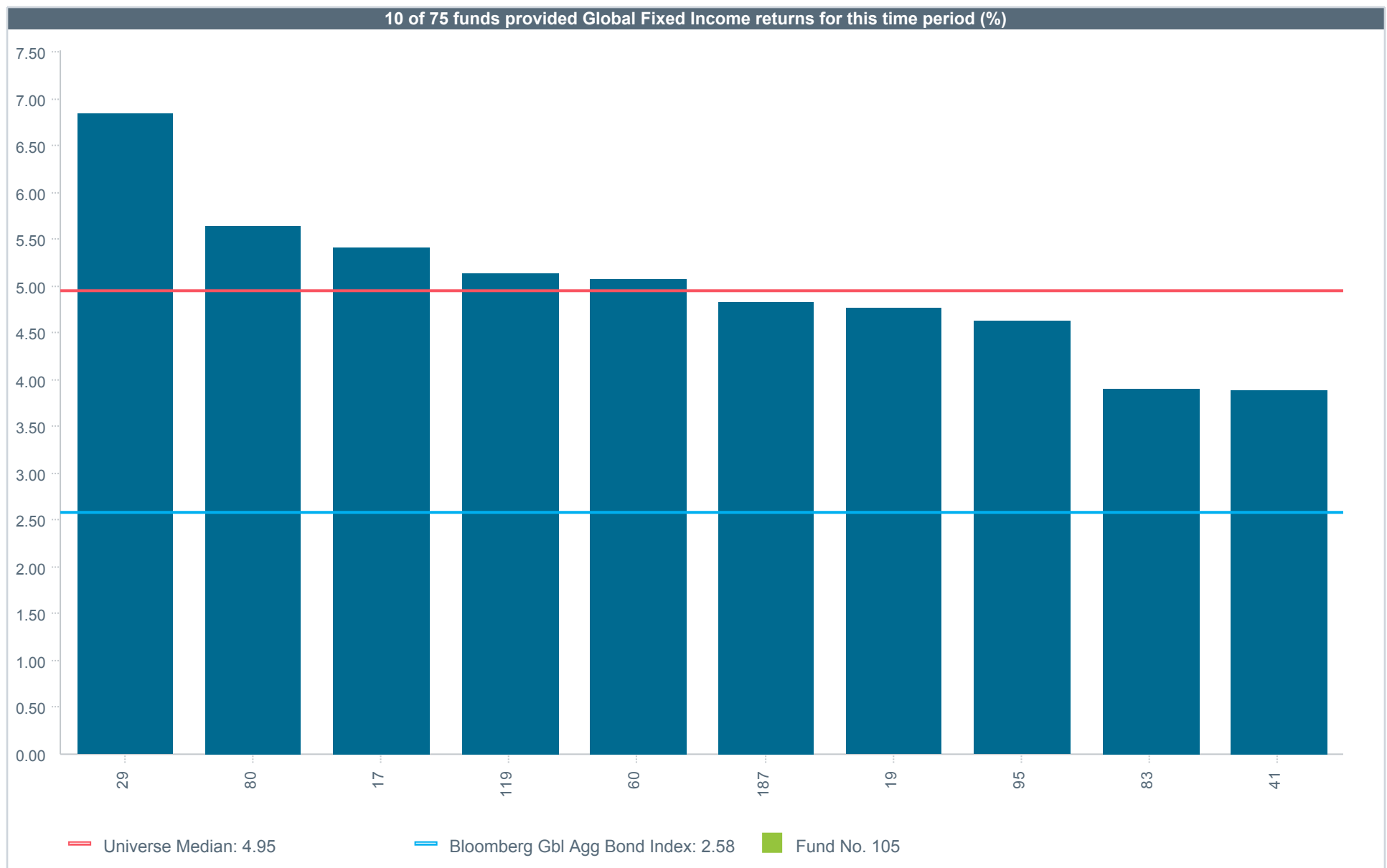




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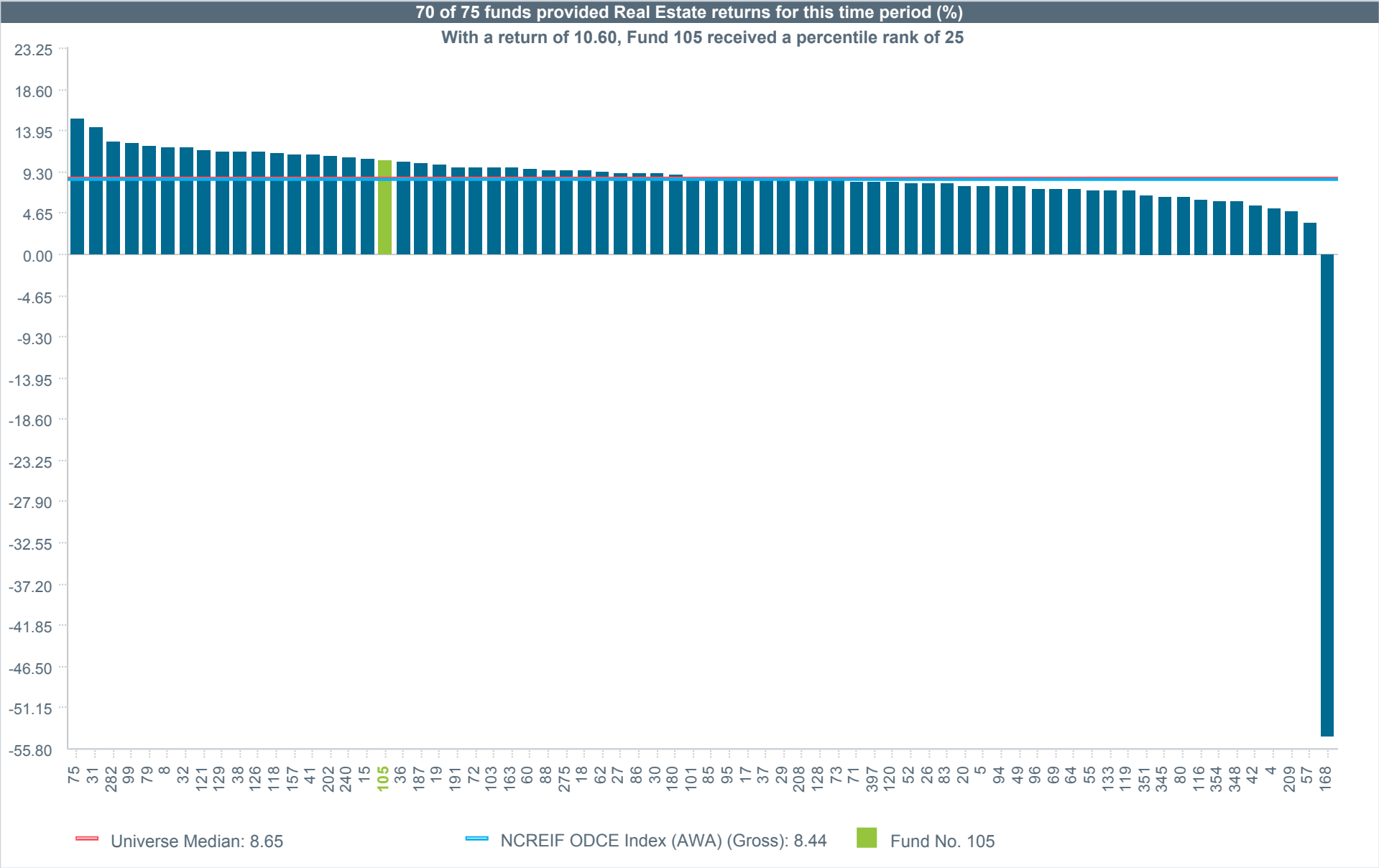


