



# Alternative Investment Performance Supplement

Nebraska Investment Council  
Data as of 12/31/2018

# 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 December 31<sup>st</sup>, 2018

# 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          | \$106,102,077.00         | \$358,261,212.00        | \$464,363,289.00          | 0.41x        | 1.77x             | 5.46%            |
| 2007         | 4                     | \$124,000,000.00          | \$3,881,917.00          | \$124,165,188.00          | \$80,585,976.00          | \$86,832,132.00         | \$167,418,108.00          | 0.65x        | 1.35x             | 5.51%            |
| 2008         | 2                     | \$50,000,000.00           | \$837,188.00            | \$49,303,201.00           | \$64,214,024.00          | \$7,270,634.00          | \$71,484,658.00           | 1.30x        | 1.45x             | 7.94%            |
| 2010         | 2                     | \$150,000,000.00          | \$4,909,392.00          | \$145,090,608.00          | \$79,005,102.00          | \$160,367,524.00        | \$239,372,626.00          | 0.54x        | 1.65x             | 11.82%           |
| 2011         | 1                     | \$25,000,000.00           | \$3,854,470.00          | \$23,683,278.00           | \$29,363,036.00          | \$8,187,277.00          | \$37,550,313.00           | 1.24x        | 1.59x             | 14.83%           |
| 2012         | 1                     | \$20,000,000.00           | \$2,720,946.00          | \$18,281,973.00           | \$18,315,560.00          | \$7,488,297.00          | \$25,803,857.00           | 1.00x        | 1.41x             | 13.82%           |
| 2013         | 1                     | \$20,000,000.00           | \$0.00                  | \$21,598,377.00           | \$21,886,074.00          | \$7,602,819.00          | \$29,488,893.00           | 1.01x        | 1.37x             | 10.11%           |
| 2014         | 1                     | \$50,000,000.00           | \$4,901,450.00          | \$45,098,550.00           | \$26,260,177.00          | \$29,220,870.00         | \$55,481,047.00           | 0.58x        | 1.23x             | 13.58%           |
| 2015         | 3                     | \$200,000,000.00          | \$30,769,246.00         | \$172,212,931.00          | \$17,523,993.00          | \$188,483,565.00        | \$206,007,558.00          | 0.10x        | 1.20x             | 9.06%            |
| 2016         | 1                     | \$40,000,000.00           | \$16,590,121.00         | \$23,409,878.00           | \$774,206.00             | \$23,973,969.00         | \$24,748,175.00           | 0.03x        | 1.06x             | 4.80%            |
| 2017         | 1                     | \$40,000,000.00           | \$35,004,256.00         | \$8,425,526.00            | \$3,429,782.00           | \$6,741,479.00          | \$10,171,261.00           | 0.41x        | 1.21x             | 19.12%           |
| 2018         | 3                     | \$140,000,000.00          | \$77,604,614.00         | \$62,441,673.00           | \$584,855.00             | \$61,941,958.00         | \$62,526,813.00           | 0.01x        | 1.00x             | 0.00%            |
| <b>Total</b> | <b>22</b>             | <b>\$1,109,000,000.00</b> | <b>\$181,073,600.00</b> | <b>\$1,139,010,816.00</b> | <b>\$674,430,474.00</b>  | <b>\$946,371,736.00</b> | <b>\$1,620,802,211.00</b> | <b>0.59x</b> | <b>1.42x</b>      | <b>7.20%</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         | \$18,332,621        | \$26,355,749             | \$1,914,085         | \$28,269,834         | 1.44x            | 1.54x             | 11.44%        |
| 2009         | 1                     | 10,000,000          | 1,061,669           | 8,919,577           | 9,173,495                | 1,843,075           | 11,016,570           | 1.03x            | 1.24x             | 5.96%         |
| 2010         | 3                     | 26,000,000          | 0                   | 26,000,000          | 7,383,850                | 38,674,055          | 46,057,905           | 0.28x            | 1.77x             | 9.90%         |
| 2014         | 1                     | 7,500,000           | 735,217             | 6,764,783           | 3,936,571                | 4,383,130           | 8,319,701            | 0.58x            | 1.23x             | 13.61%        |
| 2015         | 1                     | 10,000,000          | 1,806,413           | 8,171,818           | 2,972,064                | 7,579,199           | 10,551,263           | 0.36x            | 1.29x             | 14.84%        |
| 2016         | 1                     | 6,000,000           | 0                   | 6,000,000           | 510,448                  | 6,524,701           | 7,035,149            | 0.09x            | 1.17x             | 6.19%         |
| <b>Total</b> | <b>8</b>              | <b>\$79,500,000</b> | <b>\$5,169,476</b>  | <b>\$74,188,799</b> | <b>\$50,332,177</b>      | <b>\$60,918,245</b> | <b>\$111,250,422</b> | <b>0.68x</b>     | <b>1.50x</b>      | <b>10.09%</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

