

## City of Cincinnati Retirement System Investment Committee

City Hall, Committee Room B August 1, 2019 - 12:00 P.M.

### AGENDA

### **Members**

Chris Meyer, Chair Bill Moller, Vice Chair Christopher Baucom Steven Dietrich Tom Gamel Don Stiens Kathy Rahtz <u>CRS Staff</u> Paula Tilsley Renee Tyree Peter Wilson Ron Wilson

### Call to Order

Approval of Minutes May 2, 2019

+ Way 2, 201

### **New Business**

- 4 2nd Quarter Investment Report
- **4** Asset Allocation Study
- Private Equity Education

### Adjournment

Next Meeting: November 7, 2019, 12:00 P.M. - City Hall, Committee Room B





### **Cincinnati Retirement System**

City of Cincinnati Retirement System Executive Summary June 30, 2019



### Manager Status

Market Value: \$2,228.0 Million and 100.0% of Fund

Investment Manager	Asset Class	Status	Reason
BlackRock Strategic Income Opps	Unconstrained Fixed Income	In Compliance	
Loomis Sayles Core-Plus	Core Plus Fixed Income	In Compliance	
Shenkman - Four Points	High Yield Fixed Income	In Compliance	
Northern Trust	US & Non-US Equity Indexes	In Compliance	
Vanguard Mid Cap Value	Mid-Cap Value	In Compliance	
DFA International Small Value	Non-U.S. Small-Cap Value	In Compliance	
DFA Emerging Markets Value	Emerging Markets	In Compliance	
DFA Emerging Markets Core	Emerging Markets	In Compliance	
DFA Emerging Markets Small Cap	EM Small-Cap	In Compliance	
AQR Risk Parity	Risk Parity	In Compliance	
J.P. Morgan SPF	Core Real Estate	In Compliance	
Morgan Stanley P.P.	Core Real Estate	In Compliance	
PRISA III	Value-Added Real Estate	In Compliance	
Principal Enhanced	Value-Added Real Estate	In Compliance	
Mesirow/Courtland I	Non-U.S. Core Real Estate	In Compliance	
Alinda Fund II	Core Infrastructure	In Compliance	
Macquarie Fund II	Core Infrastructure	In Compliance	
J.P. Morgan Infrastructure	Core Infrastructure	In Compliance	
IFM Global Infrastructure (U.S)	Global Infrastructure	In Compliance	
Blue Chip Fund IV	Venture Private Equity	In Compliance	
Fort Washington Fund V	Divers. Private Equity	In Compliance	
Fort Washington Fund VI	Divers. Private Equity	In Compliance	
Fort Washington Fund VIII	Divers. Private Equity	In Compliance	
Fort Washington Fund IX	Divers. Private Equity	In Compliance	
Fort Washington Fund X	Divers. Private Equity	In Compliance	
Fort Washington Opp Fund III	Secondary Private Equity FoF	In Compliance	
North Sky Fund III - LBO	LBO Private Equity	In Compliance	
North Sky Fund III - VC	Venture Private Equity	In Compliance	
North Sky Fund IV - LBO	LBO Private Equity	In Compliance	
North Sky Fund IV - VC	Venture Private Equity	In Compliance	
North Sky Fund V	Divers. Private Equity	In Compliance	
Portfolio Advisors IV - Special Sit	Mezz./Special Sit. Private Equity FoF	In Compliance	
Portfolio Advisors V - Special Sit	Mezz./Special Sit. Private Equity FoF	In Compliance	
JP Morgan Global Private Equity VIII	Global Divers. Private Equity FoF	In Compliance	

### **Investment Manager Evaluation Terminology**

The following terminology has been developed by Marquette Associates to facilitate efficient communication among the Investment Manager, Investment Consultant, and the Plan Sponsor. Each term signifies a particular status with the Fund and any conditions that may require improvement. In each case, communication is made only after consultation with the Trustees and/or the Investment Committee of the Plan.

In Compliance - The investment manager states it is acting in accordance with the Investment Policy Guidelines.

Alert – The investment manager is notified of a problem in performance (usually related to a benchmark or volatility measure), a change in investment characteristics, an alteration in management style or key investment professionals, and/or any other irregularities.

**On Notice** – The investment manager is notified of continued concern with one or more Alert issues. Failure to improve upon stated issues within a specific time frame justifies termination.

Termination - The Trustees have decided to terminate the investment manager. The investment manager is notified and transition plans are in place.

Total Fund Composite

		E	nding June 30, 2	2019		
	Asset Class	Market Value (\$)	3 Mo Net م Cash Flows (\$)	6 of Portfolio	Policy %	Policy Difference (\$)
Total Fund Composite		2,227,975,124	-36,325,895	100.0	100.0	0
Fixed Income Composite		393,238,365	-109,799	17.7	17.0	14,482,594
Loomis Sayles Core-Plus	Core Plus Fixed Income	160,389,703	-109,799	7.2	7.0	4,431,444
BlackRock Strategic Income Opps	Unconstrained Fixed Income	157,120,615	0	7.1	7.0	1,162,356
Shenkman - Four Points	High Yield Fixed Income	75,728,048	0	3.4	3.0	8,888,794
U.S. Equity Composite		638,844,347	-5,058,771	28.7	27.5	26,151,187
NTGI Russell 1000 Value	Large-Cap Value	161,652,641	-7,783	7.3	7.0	5,694,382
NTGI Russell 1000 Growth	Large-Cap Growth	122,613,959	-5,859	5.5	5.0	11,215,203
NTGI S&P 400	Mid-Cap Core	94,509,192	-4,585	4.2	4.0	5,390,187
Vanguard Mid Cap Value	Mid-Cap Value	94,783,336	-5,000,000	4.3	4.0	5,664,331
NTGI Russell 2000 Value	Small-Cap Value	161,180,132	-7,948	7.2	7.5	-5,918,002
Clifton Group	Cash Overlay	4,105,086	-32,596	0.2		
Non-U.S. Equity Composite		499,103,643	-130,652	22.4	23.0	-13,330,635
NTGI MSCI EAFE	Non-U.S. Large-Cap Core	224,723,958	-10,819	10.1	10.0	1,926,446
DFA International Small Value	Non-U.S. Small-Cap Value	100,763,860	0	4.5	5.0	-10,634,896
DFA Emerging Markets Value	Emerging Markets	52,938,486	0	2.4	2.5	-2,760,893
DFA Emerging Markets Core	Emerging Markets	51,964,859	0	2.3	2.5	-3,734,519
DFA Emerging Markets Small Cap	EM Small-Cap	67,123,059	0	3.0	3.0	283,805
Risk Parity Composite		117,204,504	0	5.3	5.0	5,805,748
AQR Risk Parity	Risk Parity	117,204,504	0	5.3	5.0	5,805,748
Real Estate Composite		230,914,766	-11,679,180	10.4	10.0	8,117,253
J.P. Morgan SPF	Core Real Estate	72,865,654	-3,847,822	3.3	2.5	17,166,276
Morgan Stanley P.P.	Core Real Estate	67,201,463	-5,914,294	3.0	2.5	11,502,084
PRISA III	Value-Added Real Estate	39,114,609	-252,531	1.8	2.5	-16,584,769
Principal Enhanced	Value-Added Real Estate	47,403,540	-614,532	2.1	2.5	-8,295,838
Mesirow/Courtland I	Non-U.S. Core Real Estate	4,329,500	-1,050,000	0.2	0.0	4,329,500
Infrastructure Composite		156,992,381	-28,627,640	7.0	7.5	-10,105,754
Alinda Fund II	Core Infrastructure	29,477,828	-331,646	1.3	2.5	-26,221,550
Macquarie Fund II	Core Infrastructure	33,173,684	-28,295,994	1.5	2.5	-22,525,694
J.P. Morgan Infrastructure	Core Infrastructure	31,255,210	0	1.4	2.5	-24,444,168
IFM Global Infrastructure (U.S)	Global Infrastructure	63,085,659	0	2.8		

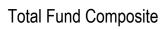
#### Market Value: \$2,228.0 Million and 100.0% of Fund

Total Fund Composite

		L	nung sune so,	2013		
	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Private Equity Composite		177,151,426	-1,928,950	8.0	10.0	-45,646,087
Private Equity w/o Blue Chip		175,724,782	-1,928,950	7.9	-	175,724,782
Fort Washington Fund V	Divers. Private Equity	17,797,234	-1,400,000	0.8		
Fort Washington Fund VI	Divers. Private Equity	13,188,768	-825,000	0.6		
Fort Washington Fund VIII	Divers. Private Equity	37,988,852	0	1.7		
Fort Washington Fund IX	Divers. Private Equity	19,141,697	0	0.9		
Fort Washington Fund X	Divers. Private Equity	4,000,000	4,000,000	0.2		
Fort Washington Opp Fund III	Secondary Private Equity FoF	17,284,575	-3,000,000	0.8		
North Sky Fund III - LBO	LBO Private Equity	7,861,456	-755,967	0.4		
North Sky Fund III - VC	Venture Private Equity	3,055,697	-239,284	0.1		
North Sky Fund IV - LBO	LBO Private Equity	7,809,427	-1,203,774	0.4		
North Sky Fund IV - VC	Venture Private Equity	2,285,271	-1,145,545	0.1		
North Sky Fund V	Divers. Private Equity	37,375,513	0	1.7		
Portfolio Advisors IV - Special Sit	Mezz./Special Sit. Private Equity FoF	3,305,891	-38,242	0.1		
Portfolio Advisors V - Special Sit	Mezz./Special Sit. Private Equity FoF	1,832,850	-118,689	0.1		
JP Morgan Global Private Equity VIII	Global Divers. Private Equity FoF	2,797,551	2,797,551	0.1		
Blue Chip Fund IV	Venture Private Equity	1,426,644	0	0.1		
Total Cash Equivalents		14,525,693	11,307,385	0.7		14,525,693

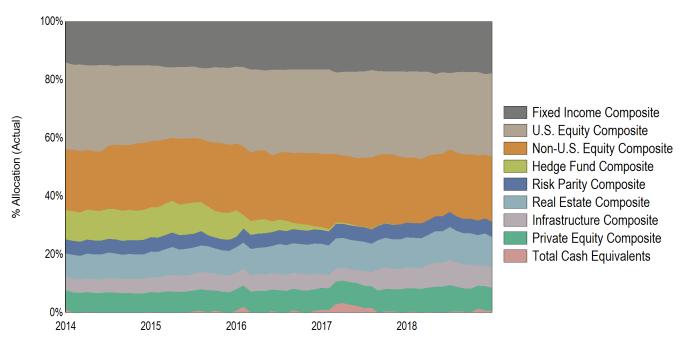
### Ending June 30, 2019

Market Value: \$2,228.0 Million and 100.0% of Fund



### Asset Allocation

Market Value: \$2,228.0 Million and 100.0% of Fund



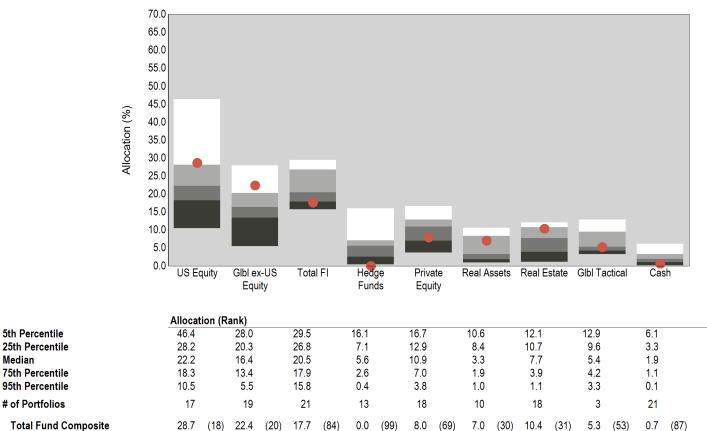
	Current	Policy	Difference	%
Fixed Income Composite	\$393,238,365	\$378,755,771	\$14,482,594	0.7%
U.S. Equity Composite	\$638,844,347	\$612,693,159	\$26,151,187	1.2%
Non-U.S. Equity Composite	\$499,103,643	\$512,434,278	-\$13,330,635	-0.6%
Hedge Fund Composite		\$0		
Risk Parity Composite	\$117,204,504	\$111,398,756	\$5,805,748	0.3%
Real Estate Composite	\$230,914,766	\$222,797,512	\$8,117,253	0.4%
Infrastructure Composite	\$156,992,381	\$167,098,134	-\$10,105,754	-0.5%
Private Equity Composite	\$177,151,426	\$222,797,512	-\$45,646,087	-2.0%
Total Cash Equivalents	\$14,525,693	-		
Total	\$2,227,975,124			

**Historic Asset Allocation** 



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Market Value: \$2,228.0 Million and 100.0% of Fund



Total Plan Allocation vs. InvMetrics Public DB > \$1B Net

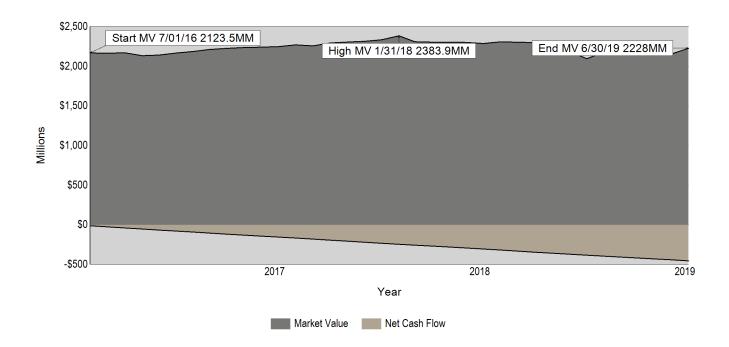
**Total Fund Composite** 

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### Market Value History

Market Value: \$2,228.0 Million and 100.0% of Fund



### Summary of Cash Flows

	Second Quarter	Year-To-Date	One Year	Three Years
Beginning Market Value	\$2,211,892,543.59	\$2,095,589,169.17	\$2,286,723,358.82	\$2,123,454,764.16
Net Cash Flow	-\$35,659,824.14	-\$70,275,876.11	-\$146,825,056.89	-\$442,188,623.30
Net Investment Change	\$51,742,404.45	\$202,661,830.84	\$88,076,821.97	\$546,708,983.04
Ending Market Value	\$2,227,975,123.90	\$2,227,975,123.90	\$2,227,975,123.90	\$2,227,975,123.90



## Attribution

Market Value: \$2,228.0 Million and 100.0% of Fund

Attribution Summary														
	5 Years Ending June 30, 2019													
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects							
Fixed Income Composite	3.59%	2.95%	0.64%	0.11%	-0.01%	0.01%	0.11%							
U.S. Equity Composite	8.16%	10.19%	-2.03%	-0.50%	-0.01%	-0.04%	-0.55%							
Non-U.S. Equity Composite	2.39%	2.16%	0.22%	0.05%	0.00%	0.00%	0.04%							
Hedge Fund Composite		1.91%		0.04%	-0.07%	-0.10%	-0.13%							
Risk Parity Composite	3.01%	7.42%	-4.41%	-0.22%	0.00%	0.00%	-0.22%							
Real Estate Composite	10.86%	8.77%	2.09%	0.19%	0.02%	0.00%	0.22%							
Infrastructure Composite	5.43%	4.90%	0.52%	-0.01%	0.05%	0.03%	0.07%							
Private Equity Composite	10.94%	10.78%	0.16%	0.01%	-0.08%	0.00%	-0.06%							
Total Cash Equivalents	1.71%	0.87%	0.84%											
Total	5.87%	6.44%	-0.58%	-0.33%	-0.11%	-0.09%	-0.53%							

#### **Calendar Years**

	YTD	2018	2017	2016	2015	Quarter	1 Yr	3 Yrs
Wtd. Actual Return	9.8%	-4.1%	15.1%	9.1%	0.3%	2.4%	4.2%	8.6%
Wtd. Index Return *	10.9%	-2.7%	16.0%	7.2%	0.8%	2.8%	6.7%	9.5%
Excess Return	-1.1%	-1.5%	-0.9%	2.0%	-0.6%	-0.4%	-2.5%	-0.8%
Selection Effect	-0.8%	-1.2%	-0.7%	2.5%	-0.6%	-0.4%	-2.0%	-0.5%
Allocation Effect	-0.3%	-0.1%	0.2%	-0.2%	-0.1%	-0.1%	-0.2%	-0.1%
Interaction Effect	0.0%	-0.2%	-0.2%	-0.3%	0.1%	0.0%	-0.2%	-0.1%

\*Calculated from the benchmark returns and weightings of each composite. Returns will differ slightly from the official Policy Benchmark.

### Attribution

Market Value: \$2,228.0 Million and 100.0% of Fund

	Market Value	3 Mo	Contribution	% Contribution
	(\$)	Return	to Return	to Return
Total Fund Composite	2,227,975,124	2.4	2.4	100.0%
Fixed Income Composite	393,238,365	2.8	0.5	20.9%
Loomis Sayles Core-Plus	160,389,703	3.0	0.2	9.2%
BlackRock Strategic Income Opps	157,120,615	2.6	0.2	7.7%
Shenkman - Four Points	75,728,048	2.8	0.1	4.0%
U.S. Equity Composite	638,844,347	3.2	0.9	39.1%
NTGI Russell 1000 Value	161,652,641	3.9	0.3	11.7%
NTGI Russell 1000 Growth	122,613,959	4.6	0.3	10.6%
NTGI S&P 400	94,509,192	3.1	0.1	5.4%
Vanguard Mid Cap Value	94,783,336	3.9	0.2	7.0%
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Clifton Group	4,105,086	1.8	0.0	0.1%
Non-U.S. Equity Composite	499,103,643	2.0	0.4	18.6%
NTGI MSCI EAFE	224,723,958	3.9	0.4	16.3%
DFA International Small Value	100,763,860	0.2	0.0	0.3%
DFA Emerging Markets Value	52,938,486	0.3	0.0	0.3%
DFA Emerging Markets Core	51,964,859	0.9	0.0	0.8%
DFA Emerging Markets Small Cap	67,123,059	0.8	0.0	1.0%
Risk Parity Composite	117,204,504	5.1	0.3	11.0%
AQR Risk Parity	117,204,504	5.1	0.3	11.0%
Real Estate Composite	230,914,766	1.2	0.1	5.5%
J.P. Morgan SPF	72,865,654	0.9	0.0	1.3%
Morgan Stanley P.P.	67,201,463	1.8	0.1	2.4%
PRISA III	39,114,609	1.6	0.0	1.2%
Principal Enhanced	47,403,540	0.6	0.0	0.6%
Mesirow/Courtland I	4,329,500	0.0	0.0	0.0%
Infrastructure Composite	156,992,381	1.5	0.1	4.8%
Alinda Fund II	29,477,828	0.0	0.0	0.0%
Macquarie Fund II	33,173,684	0.0	0.0	0.0%
J.P. Morgan Infrastructure	31,255,210	0.0	0.0	0.0%
IFM Global Infrastructure (U.S)	63,085,659	3.8	0.1	4.6%
Private Equity Composite	177,151,426	0.0	0.0	0.0%
Private Equity w/o Blue Chip	175,724,782	0.0	0.0	0.0%
Fort Washington Fund V	17,797,234	0.0	0.0	0.0%
Fort Washington Fund VI	13,188,768	0.0	0.0	0.0%
Fort Washington Fund VIII	37,988,852	0.0	0.0	0.0%
Fort Washington Fund IX	19,141,697	0.0	0.0	0.0%
Fort Washington Fund X	4,000,000	0.0	0.0	0.0%
Fort Washington Opp Fund III	17,284,575	0.0	0.0	0.0%
North Sky Fund III - LBO	7,861,456	0.0	0.0	0.0%
North Sky Fund III - VC	3,055,697	0.0	0.0	0.0%
North Sky Fund IV - LBO	7,809,427	0.0	0.0	0.0%
North Sky Fund IV - VC	2,285,271	0.0	0.0	0.0%
North Sky Fund V	37,375,513	0.0	0.0	0.0%
Portfolio Advisors IV - Special Sit	3,305,891	0.0	0.0	0.0%
Portfolio Advisors V - Special Sit	1,832,850	0.0	0.0	0.0%
JP Morgan Global Private Equity VIII	2,797,551	0.0	0.0	0.0%
Blue Chip Fund IV	1,426,644	0.0	0.0	0.0%
Total Cash Equivalents	14,525,693	0.6	0.0	0.1%



# Total Fund Composite

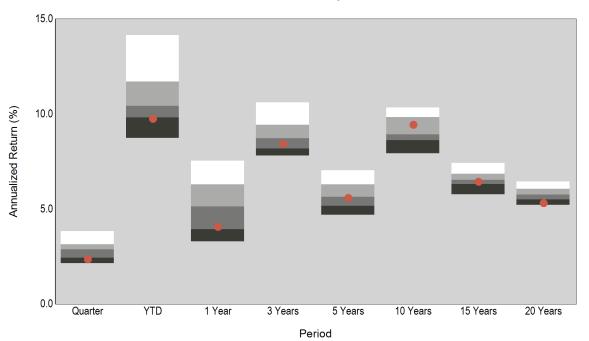
# Annualized Performance (Net of Fees)

Market Value: \$2,228.0 Million and 100.0% of Fund

					Enc	ding Jun	e 30, 201	19			
	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	15 Yrs	20 Yrs
Total Fund Composite	2.36%	9.75%	4.06%	6.15%	8.43%	6.08%	5.58%	8.34%	9.44%	6.44%	5.31%
Target Benchmark	2.34%	10.33%	4.74%	6.70%	8.95%	6.60%	6.05%	8.46%	9.23%	6.62%	5.54%
InvMetrics Public DB > \$1B Net Rank	80	78	72	80	60	61	57	46	35	62	93
Fixed Income Composite	2.82%	6.57%	6.00%	4.09%	4.75%	3.76%	3.46%	3.73%	5.58%	5.20%	5.71%
BBgBarc US Aggregate TR	3.08%	6.11%	7.87%	3.65%	2.31%	3.22%	2.95%	2.62%	3.90%	4.27%	4.93%
InvMetrics Public DB Total Fix Inc Net Rank	42	36	89	14	7	27	7	17	23	28	45
U.S. Equity Composite	3.24%	17.21%	3.42%	8.61%	12.49%	8.67%	8.03%	12.48%	13.76%	8.30%	5.90%
Russell 3000	4.10%	18.71%	8.98%	11.84%	14.02%	10.93%	10.19%	13.79%	14.67%	8.88%	6.30%
InvMetrics Public DB US Eq Net Rank	95	94	99	97	83	88	91	79	64	79	99
Non-U.S. Equity Composite	1.97%	11.20%	-1.76%	1.63%	7.46%	3.76%	2.10%	6.60%	7.43%	6.28%	4.10%
MSCI ACWI ex USA	2.98%	13.60%	1.29%	4.24%	9.39%	4.11%	2.16%	6.36%	6.54%	5.85%	4.51%
InvMetrics Public DB ex-US Eq Net Rank	86	96	86	88	88	65	71	68	40	33	81
Risk Parity Composite	5.06%	15.57%	8.36%	8.68%	6.57%	4.89%	3.01%				
60% Wilshire 5000/40% BarCap Aggregate	3.83%	13.74%	8.98%	8.77%	9.41%	8.00%	7.42%	9.34%	10.50%	7.35%	6.12%
Real Estate Composite	1.22%	2.27%	5.93%	6.87%	7.31%	8.57%	9.62%	10.65%	9.98%		
NFI	0.78%	1.99%	5.48%	6.47%	6.61%	7.65%	8.77%	9.52%	8.87%	7.02%	7.35%
NPI	0.00%	1.80%	4.92%	6.05%	6.36%	7.41%	8.50%	9.20%	9.08%	8.59%	8.79%
InvMetrics All DB Real Estate Priv Net Rank	49	55	61	47	37	26	28	10	13		
Infrastructure Composite	1.48%	3.34%	5.39%	3.75%	2.82%	3.82%	4.95%	5.91%	8.00%		
3 Month T-Bill +4%	1.56%	3.17%	6.35%	5.90%	5.45%	5.13%	4.90%	4.66%	4.49%	5.35%	5.78%
Private Equity Composite	0.00%	3.41%	11.32%	13.76%	13.11%	10.54%	10.75%	12.67%	13.63%	9.32%	5.24%
Cambridge Associates All PE	0.00%	4.72%	7.29%	12.64%	13.78%	11.03%	10.78%	12.90%	13.67%	13.29%	12.05%
Private Equity w/o Blue Chip	0.00%	3.44%	11.65%	14.30%	13.91%	11.17%	11.57%	13.68%	14.75%		



Market Value: \$2,228.0 Million and 100.0% of Fund



### InvMetrics Public DB > \$1B Net Return Comparison

	Return								
5th Percentile	3.8	14.1	7.5	10.6	7.0	10.3	7.4	6.4	
25th Percentile	3.2	11.7	6.3	9.4	6.3	9.8	6.9	6.1	
Median	2.9	10.4	5.1	8.7	5.6	8.9	6.5	5.8	
75th Percentile	2.4	9.8	3.9	8.2	5.2	8.6	6.3	5.5	
95th Percentile	2.2	8.7	3.3	7.8	4.7	7.9	5.8	5.2	
# of Portfolios	27	27	27	27	27	25	22	19	
Total Fund Composite	2.4	9.7	4.1	8.4	5.6	9.4	6.4	5.3	

# Total Fund Composite

# Calendar Performance (Net of Fees)

Market Value: \$2,228.0 Million and 100.0% of Fund

					Cale	endar Ye	ar				
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Total Fund Composite	-4.3%	14.9%	8.9%	-0.1%	6.4%	17.5%	12.0%	1.1%	13.9%	20.7%	-28.1%
Target Benchmark	-4.1%	15.4%	8.9%	0.4%	5.8%	17.2%	12.1%	-1.8%	14.7%	20.8%	-29.3%
InvMetrics Public DB > \$1B Net Rank	59	62	13	46	18	13	69	32	20	39	69
Fixed Income Composite	-0.6%	5.6%	7.2%	-2.1%	5.6%	0.7%	8.6%	5.6%	9.7%	21.1%	-5.7%
BBgBarc US Aggregate TR	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%
InvMetrics Public DB Total Fix Inc Net Rank	57	45	14	78	17	20	36	67	25	13	67
U.S. Equity Composite	-8.6%	17.8%	16.4%	-3.0%	10.8%	35.4%	15.4%	-0.1%	19.4%	28.1%	-36.6%
Russell 3000	-5.2%	21.1%	12.7%	0.5%	12.6%	33.6%	16.4%	1.0%	16.9%	28.3%	-37.3%
InvMetrics Public DB US Eq Net Rank	92	95	3	88	54	24	58	66	29	65	36
Non-U.S. Equity Composite	-16.2%	27.7%	7.3%	-4.9%	-1.4%	14.5%	18.2%	-10.2%	12.9%	36.1%	-39.1%
MSCI ACWI ex USA	-14.2%	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%	-13.7%	11.2%	41.4%	-45.5%
InvMetrics Public DB ex-US Eq Net Rank	68	59	7	68	13	79	49	6	40	59	20
Risk Parity Composite	-6.1%	11.9%	11.2%	-9.4%	6.5%	-2.9%					
60% Wilshire 5000/40% BarCap Aggregate	-2.9%	13.8%	8.7%	0.7%	9.9%	18.1%	11.5%	4.1%	13.6%	19.6%	-22.2%
Real Estate Composite	7.5%	7.9%	9.3%	14.8%	12.4%	14.8%	11.0%	16.9%	15.9%	-31.9%	-8.3%
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%
NPI	6.7%	7.0%	8.0%	13.3%	11.8%	11.0%	10.5%	14.3%	13.1%	-16.9%	-6.5%
InvMetrics All DB Real Estate Priv Net Rank	39	20	7	22	31	17	30	14	25	77	24
Infrastructure Composite	4.8%	2.5%	0.4%	11.2%	12.5%	4.2%	5.6%	11.7%	23.9%	2.9%	
3 Month T-Bill +4%	6.0%	5.0%	4.3%	4.0%	4.0%	4.1%	4.1%	4.0%	4.1%	4.1%	5.4%
Private Equity Composite	16.0%	14.3%	8.1%	8.2%	8.4%	26.5%	8.4%	11.8%	17.5%	17.4%	-10.5%
Cambridge Associates All PE	10.4%	19.3%	9.8%	7.3%	11.3%	20.7%	12.7%	8.2%	19.6%	14.0%	-25.8%
Private Equity w/o Blue Chip	16.8%	15.0%	9.0%	9.5%	8.8%	28.8%	9.0%	14.3%	19.8%	17.0%	-15.3%

