



Oklahoma State Pension Commission

Calendar Year 2016 Fee Analysis

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Don Stracke, CFA, CAIA, Senior Consultant Tony Ferrara, CAIA, Consultant

Public Markets Fee Overview

Within Public Markets (Both Equity & Fixed) there are 3 general types of Fee structures:

1. Flat Fee

- A flat basis point fee that is charged no matter the size of the mandate
- Typically used for passive or indexed mandates

2. Tier or Asset-Based Fee (Declining Marginal Rate Fee Structure)

- A fee schedule that includes breakpoints or "Tiers" based on the size of the mandate
- The breakpoints will provide lower fees as the amount of assets grows
- These fee structures are offered by passive and active managers and are the most prominently used (100 bps on the first \$50 mm, 75 bps on the next \$50 mm, with 50 bps on assets over \$100mm)

3. Performance-Based Fee

- A fee schedule that includes the ability for the manager to profit from the performance of a portfolio
- The fee is compromised of a base fee, which is substantially lower than the customary or normal fee, and a
 performance component that is earned or exceeded only when the manager earns a required excess
 returns (See Appendix for Formula)

Notes:

- Performance fees do not lead to better performance
- Clients may be able to negotiate better fees using the performance fee approach, since manager mostfavored-nation restrictions are less binding
- When managers seriously underperform, the optics are better, bet in rising markets fees can be noticeably higher

Private Equity/Hedge Fund Fee Overview

Within the private equity and hedge fund fees, there are different types of fee structures which depend on the type of vehicle:

1. Private Equity Fee Structures

- Fees are typically much higher than for public market assets
- Fees structures often include the following components:
 - Management Fee Typically 1-2%
 - Performance Fee or "carry" Typically 20% of performance above a preferred return payable after all capital is returned
 - Preferred return or "hurdle rate" which needs to be attained in order to earn the performance fee— Typically 6-10%
- Fees often paid on committed, not invested capital, although this is changing

2. Hedge Fund Fee Structures

- Fees are very high compared to traditional managers
- Fees are made up of two components:
 - Management Fee
 - A fixed fee usually determined as a percentage of assets
 - Typically between 1-3%
 - Performance Fee:
 - Based on net new performance
 - Generally subject to a "highwater mark" or max fee
 - Typically between 15-30% of performance, which can be either above a hurdle or simply a
 positive return

General Observations

- Competitive pressures are leading to lower fees
- In Public Markets, chronic manager underperformance has led to increased use of passive management
- In Alternatives, 1) Fees are coming down 2) Increasingly fees are being quoted on invested or drawn amounts, and 3) Non-zero hurdle rates are becoming more common
- Public Entities are facing greater political pressures on fees

Fee Comparison from 2015 to 2016 – Using Monthly Average of Market Values

	TEACHERS	PERS	FIRE	POLICE	LAW	JUDGES	WILDLIFE	Total
Total Average 2016 Market Values	\$14,110,646,267	\$8,405,208,584	\$2,269,108,834	\$1,707,034,305	\$919,924,862	\$292,546,707	\$104,911,966	\$27,809,381,52
Custody Fee	\$25,000	\$31,407	\$251,489	\$189,974	\$101,000	\$868	\$10,603	\$610,340
Securities Lending Income	(\$7,736,648)	(\$2,521,390)	(\$1,068,717)	\$0	(\$309,444)	\$0	\$0	(\$11,636,198)
Commission Recapture	(\$148,125)	(\$95,409)	(\$55,807)	(\$319,669)	\$0	\$0	\$0	(\$619,011)
Sub-Total (Custody - Net)	(\$7,859,773)	(\$2,585,393)	(\$873,035)	(\$129,696)	(\$208,444)	\$868	\$10,603	(\$11,644,868)
Investment Manager Fees (\$)	\$53,773,816	\$7,747,736	\$13,110,976	\$10,375,554	\$4,045,278	\$116,274	\$186,573	\$89,356,206
Investment Manager Fees (%)	0.38%	0.09%	0.58%	0.61%	0.44%	0.04%	0.18%	0.32%
Percent Passively Managed	2.7%	39.8%	19.2%	24.8%	18.0%	70.5%	10.6%	26.5%
Total Investment Return	11.4%	7.7%	7.3%	7.5%	7.2%	8.1%	6.6%	9.5%
Sub-Total Manager Fees	\$53,773,816	\$7,747,736	\$13,110,976	\$10,375,554	\$4,045,278	\$116,274	\$186,573	\$89,356,206
Investment Consultant Fee (\$)	\$1,062,000	\$272,466	\$270,000	\$650,000	\$135,000	\$7,534	\$0	\$2,397,000
Investment Consultant Fee (%)	0.01%	0.003%	0.01%	0.04%	0.01%	0.003%	0%	0.01%
Total Fee (\$) Total Fee (%)	\$46,976,043 0.33%	\$5,434,809 0.06%	\$12,507,942 0.55%	\$10,895,858 0.64%	\$3,971,835 0.43%	\$124,676 0.04%	\$197,176 0.19%	\$80,108,338 0.29%
	TEACHERS	PERS	FIRE	POLICE	LAW	JUDGES	WILDLIFE	Total
Total Average 2015 Market Values	\$13,881,907,405	\$8,510,287,049	\$2,218,638,870	\$2,197,496,324	\$848,632,166	\$296,710,041	\$97,595,071	\$28,051,266,92
Custody Fee	\$50,000	\$38,924	\$251,972	\$182,571	\$101,000	\$1,076	\$9,839	\$635,382
Securities Lending Income	(\$8,265,907)	(\$2,638,263)	(\$903,560)	\$0	(\$212,244)	\$0	\$0	(\$12,019,973)
Commission Recapture	(\$2,635,625)	(\$67,231)	(\$85,007)	(\$263,840)	\$0	\$0	\$0	(\$3,051,702)
Sub-Total (Custody - Net)	(\$10,851,532)	(\$2,666,570)	(\$736,594)	(\$81,269)	(\$111,244)	\$1,076	\$9,839	(\$14,436,293)
Investment Manager Fees (\$)	\$58,698,381	\$11,349,644	\$12,694,080	\$12,087,165	\$4,691,702	\$127,131	\$174,646	\$99,822,750
Investment Manager Fees (%)	0.42%	0.13%	0.57%	0.55%	0.55%	0.04%	0.18%	0.36%
Percent Passively Managed	9.2%	46.5%	22.5%	17.2%	13.5%	70.3%	10.6%	27.1%
Total Investment Return	-2.9%	-0.8%	2.1%	1.0%	-0.4%	-1.1%	0.1%	-1.5%