# 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  | 154,666,491        | 1.0        | 0.6         | 1.6        | 1.5         | 4.2        | 3.2        | 7.4         | 6.7        | 4.4        | 3.8        | 8.3         | 7.5         | 4.7        | 5.4        | 10.3        | 9.4         | 11.2       | 10.3        | 1Q11                      | 10.5        | 1.7             |
| Lion Properties Fund   | 59,807,375         |            |             |            |             |            |            |             |            |            |            |             |             |            |            |             |             |            |             | 1Q19                      | 7.2         | 1.0             |
| PRISA SA   | 195,352,320        | 1.1        | 0.8         | 1.8        | 1.6         | 4.4        | 4.2        | 8.7         | 7.8        | 4.5        | 3.7        | 8.3         | 7.5         | 4.7        | 5.8        | 10.7        | 9.9         | 6.4        | 5.5         | 2Q06                      | 5.6         | 1.8             |
| UBS Trumbull Property Fund   | 162,908,892        | 1.1        | 0.6         | 1.7        | 1.5         | 4.6        | 2.3        | 7.0         | 6.2        | 4.6        | 2.1        | 6.8         | 5.9         | 4.8        | 4.0        | 9.0         | 8.0         | 6.6        | 5.6         | 3Q06                      | 5.3         | 1.8             |
| <b>Core-Core</b>   | <b>572,735,078</b> | <b>1.1</b> | <b>0.7</b>  | <b>1.7</b> | <b>1.6</b>  | <b>4.4</b> | <b>3.3</b> | <b>7.8</b>  | <b>7.0</b> | <b>4.5</b> | <b>3.2</b> | <b>7.8</b>  | <b>7.0</b>  | <b>4.7</b> | <b>5.1</b> | <b>10.0</b> | <b>9.1</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  | 131,524,982        | 1.0        | 1.3         | 2.3        | 2.1         | 4.1        | 3.6        | 7.7         | 7.0        | 4.2        | 3.0        | 7.3         | 6.5         |            |            |             |             | 8.1        | 7.4         | 2Q15                      | 7.3         | 1.2             |
| <b>Core Debt</b>   | <b>131,524,982</b> | <b>1.0</b> | <b>1.3</b>  | <b>2.3</b> | <b>2.1</b>  | <b>4.1</b> | <b>3.6</b> | <b>7.7</b>  | <b>7.0</b> | <b>4.2</b> | <b>3.0</b> | <b>7.3</b>  | <b>6.5</b>  |            |            |             |             | <b>8.1</b> | <b>7.4</b>  | <b>2Q15</b>               | <b>7.3</b>  | <b>1.2</b>      |
| <b>Core Plus</b>   |                    |            |             |            |             |            |            |             |            |            |            |             |             |            |            |             |             |            |             |                           |             |                 |
| PRISA II   | 84,718,170         | 1.0        | 0.4         | 1.5        | 1.2         | 4.0        | 5.3        | 9.4         | 8.2        | 4.3        | 4.9        | 9.4         | 8.2         | 4.5        | 7.2        | 11.9        | 10.8        | 4.7        | 3.6         | 3Q07                      | 7.0         | 1.6             |
| <b>Core Plus</b>   | <b>84,718,170</b>  | <b>1.0</b> | <b>0.4</b>  | <b>1.5</b> | <b>1.2</b>  | <b>4.0</b> | <b>5.3</b> | <b>9.4</b>  | <b>8.2</b> | <b>4.3</b> | <b>4.9</b> | <b>9.4</b>  | <b>8.2</b>  | <b>4.5</b> | <b>7.2</b> | <b>11.9</b> | <b>10.8</b> | <b>4.7</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  | 1,210,722          | 2.2        | -2.0        | 0.2        | -0.2        | 39.5       | -20.0      | 15.1        | 13.5       | 26.7       | -11.3      | 15.3        | 13.7        | 22.6       | -9.1       | 13.5        | 12.0        | 13.4       | 10.4        | 3Q08                      | 11.9        | 1.5             |
| Almanac Realty Securities VII  | 28,650,974         | 0.7        | 1.7         | 2.4        | 2.1         | 7.0        | 7.9        | 15.4        | 13.7       | 8.7        | 7.8        | 17.0        | 13.5        |            |            |             |             | 17.7       | 13.3        | 3Q15                      | 14.0        | 1.3             |
| Almanac Realty Securities VIII   | -70,391            |            |             |            |             |            |            |             |            |            |            |             |             |            |            |             |             |            |             | 3Q19                      | 0.0         | -0.7            |
| Beacon Capital Strategic Partners V  | 0                  | -14.9      | 6.8         | -8.1       | -8.1        | -14.8      | -57.8      | -63.7       | -63.7      | -2.8       | -31.5      | -33.2       | -33.4       | -1.4       | -17.1      | -18.1       | -18.5       | -15.0      | -16.7       | 4Q07                      | -7.9        | 0.6             |
| Heitman Value Partners II  | 50,111             | 14.7       | 0.0         | 14.7       | 14.7        | 15.2       | 0.0        | 15.2        | 15.2       | 12.0       | 3.8        | 16.3        | 16.3        | 9.2        | 8.2        | 18.1        | 17.9        | 6.3        | 5.8         | 1Q08                      | 8.6         | 1.5             |
| Rockwood Capital Real Estate Partners Fund IX                                | 7,488,297          | 0.9        | 0.6         | 1.4        | 0.7         | 2.9        | 0.8        | 3.7         | 0.6        | 2.9        | 8.4        | 11.5        | 9.1         | 0.2        | 14.9       | 15.5        | 12.7        | 18.5       | 15.2        | 4Q13                      | 13.8        | 1.4             |
| Rockwood Capital Real Estate Partners Fund X                                 | 23,973,969         | 0.4        | -0.3        | 0.1        | -0.5        | 1.5        | 12.0       | 13.6        | 10.1       |            |            |             |             |            |            |             |             | 5.8        | 2.2         | 4Q16                      | 4.8         | 1.1             |
| <b>Value-Value Added</b>   | <b>61,303,682</b>  | <b>0.6</b> | <b>0.7</b>  | <b>1.4</b> | <b>0.7</b>  | <b>5.7</b> | <b>6.6</b> | <b>12.6</b> | <b>9.9</b> | <b>6.2</b> | <b>7.0</b> | <b>13.5</b> | <b>10.6</b> | <b>6.4</b> | <b>7.9</b> | <b>14.7</b> | <b>12.3</b> | <b>3.7</b> | <b>1.2</b>  | <b>4Q07</b>               | <b>6.0</b>  | <b>1.2</b>      |
| <b>Opportunistic-Opportunistic</b>   |                    |            |             |            |             |            |            |             |            |            |            |             |             |            |            |             |             |            |             |                           |             |                 |
| AG Realty Fund VIII  | 8,187,277          | -1.9       | 1.5         | -0.4       | -0.5        | -4.6       | 16.6       | 11.4        | 8.2        | -1.0       | 13.5       | 12.4        | 8.9         | -0.1       | 18.2       | 18.1        | 13.1        | 18.9       | 13.6        | 2Q12                      | 14.8        | 1.6             |
| CBRE Strategic Partners U.S. Opportunity 5                                   | 6,059,912          | -0.1       | 3.4         | 3.3        | 3.1         | -0.4       | 5.5        | 5.1         | 4.1        | 4.6        | 0.6        | 5.6         | 4.5         | 4.6        | 7.8        | 13.0        | 11.8        | -13.9      | -15.9       | 4Q08                      | 5.3         | 1.4             |
| Landmark Real Estate Fund VI   | 5,701,033          | 0.9        | -2.6        | -1.6       | -1.9        | 0.4        | -0.3       | 0.3         | -0.9       | 14.7       | -13.6      | 0.9         | -0.5        | 18.2       | -12.1      | 5.5         | 4.2         | 10.7       | 8.9         | 1Q11                      | 19.8        | 1.6             |
| Landmark Real Estate Fund VII  | 29,220,870         | 0.1        | 0.9         | 1.0        | 0.5         | 4.5        | -1.0       | 3.5         | 2.1        | 11.0       | -2.7       | 8.3         | 5.8         |            |            |             |             | 28.7       | 21.6        | 1Q15                      | 13.6        | 1.2             |
| Landmark Real Estate Fund VIII   | 6,741,479          | -1.8       | 5.6         | 3.8        | 2.0         | 4.3        | -8.8       | -4.5        | -10.0      |            |            |             |             |            |            |             |             | -12.5      | -16.3       | 4Q17                      | 24.4        | 1.2             |
| Rockpoint Real Estate Fund III   | 2,063,851          | -0.1       | 13.8        | 13.8       | 13.2        | 0.6        | 7.0        | 7.7         | 3.8        | 0.9        | 4.3        | 5.3         | 0.1         | 0.9        | 5.5        | 6.4         | 2.6         | 9.9        | 3.2         | 2Q09                      | 13.8        | 1.4             |
| Torchlight Debt Opportunity Fund IV  | 7,602,819          | 1.6        | -3.4        | -1.8       | -0.2        | 8.1        | 6.8        | 15.3        | 11.0       | 9.4        | 4.5        | 14.2        | 10.8        | 9.8        | 3.7        | 13.8        | 10.7        | 13.8       | 10.7        | 1Q14                      | 10.1        | 1.4             |
| Torchlight Debt Opportunity Fund V   | 28,307,609         | 2.3        | -3.0        | -0.6       | -0.8        | 11.0       | 7.5        | 19.0        | 13.5       | 15.6       | 6.5        | 22.8        | 14.7        |            |            |             |             | 22.8       | 10.8        | 3Q15                      | 13.2        | 1.3             |
| Torchlight Debt Opportunity Fund VI  | 2,204,974          | 6.1        | -16.6       | -10.5      | -15.6       |            |            |             |            |            |            |             |             |            |            |             |             | 8.3        | -2.1        | 3Q18                      | -5.4        | 1.0             |
| <b>Opportunistic-Opportunistic</b>   | <b>96,089,824</b>  | <b>0.8</b> | <b>-0.5</b> | <b>0.3</b> | <b>-0.1</b> | <b>5.1</b> | <b>4.3</b> | <b>9.6</b>  | <b>5.8</b> | <b>9.3</b> | <b>1.5</b> | <b>11.0</b> | <b>7.3</b>  | <b>9.7</b> | <b>5.4</b> | <b>15.5</b> | <b>11.6</b> | <b>0.8</b> | <b>-4.1</b> | <b>4Q08</b>               | <b>12.0</b> | <b>1.4</b>      |
| <b>Total Portfolio</b>   |                    |            |             |            |             |            |            |             |            |            |            |             |             |            |            |             |             |            |             |                           |             |                 |
| NIC - DB Direct  | 946,371,736        | 1.0        | 0.6         | 1.6        | 1.4         | 4.5        | 3.9        | 8.5         | 7.1        | 5.2        | 3.3        | 8.7         | 7.3         | 5.5        | 5.5        | 11.2        | 9.8         | 8.4        | 7.2         | 1Q05                      | 7.2         | 1.4             |
| <b>Indices</b>   |                    |            |             |            |             |            |            |             |            |            |            |             |             |            |            |             |             |            |             |                           |             |                 |
| NCREIF Fund Index – Open End Diversified Core Equity “NFI-ODCE Value Weight” |                    | 1.0        | 0.7         | 1.8        | 1.5         | 4.2        | 4.0        | 8.3         | 7.4        | 4.4        | 3.8        | 8.2         | 7.3         | 4.6        | 5.6        | 10.4        | 9.4         | 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  | 16,742,751        | 1.0        | 0.6         | 1.6         | 1.5         | 4.2        | 3.2        | 7.4        | 6.7        | 4.4        | 3.8        | 8.3        | 7.5        | 4.7        | 5.3         | 10.1        | 9.2         | 11.1        | 10.2        | 1Q11                      | 10.6        | 1.7             |  |
| PRISA LP   | 9,449,228         | 1.1        | 0.6         | 1.7         | 1.5         | 4.4        | 4.0        | 8.5        | 7.6        | 4.6        | 3.6        | 8.3        | 7.4        | 4.8        | 5.6         | 10.6        | 9.7         | 12.7        | 11.7        | 1Q10                      | 10.7        | 1.9             |  |
| UBS Trumbull Property Fund   | 12,482,076        | 1.1        | 0.6         | 1.7         | 1.5         | 4.6        | 2.3        | 7.0        | 6.2        | 4.6        | 2.1        | 6.8        | 5.9        | 4.8        | 4.0         | 9.0         | 8.0         | 10.6        | 9.6         | 1Q10                      | 8.7         | 1.7             |  |
| <b>Core</b>  | <b>38,674,055</b> | <b>1.1</b> | <b>0.6</b>  | <b>1.7</b>  | <b>1.5</b>  | <b>4.4</b> | <b>3.1</b> | <b>7.5</b> | <b>6.7</b> | <b>4.5</b> | <b>3.2</b> | <b>7.8</b> | <b>7.0</b> | <b>4.7</b> | <b>5.0</b>  | <b>9.9</b>  | <b>9.0</b>  | <b>13.4</b> | <b>12.4</b> | <b>1Q10</b>               | <b>9.9</b>  | <b>1.8</b>      |  |
| <b>Core Debt</b>   |                   |            |             |             |             |            |            |            |            |            |            |            |            |            |             |             |             |             |             |                           |             |                 |  |
| UBS Trumbull Property Income Fund  | 6,524,701         | 1.0        | 1.3         | 2.3         | 2.1         | 4.1        | 3.6        | 7.7        | 6.9        |            |            |            |            |            |             |             |             | 7.0         | 6.2         | 2Q16                      | 6.2         | 1.2             |  |
| <b>Core Debt</b>   | <b>6,524,701</b>  | <b>1.0</b> | <b>1.3</b>  | <b>2.3</b>  | <b>2.1</b>  | <b>4.1</b> | <b>3.6</b> | <b>7.7</b> | <b>6.9</b> |            |            |            |            |            |             |             |             | <b>7.0</b>  | <b>6.2</b>  | <b>2Q16</b>               | <b>6.2</b>  | <b>1.2</b>      |  |
| <b>Opportunistic</b>   |                   |            |             |             |             |            |            |            |            |            |            |            |            |            |             |             |             |             |             |                           |             |                 |  |
| Landmark Real Estate Fund VII  | 4,383,130         | 0.1        | 0.9         | 1.0         | 0.5         | 4.5        | -1.0       | 3.5        | 2.1        | 11.0       | -2.7       | 8.3        | 5.8        |            |             |             |             | 28.6        | 21.5        | 1Q15                      | 13.6        | 1.2             |  |
| Metropolitan Real Estate Partners International III, L.P.                    | 1,843,075         | 1.6        | -11.8       | -10.3       | -10.5       | 4.6        | -12.3      | -8.1       | -8.8       | 3.2        | -1.7       | 1.6        | 0.8        | 3.5        | 5.3         | 8.9         | 6.6         | -11.4       | -12.4       | 3Q09                      | 6.0         | 1.1             |  |
| Metropolitan Real Estate Partners VI, L.P.*                                  | 1,914,085         | -0.1       | 2.4         | 2.4         | 1.8         | -2.7       | 11.4       | 8.7        | 7.5        | 1.6        | 4.8        | 6.6        | 5.6        | 1.4        | 8.3         | 9.8         | 9.0         | 13.4        | 12.9        | 1Q09                      | 11.4        | 1.5             |  |
| Metropolitan Real Estate Secondaries and Co-Investments Fund, L.P.           | 7,579,199         | 0.5        | 0.4         | 0.9         | 0.6         | 1.6        | 16.1       | 18.0       | 15.2       | 0.5        | 12.1       | 12.7       | 9.7        |            |             |             |             | 12.7        | 9.7         | 1Q16                      | 14.8        | 1.3             |  |
| <b>Opportunistic</b>   | <b>15,719,489</b> | <b>0.5</b> | <b>-1.3</b> | <b>-0.8</b> | <b>-1.1</b> | <b>2.2</b> | <b>5.7</b> | <b>8.0</b> | <b>6.2</b> | <b>3.9</b> | <b>4.6</b> | <b>8.6</b> | <b>6.8</b> | <b>3.3</b> | <b>10.1</b> | <b>13.6</b> | <b>11.1</b> | <b>14.4</b> | <b>13.1</b> | <b>1Q09</b>               | <b>10.6</b> | <b>1.3</b>      |  |
| <b>Total Portfolio</b>   |                   |            |             |             |             |            |            |            |            |            |            |            |            |            |             |             |             |             |             |                           |             |                 |  |
| NIC - DB Endowment   | 60,918,245        | 0.9        | 0.1         | 1.0         | 0.8         | 3.6        | 4.0        | 7.8        | 6.7        | 4.3        | 3.6        | 8.0        | 6.9        | 4.2        | 6.9         | 11.3        | 9.8         | 13.5        | 12.5        | 1Q09                      | 10.1        | 1.4             |  |
| <b>Indices</b>   |                   |            |             |             |             |            |            |            |            |            |            |            |            |            |             |             |             |             |             |                           |             |                 |  |
| NCREIF Fund Index – Open End Diversified Core Equity “NFI-ODCE Value Weight” |                   | 1.0        | 0.7         | 1.8         | 1.5         | 4.2        | 4.0        | 8.3        | 7.4        | 4.4        | 3.8        | 8.2        | 7.3        | 4.6        | 5.6         | 10.4        | 9.4         | 7.9         | 6.9         | 1Q05                      |             |                 |  |