# Annualized Performance (Net of Fees)

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	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Total Fund Composite	4.0%	2.4%	9.7%	4.1%	6.1%	8.4%	6.1%	5.6%	8.3%	9.4%	8.9%	May-85
Target Benchmark	3.6%	2.3%	10.3%	4.7%	6.7%	8.9%	6.6%	6.1%	8.5%	9.2%		May-85
InvMetrics Public DB > \$1B Net Rank	27	80	78	72	80	60	61	57	46	35	16	May-85
Fixed Income Composite	1.5%	2.8%	6.6%	6.0%	4.1%	4.7%	3.8%	3.5%	3.7%	5.6%	5.8%	Nov-95
BBgBarc US Aggregate TR	1.3%	3.1%	6.1%	7.9%	3.7%	2.3%	3.2%	2.9%	2.6%	3.9%	5.1%	Nov-95
InvMetrics Public DB Total Fix Inc Net Rank	12	42	36	89	14	7	27	7	17	23	26	Nov-95
Loomis Sayles Core-Plus	1.3%	3.0%	6.8%	7.4%	4.1%	3.6%					3.8%	Jul-15
BBgBarc US Aggregate TR	1.3%	3.1%	6.1%	7.9%	3.7%	2.3%	3.2%	2.9%	2.6%	3.9%	3.1%	Jul-15
eV US Core Plus Fixed Inc Net Rank	68	69	51	79	35	31					35	Jul-15
BlackRock Strategic Income Opps	1.7%	2.6%	5.2%	5.1%	3.5%	4.2%	3.1%				2.9%	Dec-14
BBgBarc US Aggregate TR	1.3%	3.1%	6.1%	7.9%	3.7%	2.3%	3.2%	2.9%	2.6%	3.9%	2.8%	Dec-14
3 Month T-Bill +4%	0.5%	1.6%	3.2%	6.4%	5.9%	5.5%	5.1%	4.9%	4.7%	4.5%	5.0%	Dec-14
eV US Core Plus Fixed Inc Net Rank	11	91	98	99	83	8	90				82	Dec-14
Shenkman - Four Points	1.8%	2.8%	9.2%	4.9%	5.4%	8.3%	5.4%	4.7%	6.6%		6.6%	Aug-10
BBgBarc US High Yield TR	2.3%	2.5%	9.9%	7.5%	5.0%	7.5%	6.0%	4.7%	6.4%	9.2%	7.2%	Aug-10
eV US High Yield Fixed Inc Net Rank	72	28	63	88	12	7	40	26	16		56	Aug-10

# Investment Manager

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
U.S. Equity Composite	7.2%	3.2%	17.2%	3.4%	8.6%	12.5%	8.7%	8.0%	12.5%	13.8%	9.2%	Feb-89
Russell 3000	7.0%	4.1%	18.7%	9.0%	11.8%	14.0%	10.9%	10.2%	13.8%	14.7%	10.3%	Feb-89
InvMetrics Public DB US Eq Net Rank	9	95	94	99	97	83	88	91	79	64	99	Feb-89
NTGI Russell 1000 Value	7.2%	3.9%	16.3%	8.5%	7.7%	10.3%	8.4%	7.6%			8.4%	Dec-13
Russell 1000 Value	7.2%	3.8%	16.2%	8.5%	7.6%	10.2%	8.3%	7.5%	12.1%	13.2%	8.3%	Dec-13
eV US Large Cap Value Equity Net Rank	43	45	38	28	47	58	40	39			37	Dec-13
NTGI Russell 1000 Growth	6.9%	4.6%	21.5%	11.6%	16.9%	18.1%	14.1%	13.4%			13.4%	Dec-13
Russell 1000 Growth	6.9%	4.6%	21.5%	11.6%	16.9%	18.1%	14.1%	13.4%	15.8%	16.3%	13.4%	Dec-13
eV US Large Cap Growth Equity Net Rank	43	61	53	47	42	47	25	27			18	Dec-13
NTGI S&P 400	7.6%	3.1%	18.0%	1.4%	7.3%	11.0%	8.5%	8.1%			8.8%	Dec-13
S&P 400 MidCap	7.6%	3.0%	18.0%	1.4%	7.3%	10.9%	8.4%	8.0%	12.7%	14.6%	8.7%	Dec-13
eV US Mid Cap Equity Net Rank	29	73	65	69	58	61	49	50			48	Dec-13
Vanguard Mid Cap Value	7.8%	3.9%	18.2%	3.5%							-0.2%	Jan-18
CRSP US Mid Cap Value TR USD	7.9%	3.9%	18.3%	3.6%	6.5%	10.2%	7.9%	7.5%	13.1%	15.1%	-0.1%	Jan-18
Mid-Cap Value MStar MF Rank	23	32	32	27							37	Jan-18
NTGI Russell 2000 Value	6.4%	1.4%	13.6%	-6.1%	3.2%	10.0%	6.8%	5.6%			5.9%	Dec-13
Russell 2000 Value	6.4%	1.4%	13.5%	-6.2%	3.0%	9.8%	6.6%	5.4%	10.3%	12.4%	5.7%	Dec-13
eV US Small Cap Value Equity Net Rank	70	66	66	57	46	33	30	33			40	Dec-13

# Investment Manager

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Non-U.S. Equity Composite	5.5%	2.0%	11.2%	-1.8%	1.6%	7.5%	3.8%	2.1%	6.6%	7.4%	5.9%	May-93
MSCI ACWI ex USA	6.0%	3.0%	13.6%	1.3%	4.2%	9.4%	4.1%	2.2%	6.4%	6.5%		<i>May</i> -93
InvMetrics Public DB ex-US Eq Net Rank	86	86	96	86	88	88	65	71	68	40	71	May-93
NTGI MSCI EAFE	5.8%	3.9%	14.2%								-1.1%	Jul-18
MSCI EAFE	5.9%	3.7%	14.0%	1.1%	3.9%	9.1%	3.9%	2.2%	7.3%	6.9%	-1.3%	Jul-18
eV EAFE Large Cap Core Net Rank	56	44	47								34	Jul-18
DFA International Small Value	5.2%	0.2%	8.8%	-11.5%	-3.4%	6.3%	2.2%	1.1%	8.5%	8.2%	3.1%	Nov-07
MSCI EAFE Small Cap	4.2%	1.7%	12.5%	-6.3%	2.6%	9.1%	5.7%	4.4%	9.9%	9.7%	3.9%	Nov-07
Foreign Small/Mid Value MStar MF Rank	38	54	61	72	79	54	62	55	26	51	99	Nov-07
DFA Emerging Markets Value	5.1%	0.3%	7.5%	2.0%							-6.0%	Mar-18
MSCI Emerging Markets	6.2%	0.6%	10.6%	1.2%	4.6%	10.7%	4.5%	2.5%	4.2%	5.8%	-5.5%	Mar-18
Diversified Emerging Mkts MStar MF Rank	81	83	95	41							41	Mar-18
DFA Emerging Markets Core	5.6%	0.9%	9.5%	1.3%							-7.0%	Mar-18
MSCI Emerging Markets	6.2%	0.6%	10.6%	1.2%	4.6%	10.7%	4.5%	2.5%	4.2%	5.8%	-5.5%	Mar-18
Diversified Emerging Mkts MStar MF Rank	69	67	82	49							54	Mar-18
DFA Emerging Markets Small Cap	5.0%	0.8%	9.6%	-1.3%	2.0%	7.6%	4.1%				4.9%	Dec-14
MSCI Emerging Markets Small Cap	3.9%	-1.0%	6.7%	-5.1%	0.1%	5.5%	0.6%	0.5%	3.7%	5.9%	2.3%	Dec-14
eV Emg Mkts Small Cap Equity Net Rank	38	42	59	30	46	44	23				29	Dec-14
Risk Parity Composite	5.4%	5.1%	15.6%	8.4%	8.7%	6.6%	4.9%	3.0%				Jul-12
60% Wilshire 5000/40% BarCap Aggregate	4.7%	3.8%	13.7%	9.0%	8.8%	9.4%	8.0%	7.4%	9.3%	10.5%	9.3%	Jul-12
AQR Risk Parity	5.4%	5.1%	15.6%	8.4%	8.7%	6.6%	4.9%	3.0%				Jul-12
60% Wilshire 5000/40% BarCap Aggregate	4.7%	3.8%	13.7%	9.0%	8.8%	9.4%	8.0%	7.4%	9.3%	10.5%	9.3%	Jul-12
60% MSCI World / 40% BarCap Aggregate	4.5%	3.8%	12.7%	7.3%	6.9%	8.1%	6.2%	5.3%	7.5%	8.2%	7.5%	Jul-12

# Investment Manager

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	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inceptio Dat
eal Estate Composite	1.0%	1.2%	2.3%	5.9%	6.9%	7.3%	8.6%	9.6%	10.6%	10.0%	5.4%	Aug-0
NFI	0.3%	0.8%	2.0%	5.5%	6.5%	6.6%	7.6%	8.8%	9.5%	8.9%	4.5%	Aug-0
NPI	0.0%	0.0%	1.8%	4.9%	6.1%	6.4%	7.4%	8.5%	9.2%	9.1%	6.2%	Aug-(
InvMetrics All DB Real Estate Priv Net Rank	40	49	55	61	47	37	26	28	10	13	15	Aug-0
J.P. Morgan SPF	0.3%	0.9%	1.1%	4.3%	5.6%	6.0%	7.0%	8.0%	9.5%	8.9%		Jan-C
NFI	0.3%	0.8%	2.0%	5.5%	6.5%	6.6%	7.6%	8.8%	9.5%	8.9%	4.4%	Jan-(
NPI	0.0%	0.0%	1.8%	4.9%	6.1%	6.4%	7.4%	8.5%	9.2%	9.1%	6.0%	Jan-(
InvMetrics All DB Real Estate Pub Net Rank	90	56	99	98	97	75	88	77	53	61		Jan-
Morgan Stanley P.P.	1.8%	1.8%	3.1%	7.2%	7.8%	8.2%	9.0%	10.4%	11.4%	10.4%	6.0%	Aug-0
NFI	0.3%	0.8%	2.0%	5.5%	6.5%	6.6%	7.6%	8.8%	9.5%	8.9%	4.5%	Aug-
NPI	0.0%	0.0%	1.8%	4.9%	6.1%	6.4%	7.4%	8.5%	9.2%	9.1%	6.2%	Aug-
InvMetrics All DB Real Estate Pub Net Rank	5	18	48	30	19	3	17	4	2	15	7	Aug-
PRISA III	1.6%	1.6%	3.4%	7.4%	8.0%	8.6%	11.5%	13.6%	13.4%	12.1%	3.9%	Dec-
NFI	0.3%	0.8%	2.0%	5.5%	6.5%	6.6%	7.6%	8.8%	9.5%	8.9%	4.4%	Dec-
NPI	0.0%	0.0%	1.8%	4.9%	6.1%	6.4%	7.4%	8.5%	9.2%	9.1%	6.0%	Dec-
InvMetrics All DB Real Estate Pub Net Rank	16	26	47	29	17	2	1	1	1	10	90	Dec
Principal Enhanced	0.6%	0.6%	2.2%	6.8%	8.4%	9.3%	11.4%	12.1%	13.1%	10.4%	4.0%	Mar-
NFI	0.3%	0.8%	2.0%	5.5%	6.5%	6.6%	7.6%	8.8%	9.5%	8.9%	4.3%	Mar-
NPI	0.0%	0.0%	1.8%	4.9%	6.1%	6.4%	7.4%	8.5%	9.2%	9.1%	6.0%	Mar
InvMetrics All DB Real Estate Pub Net Rank	69	67	82	41	14	1	1	1	1	15	74	Mar
Mesirow/Courtland I	0.0%	0.0%	0.0%	-4.7%	-3.8%	-2.3%	-1.0%	-0.5%	2.2%	6.1%		Aug-
NFI	0.3%	0.8%	2.0%	5.5%	6.5%	6.6%	7.6%	8.8%	9.5%	8.9%	4.5%	Aug-
NPI	0.0%	0.0%	1.8%	4.9%	6.1%	6.4%	7.4%	8.5%	9.2%	9.1%	6.2%	Aug-
frastructure Composite	1.5%	1.5%	3.3%	5.4%	3.7%	2.8%	3.8%	5.0%	5.9%	8.0%		Aug
3 Month T-Bill +4%	0.5%	1.6%	3.2%	6.4%	5.9%	5.5%	5.1%	4.9%	4.7%	4.5%	4.5%	Aug-
Alinda Fund II	0.0%	0.0%	0.5%	-9.3%	-9.6%	-8.0%	-4.7%	-1.4%	1.3%	4.7%		Aug-
3 Month T-Bill +4%	0.5%	1.6%	3.2%	6.4%	5.9%	5.5%	5.1%	4.9%	4.7%	4.5%	4.5%	Aug-
Macquarie Fund II	0.0%	0.0%	2.0%	3.5%	5.6%	6.8%	7.3%	6.6%	6.3%	8.3%		Sep
3 Month T-Bill +4%	0.5%	1.6%	3.2%	6.4%	5.9%	5.5%	5.1%	4.9%	4.7%	4.5%	4.5%	Sep-
J.P. Morgan Infrastructure	0.0%	0.0%	1.2%	4.3%							4.0%	Dec-
CPI +4%	0.3%	1.8%	4.0%	5.7%	6.3%	6.1%	5.9%	5.5%	5.6%	5.8%	6.7%	Dec-
IFM Global Infrastructure (U.S)	3.9%	3.8%	6.6%	16.4%							19.0%	Feb-
CPI +4%	0.3%	1.8%	4.0%	5.7%	6.3%	6.1%	5.9%	5.5%	5.6%	5.8%	6.2%	Feb-

# Investment Manager

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	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Private Equity Composite	0.0%	0.0%	3.4%	11.3%	13.8%	13.1%	10.5%	10.7%	12.7%	13.6%	7.8%	Jul-9
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	15.3%	Jul-9
Private Equity w/o Blue Chip	0.0%	0.0%	3.4%	11.7%	14.3%	13.9%	11.2%	11.6%	13.7%	14.7%		
Fort Washington Fund V	0.0%	0.0%	7.8%	11.4%	10.4%	9.9%	6.8%	7.0%	9.9%	13.0%		Sep-0
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	9.2%	Sep-0
Fort Washington Fund VI	0.0%	0.0%	7.8%	15.8%	16.7%	15.7%	11.0%	13.5%	15.3%	14.1%		Apr-0
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	9.3%	Apr-0
Fort Washington Fund VIII	0.0%	0.0%	2.6%	9.5%	12.5%	11.9%	12.7%	17.3%			9.9%	Jan-1
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	11.3%	Jan-1
Fort Washington Fund IX	0.0%	0.0%	2.9%	2.8%	8.0%						22.7%	Sep-1
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	13.5%	Sep-1
Fort Washington Fund X	0.0%										0.0%	May-1
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	0.0%	May-1
Fort Washington Opp Fund III	0.0%	0.0%	1.5%	15.9%	17.5%	16.1%	17.3%				26.8%	Jul-1
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	11.0%	Jul-1
North Sky Fund III - LBO	0.0%	0.0%	8.4%	-2.9%	11.6%	15.1%	12.7%	12.6%	14.9%	15.7%	11.5%	May-0
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	9.7%	May-0
North Sky Fund III - VC	0.0%	0.0%	0.3%	13.8%	19.0%	18.5%	11.0%	11.1%	13.7%	13.2%	11.5%	May-0
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	9.7%	May-0
North Sky Fund IV - LBO	0.0%	0.0%	1.4%	10.8%	17.0%	17.4%	16.5%	16.7%	16.5%	15.4%		Aug-0
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	9.9%	Aug-0
North Sky Fund IV - VC	0.0%	0.0%	2.3%	-4.3%	5.8%	10.6%	7.3%	7.9%	12.4%	16.1%		May-0
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	9.4%	May-0
North Sky Fund V	0.0%	0.0%	2.2%	21.6%	21.3%	16.6%	15.2%	7.2%			4.1%	Apr-1
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	11.1%	Apr-1
Portfolio Advisors IV - Special Sit	0.0%	0.0%	-0.3%	-1.2%	0.6%	2.6%	-0.1%	0.6%	4.5%	7.2%		Jun-C
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	9.5%	Jun-(
Portfolio Advisors V - Special Sit	0.0%	0.0%	-0.3%	2.3%	2.8%	5.0%	3.9%	4.4%	7.1%	8.3%		Aug-(
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	9.9%	Aug-(
JP Morgan Global Private Equity VIII												Jun-1
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%		Jun-1
Blue Chip Fund IV	0.0%	0.0%	0.0%	-21.6%	-25.4%	-25.8%	-20.2%	-18.9%	-13.2%	-8.3%		Dec-0
Cambridge Associates All PE	0.0%	0.0%	4.7%	7.3%	12.6%	13.8%	11.0%	10.8%	12.9%	13.7%	9.6%	Dec-0

# Calendar Performance (Net of Fees)

						Calenda	r Year				
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Total Fund Composite	-4.3%	14.9%	8.9%	-0.1%	6.4%	17.5%	12.0%	1.1%	13.9%	20.7%	-28.1%
Target Benchmark	-4.1%	15.4%	8.9%	0.4%	5.8%	17.2%	12.1%	-1.8%	14.7%	20.8%	-29.3%
InvMetrics Public DB > \$1B Net Rank	59	62	13	46	18	13	69	32	20	39	69
Fixed Income Composite	-0.6%	5.6%	7.2%	<b>-2</b> .1%	5.6%	0.7%	8.6%	5.6%	9.7%	21.1%	-5.7%
BBgBarc US Aggregate TR	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%
InvMetrics Public DB Total Fix Inc Net Rank	57	45	14	78	17	20	36	67	25	13	67
Loomis Sayles Core-Plus	-0.5%	5.2%	6.9%								
BBgBarc US Aggregate TR	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%
eV US Core Plus Fixed Inc Net Rank	47	24	17								
BlackRock Strategic Income Opps	-0.5%	5.0%	3.7%	-0.3%							
BBgBarc US Aggregate TR	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%
3 Month T-Bill +4%	6.0%	5.0%	4.3%	4.0%	4.0%	4.1%	4.1%	4.0%	4.1%	4.1%	5.4%
eV US Core Plus Fixed Inc Net Rank	41	36	75	62							
Shenkman - Four Points	-1.0%	7.5%	16.1%	-4.2%	2.6%	10.7%	11.9%	1.7%			
BBgBarc US High Yield TR	-2.1%	7.5%	17.1%	-4.5%	2.5%	7.4%	15.8%	5.0%	15.1%	58.2%	-26.2%
eV US High Yield Fixed Inc Net Rank	28	39	20	66	35	10	91	86			

# Calendar Performance (Net of Fees)

						Calenda	r Year				
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
U.S. Equity Composite	-8.6%	17.8%	16.4%	-3.0%	10.8%	35.4%	15.4%	-0.1%	19.4%	28.1%	-36.6%
Russell 3000	-5.2%	21.1%	12.7%	0.5%	12.6%	33.6%	16.4%	1.0%	16.9%	28.3%	-37.3%
InvMetrics Public DB US Eq Net Rank	92	95	3	88	54	24	58	66	29	65	36
NTGI Russell 1000 Value	-8.2%	13.8%	17.3%	-3.6%	13.5%						
Russell 1000 Value	-8.3%	13.7%	17.3%	-3.8%	13.5%	32.5%	17.5%	0.4%	15.5%	19.7%	-36.8%
eV US Large Cap Value Equity Net Rank	42	83	19	57	23						
NTGI Russell 1000 Growth	-1.5%	30.1%	7.2%	5.7%	13.1%						
Russell 1000 Growth	-1.5%	30.2%	7.1%	5.7%	13.0%	33.5%	15.3%	2.6%	16.7%	37.2%	-38.4%
eV US Large Cap Growth Equity Net Rank	52	40	19	35	26						
NTGI S&P 400	-11.0%	16.3%	20.8%	-2.1%	9.9%						
S&P 400 MidCap	-11.1%	16.2%	20.7%	-2.2%	9.8%	33.5%	17.9%	-1.7%	26.6%	37.4%	-36.2%
eV US Mid Cap Equity Net Rank	57	61	14	49	40						
Vanguard Mid Cap Value											
CRSP US Mid Cap Value TR USD	-12.4%	17.1%	15.3%	-1.8%	14.1%	37.4%	17.9%	-0.4%	24.6%	35.2%	-37.9%
Mid-Cap Value MStar MF Rank											
NTGI Russell 2000 Value	-12.7%	8.1%	31.9%	-7.3%	4.4%						
Russell 2000 Value	-12.9%	7.8%	31.7%	-7.5%	4.2%	34.5%	18.0%	-5.5%	24.5%	20.6%	-28.9%
eV US Small Cap Value Equity Net Rank	29	67	12	72	56						

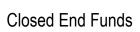
Clifton Group

# Calendar Performance (Net of Fees)

						Calenda	r Year				
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Non-U.S. Equity Composite	-16.2%	27.7%	7.3%	-4.9%	-1.4%	14.5%	18.2%	-10.2%	12.9%	36.1%	-39.1%
MSCI ACWI ex USA	-14.2%	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%	-13.7%	11.2%	41.4%	-45.5%
InvMetrics Public DB ex-US Eq Net Rank	68	59	7	68	13	79	49	6	40	59	20
NTGI MSCI EAFE											
MSCI EAFE	-13.8%	25.0%	1.0%	-0.8%	-4.9%	22.8%	17.3%	-12.1%	7.8%	31.8%	-43.4%
eV EAFE Large Cap Core Net Rank											
DFA International Small Value	-23.3%	28.0%	8.0%	4.0%	-5.0%	32.4%	22.3%	-17.5%	18.1%	39.5%	-41.7%
MSCI EAFE Small Cap	-17.9%	33.0%	2.2%	9.6%	-4.9%	29.3%	20.0%	-15.9%	22.0%	46.8%	-47.0%
Foreign Small/Mid Value MStar MF Rank	88	65	24	43	41	8	37	62	72	41	17
DFA Emerging Markets Value											
MSCI Emerging Markets	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%	-18.4%	18.9%	78.5%	-53.3%
Diversified Emerging Mkts MStar MF Rank											
DFA Emerging Markets Core											
MSCI Emerging Markets	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%	-18.4%	18.9%	78.5%	-53.3%
Diversified Emerging Mkts MStar MF Rank											
DFA Emerging Markets Small Cap	-17.6%	35.3%	10.9%	-8.7%							
MSCI Emerging Markets Small Cap	-18.6%	33.8%	2.3%	-6.8%	1.0%	1.0%	22.2%	-27.2%	27.2%	113.8%	-58.2%
eV Emg Mkts Small Cap Equity Net Rank	46	55	15	59							
Risk Parity Composite	<b>-6.1%</b>	11.9%	11.2%	-9.4%	6.5%	-2.9%					
60% Wilshire 5000/40% BarCap Aggregate	-2.9%	13.8%	8.7%	0.7%	9.9%	18.1%	11.5%	4.1%	13.6%	19.6%	-22.2%
AQR Risk Parity	-6.1%	11.9%	11.2%	-9.4%	6.5%	-2.9%					
60% Wilshire 5000/40% BarCap Aggregate	-2.9%	13.8%	8.7%	0.7%	9.9%	18.1%	11.5%	4.1%	13.6%	19.6%	-22.2%
60% MSCI World / 40% BarCap Aggregate	-5.1%	14.5%	5.7%	-0.1%	5.4%	14.5%	11.3%	0.0%	10.2%	20.4%	-24.7%

# Calendar Performance (Net of Fees)

						Calenda	r Year				
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Real Estate Composite	7.5%	7.9%	9.3%	14.8%	12.4%	14.8%	11.0%	16.9%	15.9%	-31.9%	-8.3%
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%
NPI	6.7%	7.0%	8.0%	13.3%	11.8%	11.0%	10.5%	14.3%	13.1%	-16.9%	-6.5%
InvMetrics All DB Real Estate Priv Net Rank	39	20	7	22	31	17	30	14	25	77	24
J.P. Morgan SPF	7.0%	6.2%	7.3%	14.1%	10.3%	14.8%	10.9%	16.0%	14.2%	-26.5%	
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%
NPI	6.7%	7.0%	8.0%	13.3%	11.8%	11.0%	10.5%	14.3%	13.1%	-16.9%	-6.5%
InvMetrics All DB Real Estate Pub Net Rank	53	56	45	31	85	10	34	29	53	26	
Morgan Stanley P.P.	8.0%	8.7%	9.2%	14.6%	14.1%	16.2%	11.7%	16.5%	15.2%	-33.1%	-4.5%
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%
NPI	6.7%	7.0%	8.0%	13.3%	11.8%	11.0%	10.5%	14.3%	13.1%	-16.9%	-6.5%
InvMetrics All DB Real Estate Pub Net Rank	15	10	11	21	25	5	22	21	46	79	12
PRISA III	7.9%	9.9%	13.2%	22.7%	16.9%	14.9%	13.7%	23.1%	20.8%	-50.1%	-19.6%
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%
NPI	6.7%	7.0%	8.0%	13.3%	11.8%	11.0%	10.5%	14.3%	13.1%	-16.9%	-6.5%
InvMetrics All DB Real Estate Pub Net Rank	20	9	1	1	14	8	16	1	7	99	92
Principal Enhanced	9.5%	9.3%	13.5%	20.3%	13.8%	18.0%	12.6%	16.7%	12.5%	-43.7%	
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%
NPI	6.7%	7.0%	8.0%	13.3%	11.8%	11.0%	10.5%	14.3%	13.1%	-16.9%	-6.5%
InvMetrics All DB Real Estate Pub Net Rank	1	10	1	1	27	2	17	21	71	97	
Mesirow/Courtland I	-6.6%	1.7%	1.8%	0.0%	6.9%	7.9%	4.1%	7.3%	15.0%	-10.2%	-31.8%
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%
NPI	6.7%	7.0%	8.0%	13.3%	11.8%	11.0%	10.5%	14.3%	13.1%	-16.9%	-6.5%
Infrastructure Composite	4.8%	2.5%	0.4%	11.2%	12.5%	4.2%	5.6%	11.7%	23.9%	2.9%	
3 Month T-Bill +4%	6.0%	5.0%	4.3%	4.0%	4.0%	4.1%	4.1%	4.0%	4.1%	4.1%	5.4%
Alinda Fund II	-13.0%	-5.3%	-4.4%	13.1%	21.9%	0.2%	0.4%	8.6%	27.9%	8.9%	
3 Month T-Bill +4%	6.0%	5.0%	4.3%	4.0%	4.0%	4.1%	4.1%	4.0%	4.1%	4.1%	5.4%
Macquarie Fund II	4.5%	10.1%	7.8%	8.2%	0.8%	6.2%	8.6%	14.0%	22.5%	0.4%	
3 Month T-Bill +4%	6.0%	5.0%	4.3%	4.0%	4.0%	4.1%	4.1%	4.0%	4.1%	4.1%	5.4%
J.P. Morgan Infrastructure	4.9%										
CPI +4%	6.0%	6.2%	6.2%	4.8%	4.8%	5.6%	5.8%	7.1%	5.6%	6.8%	4.1%
IFM Global Infrastructure (U.S)											
CPI +4%	6.0%	6.2%	6.2%	4.8%	4.8%	5.6%	5.8%	7.1%	5.6%	6.8%	4.1%



