A GENDA

A regular meeting of the Board of Trustees of the Waxahachie Firemen's Relief and Retirement Fund to be held at Waxahachie Fire Station No. 1, 407 Water Street, Waxahachie, Texas on *Monday, November 5, 2018 at 8:30 a.m.*

BOARD MEMBERS: Gary Myers, Chairman

Matt Dorsey, Vice Chairman Marcus Brown, Secretary

John Tillery Lee Statham

David Hill, Mayor Pro Tem Charles Harris, Finance Director

- 1. Call to Order
- 2. Consent Agenda

All matters listed under Item 2, Consent Agenda, are considered to be routine by the Board Members and will be enacted by one motion. Approval of the Consent Agenda authorizes the Chairman to execute all matters necessary to implement each item. Any item may be removed from the Consent Agenda for separate discussion and consideration by any Board Member.

- a. Minutes of the Firemen's Relief & Retirement Fund meeting of September 10, 2018
- b. Annuity checks for FR&R Retirees and other disbursements for the months of November and December 2018
- 3. Hear Third Quarter Report 2018 from Jim Stoker and Daniel Sullivan, Morgan Stanley, and take any necessary action
- 4. Consider TEXPERS membership dues
- 5. Consider Texas Local Fire Fighters' Retirement Act Annual Report for fiscal year end September 30, 2018
- 6. Set next meeting date and time of Firemen's Relief and Retirement Fund Board
- 7. Adjourn

The Waxahachie Firemen's Relief and Retirement Fund reserves the right to go into Executive Session on any posted item.

This meeting location is wheelchair-accessible. Parking for mobility impaired persons is available. Any request for sign interpretive services must be made forty-eight hours ahead of the meeting. To make arrangements, call the City Secretary at 469-309-4005 or (TDD) 1-800-RELAY TX

Notice of Potential Quorum

One or more members of the Waxahachie City Council may be present at this meeting.

No action will be taken by the City Council at this meeting.

(2a)

Firemen's Relief and Retirement Fund September 10, 2018

A regular meeting of the Board of Trustees of the Waxahachie Firemen's Relief and Retirement Fund was held at Waxahachie Fire Station No. 1, 407 Water Street, Waxahachie, Texas on Monday, September 10, 2018 at 8:30 a.m.

Members Present: Gary Myers, Chairman

Matt Dorsey, Vice Chairman Marcus Brown, Secretary

John Tillery Lee Statham

David Hill, Mayor Pro Tem

Member Absent:

Charles Harris, Finance Director

Others Present:

Lori Cartwright, City Secretary

1. Call to Order

Chairman Gary Myers called the meeting to order.

2. Consent Agenda

- a. Minutes of the Firemen's Relief & Retirement Fund meeting of August 13, 2018
- Annuity checks for FR&R Retirees and other disbursements for the month of October 2018

Action:

Mr. Lee Statham moved to approve items a. and b. on the Consent Agenda. Vice Chairman Matt Dorsey seconded, All Ayes.

3. Discuss TLFFRA Pension Conference and approve related travel expenses

Chairman Myers reported five members with two bringing spouses will be attending the conference on September 30 – October 2, 2018 in Temple, Texas. Registration, hotel and mileage for attendees total \$2,969.00.

Action:

Mr. John Tillery moved to approve travel expenses for the TLFFRA Pension Conference as presented. Mr. Marcus Brown seconded, All Ayes.

4. Discuss 2018 Actuary and take any necessary action

Chairman Myers reported the Actuary review will began October 1 and results won't be back until January or February of 2019. He stated Retirement Horizon will perform the audit and if no objections the fund will continue with them. Chairman Myers explained the amendment recently passed will change is some.

Vice Chairman Matt Dorsey stated at one time discussion was held to have special studies as part of the actuary. He requested to research how far we can extend 2.6, going from 27 years to 30

(2a)

Firemen's Relief and Retirement Fund September 10, 2018 Page 2

years and another study to get everyone in the retirement system on the same DROP Plan. Vice Chairman Dorsey stated if the fund is in a position to improve and simplify the DROP Plan to bring in new hires with same benefits.

Mr. John Tillery stated the question has come up with raises to retirees.

Chairman Myers stated he will talk to the actuary and provide them with Board's questions and explained the actuary will come back with recommendations after preliminary work and the Board can review what changes to make.

Action:

None

5. Review proposed amendments to Plan Document and take any necessary action

Chairman Myers stated the Plan Document will be discussed at future meeting.

6. Set next meeting date and time of Firemen's Relief and Retirement Fund Board

The Firemen's Relief and Retirement Board set their next meeting for Monday, October 8, 2018 at 8:30 a.m.

7. Adjourn

There being no further business, the meeting adjourned at 9:05 a.m.

Respectfully submitted,

Lori Cartwright City Secretary (ab)

MEMORANDUM

TO:

FR&R Board Members

FROM:

Lori Cartwright, City Secretary

DATE:

November 5, 2018

SUBJECT:

ANNUITY CHECKS

Please approve the annuity checks for the months of November & December for the following retirees:

Mrs. James Gilley

Widow Benefits

Alan Morgan

Mike Slay

Disability

Jimmy Turner
John Olin Turner

Service Retirement Service Retirement

Service Retirement

(Sharon Cobb QDRO Payment)

John Tillery Service Retirement Loyde Junkin Service Retirement Don Fuller Service Retirement Service Retirement Billy Bratcher Larry Evans Service Retirement **Dwayne Williams** Service Retirement Don Bennett Service Retirement Terry Kuykendall Service Retirement Steve Hamilton Service Retirement

(Denise Hamilton QDRO payment)

Sam Lewis
John Chenault
Rusty Ogletree
Jeff Sport
Paul Carrington
Service Retirement
Service Retirement
Service Retirement
Service Retirement
Service Retirement

(Carol Nunn QDRO payment)

Randy Johnston Service Retirement
Terry Skipper Service Retirement
Jeff Alexander Service Retirement

(Lisa Warren QDRO payment)

James Irvin Service Retirement

(Lori Irvin QDRO payment)

David Len Crow Service Retirement
Randy Muirhead Service Retirement
Jerry Sykes Service Retirement
Don Alexander Service Retirement

\$

Waxahachie Firemen's Relief & Retirement Fund

Quarterly Report September 30, 2018



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1	Balances & Asset Allocation	P	age
2	Asset Allocation and Performance	* P	age