2015 FEES

2016 FEES

Total Fee (\$) Total Fee (%)	\$48,908,850 0.35%	\$8,955,540 0.11%	\$12,227,486 0.55%	\$12,655,896 0.58%	\$4,690,459 0.55%	\$135,741 0.05%	\$184,485 0.19%	\$87,758,457 0.31%
Investment Consultant Fee (%)	0.01%	0.003%	0.01%	0.03%	0.01%	0.003%	0%	0.01%
nvestment Consultant Fee (\$)	\$1,062,000	\$272,466	\$270,000	\$650,000	\$110,000	\$7,534	\$0	\$2,372,000
Sub-Total Manager Fees	\$58,698,381	\$11,349,644	\$12,694,080	\$12,087,165	\$4,691,702	\$127,131	\$174,646	\$99,822,750
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Custody Fee	\$50,000	\$38,924	\$251,972	\$182,571	\$101,000	\$1 <i>,</i> 076	\$9,839	\$635 <i>,</i> 382



OK Teachers Fee Overview

Manager	Asset Class/Style	2016 Total Fees Paid	Avg. Market Value	Fees (%)
Advisory Research, Inc.	Small Cap International Equity	\$1,112,568	\$184,108,553	0.60%
Advisory Research/FAMCO MLP	Master Limited Partnerships	\$589,138	\$227,285,099	0.26%
AEW	Core Real Estate	\$2,192,341	\$272,091,827	0.81%
Allianz	Large Cap International Equity	\$1,548,519	\$747,028,085	0.21%
American Realty	Non-Core Real Estate	\$504,020	\$31,734,361	1.59%
Antheus	Non-Core Real Estate	\$800,727	\$44,912,961	1.78%
Aronson Johnson Ortiz (AJO)	Mid Cap Domestic Equity	\$900,073	\$563,069,885	0.16%
Causeway Capital Management LLC	Large Cap International Equity	\$926,790	\$345,260,927	0.27%
Chickasaw Capital Management, LLC	Master Limited Partnerships	\$2,799,724	\$401,336,212	0.70%
Cove Street Capital	Small Cap Domestic Equity	\$650,177	\$112,780,928	0.58%
Cushing	Master Limited Partnerships	\$1,266,790	\$365,495,086	0.35%
Dune	Non-Core Real Estate	\$730,710	\$42,011,247	1.74%
Epoch	All Cap Domestic Equity	\$1,133,916	\$310,855,934	0.36%
Epoch	Small Cap International Equity	\$1,022,643	\$193,598,094	0.53%
Franklin Park	Private Equity - Legacy	\$133,411	\$37,928,541	0.35%
Franklin Park	Private Equity	\$4,237,459	\$751,258,388	0.56%
Frontier Capital Management	Small Cap Domestic	\$1,368,446	\$199,282,394	0.69%
Frontier Capital Management	Mid Cap Domestic Equity	\$2,151,682	\$536,810,469	0.40%
Geneva Capital Management LTD	Small Cap Domestic Equity	\$1,242,961	\$239,888,339	0.52%
GreenOak	Non-Core Real Estate	\$601,746	\$34,171,262	1.76%
Heitman	Core Real Estate	\$1,988,054	\$280,265,515	0.71%
Hoisington	Core + Fixed Income	\$351,643	\$359,359,248	0.10%
Hotchkis & Wiley	Large Cap Domestic Equity	\$1,288,171	\$605,013,948	0.21%
Hotchkis & Wiley	Mid Cap Domestic Equity	\$2,073,175	\$543,414,925	0.38%
L&B	Core Real Estate	\$2,010,761	\$249,418,045	0.81%
L&B	Non-Core Real Estate	\$233,324	\$52,594,679	0.44%
Landmark	Non-Core Real Estate	\$350,000	\$18,093,748	1.93%
Loomis Sayles	Core + Fixed Income	\$695,645	\$654,435,175	0.11%
Loomis Sayles	High Yield Fixed Income	\$1,011,794	\$280,327,525	0.36%
Lord Abbett	Core + Fixed Income	\$797,251	\$652,406,496	0.12%
Lord Abbett	High Yield Fixed Income	\$829,346	\$297,139,041	0.28%
Mackay Shields	Core + Fixed Income	\$983,132	\$635,299,750	0.15%
Mackay Shields	High Yield Fixed Income	\$913,859	\$294,664,492	0.31%
Neumeier Poma Investments	Small Cap Domestic Equity	\$722,284	\$152,177,229	0.47%
Northern Trust	Passive Domestic Equity	\$61,896	\$328,520	18.84%
PIMCO	BRAVO I	\$53,157	\$11,039,144	0.48%
PIMCO	BRAVO II	\$686,628	\$151,923,770	0.45%
PIMCO	BRAVO III	\$278,299	\$5,850,114	4.76%
PIMCO	COFII	\$313,039	\$11,558,801	2.71%
Sawgrass Asset Management	Large Cap Domestic Equity	\$1,421,669	\$575,366,072	0.25%
Shapiro Capital Management	Small Cap Domestic Equity	\$3,828,663	\$752,722,537	0.51%
Starwood	Non-Core Real Estate	\$670,950	\$33,469,006	2.00%
State Street Global Advisors	Passive Domestic Equity	\$69,885	\$219,416,244	0.03%
State Street Global Advisors	Emerging Markets Small Cap	\$666,967	\$166,992,833	0.40%
Wasatch Advisors	Small Cap International Equity	\$1,244,387	\$166,992,833	0.40%
Wasatch Advisors				0.66%
	Small Cap Domestic Equity	\$1,472,998	\$224,763,140	
Wellington Management	Large Cap International Equity	\$1,205,087	\$338,095,037	0.36% 0.52%
Wellington Management	Small Cap International Equity	\$1,050,405	\$202,183,869	0.52%
Wellington Management Total	Mid Cap Domestic Equity	\$587,506 \$53,773,816	\$495,944,169 \$14,110,646,267	0.12%