### Statistics

#### Annualized Performance<sup>1</sup>

Asset Class	Fund Company	Vintage Yr.	Category	Net IRR	Median Fund IRR <sup>2</sup>	Rank <sup>3</sup>	Perf. as of:
Real Estate	Mesirow/Courtland I	2007		1.4%			12/31/2018
Total Real Estate				1.4%			12/31/2018
Infrastructure Infrastructure Total Infrastructure	Alinda II Macquarie II	2008 2008	2007 Infrastructure 2008 Infrastructure 	1.1% 7.0% <b>4.4%</b>	4.4% 2.0% 	1st Quartile 1st Quartile 	12/31/2018 12/31/2018 <b>12/31/2018</b>
Private Equity Venture Private Equity Venture Private Equity Venture Private Equity Venture Private Equity FoFs Specialized Private Equity Buy-Out Private Equity Venture Private Equity Venture Private Equity Venture Private Equity FoFs Diversified Private Equity FoFs Diversified Private Equity FoFs Specialized	Blue Chip I Blue Chip II Blue Chip III Blue Chip IV Fort Washington Fund V Fort Washington Fund VII Fort Washington Fund VIII Fort Washington Fund IX Fort Washington Fund IX North Sky III - LBO North Sky III - VC North Sky IV - LBO North Sky IV - VC North Sky V Portfolio Advisors IV - Special Sit	1993 1997 1999 2000 2007 2008 2014 2014 2014 2016 2007 2007 2008 2008 2014 2014	1992 US Venture 1997 US Venture 2000 US Venture 2000 US Venture 2006 US FoF 2007 US FoF 2013 US FoF 2014 Secondaries 2016 US FoF 2007 US FoF 2007 US FoF 2009 US FoF 2009 US FoF 2015 US FoF 2006 All FoF	$\begin{array}{c} 13.4\%\\ 0.9\%\\ -13.1\%\\ -3.4\%\\ 10.8\%\\ 14.7\%\\ 15.1\%\\ 24.4\%\\ 12.8\%\\ 9.2\%\\ 6.4\%\\ 9.5\%\\ 12.4\%\\ 15.4\%\\ 5.3\%\end{array}$	18.2% 16.0% -5.9% 0.5% 7.2% 8.0% 13.1% 10.1% 9.9% 9.9% 13.1% 13.1% 6.9%	3rd Quartile 3rd Quartile 4th Quartile 3rd Quartile 1st Quartile 2nd Quartile 2nd Quartile 3rd Quartile 3rd Quartile 3rd Quartile 1st Quartile 2nd Quartile 2nd Quartile	12/31/2007 12/31/2013 9/30/2013 12/31/2018 12/31/2018 12/31/2018 12/31/2018 12/31/2018 12/31/2018 12/31/2018 12/31/2018 12/31/2018 12/31/2018 12/31/2018 12/31/2018
Private Equity FoFs Specialized	Portfolio Advisors V - Special Sit	2008	2007 All FoF	8.7%			12/31/2018
Total Private Equity				6.3%			12/31/2018
Total Private Equity Excluding	Blue Chip			10.8%			12/31/2018

### Since Inception Cash Flows

Asset Class	Fund Company	Commitment	Capital Calls	Distributions	Ending Value	Cash Multiple <sup>4</sup>
Real Estate	Mesirow/Courtland I	\$30,000,000	\$24,100,863	\$20,695,438	\$5,379,500	1.1
Total Real Estate		\$30,000,000	\$24,100,863	\$20,695,438	\$5,379,500	1.1
Infrastructure Infrastructure Total Infrastructure	Alinda II Macquarie II	\$65,000,000 \$65,000,000 <b>\$130,000,000</b>	\$72,836,793 \$68,180,388 <b>\$141,017,181</b>	\$55,871,455 \$46,254,159 <b>\$102,125,614</b>	\$29,921,607 \$60,252,259 <b>\$90,173,866</b>	1.2 1.6 <b>1.4</b>
Private Equity Venture Private Equity Venture Private Equity Venture Private Equity Venture Private Equity FoFs Specialized Private Equity Buy-Out Private Equity Venture Private Equity Venture Private Equity FoFs Diversified	Blue Chip I Blue Chip II Blue Chip II Blue Chip IV Fort Washington Fund V Fort Washington Fund VII Fort Washington Fund VIII Fort Washington Opp Fund III Fort Washington Fund IX North Sky III - LBO North Sky III - VC North Sky IV - LBO North Sky IV - VC North Sky V	\$4,000,000 \$10,000,000 \$15,000,000 \$40,000,000 \$30,000,000 \$50,000,000 \$30,000,000 \$30,000,000 \$30,000,000 \$10,000,000 \$15,000,000 \$15,000,000 \$40,000,000	\$4,000,000 \$10,000,000 \$15,000,000 \$32,493,882 \$18,143,165 \$32,999,999 \$22,200,000 \$16,500,000 \$21,700,017 \$9,183,339 \$9,075,000 \$12,300,000 \$26,394,820	\$6,314,076 \$10,396,215 \$5,957,739 \$23,670,550 \$46,854,212 \$28,772,881 \$4,874,999 \$6,000,000 \$0 \$35,414,489 \$14,367,360 \$10,505,353 \$26,619,556 \$1,227,804	\$0 \$0 \$1,426,644 \$17,800,963 \$15,325,108 \$41,265,808 \$31,090,558 \$18,608,078 \$7,948,104 \$3,284,055 \$9,565,523 \$3,352,439 \$36,584,384	1.6 1.0 0.4 1.0 2.0 2.4 1.4 1.7 1.1 2.0 1.9 2.2 2.4 1.4
Private Equity FoFs Specialized Private Equity FoFs Specialized	Portfolio Advisors IV - Special Sit Portfolio Advisors V - Special Sit	\$20,000,000 \$10,000,000	\$17,186,419 \$6,921,414	\$20,180,550 \$9,096,367	\$3,442,209 \$2,060,461	1.4 1.6
Total Private Equity		\$394,000,000	\$279,098,055	\$250,252,151	\$191,754,334	1.6
<b>Total Private Equity Excluding</b>	Blue Chip	\$340,000,000	\$225,098,055	\$203,913,571	\$190,327,690	1.8

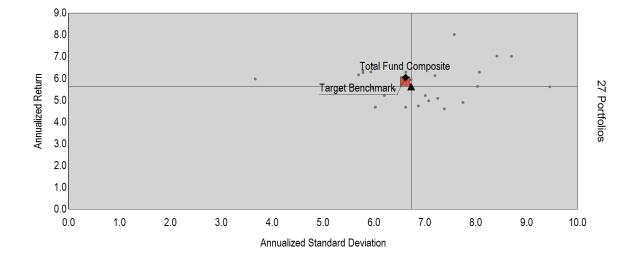
<sup>1</sup> All data is preliminary and subject to change

<sup>2</sup> Represents IRR of median fund in Pitchbook category

<sup>3</sup> Represents quartile rank in Pitchbook category

<sup>4</sup> Calculated as the sum of the distributions and ending value divided by the amount of all capital calls

Market Value: \$2,228.0 Million and 100.0% of Fund





### 15.0 • Annualized Return (%) 10.0 • . 5.0 0.0 7/1/13 -6/30/18 7/1/12 -6/30/17 7/1/14 -7/1/11 -7/1/10 -6/30/19 6/30/16 6/30/15

	Return (Ranl	k)								
5th Percentile	7.0		9.3		10.0		7.7		11.8	
25th Percentile	6.3		8.3		9.2		6.9		11.1	
Median	5.6		7.5		8.6		6.0		10.3	
75th Percentile	5.2		7.0		7.6		5.3		9.4	
95th Percentile	4.7		6.2		3.2		4.4		8.0	
# of Portfolios	27		51		64		53		52	
Total Fund Composite	5.9	(48)	8.7	(12)	9.6	(15)	7.1	(18)	11.5	(14)

### **Rolling 5 Year Returns**

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### Statistics

Market Value: \$2,228.0 Million and 100.0% of Fund

### 3 Years Ending June 30, 2019

	Sharpe Ratio	Tracking Error	Anlzd Alpha	Beta	R-Squared	Information Ratio	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Total Fund Composite	1.1	6.6%	1.6%	0.5	0.9	-0.8	6.5%	47.9%	53.0%
S&P 500	1.0						12.2%		
Total Fund Composite	1.1	5.1%	2.1%	0.6	1.0	-0.6	6.5%	56.7%	55.2%
MSCI ACWI	0.9						11.3%		
Total Fund Composite	1.1	1.0%	-0.3%	1.0	1.0	-0.3	6.5%	96.1%	97.1%
Target Benchmark	1.2	-					6.4%		
Fixed Income Composite	1.6	2.6%	4.0%	0.4	0.3	1.0	2.1%	89.2%	-4.6%
BBgBarc US Aggregate TR	0.3						3.0%		
Loomis Sayles Core-Plus	0.9	1.3%	2.0%	0.8	0.8	1.2	2.8%	105.9%	56.2%
BBgBarc US Aggregate TR	0.3						3.0%		
BlackRock Strategic Income Opps	1.6	3.1%	3.8%	0.2	0.1	0.6	1.8%	64.4%	-25.8%
BBgBarc US Aggregate TR	0.3						3.0%		
Shenkman - Four Points	1.6	1.6%	1.3%	0.9	0.9	0.5	4.4%	101.8%	78.7%
BBgBarc US High Yield TR	1.4						4.4%		
U.S. Equity Composite	0.8	4.0%	-2.8%	1.1	0.9	-0.4	13.8%	97.4%	108.1%
S&P 500	1.0						12.2%		
U.S. Equity Composite	0.8	5.9%	-0.3%	1.1	0.8	0.2	13.8%	113.9%	110.7%
MSCI ACWI	0.9						11.3%		
U.S. Equity Composite	0.8	3.1%	-2.5%	1.1	1.0	-0.5	13.8%	96.7%	105.8%
Russell 3000	1.0						12.5%		
NTGI Russell 1000 Value	0.7	0.0%	0.1%	1.0	1.0	2.1	12.1%	100.3%	99.7%
Russell 1000 Value	0.7						12.1%		
NTGI Russell 1000 Growth	1.2	0.0%	0.0%	1.0	1.0	0.0	13.4%	99.9%	99.9%
Russell 1000 Growth	1.2						13.4%		
NTGI S&P 400	0.6	0.0%	0.1%	1.0	1.0	5.7	15.1%	100.2%	99.9%
S&P 400 MidCap	0.6						15.1%		
NTGI Russell 2000 Value	0.5	0.1%	0.2%	1.0	1.0	3.9	17.3%	100.6%	99.6%
Russell 2000 Value	0.5						17.3%		

### Statistics

Market Value: \$2,228.0 Million and 100.0% of Fund

### 3 Years Ending June 30, 2019

	Sharpe Ratio	Tracking Error	Anlzd Alpha	Beta	R-Squared	Information Ratio	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Mondrian	0.9	9.1%	4.8%	0.4	0.4	0.0	8.2%	64.9%	56.5%
MSCI EAFE	0.7						11.1%		
Harding Loevner	1.5	9.0%	9.1%	0.4	0.4	0.4	8.1%	70.9%	31.0%
MSCI EAFE	0.7						11.1%		
DFA International Small Value	0.4	4.2%	-3.1%	1.0	0.9	-0.7	13.4%	90.9%	106.9%
MSCI EAFE Small Cap	0.6						12.3%		
DFA Emerging Markets Small Cap	0.4	2.7%	1.8%	1.1	1.0	0.8	13.7%	113.8%	100.3%
MSCI Emerging Markets Small Cap	0.3						12.7%		
Risk Parity Composite	0.7	5.0%	-0.4%	0.7	0.6	-0.6	7.2%	64.1%	68.7%
60% Wilshire 5000/40% BarCap Aggregate	1.1						7.5%		
AQR Risk Parity	0.7	5.0%	-0.4%	0.7	0.6	-0.6	7.2%	64.1%	68.7%
60% Wilshire 5000/40% BarCap Aggregate	1.1						7.5%		



### Statistics

Market Value: \$2,228.0 Million and 100.0% of Fund

				-					
	Sharpe Ratio	Tracking Error	Anlzd Alpha	Beta	R-Squared	Information Ratio	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Total Fund Composite	0.8	6.4%	0.4%	0.5	0.9	-0.8	6.6%	40.7%	59.1%
S&P 500	0.8						12.0%		
Total Fund Composite	0.8	5.6%	2.5%	0.5	0.9	-0.1	6.6%	50.5%	53.6%
MSCI ACWI	0.4						11.8%		
Total Fund Composite	0.8	1.0%	-0.1%	1.0	1.0	-0.2	6.6%	95.6%	97.0%
Target Benchmark	0.8						6.6%		
Fixed Income Composite	1.1	2.7%	2.3%	0.5	0.3	0.2	2.6%	77.2%	33.7%
BBgBarc US Aggregate TR	0.7						2.9%		
Shenkman - Four Points	0.7	1.9%	0.5%	0.9	0.9	0.0	5.2%	88.9%	86.0%
BBgBarc US High Yield TR	0.7						5.5%		
U.S. Equity Composite	0.5	3.0%	-2.7%	1.1	1.0	-0.7	13.4%	94.2%	106.6%
Russell 3000	0.8						12.3%		
U.S. Equity Composite	0.5	5.8%	1.8%	1.0	0.8	0.3	13.4%	113.4%	98.2%
MSCI ACWI	0.4						11.8%		
U.S. Equity Composite	0.5	4.0%	-3.2%	1.1	0.9	-0.6	13.4%	94.1%	109.8%
S&P 500	0.8						12.0%		
NTGI Russell 1000 Value	0.6	0.1%	0.1%	1.0	1.0	1.7	11.9%	100.4%	99.7%
NTGI Russell 1000 Growth	1.0	5.9%	6.1%	1.0	0.8	1.0	13.0%	124.3%	83.6%
NTGI S&P 400	0.5	5.3%	-0.2%	1.1	0.9	0.1	14.2%	114.6%	106.6%

### 5 Years Ending June 30, 2019

U.S. Equity Composite	0.5	5.8%	1.8%	1.0	0.8	0.3	13.4%	113.4%	98.2%
MSCI ACWI	0.4						11.8%		
U.S. Equity Composite	0.5	4.0%	-3.2%	1.1	0.9	-0.6	13.4%	94.1%	109.8%
S&P 500	0.8						12.0%		
NTGI Russell 1000 Value	0.6	0.1%	0.1%	1.0	1.0	1.7	11.9%	100.4%	99.7%
NTGI Russell 1000 Growth	1.0	5.9%	6.1%	1.0	0.8	1.0	13.0%	124.3%	83.6%
NTGI S&P 400	0.5	5.3%	-0.2%	1.1	0.9	0.1	14.2%	114.6%	106.6%
NTGI Russell 2000 Value	0.3	8.5%	-3.3%	1.2	0.8	-0.2	16.4%	115.5%	119.6%
Non-U.S. Equity Composite	0.1	8.4%	-3.5%	0.8	0.6	-0.6	12.4%	48.5%	81.6%

# Loomis Sayles Core-Plus

### Characteristics

Q2-19

15.0%

12.8%

9.9%

21.0%

24.6%

0.9%

1.0%

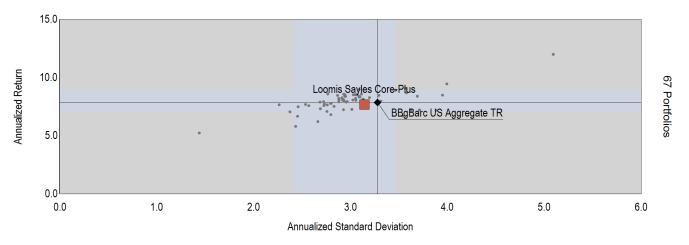
14.9%

0.0%

Market Value: \$160.4 Million and 7.2% of Fund

As of June 30, 2019

#### Risk / Return - 1 Year

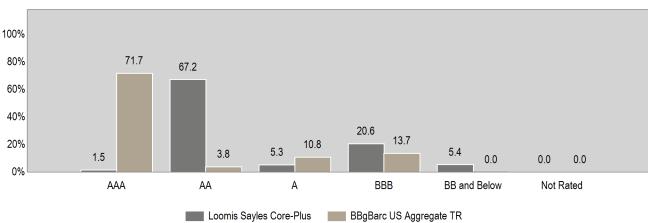


### Characteristics

	Portfolio	Index
	Q2-19	Q2-19
Yield to Maturity	2.9%	2.5%
Avg. Eff. Maturity	8.7 yrs.	13.0 yrs.
Avg. Duration	6.5 yrs.	6.1 yrs.
Avg. Quality	А	

Region	Number Of Assets
North America ex U.S.	2
United States	311
Europe Ex U.K.	5
United Kingdom	3
Pacific Basin Ex Japan	1
Emerging Markets	11

#### Maturity Sector Portfolio Index Q2-19 Q2-19 <1 Year UST/Agency 45.2% 41.3% 1-3 Years Corporate 27.7% 25.1% 3-5 Years MBS 29.3% 5-7 Years 34.8% ABS 0.3% 0.5% 7-10 Years 3.7% 10-15 Years Foreign ---15-20 Years Muni ---------Other -7.9% >20 Years Not Rated/Cash



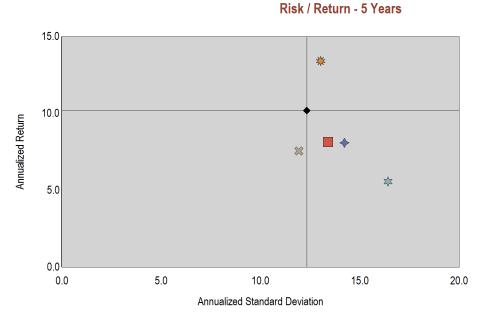
### **Quality Distribution**

# U.S. Equity Composite

### As of June 30, 2019

### Characteristics

Market Value: \$638.8 Million and 28.7% of Fund



### NTGI Russell 1000 Growth

- NTGI S&P 400
- \* NTGI Russell 2000 Value

U.S. Equity Composite

NTGI Russell 1000 Value

Russell 3000

83

#### Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,398	2,954
Weighted Avg. Market Cap. (\$B)	90.0	190.7
Median Market Cap. (\$B)	3.5	1.6
Price To Earnings	18.6	20.5
Price To Book	2.5	3.4
Price To Sales	1.4	1.9
Return on Equity (%)	16.1	21.8
Yield (%)	2.1	1.9
Beta	1.1	1.0
R-Squared	1.0	1.0

#### Characteristics

	Portfolio	Russell 3000
INDUSTRY SECTOR DISTRIBUTION (% Equity)		
Energy	4.6	4.7
Materials	4.7	3.0
Industrials	10.7	10.2
Consumer Discretionary	10.2	10.4
Consumer Staples	4.7	6.5
Health Care	9.6	14.0
Financials	19.2	13.6
Information Technology	15.7	21.4
Communication Services	5.9	9.1
Utilities	6.1	3.2
Real Estate	7.1	3.9
Unclassified	0.3	0.0

Large	est Holdings	
	End Weight	Return
MICROSOFT	1.4	14.0
APPLE	1.3	4.6
AMAZON.COM	1.1	6.3
BERKSHIRE HATHAWAY 'B'	0.7	6.1
JP MORGAN CHASE & CO.	0.7	11.3

### Top Contributors

	End Weight	Return	Contribution
MICROSOFT	1.4	14.0	0.2
FACEBOOK CLASS A	0.6	15.8	0.1
WALT DISNEY	0.4	25.8	0.1
JP MORGAN CHASE & CO.	0.7	11.3	0.1
AMAZON.COM	1.1	6.3	0.1

#### **Bottom Contributors**

INTEL ALPHABET 'C' ALPHABET A MYLAN EXXON MOBIL

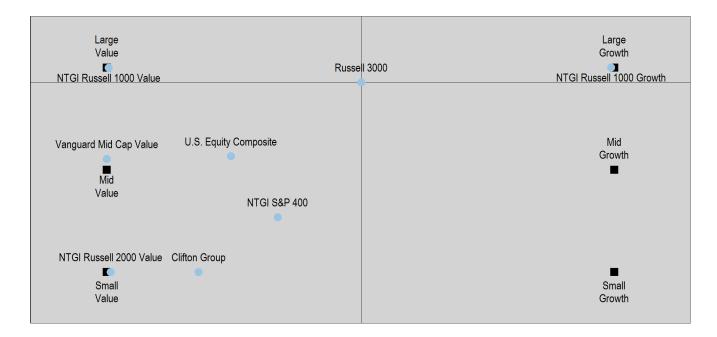
End Weight	Return	Contribution
0.4	-10.3	0.0
0.5	-7.9	0.0
0.4	-8.0	0.0
0.1	-32.8	0.0
0.6	-4.1	0.0

#### **Market Capitalization**

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
U.S. Equity Composite	21.3%	23.0%	22.0%	13.6%	20.0%
Russell 3000	5.4%	8.6%	16.1%	27.9%	42.1%
Weight Over/Under	15.9%	14.5%	5.9%	-14.3%	-22.0%







### **Common Holdings Matrix**

	// o //	º. Equity Composite	Mr.C.	VI GI RUSSell 1000 Value	MT.	VI GI RUSSell 1000 Growth	MT.	1 61 S&P 400		unguard Mid Cap Value	Mr.C.	" Val Russell 2000 Value
	#	%	#	%	#	%	#	%	#	%	#	%
U.S. Equity Composite			723	100	546	100	404	99	208	100	1,346	98
NTGI Russell 1000 Value	723	52			290	31	183	52	182	90	1	0
NTGI Russell 1000 Growth	546	36	290	30			110	37	60	29	0	0
NTGI S&P 400	404	24	183	5	110	3			11	3	118	26
Vanguard Mid Cap Value	208	20	182	14	60	3	11	5			0	0
NTGI Russell 2000 Value	1,346	28	1	0	0	0	118	19	0	0		

U.S. Equity Composite

As of June 30, 2019

Market Value: \$638.8 Million and 28.7% of Fund

			3 Years					
	U.S. Equity Com-	NTG/ Russell 1000 V.S.	NTG/ Russell 1000 C.	NTGI S&P 400	Vanguard Mid Cap Value.	NTGI Russell 2000 V.S.	Russell 3000	
U.S. Equity Composite								
NTGI Russell 1000 Value	0.97	1.00		-				
NTGI Russell 1000 Growth	0.90	0.87	1.00					
NTGI S&P 400	0.99	0.95	0.88	1.00				
Vanguard Mid Cap Value	-							
NTGI Russell 2000 Value	0.94	0.88	0.73	0.95		1.00		
Russell 3000	0.98	0.97	0.96	0.96		0.85	1.00	

**Correlation Matrix** 

## NTGI Russell 1000 Value

As of June 30, 2019

### Characteristics

Market Value: \$161.7 Million and 7.3% of Fund

#### Style Drift - 3 Years



NTGI Russell 1000 Value

🔶 Russell 1000 Value

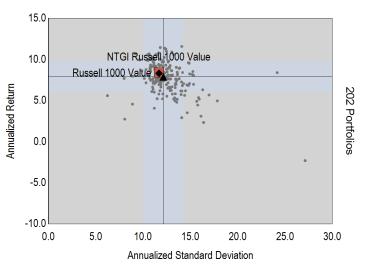
#### Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	724	722
Weighted Avg. Market Cap. (\$B)	123.0	123.1
Median Market Cap. (\$B)	9.2	9.2
Price To Earnings	17.4	17.4
Price To Book	2.3	2.3
Price To Sales	1.5	1.5
Return on Equity (%)	14.4	14.4
Yield (%)	2.6	2.6
Beta	1.0	1.0
R-Squared	1.0	1.0

#### **Characteristics**

	Portfolio	Russell 1000 Value
INDUSTRY SECTOR DISTRIBUTION (% E	quity)	
Energy	9.0	9.0
Materials	4.0	4.0
Industrials	8.0	8.0
Consumer Discretionary	5.3	5.3
Consumer Staples	7.8	7.8
Health Care	15.1	15.2
Financials	22.5	22.5
Information Technology	9.7	9.7
Communication Services	7.1	7.1
Utilities	6.4	6.4
Real Estate	5.1	5.0
Unclassified	0.1	0.0

**Risk / Return - Since Inception** 



### Largest Holdings

	End Weight	Return
JP MORGAN CHASE & CO.	2.7	11.3
BERKSHIRE HATHAWAY 'B'	2.7	6.1
EXXON MOBIL	2.4	-4.1
JOHNSON & JOHNSON	2.3	0.3
PROCTER & GAMBLE	2.0	6.1

### **Top Contributors**

	End Weight	Return	Contribution
JP MORGAN CHASE & CO.	2.7	11.3	0.3
QUALCOMM	0.7	34.6	0.2
WALT DISNEY	0.7	25.8	0.2
BERKSHIRE HATHAWAY 'B'	2.7	6.1	0.2
CITIGROUP	1.2	13.3	0.2

#### **Bottom Contributors** End Weight Contribution Return INTEL 1.6 -10.3 -0.2 EXXON MOBIL 2.4 -4.1 -0.1 PHILIP MORRIS INTL. 0.9 -9.8 -0.1 OCCIDENTAL PTL. -22.8 -0.1 0.3 WALGREENS BOOTS ALLIANCE 0.3 -12.9 0.0

#### **Market Capitalization**

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
NTGI Russell 1000 Value	0.9%	9.1%	20.3%	29.0%	40.7%
Russell 1000 Value	1.2%	8.6%	20.4%	29.1%	40.7%
Weight Over/Under	-0.3%	0.5%	-0.1%	0.0%	0.0%

# NTGI Russell 1000 Value

As of June 30, 2019

### Attribution

Market Value: \$161.7 Million and 7.3% of Fund

#### Sector Attribution vs Russell 1000 Value

GICS Sector	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Energy	9.7%	9.7%	0.0%	-3.6%	-3.6%	0.0%	0.0%	0.0%	0.0%	-0.7%	-0.7%
Materials	4.0%	4.0%	0.0%	4.4%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Industrials	7.8%	7.8%	0.0%	6.6%	6.6%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
Consumer Discretionary	5.3%	5.3%	0.0%	3.7%	3.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Consumer Staples	7.9%	7.9%	0.0%	2.6%	2.6%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Health Care	15.3%	15.3%	0.0%	2.8%	2.8%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%
Financials	21.7%	21.7%	0.0%	7.7%	7.7%	0.0%	0.0%	0.0%	0.0%	0.8%	0.8%
Information Technology	9.8%	9.8%	0.0%	3.2%	3.2%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Communication Services	6.9%	6.9%	0.0%	6.4%	6.4%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
Utilities	6.5%	6.5%	0.0%	3.4%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Real Estate	5.2%	5.2%	0.0%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Unclassified	0.0%	0.0%	0.0%	2.7%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

### NTGI Russell 1000 Value Performance Attribution vs. Russell 1000 Value

	Total	Selection	Allocation	Interaction
	Effects	Effect	Effect	Effects
Energy	0.0%	0.0%	0.0%	0.0%
Materials	0.0%	0.0%	0.0%	0.0%
Industrials	0.0%	0.0%	0.0%	0.0%
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%
Consumer Staples	0.0%	0.0%	0.0%	0.0%
Health Care	0.0%	0.0%	0.0%	0.0%
Financials	0.0%	0.0%	0.0%	0.0%
Information Technology	0.0%	0.0%	0.0%	0.0%
Communication Services	0.0%	0.0%	0.0%	0.0%
Utilities	0.0%	0.0%	0.0%	0.0%
Real Estate	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	0.0%	0.0%	0.0%
Portfolio	0.0% =	0.0% +	0.0% +	0.0%

### Market Cap Attribution vs. Russell 1000 Value

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 241.49	19.2%	19.3%	0.0%	2.8%	2.8%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%
2) 119.66 - 241.49	20.6%	20.6%	0.0%	3.9%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3) 42.08 - 119.66	20.0%	20.1%	0.0%	4.4%	4.5%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
4) 15.89 - 42.08	20.2%	20.2%	0.0%	5.9%	5.9%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%
5) 0.00 - 15.89	19.9%	19.9%	0.0%	2.2%	2.2%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.3%
Total				3.9%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

