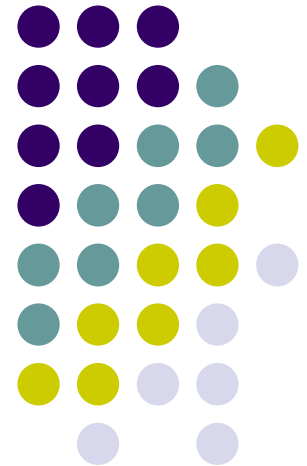


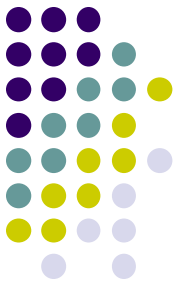
# Pieper Challenge Grant and Match Program 2018 Annual Report

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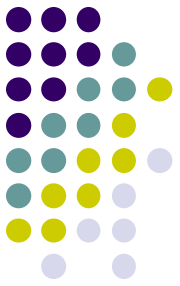
Prepared by Marquette University – College of Business Administration

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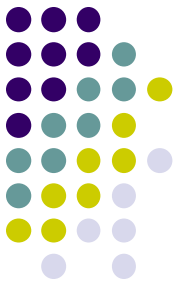
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# Grantee Summary



- The Pieper Family Foundation has created the Challenge Grant and Match program to stimulate the trustees of not-for-profits to sharpen their investment policy and oversight. The objective of these grants is growth of capital and the expectation is that investment results will fall within the upper quartile of diversified U.S. equity funds' returns over time.
- Pieper Fund returns are provided by each Grantee. The Grantees also provide a description of how their Pieper Fund is invested and the current investment policy. Morningstar data is used to evaluate performance. The Challenge Grant and Match program completed the transition from Lipper data in 2014. Morningstar is widely accepted in the investment industry.
- In addition to comparing performance to large groups of peers, results are compared to the Greater Milwaukee Foundation – Investment Pool, the in-house managed Pool for a large local foundation.
- Ten Grantees reported on their Pieper Challenge & Match results for 2018. Grantees reported results in a range of -3.7% to -12.2% compared to -5.2% for the Vanguard Total Stock Market Index.
- During the last 10 years, six Grantees earned returns that met or exceeded the return of the Greater Milwaukee Foundation – Investment Pool.
- Over the decade all of the Grantees have sharpened their investment policy focus and oversight. Like most investors, over half of the Grantees have experienced missteps during their participation in the Pieper Challenge (primarily early on in their tenure). Corrections by the Grantees have produced fruit, in the form of higher and more stable returns.

# Performance Summary



- All ten Grantee funds had a negative return in 2018. The Vanguard Total Stock Market Index Fund lost 5.2% for the year. Two of the ten Grantees performed as well as or better than the Vanguard Total Stock Market Index.
- The highest return for 2018 was -3.7%, achieved by Grantee Seven. The lowest return for 2018 was -12.2% achieved by Grantee Five.
- Two Grantees' five-year performance was in the top quartile versus the Morningstar Aggressive Allocation comparison group. Grantee Nine had the highest five-year average return (+7.9%/year). Grantee Two (+5.5%/year) also had a first quartile ranking over the five year period.
- Grantee performance since inception is summarized on the next page. We are interested in Grantees' change in relative performance over time. In other words, have Grantees learned lessons from participating in the Challenge Grant Program that they have implemented to improve performance over time?

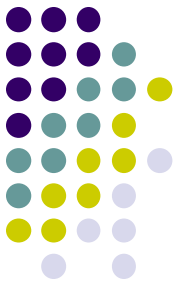
# Grantee Fund Performance Since Inception



Grantee	Return /year since inception	Inception	Quartile/ Inception	Progress
1	4.4%	1999	1	Improved
2	8.5%	1997	1	Consistent
3	2.3%	1999	4	Worsened
4	4.8%	1999	1	Improved
5	2.5%	1999	4	Worsened
6	2.9%	2000	3	Consistent
7	4.9%	2000	3	Consistent
8	4.0%	2002	4	Consistent
9	7.6%	2003	1	Improved
10	5.2%	2002	3	Improved

- Endnotes:
  - Full calendar year performance for each Grantee is presented and analyzed in this report.
  - Grantee One – performance in 1999 and 2000 is a simple average of two managers during a transition in management.
  - Grantee Four – inception date is 3/31/1999.
  - Grantee Six – inception date is 11/20/2000.
  - Grantee Seven – inception date is 9/1/2000.
  - Grantee Eight – inception date is 1/1/2002.
  - Grantee Nine – inception date is 11/1/2003.
  - Grantee Ten – inception date is 9/31/2002.