Asset Allocation	Asset Allocation Breakdown				
	2016 % of	2015 % of			
	<u>Total Fund</u>	Total Fund			
Domestic Equity	41.9%	44.1%			
% Active	38.3%	41.1%			
% Passive	3.6%	3.0%			
Domestic Fixed	21.5%	21.6%			
% Active	21.5%	21.6%			
% Passive	0.0%	0.0%			
International Eq	15.4%	16.3%			
% Active	15.4%	10.1%			
% Passive	0.0%	6.2%			
Global Fixed	0.0%	0.0%			
% Active	0.0%	0.0%			
% Passive	0.0%	0.0%			

21.2%

11.4%

17.9%

-2.9%

2016 Securities

Lending Income

\$7,736,648

Other

Calendar Year Return

2016 Commission

Recapture

\$148,125

2016 Investment

Consultant Fee

\$1,062,000

2016 Custody

Fee

\$25,000



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OK PERS Fee Overview

Manager	Asset Class/Style	2016 Total Fees Paid	Avg. Market Value	Fees (%)
BlackRock Financial	Constrained Core	\$1,103,868	\$1,373,174,400	0.08%
Hoisington	Interest Rate Sensitive	\$416,356	\$281,227,182	0.15%
BlackRock TIPS	Interest Rate Sensitive	\$29,085	\$245,657,079	0.01%
MetWest	Core Plus	\$392,922	\$789,100,751	0.05%
Mondrian	International Equity Value	\$1,810,133	\$498,487,641	0.36%
Baillie Gifford	International Equity Growth	\$1,092,265	\$269,795,293	0.40%
BlackRock ACWI x-US Growth	International Equity Growth	\$137,071	\$268,776,116	0.05%
BlackRock ACWI x-US	International Equity	\$415,402	\$842,623,609	0.05%
BlackRock R1000 Index	US Equity Large Cap	\$133,087	\$1,753,312,766	0.01%
BlackRock R1000 Growth Index	US Equity Large Cap	\$15,987	\$235,105,980	0.01%
Mellon	US Equity Large Cap	\$125,000	\$523,084,673	0.02%
SSgA	US Equity Large Cap	\$157,928	\$529,746,997	0.03%
AJO	US Equity Large Cap		\$231,877,592	0.00%
Westfield	US Equity Large Cap			-
UBS	US Equity Small Cap	\$276,096	\$183,338,609	0.15%
Barrow Hanley	US Equity Small Cap	\$1,013,879	\$193,407,897	0.52%
DRZ	US Equity Small Cap	\$581,274	\$173,856,580	0.33%
Price Edwards/Grand Centre	Property Management	\$47,381	\$12,635,417	0.37%
Total		\$7,747,736	\$8,405,208,584	0.09%

Asset Allocation Br		
<u>2016 % of</u> <u>Total Fund</u>		2015 % of Total Fund
Domestic Equity	46.8%	45.7%
% Active	23.2%	15.3%
% Passive	23.6%	30.4%
Domestic Fixed	30.5%	31.5%
% Active	27.7%	28.7%
% Passive	2.8%	2.8%
Int'l Equity	22.2%	22.4%
% Active	9.0%	9.1%
% Passive	13.2%	13.3%
Other	0.5%	0.4%
Calendar Year Return	7.7%	-0.8%