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

| Defined Benefit Portfolio              |                       |                        | Portfolio Returns |                   |               | TVPI       | IRR        |
|--|-----------------------|------------------------|-------------------|-------------------|---------------|------------|------------|
| Vintage Year                           | Number of Investments | Total Commitments      | DPI <sup>3</sup>  | TVPI <sup>4</sup> | IRR           | Quartile   | Quartile   |
| 2005                                   | 1                     | \$50,000,000           | 1.23x             | 1.45x             | 6.89%         | 2          | 3          |
| 2006                                   | 2                     | 125,000,000            | 1.22x             | 1.48x             | 7.62%         | 2          | 2          |
| 2007                                   | 5                     | 103,002,649            | 1.23x             | 1.58x             | 10.21%        | 2          | 2          |
| 2008                                   | 5                     | 104,500,000            | 1.29x             | 1.87x             | 16.43%        | 1          | 1          |
| 2009                                   | 4                     | 70,000,000             | 0.91x             | 1.54x             | 9.91%         | 3          | 3          |
| 2010                                   | 2                     | 35,000,000             | 0.58x             | 1.29x             | 7.48%         | 3          | 3          |
| 2011                                   | 2                     | 35,000,000             | 1.27x             | 1.74x             | 19.93%        | 2          | 2          |
| 2012                                   | 5                     | 105,000,000            | 0.76x             | 1.63x             | 15.74%        | 2          | 2          |
| 2013                                   | 4                     | 87,500,000             | 0.58x             | 1.45x             | 15.27%        | 2          | 2          |
| 2014                                   | 5                     | 144,599,150            | 0.34x             | 1.33x             | 13.30%        | 3          | 2          |
| 2015                                   | 2                     | 45,000,000             | 0.31x             | 1.54x             | 25.18%        | 1          | 1          |
| 2016                                   | 3                     | 115,070,600            | 0.16x             | 1.26x             | 23.22%        | 2          | 1          |
| 2017                                   | 6                     | 300,000,000            | 0.05x             | 1.08x             | 11.24%        | 2          | 2          |
| 2018                                   | 2                     | 98,968,000             | 0.00x             | 1.16x             | 16.37%        | 1          | 1          |
| <b>Total Defined Benefit Portfolio</b> | <b>48</b>             | <b>\$1,418,640,399</b> | <b>0.76x</b>      | <b>1.47x</b>      | <b>11.54%</b> | <b>N/A</b> | <b>N/A</b> |

