



# Alternative Investment Performance Supplement

Nebraska Investment Council  
Data as of 3/31/2019

## Overview

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- The state of Nebraska's Defined Benefit Plan, Cash Balance Benefit Plan, and Health Care and 50/50 Endowments invest in Private Equity and Real Estate
  - 5% policy target to Private Equity (all pools)
  - 7.5% policy target to Real Estate for DB and CBB Plans, 5% policy target to Real Estate for endowments
- The slides that follow include vintage year and partnership level performance information for these investments
- We have also included summary performance information on OSERS' private market investments
- As private market investments are not valued as frequently as public market investments, performance information is reported on a time lag
  - All information presented in this presentation is as of March 31<sup>st</sup>, 2019

# Real Estate–DB/CBB & Endowment Performance Summary by Vintage Year

## Vintage Year Performance – DB/CBB

Vintage Year	Number of Investments	Commitment	Unfunded Commitment	Cumulative Paid-In	Cumulative Distributions	Net Asset Value	Total Value	DPI	Return Multiples	
									TVPI <sup>1</sup>	IRR <sup>2</sup>
2004	0	\$0.00	\$0.00	\$183,528,392.00	\$226,385,612.00	\$0.00	\$226,385,613.00	1.23x	1.23x	11.69%
2006	2	\$250,000,000.00	\$0.00	\$261,771,241.00	\$109,104,889.00	\$359,250,004.00	\$468,354,893.00	0.42x	1.79x	5.45%
2007	3	\$101,500,000.00	\$881,917.00	\$103,023,693.00	\$68,786,926.00	\$87,495,298.00	\$156,282,224.00	0.67x	1.52x	5.54%
2008	2	\$50,000,000.00	\$821,564.00	\$49,318,825.00	\$64,721,232.00	\$6,791,994.00	\$71,513,226.00	1.31x	1.45x	7.92%
2010	2	\$150,000,000.00	\$4,909,392.00	\$145,090,608.00	\$95,267,997.00	\$146,393,636.00	\$241,661,633.00	0.66x	1.67x	11.66%
2012	2	\$45,000,000.00	\$5,572,497.00	\$41,965,251.00	\$48,369,040.00	\$14,854,710.00	\$63,223,750.00	1.15x	1.51x	14.20%
2013	1	\$20,000,000.00	\$0.00	\$21,598,377.00	\$22,814,739.00	\$6,767,796.00	\$29,582,535.00	1.06x	1.37x	10.03%
2014	1	\$50,000,000.00	\$4,901,450.00	\$45,098,550.00	\$28,083,861.00	\$27,035,818.00	\$55,119,679.00	0.62x	1.22x	12.25%
2015	3	\$200,000,000.00	\$25,022,980.00	\$177,959,197.00	\$20,336,756.00	\$194,276,842.00	\$214,613,598.00	0.11x	1.21x	8.80%
2016	1	\$40,000,000.00	\$16,590,121.00	\$23,409,878.00	\$774,206.00	\$24,348,069.00	\$25,122,275.00	0.03x	1.07x	5.07%
2017	1	\$40,000,000.00	\$33,661,845.00	\$10,577,646.00	\$4,239,491.00	\$8,603,454.00	\$12,842,945.00	0.40x	1.21x	25.91%
2018	3	\$140,000,000.00	\$77,423,294.00	\$78,033,439.00	\$1,330,166.00	\$78,158,324.00	\$79,488,490.00	0.02x	1.02x	5.79%
<b>Total</b>	<b>21</b>	<b>\$1,086,500,000.00</b>	<b>\$169,785,060.00</b>	<b>\$1,141,375,097.00</b>	<b>\$690,214,915.00</b>	<b>\$953,975,945.00</b>	<b>\$1,644,190,861.00</b>	<b>0.60x</b>	<b>1.43x</b>	<b>7.10%</b>

- Vintage years and investment types largely drive performance
- The 2004 vintage year consists of 100% REIT investments
- The 2006 vintage year consists of 100% open-end diversified Core equity funds

## Vintage Year Performance -- Endowment

Vintage Year	Number of Investments	Commitment	Unfunded Commitment	Cumulative Paid-In	Cumulative Distributions	Net Asset Value	Total Value	Return Multiples		
								DPI <sup>1</sup>	TVPI <sup>2</sup>	IRR
2008	1	\$20,000,000	\$1,566,177	\$4,192,906	\$13,119,073	\$1,802,967	\$14,922,040	3.13x	3.56x	11.39%
2009	1	10,000,000	1,061,669	8,918,329	9,274,469	1,626,884	10,901,353	1.04x	1.22x	8.37%
2010	3	26,000,000	0	26,000,000	9,145,079	37,416,626	46,561,705	0.35x	1.79x	9.54%
2014	1	7,500,000	735,217	6,764,783	4,210,124	4,055,373	8,265,497	0.62x	1.22x	12.28%
2015	1	10,000,000	1,713,731	8,261,013	4,130,538	6,829,951	10,960,489	0.50x	1.33x	15.17%
2016	1	6,000,000	0	6,000,000	562,281	6,546,200	7,108,481	0.09x	1.18x	6.07%
2019	1	11,500,000	0	1,602,438	15,787	1,605,564	1,621,351	0.01x	1.01x	7.68%
<b>Total</b> <sup>3</sup>	<b>9</b>	<b>\$91,000,000</b>	<b>\$5,076,794</b>	<b>\$87,076,730</b>	<b>\$65,949,183</b>	<b>\$59,883,565</b>	<b>\$125,832,748</b>	<b>0.76x</b>	<b>1.45x</b>	<b>9.96%</b>