2016 Investment

Consultant Fee

\$272,466

2016 Custody

Fee

\$31,407

2016

Commission

Recapture

\$95,409

2016 Securities

Lending Income

\$2,521,390

^{*}Baillie Gifford entered portfolio in Sept 2013



OK Firefighters Fee Overview

ARONSON- PARTNERS LARGE CAP VALUE REMNANT \$29,888 0.00% \$29,888 0.00% \$29,888 0.00% \$29,888 0.00% \$29,888 0.00% \$29,888 0.00% \$29,888 0.00% \$29,888 0.00% \$29,888 0.00% \$20,888 0.00% \$20,888 0.00% \$20,888 0.00% \$20,888 0.00% \$20,888 0.00% \$20,888 0.00% \$20,888 0.00% \$20,888 0.00% \$20,888 0.00% \$20,888 0.00% \$20,888 0.00% \$20,898 0.00% 0.00	anager	Asset Class/Style	2016 Total Fees Paid	Avg. Market Value	Fees (%)	2016 Securities Lending Income
ARDIAN PRIVATE EQUITY SECONDARIES \$40,000 \$22,162,003 1.80% ARDIOSON PARTNERS LARGE CAP VALUE \$86,535 \$81,588,044 0.11% ARTIO GLIDBAL MANAGEMENT LLC REMINANT \$29,888 0.00% 224,100 DOWN PARTNERS BEAUTION OF THE PRIVATE STATE OF THE PRIVATE STATE S	LIANZ GLOBAL INVESTORS DMAP	OTHER FIXED INCOME	\$173,110	\$47,728,013	0.36%	\$1,068,717
ARONSON - PARTINERS ARGE CAP VALUE REMNANT S19,888 0.00% AZUL HOLDCO REMINANT S29,888 0.00% AZUL HOLDCO REMNANT S29,888 0.00% S69,458,931 0.33% S69,458,931 0.32% CAPITAL DYNAMICS GLOBAL SECONDARIES IV P PRIVATE EQUITY SECONDARIES S701,973 S72,939,502 0.76% CLARIVEST EM EQUITY EMERGING MARKETS S329,484 S42,051,139 0.78% S69,595,545 1.84% EARNEST PARTINERS SMALL CAP VALUE S328,083 S69,739,188 0.50% S69,598,544 S69,599,554 1.84% EARNEST PARTINERS SMALL CAP VALUE S328,083 S69,739,188 0.50% S69,598,598 D0mest EMPANCED INVESTMENT TECHNOLOGIES LARGE CAP GROWTH S692,677 S173,169,185 0.40% S69,508,332 1.58% D0mest EMPANCED INVESTMENT TECHNOLOGIES FRED ALGER MANAGEMENT, INC. LARGE CAP GROWTH S692,677 S173,169,185 0.40% S69,508,332 1.58% D0mest EMPANCED INVESTMENT TECHNOLOGIES FRED ALGER MANAGEMENT, INC. LARGE CAP GROWTH S692,677 S173,169,185 0.40% S69,508,332 1.58% D0mest EMPANCED INVESTMENT S10,268 S10,248,332 S10,348	GELO GORDON NET LEASE REALTY III LP	REAL ESTATE	\$295,280	\$9,991,057	2.96%	
ARTIO GLOBAL MANAGEMENT LLC REMNANT S.29,858 0.00% AZUL HOLDCO REMNANT LARGE CAP VALUE \$226,930 \$69,588,931 0.33% GRANDYWINE GLOBAL FIXED GLOBAL FIXED INCOME \$458,513 \$144,074,938 0.32% CHAUTAUQUA INT EQUITY PRIVATE GUITY SCEONDARIES SAP,500 CHAUTAUQUA INTERNATIONAL EQUITY PRIVATE GUITY SCEONDARIES LARGE CAP VALUE S.29,939,502 0.76% CHAUTAUQUA INTERNATIONAL EQUITY PRIVATE EQUITY SCEONDARIES REMEANDED SAPE,500 CHAUTAUQUA INTERNATIONAL EQUITY PRIVATE CULTY SCEONDARIES REMEAL ESTATE FUNDI III REAL ESTATE SAPALOSA SABAL CAP VALUE S.329,848 S.29,939,502 0.76% CHAUTAUQUA INTERNATIONAL EQUITY PRIVATE CULTY S.329,848 S.29,399,502 0.76% CHAUTAUQUA INTERNATIONAL EQUITY PRIVATE CULTY S.329,848 S.29,399,502 0.76% CHAUTAUQUA INTERNATIONAL EQUITY S.329,848 S.29,399,502 0.76% CASH S.329,848 S.29,399,502 0.76% CASH S.329,848 S.29,399,502 0.76% CASH DOMEST DOM	DIAN	PRIVATE EQUITY SECONDARIES	\$400,000	\$22,162,003	1.80%	