  

| Endowment Portfolio              |                       |                      | Portfolio Returns |                   |               | TVPI       | IRR        |
|----------------------------------|-----------------------|----------------------|-------------------|-------------------|---------------|------------|------------|
| Vintage Year                     | Number of Investments | Total Commitments    | DPI <sup>3</sup>  | TVPI <sup>4</sup> | IRR           | Quartile   | Quartile   |
| 2008                             | 1                     | \$45,000,000         | 0.88x             | 1.60x             | 12.27%        | 2          | 2          |
| 2010                             | 1                     | 20,000,000           | 0.85x             | 1.78x             | 17.13%        | 2          | 1          |
| 2012                             | 2                     | 25,000,000           | 0.91x             | 1.56x             | 19.72%        | 2          | 1          |
| 2014                             | 1                     | 20,000,000           | 0.28x             | 1.35x             | 16.57%        | 2          | 2          |
| 2017                             | 1                     | 20,000,000           | 0.16x             | 1.15x             | 19.78%        | 1          | 1          |
| <b>Total Endowment Portfolio</b> | <b>6</b>              | <b>\$130,000,000</b> | <b>0.73x</b>      | <b>1.55x</b>      | <b>14.77%</b> | <b>N/A</b> | <b>N/A</b> |

- The Defined Benefit Portfolio's performance continues to improve 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 each has over \$10.0 million of net asset value remaining.
  - 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 10.90% and 1.49x, respectively.
  - Vintage year 2012 is performing well with all five funds generating positive net TVPIs and IRRs at or above 1.39x and 12.03%, respectively.
  - Vintage years 2015 and 2016 are too young to assess. We expect performance to increase as the underlying funds mature and exit the J-curve.
- The Endowment Portfolio, composed primarily of fund of funds, experienced a strong quarter with IRR increasing by 14 bps and TVPI increasing 0.01x. Abbott Capital Private Equity Fund VI and RCP Fund VII continue to mature with Net IRRs and TVPIs above 12.27% and 1.60x, respectively.

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

| 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>                  |              |                    |                   |                     |                    |                          |                 |                          |                  |                   |         |
| TRG Growth Partnership II, L.P. <sup>6</sup>      | 2006         | Buyout - Large     | \$25,000,000      | \$674,886           | \$24,757,592       | \$25,570,271             | \$4,084,028     | \$29,654,298             | 1.03x            | 1.20x             | 3.84%   |
| New Mountain Partners III, L.P.                   | 2007         | Buyout - Mega      | 25,000,000        | 1,714,702           | 25,658,710         | 34,052,247               | 16,482,591      | 50,534,838               | 1.33x            | 1.97x             | 13.32%  |
| Presidio Partners 2007, L.P. <sup>9</sup>         | 2007         | Venture - Early    | 20,000,000        | 0                   | 20,070,686         | 23,812,629               | 4,865,665       | 28,678,294               | 1.19x            | 1.43x             | 7.62%   |
| Sun Capital Partners V, L.P.                      | 2007         | Turnaround         | 18,002,649        | 1,987,857           | 18,624,842         | 15,635,502               | 5,509,547       | 21,145,049               | 0.84x            | 1.14x             | 2.67%   |
| The Resolute Fund II, L.P.                        | 2007         | Buyout - Large     | 25,000,000        | 2,259,039           | 27,449,010         | 29,147,313               | 10,455,580      | 39,602,893               | 1.06x            | 1.44x             | 8.66%   |
| Wayzata Opportunities Fund II, L.P.               | 2007         | Distressed Debt    | 15,000,000        | 3,000,000           | 17,475,000         | 32,229,154               | 552,619         | 32,781,773               | 1.84x            | 1.88x             | 16.45%  |
| Accel-KKR Capital Partners III, L.P.              | 2008         | Buyout - Medium    | 12,500,000        | 4,545,903           | 12,831,237         | 18,087,757               | 13,533,611      | 31,621,368               | 1.41x            | 2.46x             | 21.24%  |
| Ares Corporate Opportunities Fund III, L.P.       | 2008         | Buyout - Large     | 20,000,000        | 1,710,200           | 24,686,764         | 35,721,198               | 14,368,302      | 50,089,500               | 1.45x            | 2.03x             | 21.37%  |
| Bridgepoint Europe IV, L.P. <sup>7</sup>          | 2008         | Buyout - Large     | 26,000,000        | 2,347,543           | 24,108,066         | 26,001,119               | 14,308,199      | 40,309,318               | 1.08x            | 1.67x             | 11.38%  |
| CVC European Equity Partners V, L.P. <sup>7</sup> | 2008         | Buyout - Mega      | 26,000,000        | 3,239,552           | 29,571,111         | 47,384,393               | 8,934,201       | 56,318,594               | 1.60x            | 1.90x             | 17.43%  |
| Quantum Energy Partners V, L.P.                   | 2008         | Energy             | 20,000,000        | 2,445,479           | 21,338,274         | 17,510,407               | 14,238,170      | 31,748,577               | 0.82x            | 1.49x             | 10.90%  |
| Fulcrum Growth Partners IV, L.P.                  | 2009         | Buyout - Small     | 10,000,000        | 2,017,362           | 8,905,639          | 5,980,631                | 9,487,120       | 15,467,751               | 0.67x            | 1.74x             | 10.02%  |
| Lincolnshire Equity Fund IV, L.P.                 | 2009         | Buyout - Medium    | 20,000,000        | 332,946             | 21,666,150         | 24,610,736               | 8,853,732       | 33,464,468               | 1.14x            | 1.51x             | 11.02%  |
| 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            | 0.54x             | -28.44% |
| New Enterprise Associates 13, L.P.                | 2009         | Venture - Balanced | 20,000,000        | 300,000             | 19,702,071         | 18,512,537               | 18,226,719      | 36,739,256               | 0.94x            | 1.86x             | 13.73%  |
| EIF United States Power Fund IV, L.P.             | 2010         | Energy             | 20,000,000        | 1,648,281           | 23,422,826         | 10,108,399               | 17,962,328      | 28,070,727               | 0.43x            | 1.20x             | 5.83%   |
| Merit Mezzanine Fund V, L.P.                      | 2010         | Mezzanine          | 15,000,000        | 866,939             | 14,133,061         | 11,756,979               | 8,501,480       | 20,258,459               | 0.83x            | 1.43x             | 9.36%   |
| Ares Mezzanine Partners, L.P.                     | 2011         | Mezzanine          | 15,000,000        | 722,466             | 8,520,566          | 9,780,971                | 70,775          | 9,851,746                | 1.15x            | 1.16x             | 8.86%   |
| Lightyear Fund III, L.P.                          | 2011         | Buyout - Medium    | 20,000,000        | 2,165,121           | 23,093,741         | 30,311,735               | 14,972,940      | 45,284,675               | 1.31x            | 1.96x             | 22.42%  |
| Ares Corporate Opportunities Fund IV, L.P.        | 2012         | Buyout - Large     | 20,000,000        | 3,645,723           | 21,464,727         | 11,679,481               | 18,140,574      | 29,820,055               | 0.54x            | 1.39x             | 12.03%  |
| Dover Street VIII, L.P.                           | 2012         | Secondaries        | 25,000,000        | 2,500,000           | 22,500,000         | 24,674,817               | 9,917,872       | 34,592,689               | 1.10x            | 1.54x             | 20.64%  |
| Green Equity Investors VI, L.P.                   | 2012         | Buyout - Mega      | 20,000,000        | 2,124,694           | 21,971,439         | 13,336,412               | 21,594,035      | 34,930,447               | 0.61x            | 1.59x             | 15.97%  |
| McCarthy Capital V, L.P.                          | 2012         | Buyout - Small     | 20,000,000        | 2,040,253           | 19,616,511         | 16,650,803               | 15,668,517      | 32,319,320               | 0.85x            | 1.65x             | 13.27%  |
| New Enterprise Associates 14, L.P.                | 2012         | Venture - Balanced | 20,000,000        | 1,200,000           | 18,807,229         | 13,238,340               | 25,037,605      | 38,275,945               | 0.70x            | 2.04x             | 17.47%  |
| Accel-KKR Capital Partners IV, L.P.               | 2013         | Buyout - Medium    | 12,500,000        | 8,674,923           | 11,792,453         | 15,176,112               | 11,880,694      | 27,056,806               | 1.29x            | 2.29x             | 37.25%  |
| Beecken Petty O'Keefe Fund IV, L.P.               | 2013         | Buyout - Medium    | 20,000,000        | 196,281             | 19,803,719         | 13,423,533               | 17,130,721      | 30,554,255               | 0.68x            | 1.54x             | 19.35%  |
| Pine Brook Capital Partners II, L.P.              | 2013         | Buyout - Large     | 30,000,000        | 3,889,796           | 33,403,260         | 10,078,975               | 33,124,009      | 43,202,984               | 0.30x            | 1.29x             | 10.03%  |
| Wayzata Opportunities Fund III, L.P.              | 2013         | Distressed Debt    | 25,000,000        | 19,304,494          | 12,358,995         | 6,569,494                | 5,171,262       | 11,740,756               | 0.53x            | 0.95x             | -1.89%  |
| CVC Capital Partners VI, L.P. <sup>7</sup>        | 2014         | Buyout - Mega      | 19,599,150        | 3,509,575           | 17,965,442         | 5,760,675                | 17,441,508      | 23,202,184               | 0.32x            | 1.29x             | 14.95%  |
| New Mountain Partners IV, L.P.                    | 2014         | Buyout - Large     | 30,000,000        | 3,509,664           | 26,913,972         | 12,012,963               | 29,015,205      | 41,028,168               | 0.45x            | 1.52x             | 20.20%  |
| Quantum Energy Partners VI, LP                    | 2014         | Energy             | 30,000,000        | 11,273,868          | 23,105,026         | 11,708,943               | 28,044,299      | 39,753,242               | 0.51x            | 1.72x             | 40.38%  |
| The Energy & Minerals Group Fund III, LP          | 2014         | Energy             | 35,000,000        | 1,785,175           | 33,600,847         | 2,397,667                | 26,365,912      | 28,763,579               | 0.07x            | 0.86x             | -4.28%  |
| The Resolute Fund III, L.P.                       | 2014         | Buyout - Large     | 30,000,000        | 2,996,016           | 33,470,104         | 14,269,199               | 32,598,777      | 46,867,976               | 0.43x            | 1.40x             | 21.62%  |
| Francisco Partners IV, L.P.                       | 2015         | Buyout - Large     | 20,000,000        | 510,000             | 19,490,000         | 5,970,000                | 26,590,989      | 32,560,989               | 0.31x            | 1.67x             | 26.32%  |
| Wynchurch Capital Partners IV, L.P.               | 2015         | Buyout - Medium    | 25,000,000        | 11,881,479          | 13,118,521         | 4,167,411                | 13,411,059      | 17,578,470               | 0.32x            | 1.34x             | 22.25%  |