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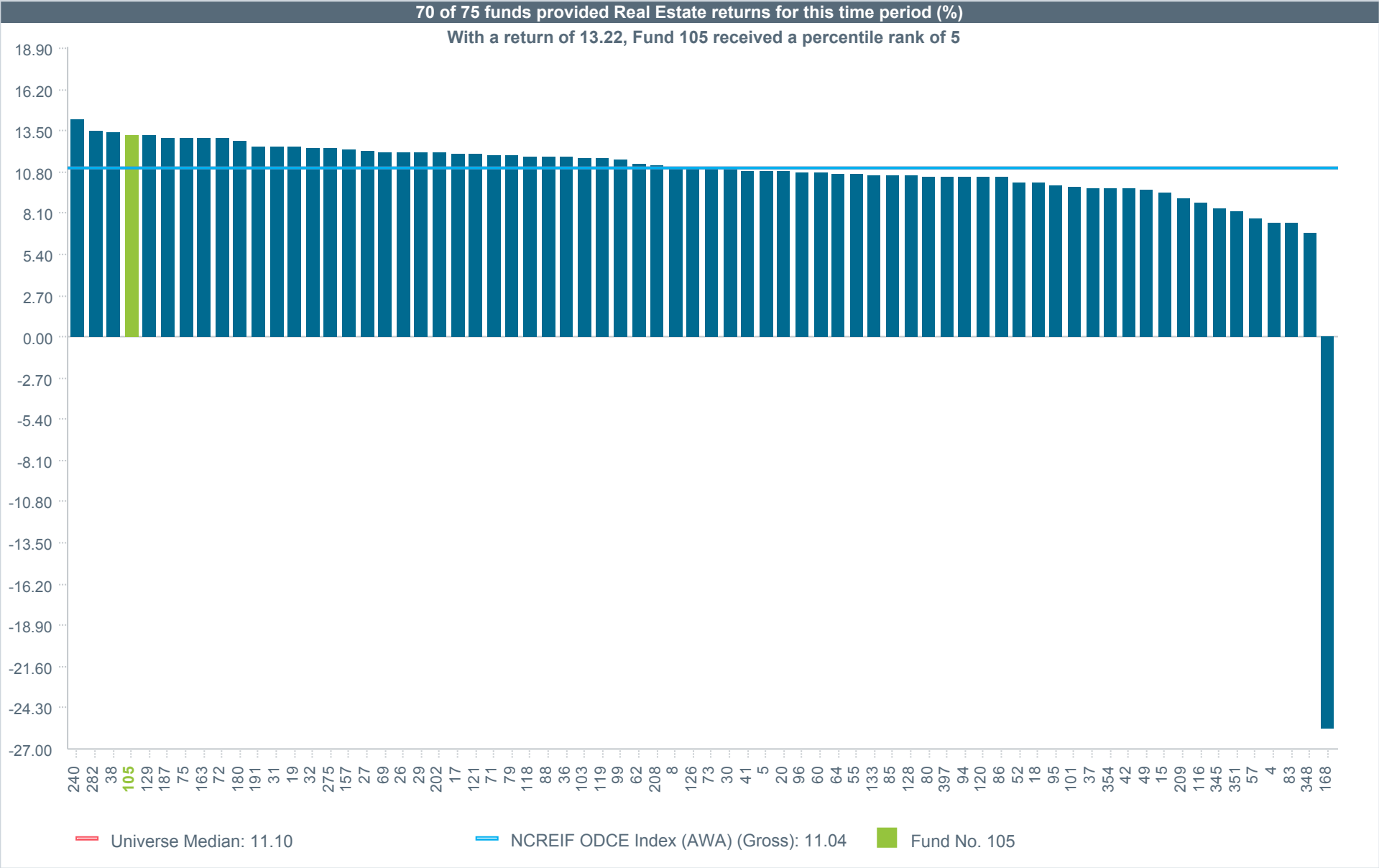
Calendar Year Rates of Return (%)	Cumulative Performance (Growth of \$100)
Fund No. 105 does not have return data for Global Fixed Income	

Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 105	N/A	N/A	N/A
Bloomberg Gbl Agg Bond Index	N/A	N/A	N/A
Variance	N/A	N/A	N/A