REMMANT BUTTEL GODMAN COMPANY LARGE CAP VALUE \$22,930 \$69,458,931 0.33% BRANDYWINE GLOBAL FIXED GLOBAL FIXED INCOME \$458,513 \$144,074,938 0.32% CAPITAL DYNAMICS GLOBAL SECONDARIES IV IP PRIVATE EQUITY SECONDARIES \$427,500 \$12,401,183 3.45% CALTITUDE OF THE FIXED INCOME \$458,513 \$144,074,938 0.32% CAPITAL DYNAMICS GLOBAL SECONDARIES IV IP PRIVATE EQUITY SECONDARIES \$427,500 \$12,401,183 3.45% CALTITUDE OF THE FIXED INCOME \$458,513 \$144,074,938 3.45% CALTITUDE OF THE FIXED INCOME \$42,051,139 0.75% CLARIVEST EM EQUITY EMERGING MARKETS \$329,484 \$42,051,139 0.75% CARTIST EMINOR IN EXAMOSIC SECONDARIES \$42,051,139 0.05% EMANACED INVESTMENT TECHNOLOGIES LARGE CAP CORE \$264,553 \$11,468,838 0.19% 6ACTITUDE OF THE FIXED INCOME \$507,028 \$32,048,332 1.55% DOMEST EMERAL ESTATE \$57,454,546 0.00% FALL CAPITAL III IP REAL ESTATE \$57,454,456 0.00% FALL CAPITAL III IP REAL ESTATE \$1,220,458 \$11,968,553 2.09% FALL CAPITAL III IP REAL ESTATE \$44,135 \$11,968,553 2.09% FALL CAPITAL III IP REAL ESTATE \$44,135 \$15,668,374 1.49% FALL CAPITAL III IP THE FIXED INCOME FALL ESTATE \$57,481,391 0.69% FA	ONSON+ PARTNERS	LARGE CAP VALUE	\$86,535	\$81,598,044	0.11%	
BEUTEL GOODMAN COMPANY LARGE CAP VALUE \$226,930 \$59,458,931 0.33% BRANDYWINE GLOBAL FIXED GLOBAL FIXED INCOME \$44,074,938 0.32% CAPITAL DYNAMICS GLOBAL SECONDARIES IV LP PRIVATE COLITY SECONDARIES \$427,500 \$12,401,183 3.45% CHAUTAUQUA INT EQUITY INTERNATIONAL EQUITY INTERNATIONAL EQUITY INTERNATIONAL EQUITY INTERNATIONAL EQUITY INTERNATIONAL EQUITY STOLLARY SET ME QUITY DUNE REAL ESTATE \$394,844 \$42,01,139 \$92,399,502 0.76% CHAUTAUQUA INT EQUITY DUNE REAL ESTATE \$394,845 \$394,035 \$16,559,554 1.84% EARNEST PARTNERS SMALL CAP VALUE \$328,083 \$65,931,189 0.50% *ACTIVITY GARCIA HAMILTON & ASSOCIATES, LP BONDS \$106,543 \$514,946,838 0.19% *ACTIVITY GARCIA HAMILTON & ASSOCIATES, LP BONDS \$106,543 \$524,8432 1.58% DOMEST HERNDON CAPITAL (TERNIDING LP OTHER FIXED INCOME \$507,028 \$32,048,332 1.58% DOMEST *ACTIVITY HERNDALCAP HALL GAPITAL III LP REAL ESTATE \$5,454,546 0.00% *ACTIVITY HERNDALCAP HALL GAPITAL III LP REAL ESTATE \$5,457,972 0.00% *ACTIVITY HERNDALCAP HALL GAPITAL III LP REAL ESTATE \$12,275,345 0.00% *ACTIVITY HERNDALCAP HALL GAPITAL III LP REAL ESTATE \$12,275,345 0.00% *ACTIVITY HERNDALCAP HALL GAPITAL III LP REAL ESTATE \$12,275,345 0.00% *ACTIVITY HERNDALCAP HALL GAPITAL III LP REAL ESTATE \$1,20,458 \$135,293,119 0.90% *ACTIVITY *ACTIVITY FUND II LP OTHER FIXED INCOME \$44,079,770 0.00% *ACTIVITY *ACTIVITY FUND II LP OTHER FIXED INCOME \$44,079,977 0.00% *ACTIVITY *ACTIVITY FUND II LP OTHER FIXED INCOME \$4,407,977 0.00% *ACTIVITY *ACTIVITY FUND II LP OTHER FIXED INCOME \$44,079,977 0.00% *ACTIVITY *ACTIVITY FUND II LP OTHER FIXED INCOME \$44,079,977 0.00% *ACTIVITY *ACTIVITY FUND II LP OTHER FIXED INCOME \$44,079,977 0.00% *ACTIVITY *ACTIVITY FUND II LP OTHER FIXED INCOME \$44,079,977 0.00% *ACTIVITY *A	TIO GLOBAL MANAGEMENT LLC	REMNANT		\$29,858	0.00%	
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THORNBURG INVESTMENT MGMT REMNANT \$63,023 0.00% TORTOISE DIRECT OPPORTUNITIES FUND, LP OTHER EQUITY \$15,568,998 WASATCH EM EQUITY EMERGING MARKETS \$192,140 \$20,729,675 0.93%			\$84,171		0.92%	
TORTOISE DIRECT OPPORTUNITIES FUND, LP OTHER EQUITY \$15,568,998 WASATCH EM EQUITY EMERGING MARKETS \$192,140 \$20,729,675 0.93%						
WASATCH EM EQUITY EMERGING MARKETS \$192,140 \$20,729,675 0.93%					0.00%	
		•				
WCM INT EQTY INTERNATIONAL EQUITY \$1,243,236 \$97,904,620 1.27%						
Total \$13,110,976 \$2,269,108,834 0.58%	-	INTERNATIONAL EQUITY				7