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             | 2,155,505            | 20,766,286             | 2,832,351                | 23,511,606           | 26,343,957               | 0.14x            | 1.27x             | 18.24%        |
| Dover Street IX, L.P.                        | 2016         | Secondaries     | 50,000,000             | 23,500,000           | 26,500,000             | 6,068,350                | 27,135,526           | 33,203,876               | 0.23x            | 1.25x             | 37.03%        |
| McCarthy Capital VI, L.P.                    | 2016         | Buyout - Small  | 40,000,000             | 23,117,872           | 17,363,461             | 1,151,746                | 20,760,412           | 21,912,158               | 0.07x            | 1.26x             | 19.71%        |
| Ares Corporate Opportunities Fund V, L.P.    | 2017         | Buyout - Mega   | 50,000,000             | 29,574,024           | 21,243,067             | 860,775                  | 19,927,417           | 20,788,192               | 0.04x            | 0.98x             | -2.50%        |
| Francisco Partners V, L.P.                   | 2017         | Buyout - Large  | 50,000,000             | 35,750,000           | 14,250,000             | 0                        | 14,599,175           | 14,599,175               | 0.00x            | 1.02x             | 3.15%         |
| Genstar Capital Partners VIII, L.P.          | 2017         | Buyout - Large  | 50,000,000             | 23,431,443           | 27,922,432             | 1,353,875                | 33,247,013           | 34,600,888               | 0.05x            | 1.24x             | 50.54%        |
| Green Equity Investors VII, L.P.             | 2017         | Buyout - Mega   | 50,000,000             | 27,214,194           | 22,983,800             | 197,994                  | 24,677,230           | 24,875,224               | 0.01x            | 1.08x             | 8.01%         |
| New Mountain Partners V, L.P.                | 2017         | Buyout - Mega   | 50,000,000             | 35,678,143           | 14,321,857             | 330,434                  | 14,243,870           | 14,574,304               | 0.02x            | 1.02x             | 2.46%         |
| Quantum Energy Partners VII, LP              | 2017         | Energy          | 50,000,000             | 31,682,654           | 22,069,268             | 3,833,067                | 19,354,313           | 23,187,380               | 0.17x            | 1.05x             | 7.35%         |
| Bridgepoint Europe VI, L.P.                  | 2018         | Buyout - Large  | 48,968,000             | 45,726,000           | 0                      | 0                        | (398,113)            | (398,113)                | N/A              | N/A               | NM            |
| The Resolute Fund IV, L.P.                   | 2018         | Buyout - Large  | 50,000,000             | 45,240,358           | 4,759,642              | 0                        | 5,903,639            | 5,903,639                | 0.00x            | 1.24x             | 25.15%        |
| <b>Total Direct Portfolio</b>                |              |                 | <b>1,268,640,399</b>   | <b>446,044,265</b>   | <b>915,623,549</b>     | <b>618,028,415</b>       | <b>719,570,500</b>   | <b>1,337,598,915</b>     | <b>0.67x</b>     | <b>1.46x</b>      | <b>13.00%</b> |
| Abbott Capital Private Equity Fund V, L.P.   | 2005         | Fund of Funds   | 50,000,000             | 1,750,000            | 48,250,000             | 59,219,373               | 10,773,239           | 69,992,612               | 1.23x            | 1.45x             | 6.89%         |
| Pathway Private Equity Fund XVIII, LLC       | 2006         | Fund of Funds   | 100,000,000            | 7,835,701            | 102,516,163            | 130,298,264              | 27,832,638           | 158,130,902              | 1.27x            | 1.54x             | 8.35%         |
| <b>Total Fund of Funds Portfolio</b>         |              |                 | <b>150,000,000</b>     | <b>9,585,701</b>     | <b>150,766,163</b>     | <b>189,517,637</b>       | <b>38,605,877</b>    | <b>228,123,514</b>       | <b>1.26x</b>     | <b>1.51x</b>      | <b>7.87%</b>  |
| <b>Total Defined Benefit Portfolio</b>       |              |                 | <b>\$1,418,640,399</b> | <b>\$455,629,966</b> | <b>\$1,066,389,712</b> | <b>\$807,546,052</b>     | <b>\$758,176,377</b> | <b>\$1,565,722,430</b>   | <b>0.76x</b>     | <b>1.47x</b>      | <b>11.54%</b> |
| <b>Endowment Performance by Investment</b>   |              |                 |                        |                      |                        |                          |                      |                          |                  |                   |               |
| <b>As of December 31, 2018</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           | \$14,804,892             | \$6,177,412          | \$20,982,304             | 1.10x            | 1.55x             | 21.07%        |
| <b>Total Direct Portfolio</b>                |              |                 | <b>15,000,000</b>      | <b>1,500,000</b>     | <b>13,500,000</b>      | <b>14,804,892</b>        | <b>6,177,412</b>     | <b>20,982,304</b>        | <b>1.10x</b>     | <b>1.55x</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             | 38,925,792               | 32,211,598           | 71,137,390               | 0.88x            | 1.60x             | 12.27%        |
| RCP Fund VII, L.P.                           | 2010         | Fund of Funds   | 20,000,000             | 453,779              | 21,162,133             | 17,923,112               | 19,689,257           | 37,612,370               | 0.85x            | 1.78x             | 17.13%        |
| RCP Fund VIII, L.P.                          | 2012         | Fund of Funds   | 10,000,000             | 2,574,024            | 9,385,760              | 6,122,932                | 8,527,492            | 14,650,424               | 0.65x            | 1.56x             | 17.99%        |
| Abbott Capital Private Equity Fund VII, L.P. | 2014         | Fund of Funds   | 20,000,000             | 1,900,000            | 18,100,630             | 5,000,000                | 19,349,362           | 24,349,362               | 0.28x            | 1.35x             | 16.57%        |
| Ironsides Partnership Fund IV, L.P.          | 2017         | Fund of Funds   | 20,000,000             | 13,253,352           | 8,043,558              | 1,289,576                | 7,956,511            | 9,246,088                | 0.16x            | 1.15x             | 19.78%        |
| <b>Total Fund of Funds Portfolio</b>         |              |                 | <b>115,000,000</b>     | <b>18,856,154</b>    | <b>101,017,080</b>     | <b>69,261,412</b>        | <b>87,734,221</b>    | <b>156,995,633</b>       | <b>0.69x</b>     | <b>1.55x</b>      | <b>14.24%</b> |
| <b>Total Endowment Portfolio</b>             |              |                 | <b>\$130,000,000</b>   | <b>\$20,356,154</b>  | <b>\$114,517,080</b>   | <b>\$84,066,304</b>      | <b>\$93,911,633</b>  | <b>\$177,977,937</b>     | <b>0.73x</b>     | <b>1.55x</b>      | <b>14.77%</b> |

See Page 13 for notes.