## NTGI Russell 1000 Growth

As of June 30, 2019

### Characteristics

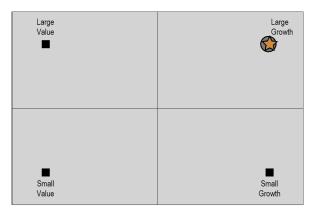
Market Value: \$122.6 Million and 5.5% of Fund

15.0

20.0

Contribution

#### Style Drift - 3 Years



NTGI Russell 1000 Growth

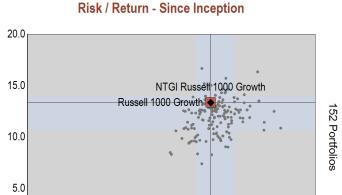
Russell 1000 Growth 

### **Characteristics**

	Portfolio	Russell 1000 Growth
Number of Holdings	548	546
Weighted Avg. Market Cap. (\$B)	283.3	283.4
Median Market Cap. (\$B)	12.1	12.1
Price To Earnings	24.9	24.9
Price To Book	7.2	7.2
Price To Sales	2.9	2.9
Return on Equity (%)	37.6	37.6
Yield (%)	1.3	1.3
Beta	1.0	1.0
R-Squared	1.0	1.0

#### **Characteristics**

	Portfolio	Russell 1000 Growth
INDUSTRY SECTOR DISTRIBUTION (% E	quity)	
Energy	0.7	0.7
Materials	1.9	1.9
Industrials	11.5	11.5
Consumer Discretionary	15.1	15.2
Consumer Staples	5.7	5.7
Health Care	12.6	12.6
Financials	4.4	4.4
Information Technology	33.4	33.6
Communication Services	11.9	12.0
Utilities	0.0	0.0
Real Estate	2.3	2.4
Unclassified	0.1	0.0



10.0

Annualized Standard Deviation

Annualized Return

0.0

0.0

#### Largest Holdings End Weight Return MICROSOFT 6.9 14.0 APPLE 6.7 4.6 AMAZON.COM 5.6 6.3 FACEBOOK CLASS A 3.3 15.8 ALPHABET 'C' 2.4 -7.9

5.0

#### **Top Contributors**

	End Weight	Return	Contribution
MICROSOFT	6.9	14.0	1.0
FACEBOOK CLASS A	3.3	15.8	0.5
AMAZON.COM	5.6	6.3	0.4
APPLE	6.7	4.6	0.3
WALT DISNEY	1.1	25.8	0.3

#### **Bottom Contributors** End Weight Doturn

	End weight	Return	Contribution
ALPHABET 'C'	2.4	-7.9	-0.2
ALPHABET A	2.3	-8.0	-0.2
ALTRIA GROUP	0.7	-16.3	-0.1
3M	0.6	-15.9	-0.1
ABBVIE	0.8	-8.6	-0.1

#### **Market Capitalization**

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
NTGI Russell 1000 Growth	0.3%	5.3%	14.2%	30.7%	49.5%
Russell 1000 Growth	0.3%	5.2%	14.2%	30.8%	49.6%
Weight Over/Under	0.0%	0.2%	0.0%	-0.1%	0.0%

## NTGI Russell 1000 Growth

### As of June 30, 2019

### Attribution

Market Value: \$122.6 Million and 5.5% of Fund

### Sector Attribution vs Russell 1000 Growth

GICS Sector	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Energy	0.7%	0.7%	0.0%	-3.3%	-3.3%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Materials	1.8%	1.8%	0.0%	8.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Industrials	11.8%	11.8%	0.0%	2.6%	2.6%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%
Consumer Discretionary	15.1%	15.1%	0.0%	5.6%	5.5%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%
Consumer Staples	5.8%	5.8%	0.0%	4.8%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Health Care	13.2%	13.2%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	-0.6%	-0.6%
Financials	4.3%	4.3%	0.0%	8.9%	8.9%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
Information Technology	32.9%	32.9%	0.0%	6.6%	6.6%	0.0%	0.0%	0.0%	0.0%	0.7%	0.7%
Communication Services	12.1%	12.1%	0.0%	3.6%	3.6%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Utilities	0.0%	0.0%	0.0%					0.0%	0.0%		
Real Estate	2.4%	2.4%	0.0%	3.6%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unclassified	0.0%	0.0%	0.0%	2.7%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

#### NTGI Russell 1000 Growth Performance Attribution vs. Russell 1000 Growth

	Total	Selection	Allocation	Interaction
	Effects	Effect	Effect	Effects
Energy	0.0%	0.0%	0.0%	0.0%
Materials	0.0%	0.0%	0.0%	0.0%
Industrials	0.0%	0.0%	0.0%	0.0%
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%
Consumer Staples	0.0%	0.0%	0.0%	0.0%
Health Care	0.0%	0.0%	0.0%	0.0%
Financials	0.0%	0.0%	0.0%	0.0%
Information Technology	0.0%	0.0%	0.0%	0.0%
Communication Services	0.0%	0.0%	0.0%	0.0%
Utilities	0.0%			-
Real Estate	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	0.0%	0.0%	0.0%
Portfolio	0.0% =	0.0% +	0.0% +	0.0%

#### Market Cap Attribution vs. Russell 1000 Growth

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 874.71	18.6%	18.6%	0.0%	8.3%	8.3%	0.0%	0.0%	0.0%	0.0%	0.7%	0.7%
2) 172.09 - 874.71	21.1%	21.1%	0.0%	4.8%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3) 77.89 - 172.09	20.1%	20.1%	0.0%	1.8%	1.8%	0.0%	0.0%	0.0%	0.0%	-0.6%	-0.6%
4) 28.01 - 77.89	20.2%	20.2%	0.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.3%
5) 0.00 - 28.01	20.0%	20.0%	0.0%	5.6%	5.6%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
Total				4.7%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

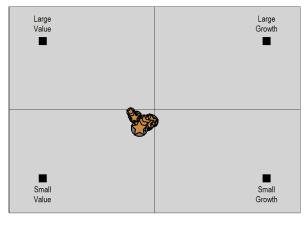


As of June 30, 2019

# Characteristics

Market Value: \$94.5 Million and 4.2% of Fund

## Style Drift - 3 Years



NTGI S&P 400

S&P 400 MidCap

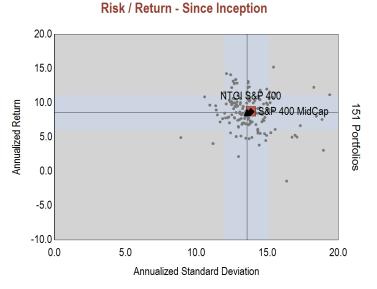
## Characteristics

☆

	Portfolio	S&P 400 MidCap
Number of Holdings	402	400
Weighted Avg. Market Cap. (\$B)	5.8	5.8
Median Market Cap. (\$B)	4.1	4.1
Price To Earnings	19.8	19.8
Price To Book	2.6	2.6
Price To Sales	1.2	1.2
Return on Equity (%)	16.2	16.2
Yield (%)	1.7	1.7
Beta	1.0	1.0
R-Squared	1.0	1.0

#### Characteristics

	Portfolio	S&P 400 MidCap
INDUSTRY SECTOR DISTRIBUTION (% Eq	uity)	
Energy	3.1	3.1
Materials	6.4	6.4
Industrials	15.8	15.9
Consumer Discretionary	12.2	12.3
Consumer Staples	2.7	2.7
Health Care	9.6	9.7
Financials	16.8	16.9
Information Technology	15.6	15.7
Communication Services	2.5	2.5
Utilities	4.7	4.7
Real Estate	10.1	10.1
Unclassified	0.2	0.0



#### Largest Holdings

	End Weight	Return
IDEX	0.8	13.8
STERIS	0.7	16.6
MARKETAXESS HOLDINGS	0.7	30.9
LEIDOS HOLDINGS	0.7	25.1
DOMINO'S PIZZA	0.7	8.1

# **Top Contributors**

	End Weight	Return	Contribution
CYPRESS SEMICON.	0.5	49.8	0.2
MARKETAXESS HOLDINGS	0.7	30.9	0.2
LEIDOS HOLDINGS	0.7	25.1	0.2
CATALENT	0.5	33.6	0.2
CAESARS ENTERTAINMENT	0.4	36.0	0.1

#### **Bottom Contributors**

	End Weight	Return	Contribution
CHEMOURS	0.2	-34.7	-0.1
UNITED THERAPEUTICS	0.2	-33.5	-0.1
EQT	0.2	-23.7	-0.1
CDK GLOBAL	0.3	-15.7	-0.1
STEEL DYNAMICS	0.4	-13.7	-0.1

## **Market Capitalization**

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
NTGI S&P 400	14.6%	71.7%	13.7%	0.0%	0.0%
S&P 400 MidCap	14.6%	70.8%	14.6%	0.0%	0.0%
Weight Over/Under	0.0%	0.9%	-0.9%	0.0%	0.0%





As of June 30, 2019

# Attribution

Market Value: \$94.5 Million and 4.2% of Fund

## Sector Attribution vs S&P 400 MidCap

GICS Sector	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Energy	3.8%	3.8%	0.0%	-3.2%	-16.0%	12.9%		0.0%	0.0%	-0.7%	-0.7%
Materials	6.9%	6.9%	0.0%	0.7%	0.9%	-0.2%		0.0%	0.0%	-0.1%	-0.1%
Industrials	15.1%	15.2%	0.0%	6.8%	6.8%	0.0%		0.0%	0.0%	0.6%	0.6%
Consumer Discretionary	11.9%	11.9%	0.0%	6.6%	5.0%	1.6%		0.0%	0.0%	0.2%	0.2%
Consumer Staples	2.8%	2.8%	0.0%	2.2%	-2.7%	4.9%		0.0%	0.0%	-0.2%	-0.2%
Health Care	9.7%	9.7%	0.0%	-2.3%	1.7%	-4.1%		0.0%	0.0%	-0.1%	-0.1%
Financials	16.0%	16.0%	0.0%	7.9%	7.0%	0.9%		0.0%	0.0%	0.6%	0.6%
Information Technology	16.3%	16.3%	0.0%	6.5%	5.0%	1.5%		0.0%	0.0%	0.3%	0.3%
Communication Services	2.6%	2.6%	0.0%	4.4%	0.7%	3.7%		0.0%	0.0%	-0.1%	-0.1%
Utilities	4.6%	4.6%	0.0%	0.2%	2.4%	-2.2%		0.0%	0.0%	0.0%	0.0%
Real Estate	10.1%	10.1%	0.0%	-0.5%	-2.0%	1.5%		0.0%	0.0%	-0.5%	-0.5%
Total				4.0%	3.0%	1.0%		0.0%	0.0%	0.0%	0.0%

## NTGI S&P 400 Performance Attribution vs. S&P 400 MidCap

	Total	Selection	Allocation	Interaction
	Effects	Effect	Effect	Effects
Energy	0.0%	0.0%	0.0%	0.0%
Materials	0.0%	0.0%	0.0%	0.0%
Industrials	0.0%	0.0%	0.0%	0.0%
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%
Consumer Staples	0.0%	0.0%	0.0%	0.0%
Health Care	0.0%	0.0%	0.0%	0.0%
Financials	0.0%	0.0%	0.0%	0.0%
Information Technology	-0.1%	0.0%	0.0%	0.0%
Communication Services	0.0%	0.0%	0.0%	0.0%
Utilities	0.0%	0.0%	0.0%	0.0%
Real Estate	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	0.0%	0.0%	0.0%
Portfolio	0.0% =	0.0% +	0.0% +	0.0%

# Market Cap Attribution vs. S&P 400 MidCap

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 7.55	19.9%	19.9%	0.0%	3.7%	7.5%	-3.8%	0.0%	6.2%	6.2%	0.9%	7.1%
2) 5.60 - 7.55	20.0%	20.0%	0.0%	4.6%	4.2%	0.4%	-0.1%	3.5%	3.4%	0.2%	3.6%
3) 4.51 - 5.60	19.8%	19.8%	0.0%	3.8%	1.6%	2.2%	-0.1%	-0.2%	-0.3%	-0.3%	-0.5%
4) 3.34 - 4.51	20.1%	20.1%	0.0%	4.4%	2.5%	1.9%	0.0%	-0.9%	-0.9%	-0.1%	-1.0%
5) 0.00 - 3.34	20.2%	20.2%	0.0%	3.3%	-0.9%	4.2%	0.2%	-7.7%	-7.4%	-0.8%	-8.2%
Total				4.0%	3.0%	1.0%	0.0%	0.9%	1.0%	0.0%	1.0%

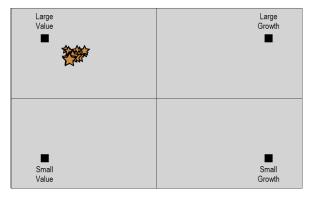
# Vanguard Mid Cap Value

As of June 30, 2019

# Characteristics

Market Value: \$94.8 Million and 4.3% of Fund

## Style Drift - 3 Years



Duesell

Russell

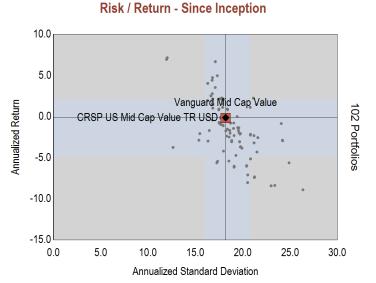
Vanguard Mid Cap Value CRSP US Mid Cap Value TR USD

## **Characteristics**

	Portfolio	Russell MidCap Value
Number of Holdings	208	587
Weighted Avg. Market Cap. (\$B)	14.6	15.6
Median Market Cap. (\$B)	11.2	7.5
Price To Earnings	17.0	18.8
Price To Book	2.3	2.2
Price To Sales	1.2	1.4
Return on Equity (%)	15.5	11.2
Yield (%)	2.3	2.3
Beta		1.0
R-Squared		1.0

#### **Characteristics**

Materials8.8Industrials8.5Industrials8.5Consumer Discretionary13.6Consumer Staples4.3Health Care6.7Financials19.7Information Technology11.0Communication Services5.2		Portfolio	MidCap Value
Materials8.8Industrials8.5Industrials8.5Consumer Discretionary13.6Consumer Staples4.3Health Care6.7Financials19.7Information Technology11.0Communication Services5.2	INDUSTRY SECTOR DISTRIBUTION (%	5 Equity)	
Industrials8.511Consumer Discretionary13.61Consumer Staples4.31Health Care6.71Financials19.71Information Technology11.01Communication Services5.21	Energy	3.2	5.4
Consumer Discretionary13.6Consumer Staples4.3Health Care6.7Financials19.7Information Technology11.0Communication Services5.2	Materials	8.8	6.0
Consumer Staples4.3Health Care6.7Financials19.7Information Technology11.0Communication Services5.2	Industrials	8.5	12.7
Health Care6.7Financials19.7Information Technology11.0Communication Services5.2	Consumer Discretionary	13.6	8.4
Financials19.71Information Technology11.0Communication Services5.2	Consumer Staples	4.3	4.7
Information Technology11.0Communication Services5.2	Health Care	6.7	7.1
Communication Services 5.2	Financials	19.7	17.8
	Information Technology	11.0	9.0
Litilities 12.5 1	Communication Services	5.2	3.2
	Utilities	12.5	11.4
Real Estate 5.4 14	Real Estate	5.4	14.0
Unclassified 1.2	Unclassified	1.2	0.0



#### Largest Holdings

	End Weight	Return
NEWMONT GOLDCORP	1.5	10.7
MOTOROLA SOLUTIONS	1.3	19.2
WEC ENERGY GROUP	1.2	6.2
WILLIS TOWERS WATSON	1.2	9.4
EVERSOURCE ENERGY	1.2	7.6

#### **Top Contributors**

	End Weight	Return	Contribution
MOTOROLA SOLUTIONS	1.3	19.2	0.2
BALL	1.1	21.3	0.2
L3 TECHNOLOGIES DEAD - DELIST.01/07/19	0.9	19.2	0.2
PG&E	0.6	28.8	0.2
CINCINNATI FINL.	0.8	21.3	0.2

#### **Bottom Contributors**

	End Weight	Return	Contribution
MYLAN	0.5	-32.8	-0.2
KOHL'S	0.4	-29.9	-0.1
MARATHON OIL	0.6	-14.7	-0.1
NETAPP	0.7	-10.5	-0.1
PVH	0.3	-22.4	-0.1

#### **Market Capitalization**

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Vanguard Mid Cap Value	0.3%	17.3%	80.9%	1.5%	0.0%
Russell MidCap Value	2.8%	26.7%	59.0%	11.5%	0.0%
Weight Over/Under	-2.5%	-9.4%	21.9%	-10.1%	0.0%

# Vanguard Mid Cap Value

## As of June 30, 2019

# Attribution

Market Value: \$94.8 Million and 4.3% of Fund

## Sector Attribution vs Russell MidCap Value

GICS Sector	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Energy	3.7%	6.1%	-2.4%	1.0%	-8.2%	9.2%	0.1%	0.0%	0.1%	-0.7%	-0.6%
Materials	8.1%	6.0%	2.1%	0.1%	2.9%	-2.8%	-0.1%	0.0%	-0.1%	0.0%	-0.1%
Industrials	8.1%	12.1%	-4.0%	4.9%	8.3%	-3.4%	-0.1%	-0.1%	-0.3%	0.6%	0.3%
Consumer Discretionary	15.4%	8.7%	6.6%	3.0%	-0.6%	3.6%	0.0%	-0.1%	-0.1%	-0.3%	-0.4%
Consumer Staples	4.7%	5.0%	-0.2%	3.2%	-1.5%	4.7%	0.0%	0.0%	0.0%	-0.2%	-0.2%
Health Care	6.1%	7.1%	-1.0%	0.6%	3.0%	-2.3%	0.0%	0.1%	0.1%	0.0%	0.1%
Financials	18.9%	17.1%	1.8%	8.2%	7.5%	0.7%	0.1%	0.0%	0.1%	0.7%	0.8%
Information Technology	11.5%	8.9%	2.6%	5.9%	5.4%	0.5%	0.1%	0.0%	0.1%	0.2%	0.3%
Communication Services	4.8%	3.1%	1.7%	6.4%	7.7%	-1.4%	0.0%	0.1%	0.1%	0.1%	0.2%
Utilities	13.3%	11.4%	1.9%	1.3%	3.5%	-2.2%	-0.1%	0.1%	0.0%	0.0%	0.0%
Real Estate	5.2%	14.5%	-9.3%	-1.3%	0.2%	-1.5%	0.4%	0.0%	0.4%	-0.4%	0.0%
Unclassified	0.3%	0.0%	0.3%	1.3%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total				3.7%	3.2%	0.5%	0.5%	0.0%	0.5%	0.0%	0.5%

# Vanguard Mid Cap Value Performance Attribution vs. Russell MidCap Value

	Total	Selection	Allocation	Interaction
	Effects	Effect	Effect	Effects
Energy	0.2%	0.0%	0.2%	0.0%
Materials	0.2%	0.1%	0.0%	0.0%
Industrials	-0.4%	-0.1%	-0.3%	0.0%
Consumer Discretionary	-0.1%	0.0%	0.0%	0.0%
Consumer Staples	0.1%	0.1%	0.0%	0.0%
Health Care	0.1%	0.1%	0.0%	0.0%
Financials	0.4%	0.3%	0.1%	0.0%
Information Technology	0.0%	-0.1%	0.1%	0.0%
Communication Services	0.2%	0.1%	0.1%	0.0%
Utilities	0.1%	0.1%	0.1%	0.0%
Real Estate	-0.1%	-0.1%	0.0%	0.1%
Cash	0.0%	0.0%	0.0%	0.0%
Portfolio	0.8% =	0.4% +	0.3% +	0.1%

## Market Cap Attribution vs. Russell MidCap Value

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 22.68	6.5%	20.0%	-13.5%	1.8%	4.5%	-2.8%	0.2%	0.0%	0.2%	0.3%	0.5%
2) 15.45 - 22.68	22.8%	19.9%	3.0%	2.4%	4.9%	-2.5%	0.0%	-0.3%	-0.3%	0.3%	0.0%
3) 10.98 - 15.45	37.2%	20.0%	17.2%	4.5%	2.0%	2.5%	0.1%	0.3%	0.4%	-0.3%	0.2%
4) 6.70 - 10.98	27.2%	20.1%	7.1%	4.3%	3.4%	0.9%	0.0%	0.3%	0.3%	0.0%	0.3%
5) 0.00 - 6.70	6.3%	20.1%	-13.7%	4.0%	1.3%	2.7%	-0.1%	0.0%	-0.1%	-0.4%	-0.5%
Total				3.7%	3.2%	0.5%	0.3%	0.3%	0.5%	0.0%	0.5%

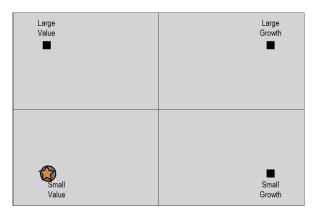
# NTGI Russell 2000 Value

As of June 30, 2019

# Characteristics

Market Value: \$161.2 Million and 7.2% of Fund

## Style Drift - 3 Years



NTGI Russell 2000 Value 

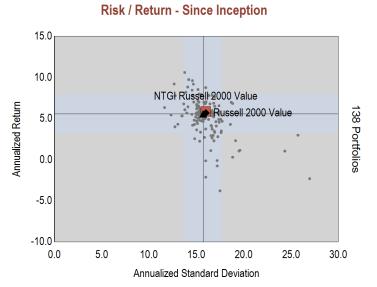
Russell 2000 Value 

## **Characteristics**

	Portfolio	Russell 2000 Value
Number of Holdings	1,351	1,347
Weighted Avg. Market Cap. (\$B)	2.2	2.2
Median Market Cap. (\$B)	0.7	0.7
Price To Earnings	16.2	16.2
Price To Book	1.7	1.7
Price To Sales	0.9	0.9
Return on Equity (%)	6.0	6.0
Yield (%)	2.2	2.2
Beta	1.0	1.0
R-Squared	1.0	1.0

#### **Characteristics**

	Portfolio	Russell 2000 Value
INDUSTRY SECTOR DISTRIBUTION (% E	quity)	
Energy	5.0	4.9
Materials	4.1	4.2
Industrials	11.3	11.6
Consumer Discretionary	8.3	8.5
Consumer Staples	2.3	2.4
Health Care	4.0	4.1
Financials	28.9	29.4
Information Technology	11.7	11.9
Communication Services	2.9	2.9
Utilities	7.5	7.7
Real Estate	12.1	12.3
Unclassified	0.1	0.0



## Largest Holdings

	End Weight	Return
CIENA	0.6	10.1
CREE	0.6	-1.8
COUSINS PROPS.	0.5	-5.7
IDACORP	0.5	1.5
CACI INTERNATIONAL 'A'	0.5	12.4

## **Top Contributors**

	End Weight	Return	Contribution
ENPHASE ENERGY	0.2	97.5	0.2
KBR	0.4	31.1	0.1
SELECTIVE IN.GP.	0.4	18.7	0.1
SINCLAIR BROADCAST 'A'	0.2	39.9	0.1
ADVERUM BIOTCHS.	0.1	126.9	0.1

Bottom Contributors						
	End Weight	Return	Contribution			
SOUTHWESTERN ENERGY	0.2	-32.6	-0.1			
EDGEWELL PERSONAL CARE	0.1	-38.6	-0.1			
OFFICE DEPOT	0.1	-42.5	0.0			
BED BATH & BEYOND	0.2	-30.7	0.0			
MALLINCKRODT	0.1	-57.8	0.0			

#### **Market Capitalization**

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
NTGI Russell 2000 Value	74.8%	25.2%	0.0%	0.0%	0.0%
Russell 2000 Value	74.4%	25.6%	0.0%	0.0%	0.0%
Weight Over/Under	0.4%	-0.4%	0.0%	0.0%	0.0%



## As of June 30, 2019

# Attribution

Market Value: \$161.2 Million and 7.2% of Fund

# Sector Attribution vs Russell 2000 Value

GICS Sector	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Energy	5.5%	5.5%	0.0%	-0.4%	-8.4%	8.0%		0.0%	0.0%	-0.5%	-0.5%
Materials	4.3%	4.3%	0.0%	1.2%	-1.6%	2.8%		0.0%	0.0%	-0.1%	-0.1%
Industrials	11.3%	11.3%	0.0%	7.2%	7.3%	-0.2%		0.0%	0.0%	0.7%	0.7%
Consumer Discretionary	9.2%	9.2%	0.0%	3.0%	-4.8%	7.8%		0.0%	0.0%	-0.6%	-0.6%
Consumer Staples	2.6%	2.6%	0.0%	0.9%	-8.2%	9.0%		0.0%	0.0%	-0.3%	-0.3%
Health Care	4.3%	4.3%	0.0%	-5.1%	-5.0%	-0.1%		0.0%	0.0%	-0.3%	-0.3%
Financials	28.3%	28.3%	0.0%	6.2%	5.3%	1.0%		0.0%	0.0%	1.1%	1.1%
Information Technology	11.5%	11.5%	0.0%	6.6%	1.4%	5.2%		0.0%	0.0%	0.0%	0.0%
Communication Services	3.2%	3.2%	0.0%	4.7%	-7.6%	12.3%		0.0%	0.0%	-0.3%	-0.3%
Utilities	7.3%	7.3%	0.0%	0.7%	5.3%	-4.6%		0.0%	0.0%	0.3%	0.3%
Real Estate	12.5%	12.4%	0.1%	1.1%	1.5%	-0.3%		0.0%	0.0%	0.0%	0.0%
Total				3.8%	1.4%	2.4%		0.0%	0.0%	0.0%	0.0%

## NTGI Russell 2000 Value Performance Attribution vs. Russell 2000 Value

	Total	Selection	Allocation	Interaction
	Effects	Effect	Effect	Effects
Energy	0.0%	0.0%	0.0%	0.0%
Materials	0.0%	0.0%	0.0%	0.0%
Industrials	0.1%	0.1%	0.0%	0.0%
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%
Consumer Staples	0.0%	0.0%	0.0%	0.0%
Health Care	0.0%	0.0%	0.0%	0.0%
Financials	0.0%	0.0%	0.0%	0.0%
Information Technology	-0.1%	-0.1%	0.0%	0.0%
Communication Services	0.0%	0.0%	0.0%	0.0%
Utilities	0.0%	0.0%	0.0%	0.0%
Real Estate	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	0.0%	0.0%	0.0%
Portfolio	0.0% =	0.0% +	0.0% +	0.0%

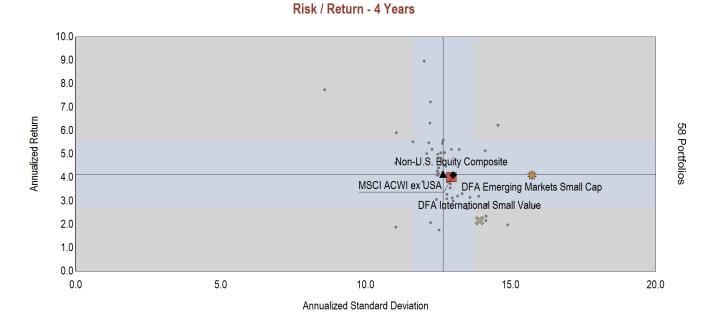
## Market Cap Attribution vs. Russell 2000 Value

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 3.11	19.9%	19.9%	0.0%	4.2%	3.2%	1.1%	-0.4%	0.0%	-0.5%	0.3%	-0.1%
2) 2.23 - 3.11	20.2%	20.1%	0.0%	5.3%	3.1%	2.2%	-1.9%	1.4%	-0.5%	0.3%	-0.1%
3) 1.54 - 2.23	20.0%	20.0%	0.0%	3.5%	1.2%	2.3%	0.0%	-2.0%	-1.9%	0.0%	-2.0%
4) 0.85 - 1.54	20.0%	20.1%	-0.1%	2.9%	0.6%	2.3%	-3.4%	1.7%	-1.7%	-0.2%	-1.8%
5) 0.00 - 0.85	19.9%	19.9%	0.0%	2.9%	-1.0%	3.9%	1.4%	5.5%	6.9%	-0.5%	6.4%
Total				3.8%	1.4%	2.4%	-4.2%	6.6%	2.4%	0.0%	2.4%