Asset Allocation Breakdown					
	2016 % of	2015 % of			
	Total Fund	<u>Total Fund</u>			
Domestic Equity	50.0%	47.1%			
% Active	33.6%	34.5%			
% Passive	16.4%	12.6%			
Domestic Fixed	5.4%	7.4%			
% Active	3.5%	3.6%			
% Passive	1.9%	3.8%			
International Eq	10.9%	14.1%			
% Active	10.9%	14.1%			
% Passive	0.0%	0.0%			
International Fxd	8.0%	6.1%			
% Active	6.1%	0.0%			
% Passive	1.9%	6.1%			
Other*	25.7%	25.3%			

7.3%

2016 Investment

Consultant Fee

\$270,000

2016 Custody Fee

\$251,489

2.1%

2016 Commission

\$55,807

Calendar Year Return



^{*}Includes L/S Equity

OK Police Fee Overview

Manager	Asset Class/Style	2016 Total Fees Paid	Avg. Market Value	Fees (%)	Manager	Asset Class/Style	2016 Total Fees Paid
ACCEL	Private Equity -Venture Capital	NC	\$4,868,508	-	GROSVENOR "B"	Long/Short Equity	
ACTIS GLOBAL 4	Private Equity - EM	\$135,000	\$4,464,088	3.02%	HALL CAPITAL III	Real Estate	\$43,001
AGINCOURT	Global Fixed Income - Core	\$295,473	\$159,950,702	0.18%	JP MORGAN	Real Assets - Core	\$995,237
ALLIANCEBERNSTEIN EM	International Equity - EM	\$90,614	\$11,297,282	0.80%	KNIGHTBRIDGE	Private Equity - Distressed	\$75,060
APOLLO FUND VIII	Private Equity - Buyout	\$43,935	\$3,481,153	1.26%	LBC CREDIT PARTNERS IV	Private Equity - Credit	\$16,275
ARCLIGHT ENERGY		\$112,500	\$2,738,216	4.11%	LEVINE LEICHTMAN III	Private Equity - Buyout	
ARSENAL I	Private Equity - Buyout		\$78,111	0.00%	LEVINE LEICHTMAN IV	Private Equity - Buyout	\$33,544
ARSENAL II	Private Equity - Buyout	\$42,291	\$9,554,423	0.44%	LEXINGTON CAPITAL PARTNERS VI-B	Private Equity - Fund of Funds	\$52,192
ARSENAL III	Private Equity - Buyout	\$26,918	\$8,591,264	0.31%	LIGHTSPEED VENTURE PARTNERS VI	Private Equity -Venture Capital	
BARING FOCUSED INT'L EQUITY	International Equity	\$379,777	\$94,928,756	0.40%	LOOMIS SAYLES	Global Fixed Income	\$307,274
BLACKSTONE PROPERTY	Core Real Estate	\$275,303	\$33,703,284	0.82%	MARATHON V	Private Equity - Distressed	
BOSTON PARTNERS	Domestic Equity/Small-Mid Cap	o' \$566,536	\$91,694,247	0.62%	MIDTOWN FUND III	Private Equity -Venture Capital	
CALERA III (Semi Annual)	Private Equity - Buyout		\$1,542,362	0.00%	MONDRIAN INVESTMENT	International Equity	\$536,062
CALERA IV (Semi Annual)	Private Equity - Buyout	\$45,660	\$1,370,327	3%	NEWSTONE CAPITAL	Private Equity - Mezzanine	\$7,907
CENTER OAK EQUITY I		\$52,752	\$520,836	10.13%	NEWSTONE CAPITAL Fund II	Private Equity - Mezzanine	\$82,969
CERBERUS FUND III	Real Assets-Opportunistic	\$241,525	\$21,140,307	1.14%	NEWSTONE CAPITAL FUND III		\$0
CERBERUS FUND IV	Real Assets- Opportunistic	\$268,410	\$960,490	27.95%	NT- EMERGING MKTS INDEX	Emerging Mkts Index	\$43,247
COLUMBUS SQUARE	Real Assets - Core	\$22,681	\$4,253,447	0.53%	NT- RUSSELL 1000 INDEX	Domestic Equity/Large Cap	\$38,401
CONTROL ACCOUNT	Cash & Cash Equivalent		\$18,485,084	0.00%	OAKTREE CAPITAL TRUST	Global Fixed Income	\$537,814
CORTINA CAPITAL	Small/Mid Cap Growth	\$595,125	\$66,019,620	0.90%	OAKTREE EUROPEAN DISLOCATION	Private Equity - Distressed	\$45,418
ENCAP ENERGY CAP X	Private Equity - Energy/Other	\$112,500	\$1,346,399	8.36%	OAKTREE FUND III	Private Equity - Distressed	\$0
ENCAP ENERGY CAPITAL FUND IX	Private Equity - Energy/Other	\$63,496	\$4,539,751	1.40%	OAKTREE FUND IX	Private Equity - Distressed	\$118,032
FIRST MARK CAP II	Private Equity -Venture Capital		\$42,361	0.00%	OAKTREE FUND V	Private Equity - Distressed	\$0
FIRST MARK CAP III	Private Equity -Venture Capital	\$86,749	\$2,317,395	3.74%	OAKTREE FUND VI	Private Equity - Distressed	\$6,073
FIRST MARK CAP OPP I	Private Equity -Venture Capital	\$17,358	\$2,345,251	0.74%	OAKTREE FUND VII	Private Equity - Distressed	\$25,515
FIRST MARK I (FIRSTMARK CAP IV)	Private Equity -Venture Capital	\$44,251	\$21,400,209	0.21%	OAKTREE FUND VIIb	Private Equity - Distressed	\$14,789
FIRST MARK II (FIRSTMARK CAP V)	Private Equity -Venture Capital	\$93,732	\$5,956,993	1.57%	OAKTREE FUND VIII	Private Equity - Distressed	\$45,957
FRANCISCO	Private Equity -Venture Capital	\$97,414	\$2,872,056	3.39%	OAKTREE FUND X	Private Equity - Distressed	\$118,849
GRESHAM INV.	Real Assets - Commodities	\$357,340	\$47,211,810	0.76%	OAKTREE OPPORTUNITIES FUND IV	Private Equity - Distressed	\$0
GROSVENOR "A"	Long/Short Equity	\$1,422,880	\$174,697,884	0.81%	OVERSEAS CAP PARTNERS	Private Equity - Distressed	\$0
2016 Securities 2016 Comm	mission 2016 Investment 2	2016 Custody			PAAMCO/ NEW PORT MESA, LLC	Low Volatility	\$1,447,470
Lending Income Recaptu		Fee			PEAK PARTNERS, L.P.	Real Assets - Commodities	\$295,122
					SIGULER GUFF I	Private Equity - Distressed	\$8,849
\$0 \$319,60	69 \$650,000	\$189,974			SIGULER GUFF II (E)	Private Equity - Distressed	\$38,414
Asset Allocatio	n Breakdown				SIGULER GUFF III	Real Assets- Opportunistic	\$79,006
2	016 % of 2015 % of				SIGULER GUFF RE I	Private Equity - Distressed	\$100,000
_					SIGULER GUFF RE II	Real Assets- Opportunistic	\$100,000
	otal Fund Total Fund				SUN CAPITAL V	Private Equity - Buyout	\$0
Domostic Fauity	24 70/ 24 00/				1		