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

| Partnership Name                                    | Vintage Year | Investment Type    | IRR as of  |            |            |            |            |            |            |            |            |            |
|---|--------------|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|   |              |                    | 12/31/2009 | 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 |
| <b>Defined Benefit Portfolio</b>                    |              |                    |            |            |            |            |            |            |            |            |            |            |
| Abbott Capital Private Equity Fund V, L.P.          | 2005         | Fund of Funds      | -4.63%     | 0.08%      | 3.48%      | 4.99%      | 6.93%      | 7.60%      | 7.29%      | 7.03%      | 6.98%      | 6.89%      |
| Pathway Private Equity Fund XVIII, LLC <sup>9</sup> | 2006         | Fund of Funds      | -11.45%    | -2.96%     | 0.66%      | 3.01%      | 6.22%      | 7.65%      | 7.81%      | 8.12%      | 8.46%      | 8.35%      |
| TRG Growth Partnership II, L.P. <sup>6</sup>        | 2006         | Buyout - Large     | -2.64%     | 5.35%      | 2.30%      | 4.77%      | 4.85%      | 5.91%      | 5.35%      | 5.58%      | 5.24%      | 3.84%      |
| New Mountain Partners III, L.P.                     | 2007         | Buyout - Mega      | -7.55%     | -1.61%     | 6.95%      | 8.94%      | 11.17%     | 8.24%      | 11.41%     | 12.85%     | 13.60%     | 13.32%     |
| Presidio Partners 2007, L.P. <sup>10</sup>          | 2007         | Venture - Early    | -3.67%     | -10.34%    | -1.79%     | -6.82%     | -4.24%     | 5.97%      | 10.45%     | 9.36%      | 9.37%      | 7.62%      |
| Sun Capital Partners V, L.P.                        | 2007         | Turnaround         | -9.54%     | 5.91%      | 9.71%      | 10.32%     | 11.20%     | 10.20%     | 8.12%      | 7.09%      | 5.56%      | 2.67%      |
| The Resolute Fund II, L.P.                          | 2007         | Buyout - Large     | -7.04%     | -0.60%     | 3.33%      | 6.71%      | 10.55%     | 10.33%     | 10.36%     | 9.06%      | 9.15%      | 8.66%      |
| Wayzata Opportunities Fund II, L.P.                 | 2007         | Distressed Debt    | 16.14%     | 16.81%     | 16.01%     | 15.43%     | 16.88%     | 17.04%     | 16.32%     | 16.34%     | 16.55%     | 16.45%     |
| Accel-KKR Capital Partners III, L.P.                | 2008         | Buyout - Medium    | -4.51%     | 2.82%      | 18.21%     | 13.06%     | 17.30%     | 15.06%     | 14.07%     | 13.69%     | 18.37%     | 21.24%     |
| Ares Corporate Opportunities Fund III, L.P.         | 2008         | Buyout - Large     | 15.34%     | 41.10%     | 29.67%     | 27.14%     | 24.90%     | 23.64%     | 22.21%     | 22.34%     | 23.72%     | 21.37%     |
| Bridgepoint Europe IV, L.P. <sup>7</sup>            | 2008         | Buyout - Large     | -46.99%    | -11.75%    | 1.78%      | 9.70%      | 12.62%     | 11.12%     | 10.87%     | 10.68%     | 12.04%     | 11.38%     |
| CVC European Equity Partners V, L.P. <sup>7</sup>   | 2008         | Buyout - Mega      | 11.55%     | 14.05%     | 10.55%     | 11.76%     | 12.64%     | 11.30%     | 12.17%     | 14.96%     | 16.58%     | 17.43%     |
| Quantum Energy Partners V, L.P.                     | 2008         | Energy             | -34.76%    | -32.63%    | -25.04%    | 7.75%      | 19.73%     | 16.59%     | 7.90%      | 18.35%     | 17.10%     | 10.90%     |
| Fulcrum Growth Partners IV, L.P.                    | 2009         | Buyout - Small     | 6.68%      | 100.09%    | 17.23%     | 11.60%     | 7.23%      | 9.56%      | 9.88%      | 9.98%      | 9.35%      | 10.02%     |
| Lincolnshire Equity Fund IV, L.P.                   | 2009         | Buyout - Medium    | -64.65%    | -65.41%    | -27.71%    | -14.24%    | 0.46%      | 7.26%      | 8.08%      | 10.12%     | 9.36%      | 11.02%     |
| Longroad Capital Partners III, L.P.                 | 2009         | Distressed Debt    | NM         | -32.27%    | -21.75%    | -9.10%     | -21.56%    | -28.60%    | -22.38%    | -35.02%    | -28.93%    | -28.44%    |
| New Enterprise Associates 13, L.P.                  | 2009         | Venture - Balanced | -12.60%    | 3.76%      | 12.98%     | 17.39%     | 20.77%     | 21.05%     | 19.37%     | 19.28%     | 15.54%     | 13.73%     |
| EIF United States Power Fund IV, L.P.               | 2010         | Energy             | N/A        | NM         | -7.93%     | -16.68%    | -6.39%     | 17.53%     | 13.33%     | 11.21%     | 6.26%      | 5.83%      |
| Merit Mezzanine Fund V, L.P.                        | 2010         | Mezzanine          | N/A        | -6.47%     | -16.19%    | -5.13%     | 0.76%      | 8.08%      | 8.04%      | 9.57%      | 9.60%      | 9.36%      |
| Ares Mezzanine Partners, L.P.                       | 2011         | Mezzanine          | N/A        | N/A        | -3.32%     | 8.03%      | 9.72%      | 8.12%      | 9.07%      | 8.87%      | 8.85%      | 8.86%      |
| Lightyear Fund III, L.P.                            | 2011         | Buyout - Medium    | N/A        | N/A        | 17.70%     | 16.32%     | 14.93%     | 20.11%     | 18.59%     | 18.32%     | 20.46%     | 22.42%     |
| Ares Corporate Opportunities Fund IV, L.P.          | 2012         | Buyout - Large     | N/A        | N/A        | N/A        | -8.82%     | -12.60%    | 8.28%      | 8.66%      | 14.02%     | 15.65%     | 12.03%     |
| Dover Street VIII, L.P.                             | 2012         | Secondaries        | N/A        | N/A        | N/A        | 95.48%     | 92.76%     | 49.90%     | 32.28%     | 22.95%     | 22.29%     | 20.64%     |
| Green Equity Investors VI, L.P.                     | 2012         | Buyout - Mega      | N/A        | N/A        | N/A        | 1.81%      | 2.75%      | 8.52%      | 12.32%     | 13.01%     | 15.35%     | 15.97%     |
| McCarthy Capital V, L.P.                            | 2012         | Buyout - Small     | N/A        | N/A        | N/A        | -13.25%    | 23.32%     | 11.98%     | 12.60%     | 11.24%     | 11.37%     | 13.27%     |
| New Enterprise Associates 14, L.P.                  | 2012         | Venture - Balanced | N/A        | N/A        | N/A        | -6.40%     | 8.14%      | 15.93%     | 20.24%     | 17.29%     | 16.06%     | 17.47%     |
| Accel-KKR Capital Partners IV, L.P.                 | 2013         | Buyout - Medium    | N/A        | N/A        | N/A        | N/A        | -56.68%    | -21.06%    | 12.66%     | 10.09%     | 21.96%     | 37.25%     |
| Beecken Petty O'Keefe Fund IV, L.P.                 | 2013         | Buyout - Medium    | N/A        | N/A        | N/A        | N/A        | -13.60%    | -4.86%     | -4.62%     | 16.20%     | 18.38%     | 19.35%     |
| Pine Brook Capital Partners II, L.P.                | 2013         | Buyout - Large     | N/A        | N/A        | N/A        | N/A        | N/A        | -16.55%    | -10.20%    | 7.99%      | 11.30%     | 10.03%     |
| Wayzata Opportunities Fund III, L.P.                | 2013         | Distressed Debt    | N/A        | N/A        | N/A        | N/A        | N/A        | -24.10%    | -14.58%    | -17.42%    | -0.33%     | -0.53%     |
| CVC Capital Partners VI, L.P. <sup>7</sup>          | 2014         | Buyout - Mega      | N/A        | N/A        | N/A        | N/A        | N/A        | -26.58%    | -21.88%    | 6.70%      | 15.13%     | 14.95%     |
| New Mountain Partners IV, L.P.                      | 2014         | Buyout - Large     | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | 3.24%      | 25.76%     | 23.86%     | 20.78%     |
| Quantum Energy Partners VI, L.P.                    | 2014         | Energy             | N/A        | N/A        | N/A        | N/A        | N/A        | NM         | 58.40%     | 61.00%     | 48.33%     | 40.38%     |
| The Energy & Minerals Group Fund III, LP            | 2014         | Energy             | N/A        | N/A        | N/A        | N/A        | N/A        | -1.25%     | -18.34%    | -7.81%     | -3.39%     | -4.28%     |
| The Resolute Fund III, L.P.                         | 2014         | Buyout - Large     | N/A        | N/A        | N/A        | N/A        | N/A        | -5.28%     | 8.02%      | 15.78%     | 20.16%     | 21.62%     |
| Francisco Partners IV, L.P.                         | 2015         | Buyout - Large     | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | -0.06%     | 7.60%      | 18.09%     | 26.32%     |
| Wynnchurch Capital Partners IV, L.P.                | 2015         | Buyout - Medium    | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | -0.33%     | 15.79%     | 35.58%     | 22.25%     |

