

**San Bernardino County Employees' Retirement Association**

**Board Report**

**February 28, 2023**

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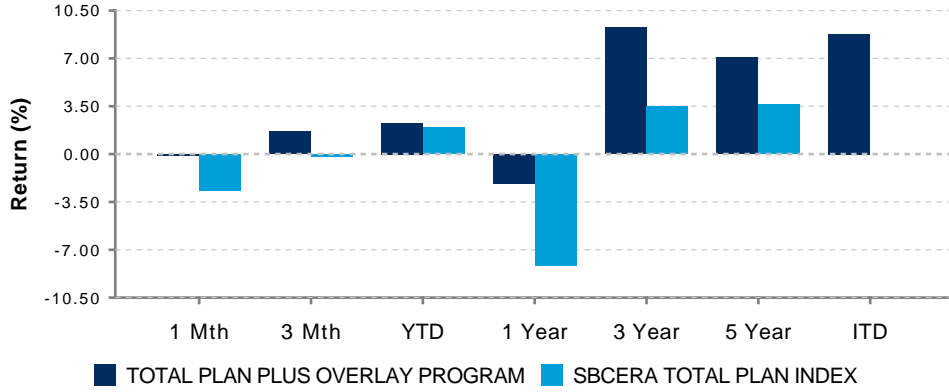
# San Bernardino County Retirement

February 28, 2023

Net Mgr



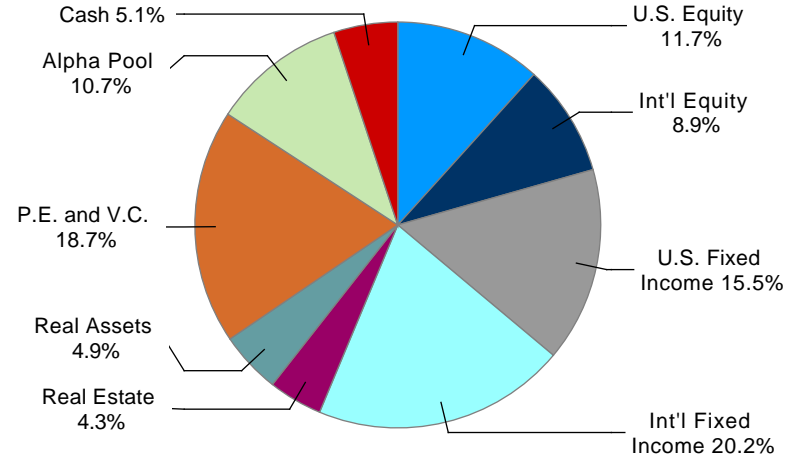
## Performance



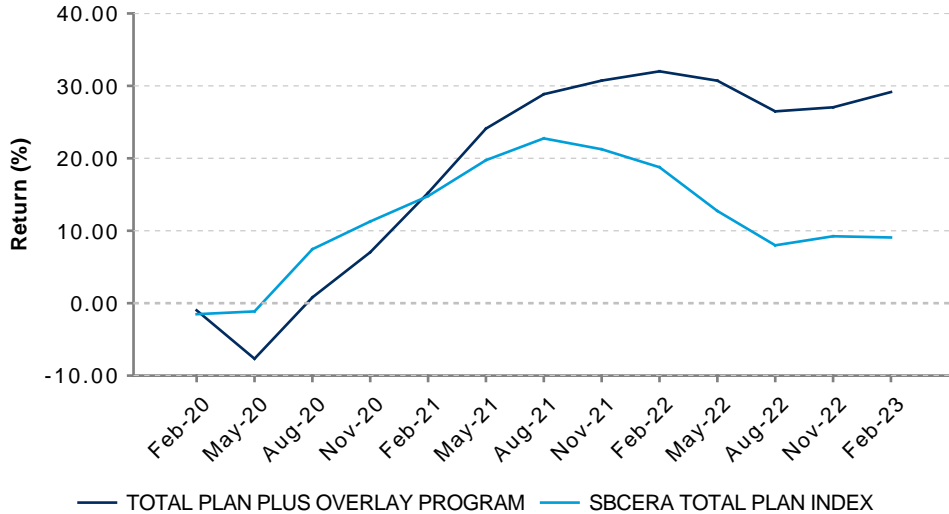
	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	ITD	Incept Date
TOTAL PLAN +OVERLAY PROGRAM	-0.08	1.67	2.27	2.65	-2.16	9.26	7.08	8.78	07/82
SBCERA TOTAL PLAN INDEX	-2.70	-0.16	1.95	2.18	-8.17	3.46	3.62		07/82
Excess	2.62	1.82	0.33	0.47	6.01	5.80	3.46		

## Asset Allocation

	Ending Market Value
TOTAL PLAN PLUS OVERLAY PROGRAM	13,779,508,903

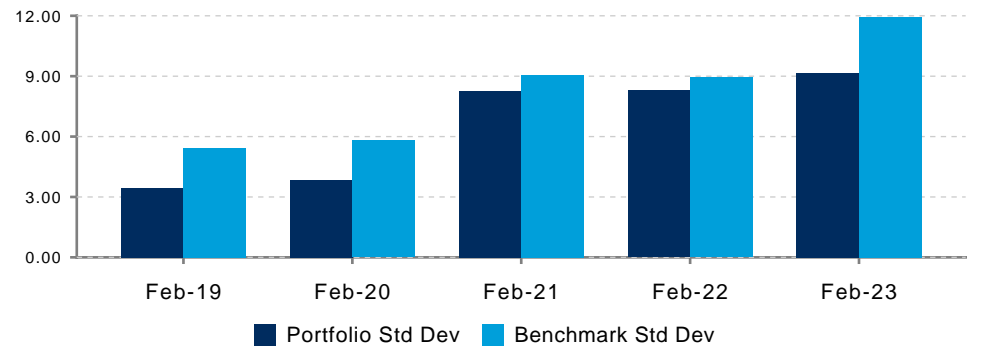


## Cumulative Return (%)



## 3 Year Risk Statistics

	Return	Portfolio Std Dev	Benchmark Std Dev	Sharpe Ratio	Beta	Tracking Error
TOTAL PLAN PLUS OVERLAY PROGRAM	9.26	9.16	11.95	0.92	0.66	6.41



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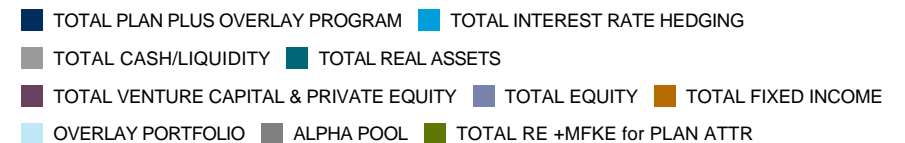
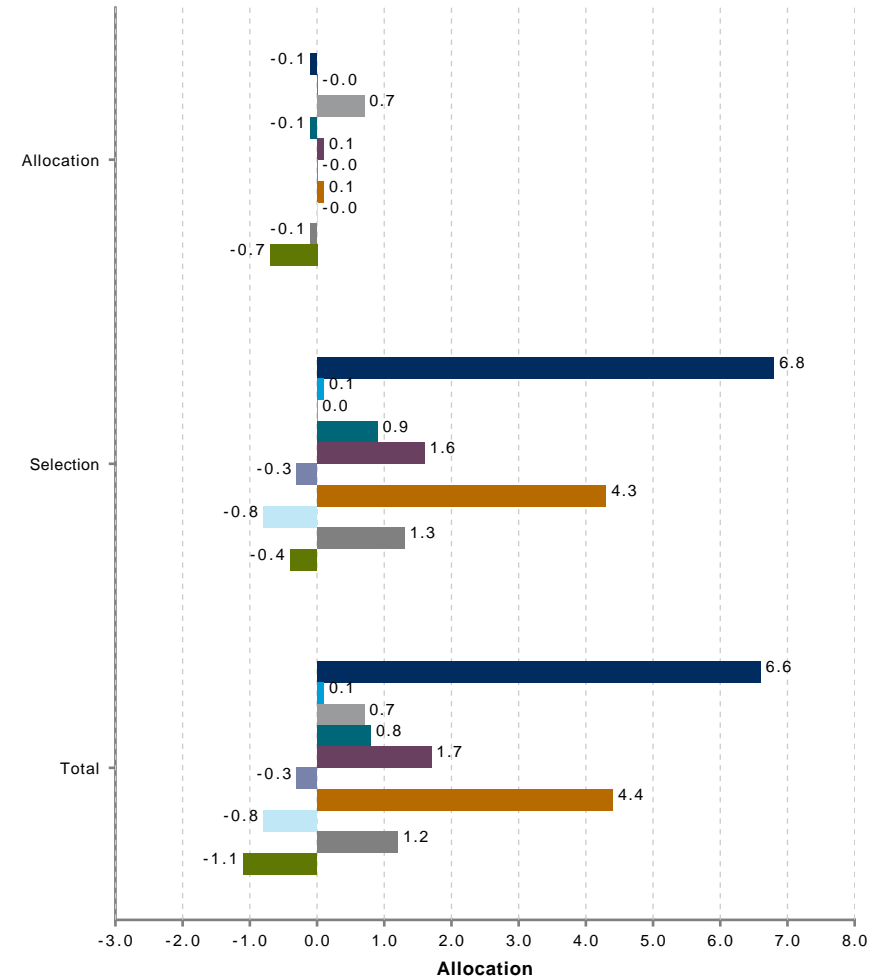
1 Year Plan Attribution



## Plan Attribution - 1 Year, Asset Class Level

	Weighting		Returns		Value Added			Total
	Fund	Relative	Fund	Relative	Allocation	Selection	Bench Imp	
TOTAL PLAN PLUS OVERLAY PROGRAM	100.0	0.0	-2.2	6.5	-0.1	6.8	0.4	6.6
TOTAL INTEREST RATE HEDGING	0.1	0.1	124.7	120.1	-0.0	0.1	-	0.1
TOTAL CASH/LIQUIDITY	8.9	6.9	2.6	0.5	0.7	0.0	-	0.7
TOTAL REAL ASSETS	3.9	-1.1	9.9	20.7	-0.1	0.9	-	0.8
TOTAL VENTURE CAPITAL & PRIVATE EQUITY	17.9	1.9	1.4	10.3	0.1	1.6	-	1.7
TOTAL EQUITY	15.9	-12.1	-8.2	0.1	-0.0	-0.3	-	-0.3
TOTAL FIXED INCOME	28.6	-6.4	0.1	11.7	0.1	4.3	-	4.4
OVERLAY PORTFOLIO	8.5	8.5	-22.9	-16.0	-0.0	-0.8	-	-0.8
ALPHA POOL	12.2	5.2	-0.6	10.1	-0.1	1.3	-	1.2
TOTAL RE +MFKE for PLAN ATTR	4.0	-3.0	6.3	-8.4	-0.7	-0.4	-	-1.1

## Value Added Effects



# San Bernardino County Retirement

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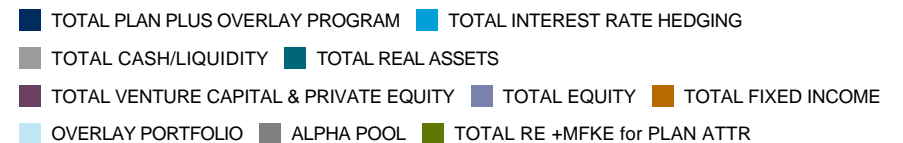
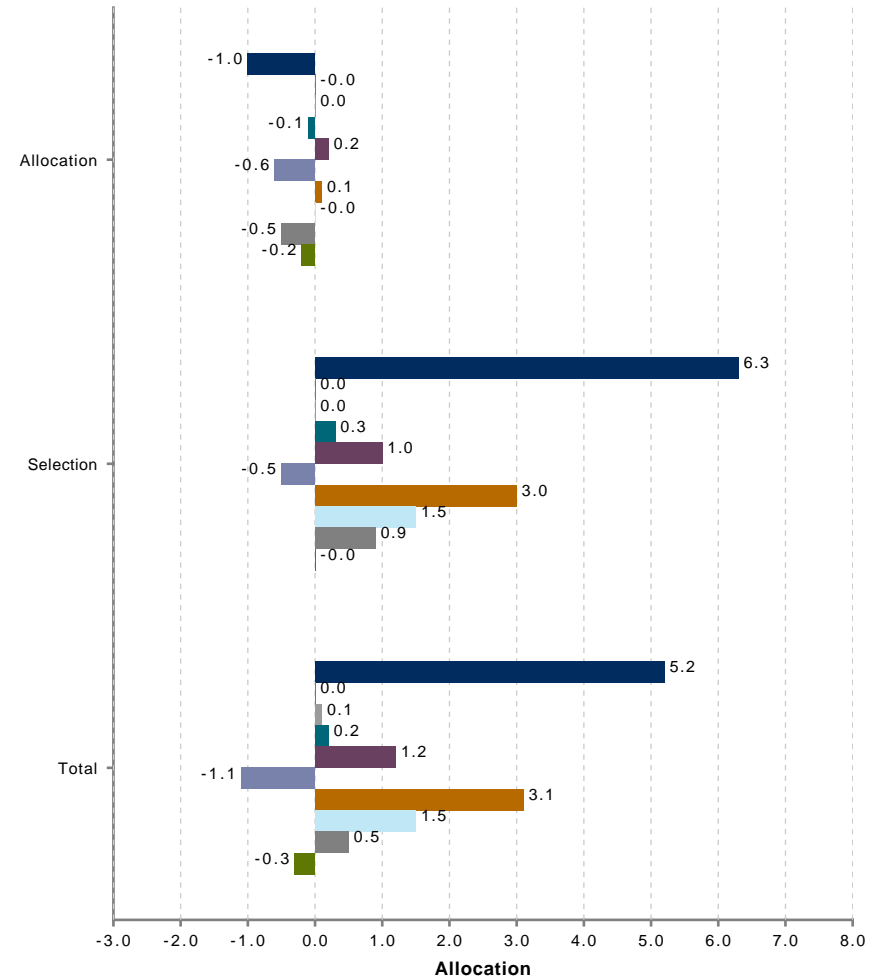
3 Year Plan Attribution



## Plan Attribution - 3 Year, Asset Class Level

	Weighting		Returns		Value Added			Total
	Fund	Relative	Fund	Relative	Allocation	Selection	Bench Imp	
TOTAL PLAN PLUS OVERLAY PROGRAM	100.0	0.0	9.2	5.6	-1.0	6.3	0.3	5.2
TOTAL INTEREST RATE HEDGING	0.0	0.0	59.6	58.3	-0.0	0.0	-	0.0
TOTAL CASH/LIQUIDITY	4.7	2.7	1.0	0.2	0.0	0.0	-	0.1
TOTAL REAL ASSETS	4.4	-0.6	16.2	6.0	-0.1	0.3	-	0.2
TOTAL VENTURE CAPITAL & PRIVATE EQUITY	17.2	1.2	20.0	7.4	0.2	1.0	-	1.2
TOTAL EQUITY	15.5	-12.5	6.7	-1.9	-0.6	-0.5	-	-1.1
TOTAL FIXED INCOME	35.7	0.7	5.0	8.5	0.1	3.0	-	3.1
OVERLAY PORTFOLIO	2.7	2.7	27.1	22.9	-0.0	1.5	-	1.5
ALPHA POOL	15.4	8.4	3.4	7.5	-0.5	0.9	-	0.5
TOTAL RE +MFKE for PLAN ATTR	4.3	-2.7	9.6	-0.3	-0.2	-0.0	-	-0.3

## Value Added Effects



Total Plan Performance History

**TOTAL PLAN PERFORMANCE HISTORY**

**FEB-2023**

Net Mgr Returns

Total Plan Returns (by Fiscal Quarter)							
	Q1	Q2	Q3	Q4	FYTD	Fiscal Year	5 Year Annualized Return
2023	-3.25%	3.74%			2.65%		7.08%
2022	2.15%	4.25%	-1.16%	-5.04%		-0.06%	
2021	5.87%	11.25%	5.91%	6.88%		33.32%	
2020	0.83%	3.69%	-10.99%	3.98%		-3.24%	
2019	1.96%	-3.95%	4.75%	2.17%		4.81%	

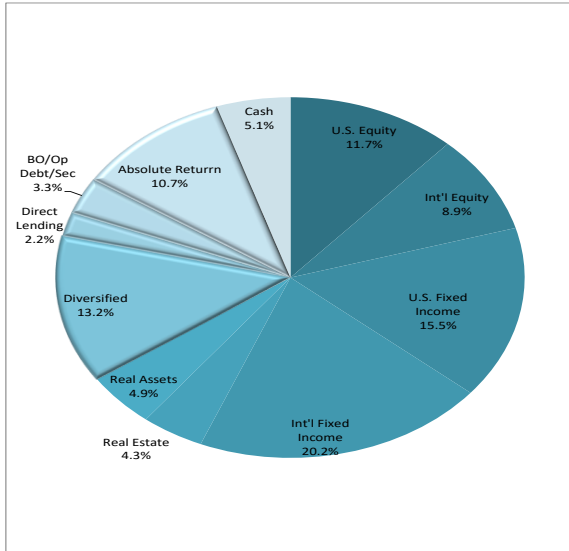
Policy Benchmark Returns (by Fiscal Quarter)							
	Q1	Q2	Q3	Q4	FYTD	Fiscal Year	5 Year Annualized Return
2023	-5.68%	6.27%			2.18%		3.62%
2022	-0.26%	3.17%	-3.73%	-10.51%		-11.35%	
2021	4.88%	8.37%	0.80%	4.40%		19.61%	
2020	0.56%	4.38%	-10.44%	10.24%		3.63%	
2019	2.07%	-5.42%	6.81%	3.19%		6.40%	