Avg. Market

Value \$130,148,253

\$2,712,070

\$103,717,152

\$9,195,219

\$1,000,000

\$3,643,375

\$3,953,364

\$5,805,420

\$768,821

\$93,033,199

\$51,327

\$360,123

\$113,930,118

\$396,957

\$3,287,472

\$627,338

\$38,879,894

\$384,467,542

\$116,591,874

\$1,533,998

\$71,918

\$7,200,078

\$122,414

\$198,637

\$871,991

\$682,291

\$2,986,535

\$1,478,552

\$31,961

\$118,078

\$167,448,184

\$29,490,986

\$661,791

\$1,949,539

\$5,628,864

\$8,216,450

\$6,540,799

\$11,217,297

\$19,669,103

\$360,629

\$440,559

\$1,856,364

\$3,033,878

\$4,069,809

\$975,575

\$214,253

\$15,322,877

\$7,667,033

\$7,173,681

\$763,363

\$29,959,144

\$7,583,448

\$9,841,375

\$33,333

\$564

\$4,988,528

\$6,735

\$416,272

\$0

\$11,609

\$26,309

\$54,686

\$101,174

\$150,000

\$0

\$130,621

\$35,987

\$53,623

\$140,000

\$450,295

\$60,750

\$75,000

\$12,500

\$0

\$12,676

\$0

Fees

0.00%

1.59%

0.96%

0.82%

1.63%

0.00%

0.85%

0.90%

0.00%

0.33%

0.00%

0.00%

0.47%

1.99%

2.52%

0.00%

0.11%

0.01%

0.46%

2.96%

0.00%

1.64%

0.00%

3.06%

2.93%

2.17%

1.54%

8.04%

0.00%

0.00%

0.86%

1.00%

1.34%

1.97%

1.40%

1.22%

1.53%

0.00%

2.12%

0.00%

2.63%

1.42%

1.80%

2.49%

15.38%

0.00%

0.85%

0.47%

0.75%

18.34%

1.50%

0.80%

0.76%

37.50%

0.00%

0.25%

0.00%

Asset Allocation Breakdown				
	2016 % of	2015 % of		
	Total Fund	Total Fund		
Domestic Equity	24.7%	24.0%		
% Active	8.0%	6.8%		
% Passive	16.7%	17.2%		
Domestic Fixed	12.4%	12.2%		
% Active	12.4%	12.2%		
% Passive	0.0%	0.0%		
International Eq	13.6%	13.8%		
% Active	13.6%	13.8%		
% Passive	0.0%	0.0%		
International Fxd	4.0%	4.0%		
% Active	4.0%	4.0%		
% Passive	0.0%	0.0%		
Other*	45.3%	46.0%		
Calendar Year Return	7.5%	1.0%		

^{*}Includes L/S Equity



TA ASSOC REALTY FUND X

TCW/CRESCENT MEZZ L.P. III

TCW/CRESCENT MEZZ L.P. IV

TCW/CRESCENT MEZZ L.P. V

VENTURE LENDING & LEASING

WASATCH ADVISOR/COMERICA

WELLINGTON GLOBAL TOTAL RETURN

WEATHERGAGE VC FUND I

WEATHERGAGE VC FUND II

VONTOBEL (Account closed 4-2016)

THOMPSON STREET

THOMPSON STREET III

THOMPSON STREET IV

WARBURG PINCUS X

WARBURG PINCUS XI

WARBURG PINCUS XII

WEATHERGAGE VC IV

WILLIAM BLAIR

WEISS, PECK & GREER V

Real Assets- Opportunistic

Private Equity - Mezzanine

Private Equity - Mezzanine

Private Equity - Mezzanine

Private Equity - Buyout

Private Equity - Buyout

Private Equity - Buyout

Private Equity - Venture Capital

International Equity

Private Equity - Venture Capital

Private Equity -Venture Capital

Private Equity -Venture Capital

Int'l. EM Small Cap

Private Equity -Venture Capital

Private Equity -Venture Capital

Private Equity -Venture Capital

Private Equity -Venture Capital

OK Law Fee Overview

Manager	Asset Class/Style	2016 Total Fees Paid	Avg. Market Value	Fees (%)
COLUMBUS CIRCLE	SMALL CAP	\$211,860	\$47,009,000	0.45%
HOTCHKIS AND WILEY	LARGE CAP	\$218,103	\$64,608,000	0.34%
KENNEDY CAPITAL	SMALL CAP	\$528,216	\$56,595,000	0.93%
WADDELL AND REED	LARGE CAP	\$324,559	\$65,502,000	0.50%
NORTHERN TRUST	S&P 500	\$38,684	\$61,138,000	0.06%
NORTHERN TRUST	BOND		\$76,224,000	0.00%
NORTHERN TRUST	EMERGING INT	\$17,062	\$27,861,000	0.06%
TCW ASSET MNGT	CORE PLUS BOND	\$321,338	\$100,811,000	0.32%
FRANKLIN TEMPLETON	INTERNATIONAL BOND	\$340,874	\$72,549,000	0.47%
BARING	INTERNATIONAL EQUITY	\$265,298	\$33,204,000	0.80%
MONDRIAN	INTERNATIONAL EQUITY	\$239,264	\$39,872,000	0.60%
WASATCH ADVISORS	EMERGING INT	\$102,975	\$10,312,000	1.00%
JP MORGAN	REAL ESTATE	\$558,904	\$56,661,000	0.99%
UBS TRUMBELL	REAL ESTATE	\$162,642	\$13,999,000	1.16%
GROSVENOR	LONG/SHORT EQUITY	\$715,500	\$96,283,862	0.74%
GRESHAM	COMMODITIES	\$169,750	\$17,253,000	0.98%
WILLIAM BLAIR	EMERGING INT	\$59,000	\$28,185,000	0.21%
WELLINGTON	SMALL CAP	\$151,758	\$51,858,000	0.29%
	Total	4,045,278.40	\$919,924,862	0.44%