# Characteristics

Market Value: \$499.1 Million and 22.4% of Fund

As of June 30, 2019



# **Characteristics**

	Portfolio	MSCI ACWI ex USA
Number of Holdings	8,259	2,204
Weighted Avg. Market Cap. (\$B)	35.7	65.4
Median Market Cap. (\$B)	0.4	7.6
Price To Earnings	13.3	15.0
Price To Book	2.0	2.3
Price To Sales	0.8	1.2
Return on Equity (%)	11.8	15.3
Yield (%)	3.2	3.2
Beta	1.0	1.0
R-Squared	1.0	1.0

Region	% of Total	% of Bench
North America ex U.S.	1.8%	6.8%
United States	0.4%	0.0%
Europe Ex U.K.	28.9%	30.8%
United Kingdom	9.4%	11.2%
Pacific Basin Ex Japan	12.1%	8.6%
Japan	15.9%	15.9%
Emerging Markets	30.9%	25.6%
Other	0.5%	1.1%
Total	100.0%	100.0%

#### **Characteristics**

	Portfolio	MSCI ACWI ex USA
INDUSTRY SECTOR DISTRIBUTION (% Equ	uity)	
Energy	6.4	7.1
Materials	11.0	7.7
Industrials	15.4	12.0
Consumer Discretionary	11.7	11.3
Consumer Staples	8.5	9.8
Health Care	6.8	8.3
Financials	18.7	21.9
Information Technology	8.6	8.5
Communication Services	4.8	6.9
Utilities	3.4	3.4
Real Estate	4.1	3.2
Unclassified	0.2	0.0

## **Market Capitalization**

	Small Cap	Mid Cap	Large Cap
Non-U.S. Equity Composite	42.1%	15.2%	42.7%
MSCI ACWI ex USA	6.2%	19.9%	73.8%

# Attribution

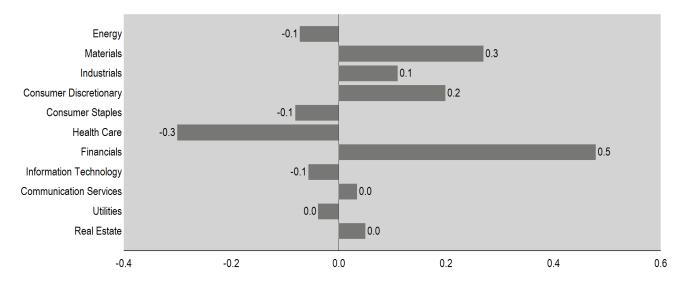
Market Value: \$499.1 Million and 22.4% of Fund

As of June 30, 2019

Americas Europe Asia/Pacific Other Total -1.0% -0.8% -0.6% -0.2% 0.0% 0.2% 0.4% 0.6% -0.4% Selection Effect Allocation Effect Currency Effect Interaction Effect Total Effects

Non-U.S. Equity Composite Performance Attribution vs. MSCI ACWI ex USA

Active Contribution vs. MSCI ACWI ex USA



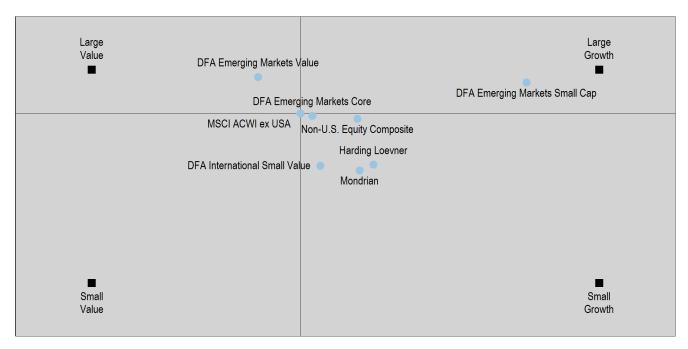
Non-U.S. Equity Composite

# Market Cap Attribution vs. MSCI ACWI ex USA

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 99.69	8.2%	19.6%	-11.4%	1.3%	3.6%	-2.3%	0.1%	0.0%	0.0%	0.1%	0.1%
2) 46.28 - 99.69	10.1%	20.4%	-10.3%	3.3%	5.5%	-2.3%	-0.2%	0.0%	-0.2%	0.5%	0.3%
3) 22.83 - 46.28	10.0%	20.0%	-9.9%	2.5%	3.4%	-0.8%	-0.1%	0.0%	-0.1%	0.0%	-0.1%
4) 10.43 - 22.83	12.9%	20.1%	-7.2%	2.9%	2.2%	0.6%	0.0%	0.2%	0.3%	-0.2%	0.1%
5) 0.00 - 10.43	58.8%	19.9%	38.9%	2.2%	1.1%	1.0%	-0.8%	0.0%	-0.8%	-0.4%	-1.2%
Total				2.3%	3.2%	-0.8%	-1.0%	0.2%	-0.8%	0.0%	-0.8%

As of June 30, 2019

# **Equity Style Map**



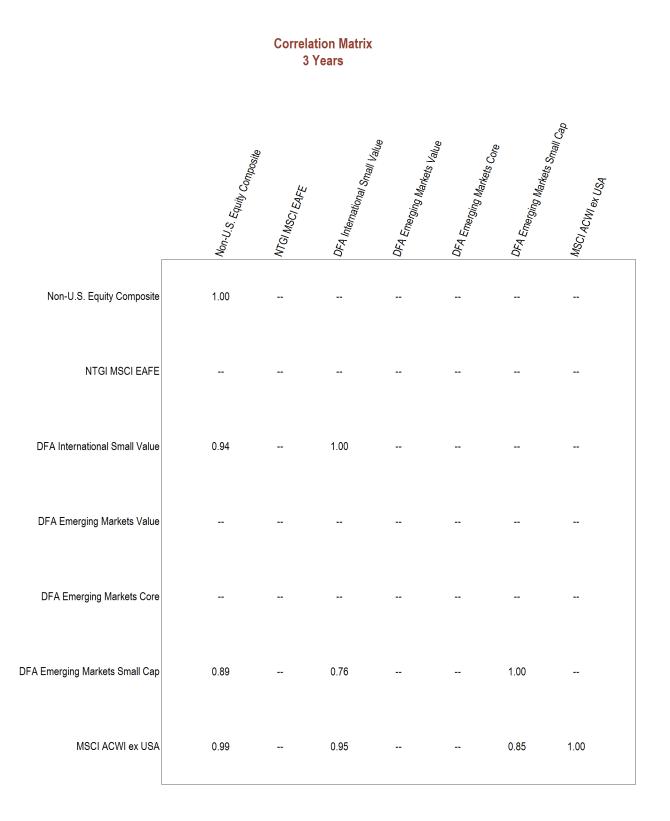
## **Common Holdings Matrix**

		N SCI EAFE	Dr.	of A International Small Value		or A Emerging Markets Value		of A Emerging Markets Core		et A Emerging Markets Small Cap
	#	%	#	%	#	%	#	%	#	%
NTGI MSCI EAFE			40	4	0	0	0	0	0	0
DFA International Small Value	40	1			0	0	1	0	0	0
DFA Emerging Markets Value	0	0	0	0			2,451	48	2,080	50
DFA Emerging Markets Core	0	0	1	0	2,451	100			3,947	98
DFA Emerging Markets Small Cap	0	0	0	0	2,080	25	3,947	31		



As of June 30, 2019

Market Value: \$499.1 Million and 22.4% of Fund

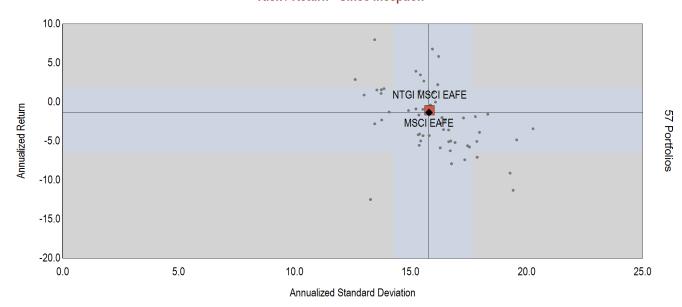




# As of June 30, 2019

# Characteristics

Market Value: \$224.7 Million and 10.1% of Fund



## Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	997	922
Weighted Avg. Market Cap. (\$B)	61.6	61.2
Median Market Cap. (\$B)	9.7	10.1
Price To Earnings	15.5	15.5
Price To Book	2.3	2.3
Price To Sales	1.1	1.1
Return on Equity (%)	14.6	14.6
Yield (%)	3.3	3.4
Beta		1.0
R-Squared		1.0

Region	% of Total	% of Bench
North America ex U.S.	0.0%	0.0%
United States	0.6%	0.0%
Europe Ex U.K.	47.4%	46.1%
United Kingdom	13.6%	16.7%
Pacific Basin Ex Japan	13.9%	12.8%
Japan	23.9%	23.8%
Emerging Markets	0.2%	0.0%
Other	0.5%	0.6%
Total	100.0%	100.0%

## Characteristics

	Portfolio	MSCI EAFE
INDUSTRY SECTOR DISTRIBUTION (%	Equity)	
Energy	5.4	5.5
Materials	6.9	7.4
Industrials	14.8	14.8
Consumer Discretionary	11.1	11.1
Consumer Staples	11.9	11.7
Health Care	11.1	11.2
Financials	18.8	18.9
Information Technology	6.6	6.7
Communication Services	5.3	5.4
Utilities	3.7	3.7
Real Estate	3.5	3.6
Unclassified	0.3	0.0

## Market Capitalization

	Small Cap	Mid Cap	Large Cap
NTGI MSCI EAFE	5.8%	21.3%	72.9%
MSCI EAFE	5.7%	20.7%	73.6%

# Risk / Return - Since Inception

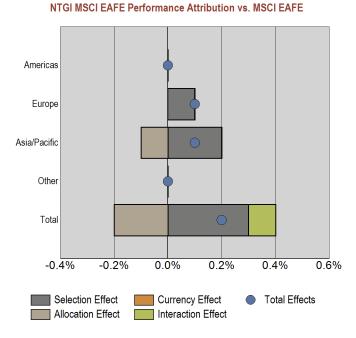


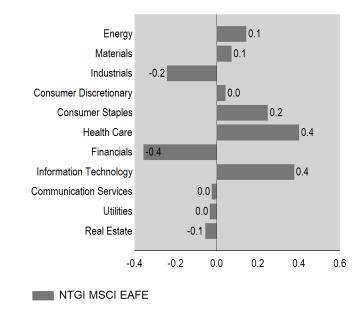
# Attribution

As of June 30, 2019

Market Value: \$224.7 Million and 10.1% of Fund

## **Active Contribution**





# Performance By Characteristic

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 99.69	13.5%	19.5%	-5.9%	1.1%	5.7%	-4.7%	-0.2%	0.1%	-0.1%	0.4%	0.2%
2) 49.00 - 99.69	16.9%	20.5%	-3.6%	3.7%	5.4%	-1.7%	0.1%	-0.1%	-0.1%	0.3%	0.2%
3) 26.24 - 49.00	16.7%	20.0%	-3.3%	3.5%	3.1%	0.3%	0.1%	0.0%	0.1%	-0.2%	-0.1%
4) 12.21 - 26.24	18.2%	20.0%	-1.8%	2.8%	4.0%	-1.2%	0.0%	0.2%	0.2%	0.0%	0.2%
5) 0.00 - 12.21	34.6%	20.0%	14.6%	3.6%	1.4%	2.2%	0.2%	-1.0%	-0.8%	-0.5%	-1.3%

# DFA International Small Value

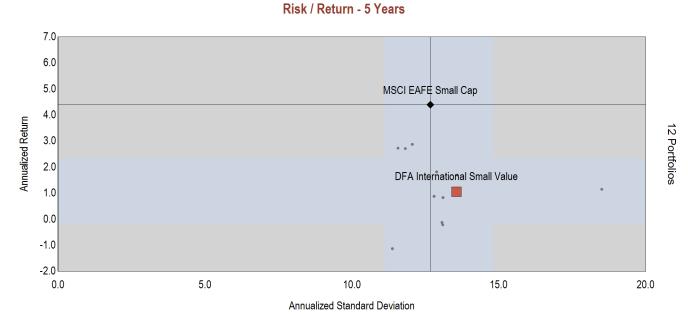
## As of June 30, 2019

# Characteristics

Market Value: \$100.8 Million and 4.5% of Fund

% of

% of





#### **Characteristics**

	Portfolio	MSCI EAFE Small Cap
Number of Holdings	2,144	2,340
Weighted Avg. Market Cap. (\$B)	1.9	2.5
Median Market Cap. (\$B)	0.4	1.0
Price To Earnings	11.7	15.1
Price To Book	1.4	2.1
Price To Sales	0.5	0.9
Return on Equity (%)	6.7	12.7
Yield (%)	3.2	2.8
Beta	1.0	1.0
R-Squared	0.9	1.0

#### Region Total Bench North America ex U.S. 8.9% 0.0% United States 0.2% 0.0% Europe Ex U.K. 36.9% 37.6% United Kingdom 17.9% 16.2% Pacific Basin Ex Japan 11.8% 12.7% Japan 25.2% 30.2% 0.0% 0.0% **Emerging Markets** Other 0.8% 1.6% Total 100.0% 100.0%

#### Characteristics

	Portfolio	MSCI EAFE Small Cap
INDUSTRY SECTOR DISTRIBUTION (% Eq	luity)	
Energy	6.9	2.7
Materials	16.4	8.6
Industrials	24.0	21.5
Consumer Discretionary	14.1	12.4
Consumer Staples	4.8	6.4
Health Care	2.1	7.6
Financials	19.3	10.9
Information Technology	4.3	9.5
Communication Services	2.6	5.1
Utilities	1.9	2.4
Real Estate	3.5	13.0
Unclassified	0.1	0.0

## **Market Capitalization**

	Small Cap	Mid Cap	Large Cap
DFA International Small Value	97.4%	2.6%	0.0%
MSCI EAFE Small Cap	96.1%	3.9%	0.0%

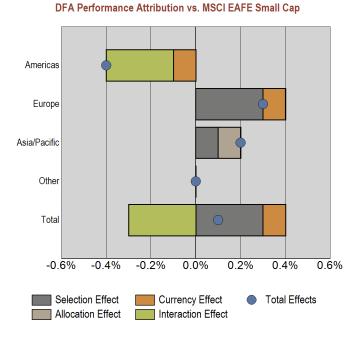
# DFA International Small Value

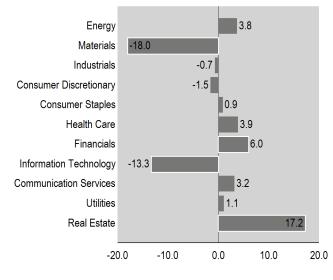
As of June 30, 2019

# Attribution

Market Value: \$100.8 Million and 4.5% of Fund

#### **Active Contribution**







## Performance By Characteristic

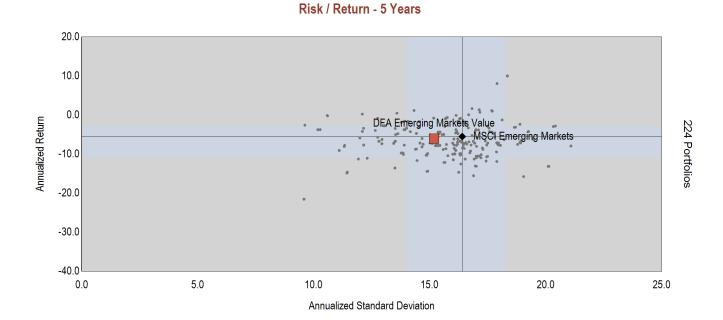
	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 3.94	11.8%	20.0%	-8.2%	2.6%	3.6%	-1.1%	0.5%	0.4%	0.8%	0.3%	1.2%
2) 2.72 - 3.94	12.6%	20.0%	-7.4%	6.3%	3.4%	2.9%	-0.7%	3.9%	3.2%	0.3%	3.5%
3) 1.74 - 2.72	17.1%	20.1%	-3.0%	2.6%	1.2%	1.5%	0.0%	-0.5%	-0.5%	-0.2%	-0.7%
4) 1.02 - 1.74	22.3%	20.0%	2.2%	2.4%	1.5%	0.9%	-0.1%	-1.1%	-1.2%	-0.1%	-1.3%
5) 0.00 - 1.02	36.1%	19.9%	16.3%	3.0%	0.4%	2.5%	-0.1%	-1.1%	-1.2%	-0.3%	-1.5%

# DFA Emerging Markets Value

# Characteristics

Market Value: \$52.9 Million and 2.4% of Fund

As of June 30, 2019



#### **Characteristics**

	Portfolio	MSCI Emerging Markets
Number of Holdings	2,492	1,193
Weighted Avg. Market Cap. (\$B)	27.0	81.7
Median Market Cap. (\$B)	0.4	5.6
Price To Earnings	10.7	14.1
Price To Book	1.5	2.4
Price To Sales	0.6	1.2
Return on Equity (%)	9.7	17.0
Yield (%)	3.4	2.8
Beta		1.0
R-Squared		1.0

Region	% of Total	% of Bench
EM Asia	65.5%	72.3%
EM Latin America	13.9%	11.9%
EM Europe & Middle East	5.2%	6.0%
EM Africa	7.2%	6.1%
Other	8.2%	3.7%
Total	100.0%	100.0%

#### Characteristics

	Portfolio	MSCI Emerging Markets
INDUSTRY SECTOR DISTRIBUTION (% Eq	luity)	
Energy	15.7	7.9
Materials	16.2	7.7
Industrials	9.1	5.5
Consumer Discretionary	7.1	13.5
Consumer Staples	3.0	6.4
Health Care	1.2	2.6
Financials	29.5	25.2
Information Technology	7.7	13.8
Communication Services	4.8	11.5
Utilities	1.5	2.7
Real Estate	4.1	3.0
Unclassified	0.1	0.0

# Market CapitalizationSmall<br/>CapMid<br/>CapLarge<br/>CapDFA Emerging Markets Value26.7%21.3%52.1%MSCI Emerging Markets5.0%18.1%76.9%

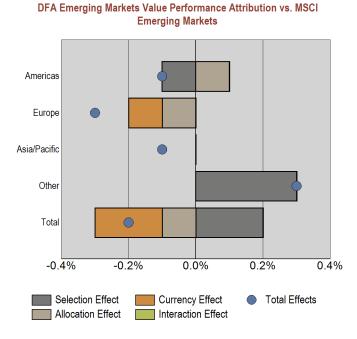
# DFA Emerging Markets Value

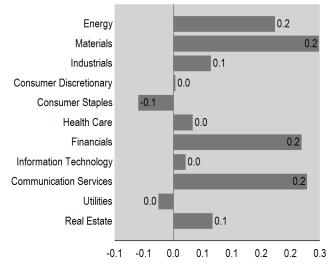
As of June 30, 2019

# Attribution

Market Value: \$52.9 Million and 2.4% of Fund

#### **Active Contribution**





## DFA Emerging Markets Value

## Performance By Characteristic

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 159.64	4.2%	19.5%	-15.3%	-1.3%	-1.8%	0.5%	0.0%	0.0%	0.0%	-0.5%	-0.5%
2) 35.87 - 159.64	18.5%	20.6%	-2.1%	-0.3%	3.4%	-3.7%	0.0%	0.0%	0.0%	0.5%	0.5%
3) 14.62 - 35.87	15.7%	20.0%	-4.3%	3.6%	1.8%	1.8%	0.0%	0.0%	0.0%	0.2%	0.2%
4) 6.45 - 14.62	19.1%	20.1%	-1.0%	1.8%	1.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
5) 0.00 - 6.45	42.5%	19.9%	22.6%	0.1%	-0.4%	0.5%	0.0%	0.0%	0.0%	-0.2%	-0.2%
Total				0.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

# DFA Emerging Markets Core

# Characteristics

Market Value: \$52.0 Million and 2.3% of Fund

As of June 30, 2019



#### **Characteristics**

	Portfolio	MSCI Emerging Markets
Number of Holdings	4,926	1,193
Weighted Avg. Market Cap. (\$B)	44.3	81.7
Median Market Cap. (\$B)	0.4	5.6
Price To Earnings	13.0	14.1
Price To Book	2.1	2.4
Price To Sales	0.9	1.2
Return on Equity (%)	15.0	17.0
Yield (%)	3.0	2.8
Beta		1.0
R-Squared		1.0

Region	% of Total	% of Bench
EM Asia	63.0%	72.3%
EM Latin America	14.8%	11.9%
EM Europe & Middle East	4.7%	6.0%
EM Africa	7.3%	6.1%
Other	10.3%	3.7%
Total	100.0%	100.0%

#### Characteristics

	Portfolio	MSCI Emerging Markets
INDUSTRY SECTOR DISTRIBUTION (% Eq	luity)	
Energy	7.0	7.9
Materials	11.0	7.7
Industrials	9.0	5.5
Consumer Discretionary	10.6	13.5
Consumer Staples	7.2	6.4
Health Care	3.0	2.6
Financials	19.2	25.2
Information Technology	17.7	13.8
Communication Services	7.7	11.5
Utilities	3.5	2.7
Real Estate	4.0	3.0
Unclassified	0.1	0.0

# Market Capitalization

	Small Cap	Mid Cap	Large Cap
DFA Emerging Markets Core	31.3%	20.2%	48.6%
MSCI Emerging Markets	5.0%	18.1%	76.9%

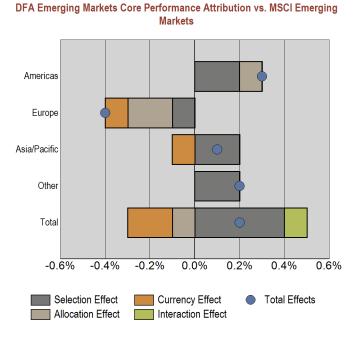
# DFA Emerging Markets Core

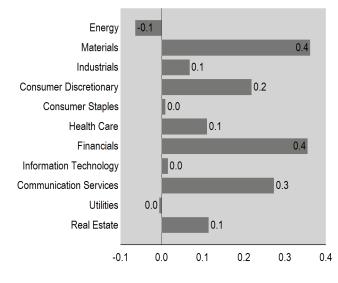
As of June 30, 2019

# Attribution

Market Value: \$52.0 Million and 2.3% of Fund

#### **Active Contribution**





#### DFA Emerging Markets Core

## **Performance By Characteristic**

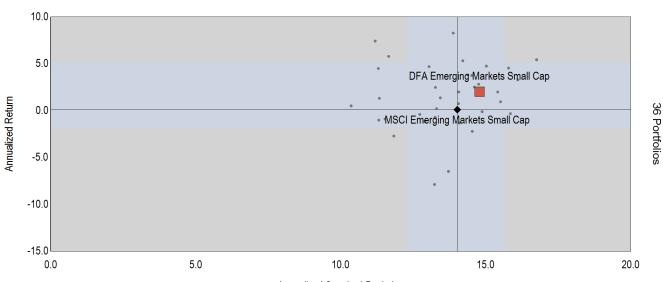
	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 159.64	10.9%	19.5%	-8.6%	2.6%	-1.8%	4.4%	0.1%	0.0%	0.1%	-0.5%	-0.5%
2) 35.87 - 159.64	13.1%	20.6%	-7.5%	1.5%	3.4%	-2.0%	0.0%	0.1%	0.1%	0.5%	0.6%
3) 14.62 - 35.87	12.9%	20.0%	-7.1%	2.5%	1.8%	0.7%	0.0%	0.0%	0.0%	0.2%	0.2%
4) 6.45 - 14.62	15.7%	20.1%	-4.4%	1.6%	1.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
5) 0.00 - 6.45	47.4%	19.9%	27.6%	0.5%	-0.4%	0.8%	0.2%	0.1%	0.3%	-0.2%	0.1%
Total				1.3%	0.8%	0.4%	0.3%	0.2%	0.4%	0.0%	0.4%

# DFA Emerging Markets Small Cap

# Characteristics

Market Value: \$67.1 Million and 3.0% of Fund

As of June 30, 2019



# Annualized Standard Deviation

#### Characteristics

	Portfolio	MSCI Emerging Markets Small Cap
Number of Holdings	4,187	1,625
Weighted Avg. Market Cap. (\$B)	1.4	1.3
Median Market Cap. (\$B)	0.3	0.7
Price To Earnings	12.7	13.4
Price To Book	2.0	2.2
Price To Sales	0.7	0.8
Return on Equity (%)	12.1	12.7
Yield (%)	2.8	2.7
Beta	1.1	1.0
R-Squared	1.0	1.0

## Characteristics

	Portfolio	MSCI Emerging Markets Small Cap
INDUSTRY SECTOR DISTRIBUTION (% Ed	quity)	
Energy	1.4	2.2
Materials	12.5	11.9
Industrials	14.9	14.5
Consumer Discretionary	15.0	13.9
Consumer Staples	7.8	6.6
Health Care	6.7	7.9
Financials	8.7	10.9
Information Technology	15.4	14.6
Communication Services	3.8	4.1
Utilities	6.1	4.9
Real Estate	7.4	8.3
Unclassified	0.3	0.0

Region	% of Total	% of Bench
EM Asia	60.4%	72.8%
EM Latin America	15.9%	12.5%
EM Europe & Middle East	2.5%	3.6%
EM Africa	7.4%	6.2%
Other	13.9%	5.0%
Total	100.0%	100.0%

Market Capitaliza	ation		
	Small Cap	Mid Cap	Large Cap
DFA Emerging Markets Small Cap	88.7%	11.3%	0.0%
MSCI Emerging Markets Small Cap	93.7%	6.3%	0.0%

# Risk / Return - 2 Years

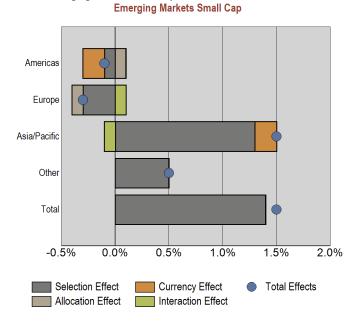
# DFA Emerging Markets Small Cap

As of June 30, 2019

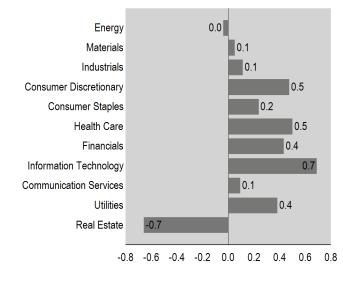
# Attribution

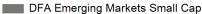
Market Value: \$67.1 Million and 3.0% of Fund

#### **Active Contribution**



DFA Emerging Markets Small Cap Performance Attribution vs. MSCI





#### **Performance By Characteristic**

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 1.82	27.1%	20.0%	7.0%	1.1%	1.8%	-0.8%	-0.3%	1.3%	1.0%	0.5%	1.6%
2) 1.26 - 1.82	11.8%	20.1%	-8.3%	-0.2%	1.5%	-1.7%	0.0%	0.1%	0.1%	0.5%	0.5%
3) 0.88 - 1.26	12.8%	20.1%	-7.3%	0.9%	-0.4%	1.3%	-0.1%	0.3%	0.2%	0.1%	0.3%
4) 0.56 - 0.88	14.7%	20.1%	-5.3%	0.1%	-2.2%	2.3%	-0.1%	0.0%	-0.1%	-0.3%	-0.4%
5) 0.00 - 0.56	33.6%	19.7%	13.9%	0.9%	-4.9%	5.8%	0.2%	0.1%	0.3%	-0.8%	-0.5%
Total				0.7%	-0.8%	1.5%	-0.2%	1.7%	1.5%	0.0%	1.5%

# Characteristics

#### Market Value: \$111.6 Million and 5.0% of Fund

Manager:	AQR Capital Management

 Product:
 Global Risk Premium Strategy AUM: \$13,312.23 MM 6/30/2017

 Strategy:
 Hedge Funds - Risk Parity

#### Date as of: Mar 31st, 2019 Benchmark 1: 60% MSCI World/40% BarCap Aggregate Benchmark 2:

#### Investment Strategy:

AQR has one of the longest active track records in the risk parity space, which includes 2008. The GRP-EL ("enhanced liquidity") product does not include exposure to credit spreads and as a result has better liquidity terms. AQR's approach to risk parity includes a very active monitoring process that reduces exposure to asset classes as the volatility increases. AQR does this to help maintain the 10% volatility target they have set for the fund. As a result, exposures in this fund typically fluctuate more than peers.