<sup>1</sup> DPI is the ratio of Cumulative Distributions to Cumulative Paid-In

<sup>2</sup> TVPI is the ratio of Total Value to Cumulative Paid-In

<sup>3</sup> Total includes liquidated positions

# Real Estate–DB/CBB Portfolio Time-Weighted Performance<sup>1</sup> by Investment

Returns (%)	Market Value (\$)	Quarter				1 Year				3 Year				5 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
<b>Core-Core</b>																						
Barings Core Property Fund LP	142,794,531	1.0	1.1	2.1	1.9	4.2	3.4	7.7	6.9	4.3	3.6	8.0	7.2	4.7	5.5	10.4	9.5	11.1	10.2	1Q11	10.4	1.7
Lion Properties Fund	75,797,847	1.0	1.0	2.0	1.8													2.0	1.8	1Q19	7.3	1.0
PRISA SA	196,882,760	1.0	0.8	1.8	1.6	4.3	3.6	8.1	7.2	4.5	3.6	8.2	7.3	4.7	5.7	10.6	9.7	6.4	5.6	2Q06	5.6	1.8
UBS Trumbull Property Fund	162,367,244	1.1	-0.4	0.7	0.5	4.6	1.1	5.7	4.9	4.6	1.7	6.3	5.4	4.8	3.7	8.6	7.6	6.5	5.5	3Q06	5.3	1.8
<b>Core-Core</b>	<b>577,842,381</b>	<b>1.0</b>	<b>0.5</b>	<b>1.6</b>	<b>1.4</b>	<b>4.3</b>	<b>2.8</b>	<b>7.3</b>	<b>6.5</b>	<b>4.5</b>	<b>3.0</b>	<b>7.6</b>	<b>6.7</b>	<b>4.7</b>	<b>5.0</b>	<b>9.9</b>	<b>9.0</b>	<b>6.8</b>	<b>5.9</b>	<b>2Q06</b>	<b>6.1</b>	<b>1.6</b>
<b>Core Debt</b>																						
UBS Trumbull Property Income Fund	131,958,367	0.9	0.4	1.3	1.1	4.0	3.1	7.2	6.4	4.2	2.6	6.8	6.0					8.0	7.2	2Q15	7.1	1.2
<b>Core Debt</b>	<b>131,958,367</b>	<b>0.9</b>	<b>0.4</b>	<b>1.3</b>	<b>1.1</b>	<b>4.0</b>	<b>3.1</b>	<b>7.2</b>	<b>6.4</b>	<b>4.2</b>	<b>2.6</b>	<b>6.8</b>	<b>6.0</b>					<b>8.0</b>	<b>7.2</b>	<b>2Q15</b>	<b>7.1</b>	<b>1.2</b>
<b>Core Plus</b>																						
PRISA II	86,158,494	0.9	1.1	2.0	1.7	3.8	4.3	8.2	7.0	4.2	4.8	9.2	8.0	4.5	7.0	11.6	10.5	4.8	3.6	3Q07	7.0	1.6
<b>Core Plus</b>	<b>86,158,494</b>	<b>0.9</b>	<b>1.1</b>	<b>2.0</b>	<b>1.7</b>	<b>3.8</b>	<b>4.3</b>	<b>8.2</b>	<b>7.0</b>	<b>4.2</b>	<b>4.8</b>	<b>9.2</b>	<b>8.0</b>	<b>4.5</b>	<b>7.0</b>	<b>11.6</b>	<b>10.5</b>	<b>4.8</b>	<b>3.6</b>	<b>3Q07</b>	<b>7.0</b>	<b>1.6</b>
<b>Value-Value Added</b>																						
Almanac Realty Securities V, LP	906,352	0.1	2.2	2.2	1.9	18.0	-13.9	3.9	2.4	24.2	-8.9	16.0	14.3	22.2	-8.6	13.7	12.3	13.3	10.4	3Q08	11.9	1.5
Almanac Realty Securities VII	31,164,986	1.5	2.5	3.9	3.6	7.3	8.2	16.0	14.6	8.4	8.5	17.5	14.4					17.6	13.4	3Q15	14.1	1.3
Almanac Realty Securities VIII	313,985																			3Q19	-99.7	0.6
Heitman Value Partners II	49,774	-0.7	0.0	-0.7	-0.7	14.5	0.0	14.5	14.5	11.3	3.2	14.8	14.8	8.8	7.4	16.8	16.6	6.1	5.6	1Q08	8.6	1.5
Rockwood Capital Real Estate Partners Fund IX	7,011,558	0.5	-0.4	0.1	-0.5	3.0	1.7	4.7	1.8	2.9	7.0	10.0	7.6	2.8	11.1	14.2	11.5	17.6	14.4	4Q13	13.5	1.4
Rockwood Capital Real Estate Partners Fund X	24,348,069	0.2	1.9	2.1	1.6	2.5	10.6	13.3	10.2									6.1	2.6	4Q16	5.1	1.1
<b>Value-Value Added</b>	<b>63,794,724</b>	<b>0.9</b>	<b>1.9</b>	<b>2.8</b>	<b>2.2</b>	<b>5.5</b>	<b>7.0</b>	<b>12.8</b>	<b>10.2</b>	<b>5.8</b>	<b>7.5</b>	<b>13.6</b>	<b>10.7</b>	<b>6.6</b>	<b>7.6</b>	<b>14.6</b>	<b>12.1</b>	<b>3.9</b>	<b>1.3</b>	<b>4Q07</b>	<b>6.0</b>	<b>1.2</b>
<b>Opportunistic-Opportunistic</b>																						
AG Realty Fund VIII	7,843,152	-0.7	-0.5	-1.2	-1.2	-4.9	12.2	6.9	4.6	-1.3	9.7	8.3	5.7	-0.5	18.0	17.4	12.5	18.0	12.9	2Q12	14.6	1.6
CBRE Strategic Partners U.S. Opportunity 5	5,885,642	-0.1	0.0	-0.1	-0.1	-0.4	5.7	5.3	4.5	4.4	0.6	5.4	4.4	4.5	7.8	12.9	11.8	-13.6	-15.6	4Q08	5.2	1.4
Landmark Real Estate Fund VI	3,599,105	0.1	-1.0	-1.0	-1.3	-1.1	-5.3	-6.4	-7.5	13.3	-14.5	-1.4	-2.7	17.1	-13.1	3.3	2.0	9.5	7.7	1Q11	19.6	1.6
Landmark Real Estate Fund VII	27,035,818	0.0	0.0	0.0	-0.4	8.7	-6.0	2.4	1.2	12.1	-4.4	7.5	5.1					26.6	19.9	1Q15	12.3	1.2
Landmark Real Estate Fund VIII	8,603,454	-1.1	9.2	8.1	5.9	22.5	-4.4	18.7	9.3									-4.6	-9.5	4Q17	25.9	1.2
Rockpoint Real Estate Fund III	1,287,030	0.9	1.6	2.4	1.9	0.6	5.3	5.9	3.6	1.3	4.5	5.8	3.3	1.1	5.4	6.6	2.6	9.9	3.3	2Q09	13.8	1.4
Torchlight Debt Opportunity Fund IV	6,767,796	1.6	-0.3	1.2	1.3	7.4	3.3	10.8	8.6	9.2	5.3	14.9	11.0	9.4	4.0	13.7	10.8	13.3	10.4	1Q14	10.0	1.4
Torchlight Debt Opportunity Fund V	31,153,489	2.1	-0.3	1.8	1.1	10.4	3.9	14.5	10.1	15.1	7.5	23.4	15.8					21.8	10.4	3Q15	12.4	1.3
Torchlight Debt Opportunity Fund VI	2,046,492	4.5	7.6	12.1	5.7													21.5	3.5	3Q18	1.4	1.0
<b>Opportunistic-Opportunistic</b>	<b>94,221,979</b>	<b>0.7</b>	<b>0.7</b>	<b>1.4</b>	<b>0.8</b>	<b>7.4</b>	<b>1.2</b>	<b>8.7</b>	<b>5.1</b>	<b>9.9</b>	<b>0.4</b>	<b>10.5</b>	<b>6.9</b>	<b>10.0</b>	<b>4.8</b>	<b>15.2</b>	<b>11.3</b>	<b>0.9</b>	<b>-4.0</b>	<b>4Q08</b>	<b>11.8</b>	<b>1.4</b>
<b>Total Portfolio</b>																						
<b>NIC - DB Direct</b>	<b>953,975,945</b>	<b>1.0</b>	<b>0.7</b>	<b>1.7</b>	<b>1.4</b>	<b>4.7</b>	<b>3.1</b>	<b>7.9</b>	<b>6.6</b>	<b>5.2</b>	<b>3.1</b>	<b>8.4</b>	<b>7.0</b>	<b>5.5</b>	<b>5.3</b>	<b>11.0</b>	<b>9.6</b>	<b>8.4</b>	<b>7.1</b>	<b>1Q05</b>	<b>7.1</b>	<b>1.4</b>
<b>Indices</b>																						
NCREIF Fund Index – Open End Diversified Core Equity “NFI-ODCE Value Weight”		1.0	0.4	1.4	1.2	4.2	3.2	7.5	6.5	4.3	3.5	8.0	7.0	4.5	5.5	10.2	9.2	7.9	6.9	1Q05		

<sup>1</sup>Returns shown are time-weighted, which ignores both the timing and magnitude of cash flows into and out of the portfolio. While time-weighted returns are commonly used as a standard measure of performance in traditional asset classes, the Internal Rate of Return (“IRR”) is a better and more common measure of real estate performance