# Value creation over time



- The Pieper Challenge Grant and Match program allows for half of the annual gain to be withdrawn for spending by the Grantee and half to be added back to the principal of the portfolio.
- A summary of what \$1 at inception has grown to for each Grantee:

Grantee	Inception	Available for spending	Currently in portfolio	Total
1	1999	\$0.63	\$1.54	\$2.17
2	1997	\$1.17	\$2.38	\$3.55
3	1999	\$0.32	\$1.19	\$1.51
4	1999	\$0.65	\$1.62	\$2.27
5	1999	\$0.43	\$1.14	\$1.57
6	2000	\$0.34	\$1.26	\$1.60
7	2000	\$0.50	\$1.45	\$1.95
8	2002	\$0.47	\$1.31	\$1.78
9	2003	\$0.77	\$1.90	\$2.67
10	2002	\$0.46	\$1.38	\$1.84



# Evaluation Method

- Performance of each total Pieper Challenge and Match Fund is compared:
  - among the Grantees
  - versus the Vanguard Total US Stock Market Index Fund, as a tool for evaluation against all publicly traded U.S. stocks
  - against the Consumer Price Index +5% to consider growth of purchasing power plus a market risk premium.
  - against the Morningstar Aggressive Allocation composite, a widely-used benchmark for diversified, growth-oriented portfolios.
- Each individual fund is compared with its respective industry peer group. Up through 2012, this peer group was calculated by Lipper. Starting in 2013, we use the Morningstar peer group.

Grantee	2018 Return	Investment Policy	
	(%)	Stocks (%)	Bonds (%)
1	-10.9	80	20
2	-7.8	100	0
3	-10.0	93	7
4	-6.1	77	23
5	-12.2	100	0
6	-7.2	70	30
7	-3.7	84	16
8	-12.0	95	5
9	-5.2	100	0
10	-6.6	100	0
<b>Vanguard Total Stock Mkt Index</b>	<b>-5.2</b>		
<b>Greater Milwaukee Fdn – Inv Pool</b>	<b>-4.5</b>		
<b>Morningstar Aggressive Allocation</b>	<b>-8.2</b>		

# Grantee Fund Performance Summary Table



<b>Investment Performance</b>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Grantee One</b>	32.9	18.5	-2.6	14.8	24.4	6.8	-1.4	9.6	18.1	-10.9
<b>Grantee Two</b>	36.3	17.8	-3.3	15.4	28.8	5.9	-1.7	12.1	21.2	-7.8
<b>Grantee Three</b>	14.3	9.8	2.2	11.0	8.5	5.5	-1.5	4.3	13.0	-10.0
<b>Grantee Four</b>	28.0	13.0	3.8	12.9	18.3	7.1	0.3	7.2	14.1	-6.1
<b>Grantee Five</b>	22.4	19.1	-7.2	13.2	12.5	4.1	-5.5	10.7	22.0	-12.2
<b>Grantee Six</b>	38.2	12.9	0.7	11.5	15.2	5.5	-0.8	3.6	15.2	-7.2
<b>Grantee Seven</b>	22.1	12.9	-0.8	10.5	13.6	5.5	-2.7	4.0	12.4	-3.7
<b>Grantee Eight</b>	29.9	16.2	-7.3	14.9	14.9	5.5	-3.5	8.1	18.1	-12.0
<b>Grantee Nine</b>	24.2	17.1	1.1	16.4	33.5	12.5	0.3	12.7	21.2	-5.2
<b>Grantee Ten</b>	33.3	13.8	-5.0	15.0	21.6	3.3	-2.3	7.1	17.1	-6.6
<b>Benchmarks</b>										
Vanguard Total Stock Mkt Index Fund	28.7	17.1	1.0	16.3	33.5	12.5	0.3	12.7	21.2	-5.2
Morningstar Aggressive Allocation	29.4	13.5	-3.8	13.4	21.3	5.7	-2.8	7.9	15.8	-8.2
Greater Milwaukee Foundation - Investment Pool	25.1	13.5	0.1	13.1	16.7	4.4	-1.2	8.1	16.7	-4.5

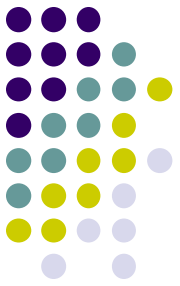


# Grantee Fund Performance Summary Table



Investment Performance	Annualized	
	5 Year	10 Year
Grantee One	4.0%	10.3%
Grantee Two	5.5%	11.7%
Grantee Three	2.0%	5.5%
Grantee Four	4.3%	9.5%
Grantee Five	3.1%	7.2%
Grantee Six	3.0%	8.9%
Grantee Seven	2.9%	7.1%
Grantee Eight	2.7%	7.8%
Grantee Nine	7.9%	12.8%
Grantee Ten	3.4%	9.1%
<b>Benchmarks</b>		
Vanguard Total Stock Mkt Index Fund	7.9%	13.2%
Morningstar Aggressive Allocation	3.3%	8.6%
Greater Milwaukee Foundation - Investment Pool	4.4%	8.8%