#### Monthly Returns: (Net of Fees)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2019	5.46%	1.08%	3.22%										10.03%
2018	0.26%	-2.82%	0.48%	0.71%	2.68%	-1.10%	-0.51%	1.16%	-0.66%	-3.98%	0.14%	-2.30%	-5.95%
2017	0.90%	3.04%	-1.15%	0.99%	0.87%	-1.76%	2.36%	1.89%	-0.39%	2.67%	0.48%	1.45%	11.83%
2016	0.33%	1.26%	2.94%	1.76%	0.87%	3.94%	0.31%	-0.38%	1.40%	-2.29%	-1.41%	1.74%	10.80%
2015	2.07%	1.21%	-0.55%	1.85%	-0.96%	-2.54%	-2.14%	-5.04%	-0.17%	1.81%	-1.96%	-3.07%	-9.36%
2014	1.46%	4.05%	-0.11%	1.78%	2.84%	1.80%	-1.67%	2.60%	-4.11%	0.80%	0.38%	-2.76%	6.94%

#### Growth of \$1000 Since Inception \$2,000 \$1,500 \$1,000 \$500 \$0 Oct-11 Oct-13 Oct-15 Oct-17 Manager \_\_\_\_\_\_\_\_OW MSCI World/40% BarCap Aggregate

Trailing Returns			YTD	3MO	1YR	3YR	5YR	10YR	INCEPT		
Manager			10.03%	10.03%	5.70%	7.03%	3.34%		3.79%		
60% MSCI World/40% BarCap Aggregate			8.63%	8.63%	4.46%	7.28%	5.31%		6.62%		
Calendar Returns	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Manager				3.85%	11.74%	-2.71%	6.94%	-9.36%	10.80%	11.83%	-5.95%
60% MSCI World/40% BarCap Aggregate				5.08%	11.29%	14.46%	5.43%	-0.07%	5.71%	14.52%	-5.07%

Risk and Return 3YR	Statistics		Risk and Return Since	Risk and Return Since Inception Statistics				
	Manager	Benchmark 1		Manager	Benchmark 1			
Annualized Return	7.03%	7.28%	Annualized Return	3.79%	6.62%			
Standard Deviation	6.83%	6.14%	Standard Deviation	7.47%	6.98%			
Sharpe Ratio	0.85	0.99	Sharpe Ratio	0.44	0.96			
Skew	-0.07	-0.63	Skew	-0.61	-0.26			
Kurtosis	0.37	1.86	Kurtosis	0.55	0.93			
Up Capture		95.19%	Up Capture		69.11%			
Down Capture		95.22%	Down Capture		101.08%			

Benchmark Based	Return Statistics 3 Year	Benchmark Based	Return Statistics Since Inception
	Benchmark1		Benchmark1
Alpha	1.19%	Alpha	-1.49%
Beta	0.80	Beta	0.77
R2	51.89%	R2	46.89%

Crisis Performance		Investment Terms	& Service Providers			
	Financial Crisis	Euro Crisis	High Yield Crash	Taper Tantrum	Inception Date	10/31/2011
	May '07 - Feb '09	April '11 - Sept '11	May '15 - Jan '16	April '13 - Aug '13	Management Fee	0.38%
Manager			-12.2%	-8.9%	Liquidity	Weekly
60% MSCI World/40% Ba			-6.4%	-1.1%	Administrator	Institutional Fund Services
					Auditors	PricewaterhouseCoopers



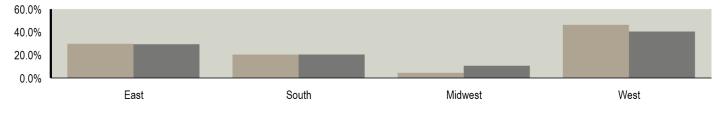
# Characteristics

Market Value: \$72.9 Million and 3.3% of Fund

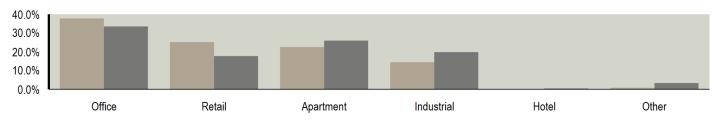
	Characteristic	cs		Strateg	y Breakdown		
				% of Portfolio	Top Five Metro A	reas	% of N/
Fund (	GAV (\$MM)	\$42,757.0	Pre-Development	0.0%	New York-Northern	n New Jersey-	12
Fund I	NAV (\$MM)	\$32,550.0	Development	3.0%	Dallas-Fort Worth-	Arlington, TX	11
Cash (	(% of NAV)	1.3%	Initial Leasing	1.3%	Los Angeles-Long	Beach-Santa	10
# of In	vestments	167	Operating	95.8%	Boston-Cambridge	-Quincy, MA-N	9
% in T	op 10 by NAV	27.0%	Re-Development	0.0%	San Jose-Sunnyva	ale-Santa Clara	7
Levera	age %	23.9%	Other	0.0%			
Occup	bancy	92.9%					
# of M	SAs	59	<u>Queue In:</u>		Queue_Out:		
1-Year	r Dividend Yield	3.8%	Contribution Queue (\$MM)	\$45.30	Redemption Queu	e (\$MM)	\$72
As of I	Date	31-Mar-19	Anticipated Drawdown (Months)	3	Anticipated Payou	t (Months)	
			Top Ten Holdings Inves	stment Detail			
#	Property			Туре	Location	% of Fund N	VAV
1	Valley Fair Mall			Retail	San Jose, CA	3.9	%
2	Edens - SPF			Retail	Various	3.7	'%
3	DSRG - SPF			Retail	Various	3.0	1%
4	Royal Hawaiian Cen	ter		Retail	Honolulu, HI	2.9	1%
5	Alliance Texas - Indu	istrial		Industrial	Fort Worth TX	2.8	20/2

1		Retail	San Jose, CA	3.9%
2	Edens - SPF	Retail	Various	3.7%
3	DSRG - SPF	Retail	Various	3.0%
4	Royal Hawaiian Center	Retail	Honolulu, HI	2.9%
5	Alliance Texas - Industrial	Industrial	Fort Worth, TX	2.8%
6	Century Plaza Towers	Office	Los Angeles, CA	2.3%
7	1345 Avenue of the Americas	Office	New York, NY	2.3%
8	University Towne Center	Retail	San Diego, CA	2.2%
9	China Basin	Office	San Francisco, CA	2.1%
10	NorthPark Center JV	Retail	Dallas, TX	2.0%
Total				27.0%

# Regional Breakdown by NAV (Excluding Cash & Debt)



Property Type Breakdown by NAV (Excluding Cash & Debt)



## Property Size Breakdown by NAV (Excluding Cash & Debt)



■ JPMorgan Strategic Property Fund ■ NFI-ODCE EqW



6

7

8

9

10

Total

Dadeland Mall

Waterview Tower

155 North Wacker

AMLI Marina del Rey

Rosedale Shopping Center

# Characteristics

2.0%

1.8%

1.8%

1.8%

1.6%

21.9%

Market Value: \$67.2 Million and 3.0% of Fund

Characteristics				Strateg	y Breakdown	
				% of Portfolic	Top Five Metro	Areas % of NAV
Fund C	GAV (\$MM)	\$28,948.1	Pre-Development	0.3%	Los Angeles, CA	13.6%
Fund N	IAV (\$MM)	\$23,705.6	Development	3.5%	Boston, MA	8.49
Cash (	% of NAV)	0.7%	Initial Leasing	3.9%	Chicago, IL	8.49
# of Inv	vestments	434	Operating	89.0%	New York, NY	7.6%
% in To	op 10 by NAV	21.9%	Re-Development	3.3%	San Francisco, 0	CA 7.0%
Levera	ge %	17.5%	Other			
Occupa	ancy	93.9%				
# of MS	SAs	34	<u>Queue_In:</u>		<u>Queue_Out:</u>	
1-Year	Dividend Yield	4.0%	Contribution Queue (\$MM)	\$687.70	Redemption Que	eue (\$MM)
As of D	Date	31-Mar-19	Anticipated Drawdown (Months)		Anticipated Payo	out (Months)
			Top Ten Holdings Inves	tment Detail		
#	Property			Туре	Location	% of Fund NAV
1	Hills Plaza			Office	San Francisco ,CA	2.9%
2	Fashion Valley Mall			Retail	San Diego ,CA	2.8%
3	Two Park Avenue			Office	New York ,NY	2.8%
4	One Post Office Square			Office	Boston ,MA	2.4%
5	One Maritime Plaza			Office	San Francisco ,CA	2.1%

#### Office Chicago ,IL Apartment Marina del Rey ,CA

Retail

Office

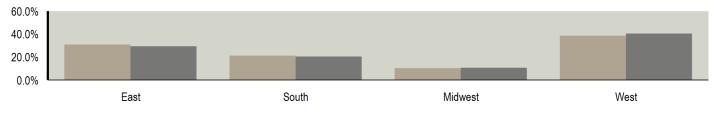
Retail

Miami ,FL

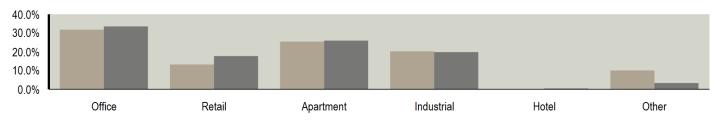
Arlington ,VA

Roseville ,MN

## **Regional Breakdown by NAV (Excluding Cash & Debt)**



Property Type Breakdown by NAV (Excluding Cash & Debt)



## Property Size Breakdown by NAV (Excluding Cash & Debt)



■ Morgan Stanley PRIME Property Fund, LLC ■ NFI-ODCE EqW



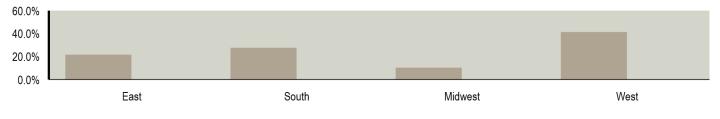
# Characteristics

Market Value: \$39.1 Million and 1.8% of Fund

Characterist	ics		Strategy Brea	Ikdown	
			% of Portfolio	Top Five Metro Areas	% of NAV
Fund GAV (\$MM)	\$4,160.0	Pre-Development	0.9%	San Francisco, CA	12.5%
Fund NAV (\$MM)	\$1,886.8	Development	19.1%	Chicago, IL	9.19
Cash (% of NAV)	0.9%	Initial Leasing	3.3%	San Diego, CA	9.09
# of Investments	70	Operating	65.8%	Miami, FL	8.39
% in Top 10 by NAV	42.4%	Re-Development	9.2%	Washington, DC	7.89
Leverage %	48.8%	Other	1.7%		
Occupancy	84.6%				
# of MSAs	30	<u>Queue_In:</u>		Queue_Out:	
1-Year Dividend Yield	9.8%	Contribution Queue (\$MM)	\$368.70	Redemption Queue (\$MM)	\$0.0
As of Date	31-Mar-19	Anticipated Drawdown (Months)	0	Anticipated Payout (Months)	
		Top Ten Holdings Investr	ment Detail		

#	Property	Туре	Location	% of Fund NAV
1	255 California	Office	San Francisco, CA	8.5%
2	Coronado Bay Club	Apartment	Coronado, CA	4.6%
3	2305 Mission College Blvd	Office	Santa Clara, CA	4.5%
4	Terraces at Copley Point	Office	San Diego, CA	4.4%
5	Arkadia Tower	Apartment	Chicago, IL	3.8%
6	CityPlace - Retail	Retail	Doral, FL	3.8%
7	Alexan Union Market	Apartment	Washington, DC	3.7%
8	Alta Potrero Hill	Apartment	San Francisco, CA	3.2%
9	Broadstone Trino	Apartment	Santa Monica, CA	3.2%
10	Montrose & Claredon	Apartment	Chicago, IL	2.7%
Total				42.4%

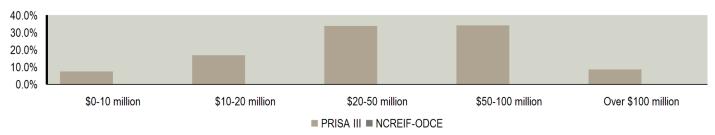
## Regional Breakdown by NAV (Excluding Cash & Debt)



# Property Type Breakdown by NAV (Excluding Cash & Debt)



## Property Size Breakdown by NAV (Excluding Cash & Debt)





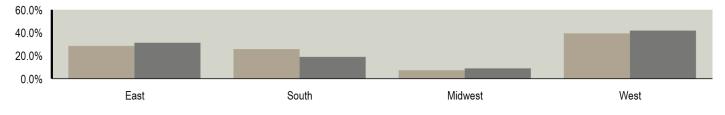
# Characteristics

Market Value: \$47.4 Million and 2.1% of Fund

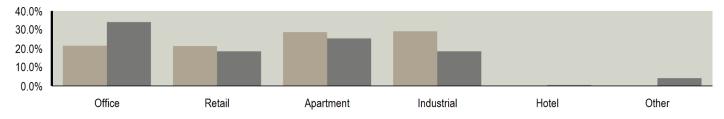
	Characte	ristics		Strategy	y Breakdown	
				% of Portfolio	Top Five Metro A	reas % of NAV
Fund G	GAV (\$MM)	\$3,408,849,786.0	Pre-Development	0.0%	Seattle	13.1%
Fund N	AV (\$MM)	\$1,850,352,330.0	Development	10.8%	Houston	11.8%
Cash (	% of NAV)	1.6%	Initial Leasing	7.5%	Phoenix	9.6%
# of Inv	vestments	54	Operating	81.7%	Oakland	7.6%
% in To	op 10 by NAV	36.4%	Re-Development	0.0%	Denver	7.3%
Levera	ge %	39.2%	Other	0.0%		
Occupa	ancy	90.5%				
# of MS	SAs	22	<u>Queue In:</u>		Queue_Out:	
1-Year	Dividend Yield	4.0%	Contribution Queue (\$MM)	\$164.90	Redemption Queue	e (\$MM) \$47.14
As of D	Date	31-Mar-19	Anticipated Drawdown (Months)	6	Anticipated Payout	(Months) 3
			Top Ten Holdings Inves	tment Detail		
#	Property			Туре	Location	% of Fund NAV
1	Mid-South Logis	stics Center		Industrial	Nashville, TN	4.8%
2	Bay Area Busin	ess Park (Phase I)		Industrial	Houston, TX	4.7%
3	Piedmont Office	)		Office	Charlotte, NC	3.9%
4	Bay Center			Office	Oakland, CA	3.8%
5	San Leandro Br	usiness Center		Industrial	Oakland, CA	3.8%

5		muusinai	Oakialiu, CA	3.0%
6	The Courts at Spring Mill Station	Apartment	Phoenix, AZ	2.7%
7	1760 3rd Avenue	Apartment	New York, NY	2.7%
8	Baybrooke Square	Retail	Houston, TX	2.7%
9	Solaris Key	Apartment	Tampa, FL	2.1%
10	M-Line Tower	Apartment	Dallas, TX	2.0%
Total				33.1%

## Regional Breakdown by NAV (Excluding Cash & Debt)



## Property Type Breakdown by NAV (Excluding Cash & Debt)



## Property Size Breakdown by NAV (Excluding Cash & Debt)



# Alinda

# As of December 31, 2017

## Characteristics

# Characteristics

Market Value: \$29.5 Million and 1.3% of Fund

\$203.3

7.3%

\$767.6

# Strategy Breakdown

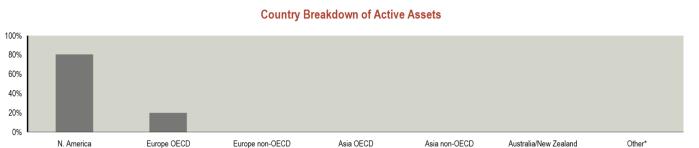
\$276.4

	Alinda Capital Partners LLC		# of Cos.	Current or Realized MV (\$M)	% of Portfolic
Fund Vintage Year	2008	Assets in Portfolio	7	\$2,783.40	100.0%
Total Size of Fund (\$M)	\$4,065.08	Active Assets in Portfolio	7	\$2,783.40	100.0%
% of Capital Called	0.56%	Assets Realized	4	-\$5.30	0.0%
Total Fund GAV (\$M)	\$2,809.70	Assets Written Off	0	\$0.00	0.0%
Total Fund NAV (\$M)	\$2,788.80	Assets Written Down	2	-\$129.51	0.0%
		Assets Written Up	5	\$1,032.24	0.0%

## **Active Assets**

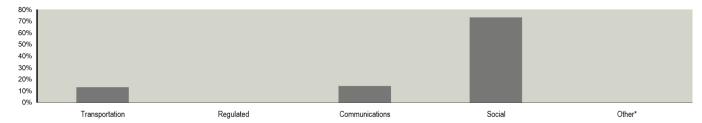
			Investment	Distributions	Fair Mkt Val	
Holding	Sector	Location	(\$M)	(\$M)	(\$M)	% of Portfolio
Binnenlandse Container Terminals Nederland b.v	Transportaion	Netherlands	\$103.7	\$50.6	\$151.0	5.4%
Regency Gas Pipeline System	Regulated	Louisiana	\$159.8	\$717.0	\$45.0	1.6%
BCTN Currency Options	Not Applicable	Not Applicable	\$12.9	\$0.0	\$7.3	0.3%
Santa Paula Water LLC	Other	Santa Paula, California	\$0.0	\$0.0	\$0.0	0.0%

Total



#### Europe non-OECD Asia OECD Asia non-OECD

## Sector Breakdown of Active Assets



#### Total Fund Annual Cash Flow Summary (\$M)

	2011	2012	2013	2014	2015	2016	2017
Paid-In Capital	-\$1,541	-\$133	-\$730	-\$1,111	-\$172	-\$112	-\$86
Return of Capital	98	141	334	651	333	316	1,273
Income + Gains	3	24	-9	774	639	-236	-325
Fees	-65	-63	-59	-46	-52	43	40
Yearly Total	-1,508	-55	-455	-506	109	160	1,146
Cumulative Total	-\$2,335	-\$2,391	-\$2,846	-\$3,352	-\$3,243	-\$3,082	-\$1,936

Other \* =

# Macquarie

## As of December 31, 2018

### **Characteristics**

# Characteristics

Market Value: \$33.2 Million and 1.5% of Fund

## Strategy Breakdown

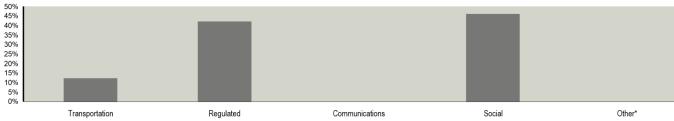
	Macquarie Asset Management		# of Cos.	Current or Realized MV (\$M)	% of Portfolio
Fund Vintage Year	2008	Assets in Portfolio	6	\$1,631.50	104.0%
Total Size of Fund (\$M)	\$1,568.95	Active Assets in Portfolio	5	\$1,631.50	104.0%
% of Capital Called	94.94%	Assets Realized	1	\$965.62	61.5%
Total Fund GAV (\$M)	\$1,644.86	Assets Written Off	0	\$0.00	0.0%
Total Fund NAV (\$M)	\$1,640.09	Assets Written Down	2	\$244.10	15.6%
		Assets Written Up	3	\$1,387.40	88.4%

#### **Active Assets**

			Investment	Distributions	Fair Mkt Val	
Holding	Sector	Location	(\$M)	(\$M)	(\$M)	% of Portfolio
Puget	Regulated	USA - WA	\$342.4	\$142.6	\$684.5	42.0%
WCA Waste Corporation	Other	USA - Texas	\$275.4	\$4.7	\$504.9	30.9%
Elizabeth River Tunnels	Transportation	USA - VA	\$75.6	\$3.0	\$198.0	12.1%
Leaf River Energy Center	Other	USA - MS	\$238.5	\$0.0	\$144.7	8.9%
Broadrock Renewables	Other	Brea, California and Johnsto	\$128.0	\$0.0	\$99.4	6.1%
GTP	Communication	USA, Puerto Rico & Mexico	\$0.0	\$1,019.7	\$0.0	0.0%

Total



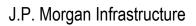


## Total Fund Annual Cash Flow Summary (\$M)

	2013	2014	2015	2016	2017	2018	2019
Paid-In Capital	-\$43	\$0	\$0	-\$75	\$0	\$0	\$0
Return of Capital	889	20	0	0	40	0	0
Income + Gains	161	-51	110	107	258	46	42
Fees	-22	-17	-16	-16	-16	-16	-4
Yearly Total	824	3	-16	-91	24	-16	-4
Cumulative Total	-\$745	-\$742	-\$758	-\$849	-\$825	-\$841	-\$845

Other \* =





# Characteristics

## Market Value: \$31.3 Million and 1.4% of Fund

#### Characteristics

#### Strategy Breakdown

Ondracteristics			onalogy bit	anuowii	
JPMorgan					
Fund Inception/Vintage Year	2007	# of Investments			19
Total Fund GAV (\$M)	\$24,815.0	# of Investors			458
Total Fund NAV (\$M)	\$11,252.0	# OECD Countries			25
Cash Balance % of NAV	0.0%	Trailing 12-month Dividend	Yield		5.3%
% in Top 10 by NAV	73.5%	Queue Out:	\$7.2	Queue In:	\$2,598.8

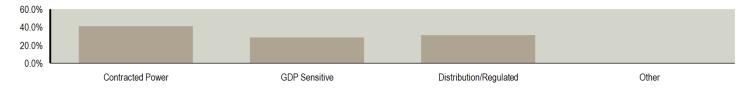
#### Top 10 Fund investments by NAV

Investment	Sector	Location	Investment (\$M)	Fair Mkt Val (\$M)	% of Portfolio
Ventient Energy/Vortex	Wind	UK	\$1,795.9	\$1,519.7	13.0%
Sonnedix Power Holdings	Solar	Various (Global)	\$1,442.0	\$1,283.8	10.9%
NorteGas Energía Distribución ("NorteGas")	Gas	Spain	\$899.2	\$924.5	7.9%
Summit Utilities	Gas	US	\$822.4	\$850.2	7.2%
North Queensland Airports	Airports	Australia	\$420.7	\$793.6	6.8%
Koole Terminals	Storage	Various (Europe)	\$568.8	\$709.5	6.0%
Novatus Energy	Wind	US	\$681.3	\$666.5	5.7%
Beacon Rail Leasing	Other	Various (Europe)	\$589.3	\$654.6	5.6%
Southwest Generation	Electric	US	\$941.0	\$629.1	5.4%
Electricity North West	Gas	UK	\$512.7	\$585.1	5.0%
Total			\$8,673.3	\$8,616.6	73.5%

**Country Breakdown of Active Assets** 









# Characteristics

## Market Value: \$63.1 Million and 2.8% of Fund

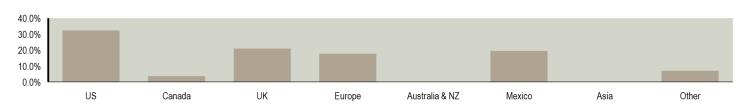
#### Characteristics

#### Strategy Breakdown

Industry Funds Management					
Fund Inception/Vintage Year	2009	# of Investments			15
Total Fund GAV (\$M)	\$35,137.0	# of Investors			312
Total Fund NAV (\$M)	\$22,746.0	# OECD Countries			15
Cash Balance % of NAV	1.9%	Trailing 12-month Dividend Yield			7.2%
% in Top 10 by NAV	88.3%	Queue Out:	\$0.0	Queue In:	\$3,000.0

#### Top 10 Fund investments by NAV

Investment	Sector	Location	Investment (\$M)	Fair Mkt Val (\$M)	% of Portfolio
Indiana Toll Road	Toll Roads	United States	\$3,705.2	\$4,830.1	21.3%
Aleatica	Toll Roads	Mexico	\$5,206.7	\$4,375.5	19.3%
Manchester Airports Group	Airports	United Kingdom	\$1,515.5	\$2,600.7	11.5%
Freeport Train 2	Midstream Services	United States	\$1,180.6	\$1,760.9	7.8%
Vienna Airport	Airports	Austria	\$876.2	\$1,448.8	6.4%
VTTI	Other	Global	\$1,192.5	\$1,255.2	5.5%
FCC Aqualia	Water	Spain	\$1,206.5	\$1,228.4	5.4%
Anglian Water Group	Water	United Kingdom	\$630.6	\$847.6	3.7%
Mersin International Port	Ports	Turkey	\$877.5	\$846.1	3.7%
M6Toll	Toll Roads	United Kingdom	\$613.0	\$800.0	3.5%
Total			\$17,004.3	\$19,993.3	88.1%



**Country Breakdown of Active Assets** 

## Sector Breakdown of Active Assets



Contracted Power

GDP Sensitive

Distribution/Regulated

Other





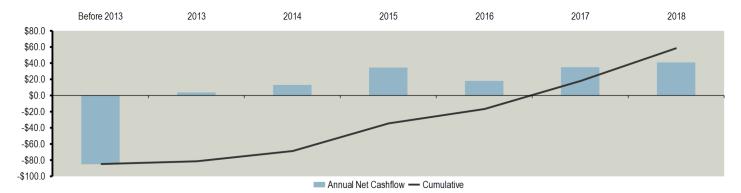
#### Characteristics

Fort Wa	ashington Capital Partners
Total Size of Fund (\$M)	\$169.1
Total Capital Called to Date	\$144.8
% of Committed Capital Called	85.6%
Capital Distributed (\$M)	\$203.4
Capital Distributed (as a % of Capital Called	140.5%

#### Top Ten Funds by Market Value

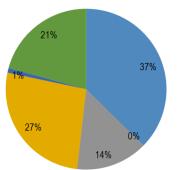
				Total			
				Commitment	Total Investment	Fair Market Value	Total Distribution
Fund	Туре	Vintage Year	% of Portfolio	(\$M)	(\$M)	(\$M)	(\$M)
Hellman & Friedman Capital Partners VII, L.P.	Intl Buyout		11.2%	\$7.5	\$7.1	\$10.5	\$7.8
Shasta Ventures II, L.P.	Venture Capital		7.6%	\$2.5	\$2.4	\$7.1	\$2.3
OrbiMed Private Investments IV, L.P.	Venture Capital		5.2%	\$4.0	\$7.1	\$4.8	\$7.1
Highland Capital Partners VIII, L.P.	Venture Capital		5.1%	\$5.0	\$1.4	\$4.8	\$1.4
Pangaea Two, L.P.	Other		5.1%	\$5.0	\$4.0	\$4.8	\$1.0
Draper Fisher Jurvetson Fund IX, L.P.	Venture Capital		5.0%	\$5.0	\$5.0	\$4.7	\$6.3
New Enterprise Associates 13, L.P.	Venture Capital		4.9%	\$5.0	\$4.9	\$4.6	\$4.6
Atlas Capital Resources, L.P.	Distressed		4.3%	\$5.0	\$4.0	\$4.1	\$4.7
H.I.G. Bayside Debt & LBO Fund II, L.P.	Distressed		4.2%	\$7.5	\$6.2	\$4.0	\$7.9
NGP Midstream & Resources, L.P.	Other		4.2%	\$7.5	\$7.5	\$4.0	\$9.8

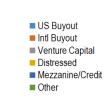
## Annual Cash Flow Summary (\$M)