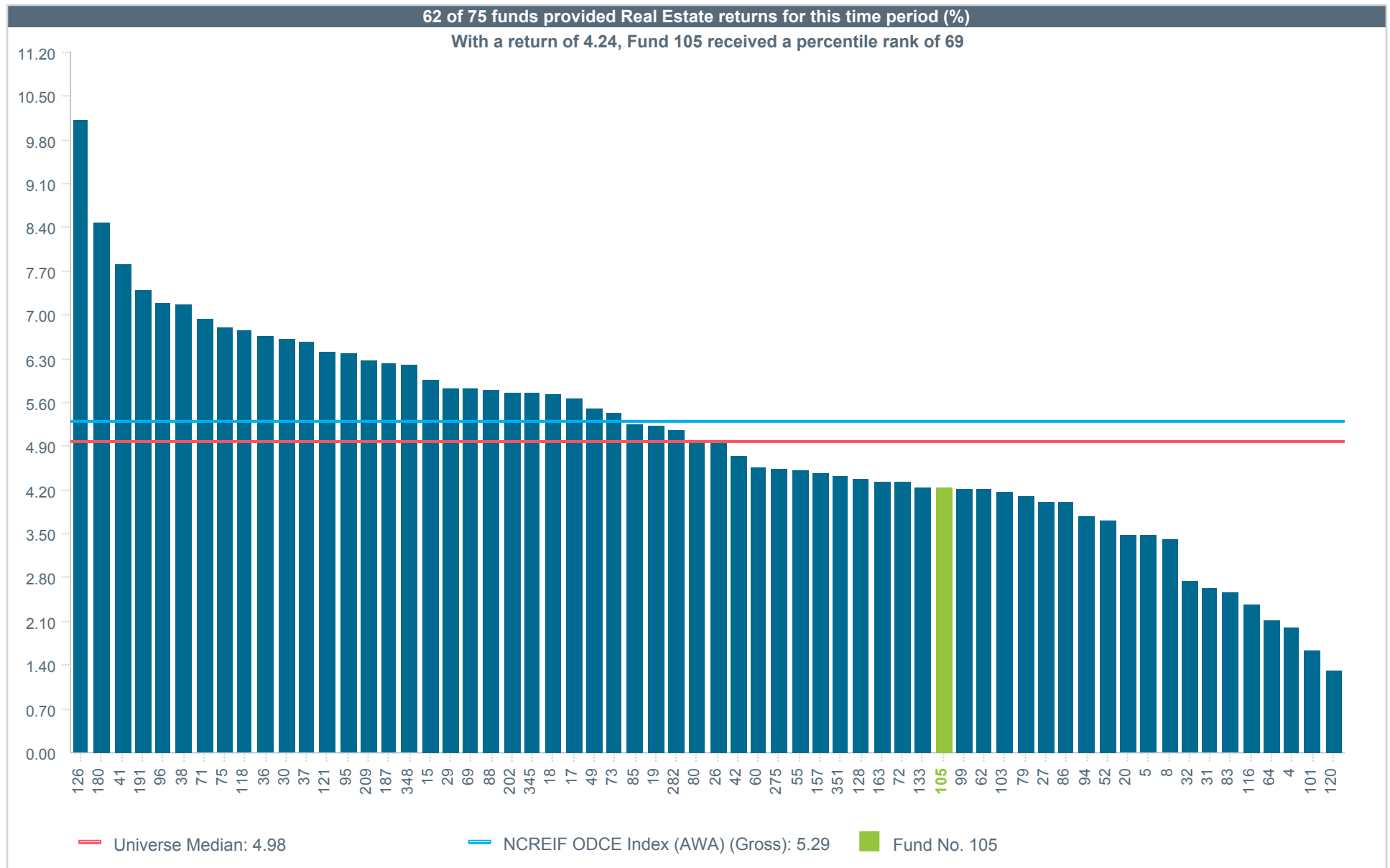
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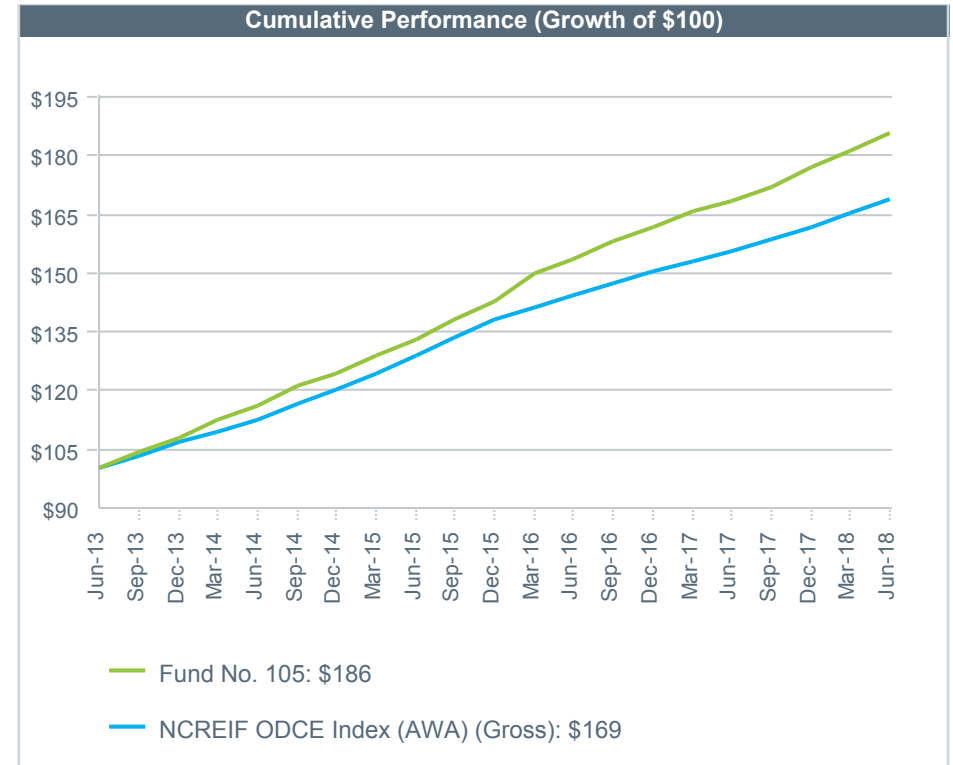
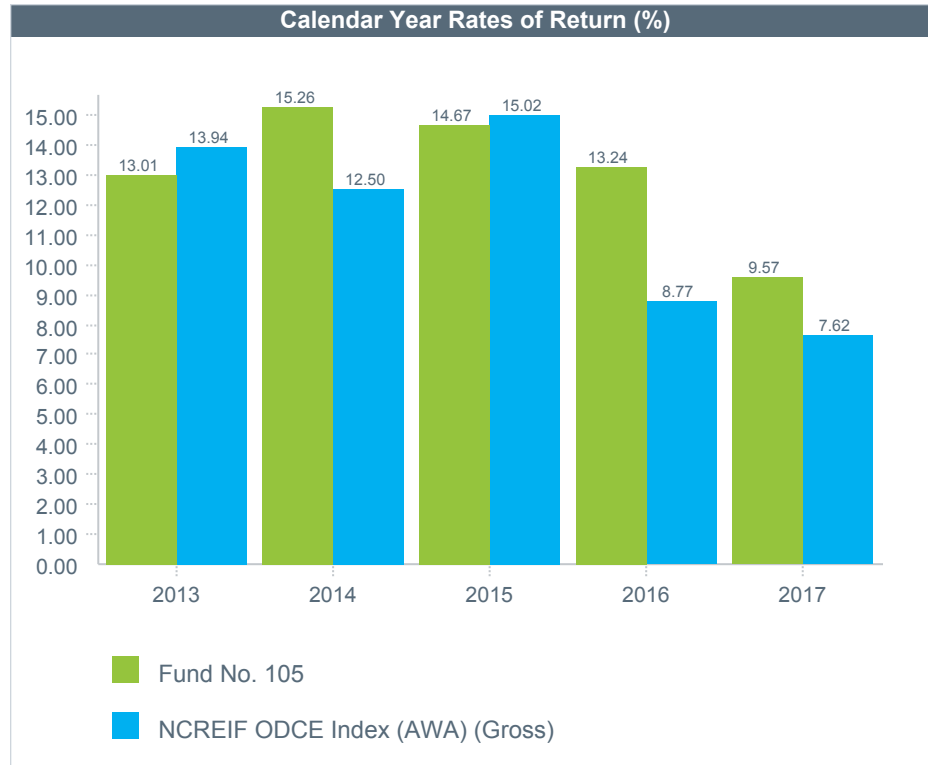




Funds with less history than the specified time period will not appear in the chart.

Total Return - Real Estate
Fund No. 105 vs. NCREIF ODCE Index (AWA) (Gross)

As of June 30, 2018



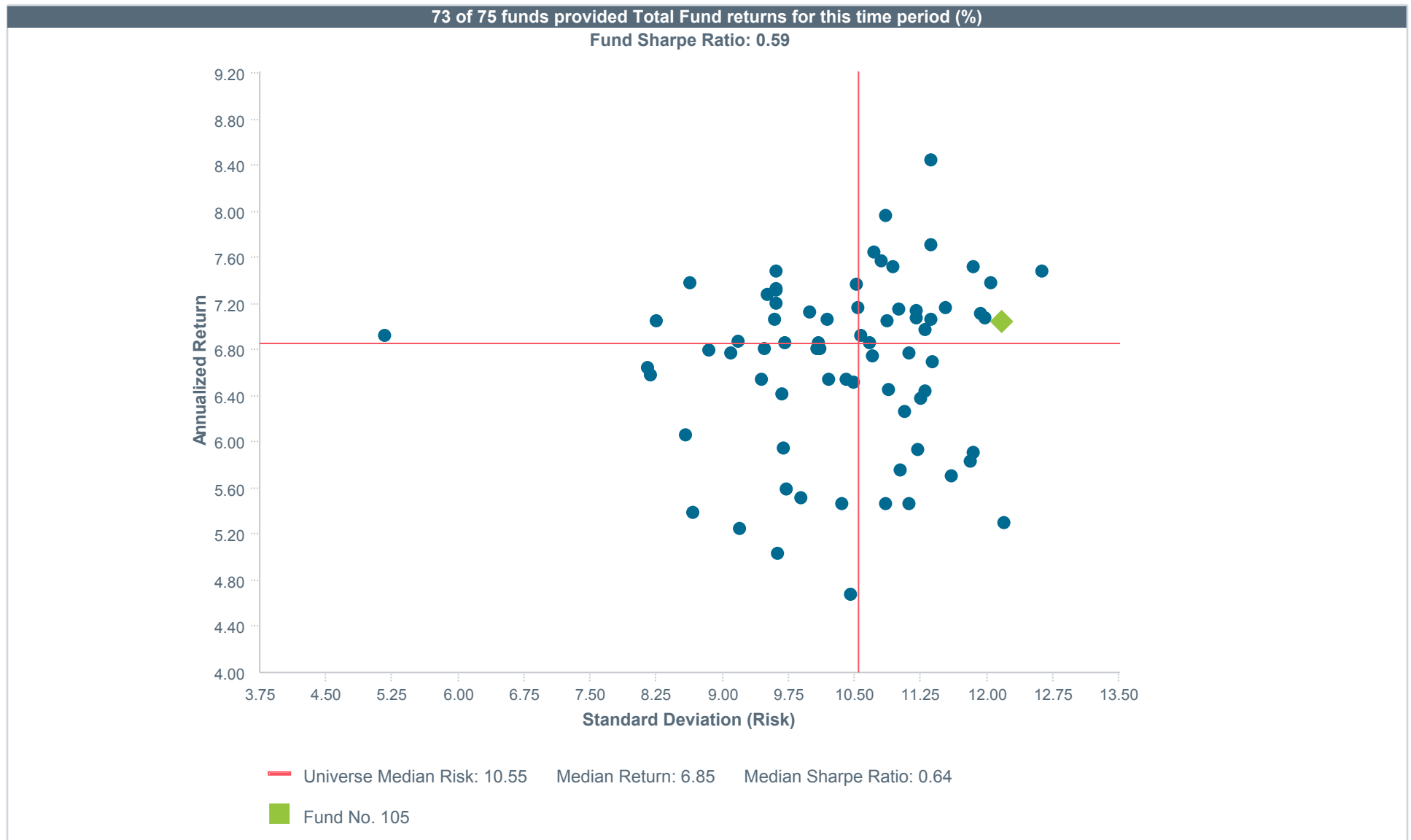
Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 105	10.60	11.86	13.22
NCREIF ODCE Index (AWA) (Gross)	8.44	9.37	11.04
Variance	2.16	2.49	2.18