# Annualized return rankings



## 5-year annualized returns

Grantee	Return
9	7.9%
<i>Vanguard Total Mkt</i>	<b>7.9%</b>
2	5.5%
<i>Greater Milw Fnd – Inv Pool</i>	<b>4.4%</b>
4	4.3%
1	4.0%
10	3.4%
<i>Morningstar Aggres Alloc</i>	<b>3.3%</b>
5	3.1%
6	3.0%
7	2.9%
8	2.7%
3	2.0%

## 10-year annualized returns

Grantee	Return
<i>Vanguard Total Mkt</i>	<b>13.2%</b>
9	12.8%
2	11.7%
1	10.3%
4	9.5%
10	9.1%
6	8.9%
<i>Greater Milw Fnd – Inv Pool</i>	<b>8.8%</b>
<i>Morningstar Aggres Alloc</i>	<b>8.6%</b>
8	7.8%
5	7.2%
7	7.1%
3	5.5%

## 15-year annualized returns

Grantee	Return
<i>Vanguard Total Mkt</i>	<b>8.2%</b>
9	7.5%
4	7.0%
2	6.6%
<i>Greater Milw Fnd – Inv Pool</i>	<b>6.5%</b>
1	5.9%
6	5.4%
<i>Morningstar Aggres Alloc</i>	<b>5.3%</b>
7	4.8%
10	4.7%
3	4.7%
8	4.2%
5	1.8%

# Sharpe ratio rankings



Sharpe ratio is a measure of risk-adjusted return. It measures excess return (i.e. risk premium – the return achieved above the Treasury bond’s return, for example) per unit of risk. Higher Sharpe ratios imply better risk-adjusted performance.

## 5-year Sharpe ratio

Grantee	Ratio
9	0.67
<i>Vanguard Total Mkt</i>	<i>0.67</i>
4	0.45
<i>Greater Milw Fnd – Inv Pool</i>	<i>0.44</i>
2	0.41
7	0.32
1	0.28
10	0.28
<i>Morningstar Aggres Alloc</i>	<i>0.27</i>
6	0.26
5	0.17
8	0.16
3	0.13

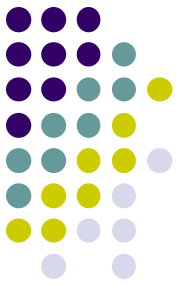
## 10-year Sharpe ratio

Grantee	Ratio
9	0.99
<i>Vanguard Total Mkt</i>	<i>0.99</i>
4	0.89
<i>Greater Milw Fnd – Inv Pool</i>	<i>0.84</i>
2	0.75
7	0.74
1	0.70
<i>Morningstar Aggres Alloc</i>	<i>0.65</i>
10	0.64
6	0.63
3	0.61
8	0.53
5	0.50

## 15-year Sharpe ratio

Grantee	Ratio
4	0.45
3	0.38
<i>Greater Milw Fnd – Inv Pool</i>	<i>0.39</i>
<i>Vanguard Total Mkt</i>	<i>0.38</i>
9	0.33
2	0.26
1	0.24
7	0.24
<i>Morningstar Aggres Alloc</i>	<i>0.23</i>
6	0.23
10	0.19
8	0.15
5	0.00

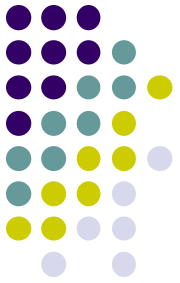
# General Market Performance Overview



Index	Description	2018
S&P 500	Large-Cap US Equity	-4.4%
Dow	Large-Cap US Equity	-3.5%
Russell 2000	Small-Cap US Equity	-11.0%
MSCI EAFE	International – Developed Markets	-13.3%
MSCI EM	International – Emerging Markets	-14.5%
Bloomberg Barclays T-Bill	Cash	0.3%
Bloomberg Barclays Agg	Fixed Income	0.0%

Total return = Price change + income

# Performance disclaimer



- This report has been prepared by undergraduate students in Marquette University's College of Business Administration. Every effort has been made to calculate and report accurate information.
- The information contained in this summary is prepared from records which Marquette University considers reliable. However it is not intended to and should not be used as a substitute for periodic statements that you receive on a regular basis from your investment advisor and custodian. Please compare the data on this document carefully with your monthly statements to verify its accuracy.
- If you discover an error in this report, please report it to Dan Geigler, Adjunct Instructor, [daniel.geigler@mu.edu](mailto:daniel.geigler@mu.edu).