Excess Returns (by Fiscal Quarter)							
	Q1	Q2	Q3	Q4	FYTD	Fiscal Year	5 Year Annualized Return
2023	2.43%	-2.52%			0.47%		3.46%
2022	2.41%	1.08%	2.57%	5.47%		11.30%	
2021	0.99%	2.88%	5.11%	2.47%		13.71%	
2020	0.27%	-0.69%	-0.55%	-6.26%		-6.87%	
2019	-0.11%	1.47%	-2.06%	-1.02%		-1.59%	

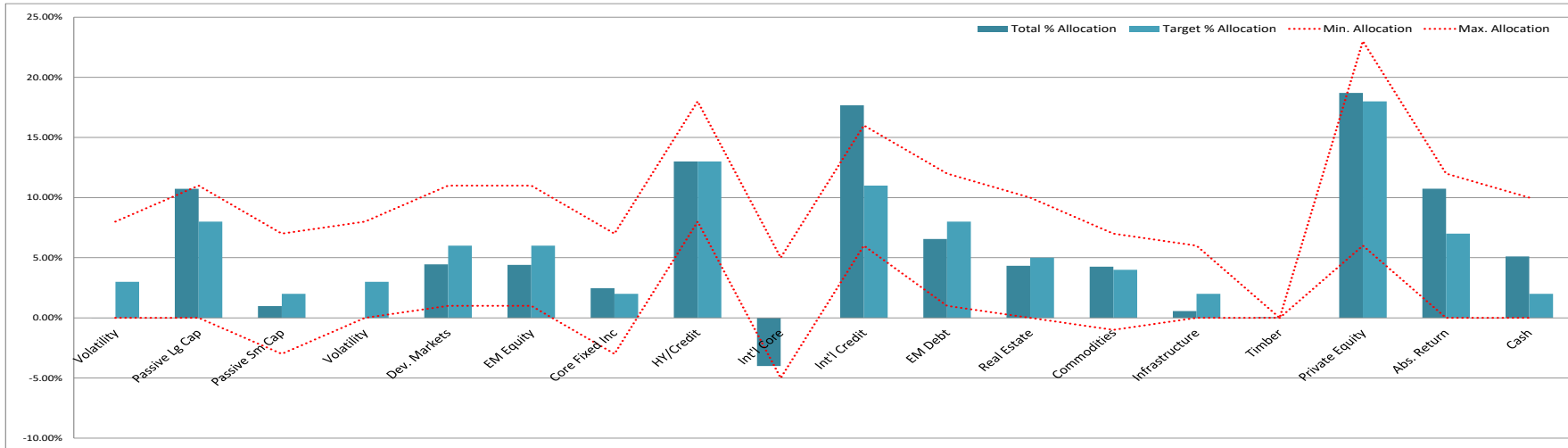
\* 5 Year Annualized Returns Effective FEB

Information Classification: General

**Total Plan Allocation**



Asset Class	Sub-Asset Class	Actual \$ Allocation			Total Alloc	Target Alloc	Target Range	
		Physical	Synthetic	Total			Min	Max
U.S. Equity	Volatility	1,218,604	0	1,218,604	0.01%	3.00%	0%	8%
	Passive Large Cap	1,456,780,891	21,000,000	1,477,780,891	10.72%	8.00%	0%	11%
	Passive Small Cap	0	135,100,000	135,100,000	0.98%	2.00%	-3%	7%
<b>SUB-TOTAL</b>		<b>1,457,999,495</b>	<b>156,100,000</b>	<b>1,614,099,495</b>	<b>11.71%</b>	<b>13.00%</b>	<b>8%</b>	<b>18%</b>
Int'l Equity	Volatility	0	0	0	0.00%	3.00%	0%	8%
	Developed Markets	391,856,383	220,700,000	612,556,383	4.45%	6.00%	1%	11%
	Emerging Markets	578,692,956	28,400,000	607,092,956	4.41%	6.00%	1%	11%
<b>SUB-TOTAL</b>		<b>970,549,339</b>	<b>249,100,000</b>	<b>1,219,649,339</b>	<b>8.85%</b>	<b>15.00%</b>	<b>10%</b>	<b>20%</b>
U.S. Fixed Income	US Core	340,500,000	0	340,500,000	2.47%	2.00%	-3%	7%
	High Yield/Credit	1,791,254,004	0	1,791,254,004	13.00%	13.00%	8%	18%
	<b>SUB-TOTAL</b>		<b>1,791,254,004</b>	<b>340,500,000</b>	<b>2,131,754,004</b>	<b>15.47%</b>	<b>15.00%</b>	<b>10%</b>
Int'l Fixed Income	International Core	0	-551,180,356	-551,180,356	-4.00%	0.00%	-5%	5%
	International Credit	1,155,775,262	1,279,080,356	2,434,855,618	17.67%	11.00%	6%	16%
	Em. Market Debt	903,755,142	0	903,755,142	6.56%	8.00%	1%	12%
	<b>SUB-TOTAL</b>		<b>2,059,530,404</b>	<b>727,900,000</b>	<b>2,787,430,404</b>	<b>20.23%</b>	<b>19.00%</b>	<b>13%</b>
Real Estate	Real Estate	596,125,394	0	596,125,394	4.33%	5.00%	0%	10%
Real Assets	Commodities	586,842,714	0	586,842,714	4.26%	4.00%	-1%	7%
	Infrastructure	77,266,468	0	77,266,468	0.56%	2.00%	0%	6%
	Timber	6,671,520	0	6,671,520	0.05%	0.00%	0%	0%
	<b>SUB-TOTAL</b>		<b>670,780,702</b>	<b>0</b>	<b>670,780,702</b>	<b>4.87%</b>	<b>6.00%</b>	<b>0%</b>
P.E and V.C	Private Equity	2,576,745,606	0	2,576,745,606	18.70%	18.00%	6%	23%
Absolute Return	Absolute Return	2,953,193,069	-1,473,600,000	1,479,593,069	10.74%	7.00%	0%	12%
	Cash	703,330,888	0	703,330,888	5.10%	2.00%	0%	10%
<b>Total</b>	<b>Total</b>	<b>13,779,508,903</b>	<b>0</b>	<b>13,779,508,903</b>	<b>100.00%</b>	<b>100.00%</b>		



# San Bernardino County Retirement

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Net Mgr



## Performance by Asset Class/Strategy

	Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD	Inception Date
<b>TOTAL PLAN + OVERLAY</b>	<b>13,779,508,903.23</b>	<b>-0.08</b>	<b>1.67</b>	<b>2.27</b>	<b>2.65</b>	<b>-2.16</b>	<b>9.26</b>	<b>7.08</b>	<b>8.79</b>	<b>7.43</b>	<b>8.78</b>	<b>Jul-01-82</b>
SBCERA TOTAL PLAN INDEX		-2.70	-0.16	1.95	2.18	-8.17	3.46	3.62	5.68	5.14		Jan-01-01
SBCERA TOT PLAN INDEX PRIOR 2003 CHANGES		-2.51	0.03	2.76	4.07	-6.50	5.87	5.42	7.75	7.08		Jan-01-90
<b>TOTAL PUBLIC EQUITY</b>	<b>2,428,548,834.62</b>	<b>-3.42</b>	<b>-1.14</b>	<b>2.07</b>	<b>4.13</b>	<b>-8.19</b>	<b>6.69</b>	<b>4.55</b>	<b>6.30</b>	<b>4.17</b>	<b>8.03</b>	<b>Jun-01-83</b>
TOTAL EQUITY BENCHMARK		-3.18	0.11	3.98	6.31	-8.25	8.77	5.90	10.32	8.40		Jun-01-83
Excess		-0.24	-1.25	-1.91	-2.18	0.06	-2.07	-1.34	-4.02	-4.23		
<b>U.S. EQUITY</b>	<b>1,457,999,495.41</b>	<b>-3.09</b>	<b>-3.34</b>	<b>1.74</b>	<b>4.60</b>	<b>-7.22</b>	<b>9.54</b>	<b>7.75</b>	<b>6.36</b>	<b>4.70</b>	<b>7.56</b>	<b>Jun-01-83</b>
Russell 3000 TR		-2.34	-1.72	4.39	6.89	-8.07	11.79	9.42	12.65	11.87	10.70	Jun-01-83
Excess		-0.75	-1.62	-2.65	-2.29	0.85	-2.25	-1.67	-6.29	-7.17	-3.14	
<b>U.S. PASSIVE EQUITY</b>	<b>1,456,780,891.21</b>	<b>-3.09</b>	<b>-3.35</b>	<b>1.74</b>	<b>4.60</b>	<b>-7.23</b>	<b>9.99</b>	<b>7.99</b>	<b>8.86</b>	<b>7.80</b>		<b>Jan-01-97</b>
Russell 3000 TR		-2.34	-1.72	4.39	6.89	-8.07	11.79	9.42	12.65	11.87		Jan-01-97
Excess		-0.75	-1.62	-2.65	-2.29	0.84	-1.80	-1.44	-3.80	-4.06		
<b>INT'L EQUITY</b>	<b>970,549,339.21</b>	<b>-3.86</b>	<b>2.22</b>	<b>2.57</b>	<b>1.29</b>	<b>-11.94</b>	<b>0.91</b>	<b>-1.97</b>	<b>5.00</b>	<b>1.82</b>	<b>5.94</b>	<b>Apr-01-86</b>
MSCI AC WORLD ex US (NET)		-3.51	3.54	4.32	7.41	-7.19	5.27	1.62	6.68	3.94		Apr-01-86
Excess		-0.35	-1.32	-1.74	-6.12	-4.76	-4.36	-3.59	-1.68	-2.12		
<b>DEVELOPED MKT INTL EQUITY</b>	<b>391,856,383.45</b>	<b>-1.97</b>	<b>5.04</b>	<b>4.45</b>	<b>8.94</b>	<b>-3.86</b>	<b>2.44</b>	<b>-0.08</b>	<b>5.34</b>	<b>3.94</b>	<b>3.36</b>	<b>Jan-01-07</b>
TOTAL DEV INTL EQUITY BM		-3.51	3.54	4.32	7.41	-7.19	5.27	1.90	6.24	4.45	2.47	Jan-01-07
Excess		1.54	1.50	0.13	1.53	3.33	-2.83	-1.98	-0.90	-0.51	0.89	
<b>EMERGING MKTS EQUITY</b>	<b>578,692,955.76</b>	<b>-5.11</b>	<b>0.41</b>	<b>1.32</b>	<b>-3.45</b>	<b>-16.54</b>	<b>-0.86</b>	<b>-3.36</b>	<b>3.24</b>	<b>-0.66</b>	<b>5.97</b>	<b>Jul-01-04</b>
MSCI EMERGING MARKETS		-6.48	-0.52	0.90	-2.12	-15.28	0.97	-1.87	6.34	1.52	6.91	Jul-01-04
Excess		1.37	0.93	0.42	-1.33	-1.25	-1.83	-1.49	-3.10	-2.18	-0.94	
<b>TOTAL FIXED INCOME</b>	<b>3,848,024,171.10</b>	<b>1.42</b>	<b>5.01</b>	<b>4.05</b>	<b>5.12</b>	<b>0.12</b>	<b>5.13</b>	<b>4.39</b>	<b>6.53</b>	<b>5.83</b>	<b>8.51</b>	<b>Sep-01-82</b>
TOTAL FIXED INCOME BENCHMARK		-2.56	0.87	0.79	0.60	-10.36	-3.21	-0.14	1.71	1.39		Sep-01-82
Excess		3.98	4.14	3.26	4.53	10.48	8.34	4.53	4.82	4.44		
<b>U.S. FIXED INCOME</b>	<b>1,788,493,766.95</b>	<b>1.18</b>	<b>3.06</b>	<b>3.20</b>	<b>4.12</b>	<b>-1.46</b>	<b>6.77</b>	<b>6.92</b>	<b>8.06</b>	<b>7.47</b>	<b>9.15</b>	<b>Jul-01-82</b>
Bloomberg U.S. Aggregate		-2.59	-0.04	0.41	-2.57	-9.72	-3.77	0.53	0.65	1.12	6.77	Jul-01-82
Excess		3.76	3.10	2.79	6.69	8.26	10.54	6.39	7.41	6.35	2.38	



# San Bernardino County Retirement

February 28, 2023

Net Mgr



Performance by Asset Class/Strategy												
	Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD	Inception Date
<b>HIGH YIELD U.S. FIXED INCOME</b>	<b>1,788,493,766.95</b>	<b>1.18</b>	<b>3.06</b>	<b>3.20</b>	<b>4.12</b>	<b>-1.46</b>	<b>6.77</b>	<b>6.92</b>	<b>8.06</b>	<b>7.47</b>	<b>8.49</b>	<b>Jan-01-07</b>
Bloomberg U.S. Aggregate		-2.59	-0.04	0.41	-2.57	-9.72	-3.77	0.53	0.65	1.12	2.92	Jan-01-07
Excess		3.76	3.10	2.79	6.69	8.26	10.54	6.39	7.41	6.35	5.56	
<b>INT'L FIXED INCOME</b>	<b>2,059,530,404.17</b>	<b>1.62</b>	<b>6.55</b>	<b>4.78</b>	<b>6.00</b>	<b>1.44</b>	<b>4.12</b>	<b>2.97</b>	<b>5.65</b>	<b>4.81</b>	<b>5.50</b>	<b>Apr-01-92</b>
INTERNATIONAL FIXED INCOME BENCHMARK		-3.99	0.65	-0.65	-3.28	-16.69	-6.32	-3.10	-0.57	-0.54		Apr-01-92
Excess		5.61	5.90	5.43	9.28	18.13	10.44	6.07	6.22	5.35		
<b>TOTAL EMERGING MKTS FIXED INCOME</b>	<b>903,755,142.08</b>	<b>0.19</b>	<b>6.98</b>	<b>3.78</b>	<b>4.06</b>	<b>-1.79</b>	<b>-0.44</b>	<b>-0.92</b>	<b>2.66</b>	<b>1.41</b>	<b>4.27</b>	<b>May-01-04</b>
TOTAL EM FIXED INC BM		-3.37	0.07	0.09	2.78	-11.57	-9.07	-3.38	-0.77	-0.14	4.74	May-01-04
Excess		3.56	6.91	3.70	1.28	9.78	8.63	2.45	3.43	1.55	-0.47	
<b>TOTAL DEVELOPED MKT INTL FIXED INCOME</b>	<b>1,155,775,262.09</b>	<b>2.78</b>	<b>6.38</b>	<b>5.59</b>	<b>7.51</b>	<b>3.78</b>	<b>7.59</b>	<b>5.81</b>	<b>7.81</b>	<b>6.88</b>	<b>7.00</b>	<b>Jan-01-07</b>
SBCERA CUSTOM BC GLOBAL AGGREGATE INDEX		-3.99	0.65	-0.65	-3.28	-16.69	-6.32	-3.61	-1.23	-1.41	1.18	Jan-01-07
Excess		6.77	5.73	6.24	10.79	20.47	13.91	9.42	9.04	8.28	5.82	
<b>INTERNATIONAL CREDIT</b>	<b>1,155,775,262.07</b>	<b>2.78</b>	<b>6.38</b>	<b>5.59</b>	<b>7.51</b>	<b>3.78</b>	<b>7.59</b>	<b>5.81</b>	<b>7.95</b>	<b>7.44</b>	<b>8.34</b>	<b>Aug-01-09</b>
TOTAL INT'L CREDIT BM		-3.99	0.65	-0.65	-3.28	-16.69	-6.32	-4.25	0.97	0.10	3.36	Aug-01-09
Excess		6.77	5.73	6.24	10.79	20.47	13.91	10.06	6.98	7.35	4.98	
<b>REAL ESTATE</b>	<b>596,125,394.22</b>	<b>0.07</b>	<b>-1.47</b>	<b>-1.77</b>	<b>-0.00</b>	<b>6.34</b>	<b>9.40</b>	<b>8.33</b>	<b>8.15</b>	<b>9.05</b>	<b>4.18</b>	<b>Mar-01-85</b>
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.13	Mar-01-85
Excess		0.07	-2.04	-1.77	-3.82	-9.74	-0.52	-0.28	-0.30	-0.43	-3.94	
<b>SECONDARIES R.E.</b>	<b>97,632,002.38</b>	<b>-0.70</b>	<b>-0.70</b>	<b>-0.70</b>	<b>0.57</b>	<b>2.19</b>	<b>4.64</b>	<b>5.47</b>	<b>8.60</b>		<b>12.74</b>	<b>Nov-01-14</b>
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45		9.04	Nov-01-14
Excess		-0.70	-1.27	-0.70	-3.25	-13.89	-5.27	-3.14	0.14		3.70	
<b>CORE R.E.</b>	<b>73,657,318.22</b>	<b>-0.23</b>	<b>6.87</b>	<b>6.03</b>	<b>-4.40</b>	<b>-1.86</b>	<b>4.00</b>	<b>3.98</b>	<b>4.25</b>	<b>6.36</b>	<b>8.49</b>	<b>Jun-01-97</b>
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	9.47	Jun-01-97
Excess		-0.23	6.30	6.03	-8.22	-17.94	-5.92	-4.64	-4.21	-3.12	-0.98	
<b>ENHANCED RETURN R.E.</b>	<b>286,824,261.21</b>	<b>-0.04</b>	<b>-5.32</b>	<b>-5.32</b>	<b>-0.06</b>	<b>6.77</b>	<b>10.32</b>	<b>9.23</b>	<b>9.17</b>	<b>11.04</b>	<b>9.05</b>	<b>Jun-01-03</b>
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.94	Jun-01-03
Excess		-0.04	-5.89	-5.32	-3.89	-9.31	0.40	0.61	0.72	1.56	0.11	
<b>HIGH RETURN - U.S. R.E.</b>	<b>102,189,350.06</b>	<b>1.84</b>	<b>2.97</b>	<b>1.84</b>	<b>2.95</b>	<b>20.29</b>	<b>22.46</b>	<b>15.63</b>	<b>20.96</b>	<b>11.15</b>	<b>6.47</b>	<b>Jan-01-03</b>