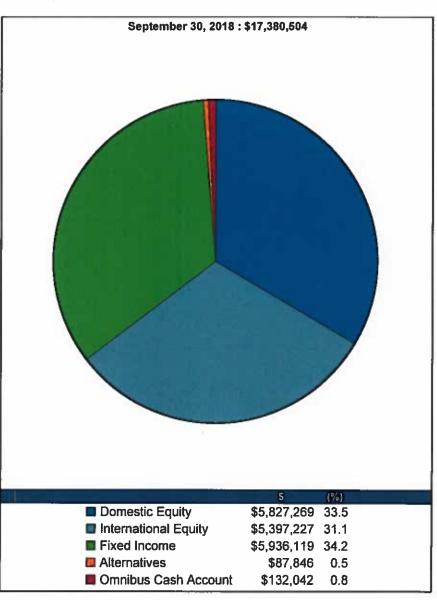


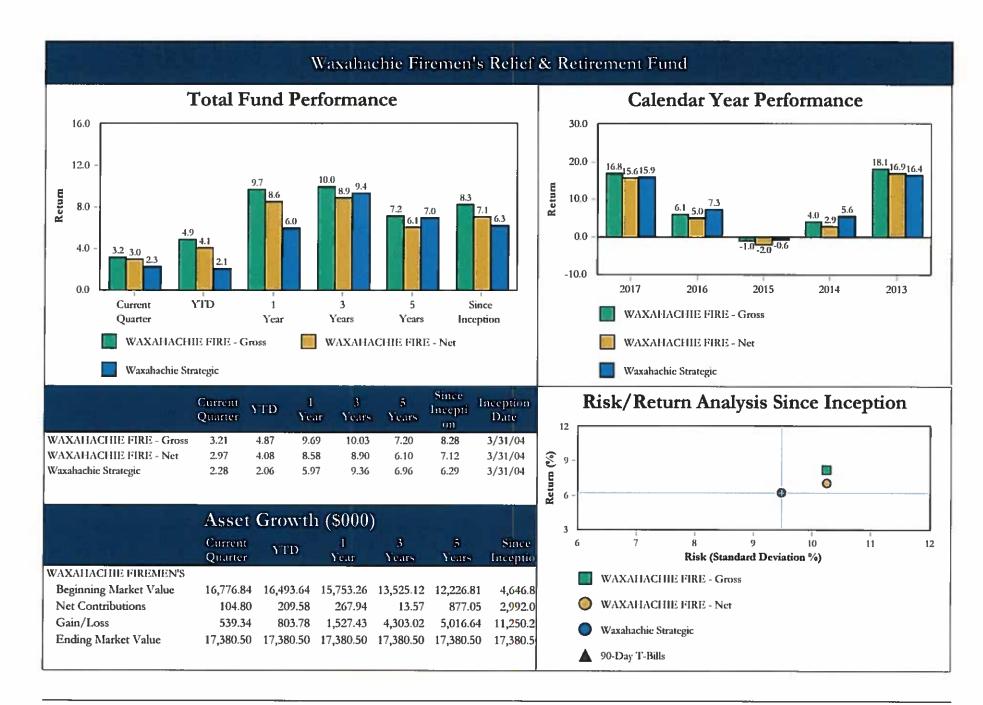


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Waxahachie Firemen's Relief & Retirement Fund Balances & Asset Allocation As of September 30, 2018

	Total F	und
		%
Domestic Equity	\$5,827,269	33.5
Polen Capital Management - LCG	\$1,640,072	9.4
Vanguard Index Fund - LCG	\$516,214	3.0
Delaware Domestic LCV	\$1,868,596	10.8
Vanguard Index Fund - LCV	\$199,044	1.1
Great Lakes - SMID Cap Core	\$1,603,342	9.2
International Equity	\$5,397,227	31.1
WCM Invest Mgmt - Focused Growth Intl	\$1,795,846	10.3
Delaware International LCV	\$1,667,407	9.6
Victory Trivalent - Intl SMID	\$796,269	4.6
Driehaus - EM	\$1,137,706	6.5
Fixed Income	\$5,936,119	34.2
Federated Investors Fixed Income	\$2,005,409	11.5
Blackstone BREIF II	\$2,004,910	11.5
Blackrock Strategic Income	\$1,925,801	11.1
Alternatives	\$87,846	0.5
CPG Vintage	\$87,846	0.5
Omnibus Cash Account	\$132,042	0.8
	\$17,380 504	100.0





Waxahachie Firemen's Relief & Retirement Fund

As of September 30, 2018

	Alloca	tion			Performance(%)					
		don				I CHOITI	ance(70)			
	Market Value (\$000)	0/0	Current Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
WAXAHACHIE FIREMEN'S	17,380.50	100,00	2.97	4.08	8.58	8.90	6.10	7.55	7.12	03/31/2004
Waxahachie Strategic Benchmark			2.28	2.06	5.97	9.36	6.96	7.70	6.31	
Omnibus Cash Account	132.04	0.76								
90-Day T-Bills			0.50	1.29	1.57	0.80	0.49	0.32	1.25	
Domestic Equity	5,827.27	33.53	7.84	13.02	21.33	15.00	10.89	12.24	8.23	03/31/2004
Russell 3000			7.13	10.57	17.58	17.07	13.46	12.01	9.16	
Polen Capital Management - LCG	1,640.07	9.44	10.16	N/A	N/A	N/A	N/A	N/A	19.75	04/01/2018
Russell 1000 Gr			9.17	N/A	N/A	N/A	N/A	N/A	15.45	
Vanguard Index Fund - LCG	516.21	2.97	7.28	14.42	N/A	N/A	N/A	N/A	16.19	12/01/2017
Russell 1000 Gr			9.17	17.09	N/A	N/A	N/A	N/A	18.00	
Delaware Domestic LCV	1,868.60	10.75	8.38	9.85	15.57	14.80	11.68	11.93	8.64	04/01/2004
Russell 1000 VL			5.70	3.92	9.45	13.55	10.72	9.79	7.99	
Vanguard Index Fund - LCV	199.04	1.15	6.40	4.68	N/A	N/A	N/A	N/A	6.99	12/01/2017
Russell 1000 VL			5.70	3.92	N/A	N/A	N/A	N/A	5.43	
Great Lakes - SMID Cap Core	1,603.34	9.22	5.32	11.44	21.76	15.58	N/A	N/A	11.26	07/01/2015
Russell 2500			4.70	10.41	16.19	16.13	N/A	N/A	11.03	
International Equity	5,397,23	31.05	0.30	-1.63	2.78	8.58	3.62	3.69	5,01	03/31/2004
MSCI AC World ex US Net			0.71	-3.09	1.76	9.97	4.12	5.18	6.01	
WCM Invest Mgmt - Focused Growth Intl	1,795.85	10.33	2.46	6.54	11.41	N/A	N/A	N/A	14.05	10/01/2016
MSCI EAFE Gr Net			1.53	0.58	5.85	N/A	N/A	N/A	10.69	
Delaware International LCV	1,667.41	9.59	1.68	-2.63	0.76	7.51	4.28	3.98	5.14	04/01/2004
MSCI EAFE VL Net			1.18	-3.49	-0.36	8.12	3.14	4.49	4.96	
Victory Trivalent - Intl SMID	796.27	4.58	-0.99	N/A	N/A	N/A	N/A	N/A	-2.40	06/01/2018
MSCI World ex US Net			1.31	N/A	N/A	N/A	N/A	N/A	0.19	



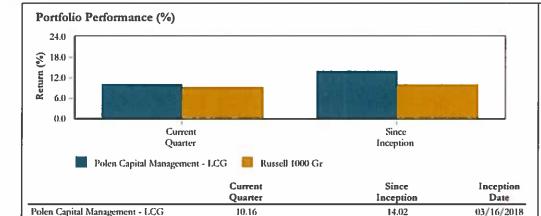


Waxahachie Firemen's Relief & Retirement Fund

As of September 30, 2018

	Allocation				Performance(%)					
	Market Value (\$000)	⁰ / ₀	Current Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Driehaus - EM	1,137.71	6.55	-3.94	N/A	N/A	N/A	N/A	N/A	-7.05	06/01/2018
MSCI EM Net			-1.09	N/A	N/A	N/A	N/A	N/A	-5.20	
Pixed Income	5,936.12	34.15	0,92	1.46	2.08	2.89	2.59	3.47	3.36	03/31/2004
Barclays Aggregate			0.02	-1.60	-1.22	1.31	2.16	3.77	3.71	
Federated Investors Fixed Income	2,005.41	11.54	0.45	-1.45	-1.08	1.58	1.93	N/A	2.12	11/01/2010
Barclays Aggregate			0.02	-1-60	-1.22	1.31	2.16	N/A	2.40	
Blackstone BREIF II	2,004.91	11.54	2.11	6.55	7.39	5.42	N/A	N/A	4.80	07/01/2014
Barclays Aggregate			0.02	-1,60	-1.22	1.31	N/A	N/A	1.66	
Blackrock Strategic Income	1,925.80	11.08	0.20	-0.55	0.12	N/A	N/A	N/A	3,02	03/01/2016
Barclays Aggregate			0.02	-1.60	-1.22	N/A	N/A	N/A	0.94	
Alternatives	87.85	0.51	0.44	N/A	N/A	N/A	N/A	N/A	-4.04	05/01/2018
CPG Vintage	87.85	0.51	0.44	N/A	N/A	N/A	N/A	N/A	-4.04	05/01/2018
Absolute Return 11.0%			2.64	N/A	N/A	N/A	N/A	N/A	4.44	





	Current Quarter	Since Inception	Inception Date
Polen Capital Management - LCG			03/16/2018
Beginning Market Value	1,538	1,595	
Net Contributions	-52	-160	
Fees/Expenses	-5	-11	
Income	3	6	
Gain/Loss	156	210	