# Real Estate–Endowment Portfolio Time-Weighted Performance by Investment

Returns (%)	Market Value (\$)	Quarter				1 Year				3 Year				5 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
		INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
<b>Core</b>																						
Barings Core Property Fund LP	15,457,603	1.0	1.1	2.1	1.9	4.2	3.4	7.7	6.9	4.3	3.6	8.0	7.2	4.6	5.4	10.2	9.4	11.0	10.1	1Q11	10.5	1.8
Lion Properties Fund	1,605,564																			2Q19	7.7	1.0
PRISA LP	9,518,448	1.0	0.7	1.8	1.6	4.3	3.4	7.8	7.0	4.5	3.5	8.1	7.3	4.7	5.5	10.5	9.6	12.6	11.6	1Q10	10.5	1.9
UBS Trumbull Property Fund	12,440,575	1.1	-0.4	0.7	0.5	4.6	1.1	5.7	4.9	4.6	1.7	6.3	5.4	4.8	3.7	8.6	7.6	10.4	9.4	1Q10	8.5	1.8
<b>Core</b>	<b>39,022,190</b>	<b>1.0</b>	<b>0.5</b>	<b>1.5</b>	<b>1.4</b>	<b>4.3</b>	<b>2.6</b>	<b>7.1</b>	<b>6.3</b>	<b>4.5</b>	<b>2.9</b>	<b>7.5</b>	<b>6.6</b>	<b>4.7</b>	<b>4.9</b>	<b>9.7</b>	<b>8.8</b>	<b>13.2</b>	<b>12.2</b>	<b>1Q10</b>	<b>9.8</b>	<b>1.7</b>
<b>Core Debt</b>																						
UBS Trumbull Property Income Fund	6,546,200	0.9	0.4	1.3	1.1	4.0	3.1	7.2	6.3	4.2	2.6	6.8	6.1					6.8	6.1	2Q16	6.1	1.2
<b>Core Debt</b>	<b>6,546,200</b>	<b>0.9</b>	<b>0.4</b>	<b>1.3</b>	<b>1.1</b>	<b>4.0</b>	<b>3.1</b>	<b>7.2</b>	<b>6.3</b>	<b>4.2</b>	<b>2.6</b>	<b>6.8</b>	<b>6.1</b>					<b>6.8</b>	<b>6.1</b>	<b>2Q16</b>	<b>6.1</b>	<b>1.2</b>
<b>Opportunistic</b>																						
Landmark Real Estate Fund VII	4,055,373	0.0	0.0	0.0	-0.4	8.7	-6.0	2.4	1.2	12.1	-4.4	7.5	5.1					26.4	19.8	1Q15	12.3	1.2
Metropolitan Real Estate Partners International III, L.P.	1,626,884	-0.1	-6.0	-6.1	-6.4	2.3	-17.3	-15.2	-16.0	3.2	-4.7	-1.6	-2.4	3.5	3.79	7.26	4.98	-11.7	-12.7	3Q09	5.7	1.1
Metropolitan Real Estate Partners VI, L.P.*	1,802,967	-0.2	-1.3	-1.5	-1.7	-2.8	5.9	3.1	2.1	1.2	4.4	5.8	4.8	1.3	7.41	8.85	7.93	12.9	12.4	1Q09	11.4	1.5
Metropolitan Real Estate Secondaries and Co-Investments Fund,	6,829,951	0.2	4.8	5.0	4.4	1.7	12.0	13.9	11.6	0.9	14.1	15.1	11.9					13.3	10.4	1Q16	15.2	1.3
<b>Opportunistic</b>	<b>14,315,175</b>	<b>0.1</b>	<b>1.5</b>	<b>1.5</b>	<b>1.0</b>	<b>2.8</b>	<b>2.0</b>	<b>4.8</b>	<b>3.2</b>	<b>4.1</b>	<b>4.3</b>	<b>8.6</b>	<b>6.7</b>	<b>3.5</b>	<b>9.6</b>	<b>13.4</b>	<b>10.7</b>	<b>14.2</b>	<b>12.9</b>	<b>1Q09</b>	<b>10.5</b>	<b>1.3</b>
<b>Total Portfolio</b>																						
<b>NIC - DB Endowment</b>	<b>59,883,566</b>	<b>0.8</b>	<b>0.7</b>	<b>1.5</b>	<b>1.3</b>	<b>3.9</b>	<b>2.5</b>	<b>6.4</b>	<b>5.4</b>	<b>4.3</b>	<b>3.3</b>	<b>7.8</b>	<b>6.6</b>	<b>4.3</b>	<b>6.6</b>	<b>11.1</b>	<b>9.6</b>	<b>13.3</b>	<b>12.3</b>	<b>1Q09</b>	<b>10.0</b>	<b>1.4</b>
<b>Indices</b>																						
NCREIF Fund Index – Open End Diversified Core Equity “NFI-ODCE Value Weight”		1.0	0.4	1.4	1.2	4.2	3.2	7.5	6.5	4.3	3.5	8.0	7.0	4.5	5.5	10.2	9.2	7.0	6.0	1Q09		

# Private Equity–DB/CBB & Endowment Performance Summary by Vintage Year

## Defined Benefit Portfolio

Vintage Year	Number of Investments	Total Commitments	Portfolio Returns			TVPI Quartile	IRR Quartile
			DPI <sup>3</sup>	TVPI <sup>4</sup>	IRR		
2005	1	\$50,000,000	1.25x	1.46x	6.90%	2	3
2006	2	125,000,000	1.24x	1.47x	7.54%	2	2
2007	5	103,002,649	1.24x	1.59x	10.21%	2	2
2008	5	104,500,000	1.35x	1.98x	17.33%	1	1
2009	4	70,000,000	0.99x	1.56x	9.97%	3	3
2010	2	35,000,000	0.57x	1.29x	7.37%	3	3
2011	2	35,000,000	1.30x	1.75x	19.66%	2	2
2012	5	105,000,000	0.78x	1.66x	15.74%	2	2
2013	4	87,500,000	0.60x	1.47x	15.05%	2	2
2014	5	144,599,150	0.35x	1.36x	13.43%	2	2
2015	2	45,000,000	0.35x	1.56x	25.00%	1	1
2016	3	115,070,600	0.22x	1.31x	24.68%	2	1
2017	6	300,000,000	0.07x	1.17x	19.33%	2	2
2018	2	98,968,000	0.00x	1.40x	40.69%	1	1
2019	1	50,000,000	N/A	N/A	NM	N/A	N/A
<b>Total Defined Benefit Portfolio</b>	<b>49</b>	<b>\$1,468,640,399</b>	<b>0.77x</b>	<b>1.50x</b>	<b>11.91%</b>	<b>N/A</b>	<b>N/A</b>

## Endowment Portfolio

Vintage Year	Number of Investments	Total Commitments	Portfolio Returns			TVPI Quartile	IRR Quartile
			DPI <sup>3</sup>	TVPI <sup>4</sup>	IRR		
2008	1	\$45,000,000	0.92x	1.63x	12.34%	2	2
2010	1	20,000,000	0.93x	1.85x	17.70%	1	1
2012	2	25,000,000	0.91x	1.56x	19.51%	2	1
2014	1	20,000,000	0.28x	1.39x	16.76%	2	2
2017	1	20,000,000	0.16x	1.14x	14.55%	2	2
<b>Total Endowment Portfolio</b>	<b>6</b>	<b>\$130,000,000</b>	<b>0.77x</b>	<b>1.59x</b>	<b>14.89%</b>	<b>N/A</b>	<b>N/A</b>

- The Defined Benefit Portfolio's performance continues to progress and is above the benchmark performance metrics of IRR, TVPI, and DPI. Vintage Years 2015 and 2016 are performing well based on TVPI and IRR, but it is still too early to determine ultimate performance.
  - 2005 and 2006 vintage years, comprised of primarily fund of funds investments, continue to mature and increase the pace of their distributions. The fund of funds investments should continue to distribute capital for the next three to five years as they have \$9.9 million and \$25.6 million of net asset value remaining, respectively.
  - Within vintage year 2008, Ares Corporate Opportunities Fund III, Accel-KKR Capital Partners III, Bridgepoint Europe IV, CVC European Equity Partners V, and Quantum Energy Partners V are driving outperformance with the five funds generating IRRs and TVPIs above 11.39% and 1.54x, respectively.
  - Vintage year 2012 is performing well with all five funds generating positive net TVPIs and IRRs at or above 1.42x and 12.30%, respectively.
  - Vintage years 2015 and 2016 are too young to assess. We expect performance to increase as the underlying funds mature and exit their J-curves.
- The Endowment Portfolio, composed primarily of fund of funds, experienced a strong quarter with IRR increasing by 12 bps and TVPI increasing 0.04x. Abbott Capital Private Equity Fund VI and RCP Fund VII continue to mature with Net IRRs and TVPIs above 12.34% and 1.63x, respectively.