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Performance by Asset Class/Strategy												
	Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD	Inception Date
<b>NCREIF PROPERTY INDEX 1 QTR LAG</b>		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.84	Jan-01-03
Excess		1.84	2.40	1.84	-0.87	4.21	12.55	7.01	12.51	1.67	-2.37	
<b>HIGH RETURN - GLOBAL R.E.</b>	<b>35,351,846.44</b>	<b>-1.26</b>	<b>0.80</b>	<b>0.13</b>	<b>0.89</b>	<b>-3.98</b>	<b>1.86</b>	<b>3.71</b>	<b>5.52</b>	<b>6.53</b>	<b>4.89</b>	<b>Jul-01-03</b>
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.88	Jul-01-03
Excess		-1.26	0.23	0.13	-2.93	-20.06	-8.05	-4.90	-2.94	-2.95	-3.99	
<b>STRUCTURED R.E.</b>	<b>470,615.90</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.76</b>	<b>34.81</b>	<b>3.27</b>	<b>8.23</b>	<b>8.30</b>	<b>6.13</b>	<b>2.15</b>	<b>Apr-01-05</b>
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.55	Apr-01-05
Excess		0.00	-0.57	0.00	8.94	18.74	-6.64	-0.38	-0.15	-3.35	-6.40	
<b>TOTAL P.E &amp; V.C.</b>	<b>2,576,745,606.33</b>	<b>0.86</b>	<b>0.56</b>	<b>0.78</b>	<b>-2.46</b>	<b>1.36</b>	<b>20.03</b>	<b>17.39</b>	<b>16.12</b>	<b>15.40</b>	<b>11.42</b>	<b>Sep-01-87</b>
TOTAL VC & PVT EQUITY BM		-2.34	-1.72	4.39	6.89	-8.07	11.79	10.59	10.92	11.22	12.05	Sep-01-87
Excess		3.20	2.28	-3.61	-9.36	9.44	8.24	6.80	5.20	4.18	-0.62	
<b>DIVERSIFIED</b>	<b>1,821,675,055.23</b>	<b>0.96</b>	<b>0.85</b>	<b>1.19</b>	<b>-2.51</b>	<b>1.02</b>	<b>22.25</b>	<b>19.95</b>	<b>18.45</b>	<b>17.28</b>	<b>10.13</b>	<b>Jul-01-04</b>
Russell 3000 TR		-2.34	-1.72	4.39	6.89	-8.07	11.79	9.42	12.65	11.87	9.08	Jul-01-04
Excess		3.30	2.58	-3.20	-9.41	9.09	10.46	10.53	5.79	5.41	1.05	
<b>BUYOUT</b>	<b>163,846,782.76</b>	<b>0.18</b>	<b>0.20</b>	<b>0.18</b>	<b>1.43</b>	<b>23.25</b>	<b>23.60</b>	<b>18.79</b>	<b>21.80</b>	<b>22.37</b>	<b>17.11</b>	<b>Sep-01-05</b>
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	12.47	Sep-01-05
Excess		0.18	1.56	0.18	7.44	24.49	4.81	2.99	7.17	8.55	4.64	
<b>SECONDARIES</b>	<b>126,088,584.05</b>	<b>-0.36</b>	<b>-2.98</b>	<b>-0.34</b>	<b>-11.64</b>	<b>-13.47</b>	<b>20.95</b>	<b>17.41</b>	<b>14.28</b>	<b>14.62</b>	<b>12.28</b>	<b>Jun-01-05</b>
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	12.16	Jun-01-05
Excess		-0.36	-1.62	-0.34	-5.63	-12.22	2.16	1.61	-0.35	0.81	0.12	
<b>DIRECT LENDING</b>	<b>300,731,014.51</b>	<b>0.71</b>	<b>-1.11</b>	<b>-1.33</b>	<b>-0.37</b>	<b>0.21</b>	<b>9.35</b>	<b>9.39</b>	<b>8.47</b>	<b>7.27</b>	<b>7.22</b>	<b>May-01-05</b>
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	12.10	May-01-05
Excess		0.71	0.25	-1.33	5.64	1.46	-9.44	-6.41	-6.16	-6.54	-4.88	
<b>OPPORTUNISTIC DEBT</b>	<b>164,404,169.77</b>	<b>1.63</b>	<b>3.50</b>	<b>1.73</b>	<b>-1.61</b>	<b>1.51</b>	<b>17.07</b>	<b>12.19</b>	<b>11.90</b>	<b>12.98</b>	<b>11.58</b>	<b>Jan-01-06</b>
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	11.95	Jan-01-06
Excess		1.63	4.86	1.73	4.39	2.75	-1.72	-3.62	-2.74	-0.84	-0.38	
<b>REAL ASSETS</b>	<b>670,780,702.20</b>	<b>0.91</b>	<b>3.32</b>	<b>3.74</b>	<b>7.33</b>	<b>9.88</b>	<b>16.17</b>	<b>10.57</b>	<b>8.64</b>	<b>6.21</b>		<b>Dec-01-05</b>
TOTAL REAL ASSETS BENCHMARK		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40		Dec-01-05

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Performance by Asset Class/Strategy												
	Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD	Inception Date
Excess		3.93	7.03	6.22	15.53	18.82	6.61	6.15	2.95	2.81		
<b>TOTAL COMMODITIES</b>	<b>586,842,714.41</b>	<b>1.28</b>	<b>4.00</b>	<b>3.84</b>	<b>6.27</b>	<b>8.96</b>	<b>15.06</b>	<b>13.31</b>	<b>9.56</b>	<b>6.98</b>	<b>5.45</b>	<b>Apr-01-08</b>
TOTAL REAL ASSETS BENCHMARK		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40	2.03	Apr-01-08
Excess		4.29	7.71	6.32	14.47	17.89	5.51	8.89	3.87	3.58	3.41	
<b>TIMBER</b>	<b>6,671,519.59</b>	<b>-0.00</b>	<b>1.68</b>	<b>-0.00</b>	<b>-0.68</b>	<b>27.58</b>	<b>6.16</b>	<b>2.53</b>	<b>1.86</b>	<b>3.34</b>	<b>1.74</b>	<b>Jul-01-05</b>
TOTAL REAL ASSETS BENCHMARK		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40		Jul-01-05
Excess		3.02	5.40	2.49	7.52	36.52	-3.39	-1.89	-3.83	-0.06		
<b>INFRASTRUCTURE</b>	<b>77,266,468.21</b>	<b>-1.71</b>	<b>-1.36</b>	<b>3.25</b>	<b>14.59</b>	<b>8.47</b>	<b>21.70</b>	<b>10.68</b>	<b>14.87</b>	<b>5.74</b>	<b>6.51</b>	<b>Oct-01-07</b>
TOTAL REAL ASSETS BENCHMARK		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40	2.53	Oct-01-07
Excess		1.31	2.35	5.74	22.78	17.40	12.15	6.26	9.18	2.34	3.97	
<b>ALPHA POOL</b>	<b>1,969,383,163.24</b>	<b>0.62</b>	<b>2.13</b>	<b>2.27</b>	<b>4.96</b>	<b>-0.63</b>	<b>3.41</b>	<b>3.82</b>	<b>5.90</b>	<b>4.36</b>	<b>4.29</b>	<b>Jan-01-08</b>
BBG BARC Agg Bd		-2.59	-0.04	0.41	-2.57	-9.72	-3.77	0.53	0.65			Jan-01-08
Excess		3.21	2.17	1.86	7.53	9.09	7.19	3.29	5.24			
<b>ALPHA POOL CREDIT COMPOSITE</b>	<b>1,758,531,670.97</b>	<b>0.66</b>	<b>2.26</b>	<b>2.46</b>	<b>5.32</b>	<b>-0.97</b>	<b>3.80</b>	<b>4.15</b>	<b>6.47</b>	<b>4.74</b>	<b>4.48</b>	<b>Jun-01-06</b>
BBG BARC Agg Bd		-2.59	-0.04	0.41	-2.57	-9.72	-3.77	0.53	0.65			Jun-01-06
Excess		3.24	2.30	2.05	7.89	8.75	7.58	3.62	5.81			
<b>OVERLAY PORTFOLIO</b>	<b>966,563,981.12</b>	<b>-2.67</b>	<b>-0.81</b>	<b>2.72</b>	<b>-1.71</b>	<b>-22.88</b>	<b>27.11</b>	<b>8.50</b>	<b>23.92</b>		<b>8.37</b>	<b>May-01-15</b>
SBCERA - TOTAL PLAN INDEX		-2.70	-0.16	1.95	2.18	-8.17	3.46	3.62	5.68			May-01-15
Excess		0.03	-0.66	0.77	-3.89	-14.71	23.65	4.88	18.25			
<b>CASH</b>	<b>19,128,365.90</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.40</b>	<b>0.35</b>	<b>0.25</b>	<b>-0.71</b>	<b>-0.71</b>	<b>Mar-01-13</b>
ICE BofA US 3-Month Treasury Bill		0.33	1.00	0.64	1.96	2.10	0.84	1.35	1.16	0.83	0.83	Mar-01-13
Excess		-0.33	-1.00	-0.64	-1.96	-2.10	-0.44	-0.99	-0.91	-1.53	-1.53	

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## Performance by Manager

	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
<b>TOTAL DOMESTIC EQUITY</b>	<b>1,457,999,495.41</b>	<b>-3.09</b>	<b>-3.34</b>	<b>1.74</b>	<b>4.60</b>	<b>-7.22</b>	<b>9.54</b>	<b>7.75</b>	<b>6.36</b>	<b>4.70</b>	<b>7.56</b>
Russell 3000 TR		-2.34	-1.72	4.39	6.89	-8.07	11.79	9.42	12.65	11.87	10.70
RUSSELL - US SC VOL	254,907.87	0.37	1.12	0.76	2.31	2.52	0.94	1.72	1.47	-18.88	-9.75
<i>Russell 2000 Index</i>		-1.69	0.89	7.89	12.11	-6.02	10.08	6.01	10.52	9.06	11.10
RUSSELL - US LC VOL	963,696.33	0.37	1.12	0.76	2.31	2.52	-57.66	-39.45	-58.01	-53.51	-42.73
<i>Russell 3000 TR</i>		-2.34	-1.72	4.39	6.89	-8.07	11.79	9.42	12.65	11.87	13.21
SSGA - S&P CALL WRITE	1,062,027,991.21	-2.44	-2.29	3.68	6.08	-7.71	11.14	9.19	9.72	8.40	5.71
<i>Russell 3000 TR</i>		-2.34	-1.72	4.39	6.89	-8.07	11.79	9.42	12.65	11.87	8.66
TOBAM - AB US EQUITY	394,752,900.00	-4.78	-6.07	-3.13	0.82	-5.92	7.72				6.18
<i>Russell 3000 TR</i>		-2.34	-1.72	4.39	6.89	-8.07	11.79				10.05
<b>TOTAL INTERNATIONAL EQUITY</b>	<b>970,549,339.21</b>	<b>-3.86</b>	<b>2.22</b>	<b>2.57</b>	<b>1.29</b>	<b>-11.94</b>	<b>0.91</b>	<b>-1.97</b>	<b>5.00</b>	<b>1.82</b>	<b>5.94</b>
MSCI AC WORLD ex US (NET)		-3.51	3.54	4.32	7.41	-7.19	5.27	1.62	6.68	3.94	
WASATCH EM SELECT	108,778,829.35	-1.72	8.95	7.29							
MSCI EMERGING MARKETS		-6.48	-0.52	0.90							
RUSSELL - INTER VOL	16,868.09	0.37	1.12	0.76	2.31	2.52					
<i>OVERLAY BLENDED BM</i>		-3.51	3.54	4.32	7.41	-7.19					
SSGA - MSCI WORLD EX-US	221,961,153.07	-2.33	5.16	5.68							
MSCI AC WORLD ex US (NET)		-3.51	3.54	4.32							
WILLIAM BLAIR EM GROWTH	101,204,267.22	-4.94	1.20	0.34							
MSCI EMERGING MARKETS		-6.48	-0.52	0.90							
TOBAM - AB WORLD EX-US	169,878,362.29	-1.50	4.89	2.88	4.27	-7.98	0.61				-2.19
<i>MSCI AC WORLD ex US (NET)</i>		-3.51	3.54	4.32	7.41	-7.19	5.27				2.25
TOBAM - AB EM FUND	264,299,463.65	-5.97	-4.37	-2.05	-5.65	-19.27	-2.02	-4.36			0.33
<i>MSCI EMERGING MARKETS</i>		-6.48	-0.52	0.90	-2.12	-15.28	0.97	-1.87			4.52
MONDRIAN - EM EQUITY	104,410,395.55	-7.06	1.96	2.96	1.50	-10.51	1.61	-0.89	4.63	0.26	6.46
<i>MSCI EMERGING MARKETS</i>		-6.48	-0.52	0.90	-2.12	-15.28	0.97	-1.87	6.34	1.52	6.55

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
<b>TOTAL DOMESTIC FIXED INCOME</b>	<b>1,788,493,766.95</b>	<b>1.18</b>	<b>3.06</b>	<b>3.20</b>	<b>4.12</b>	<b>-1.46</b>	<b>6.77</b>	<b>6.92</b>	<b>8.06</b>	<b>7.47</b>	<b>9.15</b>
Bloomberg U.S. Aggregate		-2.59	-0.04	0.41	-2.57	-9.72	-3.77	0.53	0.65	1.12	6.77
BEACH POINT - SELECT	239,194,521.36	3.34	4.36	3.81	2.06	-3.55	6.95	6.67	8.69	7.99	9.45
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	8.59
APOLLO - CREDIT STRAT	132,958,575.75	1.99	3.11	2.48	1.86	1.19	9.01	9.07	9.33	7.60	8.41
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	5.31
MANULIFE DEC - SMA	96,883,539.94	0.02	2.76	2.30	1.71	-2.78	-2.44	3.06	3.73	3.86	5.80
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	5.21
WATERFALL - RCOF I	4,114,713.23										
WATERFALL - SMA	54,637,998.65	-12.28	-10.55	1.17	5.37	-7.90	7.78	9.31	12.63		12.13
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50		4.00
BARDIN HILL - MCA	208,141,830.30	3.21	1.97	3.21	-1.98	-2.01	6.61	5.57	6.39		5.98
<i>HALCYON BLENDED BM</i>		-1.29	1.79	2.56	5.93	-5.52	1.95	2.86	5.62		4.11
WATERFALL - READY CAP	0.00										
<i>ICE BofA US High Yield Index</i>		-1.29									
GOLDENTREE - SMA-PB	27,235,018.89	-1.11	20.66	4.47	14.09	10.82	22.39	18.41	15.87	12.05	27.15
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	5.12
MACKAY SHIELDS - SMA	465,154.69	-12.93	-26.48	-26.04	-23.82	-31.98	-9.27	-4.22	0.02	0.40	4.35
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	6.23
WATERFALL - VICTORIA	78,386,346.99	0.33	-2.27	-1.91	-3.85	-2.42	2.86	5.36	6.63		7.05
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50		3.90
GOLDENTREE - SMA	606,060,236.17	1.01	4.29	4.75	7.97	-0.90	9.68	8.27	10.34	12.42	
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	
AG - CAP RECOVERY PRT VI	0.01	0.00	0.00	0.00	0.00	100.00					
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52					
APOLLO - OFFSHR CREDIT	277,161,957.58	2.06	3.39	2.80	1.25	-3.39	3.90	4.10	5.83	5.16	9.40
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	8.79
GOLDENTREE - DIST FUND	3,892,241.03	2.67	2.67	2.67	70.84	106.03	31.63	16.98	13.78	15.26	13.39