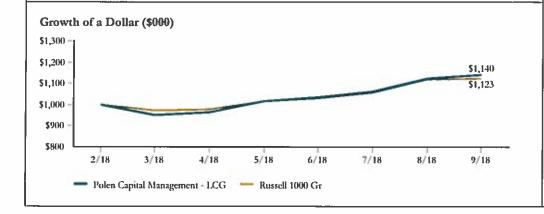
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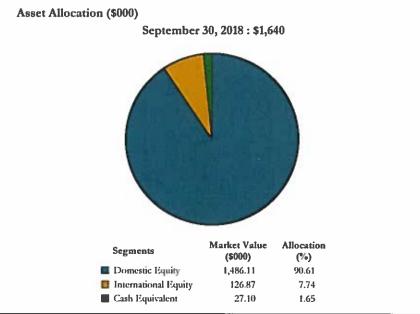
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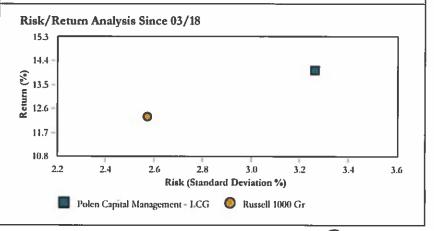
03/16/2018

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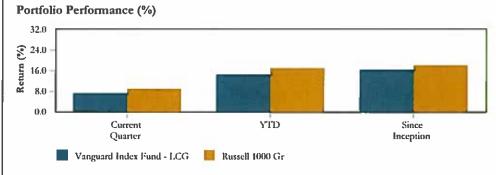
Portfolio Characteristics vs. Russell 1000 Gr Since Inception								
·	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date			
Polen Capital Management - LCG	1.22	-0.12	0.92	0.55	03/16/2018			



Russell 1000 Gr

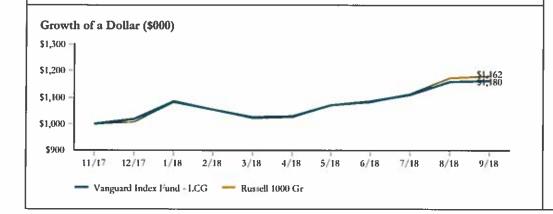
Asset Growth (\$000)

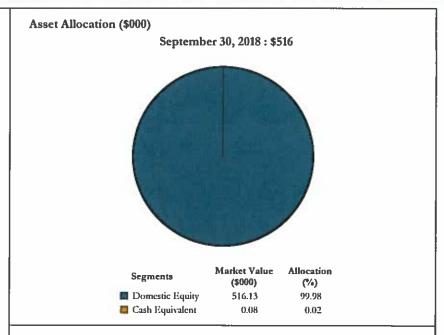
Ending Market Value



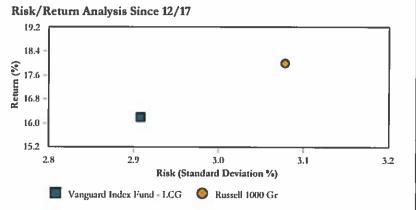
	Current Quarter	YTD	Since Inception	Inception Date
Vanguard Index Fund - LCG	7.28	14.42	16.19	12/01/2017
Russell 1000 Gr	9.17	17.09	18.00	12/01/2017

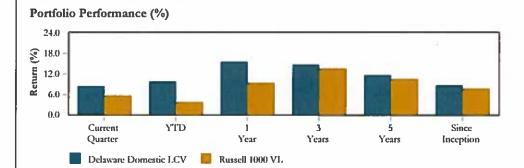
	Current Quarter	YTD	Since Inception	Inception Date
Vanguard Index Fund - LCG				12/01/2017
Beginning Market Value	500	470	463	
Net Contributions	-19	- <u>22</u>	- <u>22</u>	
Fees/Expenses	-1	-2	-3	
Income	•	3	4	
Gain/Loss	37	68	74	
Ending Market Value	516	516	516	





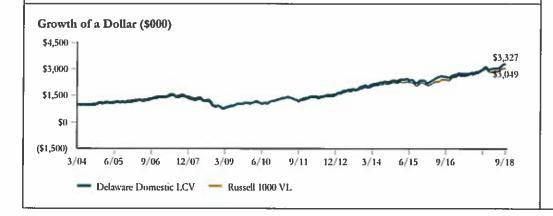
Portfolio Characteristics vs. Russell 1000 Gr Since Inception								
Beta Alpha R-Squared Ratio Date .								
Vanguard Index Fund - LCG 0.94 -0.05 0.98 0.49 12/01/2017								

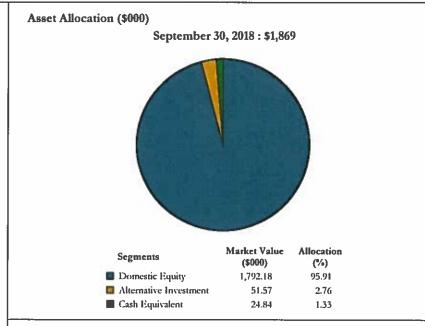




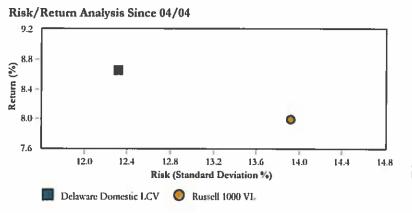
	Current Quarter	YTD	l Year	3 Years	5 Years	Since Inception	Inception Date
Delaware Domestic LCV	8.38	9.85	15.57	14.80	11.68	8.64	04/01/2004
Russell 1000 VL	5.70	3.92	9.45	13.55	10.72	7.99	04/01/2004

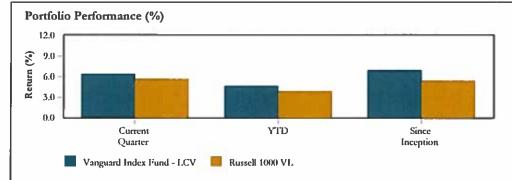
	Current Quarter	YTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Delaware Domestic LCV							04/01/2004
Beginning Market Value	1,724	1,848	2,319	2,026	1,726	748	
Net Contributions	-	-151	-724	-1,004	-968	-1,005	
Fees/Expenses	-5	-15	-22	-71	-120	-256	
Income	11	33	46	155	260	610	
Gain/Loss	139	154	250	763	971	1,771	
Ending Market Value	1,869	1,869	1,869	1,869	1,869	1,869	





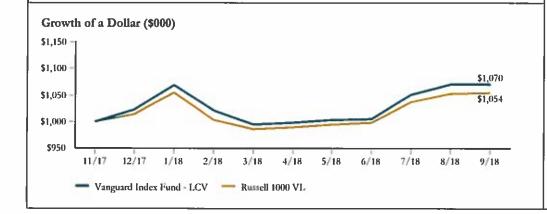
Portfolio Characteristics vs. Russell 1000 VL Since Inception								
	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date			
Delaware Domestic LCV	0.84	1.80	0.90	0.64	04/01/2004			

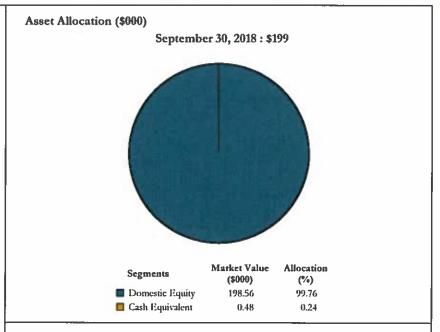




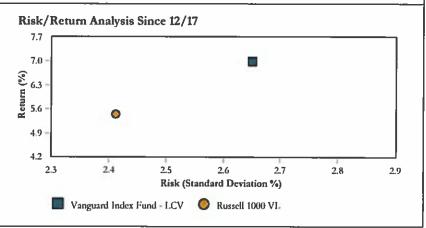
	Current Quarter	YTD	Since Inception	Inception Date
Vanguard Index Fund - LCV	6.40	4.68	6.99	12/01/2017
Russell 1000 VL	5.70	3.92	5.43	12/01/2017