## Private Equity–DB/CBB & Endowment Performance by Investment

Partnership Name	Vintage		Total Commitments	Unfunded Commitment	Cumulative Paid-In	Cumulative Distributions	Net Asset Value	Total Value <sup>1</sup>	DPI <sup>2</sup>	TVPI <sup>3</sup>	IRR
	Year	Investment Type									
<b>Defined Benefit Portfolio</b>											
TRG Growth Partnership II, L.P. <sup>6</sup>	2006	Buyout - Large	\$25,000,000	\$674,886	\$24,757,592	\$25,570,271	\$3,972,261	\$29,542,532	1.03x	1.19x	3.74%
New Mountain Partners III, L.P.	2007	Buyout - Mega	25,000,000	1,714,702	25,658,710	34,052,247	16,795,243	50,847,490	1.33x	1.98x	13.26%
Presidio Partners 2007, L.P. <sup>9</sup>	2007	Venture - Early	20,000,000	0	20,070,686	23,812,629	5,236,027	29,048,656	1.19x	1.45x	7.78%
Sun Capital Partners V, L.P.	2007	Turnaround	18,002,649	1,805,466	18,801,074	16,129,022	5,196,933	21,325,955	0.86x	1.13x	2.64%
The Resolute Fund II, L.P.	2007	Buyout - Large	25,000,000	2,259,039	27,449,010	29,276,276	10,595,354	39,871,630	1.07x	1.45x	8.68%
Wayzata Opportunities Fund II, L.P.	2007	Distressed Debt	15,000,000	3,000,000	17,475,000	32,229,154	573,115	32,802,269	1.84x	1.88x	16.45%
Accel-KKR Capital Partners III, L.P.	2008	Buyout - Medium	12,500,000	4,406,181	12,970,959	20,621,772	16,354,908	36,976,680	1.59x	2.85x	23.26%
Ares Corporate Opportunities Fund III, L.P.	2008	Buyout - Large	20,000,000	1,697,130	24,699,833	37,673,355	14,759,563	52,432,918	1.53x	2.12x	21.92%
Bridgepoint Europe IV, L.P. <sup>7</sup>	2008	Buyout - Large	26,000,000	2,305,856	24,108,066	28,442,687	15,581,683	44,024,370	1.18x	1.83x	12.75%
CVC European Equity Partners V, L.P. <sup>7</sup>	2008	Buyout - Mega	26,000,000	3,182,024	29,571,111	48,287,920	8,961,043	57,248,962	1.63x	1.94x	17.60%
Quantum Energy Partners V, L.P.	2008	Energy	20,000,000	2,445,479	21,338,274	17,510,407	15,287,175	32,797,582	0.82x	1.54x	11.39%
Fulcrum Growth Partners IV, L.P.	2009	Buyout - Small	10,000,000	2,017,362	8,905,639	5,980,631	9,787,542	15,768,173	0.67x	1.77x	10.09%
Lincolnshire Equity Fund IV, L.P.	2009	Buyout - Medium	20,000,000	319,996	21,679,100	24,738,598	8,726,230	33,464,828	1.14x	1.54x	10.86%
Longroad Capital Partners III, L.P.	2009	Distressed Debt	20,000,000	11,953,855	8,046,145	4,071,020	67,767	4,138,787	0.51x	0.51x	-28.27%
New Enterprise Associates 13, L.P.	2009	Venture - Balanced	20,000,000	300,000	19,702,071	23,085,288	14,421,962	37,507,250	1.17x	1.90x	13.86%
EIF United States Power Fund IV, L.P.	2010	Energy	20,000,000	714,411	24,356,696	10,108,399	19,007,949	29,116,348	0.42x	1.20x	5.68%
Merit Mezzanine Fund V, L.P.	2010	Mezzanine	15,000,000	866,939	14,133,061	11,834,380	8,571,431	20,405,811	0.84x	1.44x	9.32%
Ares Mezzanine Partners, L.P.	2011	Mezzanine	15,000,000	722,466	8,520,566	9,780,971	70,137	9,851,108	1.15x	1.16x	8.85%
Lightyear Fund III, L.P.	2011	Buyout - Medium	20,000,000	1,705,907	23,093,741	31,194,223	14,181,749	45,375,972	1.35x	1.96x	22.07%
Ares Corporate Opportunities Fund IV, L.P.	2012	Buyout - Large	20,000,000	3,433,475	21,676,974	11,807,905	18,995,307	30,803,212	0.54x	1.42x	12.30%
Dover Street VIII, L.P.	2012	Secondaries	25,000,000	2,500,000	22,500,000	25,092,474	10,377,728	35,470,202	1.12x	1.58x	21.07%
Green Equity Investors VI, L.P.	2012	Buyout - Mega	20,000,000	2,057,443	22,038,690	13,872,376	21,608,891	35,481,267	0.63x	1.61x	15.69%
McCarthy Capital V, L.P.	2012	Buyout - Small	20,000,000	2,040,253	19,616,511	16,850,977	16,091,788	32,942,765	0.86x	1.68x	13.37%
New Enterprise Associates 14, L.P.	2012	Venture - Balanced	20,000,000	1,200,000	18,807,229	13,588,120	25,274,661	38,862,781	0.72x	2.07x	17.21%
Accel-KKR Capital Partners IV, L.P.	2013	Buyout - Medium	12,500,000	8,674,923	11,792,453	15,176,112	12,205,545	27,381,657	1.29x	2.32x	36.37%
Beecken Petty O'Keefe Fund IV, L.P.	2013	Buyout - Medium	20,000,000	1,147,121	20,479,824	15,409,210	16,266,005	31,675,215	0.75x	1.55x	18.97%
Pine Brook Capital Partners II, L.P.	2013	Buyout - Large	30,000,000	3,212,589	34,169,228	10,187,887	34,541,221	44,729,108	0.30x	1.31x	10.00%
Wayzata Opportunities Fund III, L.P.	2013	Distressed Debt	25,000,000	19,304,494	12,358,995	6,569,494	5,345,587	11,915,081	0.53x	0.96x	-1.29%
CVC Capital Partners VI, L.P. <sup>7</sup>	2014	Buyout - Mega	19,599,150	3,447,252	17,965,442	5,760,675	19,130,269	24,890,945	0.32x	1.39x	17.27%
New Mountain Partners IV, L.P.	2014	Buyout - Large	30,000,000	3,440,833	26,982,803	12,012,963	31,065,402	43,078,365	0.45x	1.60x	20.86%
Quantum Energy Partners VI, LP	2014	Energy	30,000,000	9,765,468	24,613,426	11,963,160	29,235,821	41,198,981	0.49x	1.67x	36.38%
The Energy & Minerals Group Fund III, LP	2014	Energy	35,000,000	1,785,175	33,600,847	2,555,447	26,534,222	29,089,669	0.08x	0.87x	-3.74%
The Resolute Fund III, L.P.	2014	Buyout - Large	30,000,000	3,075,560	33,470,104	15,470,744	32,160,551	47,631,295	0.46x	1.42x	20.71%
Francisco Partners IV, L.P.	2015	Buyout - Large	20,000,000	510,000	19,490,000	8,010,000	25,926,662	33,936,662	0.41x	1.74x	26.03%
Wynnchurch Capital Partners IV, L.P.	2015	Buyout - Medium	25,000,000	9,320,073	15,679,927	4,167,411	16,778,292	20,945,703	0.27x	1.34x	22.43%

See Page13 for notes.