Asset Allocation Breakdown					
	2016 % of	2015 % of			
	Total Fund	Total Fund			
Domestic Equity	35.3%	35.0%			
% Active	28.0%	30.1%			
% Passive	7.3%	4.9%			
Fixed Income	28.4%	28.4%			
% Active	19.9%	19.8%			
% Passive	8.5%	8.6%			
Int'l Equity	17.6%	17.4%			
% Active	17.6%	17.4%			
% Passive	0.0%	0.0%			
Other	18.7%	19.2%			
Calendar Year Return	7.2%	-0.4%			

2016 Securities 2016 Commission 2016 Investment 2016 Custody

Consultant Fee

\$135,000

Fee

\$101,000

Recapture

\$215,703

Lending Income

\$309,444



OK Judges & Justices Fee Overview

Manager	Asset Class/Style	2016 Total Fees Paid	Avg. Market Value	Fees (%)	2016 Securities Lending Income	2016 Commission Recapture	2016 Investment Consultant Fee	2016 Custody Fee
BlackRock Financial	Constrained Core	38,706	48,145,133	0.08%	\$0	\$0	\$7,534	\$868
Hoisington	Interest Rate Sensitive	15,840	10,696,942	0.15%				
BlackRock TIPS	Interest Rate Sensitive	1,052	8,881,839	0.01%				
MetWest	Core Plus	13,742	27,589,793	0.05%				
BlackRock R1000 Index	US Equity Large Cap	8,625	113,633,697	0.01%				
BlackRock R2000 Index	US Equity Small Cap	6,455	18,983,235	0.03%				
BlackRock ACWI x-US	International Equity	31,855	64,616,068	0.05%				
	Total	\$116,274	\$292,546,707	0.04%				

Asset Allocation Breakdown				
	2016 % of Total Fund	2015 % of Total Fund		
Domestic Equity	46.4%	45.2%		
% Active	0.0%	0.0%		
% Passive	46.4%	45.2%		
Domestic Fixed	31.0%	32.1%		
% Active	12.3%	2.9%		
% Passive	18.7%	29.2%		
Int'l Equity	22.2%	22.2%		
% Active	0.0%	0.0%		
% Passive	22.2%	22.2%		
Other	0.4%	0.5%		
Calendar Year Return	8.1%	-1.1%		



OK Wildlife Fee Overview

Manager	Asset Class/Style	2016 Total Annual Fees Paid	Average Monthly Market Value of Assets for 2016	Fees (%)	2016 Securities Lending Income
Bank of Oklahoma	Cash/CashEquivalents	5,308	2,985,001	0.18%	\$ -
Bank of Oklahoma	Individual Equity	28,479	16,014,059	0.18%	
Bank of Oklahoma	Growth Equity	15,878	8,928,224	0.18%	
Bank of Oklahoma	Core Equity	17,919	10,076,133	0.18%	
Bank of Oklahoma	Value Equity	10,756	6,048,075	0.18%	
Bank of Oklahoma	Small Cap	6,268	3,524,720	0.18%	
Bank of Oklahoma	Core Fixed	63,890	35,926,126	0.18%	
Bank of Oklahoma	Multi Cap	20,429	11,487,575	0.18%	
Bank of Oklahoma	International Equity	13,284	7,469,711	0.18%	
Bank of Oklahoma	Alternatives	4,361	2,452,342	0.18%	
	Total	\$186,573	\$104,911,966	0.18%	Domestic

Asset Allocation Breakdown				
	2016 % of	2015 % of		
	<u>Total Fund</u>	<u>Total Fund</u>		
Domestic Equity	52.9%	50.5%		
% Active	9.9%	10.6%		
% Passive	43.0%	39.9%		
Domestic Fixed	35.6%	37.0%		
% Active	35.6%	37.0%		
% Passive	0.0%	0.0%		
Int'l Equity	9.7%	9.8%		
% Active	9.7%	9.8%		
% Passive	0.0%	0.0%		
Other	1.8%	2.7%		
Calendar Year Return	6.6%	0.1%		

2016 Investment

Consultant Fee

2016 Custody Fee

\$10,603

2016 Commission

Recapture

- \$

- \$



Performance Fee Formula

Where:

•	BF	=	Base Fee, a substantial discount from the normal fee
•	PF	=	Performance Fee
•	NF	=	Normal Fee, manager's standard fee schedule for public fund
•	RER	=	Required Excess Return, the premium to be earned above the benchmark or market rate of return to earn the normal fee
•	PR	=	Portfolio Return
•	MR	=	Benchmark, the market or other index return which represents the minimum performance standard

$$(NF - BF)/(RER) \times (PR - MR - BF)$$

- (The Maximum Fee should be symmetrically balanced, i.e., the sum of the BF and the PF should equal the BF plus two times the sum of the NF minus the BF. In no event can the MF (PF plus the BF) exceed the BF plus two times the sum of the NF minus the BF)
- For the initial three quarters, the manager will receive a fee equal to the Base Fee. After the end of the fourth quarter under management an annualized fee calculation will be computed to award a performance fee due to the initial twelve-month period. If the Agreement is extended for the fifth through twelfth quarters, the annualized performance fee calculation will be made each quarter on a cumulative, annualized, basis. Thereafter, the performance fee calculation will be based on the cumulative, annualized returns for the immediately preceding twelve quarters.