5 Year Annualized Total Fund Returns vs. Standard Deviation



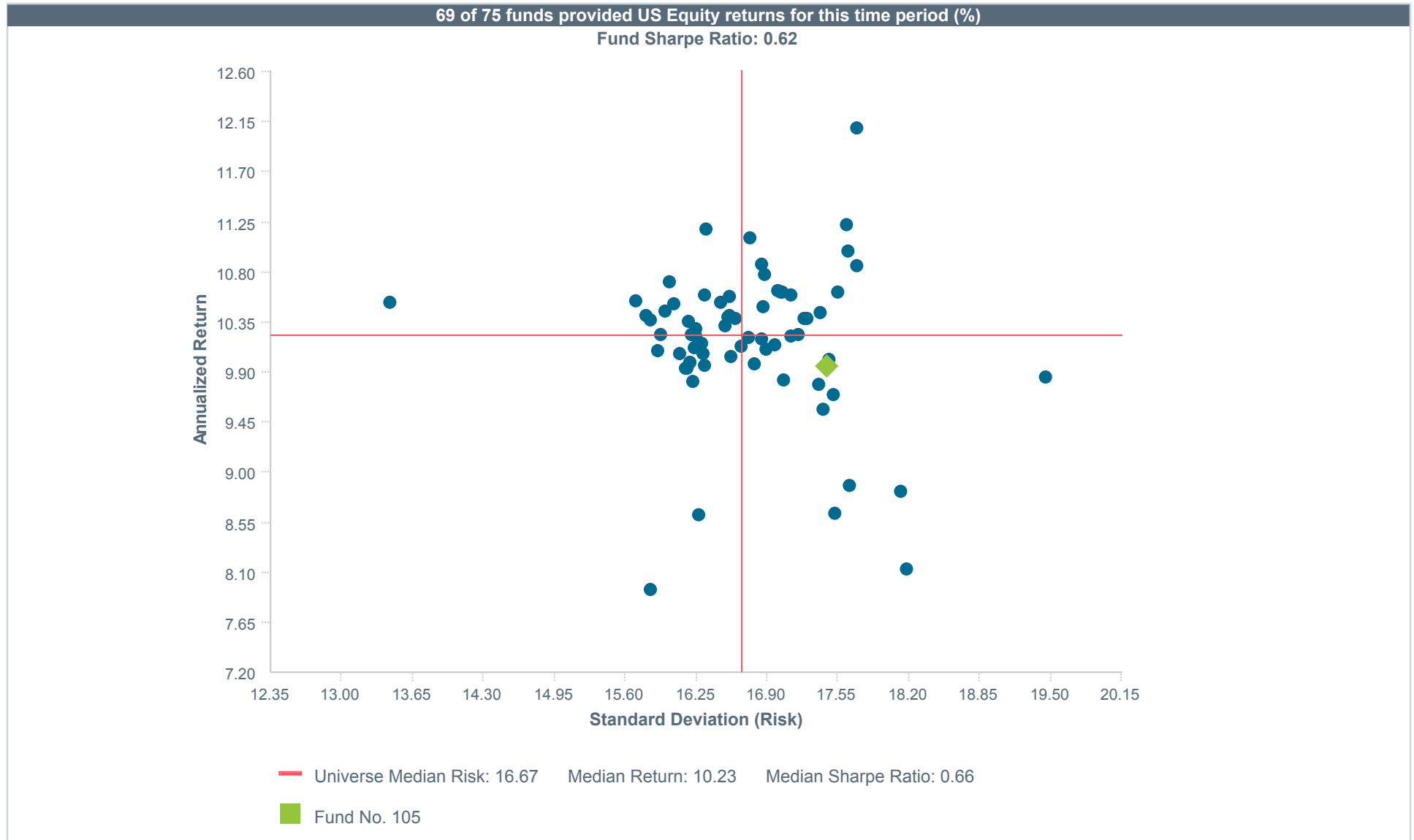
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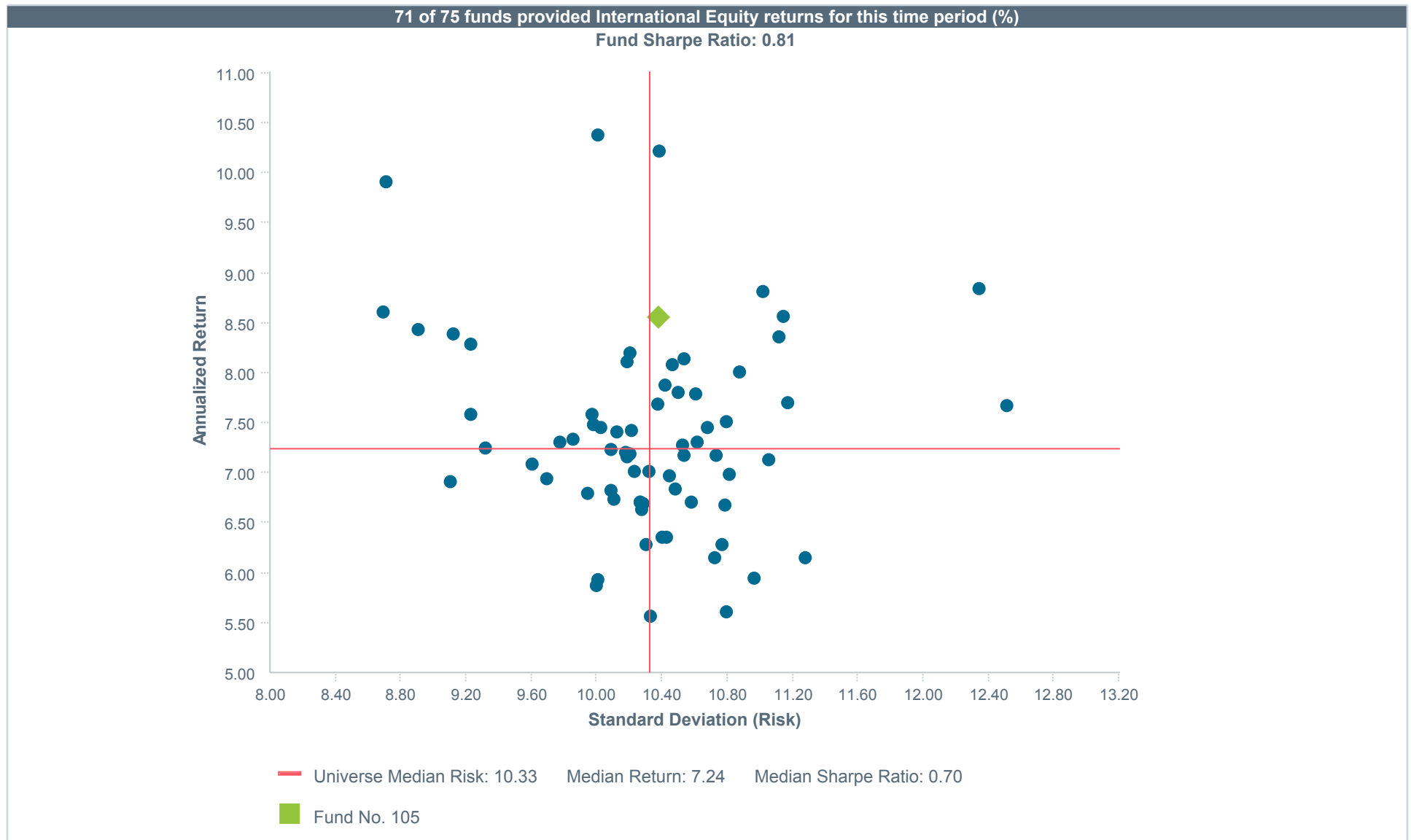
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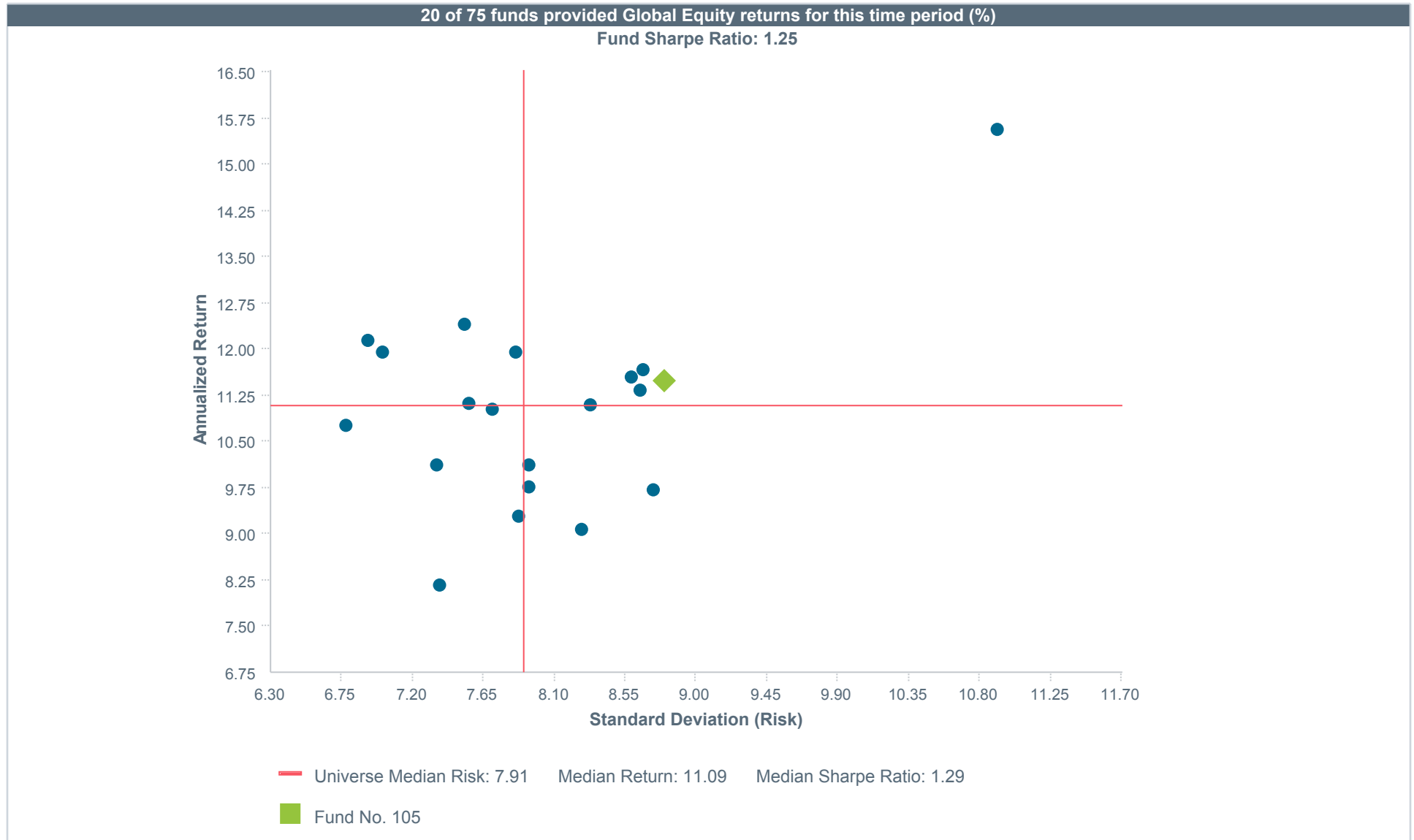