# Private Equity–DB/CBB & Endowment Performance by Investment (cont'd)

Partnership Name	Vintage Year	Investment Type	Total Commitments	Unfunded Commitment	Cumulative Paid-In	Cumulative Distributions	Net Asset Value	Total Value <sup>1</sup>	DPI <sup>2</sup>	TVPI <sup>3</sup>	IRR
<b>Defined Benefit Portfolio</b>											
Bridgepoint Europe V, L.P.	2016	Buyout - Large	25,070,600	2,117,228	20,766,286	2,832,351	25,564,073	28,396,423	0.14x	1.37x	20.84%
Dover Street IX, L.P.	2016	Secondaries	50,000,000	21,000,000	29,000,000	8,580,388	29,556,767	38,137,155	0.30x	1.32x	38.09%
McCarthy Capital VI, L.P.	2016	Buyout - Small	40,000,000	21,365,460	21,977,755	4,564,831	22,735,307	27,300,138	0.21x	1.24x	18.99%
Ares Corporate Opportunities Fund V, L.P.	2017	Buyout - Mega	50,000,000	22,602,801	28,214,291	860,775	28,394,922	29,255,697	0.03x	1.04x	4.41%
Francisco Partners V, L.P.	2017	Buyout - Large	50,000,000	35,125,000	14,875,000	0	16,212,666	16,212,666	0.00x	1.09x	11.13%
Genstar Capital Partners VIII, L.P.	2017	Buyout - Large	50,000,000	25,063,104	28,871,237	4,220,937	40,490,350	44,711,287	0.15x	1.55x	78.38%
Green Equity Investors VII, L.P.	2017	Buyout - Mega	50,000,000	24,756,166	25,441,828	197,994	27,855,045	28,053,039	0.01x	1.10x	8.77%
New Mountain Partners V, L.P.	2017	Buyout - Mega	50,000,000	32,290,875	17,709,125	514,760	18,330,077	18,844,837	0.03x	1.06x	8.00%
Quantum Energy Partners VII, LP	2017	Energy	50,000,000	31,682,654	22,069,268	3,833,067	19,308,480	23,141,547	0.17x	1.05x	5.42%
Bridgepoint Europe VI, L.P.	2018	Buyout - Large	48,968,000	44,914,000	0	0	(603,778)	(603,778)	N/A	N/A	NM
The Resolute Fund IV, L.P.	2018	Buyout - Large	50,000,000	45,240,358	4,759,642	0	7,280,304	7,280,304	0.00x	1.53x	53.53%
Genstar Capital Partners IX, L.P.	2019	Buyout - Mega	50,000,000	50,000,000	0	0	0	0	N/A	N/A	N/A
<b>Total Direct Portfolio</b>			<b>1,318,640,399</b>	<b>473,164,004</b>	<b>944,264,220</b>	<b>648,499,307</b>	<b>764,810,238</b>	<b>1,413,309,544</b>	<b>0.69x</b>	<b>1.50x</b>	<b>13.48%</b>
Abbott Capital Private Equity Fund V, L.P.	2005	Fund of Funds	50,000,000	1,750,000	48,250,000	60,219,373	9,994,205	70,213,578	1.25x	1.46x	6.90%
Pathway Private Equity Fund XVIII, LLC	2006	Fund of Funds	100,000,000	7,769,002	102,696,542	132,524,075	25,588,651	158,112,726	1.29x	1.54x	8.28%
<b>Total Fund of Funds Portfolio</b>			<b>150,000,000</b>	<b>9,519,002</b>	<b>150,946,542</b>	<b>192,743,448</b>	<b>35,582,856</b>	<b>228,326,304</b>	<b>1.28x</b>	<b>1.51x</b>	<b>7.82%</b>
<b>Total Defined Benefit Portfolio</b>			<b>\$1,468,640,399</b>	<b>\$482,683,005</b>	<b>\$1,095,210,761</b>	<b>\$841,242,755</b>	<b>\$800,393,094</b>	<b>\$1,641,635,848</b>	<b>0.77x</b>	<b>1.50x</b>	<b>11.91%</b>
<b>Endowment Performance by Investment</b>											
<b>As of March 31, 2019</b>											
Partnership Name	Vintage Year	Investment Type	Total Commitments	Unfunded Commitment	Cumulative Paid-In	Cumulative Distributions	Net Asset Value	Total Value <sup>1</sup>	DPI <sup>2</sup>	TVPI <sup>3</sup>	IRR
<b>Endowment Portfolio</b>											
Dover Street VIII, L.P.	2012	Secondaries	\$15,000,000	\$1,500,000	\$13,500,000	\$15,055,486	\$6,226,639	\$21,282,125	1.12x	1.58x	21.07%
<b>Total Direct Portfolio</b>			<b>15,000,000</b>	<b>1,500,000</b>	<b>13,500,000</b>	<b>15,055,486</b>	<b>6,226,639</b>	<b>21,282,125</b>	<b>1.12x</b>	<b>1.58x</b>	<b>21.07%</b>
Abbott Capital Private Equity Fund VI, L.P.	2008	Fund of Funds	45,000,000	675,000	44,325,000	40,950,792	31,328,561	72,279,353	0.92x	1.63x	12.34%
RCP Fund VII, L.P.	2010	Fund of Funds	20,000,000	418,669	21,162,133	19,728,561	19,516,265	39,244,827	0.93x	1.85x	17.70%
RCP Fund VIII, L.P.	2012	Fund of Funds	10,000,000	2,168,523	9,934,951	6,372,123	8,989,825	15,361,948	0.64x	1.55x	17.52%
Abbott Capital Private Equity Fund VII, L.P.	2014	Fund of Funds	20,000,000	1,900,000	18,100,630	5,000,000	20,192,660	25,192,660	0.28x	1.39x	16.76%
Ironsides Partnership Fund IV, L.P.	2017	Fund of Funds	20,000,000	13,253,352	8,043,558	1,289,576	7,886,693	9,176,270	0.16x	1.14x	14.55%
<b>Total Fund of Funds Portfolio</b>			<b>115,000,000</b>	<b>18,415,544</b>	<b>101,566,272</b>	<b>73,341,053</b>	<b>87,914,005</b>	<b>161,255,057</b>	<b>0.72x</b>	<b>1.59x</b>	<b>14.38%</b>
<b>Total Endowment Portfolio</b>			<b>\$130,000,000</b>	<b>\$19,915,544</b>	<b>\$115,066,272</b>	<b>\$88,396,539</b>	<b>\$94,140,644</b>	<b>\$182,537,182</b>	<b>0.77x</b>	<b>1.59x</b>	<b>14.89%</b>

See Page 13 for notes.