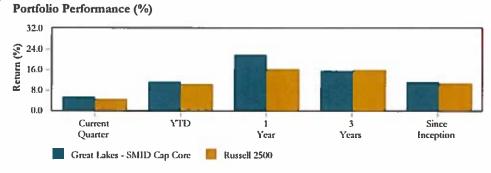
	Current Quarter	YTD	Since Inception	Inception Date
Vanguard Index Fund - LCV				12/01/2017
Beginning Market Value	187	190	185	
Net Contributions	-	-	-	
Fees/Expenses	Ç.	-1	7-1	
Income	-	2	3	
Gain/Loss	12	8	11	
Ending Market Value	199	199	199	





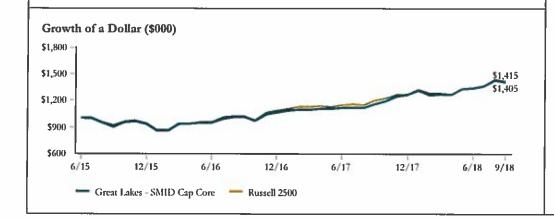
Portfolio Characteristics vs. Russell 1000 VL Since Inception					
	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Vanguard Index Fund - LCV	1.09	0.10	0.98	0.22	12/01/2017

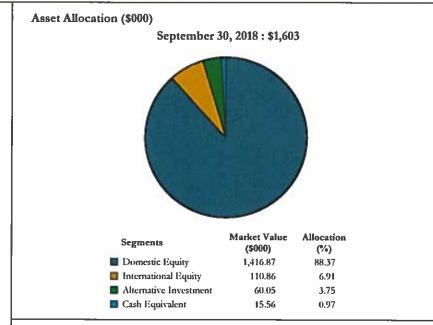




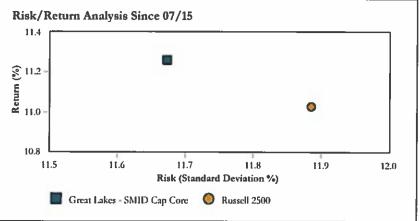
	Current Quarter	YTD	l Year	3 Years	Since Inception	Inception Date
Great Lakes - SMID Cap Core	5.32	11.44	21.76	15.58	11.26	07/01/2015
Russell 2500	4.70	10.41	16.19	16.13	11.03	07/01/2015

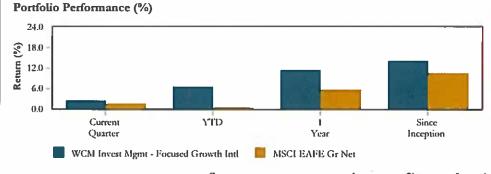
	Current Quarter	YTD	l Year	3 Years	Since Inception	Inception Date
Great Lakes - SMID Cap Core						07/01/2015
Beginning Market Value	1,553	1,950	1,785	1,488	1,623	
Net Contributions	-32	-512	-512	-617	-617	
Fees/Expenses	-5	-15	-20	-60	-63	
Income	4	14	20	73	79	
Gain/Loss	82	166	331	720	581	
Ending Market Value	1,603	1,603	1,603	1,603	1,603	





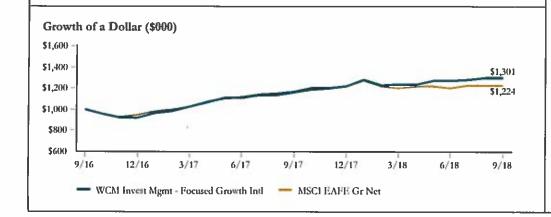
Portfolio Characteristics vs. Russell 2500 Since Inception					
·	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Great Lakes - SMID Cap Core	0.95	0.70	0.94	0.92	07/01/2015

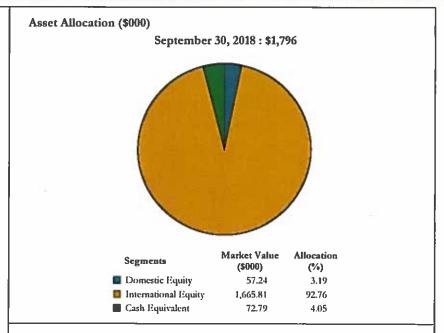




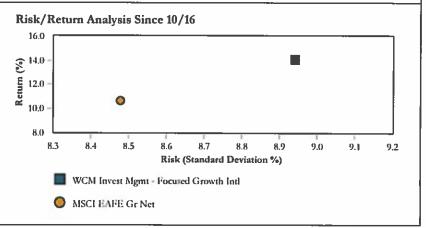
	Current Quarter	YTD	1 Year	Since Inception	Inception Date
WCM Invest Mgmt - Focused Growth Intl	2.46	6.54	11.41	14.05	10/01/2016
MSCI EAFE Gr Net	1.53	0.58	5.85	10.69	10/01/2016

	Current Quarter	YTD	1 Year	Since Inception	Inception Date
WCM Invest Mgmt - Focused Growth Intl					10/01/2016
Beginning Market Value	1,753	1,976	1,666	1,454	
Net Contributions	12	-300	-67	-98	
Fees/Expenses	-6	-20	-26	-47	
Income	6	35	40	64	
Gain/Loss	44	105	183	423	
Ending Market Value	1,796	1,796	1,796	1,796	





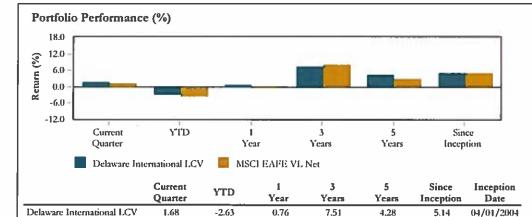
Portfolio Characteristics vs. MSCI EAFE Gr Net Since Inception Beta Alpha R-Squared State Beta Alpha R-Squared Ratio Date WCM Invest Mgmt - Focused Growth Intl 0.93 3.93 0.77 1.40 10/01/2016



1.18

-3.49

MSCI EAFE VL Net



Asset Growth (\$000)							
	Current	YTD	1	3	5	Since	Inception
	Quarter	1110	Year	Years	Years	Inception	Date
Delaware International LCV							04/01/2004
Beginning Market Value	1,640	1,949	1,655	1,343	1,399	538	
Net Contributions	-	-237	-4	-6	-53	293	
Fees/Expenses	-5	-15	-20	-52	-85	-219	
Income	15	48	60	143	236	674	
Gain/Loss	18	-77	-25	239	172	381	
Ending Market Value	1,667	1,667	1,667	1,667	1,667	1,667	

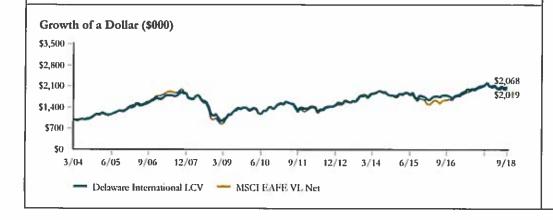
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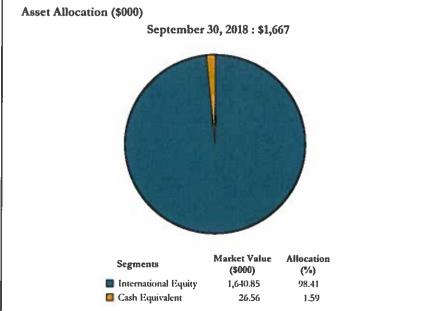
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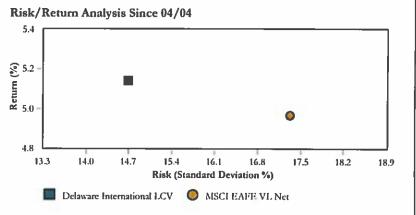
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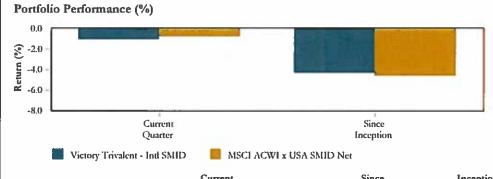
04/01/2004