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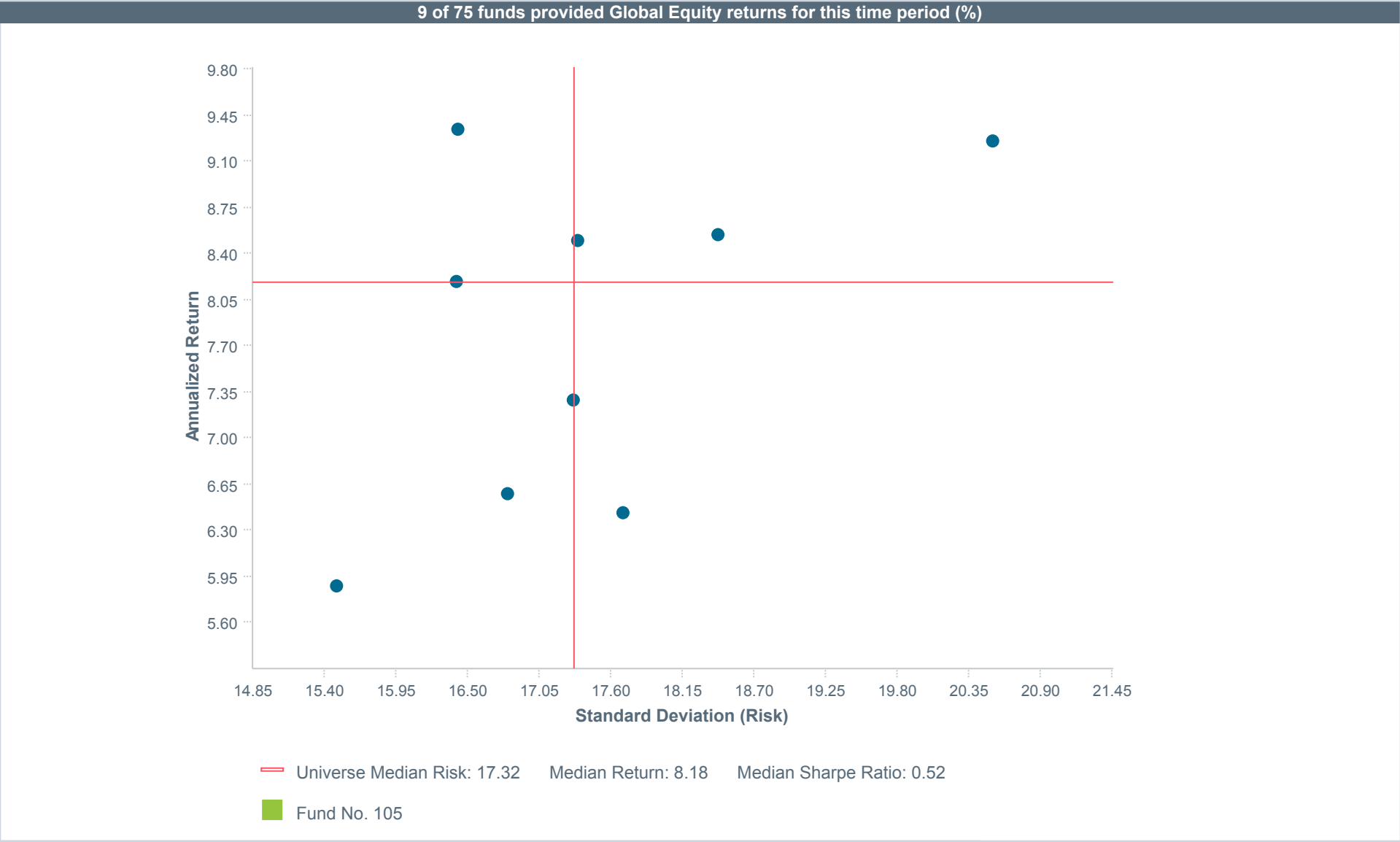
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Funds with less history than the specified time period will not appear in the chart.