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	5.64
KA - BDC	59,361,632.35	0.00	-0.37	-0.17	3.87	10.36					
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52					
<b>TOTAL INTERNATIONAL FIXED INCOME</b>	<b>2,059,530,404.17</b>	<b>1.62</b>	<b>6.55</b>	<b>4.78</b>	<b>6.00</b>	<b>1.44</b>	<b>4.12</b>	<b>2.97</b>	<b>5.65</b>	<b>4.81</b>	<b>5.50</b>
INTERNATIONAL FIXED INCOME BENCHMARK		-3.99	0.65	-0.65	-3.28	-16.69	-6.32	-3.10	-0.57	-0.54	
ALCENTRA - VIADUCT	93,474,261.44	0.00	4.47	-0.00	14.00	18.72	13.10				10.19
<i>Bloomberg Global Aggregate ex-USD</i>		-3.99	0.65	-0.65	-3.28	-16.69	-6.32				-3.83
ALCENTRA SCF	17,155,873.59	1.96	2.42	3.75	-3.18	-8.45	5.14	-2.67			-1.20
<i>Bloomberg Global Aggregate ex-USD</i>		-3.99	0.65	-0.65	-3.28	-16.69	-6.32	-3.61			-1.72
OCM INTL CONVERTIBLES SMA	0.02	0.00	0.00	0.00							
<i>SBCERA CUSTOM BC GLOBAL AGGREGATE INDEX</i>		-3.99	0.65	-0.65							
ALCENTRA DLF	972,934.69	0.82	0.82	0.82	5.73	13.97					
<i>Bloomberg Global Aggregate ex-USD</i>		-3.99	0.65	-0.65	-3.28	-16.69					
CAIRN - CLI HOLDINGS	65,636,305.75	10.15	16.18	12.09	-0.70	-7.29	3.83				8.00
<i>Bloomberg Global Aggregate ex-USD</i>		-3.99	0.65	-0.65	-3.28	-16.69	-6.32				-4.96
CAIRN - SMA	172,575,359.18	2.08	3.05	2.84	10.42	12.79	7.15	4.97	7.78		7.18
<i>Bloomberg Global Aggregate ex-USD</i>		-3.99	0.65	-0.65	-3.28	-16.69	-6.32	-3.61	-1.23		-0.70
GRAMERCY FUNDS MANAGEMENT LLC	668,171,368.09	0.80	4.61	3.12	4.26	0.70	1.49	-0.16	2.19	4.48	4.20
<i>JPMorgan EMBI Global Diversified Index</i>		-2.21	1.22	0.89	4.09	-8.64	-5.17	-0.73	1.73	1.85	1.80
ASHMORE - EM FIXED	16,806,973.99	-6.61	52.63	12.23	66.30	41.71	8.23	4.45	7.45	3.33	4.31
<i>JPMorgan EMBI Global Diversified Index</i>		-2.21	1.22	0.89	4.09	-8.64	-5.17	-0.73	1.73	1.85	4.61
ALCENTRA - CSCOF III	27,272,407.93	7.60	7.60	7.60	-6.19	-9.41	4.23	4.31			6.07
<i>Bloomberg Global Aggregate ex-USD</i>		-3.99	0.65	-0.65	-3.28	-16.69	-6.32	-3.61			-2.44
MARATHON - SMA	224,882,432.59	-1.04	-1.25	-1.09	-1.06	2.09	7.12	8.03	9.59	8.97	6.64
<i>Bloomberg Global Aggregate ex-USD</i>		-3.99	0.65	-0.65	-3.28	-16.69	-6.32	-3.61	-1.23	-1.41	-0.28
FINISTERRE EMD TRF	108,824,000.00	-2.18	8.82	1.46							8.82
<i>JPMorgan EMBI Global Diversified Index</i>		-2.21	1.22	0.89							9.07

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
ALCENTRA - SMA	553,805,686.90	4.11	11.22	9.76	16.60	3.39	8.73	6.65	9.11		9.36
<i>Bloomberg Global Aggregate ex-USD</i>		-3.99	0.65	-0.65	-3.28	-16.69	-6.32	-3.61	-1.23		-0.70
PGIM EM - DEBT OPP FUND	109,952,800.00	0.00	16.51	9.59	4.02	-3.48	-0.99	0.93	6.01		3.13
<i>JPMorgan EMBI Global Diversified Index</i>		-2.21	1.22	0.89	4.09	-8.64	-5.17	-0.73	1.73		1.60
<b>TOTAL REAL ESTATE</b>	<b>596,125,394.22</b>	<b>0.07</b>	<b>-1.47</b>	<b>-1.77</b>	<b>-0.00</b>	<b>6.34</b>	<b>9.40</b>	<b>8.33</b>	<b>8.15</b>	<b>9.05</b>	<b>4.18</b>
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.13
KA - RED IV	15,934,363.20	2.41	2.41	2.41	8.74	11.04					6.57
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08					13.54
PGIM RE - PRECap VII	16,491,859.42	-1.66	1.65	0.64	3.39	-5.33					2.02
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08					13.54
KA - RED III	7,867,272.67	1.11	6.88	1.11	11.02	19.89	17.85	13.05			13.05
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08	9.91	8.62			8.62
BRYANSTON - RETAIL OPP	12,494,050.80	13.07	13.07	13.07	-14.93	-5.96	47.66	31.59	32.37	30.38	
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	
APOLLO - RE FUND II	17,441,679.42	0.00	0.00	0.00	7.14	22.52	9.12	7.84			12.31
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08	9.91	8.62			8.07
MORGAN STANLEY - RE	280,354.19	25.64	25.64	25.64	27.08	26.64	11.62	6.51	6.07	8.55	4.57
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.27
PGIM RE - PRECap VI	9,801,390.71	-1.66	1.66	0.64	0.19	-7.56	2.41	5.44			7.66
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08	9.91	8.62			8.29
STARWOOD - CAP FUND I-2	2,574,335.38	0.00	0.00	0.00	1.10	2.73	1.20	1.88	-0.76	-0.44	0.97
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.12
PGIM RE - PRISA III	73,720,241.88	0.00	-2.68	-2.68	2.73	7.92	13.93	11.58	11.61	13.73	13.59
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.94
INVESCO - ASIA CORE RE	65,486,667.81	0.00	6.57	6.57	-6.44	-4.40	3.03	3.52	6.11		5.46
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45		9.03
WALTON ST RE FUND V	1,397,048.37	-4.34	-4.34	-4.34	-22.79	-28.23	-16.62	-17.48	-12.50	-5.50	-6.58

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	7.84
APOLLO - RE FUND III	24,926,572.34	0.00	-0.00	0.00	6.43	37.70					
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08					
KA - REP VI	4,864,570.76	0.00	4.76	0.00	8.85	21.72					
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08					
KA - RE FUND V	18,660,840.88	-0.32	2.28	-0.32	9.71	45.52	29.77	14.77			15.23
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62			8.41
PTNRS GRP - RE SEC 2017	64,471,412.00	-0.15	-0.15	-0.15	4.13	6.98	9.58	9.67			9.87
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62			8.35
SQUARE MILE - PRT III	0.01										
NCREIF PROPERTY INDEX 1 QTR LAG		0.00									
348 WEST HOSPITALITY	8,170,650.41	-2.03	9.53	1.85	16.17	25.10	13.47	9.41	9.25	9.68	4.55
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.82
PGIM RE - PRISA II	203,563,099.93	0.00	-6.44	-6.44	-1.37	6.00	8.97	8.35	8.22	10.24	6.72
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.77
OAKTREE - RE OPP V	390,793.00	0.00	-22.47	-22.47	-20.31	-20.69	-1.89	-3.93	0.01	4.27	4.60
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	9.55
FORTRESS - JP OPP II	3,823,424.97	0.00	0.00	0.00	7.28	13.37	10.62	23.47	28.01	25.75	24.09
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	9.55
INVESCO REAL ESTATE US FUND VI	9,540,919.40	-1.14	-1.14	-1.14							
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00							
STARWOOD - GI OPP VII-A	592,640.39	0.00	0.00	0.00	-1.17	-6.64	-6.79	-0.11	-0.26	1.42	-0.88
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.12
PTNRS GRP - RE SEC 2013	33,160,590.38	-1.76	-1.76	-1.76	-5.71	-5.93	-1.33	0.98	5.30		9.85
NCREIF PROPERTY INDEX 1 QTR LAG		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45		9.04
WALTON ST RE FUND IV	0.00										
NCREIF PROPERTY INDEX 1 QTR LAG		0.00									
TRI-CON CAPITAL VII	470,615.89	0.00	0.00	0.00	12.21	20.20	0.67	9.90	9.19	2.95	-8.13



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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
<i>NCREIF PROPERTY INDEX 1 QTR LAG</i>		0.00	0.57	0.00	3.82	16.08	9.91	8.62	8.45	9.48	8.55
<b>TOTAL VENTURE CAPITAL &amp; PRIVATE EQUITY</b>	<b>2,576,745,606.33</b>	<b>0.86</b>	<b>0.56</b>	<b>0.78</b>	<b>-2.46</b>	<b>1.36</b>	<b>20.03</b>	<b>17.39</b>	<b>16.12</b>	<b>15.40</b>	<b>11.42</b>
TOTAL VC & PVT EQUITY BM		-2.34	-1.72	4.39	6.89	-8.07	11.79	10.59	10.92	11.22	12.05
IND VENT - PRT HOLD VI	13,094,287.47	0.00	-0.24	0.00	4.78	-10.32					
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25					
KA - SOLUTIONS FUND	9,662,464.41	0.00	-0.01	-0.00	1.07	2.22	31.00				24.54
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25	18.79				15.57
KA - PARTNERS FUND IV	18,549,703.09	0.00	0.00	0.00	5.14	20.31	29.60	20.21			21.71
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.31
LEXINGTON - PRT VII	3,210,922.43	-3.09	-3.09	-3.09	-8.96	-6.83	13.24	11.15	9.49	10.75	12.80
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	12.58
KA - CAP ADVISORS II	11,225,405.98	0.00	0.00	0.00	4.58	6.80					
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25					
PTNRS GRP - SEC 2004	840,045.93	-2.35	3.00	-0.63	-13.47	11.27	11.81	6.01	6.24	6.52	5.40
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	12.72
IND VENT - FUND V	6,383.70	0.01	-2.50	0.01	-47.65	-42.77	-1.98	-5.26	-3.63	12.89	15.45
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	10.32
LEXINGTON - PRT VI	237,380.56	1.23	1.23	1.23	-1.82	-8.47	-10.51	-3.08	-0.77	2.19	4.00
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	11.78
BLKRK TCP - ENERGY OPP	4,481,634.96	-1.44	-4.08	-4.35	-5.88	15.75	5.62	7.98	12.31		9.98
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63		13.66
PARTNERS GRP - MCA	515,559,398.44	3.12	4.33	4.16	0.45	-0.65	15.43	13.45	17.09		15.04
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63		13.66
IND VENT - IV ARROWHEAD	4,826,230.01	0.00	-3.48	0.00							
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00							
KA - PARTNERS FUND V	21,858,263.46	0.00	0.00	0.00	3.19	5.38					
<i>STATE STREET PE 1 QTR LAG</i>		0.00	-1.36	0.00	-6.01	-1.25					

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
KA - KCLOP II	33,323,482.94	0.87	0.87	0.87	-7.68	-5.66					19.96
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25					18.21
KA - FRG	0.01	0.00	0.00	0.00	0.00	0.00					
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25					
ADAMS STREET - MCA	119,496,540.17	0.00	0.76	0.00	-1.25	6.01					27.90
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25					22.41
ASL - SOF IV	19,282,605.99	0.00	-0.70	0.00	-7.22	15.51	35.63				33.53
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				17.75
CRESTLINE - PRT FIN	20,949,875.56	0.00	0.00	0.00	4.72	5.52	10.53				9.82
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				15.28
BLKRK TCP - CO-INV 2017	0.00										
STATE STREET PE 1 QTR LAG		0.00									
ARES - PCS	25,796,396.39	0.00	0.00	0.00	-0.13	4.78	8.36	7.60			7.91
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.37
IND VENT - PRT HOLD III	40,554,201.68	0.00	-5.74	0.00	-15.43	-17.04	29.63	32.62	26.18		24.09
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63		13.69
ARES - SPECIAL SITS I	34,819,714.43	-0.00	4.94	-0.00	4.54	10.37	24.43	16.43	10.21		3.72
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63		13.69
BLKRK TCP - DIR LEND 8	21,056,215.78	0.96	0.30	0.71	0.35	1.27	6.86	5.59			5.11
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.28
LEXINGTON - MID MRKT I	265,209.82	-0.30	-0.30	-0.30	-14.09	-39.02	-25.29	-11.67	-4.69	-0.32	5.54
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	12.16
APOLLO - FUND VII	114,522.00	0.32	3.35	0.32	3.97	12.88	73.53	32.87	22.79	23.79	21.85
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	10.07
KA - PEIF 2 CO-INV	10,628,647.65	5.48	5.48	5.48	16.84	32.31	27.53				39.88
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				15.82
IND VENT - SECONDARY VIII	26,048,068.89	0.00	-6.39	0.00	-16.83	-30.91	21.56	32.61			32.08
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.44

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
PATHWAY - PPEF VII	203,350,000.33	-0.18	-0.15	-0.20	-12.35	-15.50	14.84	14.58	14.80	16.04	6.34
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	12.60
PTNRS GRP - SEC 2006	10,731.85	-34.11	-30.50	-32.95	-31.28	-41.03					
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25					
BLKRK TCP - OPP FUND V	942,578.00	-0.19	-1.52	-16.42	85.86	76.69	50.48	15.77	16.46	14.10	8.97
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	10.46
LEXINGTON - MID MRKT II	2,017,261.60	-6.93	-6.93	-6.93	-14.66	-8.93	22.37	19.14	18.54	16.93	15.38
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	10.49
BLKRK TCP - DIR LEND 9	21,026,707.54	1.50	1.23	1.50	4.33	4.92	6.40				6.24
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				18.28
KA - RENEWABLE OPP PRT	36,608,126.78	0.00	-0.00	0.00	14.89	49.21	46.65				43.81
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				17.75
BLKRK TCP - CO-INV 2019	25,974,553.28	0.37	1.12	0.76	2.31	2.52	13.81				9.45
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				17.47
WATERFALL - SENTINEL I	30,791,661.02	0.00	0.00	0.00	-7.66	9.45	17.64				12.58
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				16.00
SIG GUFF - DIST OPP III	1,542,176.71	0.00	-5.69	-5.69	-1.26	4.19	11.02	10.34	9.72	9.21	9.16
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	10.25
PTNRS GRP - EU MEZ 2005	0.01										
STATE STREET PE 1 QTR LAG		0.00									
TCW CRES - MEZZ PRTNR V	118,281.52	0.00	0.00	0.00	-5.26	-11.47	44.24	22.14	18.03	14.77	12.73
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	10.12
BLKRK TCP - WATERMAN	59,857,589.05	1.23	-1.78	-2.69	-5.25	-6.46	7.56	8.80	10.24	10.06	9.60
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	13.73
PATHWAY - MCA	548,098,334.00	0.46	-0.18	0.31	0.83	5.75	29.71	27.72	23.13		15.66
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63		12.97
IND VENT - SECONDARY IX	38,672,736.84	-0.48	-2.39	-0.48	-6.04	-9.19					
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25					

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
CRESTLINE - PRT FIN II	12,547,198.44	5.58	5.58	5.58	10.88	13.23					12.02
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25					19.64
IND VENT - PRT HOLD V	47,912,549.14	0.00	-1.14	0.00	-2.04	30.90	38.84				35.58
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				16.00
WATERFALL - PE CO-INV	58,500,069.10	0.00	-0.00	-0.00	-0.39	29.73	19.41				14.10
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				16.00
KA - PEIF 2	17,270,164.75	-2.52	-2.29	-2.52	20.00	58.76	36.20				47.50
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				15.82
IND VENT - TECH BUYOUT II	8,810,183.15	0.00	-4.03	0.00							
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00							
ASL - EU STRAT PTNR '04	672,086.68	-2.35	3.00	-0.63	-2.77	-17.18	-15.30	-5.89	-0.44	2.22	1.44
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	12.79
IND VENT - DIRECT II	73,855,449.12	0.00	-0.34	0.00	-1.92	45.34	23.39				22.07
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				17.75
KA - ENERGY VII	5,714,728.72	3.29	3.29	3.29	-6.82	37.92	-9.30	-12.32			-2.03
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.44
ASL - SOF I	3,769,711.12	0.00	-5.79	0.00	-21.86	-28.49	0.55	3.37	6.20		6.83
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63		13.11
BLKRK TCP - OPP FUND VI	417,551.85	0.92	0.92	0.92	-19.02	-13.79	5.59	0.66	1.83	4.63	5.22
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	12.82
INDUSTRY VENTURES - MCA	0.06										
STATE STREET PE 1 QTR LAG		0.00									
ASL - SOF III	20,430,930.98	0.00	-4.08	0.00	-7.04	0.79	15.85	22.24			19.99
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.31
ARES - EU LOAN FUNDING	7,961,030.88	-2.35	3.00	-0.63	-19.01	-22.18	0.18	2.70			2.78
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.33
ARES - ICOF III	22,812,146.36	0.00	3.03	0.00	-2.09	2.06	6.58	6.64			5.81
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.12