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

| Partnership Name                             | Vintage Year | Investment Type | IRR as of      |                |                |               |              |               |               |               |               |               |        |
|--|--------------|-----------------|----------------|----------------|----------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|--------|
|  |              |                 | 12/31/2009     | 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    |        |
| Bridgepoint Europe V, L.P.                   | 2016         | Buyout - Large  | N/A            | N/A            | N/A            | N/A           | N/A          | N/A           | N/A           | N/A           | 21.07%        | 24.45%        | 18.24% |
| Dover Street IX, L.P.                        | 2016         | Secondaries     | N/A            | N/A            | N/A            | N/A           | N/A          | N/A           | N/A           | N/A           | 68.91%        | 84.89%        | 37.03% |
| McCarthy Capital VI, L.P.                    | 2016         | Buyout - Small  | N/A            | N/A            | N/A            | N/A           | N/A          | N/A           | N/A           | N/A           | -11.42%       | 9.75%         | 19.71% |
| 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           | N/A           | -8.03%        | -2.50% |
| 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           | N/A           | 3.15%  |
| 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           | N/A           | 41.89%        | 50.54% |
| 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           | N/A           | -10.61%       | 8.01%  |
| 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           | N/A           | -11.82%       | 2.46%  |
| Quantum Energy Partners VII, LP              | 2017         | Energy          | N/A            | N/A            | N/A            | N/A           | N/A          | N/A           | N/A           | N/A           | N/A           | 10.08%        | 7.35%  |
| 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           | N/A           | 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           | N/A           | 25.15% |
| <b>Total Defined Benefit Portfolio</b>       |              |                 | <b>-5.38%</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>11.54%</b> |        |
| <b>Endowment Portfolio</b>                   |              |                 |                |                |                |               |              |               |               |               |               |               |        |
| Abbott Capital Private Equity Fund VI, L.P.  | 2008         | Fund of Funds   | -26.23%        | -16.87%        | -7.23%         | -0.65%        | 5.07%        | 8.03%         | 9.59%         | 10.33%        | 11.77%        | 12.27%        |        |
| RCP Fund VII, L.P.                           | 2010         | Fund of Funds   | N/A            | N/A            | -42.38%        | -24.35%       | -1.65%       | 11.14%        | 14.73%        | 19.61%        | 17.80%        | 17.13%        |        |
| Dover Street VIII, L.P.                      | 2012         | Secondaries     | N/A            | N/A            | N/A            | 95.48%        | 92.76%       | 49.90%        | 32.28%        | 22.95%        | 22.29%        | 21.07%        |        |
| RCP Fund VIII, L.P.                          | 2012         | Fund of Funds   | N/A            | N/A            | N/A            | -47.52%       | -33.15%      | -7.63%        | 5.48%         | 9.60%         | 15.93%        | 17.99%        |        |
| Abbott Capital Private Equity Fund VII, L.P. | 2014         | Fund of Funds   | N/A            | N/A            | N/A            | N/A           | N/A          | -24.03%       | -4.31%        | 6.28%         | 13.92%        | 16.57%        |        |
| Ironsides Partnership Fund IV, L.P.          | 2017         | Fund of Funds   | N/A            | N/A            | N/A            | N/A           | N/A          | N/A           | N/A           | N/A           | 1.24%         | 19.78%        |        |
| <b>Total Endowment Portfolio</b>             |              |                 | <b>-26.23%</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>Total Portfolio</b>                       |              |                 | <b>-5.61%</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>11.79%</b> |        |

# OSERS Real Estate / Real Assets Portfolio Overview

## Real Estate Portfolio

| Partnership Name                                   | Vintage |               | Commitment           | Cumulative Paid-In   |               | Percent Funded      | Unfunded Commitment  | Net Asset Value |
|--|---------|---------------|----------------------|----------------------|---------------|---------------------|----------------------|-----------------|
|  | Year    | RE Strategy   |                      | (Inside Commitment)  |               |                     |                      |                 |
| UBS Trumbull Property Fund                         | 1995    | Core          | \$33,615,067         | \$33,615,067         | 100.0%        | \$0                 | \$15,063,169         |                 |
| JPMorgan Strategic Property Fund                   | 1998    | Core          | 48,165,726           | 48,165,726           | 100.0%        | 0                   | 15,344,270           |                 |
| <b>Subtotal Core</b>                               |         |               | <b>81,780,793</b>    | <b>81,780,793</b>    | <b>100.0%</b> | <b>0</b>            | <b>30,407,440</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                   | 7,029,880            |                 |
| Almanac Realty Securities Fund VII, L.P.           | 2015    | Value Added   | 30,000,000           | 22,394,479           | 74.7%         | 11,076,936          | 21,488,234           |                 |
| <b>Subtotal Value Added</b>                        |         |               | <b>94,557,229</b>    | <b>80,770,199</b>    | <b>85.4%</b>  | <b>11,076,936</b>   | <b>28,518,114</b>    |                 |
| Mariner Real Estate Partners III, L.P.             | 2011    | Opportunistic | 50,000,000           | 50,045,613           | 100.1%        | 0                   | 20,487,516           |                 |
| 25 Capital Residential Mortgage Opportunities Fund | 2012    | Opportunistic | 50,000,000           | 109,416,991          | 218.8%        | 0                   | 36,810,683           |                 |
| JP Morgan India Property Fund II                   | 2012    | Opportunistic | 25,000,000           | 29,699,591           | 118.8%        | 2,056,423           | 14,542,253           |                 |
| Mariner Real Estate Partners IV, L.P.              | 2014    | Opportunistic | 60,000,000           | 73,965,628           | 123.3%        | 30,450,000          | 48,504,620           |                 |
| <b>Subtotal Opportunistic</b>                      |         |               | <b>185,000,000</b>   | <b>263,127,823</b>   | <b>142.2%</b> | <b>32,506,423</b>   | <b>120,345,072</b>   |                 |
| <b>Total Real Estate Portfolio</b>                 |         |               | <b>\$361,338,022</b> | <b>\$425,678,815</b> | <b>117.8%</b> | <b>\$43,583,359</b> | <b>\$179,270,626</b> |                 |

