

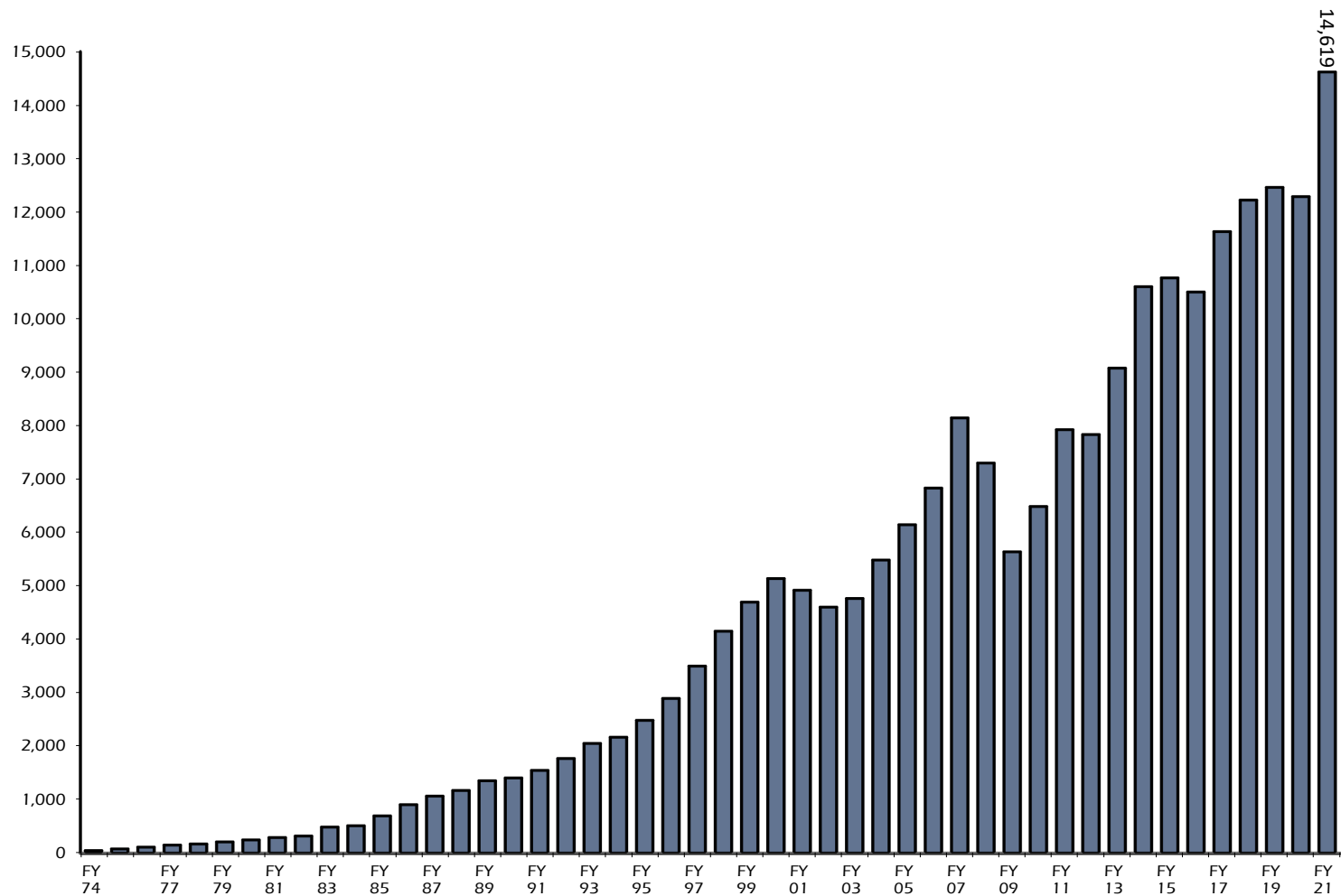


# Investment Performance FY 2021