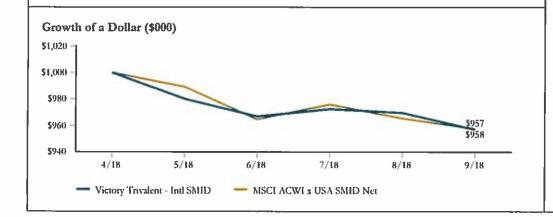
Portfolio Characteristics	s vs. MS	CI EAF	E Net Since l	Inception	
·	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Delaware International LCV	0.86	0.24	0.92	0.33	04/01/2004

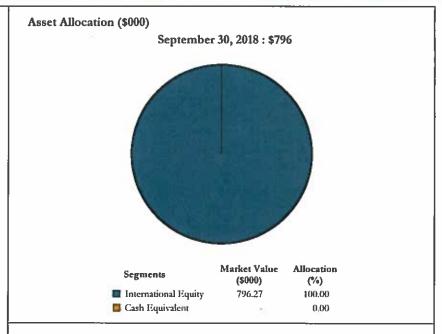




	Current	Since Incention	Inception Date
	Quarter		Date
Victory Trivalent - Intl SMID	-0.99	-4.29	05/18/2018
MSCI ACWI x USA SMID Net	-0.70	-4.56	05/18/2018

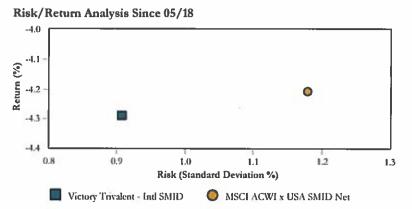
Current Quarter	Since Inception	Inception Date
		05/18/2018
803	831	
1	1	
-1	-2	
•	•	
-7	-34	
796	796	
	803 1 -1 	Quarter Inception 803 831 1 1 -1 -2 - - -7 -34



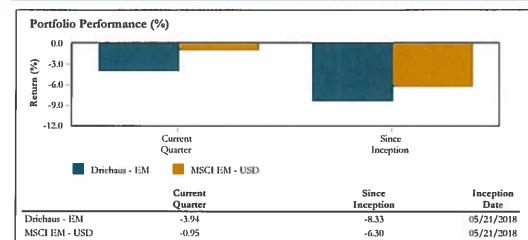


Portfolio Characteristics vs. MSCI ACWI x USA SMID Net Since

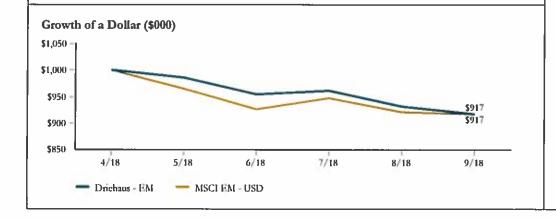
•	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date
Victory Trivalent - Intl SMID	0.55	-0.40	0.52	-1.14	05/18/2018

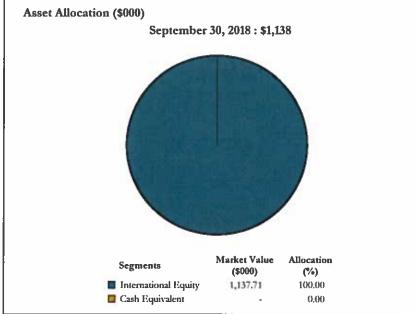




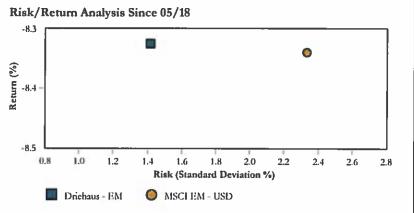


	Current	Since	T
			Inception
	Quarter	Inception	Date
Driehaus - EM			05/21/2018
Beginning Market Value	1,183	1,239	
Net Contributions	2	2	
Fees/Expenses	-2	-3	
Income	-	•	
Gain/Loss	-45	-100	
Ending Market Value	1,138	1,138	

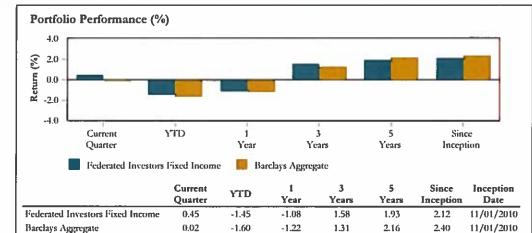




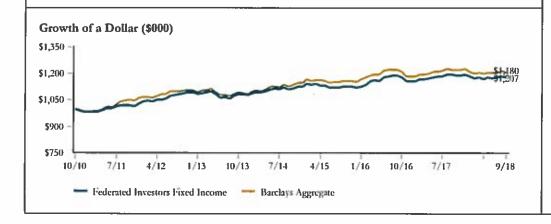
Portfolio Characteristics vs. MSCI EM - USD Since Inception							
	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date .		
Driehaus - EM	0.52	-0.84	0.72	-1.32	05/21/2018		

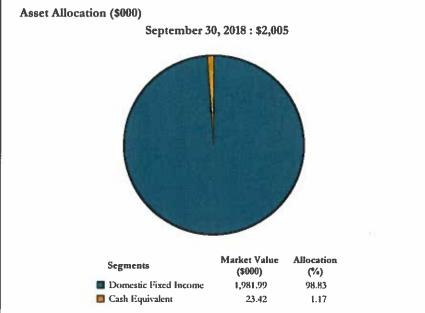


Agent Ground (\$000)

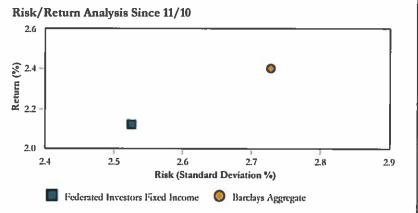


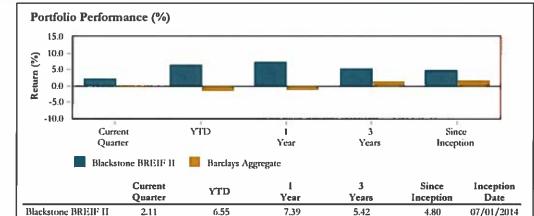
Current Quarter	YTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
						11/01/2010
1,996	1,721	1,674	1,582	3,817	2,518	
-	308	348	352	-2,039	-958	
-5	-13	-17	-45	-89	-171	
17	39	47	111	244	529	
-3	-50	-47	6	72	88	
2,005	2,005	2,005	2,005	2,005	2,005	
	1,996 - -5 17 -3	1,996 1,721 - 308 -5 -13 17 39 -3 -50	Quarter YTD Year 1,996 1,721 1,674 - 308 348 -5 -13 -17 17 39 47 -3 -50 -47	Quarter YTD Year Years 1,996 1,721 1,674 1,582 - 308 348 352 -5 -13 -17 -45 17 39 47 111 -3 -50 -47 6	Quarter YTD Year Years Years 1,996 1,721 1,674 1,582 3,817 - 308 348 352 -2,039 -5 -13 -17 -45 -89 17 39 47 111 244 -3 -50 -47 6 72	Quarter Y1D Year Years Years Inception 1,996 1,721 1,674 1,582 3,817 2,518 - 308 348 352 -2,039 -958 -5 -13 -17 -45 -89 -171 17 39 47 111 244 529 -3 -50 -47 6 72 88





Portfolio Characteristics vs. Barclays Aggregate Since Inception									
·	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date				
Federated Investors Fixed Income	0.85	0.09	0.84	0.70	11/01/2010				





Asset Growth	(\$000)
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Barclays Aggregate