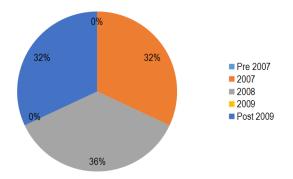
	Before 2013	2013	2014	2015	2016	2017	2018
Paid In Capital w/o Fees	\$109.3	\$20.3	\$11.0	\$0.0	\$4.2	\$0.0	\$0.0
Fees Paid	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Distribution	\$24.5	\$23.7	\$23.7	\$34.2	\$22.0	\$34.7	\$40.6
Cumulative	-\$84.8	-\$81.4	-\$68.7	-\$34.5	-\$16.7	\$18.0	\$58.6

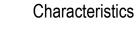
Strategy Exposure





Vintage Year Exposure





# Market Value: \$13.2 Million and 0.6% of Fund



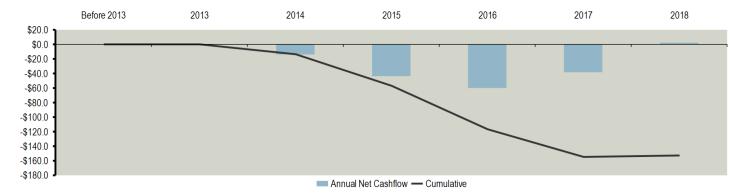
#### Characteristics

onaraotonoti	00
Fort Wa	shington Capital Partners
Total Size of Fund (\$M)	\$271.4
Total Capital Called to Date	\$179.1
% of Committed Capital Called	66.0%
Capital Distributed (\$M)	\$26.5
Capital Distributed (as a % of Capital Callec	14.8%

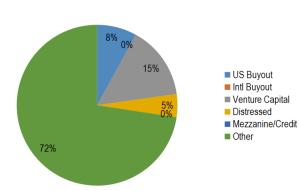
#### Top Ten Funds by Market Value

				Total			
				Commitment	Total Investment	Fair Market Value	Total Distribution
Fund	Туре	Vintage Year	% of Portfolio	(\$M)	(\$M)	(\$M)	(\$M)
Ascent Venture Partners IV-B, L.P.	Venture Capital		7.7%	\$11.7	\$11.4	\$17.7	\$0.7
Invision Diversified Holdings, LLC	Other		7.3%	\$9.0	\$9.0	\$16.6	\$0.0
Cressey & Company Fund V, L.P.	US Buyout		5.8%	\$14.0	\$12.4	\$13.2	\$4.0
OrbiMed Private Investments VI, L.P.	Venture Capital		5.3%	\$14.0	\$11.6	\$12.2	\$1.3
5AM Ventures IV, L.P.	Venture Capital		4.6%	\$6.0	\$5.7	\$10.6	\$0.1
ABRY Partners VIII, L.P.	US Buyout		4.6%	\$12.8	\$10.6	\$10.5	\$2.8
HitecVision VII, L.P.	Other		4.3%	\$12.8	\$7.1	\$10.0	\$0.0
EnCap Energy Capital Fund X, L.P.	US Buyout		4.1%	\$11.2	\$8.4	\$9.4	\$1.1
Scribe Aggregator, LLC	Other		3.7%	\$4.6	\$4.6	\$8.5	\$0.1
Accel-KKR Growth Capital Partners Fund II, L.P.	Other		3.6%	\$11.1	\$6.5	\$8.2	\$0.0

## Annual Cash Flow Summary (\$M)

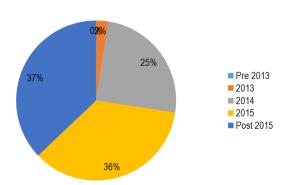


	Before 2013	2013	2014	2015	2016	2017	2018
Paid In Capital w/o Fees	\$0.0	\$0.0	\$13.6	\$43.4	\$59.7	\$48.8	\$13.6
Fees Paid	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Distribution	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$10.8	\$15.6
Cumulative	\$0.0	\$0.0	-\$13.6	-\$57.0	-\$116.7	-\$154.7	-\$152.7

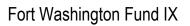


Strategy Exposure

Vintage Year Exposure



# Characteristics



#### Characteristics

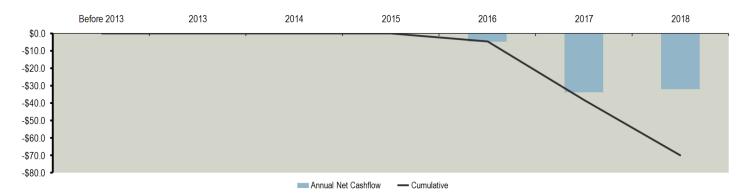
	Fort Washington Capital Partners
Total Size of Fund (\$M)	\$212.6
Total Capital Called to Date	\$70.2
% of Committed Capital Called	33.0%
Capital Distributed (\$M)	\$0.0
Capital Distributed (as a % of Cap	bital Callec 0.0%

#### Top Ten Funds by Market Value

Net IRR

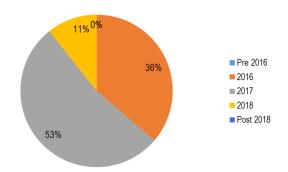
Fund	Туре	Vintage Year	% of Portfolio	Total Commitment (\$M)	Total Investment (\$M)	Fair Market Value (\$M)	Total Distribution (\$M)
G Square Capital II, L.P.	Intl Buyout		11.7%	\$10.5	\$7.3	\$9.1	\$0.0
Luminate Capital Partners, LP	Other		11.2%	\$8.5	\$7.5	\$8.7	\$0.0
HV Momentum Co-invest AS	Other		9.9%	\$3.5	\$3.5	\$7.7	\$0.0
Ascent Venture Partners IV-B, L.P.	Venture Capital		9.5%	\$4.9	\$4.7	\$7.4	\$0.3
Scribe Aggregator, LLC	Other		7.6%	\$3.2	\$3.2	\$5.9	\$0.4
Bambino Group Holdings, LLC	Other		4.5%	\$3.0	\$3.0	\$3.5	\$0.0
Livingbridge 6 L.P.	Other		4.4%	\$8.9	\$3.8	\$3.4	\$0.0
True Ventures Select II, L.P.	Venture Capital		4.3%	\$3.3	\$3.3	\$3.4	\$0.9
Lime Rock Partners IV AF, L.P.	US Buyout		4.0%	\$3.5	\$3.5	\$3.1	\$0.0
EBS Aggregator LLC	Other		3.0%	\$2.4	\$2.3	\$2.3	\$0.0

## Annual Cash Flow Summary (\$M)



	Before 2013	2013	2014	2015	2016	2017	2018
Paid In Capital w/o Fees	\$0.0	\$0.0	\$0.0	\$0.0	\$4.6	\$33.7	\$31.9
Fees Paid	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Distribution	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Cumulative	\$0.0	\$0.0	\$0.0	\$0.0	-\$4.6	-\$38.3	-\$70.2

Vintage Year Exposure



# Characteristics

12.5%

# Fort Washington Opp Fund III

## As of December 31, 2018

#### Characteristics

Fort W	ashington Capital Partners
Total Size of Fund (\$M)	\$133.4
Total Capital Called to Date	\$98.7
% of Committed Capital Called	74.0%
Capital Distributed (\$M)	\$26.7
Capital Distributed (as a % of Capital Calle	c 27.1%

# Characteristics

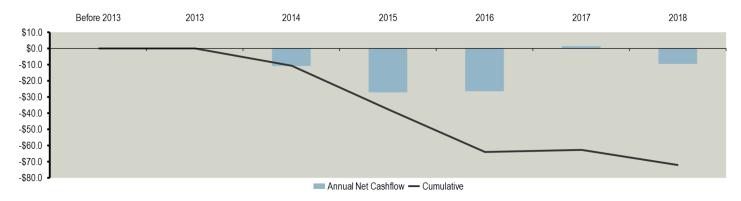
## Market Value: \$17.3 Million and 0.8% of Fund

Fund Vintage Year	2014
Total Underlying Commitments	\$110.7
# of Underlying Commitments	14
% of Capital Commited	83.0%
Fund NAV (\$M)	\$150.5
Net Multiple	1.69x
Net IRR	24.9%

#### Top Ten Funds by Market Value

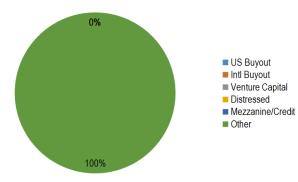
				Total			
				Commitment	Total Investment	Fair Market Value	Total Distribution
Fund	Туре	Vintage Year	% of Portfolio	(\$M)	(\$M)	(\$M)	(\$M)
Ascent Venture Partners IV-B, L.P.	Venture Capital		17.1%	\$16.9	\$16.4	\$25.5	\$1.0
Gridsmart Technologies, Inc.	Other		15.6%	\$3.3	\$3.3	\$23.2	\$0.0
Invision Diversified Holdings, LLC	Other		15.1%	\$12.2	\$12.2	\$22.5	\$0.0
Airdrie Partners I, L.P.	Other		10.3%	\$8.1	\$8.1	\$15.4	\$0.9
Arch Global Precision, LLC	Other		8.7%	\$6.7	\$6.3	\$13.0	\$0.1
Scribe Aggregator, LLC	Other		8.2%				
Capital Resource Partners V, L.P.	Mezzanine/Credit		6.0%	\$8.1	\$8.1	\$8.9	\$0.0
DCCP (FW) SPV Fund, L.P.	US Buyout		4.7%	\$12.8	\$7.2	\$7.0	\$0.3
Pangaea Two, L.P.	Other		4.3%	\$6.3	\$5.0	\$6.4	\$1.1
Exaltare Capital Partners Fund I, L.P.	US Buyout		4.2%	\$6.7	\$4.5	\$6.2	\$0.0

#### Annual Cash Flow Summary (\$M)

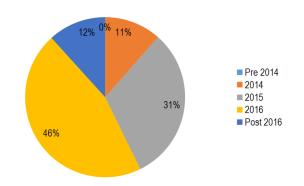


	Before 2013	2013	2014	2015	2016	2017	2018
Paid In Capital w/o Fees	\$0.0	\$0.0	\$10.7	\$27.0	\$26.3	\$12.0	\$22.7
Fees Paid	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Distribution	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$13.3	\$13.3
Cumulative	\$0.0	\$0.0	-\$10.7	-\$37.7	-\$64.0	-\$62.7	-\$72.1

Strategy Exposure



Vintage Year Exposure





# Characteristics

## Market Value: \$7.8 Million and 0.4% of Fund

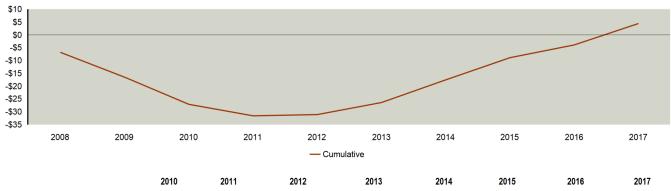
Characteristics	
	North Sky Capital
Total Size of Fund (\$M)	\$60.0
Total Capital Called to Date	\$43.1
% of Committed Capital Called	71.8%
Capital Distributed (\$M)	\$49.7
Capital Distributed (as a % of Capital Called)	115.3%
Client Commitment (\$M)	\$30.0
Client % Ownership of Fund	48.0%

Fund Vintage Year	2008
Total Underlying Commitments	\$65.0
# of Underlying Commitments	16
% of Capital Committed	108.45%
Fund NAV (\$M)	\$42.8
Net Multiple	1.88170273199071x
Net IRR	14.90%

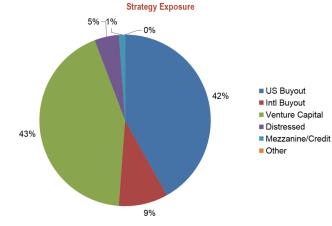
#### Top Ten Funds by Market Value

				Total			
Fund	Туре	Vintage Year	% of Portfolio	Commitment (\$M)	Total Investment (\$M)	Fair Market	Total Distribution (\$M)
i ullu	туре	viiitage Teal		. ,	(\$P(M))	Value (VIVI)	
Stone Arch Capital II	US Buyout	2008	11.7%	\$7.5	\$6.2	\$4.7	\$4.8
GGV Capital III	Venture Capital	2006	11.4%	\$8.0	\$7.9	\$4.6	\$15.1
IVP XII	Venture Capital	2007	11.4%	\$10.0	\$10.0	\$4.6	\$22.1
Clarus Ventures II	Venture Capital	2008	11.2%	\$5.0	\$4.8	\$4.5	\$5.0
DW Healthcare Partners III	US Buyout	2012	7.2%	\$4.0	\$3.3	\$2.9	\$2.4
CapStreet III	US Buyout	2010	7.1%	\$4.0	\$3.9	\$2.8	\$4.9
AEA Small Business Fund II	US Buyout	2010	6.8%	\$3.0	\$3.2	\$2.7	\$2.2
ABS Capital Partners VI	Venture Capital	2008	5.4%	\$5.0	\$4.9	\$2.1	\$2.2
Incline Equity III	US Buyout	2012	5.2%	\$4.0	\$3.9	\$2.1	\$4.1
REF IV	Intl' Buyout	2009	4.9%	\$3.2	\$3.4	\$2.0	\$3.1

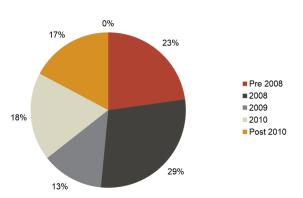
Annual Cash Flow Summary (\$M)



	2010	2011	2012	2013	2014	2015	2016	2017
Paid In Capital w/o Fees	-\$10.9	-\$6.7	-\$4.7	-\$1.8	-\$2.9	\$0.0	\$0.0	\$0.0
Fees Paid	-\$0.3	-\$0.3	-\$0.3	-\$0.3	-\$0.2	-\$0.2	-\$0.2	-\$0.1
Distribution	\$0.6	\$2.5	\$5.4	\$6.8	\$12.0	\$8.9	\$5.2	\$8.5
Cumulative	-\$27.1	-\$31.6	-\$31.1	-\$26.4	-\$17.5	-\$8.9	-\$3.9	\$4.4



Vintage Year Exposure





# Characteristics

## Market Value: \$37.4 Million and 1.7% of Fund

# As of December 31, 2017

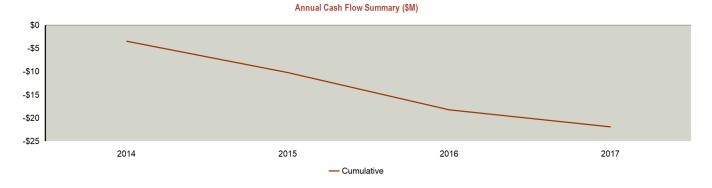
#### Characteristics

	North Sky Capital
Total Size of Fund (\$M)	\$50.9
Total Capital Called to Date	\$21.1
% of Committed Capital Called	41.5%
Capital Distributed (\$M)	\$0.0
Capital Distributed (as a % of Capital Called)	0.0%
Client Commitment (\$M)	\$40.0
Client % Ownership of Fund	78.7%

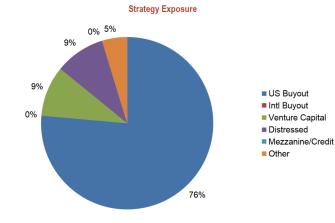
Fund Vintage Year	2014
Total Underlying Commitments	\$53.0
# of Underlying Commitments	11
% of Capital Committed	104.08%
Fund NAV (\$M)	\$22.9
Net Multiple	1.13084572290494x
Net IRR	4.28%

#### Top Ten Funds by Market Value

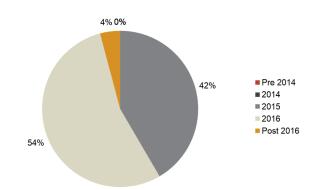
Fund	Туре	Vintage Year	% of Portfolio	Total Commitment (\$M)	Total Investment (\$M)	Fair Market Value (\$M)	Total Distribution (\$M)
Tower Arch I	US Buyout	2014	13.7%	\$6.5	\$3.0	\$3.5	\$0.5
Francisco Partners IV	US Buyout	2015	13.6%	\$4.0	\$2.8	\$3.4	\$0.0
Cressey & Company V	US Buyout	2015	13.5%	\$5.0	\$3.3	\$3.4	\$0.2
IVP XV	Venture Capital	2015	13.4%	\$5.0	\$3.6	\$3.4	\$0.3
Guardian II	US Buyout	2014	12.1%	\$6.5	\$3.1	\$3.1	\$0.0
PEP V Co-Invest	Other	2014	11.7%	\$2.5	\$2.5	\$3.0	\$0.3
CapStreet IV	US Buyout	2015	7.7%	\$5.0	\$1.7	\$2.0	\$0.1
AEA Small Business Fund III	US Buyout	2016	4.1%	\$3.5	\$1.2	\$1.1	\$0.0
Tritium I	US Buyout	2014	4.1%	\$2.0	\$0.9	\$1.0	\$0.0
Southfield II	US Buyout	2015	2.7%	\$3.0	\$0.6	\$0.7	\$0.0



	2014	2015	2016	2017
Paid In Capital w/o Fees	-\$3.3	-\$6.5	-\$7.8	-\$3.5
Fees Paid	-\$0.2	-\$0.3	-\$0.2	-\$0.2
Distribution	\$0.0	\$0.0	\$0.0	\$0.0
Cumulative	-\$3.5	-\$10.2	-\$18.3	-\$21.9



Vintage Year Exposure



\*Other:(freeform)

As of June 30, 2019

2019_Securities	l ending	Revenue
ZUID_OCUUIIIICS	Lonanig	<u>I (C V CIIUC</u>

Month	<b>v</b>	<u>CRS Earnings</u>
January		-\$8,776
February		-\$8,035
March		-\$7,127
April		-\$6,680
Мау		-\$7,597
June		-\$6,330
Total 2019 BNY Mellon YTD Secu	rities Lending Revenue	-\$44,546

M		
<u>Year</u>		<u>CRS</u> Earnings
2018		-\$29,442
2017		\$125,636
2016		\$351,379
2015		\$542,312
2014		\$562,374
2013		\$321,534
2012		\$277,849
2011		\$362,989
2010		\$340,835
2009		\$964,503
2008		\$2,365,591
2007		\$1,432,567
2006		\$983,293
2005		\$989,492
2004		\$1,513,575
2003		\$352,142
Total Securities Lend	ding Revenue (July 2003 - Present)	\$11,412,084

# Historic Securities Lending Revenue

# Update on Collateral Pool Deficiency

Realized loss from Lehman (CRS Share):	\$10,427,589
<sup>1</sup> Securities lending credit towards Lehman loss:	\$1,873,793
Remaining balance from Lehman loss:	\$8,553,796

<sup>1</sup> Beginning in March 2013, all securities lending revenue is being directed to the CRS collateral account to pay down the realized loss from Lehman.

**Total Fund Composite** 

#### Fee Schedule

Market Value: \$2,228.0 Million and 100.0% of Fund

Asset Class	Expense Ratio & Estimated Annual Fee <sup>1</sup>	Industry Average <sup>2</sup>
Fixed Income	0.44% \$1,731,642	0.37%
US Equity	0.03% \$174,340	0.21%
Non-US Equity	0.34% \$1,714,940	0.67%
Hedge Funds/Risk Parity	0.38% \$445,377	0.83%
Real Estate	1.03% \$2,375,868	1.01%
Infrastructure	1.75% \$2,748,312	1.49%
Private Equity	0.95% \$1,674,416	1.22%
Total	0.49% \$10,864,895	0.81%

<sup>1</sup> Expense Ratio & Estimated Annual Fee are Based on Market Value at Quarter End.

<sup>2</sup> Source: Marquette Associates Investment Management Fee Study.





#### Fee Schedule

#### Market Value: \$2,228.0 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee <sup>1</sup>	Industry Average <sup>2</sup>
Unconstrained Fixed Income	BlackRock Strategic Income Opps	0.55% on the balance	0.55% \$864,163	0.29%
Core Plus Fixed Income	Loomis Sayles Core-Plus	0.30% on the first \$100 million 0.25% on the next \$100 million 0.20% on the next \$200 million 0.15% on the balance	0.28% \$450,974	0.28%
High Yield Fixed Income	Shenkman - Four Points	0.55% on the balance	0.55% \$416,504	0.72%
Large-Cap Value Large-Cap Growth Mid-Cap Core Small-Cap Value Int'l Developed Large Cap Core	Northern Trust	0.02% on the balance	0.02% \$152,936	0.10%
Mid-Cap Value	Vanguard Mid Cap Value	0.070% on the balance	0.07% \$66,348	0.65%
Non-U.S. Small-Cap Value	DFA International Small Value	0.71% on the balance	0.71% \$715,423	1.08%
Emerging Markets	DFA Emerging Markets Value	0.37% on the balance	0.37% \$195,872	1.27%
Emerging Markets	DFA Emerging Markets Core	0.53% on the balance	0.53% \$275,414	0.90%
EM Small-Cap	DFA Emerging Markets Small Cap	0.72% on the balance	0.72% \$483,286	1.27%
Risk Parity	AQR Risk Parity	0.38% on the balance	0.38% \$445,377	0.83%
Core Real Estate	J.P. Morgan SPF	1.00% on the balance	1.00% \$728,657	1.01%
Core Real Estate	Morgan Stanley P.P.	0.90% on the balance Incentive Fee: 5%*NAV*(Return-NCREIF)	0.90% \$604,813	1.01%
Value-Added Real Estate	PRISA III	1.10% on assets 0.10% on cash balance 0.40% on distributions All expenses capped at 2.0%	1.10% \$430,261	1.01%
Value-Added Real Estate	Principal Enhanced	1.20% on the balance 15% performance fee on returns > 11%	1.20% \$568,842	1.01%
Non-U.S. Core Real Estate	Mesirow/Courtland I	1.00% on the balance (Following seventh anniversary, fee drops to 90% of prior years fee). (8% preferred internal rate of return to investor) 5% carry with 100% catch up provision	1.00% \$43,295	1.01%
Core Infrastructure	Alinda Fund II	1.50% on committed assets (20% incentive over 8% preferred return)	3.31% \$975,000	4.41%

#### Total Fund Composite

#### Fee Schedule

Market Value: \$2,228.0 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee <sup>1</sup>	Industry Average <sup>2</sup>
Core Infrastructure	Macquarie Fund II	1.50% on committed assets (20% incentive over 8% preferred return)	2.94% \$975,000	3.92%
Core Infrastructure	J.P. Morgan Infrastructure	1.00% on the first \$100 million 0.90% on the next \$200 million 0.80% on the balance	1.00% \$312,552	1.41%
Global Infrastructure	IFM Global Infrastructure (U.S)	0.77% on the Balance	0.77% \$485,760	2.00%
Venture Private Equity	Blue Chip Fund IV	\$100,000 annual fee for administrative expenses Plus 20% of profits after all capital returned	7.01% \$100,000	1.25%
Divers. Private Equity	Fort Washington Fund V	0.40% on committed assets (5% incentive over 8% return)	0.90% \$160,000	2.81%
Divers. Private Equity	Fort Washington Fund VI	0.40% on committed assets (5% incentive over 8% return)	0.91% \$120,000	2.84%
Divers. Private Equity	Fort Washington Fund VIII	0.20% on committed assets Yr 1 0.30% on committed assets Yr 2 0.40% on committed assets Yrs 3-8	0.53% \$200,000	1.65%
Divers. Private Equity	Fort Washington Fund IX	0.09% on committed assets Yr 1 0.18% on committed assets Yr 2 0.27% on committed assets Yr 3 0.36% on committed assets Yrs 4-10	0.71% \$135,000	3.27%
Divers. Private Equity	Fort Washington Fund X	0.15% on committed assets Yr 1 0.30% on committed assets Yr 2 0.45% on committed assets Yr 3 0.60% on committed assets Yrs 4-10	1.50% \$60,000	12.50%
Secondary Private Equity FoF	Fort Washington Opp Fund III	0.75% on committed assets (15% incentive over 8% preferred return)	1.30% \$225,000	2.17%
LBO Private Equity	North Sky Fund III - LBO	0.45% on committed assets (5% incentive over 8% return)	1.72% \$135,000	4.77%
Venture Private Equity	North Sky Fund III - VC	0.45% on committed assets (5% incentive over 8% return)	1.47% \$45,000	4.09%
LBO Private Equity	North Sky Fund IV - LBO	0.45% on committed assets (5% incentive over 8% return)	0.86% \$67,500	2.40%
Venture Private Equity	North Sky Fund IV - VC	0.45% on committed assets (5% incentive over 8% return)	2.95% \$67,500	8.20%
Divers. Private Equity	North Sky Fund V	0.65% on committed assets Yrs 1-3 0.55% on committed assets Yrs 4-6 0.45% on committed assets Yrs 7-9 0.35% on committed assets thereafter	0.59% \$220,000	1.34%
Mezz./Special Sit. Private Equity FoF	Portfolio Advisors IV - Special Sit	0.375% on committed assets Yrs 1-3 0.30% on committed assets Yrs 4-5 0.30% on invested capital thereafter (5% incentive over 8% preferred return)	0.30% \$9,918	1.25%
Mezz./Special Sit. Private Equity FoF	Portfolio Advisors V - Special Sit	0.375% on committed assets Yrs 1-3 0.30% on committed assets Yrs 4-5 0.30% on invested capital thereafter (5% incentive over 8% preferred return)	0.30% \$5,499	1.25%
Global Divers. Private Equity FoF	JP Morgan Global Private Equity VIII	0.31% on committed capital (est.) Performance Fee (Hurdle Rate 8%): Primary: 5% Secondary: 10% Direct: 15%	4.43% \$124,000	17.87%
Total Investment Management Fees			0.49% \$10,864,895	0.81%

Marquette Associates



July 26, 2019

#### **Cincinnati Retirement**

Pension

Asset Allocation Study

Client Name	Cincinnati Retirement
Plan Type	Pension
Number of Runs Evaluated	1000
Holding Period	120 Months
Most Recent Data Inputs	March 31, 2019
Market Value of Assets	\$2,227,975,124
Return Target	7.50%

#### **Description of Software**

Our asset allocation studies evaluate potential client portfolios under a variety of macroeconomic environments, which directly impact the performance of asset classes. The studies are built to analyze often overlooked – but critical – features of portfolio construction, including liquidity, rebalancing, and net cash flow. We offer customized reports and analytics to evaluate circumstances unique to each plan, such as spending policies for endowments and funding ratios for pension funds. More generally, our asset allocation studies offer a comprehensive and rigorous analysis that will formulate the most effective portfolios to achieve client goals. Specifically, the following initiatives are included in our asset allocation studies:

- Identify and quantify sources of risk, beyond the use of standard deviation as the sole risk metric
- Establish a forward looking methodology that is not anchored by pre-determined expected returns, standard deviations and correlations
- Recognize the illiquid nature of alternative asset classes, along with the liquidity needs of each client
- Incorporate the client's return goals, liabilities, and cash flows
- Allow for portfolio re-balancing to keep asset allocations within target ranges
- Allow for non-normal return patterns
- Reflect current economic conditions in the analysis.

Our software is based on a Monte Carlo simulation of macroeconomic factors, which are used to model monthly return outcomes of capital markets. The simulations are created by a powerful economic scenario generator ("ESG"), which is the driving force behind our asset allocation model. The economic scenario generator simulates the future performance of the capital markets and macro-economy; the underlying models are calibrated based on the long-term historical record, so that they will reproduce the kinds of volatility and stress scenarios that have been observed over the 20th and 21st centuries. The models are linked and correlated so that the behavior of different asset classes and economic variables is consistent within each random scenario.

Portfolio performance over the course of the study reflects projected net cash flows-using actual benefit payments and contributions / historical cash flows-as well as overall portfolio composition, rebalancing rules, and beginning market value. When coupled with the simulated returns, these inputs provide the monthly market value of all asset classes for each proposed portfolio and of the total fund. We also calculate average annualized returns and standard deviations for each portfolio. These statistics allow us to calculate risk adjusted returns that figure heavily into determining the recommended portfolio.