# Private Equity–DB/CBB & Endowment Evolution of Portfolio Performance

Partnership Name	Vintage Year	Investment Type	IRR as of									
			12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	3/31/2019
<b>Defined Benefit Portfolio</b>												
Abbott Capital Private Equity Fund V, L.P.	2005	Fund of Funds	0.08%	3.48%	4.99%	6.93%	7.60%	7.29%	7.03%	6.98%	6.89%	6.90%
Pathway Private Equity Fund XVIII, LLC <sup>9</sup>	2006	Fund of Funds	-2.96%	0.66%	3.01%	6.22%	7.65%	7.81%	8.12%	8.46%	8.35%	8.28%
TRG Growth Partnership II, L.P. <sup>6</sup>	2006	Buyout - Large	5.35%	2.30%	4.77%	4.85%	5.91%	5.35%	5.58%	5.24%	3.84%	3.74%
New Mountain Partners III, L.P.	2007	Buyout - Mega	-1.61%	6.95%	8.94%	11.17%	8.24%	11.41%	12.85%	13.60%	13.32%	13.26%
Presidio Partners 2007, L.P. <sup>10</sup>	2007	Venture - Early	-10.34%	-1.79%	-6.82%	-4.24%	5.97%	10.45%	9.36%	9.37%	7.62%	7.78%
Sun Capital Partners V, L.P.	2007	Turnaround	5.91%	9.71%	10.32%	11.20%	10.20%	8.12%	7.09%	5.56%	2.67%	2.64%
The Resolute Fund II, L.P.	2007	Buyout - Large	-0.60%	3.33%	6.71%	10.55%	10.33%	10.36%	9.06%	9.15%	8.66%	8.68%
Wayzata Opportunities Fund II, L.P.	2007	Distressed Debt	16.81%	16.01%	15.43%	16.88%	17.04%	16.32%	16.34%	16.55%	16.45%	16.45%
Accel-KKR Capital Partners III, L.P.	2008	Buyout - Medium	2.82%	18.21%	13.06%	17.30%	15.06%	14.07%	13.69%	18.37%	21.24%	23.26%
Ares Corporate Opportunities Fund III, L.P.	2008	Buyout - Large	41.10%	29.67%	27.14%	24.90%	23.64%	22.21%	22.34%	23.72%	21.37%	21.92%
Bridgepoint Europe IV, L.P. <sup>7</sup>	2008	Buyout - Large	-11.75%	1.78%	9.70%	12.62%	11.12%	10.87%	10.68%	12.04%	11.38%	12.75%
CVC European Equity Partners V, L.P. <sup>7</sup>	2008	Buyout - Mega	14.05%	10.55%	11.76%	12.64%	11.30%	12.17%	14.96%	16.58%	17.43%	17.60%
Quantum Energy Partners V, L.P.	2008	Energy	-32.63%	-25.04%	7.75%	19.73%	16.59%	7.90%	18.35%	17.10%	10.90%	11.39%
Fulcrum Growth Partners IV, L.P.	2009	Buyout - Small	100.09%	17.23%	11.60%	7.23%	9.56%	9.88%	9.98%	9.35%	10.02%	10.09%
Lincolnshire Equity Fund IV, L.P.	2009	Buyout - Medium	-65.41%	-27.71%	-14.24%	0.46%	7.26%	8.08%	10.12%	9.36%	11.02%	10.86%
Longroad Capital Partners III, L.P.	2009	Distressed Debt	-32.27%	-21.75%	-9.10%	-21.56%	-28.60%	-22.38%	-35.02%	-28.93%	-28.44%	-28.27%
New Enterprise Associates 13, L.P.	2009	Venture - Balanced	3.76%	12.98%	17.39%	20.77%	21.05%	19.37%	19.28%	15.54%	13.73%	13.86%
EIF United States Power Fund IV, L.P.	2010	Energy	NM	-7.93%	-16.68%	-6.39%	17.53%	13.33%	11.21%	6.26%	5.04%	5.68%
Merit Mezzanine Fund V, L.P.	2010	Mezzanine	-6.47%	-16.19%	-5.13%	0.76%	8.08%	8.04%	9.57%	9.60%	9.36%	9.32%
Ares Mezzanine Partners, L.P.	2011	Mezzanine	N/A	-3.32%	8.03%	9.72%	8.12%	9.07%	8.87%	8.85%	8.86%	8.85%
Lightyear Fund III, L.P.	2011	Buyout - Medium	N/A	17.70%	16.32%	14.93%	20.11%	18.59%	18.32%	20.46%	22.42%	22.07%
Ares Corporate Opportunities Fund IV, L.P.	2012	Buyout - Large	N/A	N/A	-8.82%	-12.60%	8.28%	8.66%	14.02%	15.65%	12.03%	12.30%
Dover Street VIII, L.P.	2012	Secondaries	N/A	N/A	95.48%	92.76%	49.90%	32.28%	22.95%	22.29%	21.07%	21.07%
Green Equity Investors VI, L.P.	2012	Buyout - Mega	N/A	N/A	1.81%	2.75%	8.52%	12.32%	13.01%	15.35%	15.97%	15.69%
McCarthy Capital V, L.P.	2012	Buyout - Small	N/A	N/A	-13.25%	23.32%	11.98%	12.60%	11.24%	11.37%	13.27%	13.37%
New Enterprise Associates 14, L.P.	2012	Venture - Balanced	N/A	N/A	-6.40%	8.14%	15.93%	20.24%	17.29%	16.06%	17.47%	17.21%
Accel-KKR Capital Partners IV, L.P.	2013	Buyout - Medium	N/A	N/A	N/A	-56.68%	-21.06%	12.66%	10.09%	21.96%	37.25%	36.37%
Beecken Petty O'Keefe Fund IV, L.P.	2013	Buyout - Medium	N/A	N/A	N/A	-13.60%	-4.86%	-4.62%	16.20%	18.38%	19.35%	18.97%
Pine Brook Capital Partners II, L.P.	2013	Buyout - Large	N/A	N/A	N/A	N/A	-16.55%	-10.20%	7.99%	11.30%	10.03%	10.00%
Wayzata Opportunities Fund III, L.P.	2013	Distressed Debt	N/A	N/A	N/A	N/A	-24.10%	-14.58%	-17.42%	-0.33%	-0.53%	-1.89%
CVC Capital Partners VI, L.P. <sup>7</sup>	2014	Buyout - Mega	N/A	N/A	N/A	N/A	-26.58%	-21.88%	6.70%	15.13%	14.95%	17.27%
New Mountain Partners IV, L.P.	2014	Buyout - Large	N/A	N/A	N/A	N/A	3.24%	25.76%	23.86%	20.78%	20.20%	20.86%
Quantum Energy Partners VI, L.P.	2014	Energy	N/A	N/A	N/A	N/A	NM	58.40%	61.00%	48.33%	40.38%	36.38%
The Energy & Minerals Group Fund III, LP	2014	Energy	N/A	N/A	N/A	N/A	-1.25%	-18.34%	-7.81%	-3.39%	-4.28%	-3.74%
The Resolute Fund III, L.P.	2014	Buyout - Large	N/A	N/A	N/A	N/A	-5.28%	8.02%	15.78%	20.16%	21.62%	20.71%
Francisco Partners IV, L.P.	2015	Buyout - Large	N/A	N/A	N/A	N/A	N/A	-0.06%	7.60%	18.09%	26.32%	26.03%
Wynnchurch Capital Partners IV, L.P.	2015	Buyout - Medium	N/A	N/A	N/A	N/A	N/A	-0.33%	15.79%	35.58%	22.25%	22.43%

# Private Equity–DB/CBB & Endowment Evolution of Portfolio Performance (cont'd)

Partnership Name	Vintage Year	Investment Type	IRR as of										
			12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	3/31/2019	
Bridgepoint Europe V, L.P.	2016	Buyout - Large	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21.07%	24.45%	18.24%	20.84%
Dover Street IX, L.P.	2016	Secondaries	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68.91%	84.89%	43.42%	38.09%
McCarthy Capital VI, L.P.	2016	Buyout - Small	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-11.42%	9.75%	19.71%	18.99%
Ares Corporate Opportunities Fund V, L.P.	2017	Buyout - Mega	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-8.03%	-2.50%	4.41%
Francisco Partners V, L.P.	2017	Buyout - Large	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.15%	11.13%
Genstar Capital Partners VIII, L.P.	2017	Buyout - Large	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	41.89%	50.54%	78.38%
Green Equity Investors VII, L.P.	2017	Buyout - Mega	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-10.61%	8.01%	8.77%
New Mountain Partners V, L.P.	2017	Buyout - Mega	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-11.82%	2.46%	8.00%
Quantum Energy Partners VII, LP	2017	Energy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.08%	7.35%	5.42%
Bridgepoint Europe VI, L.P.	2018	Buyout - Large	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NM	NM
The Resolute Fund IV, L.P.	2018	Buyout - Large	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25.15%	53.53%
Genstar Capital Partners IX, L.P.	2019	Buyout - Mega	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total Defined Benefit Portfolio</b>			<b>2.14%</b>	<b>4.74%</b>	<b>6.59%</b>	<b>9.02%</b>	<b>9.90%</b>	<b>9.78%</b>	<b>10.67%</b>	<b>11.40%</b>	<b>11.55%</b>	<b>11.91%</b>	
<b>Endowment Portfolio</b>													
Abbott Capital Private Equity Fund VI, L.P.	2008	Fund of Funds	-16.87%	-7.23%	-0.65%	5.07%	8.03%	9.59%	10.33%	11.77%	12.27%	12.34%	
RCP Fund VII, L.P.	2010	Fund of Funds	N/A	-42.38%	-24.35%	-1.65%	11.14%	14.73%	19.61%	17.80%	17.13%	17.70%	
Dover Street VIII, L.P.	2012	Secondaries	N/A	N/A	95.48%	92.76%	49.90%	32.28%	22.95%	22.29%	21.07%	21.07%	
RCP Fund VIII, L.P.	2012	Fund of Funds	N/A	N/A	-47.52%	-33.15%	-7.63%	5.48%	9.60%	15.93%	17.99%	17.52%	
Abbott Capital Private Equity Fund VII, L.P.	2014	Fund of Funds	N/A	N/A	N/A	N/A	-24.03%	-4.31%	6.28%	13.92%	16.57%	16.76%	
Ironsides Partnership Fund IV, L.P.	2017	Fund of Funds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.24%	19.78%	14.55%	
<b>Total Endowment Portfolio</b>			<b>-16.87%</b>	<b>-13.03%</b>	<b>-1.59%</b>	<b>4.89%</b>	<b>10.13%</b>	<b>11.93%</b>	<b>13.36%</b>	<b>14.29%</b>	<b>14.77%</b>	<b>14.89%</b>	
<b>Total Portfolio</b>			<b>1.90%</b>	<b>4.43%</b>	<b>6.37%</b>	<b>8.87%</b>	<b>9.92%</b>	<b>9.90%</b>	<b>10.85%</b>	<b>11.61%</b>	<b>11.80%</b>	<b>12.14%</b>	