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
IND VENT - PARTNERSHIP	51,228,923.69	0.00	-2.02	0.00	-1.71	11.22	37.68	25.94			20.48
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.12
IND VENT - SPECIAL OPP	2,488,212.79	0.00	13.85	0.00	-28.03	-16.58	20.89	39.50			37.33
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.28
PTNRS GRP - SEC 2008	1,355,153.03	-1.22	4.20	0.52	-10.13	-18.12	6.88	3.70	3.60	5.35	6.23
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	13.93
APOLLO - EU PRINCIPAL	115,318.99	-2.35	3.00	-0.63	37.27	419.25	113.37	55.52	42.04	36.81	29.08
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	13.75
BLKRK TCP SS FUND IX	23,551,951.57	0.99	-13.24	-13.77	-15.23	-25.66	-1.37	3.45	5.72		3.36
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63		13.85
IND VENT - DIRECT III	4,304,213.61	0.00	0.00	0.00							
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00							
KA CO-INV	10,475,070.00	0.00	0.00	0.00	3.78						
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01						
ARES - PCS II	42,018,712.61	0.00	0.00	0.00	-4.19	-0.66					
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25					
IND VENT - TECH BUYOUT	54,961,206.87	0.00	1.82	-0.23	0.68	7.13	16.36				7.85
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79				15.82
ARES - ICOF II	11,432,841.47	0.00	0.00	0.00	-11.06	-5.14	10.09	7.69			9.46
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.37
IND VENT - SEC VII	8,192,026.79	0.00	-0.20	0.00	-21.90	-23.18	16.65	21.15	16.48		15.97
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63		13.69
ASL - SOF II	107,631.36	0.00	0.00	0.00	0.00	-10.88	-17.78	-5.14	3.00		2.74
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63		13.69
IND VENT - PRT HOLD 3-A	6,037,568.65	0.00	0.00	0.00	-7.35	-0.08	10.59	5.92	2.59		1.36
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63		13.69
IND VENT - DIRECT	49,440,658.14	0.00	0.00	0.00	-0.97	12.59	39.74	25.82			21.14
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80			15.28

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
ASL - EU STRAT PTNR '08	3,280,464.46	-2.35	-0.27	-0.63	-8.36	-7.57	1.91	4.57	9.44	10.00	7.24
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	13.29
IND VENT - PRT HLDNG II	60,148,224.87	0.00	-2.61	0.00	-13.11	-15.96	29.00	25.50	19.53	24.44	23.49
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	13.59
IND VENT - FUND VI	241,400.10	0.00	1.96	0.00	-21.19	-64.05	-5.02	-2.08	-0.78	0.89	2.65
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	13.01
CATALYST - FUND LP II	34,088,364.74	-0.00	0.81	0.87	0.38	0.98	25.59	13.33	9.59	12.54	11.49
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	10.46
AURORA - EQ PARTNERS IV	533,544.97	0.00	0.00	0.00	-11.07	-9.39	7.84	12.35	16.15	15.73	14.27
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25	18.79	15.80	14.63	13.82	13.20
ARES - MCA	7,171,976.99	311.37	335.75	334.21	529.12	563.41					
STATE STREET PE 1 QTR LAG		0.00	-1.36	0.00	-6.01	-1.25					
<b>TOTAL REAL ASSETS</b>	<b>670,780,702.20</b>	<b>0.91</b>	<b>3.32</b>	<b>3.74</b>	<b>7.33</b>	<b>9.88</b>	<b>16.17</b>	<b>10.57</b>	<b>8.64</b>	<b>6.21</b>	
TOTAL REAL ASSETS BENCHMARK		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40	
PINNACLE - PHYS FIN II	334,182,637.66	0.07	3.01	2.52	6.67	4.61	13.04	12.74	10.06	7.33	6.49
TOTAL REAL ASSETS BENCHMARK		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40	3.45
ENERGY SPEC - PTNR VI	511,278.35	-0.00	-0.00	-0.00	6.46	27.26	1.17	17.69	18.59	12.48	-0.18
TOTAL REAL ASSETS BENCHMARK		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40	3.19
STARWOOD - ENERGY INFRA	57,122.00	0.00	0.00	0.00	3.84	10.89	11.61	14.14	12.17	11.46	9.03
TOTAL REAL ASSETS BENCHMARK		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40	3.94
KA - MLP	72,785,019.72	-1.64	-0.82	3.29	15.39	9.52	15.00	6.27			4.92
TOTAL REAL ASSETS BENCHMARK		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42			4.36
PINNACLE - NAT RESOURCE	252,091,676.39	2.92	5.34	5.64	6.20	15.86	20.31	14.53	9.21	7.36	7.36
TOTAL REAL ASSETS BENCHMARK		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40	2.03
HIGHSTAR - FUND III	0.00										
TOTAL REAL ASSETS BENCHMARK		-3.02									
TIMBERVEST- CROSSOVER 2	5,548,756.46	-0.00	-0.00	-0.00	-2.05	-6.15	-6.64	-5.51	-5.31	-3.95	-2.04

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
<i>TOTAL REAL ASSETS BENCHMARK</i>		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40	1.88
FORTRESS - FTAI	0.02										
<i>TOTAL REAL ASSETS BENCHMARK</i>		-3.02									
TIMBERVEST - PRTNRS II	0.01										
<i>TOTAL REAL ASSETS BENCHMARK</i>		-3.02									
HANCOCK TIMBERLAND VIII	1,122,763.12	0.00	5.34	-0.00	2.39	47.78	18.76	9.78	7.63	8.35	2.44
<i>TOTAL REAL ASSETS BENCHMARK</i>		-3.02	-3.72	-2.49	-8.20	-8.93	9.55	4.42	5.69	3.40	3.11
KA - ACQUISITION	4,481,448.47	-2.81	-9.64	2.65	2.84	-5.08					
<i>TOTAL REAL ASSETS BENCHMARK</i>		-3.02	-3.72	-2.49	-8.20	-8.93					
<b>ALPHA POOL</b>	<b>1,969,383,163.24</b>	<b>0.62</b>	<b>2.13</b>	<b>2.27</b>	<b>4.96</b>	<b>-0.63</b>	<b>3.41</b>	<b>3.82</b>	<b>5.90</b>	<b>4.36</b>	<b>4.29</b>
BBG BARC Agg Bd		-2.59	-0.04	0.41	-2.57	-9.72	-3.77	0.53	0.65		
SSGA - TREASURY POOL	210,851,492.26	0.32	1.11	0.70	1.99	1.97	0.62	1.30	1.17	0.89	0.86
<i>ICE BofA US 3-Month Treasury Bill</i>		0.33	1.00	0.64	1.96	2.10	0.84	1.35	1.16	0.83	0.63
ZAIS - ZEPHYR 7	0.01										
<i>ICE BofA US High Yield Index</i>		-1.29									
ZAIS - Zephyr 8	47,045,393.61	0.00	0.07	0.07	-4.31	-8.49	5.51				5.51
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14				1.55
ZAIS - OPPORTUNITY FUND	135,517,896.99	1.42	5.31	4.82	3.46	-4.01	0.10	0.23	5.09	3.31	6.64
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	6.03
ZAIS - SMA	398,405,396.37	0.63	4.76	4.38	14.53	6.59	8.65	6.28	12.21	7.71	7.85
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	4.75
CORRUM - GLBL CR OPP	237,262,803.92	0.00	0.93	0.00	9.26	6.88	-0.36	1.07	2.97	3.29	2.00
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50	4.02	5.70
ARES - ECO MSTR FUND II	573,288,725.24	-0.02	2.54	3.30	5.54	-3.20	3.55	3.79			4.82
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70			3.86
APOLLO - MCA	2,246,086.02	0.37	1.12	0.76	-46.76	-54.06	-11.76	0.02	6.16		5.74
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50		3.63

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	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
BIRCH GROVE - CRED STRT	232,071,970.84	3.19	-2.18	-0.31	-3.65	-9.24	2.70	4.69	5.26		4.97
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52	1.14	2.70	5.50		4.14
APOLLO ACCORD+	108,291,942.22	0.00	1.08	0.00	-4.67	-4.26					
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52					
ZAIS ZEPHYR 9	24,401,455.75	0.00	7.18	7.18	8.24	1.68					1.68
<i>ICE BofA US High Yield Index</i>		-1.29	1.79	2.56	5.93	-5.52					-5.52
<b>OVERLAY PORTFOLIO</b>	<b>966,563,981.12</b>	<b>-2.67</b>	<b>-0.81</b>	<b>2.72</b>	<b>-1.71</b>	<b>-22.88</b>	<b>27.11</b>	<b>8.50</b>	<b>23.92</b>		<b>8.37</b>
SBCERA - TOTAL PLAN INDEX		-2.70	-0.16	1.95	2.18	-8.17	3.46	3.62	5.68		
RUSSELL - CC LARGE	1,275,340.82	0.37	1.12	0.76	2.31	2.52					
<i>Russell 3000 TR</i>		-2.34	-1.72	4.39	6.89	-8.07					
RUSSELL - CRNCY OVERLAY	42,788,288.15										
<i>91 Day Treasury Bill</i>		0.33									
RUSSELL - BETA OVERLAY	921,244,654.36	-1.65	-1.09	4.00	0.89	-17.67	31.54	9.74	26.46	16.84	22.91
<i>SBCERA - TOTAL PLAN INDEX</i>		-2.70	-0.16	1.95	2.18	-8.17	3.46	3.62	5.68		
RUSSELL - CC INTER	558,829.59	0.37	1.12	0.76	2.31	2.52					
<i>RUSSELL COVERED BLENDED BM</i>		-3.51	3.54	4.32	7.41	-7.19					
RUSSELL - CC SMALL	696,868.20	0.37	1.12	0.76	2.31	2.52					
<i>Russell 3000 TR</i>		-2.34	-1.72	4.39	6.89	-8.07					
RUSSELL - IR HEDGING	17,245,924.99	25.81	-11.34	-21.10	17.89	124.69	59.62	-6.74	-6.96	-13.72	-14.63
<i>BBG BARC Agg Bd</i>		-2.59	-0.04	0.41	-2.57	-9.72	-3.77	0.53	0.65		
<b>CASH WITH TREASURY</b>	<b>19,128,365.90</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.40</b>	<b>0.35</b>	<b>0.25</b>	<b>-0.71</b>	<b>-0.71</b>
ICE BofA US 3-Month Treasury Bill		0.33	1.00	0.64	1.96	2.10	0.84	1.35	1.16	0.83	0.83
CASH W/CBB & WF	19,128,365.90	0.00	0.00	0.00	0.00	0.00	0.40	0.35	0.25	-0.71	
<i>ICE BofA US 3-Month Treasury Bill</i>		0.33	1.00	0.64	1.96	2.10	0.84	1.35	1.16	0.83	
CASH ACCOUNT	684,202,522.58	0.67	1.83	1.19	2.75	2.69	0.99	1.21	0.94	-1.46	3.41
<i>ICE BofA US 3-Month Treasury Bill</i>		0.33	1.00	0.64	1.96	2.10	0.84	1.35	1.16	0.83	



# San Bernardino County Retirement

February 28, 2023

Net Mgr



## Performance by Manager

	Ending Market Value	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
SBCERA Transition	2,760,236.84	0.24	1.35	0.78	3.57	2.88	0.90	2.44	3.80	3.73	3.83
ICE BofA US 3-Month Treasury Bill		0.33	1.00	0.64	1.96	2.10	0.84	1.35	1.16	0.83	0.62

San Bernardino County Employees' Retirement Association

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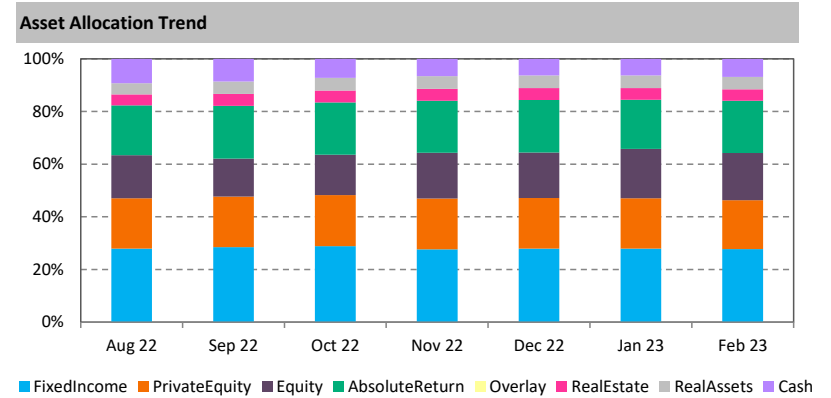
Allocation & Volatility by Asset Class

Reporting Currency: USD

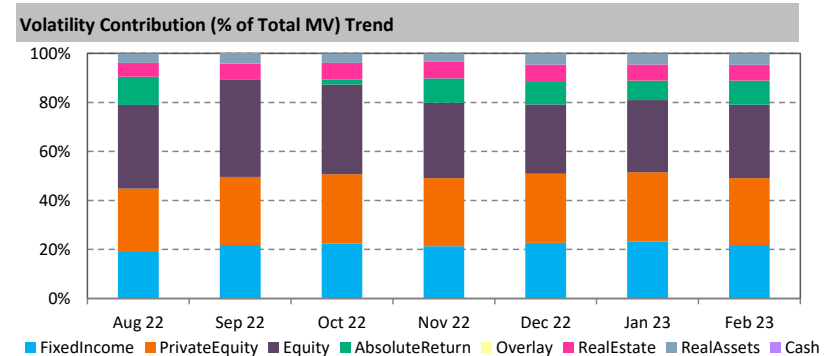


Prepared by State Street Risk Services

Asset Allocation Relative to Policy Benchmark				
	Notional Value (Millions)	Allocation (%)	Policy Benchmark (%)	Relative (%)
FixedIncome	3,842	27.8%	35.0%	-7.2%
PrivateEquity	2,559	18.5%	16.0%	2.5%
Equity	2,488	18.0%	28.0%	-10.0%
AbsoluteReturn	2,738	19.8%	7.0%	12.8%
RealEstate	597	4.3%	7.0%	-2.7%
RealAssets	658	4.8%	5.0%	-0.2%
Cash	939	6.8%	2.0%	4.8%
<b>TOTAL</b>	<b>13,829</b>	<b>99.9%</b>	<b>100.0%</b>	<b>-0.1%</b>



Volatility Decomposition				
	Notional Value (Millions)	Allocation (%)	Volatility <sup>1</sup> (% per annum)	Volatility Contribution
FixedIncome	3,842	27.8%	9.6%	21.8%
PrivateEquity	2,559	18.5%	17.9%	27.3%
Equity	2,488	18.0%	20.2%	30.0%
AbsoluteReturn	2,738	19.8%	7.2%	9.8%
RealEstate	597	4.3%	18.3%	6.5%
RealAssets	658	4.8%	17.3%	4.5%
Cash	939	6.8%	0.6%	0.2%
<b>TOTAL</b>	<b>13,829</b>	<b>99.9%</b>	<b>11.9%</b>	<b>100.0%</b>



1: Volatility at the asset class level is calculated using parametric Value-at-Risk at 84th percentile (or One downside Standard Deviation), annualized and expressed as a percentage of the market value of each asset class.