0.02

-1.60

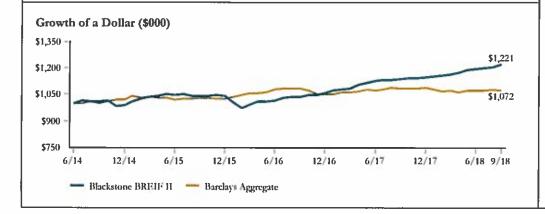
	Current Quarter	YTD	1 Year	3 Years	Since Inception	Inception Date
Blackstone BREIF II					-	07/01/201-
Beginning Market Value	1,896	1,811	1,794	1,621	1,389	
Net Contributions	68	74	77	99	274	
Fees/Expenses	-3	-9	-12	-34	-47	
Income	37	,		**	43	
Gain/Loss	44	129	146	318	389	
Ending Market Value	2,005	2,005	2,005	2,005	2,005	

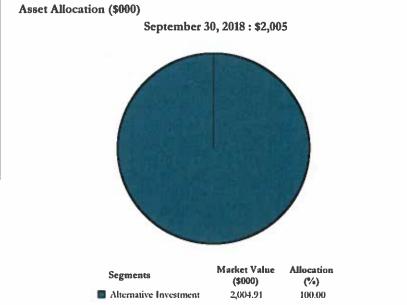
-1.22

1.31

07/01/2014

1.66

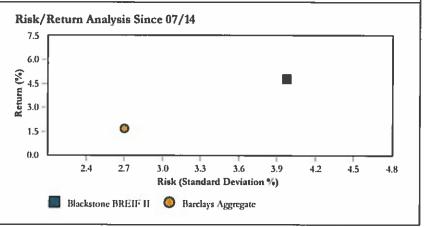




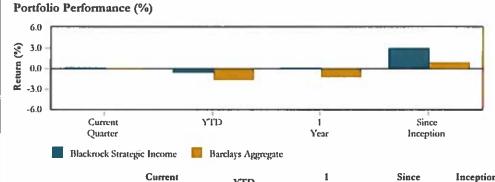
Portfolio Characteristics vs. Barclays Aggregate Since Inception

Beta Alpha R-Squared Sharpe Ratio Date

Blackstone BREIF II -0.08 5.03 0.00 1.07 07/01/2014

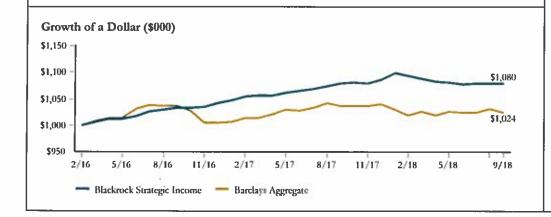


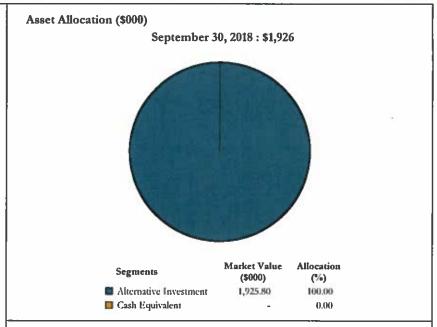




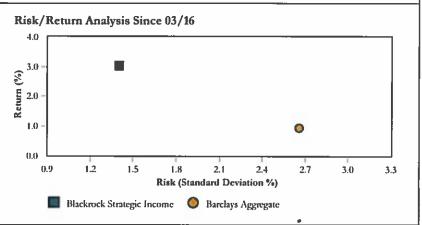
	Current Quarter	YTD	1 Year	Since Inception	Inception Date
Blackrock Strategic Income	0.20	-0.55	0.12	3.02	03/01/2016
Barclays Aggregate	0.02	-1.60	-1.22	0.94	03/01/2016

	Current Quarter	YTD	l Year	Since Inception	Inception Date
Blackrock Strategic Income					03/01/2016
Beginning Market Value	1,919	1,667	1,609	1,319	
Net Contributions	3	269	317	496	
Fees/Expenses	-3	-9	-12	-26	
Income	15	45	60	133	
Gain/Loss	-8	-46	-48	3	
Ending Market Value	1,926	1,926	1,926	1,926	





Portfolio Characteristics vs. Barclays Aggregate Since Inception							
<u> -</u>	Beta	Alpha	R-Squared	Sharpe Ratio	Inception Date		
Blackrock Strategic Income	0.11	2.92	0.04	1.39	03/01/2016		



Performance Appendix

Portfolio Name	ОТО	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Blackrock Strategic Income	0.20	-0.55	0.12		_		2.91	02/01/2016
Blackstone BREIF II	2.12	6.55	7.39	5.42			4.80	07/01/2014
CPG Vintage	0.44						-4.04	05/01/2018
Delaware Domestic LCV	8.38	9.85	15.57	14.80	11.68	11.93	8.70	03/01/2004
Delaware International LCV	1.68	-2.63	0.76	7.51	4.28	3.98	5.19	03/01/2004
Driehaus - EM	-3.94						-8.33	05/01/2018
Federated Investors Fixed Income	0.45	-1.45	-1.08	1.58	1.93		2.05	10/01/2010
Great Lakes - SMID Cap Core	5.32	11.44	21.76	15.58			10.18	06/01/2015
Omnibus Cash Account	N/A	N/A	N/A	N/A	N/A	N/A	N/A	03/01/2004
Polen Capital Management - LCG	10.16						14.02	03/01/2018
Vanguard Index Fund - LCG	7.28	14.42	••	••	••	••	16.19	11/01/2017
Vanguard Index Fund - LCV	6.40	4.68				**	6.99	11/01/2017
Victory Trivalent - Intl SMID	-0.99			••			-4.29	05/01/2018
WCM Invest Mgmt - Focused Growth Inti	2,46	6.54	11.41				13.17	09/01/2016



Glossary of Terms

Active Contribution Return: The gain or loss percentage of an investment relative to the performance of the investment benchmark.

Active Exposure: The percentage difference in weight of the portfolio compared to its policy benchmark.

Active Return: Arithmetic difference between the manager's return and the benchmark's return over a specified time period.

Actual Correlation: A measure of the correlation (linear dependence) between two variables X and Y, with a value between +1 and -1 inclusive. This is also referred to as coefficient of correlation.

Alpha; A measure of a portfolio's time weighted return in excess of the market's return, both adjusted for risk. A positive alpha indicates that the portfolio outperformed the market on a risk-adjusted basis, and a negative alpha indicates the portfolio did worse than the market.

Best Quarter: The highest quarterly return for a certain time period.

Beta: A measure of the sensitivity of a portfolio's time weighted return (net of fees) against that of the market. A beta greater than 1.00 indicates volatility greater than the market.

Consistency: The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.

Core: Refers to an investment strategy mandate that is blend of growth and value styles without a pronounced tilt toward either style.

Cumulative Selection Return (Cumulative Return): Cumulative investment performance over a specified period of time.

Distribution Rate: The most recent distribution paid, annualized, and then divided by the current market price. Distribution rate may consist of investment income, short-term capital gains, long-term capital gains, and/or return of capital.

Down Market Capture: The ratio of average portfolio returns over the benchmark during periods of negative benchmark return. Lower values indicate better product performance.

Downside Risk: A measure similar to standard deviation, but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. The higher the value, the more risk the product has.

Downside Semi Deviation: A statistical calculation that measures the volatility of returns below a minimum acceptable return. This return measure isolates the negative portion of volatility; the larger the number, the greater the volatility.

Drawdown: A drawdown is the peak-to-trough decline during a specific period of an investment, fund or commodity.

Excess over Benchmark: The percentage gain or loss of an investment relative to the investment's benchmark.

Excess Return: Arithmetic difference between the manager's return and the risk-free return over a specified time period.

Growth: A diversified investment strategy which includes investment selections that have capital appreciation as the primary goal, with little or no dividend payouts. These strategies can include reinvestment in expansion, acquisitions, and/or research and development opportunities.

Growth of Dollar: The aggregate amount an investment has gained or lost over a certain time period, also referred to as Cumulative Return, stated in terms of the amount to which an initial dollar investment would have grown over the given time period.