## Real Assets Portfolio

| Partnership Name                   | Vintage |                | Commitment          | Cumulative Paid-In  |               | Percent Funded   | Unfunded Commitment | Net Asset Value |
|------------------------------------|---------|----------------|---------------------|---------------------|---------------|------------------|---------------------|-----------------|
|                                    | Year    | RA Strategy    |                     | (Inside Commitment) |               |                  |                     |                 |
| JP Morgan Maritime Global          | 2010    | Infrastructure | \$25,000,000        | \$25,085,937        | 100.3%        | \$682,971        | \$16,786,884        |                 |
| <b>Subtotal Infrastructure</b>     |         |                | <b>25,000,000</b>   | <b>25,085,937</b>   | <b>100.3%</b> | <b>682,971</b>   | <b>16,786,884</b>   |                 |
| BTG Pactual Timberland             | 2004    | Real Estate    | 25,000,000          | 25,000,000          | 100.0%        | 0                | 21,897,574          |                 |
| <b>Subtotal Real Estate</b>        |         |                | <b>25,000,000</b>   | <b>25,000,000</b>   | <b>100.0%</b> | <b>0</b>         | <b>21,897,574</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>\$38,684,458</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    | 12/31/2011   | 12/31/2012   | 12/31/2013   | 12/31/2014   | 12/31/2015   | 12/31/2016   | 12/31/2017   | 12/31/2018   |
| UBS Trumbull Property Fund                         | 1995         | Core          | N/A          | 10.75%        | 10.71%        | 10.69%        | 10.68%        | 10.55%        | 10.45%        | 10.42%        | 1.00x        | 2.19x        | 2.22x        | 2.27x        | 2.35x        | 2.38x        | 2.41x        | 2.44x        |
| JPMorgan Strategic Property Fund                   | 1998         | Core          | N/A          | 9.94%         | 10.06%        | 10.00%        | 9.96%         | 9.80%         | 9.72%         | 9.68%         | 1.00x        | 1.61x        | 1.65x        | 1.69x        | 1.73x        | 1.75x        | 1.78x        | 1.80x        |
| <b>Subtotal Core</b>                               |              |               | <b>N/A</b>   | <b>10.41%</b> | <b>10.43%</b> | <b>10.40%</b> | <b>10.39%</b> | <b>10.23%</b> | <b>10.14%</b> | <b>10.10%</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> |
| 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%         | 1.00x        | 1.40x        | 1.42x        | 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%        | 1.00x        | 0.85x        | 0.84x        | 0.78x        | 0.77x        | 0.74x        | 0.74x        | 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%         | 1.00x        | 1.17x        | 1.27x        | 1.37x        | 1.51x        | 1.58x        | 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%        | N/A          | 1.04x        | 1.19x        | 1.22x        | 1.29x        | 1.35x        | 1.35x        | 1.35x        |
| 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%        | N/A          | N/A          | N/A          | 1.04x        | 1.10x        | 1.10x        | 1.15x        | 1.25x        |
| <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>1.00x</b> | <b>1.19x</b> | <b>1.24x</b> | <b>1.28x</b> | <b>1.28x</b> | <b>1.30x</b> | <b>1.30x</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%         | 1.00x        | 1.14x        | 1.27x        | 1.43x        | 1.54x        | 1.58x        | 1.58x        | 1.56x        |
| 25 Capital Residential Mortgage Opportunities Fund | 2012         | Opportunistic | N/A          | -19.90%       | 13.93%        | 9.85%         | 7.29%         | 6.48%         | 5.50%         | 4.79%         | N/A          | 0.95x        | 1.06x        | 1.08x        | 1.08x        | 1.10x        | 1.11x        | 1.11x        |
| JP Morgan India Property Fund II                   | 2012         | Opportunistic | N/A          | -7.93%        | -2.69%        | 3.10%         | 4.08%         | 4.94%         | 2.02%         | -11.40%       | N/A          | 0.92x        | 0.97x        | 1.04x        | 1.07x        | 1.10x        | 1.04x        | 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%        | N/A          | N/A          | N/A          | 1.32x        | 1.02x        | 1.25x        | 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>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>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>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> |

## 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    | 12/31/2011   | 12/31/2012   | 12/31/2013   | 12/31/2014   | 12/31/2015   | 12/31/2016   | 12/31/2017   | 12/31/2018   |
| BTG Pactual Timberland             | 2004         | Real Estate    | 0.00%        | 4.15%        | 4.38%        | 3.91%        | 3.53%        | 3.15%        | 2.63%        | 1.30%         | 1.00x        | 1.33x        | 1.41x        | 1.40x        | 1.39x        | 1.38x        | 1.33x        | 1.16x        |
| JP Morgan Maritime Global          | 2010         | Infrastructure | 0.00%        | -86.16%      | 7.20%        | -1.93%       | -18.11%      | -23.19%      | -10.76%      | -6.96%        | 1.00x        | 0.32x        | 1.10x        | 0.97x        | 0.74x        | 0.60x        | 0.73x        | 0.76x        |
| <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>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> |

# OSERS Private Equity Portfolio Overview

## Private Equity Portfolio

| Partnership Name                      | Vintage |               | Commitment           | Cumulative Paid-In   |               | Percent Funded      | Unfunded             |                 |
|---------------------------------------|---------|---------------|----------------------|----------------------|---------------|---------------------|----------------------|-----------------|
|                                       | Year    | PE Strategy   |                      | (Inside Commitment)  |               |                     | Commitment           | Net Asset Value |
| FCP Fund II                           | 2011    | Mezzanine     | \$30,000,000         | \$24,556,127         | 81.9%         | \$5,443,873         | \$15,591,268         |                 |
| AAVIN Mezzanine Fund, LP              | 2014    | Mezzanine     | 5,000,000            | 3,625,000            | 72.5%         | 1,375,000           | 3,094,119            |                 |
| AAVIN Equity Partners II, LP          | 2015    | Mezzanine     | 25,000,000           | 13,608,649           | 54.4%         | 11,391,351          | 13,759,496           |                 |
| <b>Subtotal Mezzanine</b>             |         |               | <b>60,000,000</b>    | <b>41,789,776</b>    | <b>69.6%</b>  | <b>18,210,224</b>   | <b>32,444,883</b>    |                 |
| SPC I-IV                              | 2001    | Fund of Funds | 163,958,323          | 187,271,267          | 114.2%        | 22,455,000          | 77,300,475           |                 |
| Stonetree IV                          | 2012    | Fund of Funds | 53,152,755           | 37,295,746           | 70.2%         | 11,824,000          | 37,840,899           |                 |
| <b>Subtotal Fund of Funds</b>         |         |               | <b>217,111,078</b>   | <b>224,567,013</b>   | <b>103.4%</b> | <b>34,278,999</b>   | <b>115,141,374</b>   |                 |
| <b>Total Private Equity Portfolio</b> |         |               | <b>\$277,111,078</b> | <b>\$266,356,789</b> | <b>96.1%</b>  | <b>\$52,489,223</b> | <b>\$147,586,257</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   | 12/31/2011   | 12/31/2012   | 12/31/2013   | 12/31/2014   | 12/31/2015   | 12/31/2016   | 12/31/2017   | 12/31/2018   |
| SPC I-IV                              | 2001         | Fund of Funds | 6.33%        | 6.08%        | 6.03%        | 5.26%        | 4.70%        | 4.75%        | 5.66%        | 5.76%        | 1.23x        | 1.24x        | 1.26x        | 1.23x        | 1.21x        | 1.20x        | 1.25x        | 1.27x        |
| FCP Fund II                           | 2011         | Mezzanine     | -11.52%      | -5.94%       | 2.26%        | 2.27%        | 8.33%        | 8.71%        | 9.21%        | 8.55%        | 0.92x        | 0.94x        | 1.03x        | 1.05x        | 1.25x        | 1.28x        | 1.39x        | 1.41x        |
| Stonetree IV                          | 2012         | Fund of Funds | 36.95%       | 9.45%        | 6.11%        | 6.15%        | 2.47%        | 2.83%        | 5.81%        | 6.39%        | 1.19x        | 1.08x        | 1.08x        | 1.12x        | 1.06x        | 1.10x        | 1.25x        | 1.33x        |
| AAVIN Mezzanine Fund, LP              | 2014         | Mezzanine     | N/A          | N/A          | N/A          | 0.00%        | -60.40%      | -32.92%      | -18.79%      | -5.41%       | N/A          | N/A          | N/A          | 1.00x        | 0.34x        | 0.77x        | 0.77x        | 0.88x        |
| AAVIN Equity Partners II, LP          | 2015         | Mezzanine     | N/A          | N/A          | N/A          | N/A          | -66.88%      | -15.16%      | -5.60%       | 1.51%        | N/A          | N/A          | N/A          | N/A          | 0.74x        | 0.90x        | 0.94x        | 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>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> |

# 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 December 31, 2018. 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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