San Bernardino County Employees' Retirement Association

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Risk & Diversification Analysis

Reporting Currency: USD



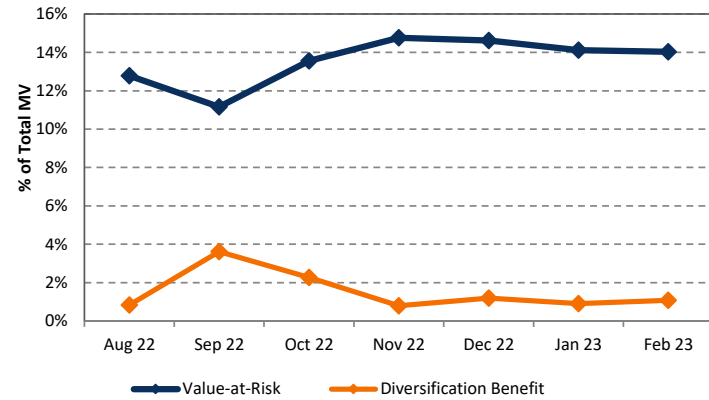
San Bernardino County Employees' Retirement Association

Prepared by State Street Risk Services

Asset Class Risk & Diversification

	Allocation (%)	Value-at-Risk <sup>1</sup> Contribution (% of Total VaR)	Value-at-Risk <sup>1</sup> (% of Total MV)
FixedIncome	27.8%	39.7%	4.5%
PrivateEquity	18.5%	27.4%	4.0%
Equity	18.0%	18.5%	3.0%
AbsoluteReturn	19.8%	11.3%	1.9%
RealEstate	4.3%	6.6%	1.0%
RealAssets	4.8%	-4.1%	0.7%
Cash	6.8%	0.6%	0.1%
Diversification Benefit	-	-	-1.1%
<b>TOTAL</b>	<b>99.9%</b>	<b>100.0%</b>	<b>14.0%</b>

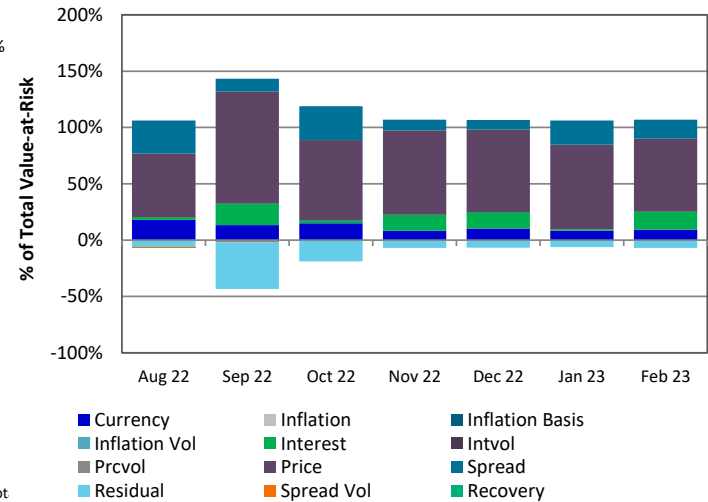
Asset Class Risk & Diversification Trend



Market Data Curve Risk & Diversification

	Contribution (%) of Total VaR	Value-at-Risk <sup>1</sup> (% of Total MV)
Currency	9.4%	1.9%
Inflation	0.0%	0.0%
Inflation Basis	0.0%	0.0%
Inflation Vol	0.0%	0.0%
Interest	15.8%	1.7%
Intvol	0.0%	0.0%
Prcvol	-0.1%	0.0%
Price	64.7%	10.1%
Spread	16.9%	3.5%
Spread Vol	0.0%	0.0%
Recovery	0.0%	0.0%
Residual	-6.8%	-0.7%
Diversification Benefit	-	-2.5%
<b>TOTAL</b>	<b>100.0%</b>	<b>14.0%</b>

Market Data Curve Risk Trend



1: Value-at-Risk is calculated using historic Value-at-Risk at 95th percentile, monthly horizon, annualized, and expressed as a percentage of the Tot

2: Diversification benefit is calculated as the sum of the standalone Value at Risk at 95th percentile for each asset class less the Total Plan Value at Risk, monthly horizon, annualized.

**Asset Class Risk & Diversification**

	Allocation (%)	Value-at-Risk <sup>1</sup> Contribution (% of Total VaR)	Value-at-Risk <sup>1</sup> (% of Total MV)	
FixedIncome	27.8%	39.7%	4.5%	
PrivateEquity	18.5%	27.4%	4.0%	
Equity	18.0%	18.5%	3.0%	
AbsoluteReturn	19.8%	11.3%	1.9%	
RealEstate	4.3%	6.6%	1.0%	
RealAssets	4.8%	-4.1%	0.7%	
Cash	6.8%	0.6%	0.1%	
Diversification Benefit	-	-	-1.1%	
<b>TOTAL</b>	<b>99.9%</b>	<b>100.0%</b>	<b>14.0%</b>	

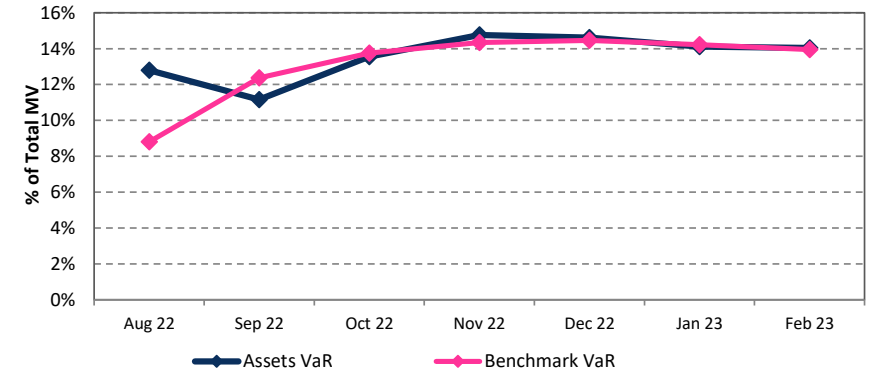
**Benchmark Risk & Diversification**

	Allocation (%)	Value-at-Risk <sup>1</sup> Contribution (% of Total VaR)	Value-at-Risk <sup>1</sup> (% of Total MV)	
FixedIncome	27.8%	26.4%	4.2%	
PrivateEquity	18.5%	22.2%	4.1%	
Equity	18.0%	19.0%	4.1%	
AbsoluteReturn	19.8%	16.0%	2.0%	
RealEstate	4.3%	13.7%	1.1%	
RealAssets	4.8%	0.0%	0.0%	
Cash	6.8%	2.7%	0.8%	
Diversification Benefit	-	-	-2.3%	
<b>TOTAL</b>	<b>99.9%</b>	<b>100.0%</b>	<b>13.9%</b>	

**Portfolio and Benchmark Risk**

	Allocation (%)	Assets VaR <sup>1</sup> (% of Notional of the Asset Class)	Benchmark VaR <sup>1</sup> (% of MV of the Asset Class)	
FixedIncome	27.8%	16.1%	14.9%	
PrivateEquity	18.5%	21.7%	22.2%	
Equity	18.0%	16.7%	23.0%	
AbsoluteReturn	19.8%	9.6%	9.9%	
RealEstate	4.3%	22.4%	25.8%	
RealAssets	4.8%	13.7%	0.0%	
Cash	6.8%	1.2%	11.2%	
<b>TOTAL</b>	<b>99.9%</b>	<b>14.0%</b>	<b>13.9%</b>	

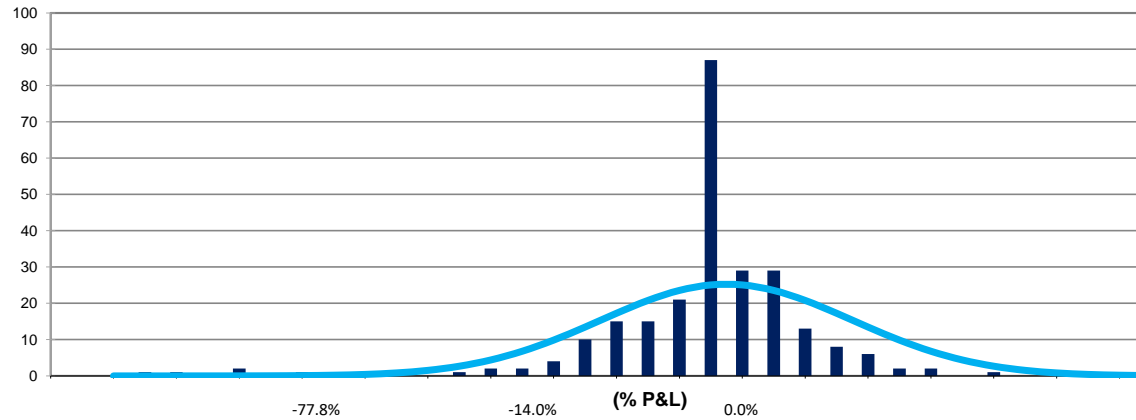
**Portfolio and Benchmark Risk Trend**



1: Value-at-Risk is calculated using historic Value-at-Risk at 95th percentile, monthly horizon, annualized, and expressed as a percentage of the Total Plan's assets.  
 2: Diversification benefit is calculated as the sum of the standalone Value-at Risk at 95th percentile for each asset class less the Total Plan Value-at Risk, monthly horizon, annualized.  
 3: The VaR for the Overlay asset class is taken as a % of the notional instead of the market value.

**Historic Profit & Loss Distribution**

- The Total Plan has a annualized Value-of-Risk 95% of 14% of the plan's asset and an annualized Expected Shortfall 95% of 27.9% of the plan's assets.
- The annualized Max Loss in this simulation for the Total Plan is 77.8% of the Total Plan's assets.
- The Total Plan benefits from diversification across the asset class investments. The diversification impact reduces the overall Total Plan Value-at-Risk 95% (annualized) by 1%.



**Risk Analytics**

		Value-at-Risk annualized 95% <sup>1</sup>	Conditional VaR annualized 95% <sup>2</sup>	Value-at-Risk Diversification annualized 95% <sup>3</sup>
Assets	% of Market Value	14.0%	27.9%	-1.0%
	Portfolio (Millions)	1,940	3,854	(138)
Benchmark	% of Market Value	13.9%	27.2%	-2.3%
	Benchmark (Millions)	1,928	3,764	(319)

1: Value-at-Risk 95% of the Total Plan level is calculated using historic Value-at-Risk at 95th percentile, daily horizon, annualized.

2: Conditional VaR 95% of the Total Plan level is calculated averaging historic Value-at-Risk between 95th and 100th percentiles, daily horizon, annualized.

3: Value-at-Risk Diversification 95% of the Total Plan level is calculated the sum of the standalone Value-at Risks for each asset class less the Total Plan Value-at Risks , daily horizon, annualized.

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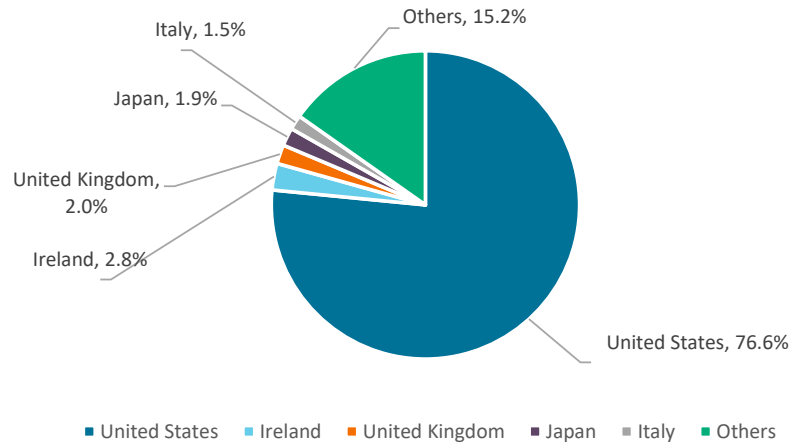
Country Exposure & Risk Decomposition

Reporting Currency: USD



Prepared by State Street Risk Services

Country Exposure



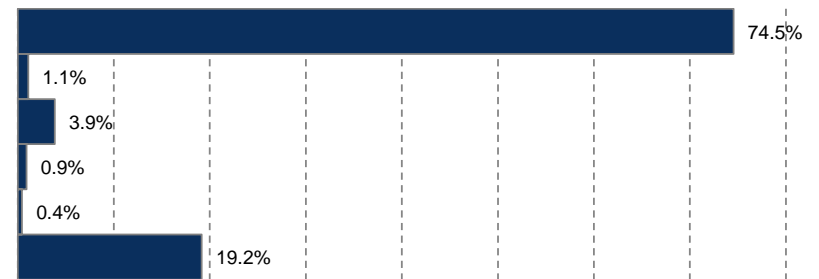
Commentary

- United States-Country denominated securities contribute 76.6% to the total market value of the Plan and 74.5% to the volatility of the Plan.
- Ireland, United Kingdom, Japan and Italy significantly contribute to the Total Plan's volatility of 1.1%, 3.9%, 0.9% and 0.4%, respectively.
- Outside of the top 5 country exposures, there are 100 other country exposures, which make up 15.2% of the Total Plan's assets, and represents 19.2% of the Total Plan's volatility.

Country Exposure & Risk Decomposition

	Market Value (Millions)	Allocation (%)	Volatility Contribution (% of Total Vol)
United States	10,580	76.6%	74.5%
Ireland	385	2.8%	1.1%
United Kingdom	276	2.0%	3.9%
Japan	262	1.9%	0.9%
Italy	211	1.5%	0.4%
Others	2,106	15.2%	19.2%
<b>TOTAL</b>	<b>13,821</b>	<b>100.0%</b>	<b>100.0%</b>

Asset Class Risk & Diversification



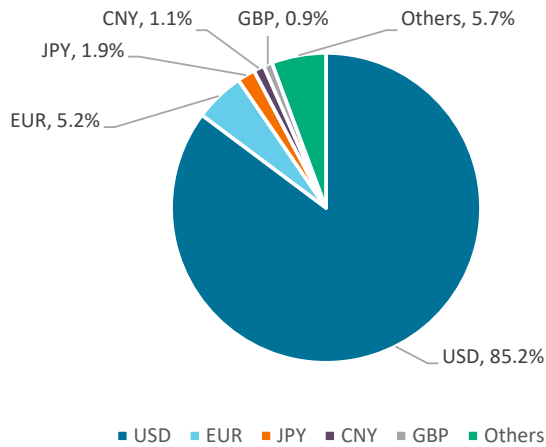
San Bernardino County Employees' Retirement Association

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Currency Exposure & Risk Decomposition

Reporting Currency: USD

Currency Exposure



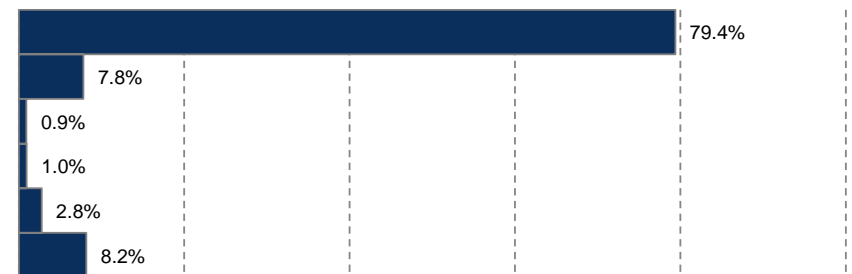
Commentary

- 85.2% of the Total Plan's assets are invested in USD denominated securities, which represents 79.4% of the Total Plan's volatility.
- EUR, JPY, CNY and GBP denominated securities significantly contribute to the Total Plan's volatility, of 7.8%, 0.9%, 1% and 2.8%, respectively.
- Outside of the top 5 currency exposures, there are 43 other currency exposures, which make up 5.7% of the Total Plan's assets, and represents 8.2% of the Total Plan's volatility.