Investment Decision Process (IDP): A model for structuring the investment process and implementing the correct attribution methodologies. The IDP includes every decision made concerning the division of the assets under management over the various asset categories. To analyze each decision's contribution to the total return, a modeling approach must measure the marginal value of every individual decision. In this respect, the hierarchy of the decisions becomes very important. We therefore use the IDP model, which serves as a proper foundation for registering the decisions and relating them to each other.

Information Ratio: Measured by dividing the active rate of return by the tracking error. The higher the Information Ratio, the more value-added contribution by the manager

Jensen's Alpha: The Jensen's alpha measure is a risk-adjusted performance measure that represents the average return on a portfolio or investment above or below that predicted by the capital asset pricing model (CAPM) given the portfolio's or investment's beta and the average market return. This metric is also commonly referred to as alpha.

Kurtosis: A statistical measure that is used to describe the distribution, or skewness, of observed data around the mean, sometimes referred to as the volatility of volatility.

Maximum Drawdown: The drawdown is defined as the percent retrenchment from a fund's peak to the fund's trough value. It is in effect from the time the fund's retrenchment begins until a new fund high is reached. The maximum drawdown encompasses both the period from the fund's peak to the fund's valley (length), and the time from the fund's valley to a new fund high (recovery). It measures the largest percentage drawdown that has occurred in any fund's data record.

Modern Portfolio Theory (MPT): An investment analysis theory on how risk-averse investors can construct portfolios to optimize or maximize expected return based on a given level of market risk, emphasizing that risk is an inherent part of higher reward.

Mutual Fund (MF): An investment program funded by shareholders that trade in diversified holdings and is professionally managed.

Peer Group: A combination of funds that share the same investment style combined as a group for comparison purposes.

Peer/ Plan Sponsor Universe: A combination of asset pools of total plan investments by specific sponsor and plan types for comparison purposes.

Performance Ineligible Assets: Performance returns are not calculated for certain assets because accurate valuations and transaction data for these assets are not processed or maintained by us. Common examples of



these include life insurance, some annuities and some assets held externally.

Performance Statistics: A generic term for various measures of investment performance measurement terms

Portfolio Characteristics: A generic term for various measures of investment portfolio characteristics.

Preferred Return: A term used in the private equity (PE) world, and also referred to as a "Hurdle Rate." It refers to the threshold return that the limited partners of a private equity fund must receive, prior to the PE firm receiving its carried interest or "carry."

Ratio of Cumulative Wealth: A defined ratio of the Cumulative Return of the portfolio divided by the Cumulative Return of the benchmark for a certain time period.

Regression Based Analysis: A statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables

Residual Correlation: Within returns-based style analysis, residual correlation refers to the portion of a strategy's return pattern that cannot be explained by its correlation to the asset-class benchmarks to which it is being compared.

Return: A rate of investment performance for the specified period.

Rolling Percentile Ranking: A measure of an investment portfolio's ranking versus a peer group for a specific rolling time period (i.e. Last 3 Years, Last 5 years, etc.).

R-Squared: The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

SA/CF (Separate Account/Comingled Fund): Represents an acronym for Separate Account and Commingled Fund investment vehicles.

Sector Benchmark: A market index that serves as a proxy for a sector within an asset class.

Sharpe Ratio: Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance results in.

Standard Deviation: A statistical measure of the range of a portfolio's performance; the variability of a return around its average return over a specified time period.

Total Fund Benchmark: The policy benchmark for a complete asset pool that could consist of multiple investment mandates.

Total Fund Composite: The aggregate of multiple portfolios within an asset pool or household.

Tracking Error: A measure of standard deviation for a portfolio's investment performance, relative to the performance of an appropriate market benchmark.

Treynor Ratlo: A ratio that divides the excess return (above the risk free rate) by the portfolio's beta to arrive at a unified measure of risk adjusted return. It is generally used to rank portfolios, funds and benchmarks. A higher ratio is indicative of higher returns per unit of market risk. This measurement can help determine if the portfolio is reaching its goal of increasing returns while managing market risk.

Up Market Capture: The ratio of average portfolio returns over the benchmark during periods of positive benchmark return. Higher values indicate better product performance.

Upside Semi Deviation: A statistical calculation that measures the volatility of returns above an acceptable return. This return measure isolates the positive portion of volatility; the larger the number, the greater the volatility.

Value: A diversified investment strategy that includes investment selections which tend to trade at a lower price relative to its dividends, earnings, and sales. Common attributes are stocks that include high dividend, low price-to-book ratio, and/or low price-to-earnings ratio.

Worst Quarter: The lowest rolling quarterly return for a certain time period.

Information Disclosures

The performance data shown reflects past performance, which does not guarantee future results. Investment return and principal will fluctuate so that an investor's shares when redeemed may be worth more or less than original cost. Please note, current performance may be higher or lower than the performance data shown. For up to date month-end performance information, please contact your Financial Advisor or visit the funds' company website.

Investors should carefully consider the fund's investment objectives, risks, charges and expenses before investing. The prospectus and, if available the summary prospectus, contains this and other information that should be read carefully before investing. Investors should review the information in the prospectus carefully. To obtain a prospectus, please contact your Financial Advisor or visit the funds' company website.

Past performance is no guarantee of future results.

Investing involves market risk, including possible loss of principal. Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations. Value investing involves the risk that the market may not recognize that securities are undervalued and they may not appreciate as anticipated. Small and mid-capitalization companies may lack the financial resources, product diversification and competitive strengths of larger companies. The securities of small capitalization companies may not trade as readily as, and be subject to higher volatility than those of larger, more established companies. Bond funds and bond holdings have the same interest rate, inflation and credit risks that are associated with the underlying bonds owned by the funds. The return of principal in bond funds, and in funds with significant bond holdings, is not guaranteed International securities' prices may carry additional risks, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes and differences in financial and accounting standards. International investing may not be for everyone. These risks may be magnified in emerging markets. Alternative investments, including private equity funds, real estate funds, hedge funds, managed futures funds, and funds of hedge funds, private equity, and managed futures funds, are speculative and entail significant risks that can include losses due to leveraging or/other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in a fund. potential lack of diversification, absence and/or delay of information regarding valuations and pricing. complex tax structures and delays in tax reporting, less regulation and higher fees than mutual funds and risks associated with the operations, personnel and processes of the advisor. Master Limited Partnerships (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate

sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk; and MLP interests in the real estate sector are subject to special risks, including interest rate and property value fluctuations, as well as risks related to general and economic conditions. Because of their narrow focus, MLPs maintain exposure to price volatility of commodities and/or underlying assets and tend to be more volatile than investments that diversify across many sectors and companies. MLPs are also subject to additional risks including: investors having limited control and rights to vote on matters affecting the MLP, limited access to capital, cash flow risk, lack of liquidity, dilution risk, conflict of interests, and limited call rights related to acquisitions.

Mortgage backed securities also involve prepayment risk, in that faster or slower prepayments than expected on underlying mortgage loans can dramatically alter the yield-to-maturity of a mortgage-backed security and prepayment risk includes the possibility that a fund may invest the proceeds at generally lower interest rates.

Tax managed funds may not meet their objective of being tax-efficient.

Real estate investments are subject to special risks, including interest rate and property value fluctuations, as well as risks related to general and economic conditions. High yield fixed income securities, also known as "junk bonds", are considered speculative, involve greater risk of default and tend to be more volatile than investment grade fixed income securities.

Credit quality is a measure of a bond issuer's creditworthiness, or ability to repay interest and principal to bondholders in a timely manner. The credit ratings shown are based on security rating as provided by Standard & Poor's, Moody's and/or Fitch, as applicable. Credit ratings are issued by the rating agencies for the underlying securities in the fund and not the fund itself, and the credit quality of the securities in the fund does not represent the stability or safety of the fund. Credit ratings shown range from AAA, being the highest, to D, being the lowest based on S&P and Fitch's classification (the equivalent of Aaa and C, respectively, by Moody(s). Ratings of BBB or higher by S&P and Fitch (Baa or higher by Moody's) are considered to be investment grade-quality securities. If two or more of the agencies have assigned different ratings to a security, the highest rating is applied. Securities that are not rated by all three agencies are listed as "NR".