# OSERS Real Estate / Real Assets Portfolio Overview

## Real Estate Portfolio

Partnership Name	Vintage Year	RE Strategy	Cumulative Paid-In			Percent Funded	Unfunded Commitment	Net Asset Value
			Commitment	(Inside Commitment)				
UBS Trumbull Property Fund	1995	Core	\$33,615,067	\$33,615,067	100.0%	\$0	\$15,013,087	
JPMorgan Strategic Property Fund	1998	Core	48,165,726	48,165,726	100.0%	0	15,264,947	
<b>Subtotal Core</b>			<b>81,780,793</b>	<b>81,780,793</b>	<b>100.0%</b>	<b>0</b>	<b>30,278,034</b>	
Almanac Realty Securities Fund IV, L.P.	2004	Value Added	20,287,514	21,896,333	107.9%	0	0	
Fremont Strategic Property Partners II, L.P.	2004	Value Added	10,000,000	9,564,781	95.7%	0	0	
JPMorgan Special Situations Property Fund	2005	Value Added	9,269,715	9,269,715	100.0%	0	0	
Almanac Realty Securities Fund VI, L.P.	2011	Value Added	25,000,000	17,644,890	70.6%	0	6,781,846	
Almanac Realty Securities Fund VII, L.P.	2015	Value Added	30,000,000	23,704,179	79.0%	9,767,236	23,373,744	
<b>Subtotal Value Added</b>			<b>94,557,229</b>	<b>82,079,899</b>	<b>86.8%</b>	<b>9,767,236</b>	<b>30,155,590</b>	
Mariner Real Estate Partners III, L.P.	2011	Opportunistic	50,000,000	50,045,613	100.1%	0	20,221,498	
25 Capital Residential Mortgage Opportunities Fund	2012	Opportunistic	50,000,000	109,416,991	218.8%	0	36,315,748	
JP Morgan India Property Fund II	2012	Opportunistic	25,000,000	30,208,337	120.8%	1,547,677	14,822,609	
Mariner Real Estate Partners IV, L.P.	2014	Opportunistic	60,000,000	77,115,628	128.5%	27,300,000	52,438,353	
<b>Subtotal Opportunistic</b>			<b>185,000,000</b>	<b>266,786,569</b>	<b>144.2%</b>	<b>28,847,677</b>	<b>123,798,208</b>	
<b>Total Real Estate Portfolio</b>			<b>\$361,338,022</b>	<b>\$430,647,261</b>	<b>119.2%</b>	<b>\$38,614,913</b>	<b>\$184,231,832</b>	

## Real Assets Portfolio

Partnership Name	Vintage Year	RA Strategy	Cumulative Paid-In			Percent Funded	Unfunded Commitment	Net Asset Value
			Commitment	(Inside Commitment)				
JP Morgan Maritime Global	2010	Infrastructure	\$25,000,000	\$25,085,937	100.3%	\$682,971	\$15,860,121	
<b>Subtotal Infrastructure</b>			<b>25,000,000</b>	<b>25,085,937</b>	<b>100.3%</b>	<b>682,971</b>	<b>15,860,121</b>	
BTG Pactual Timberland	2004	Real Estate	25,000,000	25,000,000	100.0%	0	22,076,627	
<b>Subtotal Real Estate</b>			<b>25,000,000</b>	<b>25,000,000</b>	<b>100.0%</b>	<b>0</b>	<b>22,076,627</b>	
<b>Total Real Assets Portfolio</b>			<b>\$50,000,000</b>	<b>\$50,085,937</b>	<b>100.2%</b>	<b>\$682,971</b>	<b>\$37,936,748</b>	

## Real Estate Portfolio

Partnership Name	Vintage Year	RE Strategy	IRR as of								TVPI as of									
			12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	3/31/2019	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	3/31/2019
UBS Trumbull Property Fund	1995	Core	N/A	10.75%	10.71%	10.69%	10.68%	10.55%	10.45%	10.42%	10.40%	1.00x	2.19x	2.22x	2.27x	2.35x	2.38x	2.41x	2.44x	2.44x
JPMorgan Strategic Property Fund	1998	Core	N/A	9.94%	10.06%	10.00%	9.96%	9.80%	9.72%	9.68%	9.66%	1.00x	1.61x	1.65x	1.69x	1.73x	1.75x	1.78x	1.80x	1.80x
<b>Subtotal Core</b>			<b>N/A</b>	<b>10.41%</b>	<b>10.43%</b>	<b>10.40%</b>	<b>10.38%</b>	<b>10.23%</b>	<b>10.14%</b>	<b>10.10%</b>	<b>10.08%</b>	<b>1.00x</b>	<b>1.84x</b>	<b>1.88x</b>	<b>1.92x</b>	<b>1.98x</b>	<b>2.01x</b>	<b>2.04x</b>	<b>2.06x</b>	<b>2.06x</b>
Almanac Realty Securities Fund IV, L.P.	2004	Value Added	0.00%	9.16%	8.73%	9.30%	9.25%	9.24%	9.24%	9.24%	9.24%	1.00x	1.40x	1.42x	1.48x	1.48x	1.48x	1.48x	1.48x	1.48x
Fremont Strategic Property Partners II, L.P.	2004	Value Added	0.00%	-3.48%	-3.34%	-4.18%	-4.14%	-4.72%	-4.50%	-4.24%	-4.24%	1.00x	0.85x	0.84x	0.78x	0.77x	0.74x	0.74x	0.75x	0.75x
JPMorgan Special Situations Property Fund	2005	Value Added	0.00%	3.41%	4.72%	5.47%	6.39%	6.43%	6.41%	6.41%	6.41%	1.00x	1.17x	1.27x	1.37x	1.51x	1.58x	1.61x	1.61x	1.61x
Almanac Realty Securities Fund VI, L.P.	2011	Value Added	N/A	15.38%	20.76%	16.27%	17.81%	16.98%	14.16%	12.75%	12.11%	N/A	1.04x	1.19x	1.22x	1.29x	1.35x	1.35x	1.35x	1.34x
Almanac Realty Securities Fund VII, L.P.	2015	Value Added	N/A	N/A	N/A	N/A	8.70%	10.46%	14.10%	13.96%	14.12%	N/A	N/A	N/A	1.04x	1.10x	1.15x	1.25x	1.25x	1.27x
<b>Subtotal Value Added</b>			<b>0.00%</b>	<b>4.92%</b>	<b>5.41%</b>	<b>5.94%</b>	<b>6.48%</b>	<b>6.62%</b>	<b>6.74%</b>	<b>6.90%</b>	<b>6.92%</b>	<b>1.00x</b>	<b>1.19x</b>	<b>1.24x</b>	<b>1.28x</b>	<b>1.30x</b>	<b>1.30x</b>	<b>1.32x</b>	<b>1.32x</b>	
Mariner Real Estate Partners III, L.P.	2011	Opportunistic	0.22%	13.75%	13.10%	13.37%	12.48%	11.24%	10.18%	9.42%	9.25%	1.00x	1.14x	1.27x	1.54x	1.58x	1.58x	1.56x	1.55x	
25 Capital Residential Mortgage Opportunities Fund	2012	Opportunistic	N/A	-19.90%	13.93%	9.85%	7.29%	6.48%	5.50%	4.79%	4.47%	N/A	0.95x	1.06x	1.08x	1.08x	1.10x	1.11x	1.11x	1.10x
JP Morgan India Property Fund II	2012	Opportunistic	N/A	-7.93%	-2.69%	3.10%	4.08%	4.94%	2.02%	-11.40%	-11.04%	N/A	0.92x	0.97x	1.04x	1.07x	1.10x	1.04x	0.74x	0.74x
Mariner Real Estate Partners IV, L.P.	2014	Opportunistic	N/A	N/A	N/A	32.98%	2.59%	28.68%	17.30%	15.96%	15.30%	N/A	N/A	N/A	1.32x	1.02x	1.25x	1.26x	1.26x	1.26x
<b>Subtotal Opportunistic</b>			<b>0.22%</b>	<b>11.18%</b>	<b>11.92%</b>	<b>12.41%</b>	<b>9.94%</b>	<b>10.43%</b>	<b>8.67%</b>	<b>7.02%</b>	<b>6.77%</b>	<b>1.00x</b>	<b>1.10x</b>	<b>1.14x</b>	<b>1.20x</b>	<b>1.19x</b>	<b>1.24x</b>	<b>1.23x</b>	<b>1.20x</b>	<b>1.19x</b>
<b>Total Real Estate Portfolio</b>			<b>0.01%</b>	<b>9.62%</b>	<b>9.78%</b>	<b>9.93%</b>	<b>9.70%</b>	<b>9.70%</b>	<b>9.29%</b>	<b>8.86%</b>	<b>8.78%</b>	<b>1.00x</b>	<b>1.44x</b>	<b>1.40x</b>	<b>1.42x</b>	<b>1.40x</b>	<b>1.42x</b>	<b>1.42x</b>	<b>1.39x</b>	<b>1.39x</b>