Currency Exposure & Risk Decomposition

	Market Value (Millions)	Allocation (%)	Volatility Contribution (% of Total Vol)
USD	11,778	85.2%	79.4%
EUR	721	5.2%	7.8%
JPY	258	1.9%	0.9%
CNY	154	1.1%	1.0%
GBP	125	0.9%	2.8%
Others	785	5.7%	8.2%
<b>TOTAL</b>	<b>13,821</b>	<b>100.0%</b>	<b>100.0%</b>

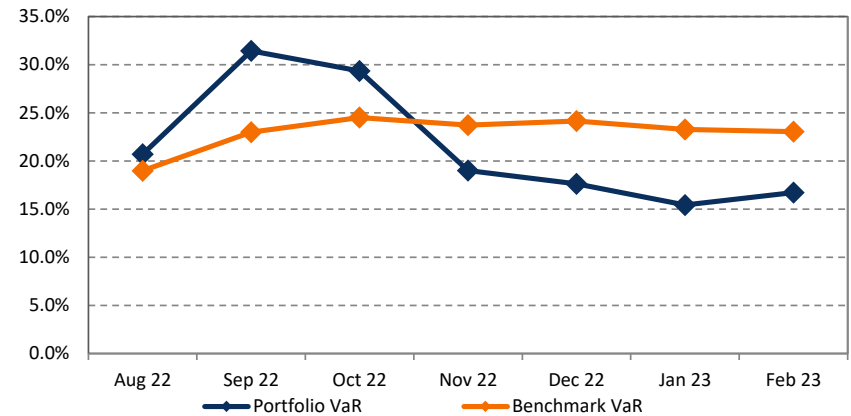
Volatility Contribution (% of Total MV)



**Sub Asset Class Value at Risk Analysis**

Asset Class / [Benchmark]	Market Value (Millions)	Allocation (%)	Value-at-Risk of the Portfolio (% of Notional Value <sup>1</sup> )
<b>Large Cap</b>	<b>2,487.8</b>	<b>100.0%</b>	<b>16.73%</b>
Domestic	1,707.0	68.6%	17.86%
Emerging	602.8	24.2%	14.75%
International	178.0	7.2%	34.94%
<b>Small Cap</b>	<b>-</b>	<b>0.0%</b>	<b>0.00%</b>
Domestic	-	0.0%	0.00%
<b>Total Equity</b>	<b>2,488</b>	<b>100.0%</b>	<b>16.73%</b>

**Total Equity Value at Risk 95% (as a % of MV) Trend**



**Top 10 Country Volatility Decomposition**

	Market Value (Millions)	Allocation (%)	Volatility Contribution (% of Total Notional)	Volatility Contribution (% of Total Vol)
United States	1,735	69.7%	14.1%	69.7%
China	153	6.2%	0.8%	3.8%
India	94	3.8%	0.6%	2.9%
Taiwan	70	2.8%	0.5%	2.3%
Brazil	54	2.2%	0.5%	2.3%
Korea	51	2.0%	0.4%	1.9%
Japan	39	1.6%	0.4%	1.7%
United Kingdom	34	1.4%	0.4%	1.9%
Indonesia	28	1.1%	0.2%	1.0%
Hong Kong	26	1.1%	0.1%	0.6%
Other	203	8.1%	2.4%	11.9%
<b>TOTAL</b>	<b>2,488</b>	<b>100.0%</b>	<b>20.2%</b>	<b>100.0%</b>

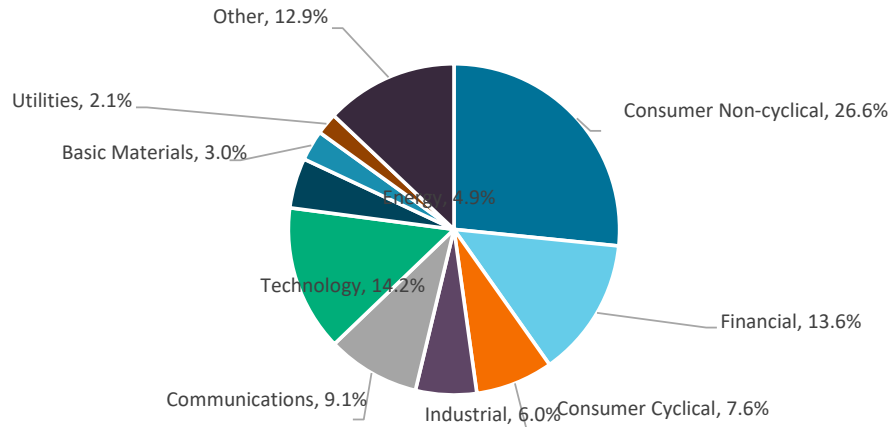
**Top 10 Sector Volatility Decomposition**

	Market Value (Millions)	Allocation (%)	Volatility Contribution (% of Total Notional)	Volatility Contribution (% of Total Vol)
Consumer Non-Cyclical	662	26.6%	3.5%	17.3%
Index	10	0.4%	3.5%	17.3%
Technology	354	14.2%	3.3%	16.4%
Financial	339	13.6%	2.8%	13.8%
Communications	226	9.1%	1.8%	8.7%
Consumer Cyclical	188	7.6%	1.7%	8.5%
Energy	122	4.9%	1.5%	7.2%
Industrial	148	6.0%	1.3%	6.4%
Basic Materials	74	3.0%	0.6%	3.1%
Utilities	53	2.1%	0.3%	1.3%
Other	311	12.5%	0.0%	0.1%
<b>TOTAL</b>	<b>2,488</b>	<b>100.0%</b>	<b>20.2%</b>	<b>100.0%</b>

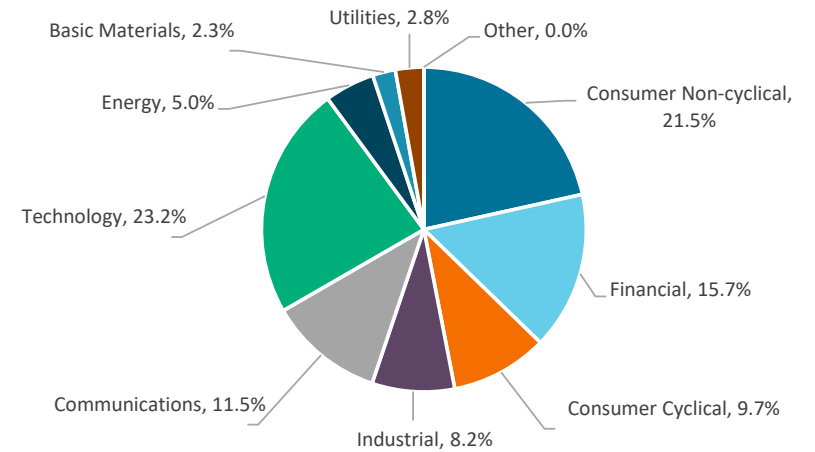
1: Value-at-Risk of the Portfolio and Benchmarks are calculated using historic Value-at-Risk at 95th percentile, 1 month horizon, annualized, and expressed as a percentage of the NPV of the assets.



**Public Equity Exposure**



**S&P 500 Index Sector Exposure**



**Sector Allocation & Risk Decomposition**

	Market Value (Millions)	Allocation (%)	S&P 500 Allocation (%)	Relative Allocation (%)
Consumer Non-cyclical	662	26.6%	21.5%	5.1%
Financial	339	13.6%	15.7%	-2.1%
Consumer Cyclical	188	7.6%	9.7%	-2.1%
Industrial	148	6.0%	8.2%	-2.3%
Communications	226	9.1%	11.5%	-2.4%
Technology	354	14.2%	23.2%	-9.0%
Energy	122	4.9%	5.0%	-0.1%
Basic Materials	74	3.0%	2.3%	0.7%
Utilities	53	2.1%	2.8%	-0.7%
Other	322	12.9%	0.0%	12.9%
<b>TOTAL</b>	<b>2,488</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

**Commentary**

- The Consumer Non-cyclical sector has the largest overweight position (excluding Other) in Public Equities relative to the S&P 500 index of 5.1%. The Other sector includes cash, FX forwards, Diversified and mutual/pooled funds.
- The Technology sector has the largest underweight position in Public Equities relative to the S&P 500 index of -9%.
- The Consumer Non-cyclical sector has the largest allocation in Public Equities, of 26.6%, and the Total Plan is marginally overweight relative to the S&P 500 index by 5.1%.

San Bernardino County Employees' Retirement Association

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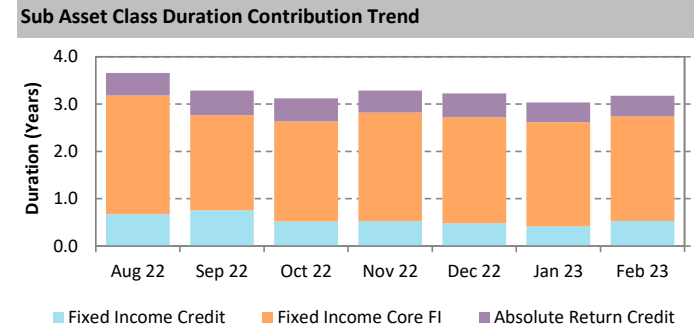
Fixed Income Assets Analytics

Reporting Currency: USD



Prepared by State Street Risk Services

Sub Asset Class Duration & Spread Analysis					
	Market Value (Millions)	Allocation (%)	Duration (Years)	Duration Contribution (Years)	Credit Spread (OAS) (%)
<b>FixedIncome</b>	<b>3,846</b>	<b>58.4%</b>	<b>5.3</b>	<b>2.7</b>	<b>11.613%</b>
Credit	3,697	56.1%	1.1	0.5	11.915%
Core FI	149	2.3%	58.5	2.2	3.355%
<b>AbsoluteReturn</b>	<b>2,738</b>	<b>41.6%</b>	<b>1.0</b>	<b>0.5</b>	<b>5.525%</b>
Credit	1,752	26.6%	1.7	0.4	9.779%
<b>TOTAL</b>	<b>6,584</b>	<b>100.0%</b>	<b>3.24</b>	<b>3.24</b>	<b>8.376%</b>



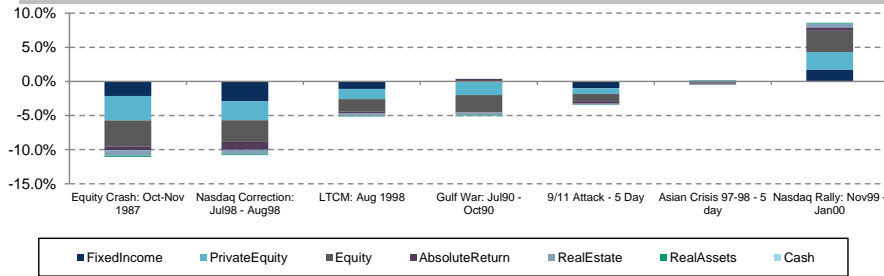
Maturity Bucket Analysis					
	Market Value (Millions)	Allocation (%)	Duration (Years)	Duration Contribution (Years)	Credit Spread (OAS) (%)
0 - 1 Years	1,770	26.9%	0.3	0.1	0.169%
1 - 3 Years	652	9.9%	1.7	0.3	9.734%
3 - 5 Years	727	11.0%	2.6	0.5	5.336%
5 - 10 Years	1,089	16.5%	7.8	1.4	15.219%
10 - 15 Years	472	7.2%	12.3	0.4	13.810%
15+ Years	299	4.5%	9.1	0.6	20.491%
Not Defined	1,578	24.0%	-	-	0.000%
<b>TOTAL</b>	<b>6,586</b>	<b>100.0%</b>	<b>3.24</b>	<b>3.24</b>	<b>8.360%</b>

Credit Rating Analysis					
	Market Value (Millions)	Allocation (%)	Spread Duration (Years)	Duration Contribution (Years)	Credit Spread (OAS) (%)
AAA	(21)	-0.3%	(0.13)	0.00	5.989%
AA	9	0.1%	10.75	0.02	1.453%
A	33	0.5%	6.00	0.05	1.840%
BBB	152	2.3%	4.59	0.18	3.351%
BB	493	7.5%	4.08	0.33	9.166%
B	463	7.0%	3.34	0.33	11.225%
CCC	269	4.1%	3.48	0.25	17.049%
CC	8	0.1%	1.45	0.00	19.858%
D	8	0.1%	4.06	0.00	50.073%
Not Rated	5,171	78.5%	0.97	0.68	20.226%
<b>TOTAL</b>	<b>6,584</b>	<b>100.0%</b>	<b>1.85</b>	<b>1.85</b>	<b>8.358%</b>

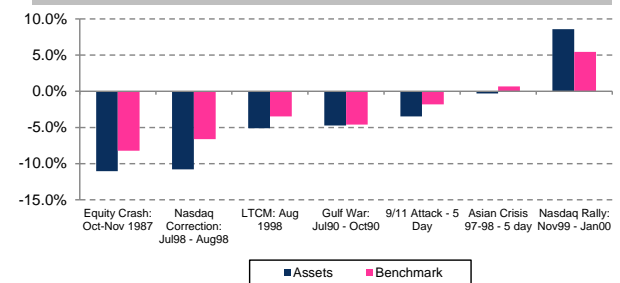
**Commentary**

- The stress tests give a sense of perspective on how historic of macroeconomic events would impact the current portfolio if they happened again.

**Asset Class Breakdown**



**Portfolio vs. Benchmark**



**Historic Stress Tests (Assets)**

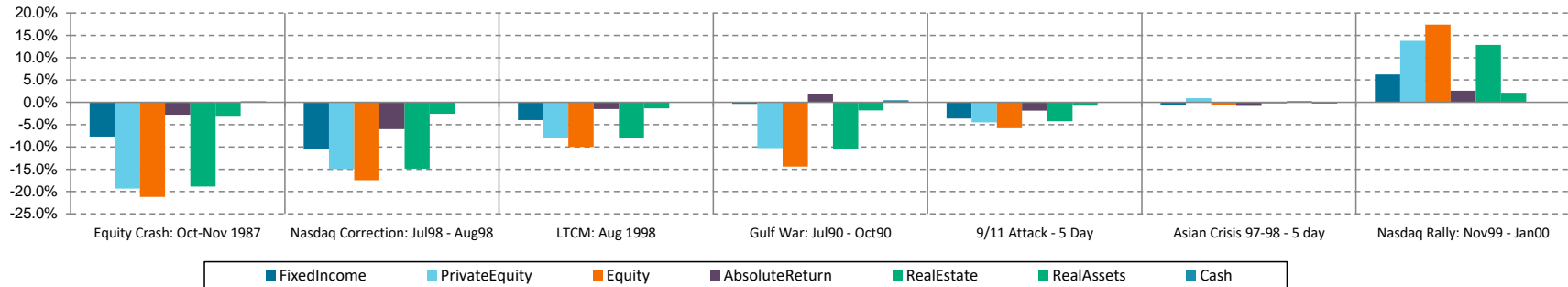
	Market Value (Millions)	Allocation (%)	Equity Crash: Oct-Nov 1987	Nasdaq Correction: Jul98 - Aug98	LTCM: Aug 1998	Gulf War: Jul90 - Oct90	9/11 Attack - 5 Day	Asian Crisis 97-98 - 5 day	Nasdaq Rally: Nov99 - Jan00
FixedIncome	3,857	27.9%	-2.1%	-2.9%	-1.1%	-0.1%	-1.0%	-0.2%	1.7%
PrivateEquity	2,559	18.5%	-3.6%	-2.8%	-1.5%	-1.9%	-0.8%	0.2%	2.5%
Equity	2,488	18.0%	-3.8%	-3.1%	-1.8%	-2.6%	-1.0%	-0.1%	3.1%
AbsoluteReturn	2,738	19.8%	-0.6%	-1.2%	-0.3%	0.4%	-0.4%	-0.2%	0.5%
RealEstate	597	4.3%	-0.8%	-0.6%	-0.3%	-0.4%	-0.2%	0.0%	0.6%
RealAssets	658	4.8%	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.1%
Cash	939	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>TOTAL</b>	<b>13,836</b>	<b>100.0%</b>	<b>-11.0%</b>	<b>-10.8%</b>	<b>-5.1%</b>	<b>-4.7%</b>	<b>-3.5%</b>	<b>-0.3%</b>	<b>8.6%</b>

**Historic Stress Tests (Benchmark)**

	Market Value (Millions)	Allocation (%)	Equity Crash: Oct-Nov 1987	Nasdaq Correction: Jul98 - Aug98	LTCM: Aug 1998	Gulf War: Jul90 - Oct90	9/11 Attack - 5 Day	Asian Crisis 97-98 - 5 day	Nasdaq Rally: Nov99 - Jan00
FixedIncome	3,857	27.9%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
PrivateEquity	2,559	18.5%	-4.1%	-3.3%	-1.7%	-2.3%	-0.9%	0.3%	2.7%
Equity	2,488	18.0%	-2.9%	-2.3%	-1.2%	-1.6%	-0.6%	0.2%	1.9%
AbsoluteReturn	2,738	19.8%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	-0.1%
RealEstate	597	4.3%	-1.1%	-0.9%	-0.4%	-0.6%	-0.2%	0.1%	0.7%
RealAssets	658	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	939	6.8%	-0.3%	-0.3%	-0.1%	-0.2%	-0.1%	0.0%	0.2%
<b>TOTAL</b>	<b>13,836</b>	<b>100.0%</b>	<b>-8.2%</b>	<b>-6.6%</b>	<b>-3.5%</b>	<b>-4.6%</b>	<b>-1.8%</b>	<b>0.7%</b>	<b>5.5%</b>



**Asset Class Breakdown**



**Stress Tests Returns by Asset Class (Assets)**

	Market Value (Millions)	Allocation (%)	Equity Crash: Oct-Nov 1987	Nasdaq Correction: Jul98 - Aug98	LTCM: Aug 1998	Gulf War: Jul90 - Oct90	9/11 Attack - 5 Day	Asian Crisis 97-98 - 5 day	Nasdaq Rally: Nov99 - Jan00
FixedIncome	3,857	27.9%	-7.7%	-10.5%	-4.0%	-0.3%	-3.6%	-0.7%	6.2%
PrivateEquity	2,559	18.5%	-19.3%	-15.0%	-8.1%	-10.2%	-4.5%	0.9%	13.8%
Equity	2,488	18.0%	-21.2%	-17.4%	-10.0%	-14.4%	-5.8%	-0.7%	17.4%
AbsoluteReturn	2,738	19.8%	-2.8%	-6.0%	-1.5%	1.8%	-1.9%	-0.8%	2.6%
RealEstate	597	4.3%	-18.9%	-14.9%	-8.1%	-10.4%	-4.3%	-0.3%	12.8%
RealAssets	658	4.8%	-3.2%	-2.6%	-1.4%	-1.8%	-0.7%	0.3%	2.1%
Cash	939	6.8%	0.2%	-0.1%	0.0%	0.4%	0.0%	-0.3%	0.1%
<b>TOTAL</b>	<b>13,836</b>	<b>100.0%</b>	<b>-11.0%</b>	<b>-10.8%</b>	<b>-5.1%</b>	<b>-4.7%</b>	<b>-3.5%</b>	<b>-0.3%</b>	<b>8.6%</b>