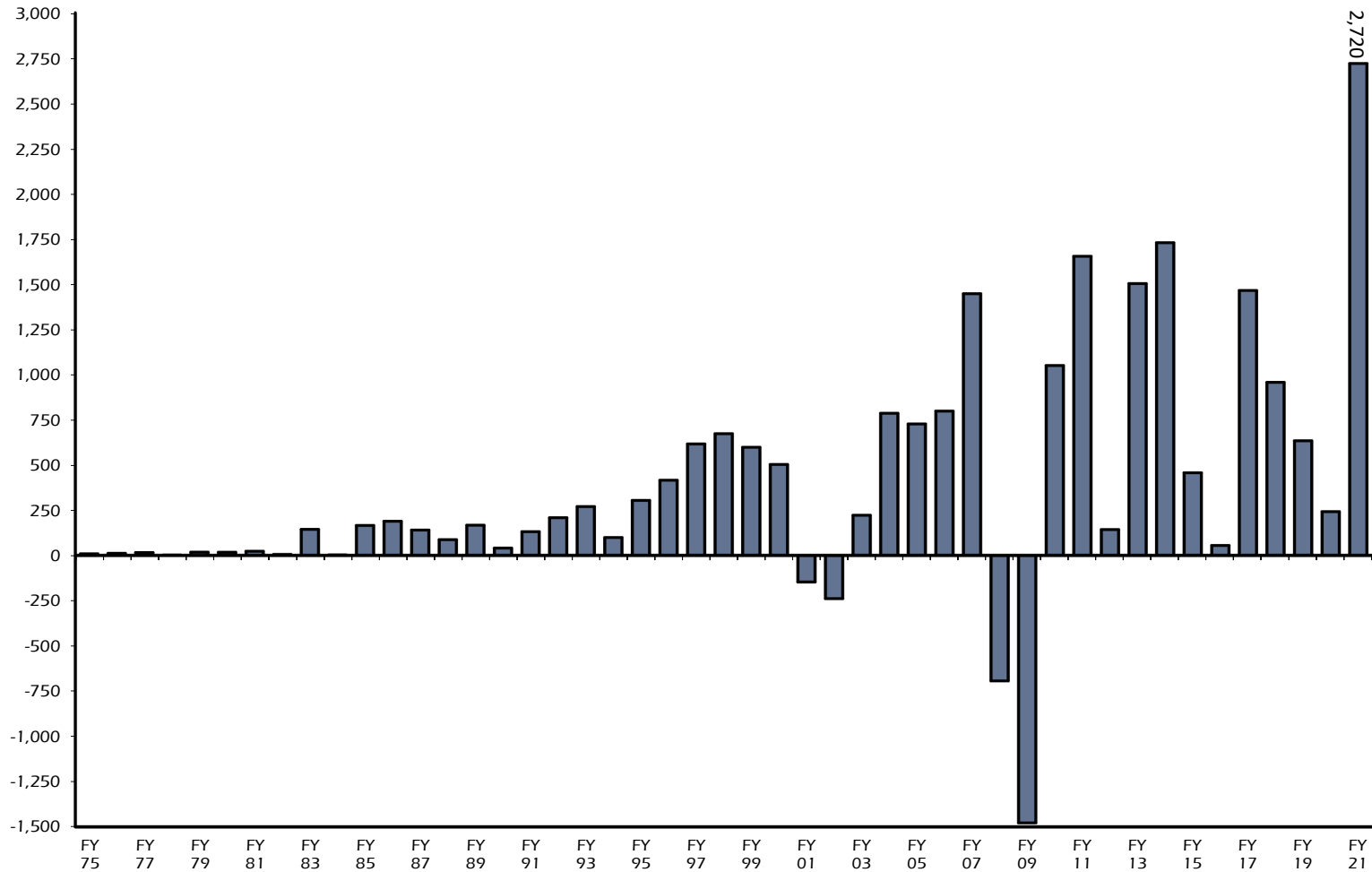
**South Dakota Retirement System  
Board of Trustees**