"Alpha tilt strategies comprise a core holding of stocks that mimic a benchmark type index such as the S&P 500 to which additional securities are added to help tilt the fund toward potentially outperforming the market in an effort to enhance overall investment returns. Tilt strategies are subject to significant timing risk and could potentially expose investors to extended periods of underperformance."

Custom Account Index: The Custom Account Index is an investment benchmark based on your historical target allocations and/or manager selection that you may use to evaluate the performance of your account. The Custom Account index does take into consideration certain changes that may have occurred in your portfolio since the inception of your account, i.e., asset class and/or manager changes. However, in some circumstances, it may not be an appropriate benchmark for use with your specific account composition. For detailed report of the historical composition of this blend please contact your Financial Advisor.

Peer Groups

Peer Groups are a collection of similar investment strategies that essentially group investment products that share the same investment approach. Peer Groups are used for comparison purposes to compare and illustrate a clients investment portfolio versus its peer across various quantitative metrics like performance and risk. Peer Group comparison is conceptually another form of benchmark comparison whereby the

actual investment can be ranked versus its peer across various quantitative metrics.

All Peer Group data are provided by Investment Metrics, LLC.

The URL below provides all the definitions and methodology about the various Peer Groups

https://www.invmetrics.com/style-peer-groups

Peer Group Ranking Methodology

A percentile rank denotes the value of a product in which a certain percent of observations fall within a peer group. The range of percentile rankings is between 1 and 100, where 1 represents a high statistical value and 100 represents a low statistical value.

The 30th percentile, for example, is the value in which 30% of the highest observations may be found, the 65th percentile is the value in which 65% of the highest observations may be found, and so on.

Percentile rankings are calculated based on a normalized distribution ranging from 1 to 100 for all products in each peer group, where a ranking of 1 denotes a high statistical value and a ranking of 100 denotes a low statistical value. It is important to note that the same ranking methodology applies to all statistics, implying that a ranking of 1 will always mean highest value across all statistics.

For example, consider a risk/return assessment using standard deviation as a measure of risk. A percentile ranking equal to 1 for return denotes highest return, whereas a percentile ranking of 1 for standard deviation denotes highest risk among peers.

In addition, values may be used to demonstrate quartile rankings. For example, the third quartile is also known as the 75th percentile, and the median is the 50th percentile.

Alternatives

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Alternatives may be either traditional alternative investment vehicles or non-traditional alternative strategy vehicles. Traditional alternative investment vehicles may include, but are not limited to, Hedge Funds, Fund of Funds (both registered and unregistered), Exchange Funds, Private Equity Funds, Private Credit Funds, Real Estate Funds, and Managed Futures Funds. Non-traditional alternative strategy vehicles may include, but are not limited to, Open or Closed End Mutual Funds, Exchange-Traded and Closed-End Funds, Unit Investment Trusts, exchange listed Real Estate Investment Trusts (REITs), and Master Limited Partnerships (MLPs). These non-traditional alternative strategy vehicles also seek alternative-like exposure but have significant differences from traditional alternative investment vehicles. Non-traditional alternative strategy vehicles may behave like, have characteristics of, or employ various investment strategies and techniques for both hedging and more speculative purposes such as short-selling, leverage, derivatives, and options, which can increase volatility and the risk of investment loss. Characteristics such as correlation to traditional markets, investment strategy, and market sector exposure can play a role in the classification of a traditional security being classified as alternative.

Traditional alternative investment vehicles are illiquid and usually are not valued daily. The estimated valuation provided will be as of the most recent date available and will be included in summaries of your assets. Such valuation may not be the most recent provided by the fund in which you are invested. No representation is made that the valuation is a market value or that the interest could be liquidated at this value. We are not required to take any action with respect to your investment unless valid instructions are received from you in a timely manner. Some positions reflected herein may not represent interests in the fund, but rather redemption proceeds withheld by the issuer pending final valuations which are not subject to the investment performance of the fund and may or may not accrue interest for the length of the withholding. Morgan Stanley does not engage in an independent valuation of your alternative investment assets. Morgan Stanley provides periodic information to you including the market value of an alternative investment vehicle based on information received from the management entity of the alternative investment vehicle or another service provider.

Traditional alternative investment vehicles often are speculative and include a high degree of risk. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, shortselling, or other speculative practices: Lack of liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring interests in a fund; Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; Absence of information regarding valuations and pricine: Complex tax structures and delays in tax reporting; Less regulation and higher fees than mutual funds; and Risks associated with the operations. personnel, and processes of the manager. As a diversified global financial services firm, Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in brokerdealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management's interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley Wealth Management can give no assurance that conflicts of interest will be resolved in favor of its clients or any such fund.

Indices are unmanaged and investors cannot directly invest in them. Composite index results are shown for illustrative purposes and do not represent the performance of a specific investment. Past performance is no guarantee of future results. Actual results may vary. Diversification does not assure a profit or protect against loss in a declining market. Any performance or related information presented has not been adjusted to reflect the impact of the additional fees paid to a placement agent by an investor (for Morgan Stanley placement clients, a one-time upfront Placement Fee of up to 3%, and for Morgan Stanley investment

advisory clients, an annual advisory fee of up to 2.5%), which would result in a substantial reduction in the returns if such fees were incorporated.

For most investment advisory clients, the program account will be charged an asset-based wrap fee every quarter ("the Fee"). In general, the Fee covers investment advisory services and reporting. In addition to the Fee, clients will pay the fees and expenses of any funds in which their account is invested. Fund fees and expenses are charged directly to the pool of assets the fund invests in and impact the valuations. Clients must understand that these fees and expenses are an additional cost and will not be included in the Fee amount in the account statements.

As fees are deducted quarterly, the compounding effect will be to increase the impact of the fees by an amount directly related to the gross account performance. For example, for an account with an initial value of \$100,000 and a 2.5% annual fee, if the gross performance is 5% per year over a three year period, the compounding effect of the fees will result in a net annual compound rate of return of approximately 2.40% per year over a three year period, and the total value of the client's portfolio at the end of the three year period would be approximately \$115,762.50 without the fees and \$107,372.63 with the fees. Please see the applicable Morgan Stanley Smith Barney LLC Form ADV Part 2A for more information including a description of the fee schedule. It is available at www.morganstanley.com/ADV or from your Financial Advisor/Private Wealth Advisor.

Afternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley does not provide tax or legal advice. Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank.

SIPC insurance does not apply to precious metals, other commodities, or traditional alternative investments.

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Money Market Funds

You could lose money in Money Market Funds. Although MMFs classified as government funds (i.e., MMFs that invest 99.5% of total assets in cash and/or securities backed by the U.S government) and retail funds (i.e., MMFs open to natural person investors only) seek to preserve value at \$1.00 per share, they cannot guarantee they will do so. The price of other MMFs will fluctuate and when you sell shares they may be worth more or less than originally paid. MMFs may impose a fee upon sale or temporarily suspend sales if liquidity falls below required minimums. During suspensions, shares would not be available for purchases, withdrawals, check writing or ATM debits. A MMF investment is not insured or guaranteed by the Federal Deposit Insurance Corporation or other government agency.





BIII To:

Waxahachle Firefighter's Retief & Retirement Fund Attn: Gary Myers 407 Water Waxahachle, TX 75185

INVOICE

Thursday, October 25, 2018 Invoice No: 2792 Member ID: 410 Contact ID: 878

Remit Payment To:

TEXPERS
13111 Northwest
Freeway, Suite 100
Houston, TX 77040

EIN: 76-0291717

DESCRIPTION	UNIT PRICE	QTY	AMOUNT
Membership Renewal Member Type: Retirement System Through 12/31/2019, Member Renew Date: 10/25/2018	\$86.71	1	\$86,71
TERMS: Due Upon Receipt			

SENT TO FAULT 10/25/18

 Subtotal
 \$86,71

 Sales Tax
 \$0.00

 Prior Payments
 \$0.00

 TOTAL DUE
 \$86,71

Notes: Member Type: Retirement System Membership Expiration Date; 12/31/2019 Membership Cost; \$86,71