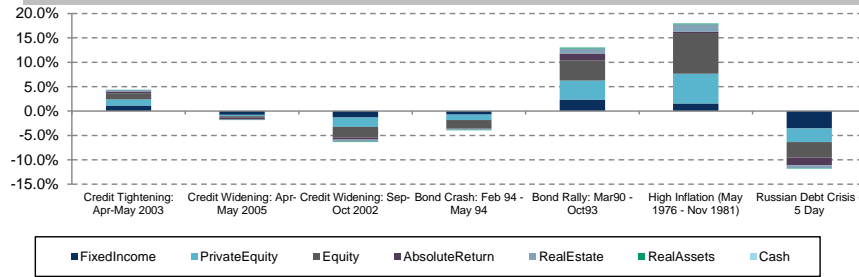
**Stress Tests Returns by Asset Class (Benchmark)**

	Market Value (Millions)	Allocation (%)	Equity Crash: Oct-Nov 1987	Nasdaq Correction: Jul98 - Aug98	LTCM: Aug 1998	Gulf War: Jul90 - Oct90	9/11 Attack - 5 Day	Asian Crisis 97-98 - 5 day	Nasdaq Rally: Nov99 - Jan00
FixedIncome	3,857	27.9%	0.2%	0.2%	0.1%	0.1%	0.1%	0.0%	-0.2%
PrivateEquity	2,559	18.5%	-22.3%	-18.0%	-9.4%	-12.6%	-4.9%	1.8%	14.9%
Equity	2,488	18.0%	-16.0%	-12.9%	-6.8%	-9.0%	-3.5%	1.3%	10.6%
AbsoluteReturn	2,738	19.8%	0.6%	0.5%	0.3%	0.3%	0.1%	0.0%	-0.4%
RealEstate	597	4.3%	-24.6%	-19.8%	-10.4%	-13.8%	-5.4%	2.0%	16.3%
RealAssets	658	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	939	6.8%	-4.8%	-3.9%	-2.0%	-2.7%	-1.1%	0.4%	3.2%
<b>TOTAL</b>	<b>13,836</b>	<b>100.0%</b>	<b>-8.2%</b>	<b>-6.6%</b>	<b>-3.5%</b>	<b>-4.6%</b>	<b>-1.8%</b>	<b>0.7%</b>	<b>5.5%</b>

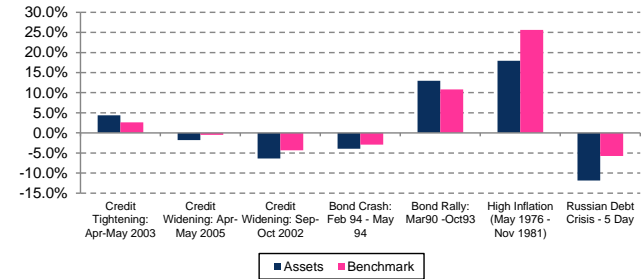
**Commentary**

- The stress tests give a sense of perspective on how historic of macroeconomic events would impact the current portfolio if they happened again.

**Asset Class Breakdown**



**Portfolio vs. Benchmark**



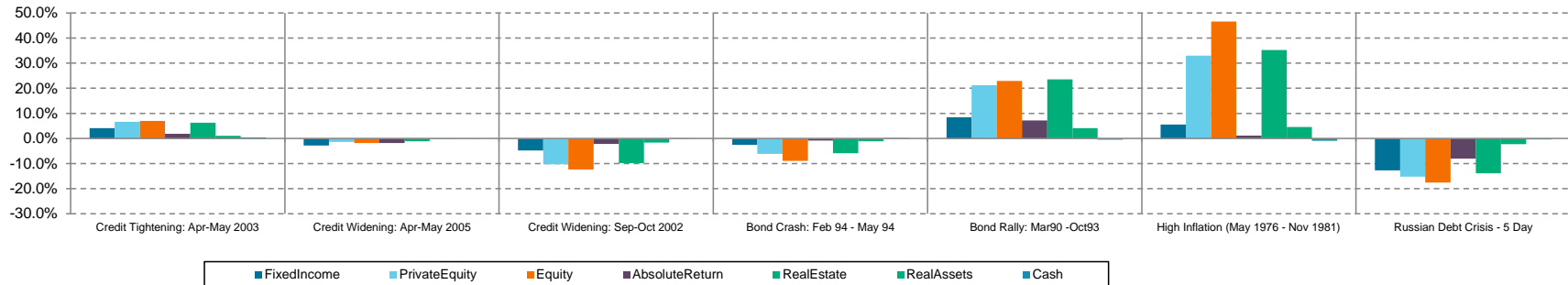
**Stress Tests Returns Contribution to Total (Assets)**

	Market Value (Millions)	Allocation (%)	Credit Tightening: Apr-May 2003	Credit Widening: Apr-May 2005	Credit Widening: Sep-Oct 2002	Bond Crash: Feb 94 - May 94	Bond Rally: Mar90 - Oct93	High Inflation (May 1976 - Nov 1981)	Russian Debt Crisis - 5 Day
FixedIncome	3,857	27.9%	1.2%	-0.8%	-1.3%	-0.7%	2.3%	1.6%	-3.5%
PrivateEquity	2,559	18.5%	1.2%	-0.2%	-1.9%	-1.1%	3.9%	6.1%	-2.8%
Equity	2,488	18.0%	1.3%	-0.3%	-2.2%	-1.6%	4.1%	8.4%	-3.2%
AbsoluteReturn	2,738	19.8%	0.4%	-0.4%	-0.4%	-0.2%	1.4%	0.2%	-1.6%
RealEstate	597	4.3%	0.3%	0.0%	-0.4%	-0.3%	1.0%	1.5%	-0.6%
RealAssets	658	4.8%	0.0%	0.0%	-0.1%	-0.1%	0.2%	0.2%	-0.1%
Cash	939	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%
<b>TOTAL</b>	<b>13,836</b>	<b>88.5%</b>	<b>4.4%</b>	<b>-1.8%</b>	<b>-6.4%</b>	<b>-3.9%</b>	<b>13.0%</b>	<b>17.9%</b>	<b>-11.8%</b>

**Stress Tests Returns Contribution to Total (Benchmark)**

	Market Value (Millions)	Allocation (%)	Credit Tightening: Apr-May 2003	Credit Widening: Apr-May 2005	Credit Widening: Sep-Oct 2002	Bond Crash: Feb 94 - May 94	Bond Rally: Mar90 - Oct93	High Inflation (May 1976 - Nov 1981)	Russian Debt Crisis - 5 Day
FixedIncome	3,857	27.9%	0.0%	0.0%	0.0%	0.0%	-0.1%	7.5%	0.0%
PrivateEquity	2,559	18.5%	1.3%	-0.2%	-2.2%	-1.5%	5.4%	5.0%	-2.9%
Equity	2,488	18.0%	0.9%	-0.2%	-1.5%	-1.0%	3.8%	4.8%	-2.0%
AbsoluteReturn	2,738	19.8%	0.0%	0.0%	0.1%	0.0%	-0.2%	5.3%	0.1%
RealEstate	597	4.3%	0.3%	-0.1%	-0.6%	-0.4%	1.4%	1.2%	-0.7%
RealAssets	658	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	939	6.8%	0.1%	0.0%	-0.2%	-0.1%	0.4%	1.8%	-0.2%
<b>TOTAL</b>	<b>13,836</b>	<b>88.5%</b>	<b>2.6%</b>	<b>-0.5%</b>	<b>-4.3%</b>	<b>-2.9%</b>	<b>10.8%</b>	<b>25.6%</b>	<b>-5.7%</b>

**Asset Class Breakdown**



**Stress Tests Returns by Asset Class (Assets)**

	Market Value (Millions)	Allocation (%)	Credit Tightening: Apr-May 2003	Credit Widening: Apr-May 2005	Credit Widening: Sep-Oct 2002	Bond Crash: Feb 94 - May 94	Bond Rally: Mar90 -Oct93	High Inflation (May 1976 - Nov 1981)	Russian Debt Crisis - 5 Day
FixedIncome	3,857	27.9%	4.1%	-2.8%	-4.8%	-2.6%	8.4%	5.6%	-12.7%
PrivateEquity	2,559	18.5%	6.7%	-1.4%	-10.2%	-6.1%	21.2%	33.0%	-15.2%
Equity	2,488	18.0%	7.0%	-1.8%	-12.3%	-8.9%	22.9%	46.5%	-17.6%
AbsoluteReturn	2,738	19.8%	1.9%	-1.8%	-2.1%	-0.8%	7.2%	1.1%	-8.1%
RealEstate	597	4.3%	6.3%	-1.1%	-9.8%	-5.9%	23.6%	35.2%	-13.9%
RealAssets	658	4.8%	1.0%	-0.2%	-1.7%	-1.1%	4.1%	4.5%	-2.2%
Cash	939	6.8%	0.5%	0.0%	0.1%	0.1%	-0.4%	-0.9%	-0.3%
<b>TOTAL</b>	<b>13,836</b>	<b>100.0%</b>	<b>4.4%</b>	<b>-1.8%</b>	<b>-6.4%</b>	<b>-3.9%</b>	<b>13.0%</b>	<b>17.9%</b>	<b>-11.8%</b>

**Stress Tests Returns by Asset Class (Benchmark)**

	Market Value (Millions)	Allocation (%)	Credit Tightening: Apr-May 2003	Credit Widening: Apr-May 2005	Credit Widening: Sep-Oct 2002	Bond Crash: Feb 94 - May 94	Bond Rally: Mar90 -Oct93	High Inflation (May 1976 - Nov 1981)	Russian Debt Crisis - 5 Day
FixedIncome	3,857	27.9%	-0.1%	0.0%	0.1%	0.1%	-0.3%	26.9%	0.2%
PrivateEquity	2,559	18.5%	7.2%	-1.3%	-11.8%	-7.9%	29.4%	26.9%	-15.6%
Equity	2,488	18.0%	5.1%	-0.9%	-8.4%	-5.6%	21.1%	26.9%	-11.2%
AbsoluteReturn	2,738	19.8%	-0.2%	0.0%	0.3%	0.2%	-0.8%	26.9%	0.4%
RealEstate	597	4.3%	7.9%	-1.4%	-12.9%	-8.7%	32.3%	26.9%	-17.2%
RealAssets	658	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	939	6.8%	1.5%	-0.3%	-2.5%	-1.7%	6.3%	26.9%	-3.3%
<b>TOTAL</b>	<b>13,836</b>	<b>100.0%</b>	<b>2.6%</b>	<b>-0.5%</b>	<b>-4.3%</b>	<b>-2.9%</b>	<b>10.8%</b>	<b>25.6%</b>	<b>-5.7%</b>

**General**

truView is able to customize parameters of many of the analytics quoted throughout this report.

truView uses a historical simulation method in order to calculate Value at Risk (VaR). Where the portfolio's holdings on valuation date are re-priced using historical returns. A return distribution from this is created, which provides the basis for historical and parametric VaR and other distribution related analytics.

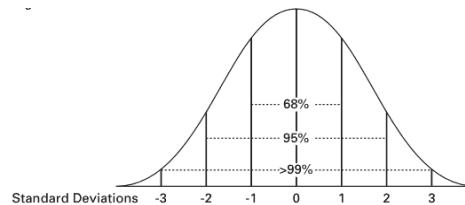
Specific to San Bernardino County Employees' Retirement Association, the historical return distribution consists of 5 years of sampling data, in which every day is a sampled, and there is a monthly return for each day sampled.

**Volatility**

Throughout the report Volatility is calculated using Parametric Value at Risk at the 84<sup>th</sup> percentile, where the mean is set to zero and this value is annualized.

In a normal distribution, approximately **34% of the scores are between the mean and +1 SD**; an additional 34% of the scores are between the mean and -1 SD. So, in a normal distribution about 68% of the returns (a little more than 2/3) will have scores are within 1 SD of the mean.

- This means that a Z score of -1 corresponds to the 16th percentile; a Z score of 1 is the 84th percentile.
  - If 50% of the returns are AT or BELOW the mean, and 34% of the scores are BETWEEN the mean and -1 SD, the 50% - 34% = 16% of the scores are AT or BELOW a Z score of -1
  - If 50% of the returns are AT or BELOW the mean, and 34% of the scores are BETWEEN the mean and +1 SD, the 50% + 34% = 84% of the scores are AT or BELOW a Z score of +1
- **95% of the scores are between ±2 SD.**
- 99.7% of the scores are between ±3 SD.



**Volatility % per annum**

This represents Volatility as a % of the NPV at that reporting level.

- i.e. at the Equity asset class level, the Volatility % per annum, is calculated by taking the dollar value of the Parametric VaR 84% for the Equity level and dividing it by the NPV for Equity.

**Volatility Contribution (% of Total)**

This represents from a total 100%, the portion of the reporting level's Volatility contribution to the Total Volatility.

- i.e. at the Equity asset class level, the Volatility Contribution (% of Total) is calculated by the dollar value of the Parametric VaR 84% contribution to the total Portfolio's Parametric VaR 84%, and dividing it by the total Portfolio's Parametric VaR 84%.

**Value at Risk (VaR)**

VaR is based on historically simulated returns i.e. the portfolios holding on valuation date are generated using the historical return. A return distribution is constructed from this, which provides the basis for historical and parametric VaR and other distribution related analytics.

VaR is a common risk measurement method, and can be defined as the possible maximum loss, at a given level of confidence, over a certain period of time. The VaR 95% value for SBCERA represents with 95% confidence the portfolio will not lose more than the VaR % value over the course of the year.

**Value at Risk Contribution (% of Total VaR)**

This represents from a total of 100%, the VaR contribution to the Total Portfolio's VaR. Given VaR 95% is a percentile in a distribution, which represents a monthly return period, the VaR contribution is the returns for the same exact monthly return period of the parent or total Portfolio.

- i.e. at the Equity asset class level, the VaR (% of Total VaR) is the VaR Contribution at the Equity level divided by the total Portfolio's VaR.

**VaR (% of Total MV)**

This represents the Value at Risk as a % of the Total Asset Class's NPV.

- i.e. at the Equity asset class level, the VaR (% of Total MV) is calculated using the VaR 95% at the Equity level divided by the total Portfolio's NPV.

**Duration**

Generally this analytic is a security's time-weighted present value of all cash flows. For the purposes of SBCERA reporting we are using Effective duration which takes into account changes in cash flow that result due to a change in interest rate. This analytic is a measure of interest rate sensitivity. The method applied to calculate this is to firstly determine the dollar sensitivity of a security to a 1 bp change in interest rate, divide that value by the security's NPV and scale it for the bp (multiply by 10,000).

- i.e. at the Fixed Income asset class level, the duration is calculated by taking the Fixed Income's dollar sensitivity to 1 bp increase in interest, dividing it by the NPV of all Fixed Income and then multiplying that product by 10,000. (The NPV excludes non-FI assets like equities and cash).

**Duration Contribution**

This is similar to Duration, except it is the contribution to the duration of the total.

- i.e. at the Fixed Income asset class level, the duration is calculated by taking the Fixed Income's dollar sensitivity to 1 bp increase in interest, dividing it by the NPV of the total Portfolio and then multiplying that product by 10,000. (The NPV excludes non-FI assets like equities and cash).

**Spread Duration**

A similar calculation to duration but where the credit spread is shifted one basis point rather than the risk free rate. This is effective spread duration since the calculation takes changes in the instrument's optionality (if any) due to changes in the credit spread. The method applied to calculate this is to firstly determine the dollar sensitivity of a security to a 1 bp change in credit spread, divide that value by the security's NPV and scale it for the bp (multiply by 10,000).

- i.e. at the Fixed Income asset class level, the Spread Duration is calculated by taking the Fixed Income's dollar sensitivity to 1 bp increase in credit spread, dividing it by the NPV of the total Portfolio and then multiplying that product by 10,000. (The NPV excludes non-FI assets like equities and cash).

**Spread Duration Contribution**

This is similar to Spread Duration, except it is the contribution to the Spread Duration of the total.

- i.e. at the Fixed Income asset class level, the Spread Duration is calculated by taking the Fixed Income's dollar sensitivity to 1 bp increase in credit spread, dividing it by the NPV of the total Portfolio and then multiplying that product by 10,000. (The NPV excludes non-FI assets like equities and cash).

**Credit Spread (OAS)**

For a fixed-income security in truView, to produce agreement between the security's traded price and the price that would be obtained using the benchmark ("risk-free") interest rates, we calibrate a single spread expressed with continuous compounding that, when applied to the term structure of market interest rates, causes the model to return the market price of the security. This spread is where possible and appropriate applied as an input to the core valuation of instruments with any embedded options, as opposed to being applied *ex post* to cash flows generated from those models. The spread produced is thus an option-adjusted spread.

**Stress Tests**

truView has two broad categories of stress tests:

Historical Stress scenarios: these are based on actual events. Here the event is "replayed", such that the changes in market variables. (e.g. equity price movements) are applied to the portfolio.

Deterministic Stress scenarios: here, hypothetical shocks are applied to the portfolio. For example, a parallel increase in interest rates of 100 bps.

Deterministic shocks can be further broken down into (a) isolated shocks; or (b) beta-adjusted shocks.

Isolated shocks are where the market variable is changed, with no impact on other market variables. For example, increasing spreads by 50 bps.



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