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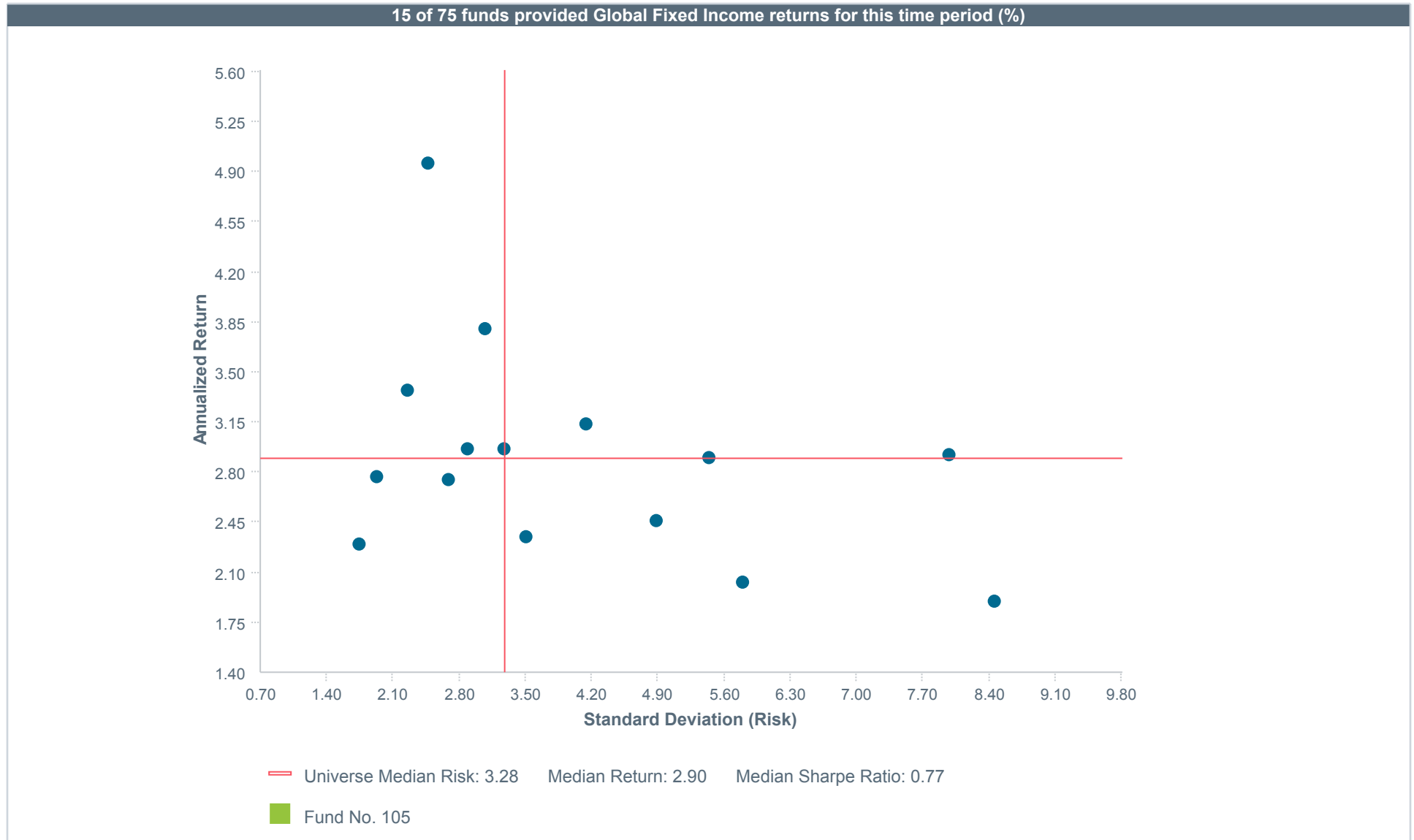
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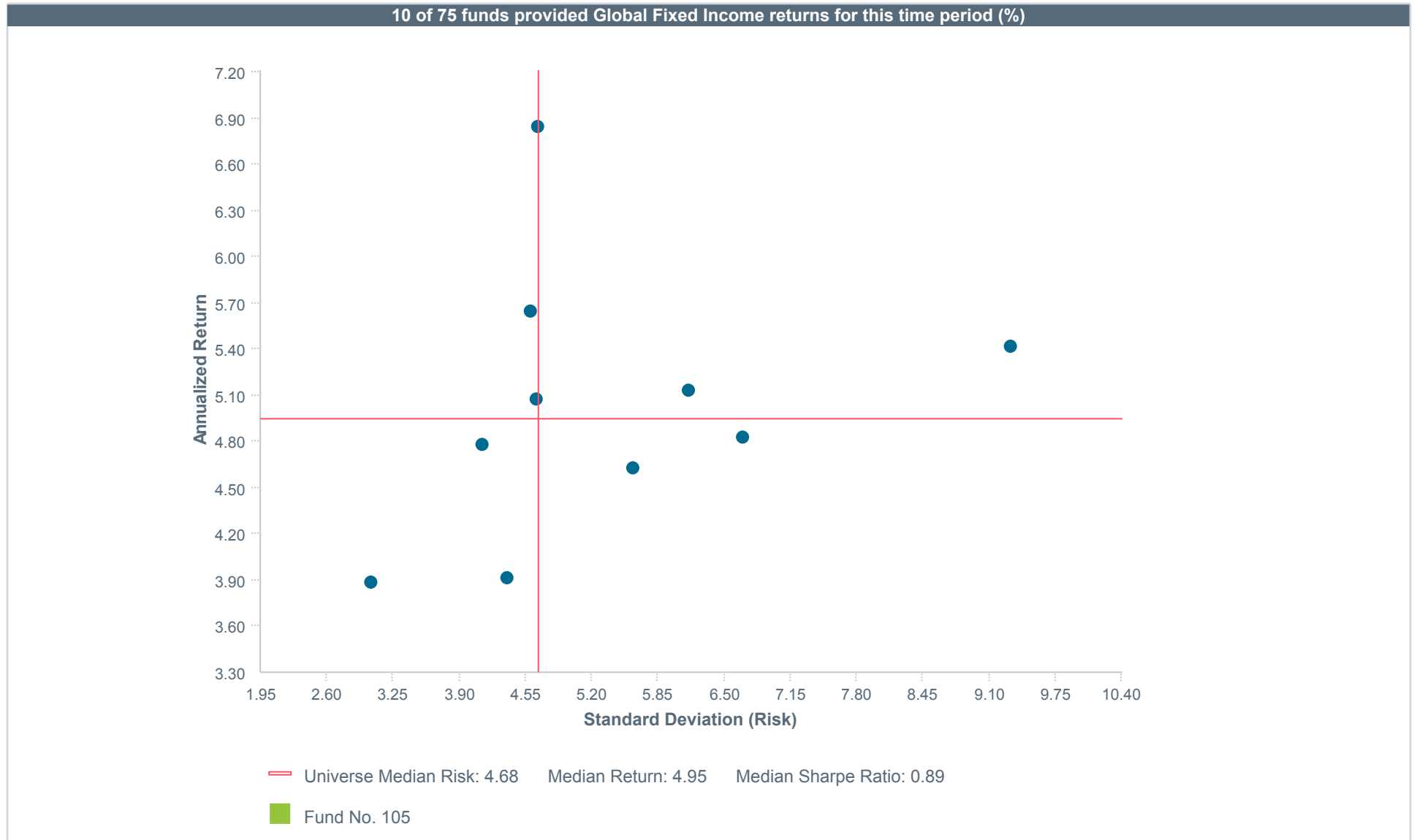


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Funds with less history than the specified time period will not appear in the chart.