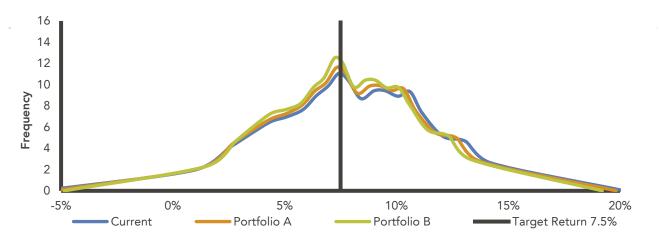
#### **Executive Summary**

#### **Portfolio Options**

Asset Class	Current	Portfolio A	Portfolio B
Core Plus	7.0%	10.0%	13.0%
Global Aggregate	7.0%	7.0%	7.0%
Opportunistic Credit	3.0%	3.0%	3.0%
Total Fixed Income	17.0%	20.0%	23.0%
US Large-Cap Value	7.0%	6.8%	6.3%
US Large-Cap Growth	5.0%	4.6%	4.2%
US Mid-Cap Core	4.0%	3.8%	3.5%
US Mid-Cap Value	4.0%	3.8%	3.5%
US Small-Cap Value	7.5%	7.0%	6.5%
Total U.S. Equity	27.5%	26.0%	24.0%
Developed Large-Cap	10.0%	9.3%	8.7%
Non-US Small-Cap	5.0%	4.7%	4.5%
Emerging Market	5.0%	4.7%	4.5%
Emerging Market Small-Cap	3.0%	2.8%	2.8%
Total Non-U.S. Equity	23.0%	21.5%	20.5%
Hedge Fund - Global Macro	5.0%	5.0%	5.0%
Total Hedge Funds	5.0%	5.0%	5.0%
Real Estate - Core	10.0%	10.0%	10.0%
Total Real Assets	10.0%	10.0%	10.0%
Global Infrastructure	7.5%	7.5%	7.5%
Private Equity - Fund of Funds	10.0%	10.0%	10.0%
Total Illiquid Assets	17.5%	17.5%	17.5%

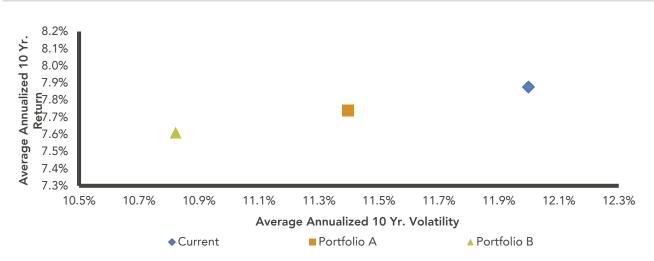
#### **Summary of Portfolio Characteristics**

	Current	Portfolio A	Portfolio B
Avg. Annualized 10 Yr. Return	7.88%	7.74%	7.61%
Avg. Annualized 10 Yr. Volatility	12.00%	11.40%	10.82%
Avg. Return/Avg. Volatility	0.66	0.68	0.70





#### Average Annualized 10 Yr. Return/Volatility







#### Summary of Downside Risk

Percentile	Current	Portfolio A	Portfolio B
Downside Probability (7.5%)	45.3%	46.5%	48.4%
Downside Risk (7.5%)	3.2%	3.1%	2.9%
Downside Probability (0%)	2.5%	2.3%	2.0%
Downside Risk (0%)	1.9%	1.6%	1.5%

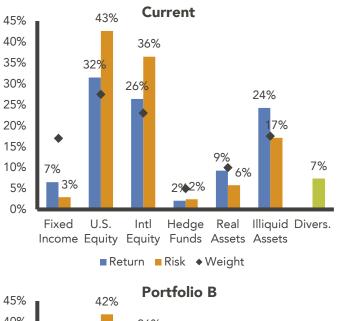
#### **Distribution of Average Annualized 10 Year Returns**

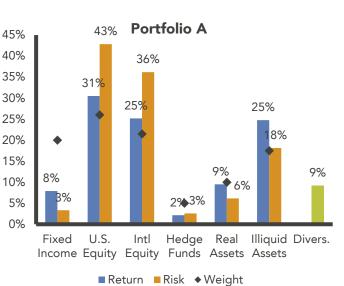
Percentile	Current	Portfolio A	Portfolio B
Average (Mean)	7.9%	7.7%	7.6%
5%	1.0%	1.3%	1.5%
25%	5.1%	5.1%	5.1%
50%	7.9%	7.7%	7.6%
75%	10.6%	10.3%	10.1%
95%	14.2%	13.8%	13.3%

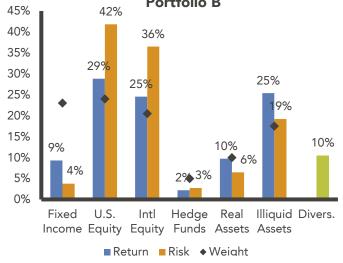


#### Portfolio Risk and Return Decomposition by Asset Class

The charts below illustrate the contribution of each asset class to a portfolio's total risk and return, as well as the benefit of diversification to each portfolio's risk.







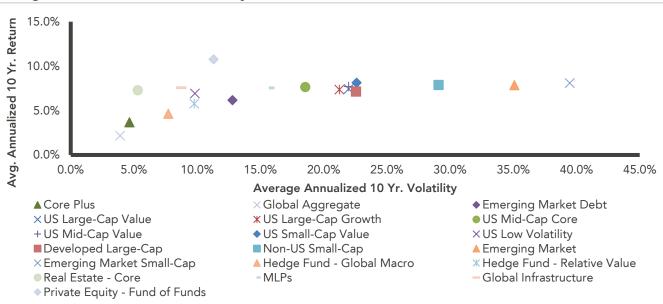


#### Simulated Asset Class Characteristics

The results of the simulated capital market returns are shown below. It is important to note that these values represent output from the software simulations, and not deterministic views of future capital market performance. The first column is the average annualized 10 year return of all the simulations, and the second column is the average annualized 10 year volatility. The last five columns indicate the annualized 10 year return for the 5th, 25th, 50th, 75th, and 95th percentile; the higher the percentiles, the better the performance.

	Average	10 Year	10 Year Annualized Returns						
Asset Class	Annualized Return	Annualized Volatility	5th Percentile	25th Percentile	50th Percentile	75th Percentile	95th Percentile		
Core Plus	3.7%	4.6%	2.7%	3.3%	3.5%	3.9%	5.3%		
Global Aggregate	2.2%	3.9%	0.2%	1.4%	2.2%	2.9%	4.2%		
Emerging Market Debt	6.2%	12.8%	-0.7%	3.3%	6.1%	9.1%	13.4%		
US Large-Cap Value	7.4%	22.0%	-4.8%	2.6%	7.5%	12.6%	18.3%		
US Large-Cap Growth	7.3%	21.3%	-4.5%	2.6%	7.4%	12.4%	17.8%		
US Mid-Cap Core	7.6%	18.6%	-2.7%	3.5%	7.9%	12.0%	17.1%		
US Mid-Cap Value	7.7%	22.0%	-4.4%	3.1%	7.8%	12.6%	19.2%		
US Small-Cap Value	8.1%	22.6%	-4.4%	3.4%	8.4%	13.0%	19.4%		
US Low Volatility	6.9%	9.8%	1.6%	4.7%	7.0%	9.2%	11.7%		
Developed Large-Cap	7.1%	22.6%	-4.0%	2.2%	7.3%	12.1%	19.5%		
Non-US Small-Cap	7.9%	29.1%	-7.0%	1.5%	7.9%	13.5%	24.3%		
Emerging Market	7.9%	35.1%	-10.3%	-0.6%	7.8%	15.0%	28.6%		
Emerging Market Small-Cap	8.1%	39.5%	-10.9%	-1.0%	7.9%	16.2%	30.4%		
Hedge Fund - Global Macro	4.6%	7.7%	-0.3%	2.0%	3.8%	6.3%	12.4%		
Hedge Fund - Relative Value	5.8%	9.8%	-0.2%	3.3%	5.7%	8.1%	11.6%		
Real Estate - Core	7.3%	5.3%	3.7%	5.8%	7.2%	8.8%	10.9%		
MLPs	7.5%	15.7%	-1.2%	4.1%	7.5%	11.1%	16.5%		
Global Infrastructure	7.6%	8.7%	2.9%	5.6%	7.5%	9.6%	12.5%		
Private Equity - Fund of Funds	10.7%	11.3%	4.7%	8.3%	11.0%	13.2%	16.3%		

Average Annualized 10 Yr. Return/Volatility







August 2019

## **Private Equity Funding Review**

Presented by

Brett Christenson, CFA, CFP® Managing Director

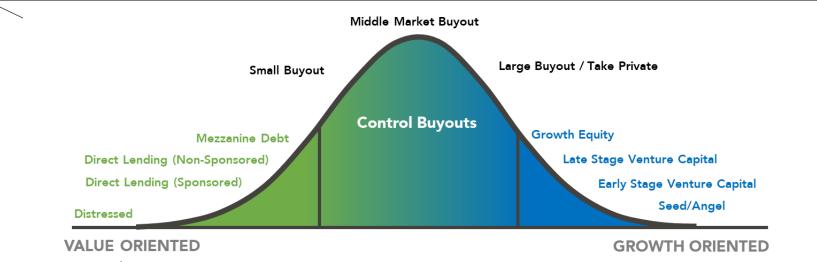
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# Private Equity OVERVIEW

### **Private equity introduction**

- Private equity encompasses any privately held debt or equity investment
- The global private equity industry currently manages over \$2.9 trillion in assets, as the industry has doubled in size over the past decade
- Strong investor demand for private equity has led to a steadily growing level of dry powder, which now exceeds \$1.0 trillion
- Private equity is broken down into four main investment categories:
  - Venture Capital
  - Growth Equity
  - Buyout
  - Private Debt / Mezzanine
  - Distressed

### Private equity market segmentation



Sub Cate	gory	Expected Return	Financing	Duration of Investment	Relative Risk	Stage	Success Rate	Ownership Stake
Venture Capital		20%+	100% Equity	5 years +	High	Early	Low	Less than 50%
Growth Equity		15% - 20%	100% Equity	3-5 years +	Medium- High	Early Growth	Medium	Less than 50%
Buyout		13% – 20%	100% Equity	3–5 years +	Medium	Mature	Medium	More than 50%
Private D / Mezz	Debt	7% – 15%	100% Debt	1–5 years +	Low	Mature	High	None
Distresse		Varies	Varies	1–5 years +	Low - Medium	Mature – Declining	Medium	0 – 100%

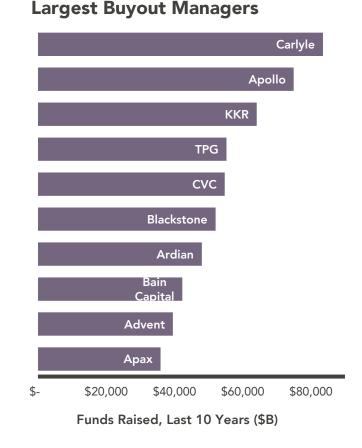
Source: Marquette Associates. This table represents Marquette's best estimate of typical returns, risk, duration, and investment style of each investment category.

### **Venture Capital**

- Seed/Angel Usually the first outside capital raised by an entrepreneur in order to launch a company, develop a concept, or build prototypes prior to entering the market
- Early Stage Capital provided to setup or expand the production, marketing, and/or distribution network of a company that is often generating revenues but typically unprofitable
- Late Stage Expansion capital provided to a company that has proven a sustainable concept by generating a significant level of revenue but may or may not be profitable. Capital may be considered bridge financing for a business near the point of "going public" through an IPO
- Growth Capital provided to accelerate the growth of a company with little or no debt

#### **Buyout**

- Buyouts feature a private equity firm taking a controlling position in a company with management often contributing some capital and maintaining a minority stake
- Buyouts typically target mature companies that are profitable and generate substantial free cash flow
- The private equity firm will often make substantial changes to the management team, capital structure, and strategic direction
- In a buyout, the private equity firm frequently takes an aggressive capital structure with leverage used to magnify returns



Source: Preqin. Largest buyout firms globally by funds raised over the last decade as of December 31, 2017.



### **Private Debt / Mezz**

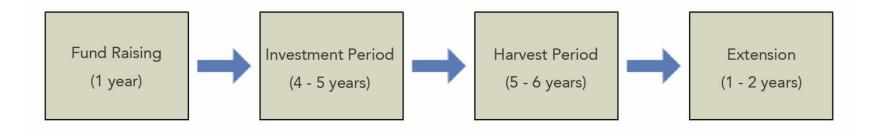
- Mezzanine financing provides debt capital to companies and is the most junior piece of debt in the capital structure
- Mezzanine debt often yields anywhere from 10-15% and commonly includes an upfront fee of 2-3% of the loan value as well as potential equity participation
- Most mezzanine debt has a five year duration and is not callable for the first two or three years
- Direct Lending can be either "sponsored" when lending capital to a business being acquired by a private equity firm or "nonsponsored" when lending capital to privately owned businesses without private equity ownership

### Distressed

- Distressed debt investments target more senior pieces of debt in distressed companies
- Distressed debt investments can generate returns in two ways:
  - Appreciation Distressed debt is purchased below par value and as the financial situation improves the investor is paid back at par value
  - Bankruptcy Recovery In a Chapter 11 reorganization control of the company is transferred to the debt holders or in a Chapter 7 liquidation the company's assets are sold and the proceeds are transferred to the debt holders

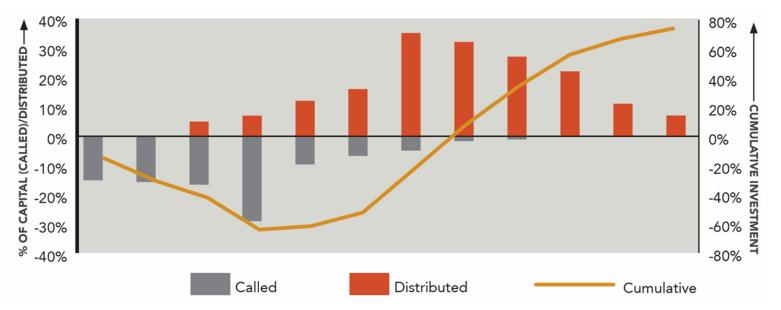
### Private equity fund lifecycle

- After fundraising concludes, investments are made for a four to five year period, followed by a five to six year period to grow and sell the portfolio companies
- Capital is called from investors as investments and fees are generated by the fund
- Private equity funds on average have a defined life of ten years for a direct fund and twelve years for a fund-of-funds
- Funds commonly include annual extension options of 1-3 years



### Investment cash flows and j-curve

- Committed capital is called from investors as investments are completed and as fees are generated
- Management fees are often calculated on committed capital not invested capital
- Capital is invested by a private equity fund over time producing large cash initial fund outflows
- Fees and slow deployment of capital often generates a negative return during the early years of a fund with positive returns in the later years as investments mature and exit, forming a "j-curve"



This chart shows the amount of capital called and distributed each year on the left axis and shows the investor's total invested capital, as a percentage of committed capital, in each year on the right axis. Private equity funds typically have large capital calls in the early years of the fund's life and then make large distributions towards the end of the fund's life as portfolio companies are sold. In this example we show a fund with a 1.75x multiple, a 14% IRR, and two one-year extensions.

### **Competitive advantage of private equity**

- The persistently higher returns in private equity compared to other asset classes is primarily due to:
  - Control Majority ownership allows for a greater ability to affect positive operational improvements in the underlying firm by leveraging the experience, sector knowledge, and network of a private equity firm
  - Alignment of interest The relationship between the owners of a company and senior management ensures management maintains a large stake in the company
  - Long-term horizon Deals tend to be large and infrequent allowing for a high level of due diligence, often leading to better price discovery over the longer term

### **Historical performance**

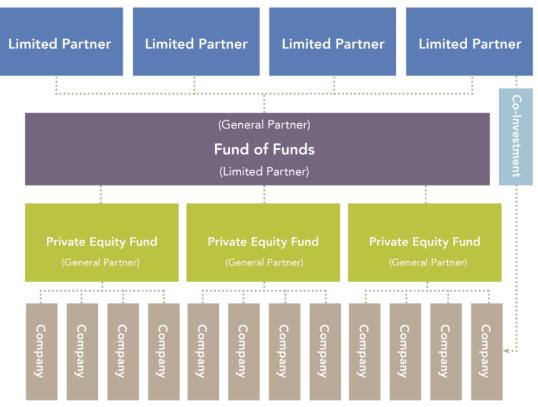
- Private equity's historical outperformance of public asset classes can be attributed to four main characteristics of private equity investments:
  - The significant resources, knowledge, and capital brought to a private business provides a catalyst to improve the growth and profitability
  - The long-term focus and structure of private equity investment aligns the interest of management and investors and allows for more strategic deployment of capital
  - Expanded flexibility in structuring deals provides excellent risk/reward characteristics
  - Substantial leverage used to enhance investment returns

### **Benefits of fund-of-funds**

- Access Investors are provided exposure to difficult-to-access funds from some of the best performing managers due to the consistent capital these managers provide and their deep relationships in the market
- Portfolio Construction Portfolios are constructed by experienced managers who actively manage and diversify exposures across investment strategies, managers, geographies, sectors, fund sizes, and vintage years
- Administration Significantly less due diligence efforts, legal fees, and administrative time required to manage a larger number of capital calls and distributions
- Investment Terms Investors benefit from the negotiating power of a larger investment into a fund which can provide beneficial fees and terms that can enhance investment returns
- Co-Investments / Secondary Investments Investors benefit from the manager's underwriting experience and ongoing monitoring of opportunities in the market to purchase attractive assets that help to mitigate the j-curve and can enhance investment returns

### Private equity fund-of-funds legal structure

• With private equity fund-of-funds, the investors are still the limited partners but the fund-of-funds is the general partner



### **Risks of private equity**

- Private equity carries substantial risk for investors, including:
  - Investment risks Private equity is riskier public market investments because target firms tend to be smaller, capital structures are more aggressively leveraged, regulatory oversight is weaker, and funds tend to be highly concentrated.
  - Illiquidity Private equity investments are illiquid, and after an investor makes a commitment they have little to no control over the size and timing of future cash flows.
  - High fees Private equity investments tend to have high fees due to the extensive amount of work that goes into each transaction. Because fees are charged on committed capital, there is substantial performance risk for funds that are slow to invest capital.
  - Subjective performance calculations Over the life of the fund, managers have substantial control over the interim portfolio valuation because investments are not listed on public exchanges.
  - Manager selection There is a large dispersion in returns between the top and bottom quartiles of funds.

## Private Equity Market Environment

### **Private equity: Outperformance continues**

#### Private equity significantly outperformed public markets in 2018

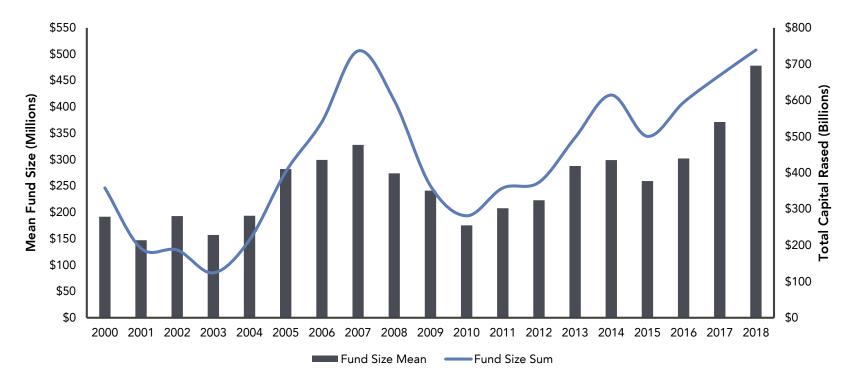
	QTR (%)	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)	15 Year (%)	20 Year (%)
Cambridge Associates U.S. PE Index	-1.7	10.7	14.1	11.8	14.3	13.4	12.0
Global Buyout and Growth Equity Index	-0.8	10.0	14.5	12.2	14.3	13.6	12.4
Ex-U.S. Developed PE and VC Index	-1.4	8.3	15.8	10.5	12.3	13.3	13.3
Cambridge Associates VC Index	1.7	18.1	9.5	12.9	12.8	10.7	21.4
U.S. VC Early Stage Index	2.3	19.2	10.2	14.2	13.6	10.7	nm
U.S. VC Late & Expansion Stage Index	2.6	21.0	10.1	9.6	13.2	11.3	9.2
NASDAQ Composite Index	-17.5	-3.9	9.8	9.7	15.5	8.3	5.7
Russell 1000 Index	-13.8	-4.8	9.1	8.2	13.3	7.9	5.9
Russell 2000 Index	-20.2	-11.0	7.4	4.4	12.0	7.5	7.4
S&P 500 Index	-13.5	-4.4	9.3	8.5	13.1	7.8	5.6
Wilshire 5000 Total Market Index	-14.3	-5.3	9.1	8.1	13.2	8.0	6.1

Source: Cambridge Associates as of December 31, 2018



### **Fundraising remains robust**

Global private equity annual fundraising and average fund size

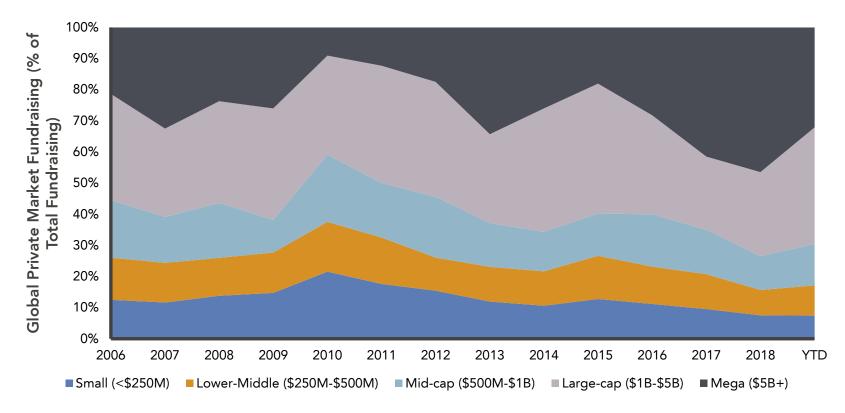


Source: Pitchbook as of December 31, 2018



### Large funds continue to dominate fundraising

Nearly 80% of private equity commitments are allocated to historically successful managers raising large and mega funds

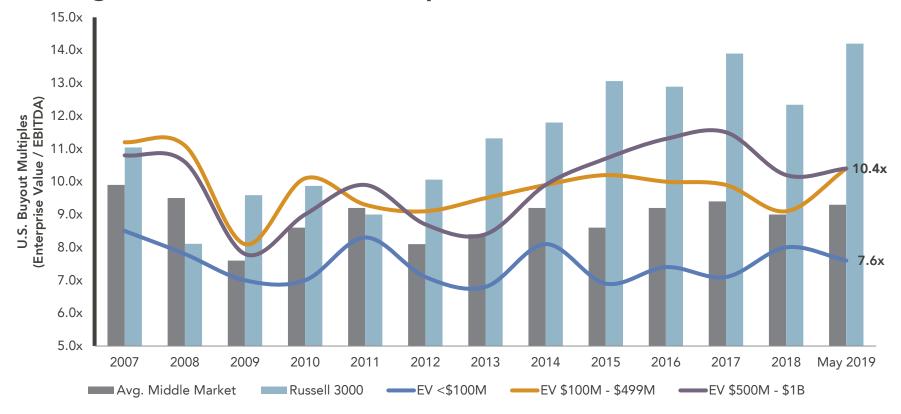


Source: Pitchbook as of July 2019



#### Private equity provides relative value opportunity

Average middle market U.S. buyout transaction multiples remain at a significant discount relative to public market valuations



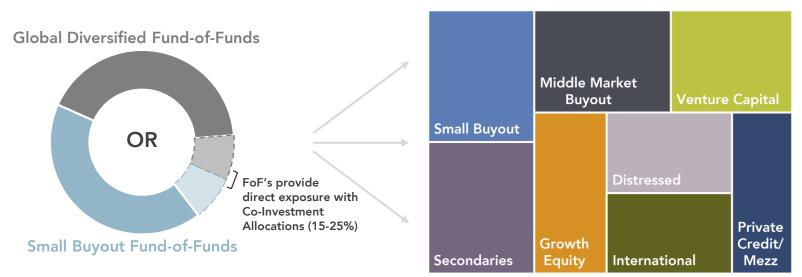
Source: Bloomberg; Robert W. Baird Global M&A Monthly Report





### Customized private equity program

#### Core Managers (50-70%)



**Tactical Satellites** (30-50%)

- Fund-of-Funds provide a quality core position as they offer diversification and access and highquality managers
- Program's tactical allocations should complement core and be selected strategically to take advantage of current investment environment
- 20-40% of overall program should be allocated to primary funds or co-investments to increase overall return and lower program cost
- Program goal is to evenly deploy capital into the asset class on an annual basis

#### Private equity investments are unique

Each private equity program and investment requires monitoring as funds have unique investment term structures. The goal of a well-constructed private equity program is to have a consistent amount of capital called each year to minimize vintage year risk.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8		
Annual Fund-of-Funds									L	EGEND
(2 year commitment period)	С	с							~	Annual
Manager 1	\$	\$	\$	\$	\$				С	Commitment by Fund
Manager 2		\$	\$	\$	\$	\$				Annual
Fund-of-Funds									\$	Investment Into Companies
(4 year commitment period)	С	С	С	С						
Year 1 Managers Invest	\$	\$	\$	\$	\$					
Year 2 Managers Invest		\$	\$	\$	\$	\$				
Year 3 Managers Invest			\$	\$	\$	\$	\$			
Year 4 Managers Invest				\$	\$	\$	\$	\$		
Secondary Fund	С									
(5 year investment period)	\$	\$	\$	\$	\$					
Primary Fund	С	•								
(5 year investment period)	\$	\$	\$	\$	\$					
Cumulative Annual Investment	\$ =	: \$ =	= \$ =	= \$ =	: \$ =	= \$ =	= \$ =	= \$		

### Manager selection

The key factors to consider in manager selection include:

- Investment Performance Historical performance of previous funds is important to evaluate due to the strong persistence of returns in private equity due to the considerable skill, industry knowledge, and network that can be beneficial to a private business.
- Investment Team A consistent and experienced team should be in place capable of deploying the size of the current fund. It is preferred that resources are added to the team prior to raising larger funds.
- Alignment of Interests All General Partners should commit a material amount of capital to their fund with incentive fees heavily allocated to the investment team responsible for the fund. It is preferred that this capital is sourced primarily from the investment team. Additional fund terms should further support alignment, including limitations on raising future funds prior to a significant level of capital in the current fund has been deployed.
- Deal Flow It is important to generate a significant and consistent level of deal flow in order to execute on attractive investments. It is preferable to have a sourcing advantage that differentiates a manager's capital and attracts proprietary deals which tend to generate better returns.

### Performance measurement

- Internal Rate of Return (IRR) The annualized effective compounded return provided to investors in the fund calculated by determining the discount rate that sets the net present value of all cash distributions from the fund equal to the cash invested
  - IRR considers the time-value of money and is useful in measuring and comparing the relative performance of different investments
  - Strategies that quickly return capital to investors tend to generate attractive IRRs, but often low multiples
- Public Market Equivalent (PME) The timing and size of cash investments into a private equity fund is matched and converted to an equal purchase of a public index in order to generate a directly comparable IRR for evaluating relative performance
  - Performance metric has mathematical issues with either a strong performing private equity funds with large distributions or in a declining public market where returns are negative
- Return Multiple Total Value of Paid-In Capital (TVPI) multiple is a cash-on-cash return multiple which is unaffected by the timing of cash flows and is calculated using the total cash returned to LPs divided by the total cash called by the GP
  - Private equity strategies with long time horizons tend to generate high multiples but lower IRRs
- Investors should consider all three metrics when evaluating absolute and relative investment performance by vintage year



- Management Fees Typically 2% of committed capital for direct funds and 0.50% – 1.00% for fund-of-funds
- Performance Fees Typically 20% of profits ("carried interest") after an 8% preferred return ("hurdle rate") is achieved for investors in a direct fund and 5% of profits after an 8% hurdle rate is achieved for investors in a fund-of-funds