

**December 31, 2018**  
**Richmond Retirement System**  
**4Q 2018 Alternatives**

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## Investment Manager Returns

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The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2018. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended December 31, 2018

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
<b>REITS</b>				
CenterSquare	(7.06%)	(4.49%)	3.70%	9.03%
<b>Private Real Estate</b>	<b>1.25%</b>	<b>6.87%</b>	<b>8.30%</b>	<b>9.90%</b>
JP Morgan Strategic Property	1.90%	8.01%	7.84%	9.92%
Oaktree RE Debt Fund	1.34%	6.10%	16.75%	18.26%
Orion Euro RE IV	(10.91%)	(11.88%)	13.32%	-

**JP Morgan Strategic Property  
Private Equity Investment Portfolio  
Quarterly Changes in Market Value**

	<b>Beg. of Period Market</b>	<b>Capital Contri- butions</b>				<b>=</b>	<b>End of Period Market</b>
12/2010	0	7,500,000					7,686,708
03/2011	7,686,708	7,500,000					15,633,322
06/2011	15,633,322	0					16,459,035
09/2011	16,459,035	0					16,955,609
12/2011	16,955,609	0					17,430,487
03/2012	17,430,487	0					17,861,271
06/2012	17,861,271	0					18,259,656
09/2012	18,259,656	0					18,874,294
12/2012	18,874,294	0					19,352,871
03/2013	19,352,871	0					19,961,048
06/2013	19,961,048	0					20,680,552
09/2013	20,680,552	0					21,484,499
12/2013	21,484,499	0					22,214,760
03/2014	22,214,760	0					22,685,373
06/2014	22,685,373	0					23,364,377
09/2014	23,364,377	0					23,856,939
12/2014	23,856,939	0					24,450,049
03/2015	24,450,049	0					23,537,547
06/2015	23,537,547	0					24,345,673
09/2015	24,345,673	0					25,112,107
12/2015	25,112,107	0					25,896,673
03/2016	25,896,673	0					26,319,991
06/2016	26,319,991	0					26,786,080
09/2016	26,786,080	0					27,271,641
12/2016	27,271,641	0					25,238,116
03/2017	25,238,116	0					25,652,855
06/2017	25,652,855	0					25,798,741
09/2017	25,798,741	0					25,983,025
12/2017	25,983,025	0					26,179,943
03/2018	26,179,943	0					26,477,958
06/2018	26,477,958	0					26,729,345
09/2018	26,729,345	0					26,939,282
12/2018	26,939,282	0					27,193,565
	0	15,000,000					27,193,565

Net Portfolio Cumulative IRR = 11.07%

**Oaktree RE Debt Fund  
Private Equity Investment Portfolio  
Quarterly Changes in Market Value**

	<b>Beg. of Period Market</b>	<b>Capital Contri- butions</b>				<b>End of Period Market</b>
12/2013	0	905,000				887,059
03/2014	887,059	0				363,242
06/2014	363,242	0				369,556
09/2014	369,556	0				394,201
12/2014	394,201	0				327,417
03/2015	327,417	500,000				819,407
06/2015	819,407	0				809,673
09/2015	809,673	0				798,882
12/2015	798,882	857,471				755,888
03/2016	755,888	135,000				805,840
06/2016	805,840	410,000				699,513
09/2016	699,513	470,000				1,204,847
12/2016	1,204,847	135,000				1,361,621
03/2017	1,361,621	0				1,410,178
06/2017	1,410,178	50,000				1,318,248
09/2017	1,318,248	100,000				1,402,963
12/2017	1,402,963	1,025,000				2,406,125
03/2018	2,406,125	0				2,117,689
06/2018	2,117,689	0				1,965,871
09/2018	1,965,871	100,000				1,965,364
12/2018	1,965,364	0				1,842,789
	0	4,687,471				1,842,789

Net Portfolio Cumulative IRR = 13.95%

Committed Capital = \$5,000,000

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**Asset Distribution Across Investment Managers**

	<b>December 31, 2018</b>		<b>September 30, 2018</b>	
	<b>Market Value</b>	██████	<b>Market Value</b>	██████
JP Morgan Strategic Property	27,193,565	██████	26,939,282	██████
Oaktree RE Debt Fund	1,842,789	██████	1,965,364	██████
Orion Euro RE IV	1,294,645	██████	1,416,984	██████
<b>Private Real Estate</b>	<b>\$30,330,998</b>	██████	<b>\$30,321,630</b>	██████

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**Asset Distribution Across Investment Managers**

	<b>December 31, 2018</b>		<b>September 30, 2018</b>	
	<b>Market Value</b>	█	<b>Market Value</b>	█
CenterSquare	4,746,037	█	5,205,904	█
<b>Total REITs</b>	<b>\$4,746,037</b>	█	<b>\$5,205,904</b>	█