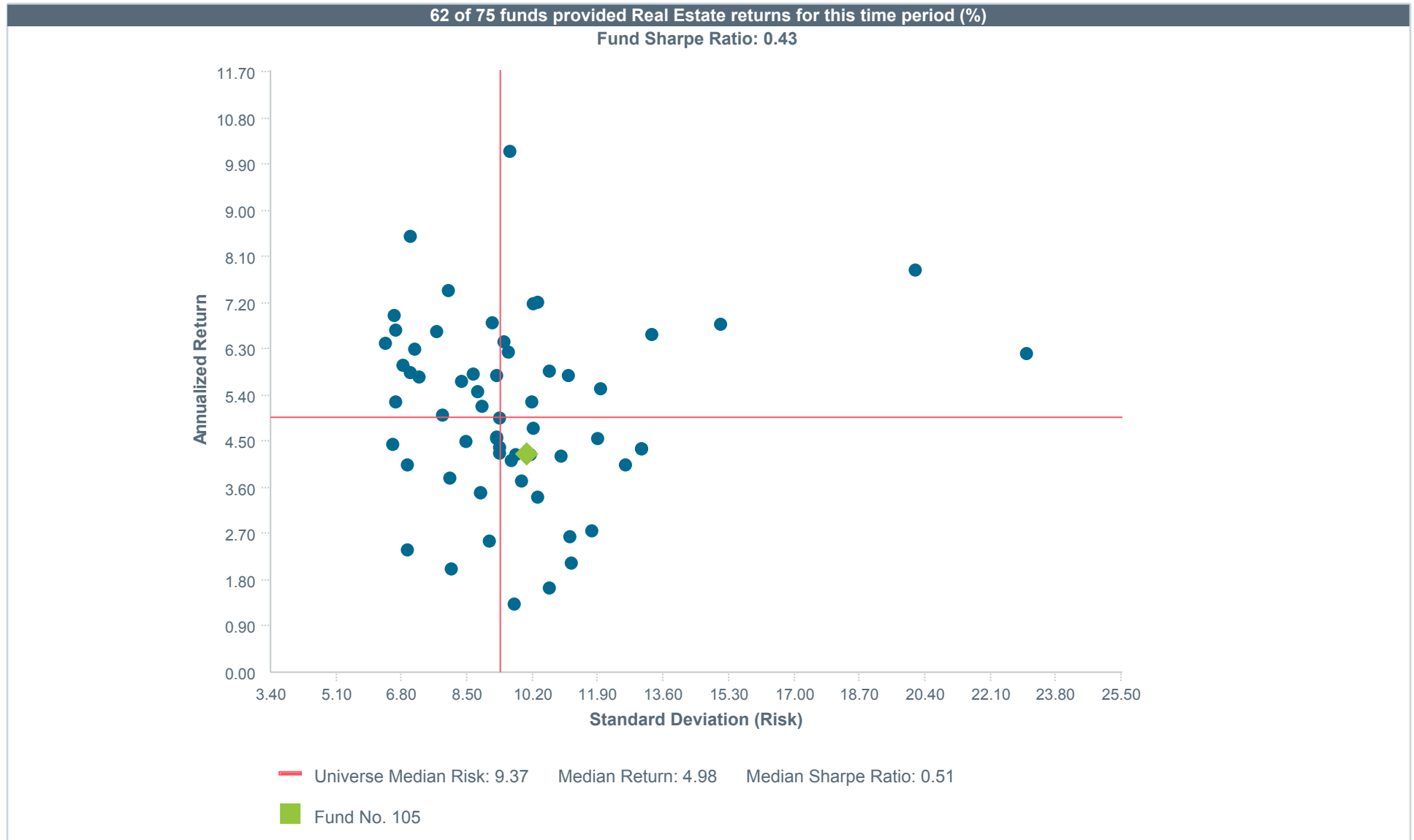
10 Year Annualized Global Fixed Income Returns vs. Standard Deviation



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



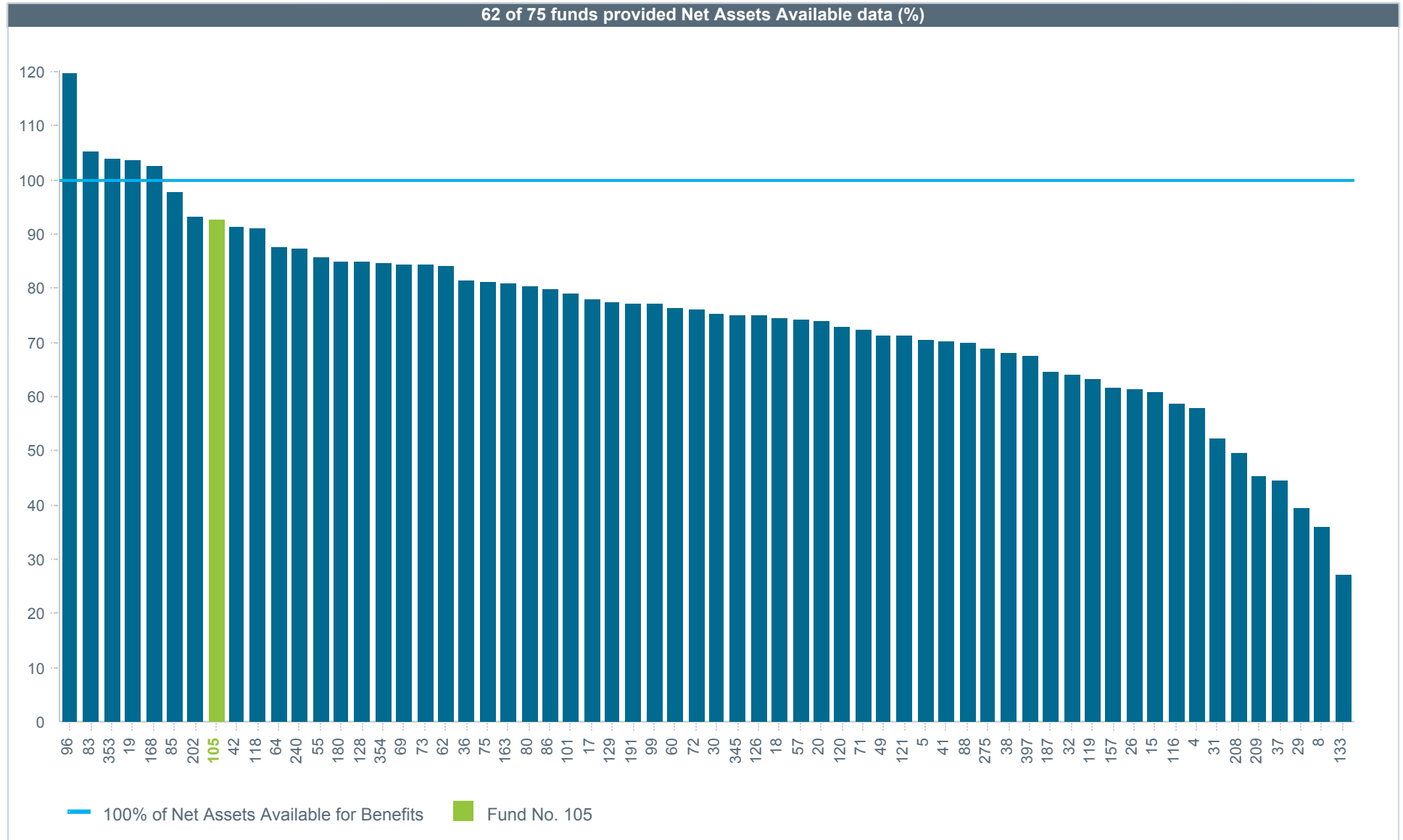
Funds with less history than the specified time period will not appear in the chart.