## Real Assets Portfolio

Partnership Name	Vintage Year	RA Strategy	IRR as of								TVPI as of									
			12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	3/31/2019	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	3/31/2019
BTG Pactual Timberland	2004	Real Estate	0.00%	4.15%	4.38%	3.91%	3.53%	3.15%	2.63%	1.30%	1.33%	1.00x	1.33x	1.41x	1.40x	1.39x	1.38x	1.33x	1.16x	1.17x
JP Morgan Maritime Global	2010	Infrastructure	0.00%	-86.16%	7.20%	-1.93%	-18.11%	-23.19%	-10.76%	-6.96%	-7.78%	1.00x	0.32x	1.10x	0.97x	0.74x	0.60x	0.73x	0.76x	0.73x
<b>Total Real Assets Portfolio</b>			<b>0.00%</b>	<b>2.90%</b>	<b>4.47%</b>	<b>3.58%</b>	<b>1.69%</b>	<b>0.05%</b>	<b>0.42%</b>	<b>-0.51%</b>	<b>-0.70%</b>	<b>1.00x</b>	<b>1.20x</b>	<b>1.34x</b>	<b>1.25x</b>	<b>1.11x</b>	<b>1.00x</b>	<b>1.03x</b>	<b>0.96x</b>	<b>0.95x</b>

# OSERS Private Equity Portfolio Overview

## Private Equity Portfolio

Partnership Name	Vintage Year	PE Strategy	Commitment	Cumulative Paid-In		Percent Funded	Unfunded Commitment	Net Asset Value
				(Inside Commitment)				
FCP Fund II	2011	Mezzanine	\$30,000,000	\$24,556,127		81.9%	\$5,443,873	\$15,579,181
AAVIN Mezzanine Fund, LP	2014	Mezzanine	5,000,000	4,625,000		92.5%	375,000	4,088,814
AAVIN Equity Partners II, LP	2015	Mezzanine	25,000,000	15,133,649		60.5%	9,866,351	15,348,801
<b>Subtotal Mezzanine</b>			<b>60,000,000</b>	<b>44,314,776</b>		<b>73.9%</b>	<b>15,685,224</b>	<b>35,016,796</b>
SPC I-IV	2001	Fund of Funds	163,958,323	190,451,595		116.2%	18,908,000	80,679,698
Stonetree IV	2012	Fund of Funds	53,152,755	38,481,071		72.4%	11,649,000	39,056,052
<b>Subtotal Fund of Funds</b>			<b>217,111,078</b>	<b>228,932,666</b>		<b>105.4%</b>	<b>30,557,000</b>	<b>119,735,750</b>
<b>Total Private Equity Portfolio</b>			<b>\$277,111,078</b>	<b>\$273,247,442</b>		<b>98.6%</b>	<b>\$46,242,224</b>	<b>\$154,752,546</b>

## Private Equity Portfolio

Partnership Name	Vintage Year	PE Strategy	IRR as of									TVPI as of								
			12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	3/31/2019	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	3/31/2019
SPC I-IV	2001	Fund of Funds	6.33%	6.08%	6.03%	5.26%	4.70%	4.75%	5.66%	5.76%	5.91%	1.23x	1.24x	1.26x	1.23x	1.21x	1.20x	1.25x	1.27x	1.28x
FCP Fund II	2011	Mezzanine	-11.52%	-5.94%	2.26%	2.27%	8.33%	8.71%	9.21%	8.55%	8.38%	0.92x	0.94x	1.03x	1.05x	1.25x	1.28x	1.39x	1.41x	1.42x
Stonetree IV	2012	Fund of Funds	36.95%	9.45%	6.11%	6.15%	2.47%	2.83%	5.81%	6.39%	6.94%	1.19x	1.08x	1.08x	1.12x	1.06x	1.10x	1.25x	1.33x	1.37x
AAVIN Mezzanine Fund, LP	2014	Mezzanine	N/A	N/A	N/A	0.00%	-60.40%	-32.92%	-18.79%	-5.41%	-4.95%	N/A	N/A	N/A	1.00x	0.34x	0.77x	0.77x	0.88x	0.91x
AAVIN Equity Partners II, LP	2015	Mezzanine	N/A	N/A	N/A	N/A	-66.88%	-15.16%	-5.60%	1.51%	1.55%	N/A	N/A	N/A	N/A	0.74x	0.90x	0.94x	1.03x	1.03x
<b>Total Private Equity Portfolio</b>			<b>6.46%</b>	<b>5.97%</b>	<b>5.92%</b>	<b>5.18%</b>	<b>4.63%</b>	<b>4.71%</b>	<b>5.79%</b>	<b>5.95%</b>	<b>6.12%</b>	<b>1.22x</b>	<b>1.21x</b>	<b>1.22x</b>	<b>1.19x</b>	<b>1.18x</b>	<b>1.18x</b>	<b>1.25x</b>	<b>1.27x</b>	<b>1.29x</b>

## Notes

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1. Total Value = Cumulative Distributions + Net Asset Value
2. DPI = Cumulative Distributions/Cumulative Paid-In
3. TVPI = Total Value/Cumulative Paid-In
4. Potential Market Exposure = Net Asset Value + Unfunded Commitments
5. Does not include exposure from fund of funds managers.
6. Formerly known as Citigroup Venture Capital International Growth Partnership II, L.P. The Rohatyn Group acquisition finalized in Q4 2013.
7. Commitments to Bridgepoint Europe IV and CVC European Equity Partners V were both EUR 20.0mm. The USD commitments were converted at an exchange rate of 1.30 USD/EUR. The commitment to CVC Capital Partners VI was EUR 15.0mm with a converted exchange rate of 1.30661 USD/EUR. The commitment to Bridgepoint Europe V was EUR 20.0mm with a converted exchange rate of 1.25353 USD/EUR.
8. Source: Burgiss. Benchmark returns for each vintage year are calculated based on the pooled cash flows of all relevant vintage year funds in the Burgiss database. Benchmark returns are as of March 31, 2019. The total portfolio peer universe returns are the commitment-weighted averages of the individual vintage year benchmark returns.
9. Formerly known as CMEA Ventures VII, L.P.
10. The Public Market Equivalent (PME) return is measured against the Wilshire 5000 using the Long-Nickels/Index Comparison Method (ICM) methodology. This methodology calculates the hypothetical return that could have been achieved by purchasing/selling shares in the index on the same dates and in the same amounts as the cash flows to/from the private market portfolio.

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