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

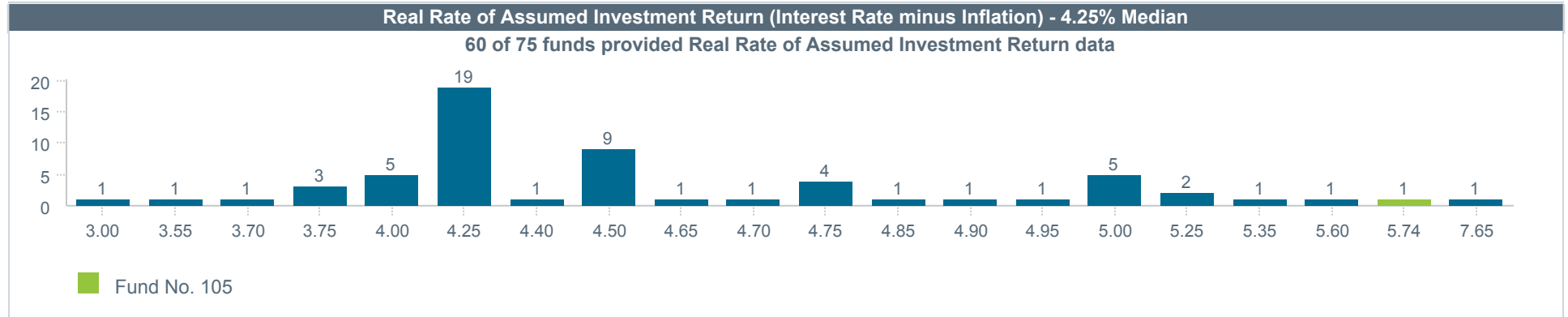
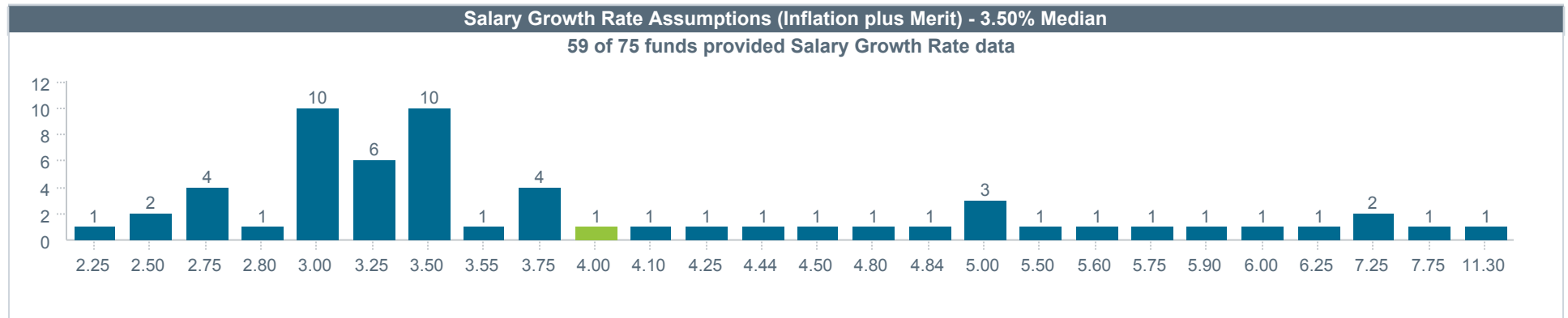
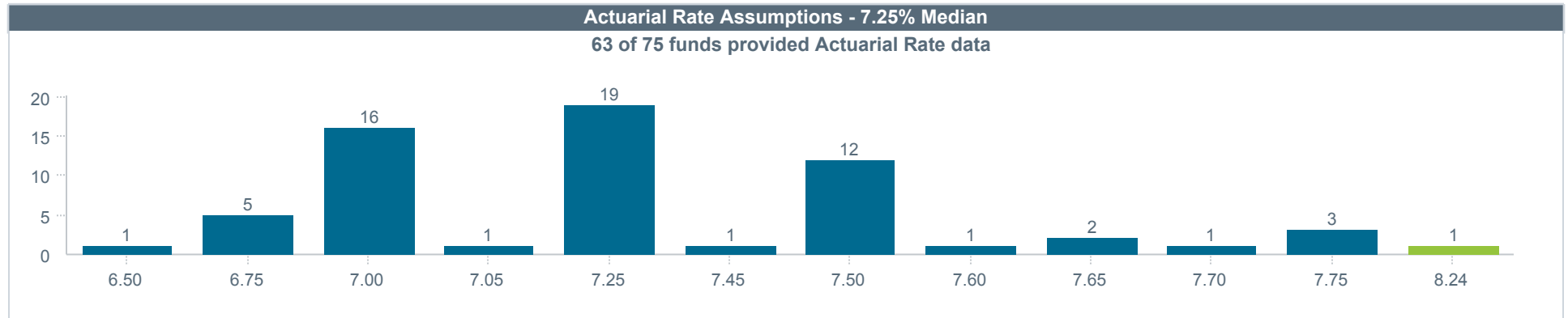
Net Assets Available For Benefits
Expressed as a Percentage of the Pension Benefit Obligation

As of June 30, 2018



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





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

Overlay Survey Summary

Q1. Of the 75 participants in the 2018 Q2 Public Fund Report, 57 participants provided a response to the Overlay Survey. Of those participants, 27 answered 'Yes', 4 answered 'Yes, considering', and 26 answered 'No'.

Q2. Of the 29 participants that provided a response to the Overlay Survey and have exposure to an overlay manager or managers, the purposes of the overlay programs are distributed as follows:

31.03 %	Manage foreign currency risk
31.03 %	Generate alpha
0.00 %	Match Plan liabilities more closely (either as part of an explicit or conceptual framework)
3.45 %	Express a view on US Dollar
0.00 %	Manage market risk within an LDI construct
13.79 %	Tactical asset allocation
48.28 %	Cash equitization
51.72 %	Rebalancing management
27.59 %	Transition management
0.00 %	Other

Q3. Of the 11 participants that provided a response to the Overlay Survey and have exposure to a currency manager or managers, the program structures are distributed as follows:

54.55 %	Static hedge ratio
36.36 %	Dynamic hedging program where manager varies the hedge ratio
27.27 %	Alpha generating currency manager focused on absolute return

Q4. Of the 6 respondents that indicated use of a hedge ratio on a currency program, the responses are distributed as follows:

3 responses indicated 50.00 %	hedge on Developed Equity exposure
1 response indicated 75.00 %	hedge on Developed Equity exposure
1 response indicated 25.00 %	hedge on All Equities
1 response indicated 50.00 %	hedge on Other - 50% hedged/50% unhedged currency benchmark

Miscellaneous Comments

- Performance shown is gross of fees, with the exception of the following:
 - **Funds 8, 31, 49, 350, 351, and 397:** Performance shown is net of fees.
 - **Funds 5 and 20:** Performance shown is net of fees, except for Total Fund performance.
 - **Funds 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 June 2017 and June 2018.
- Allocations shown reflect dedicated managers/mandates rather than actual exposure, with the exception of the following:
 - **Funds 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, 64, and 240:** 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.

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NEW YORK

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