September 2, 2021

# South Dakota Retirement System Growth in Assets FY 1975 to FY 2021



# South Dakota Retirement System Investment Income FY 1975 to FY 2021



# Capital Markets Benchmark Return and Market Index Components FY 2021

		<u>1st qtr</u>	<u>2nd qtr</u>	<u>3rd qtr</u>	<u>4th qtr</u>	<u>FY 2021</u>
<b>Capital Markets Benchmark</b>		5.5%	10.7%	3.2%	6.2%	28.0%
<b><u>Benchmark Components</u></b>	<b><u>Weights</u></b>					
<b><u>Public Equity</u></b>	<b>58%</b>					
Public Equity Benchmark (MSCI AC IMI 3/4 + MSCI IMI US 1/4)		8.4%	15.4%	5.4%	7.5%	41.7%
<b><u>Real Estate</u></b>	<b>10%</b>					
MSCI REITS		1.6%	11.5%	8.8%	12.0%	38.1%
<b><u>High Yield Debt</u></b>	<b>7%</b>					
FTSE High Yield		4.9%	6.4%	0.9%	2.7%	15.7%
<b><u>Investment Grade Debt</u></b>	<b>23%</b>					
FTSE US Broad Investment Grade		0.6%	0.8%	-3.5%	2.0%	-0.2%
<b><u>Cash</u></b>	<b>2%</b>					
FTSE 3 mo Treasury bills		0.0%	0.0%	0.0%	0.0%	0.1%

Time weighted rate-of-return

# Actual to Benchmark Allocation Comparison – June 30, 2021

	<b><u>Actual Asset Allocation</u></b>	<b><u>Benchmark Asset Allocation</u></b>	<b><u>Difference</u></b>	<b><u>Permissible Range</u></b>
Public Equity	24%	58%	-34%	75% to 20%
Real Estate - Core/REITS	0%	10%	-10%	20% to 2%
High Yield Corporate Debt	0%	7%	-7%	15% to 0%
Investment Grade Debt	12%	23%	-11%	60% to 13%
Cash	32%	2%	30%	50% to 0%
Private Equity	11%	0%	11%	12% to 0%
Opportunistic Real Estate	10%	0%	10%	15% to 0%
High Yield Real Estate Debt	6%	0%	6%	10% to 0%
High Yield Corp Debt Aggressive	4%	0%	4%	15% to 0%
Hedge Fund	1%	0%	1%	5% to 0%
US Treasury TIPS	0%	0%	0%	5% to 0%
Commodity	0%	0%	0%	5% to 0%
Merger Arbitrage	0%	0%	0%	10% to 0%
Convertible Arbitrage	0%	0%	0%	5% to 0%
Equity Like Risk	52.9%	70%	-17.1%	85% to 40%

# Total Fund Performance Attribution

## SDRS to Capital Markets Benchmark FY 2021

<b>SDRS Total Fund Return</b>	<b>22.03%</b>
Capital Markets Benchmark Return	<u>27.97%</u>
Difference	<u><b>-5.94%</b></u>

<b>Primary Asset Allocation</b>	
Equity-Like Risk	-6.90%
Bond-Like Risk	0.02%
Cash-Like Risk	<u>0.02%</u>
<b>Total Primary Asset Allocation</b>	<u>-6.85%</u>

<b>Secondary Asset Allocation</b>	
Public Equity	N/A
Investment Grade Debt	N/A
Cash	N/A
REITS / Core	-0.27%
High Yield Corporate Debt	0.23%
High Yield Distressed internal	-0.14%
High Yield Real Estate Debt	-0.10%
High Yield RE Debt aggressive	-0.01%
Real Estate Opportunistic	0.26%
Private Equity	N/A
Hedge Fund	N/A
Short S&P 500 Futures	<u>N/A</u>
<b>Total Secondary Asset Allocation</b>	<u>-0.04%</u>

<b>Total Asset Allocation</b>	<b>-6.89%</b>
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<b>Portfolio Added Value (Alpha)</b>	
Public Equity	3.17%
Investment Grade Debt	-0.17%
Cash	-0.01%
REITS / Core	N/A
High Yield Corporate Debt	N/A
High Yield Distressed internal	0.49%
High Yield Real Estate Debt	-0.05%
High Yield RE Debt aggressive	-0.02%
Real Estate Opportunistic	-2.02%
Private Equity	0.18%
Hedge Fund	-0.05%
Short S&P 500 Futures	<u>0.16%</u>
<b>Total Portfolio Added Value (Alpha)</b>	<b>1.68%</b>

<b>Total Explained Difference</b>	<b>-5.21%</b>
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Other - interperiod trading/asset allo	<u>-0.73%</u>
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<b>Total Difference</b>	<b><u>-5.94%</u></b>
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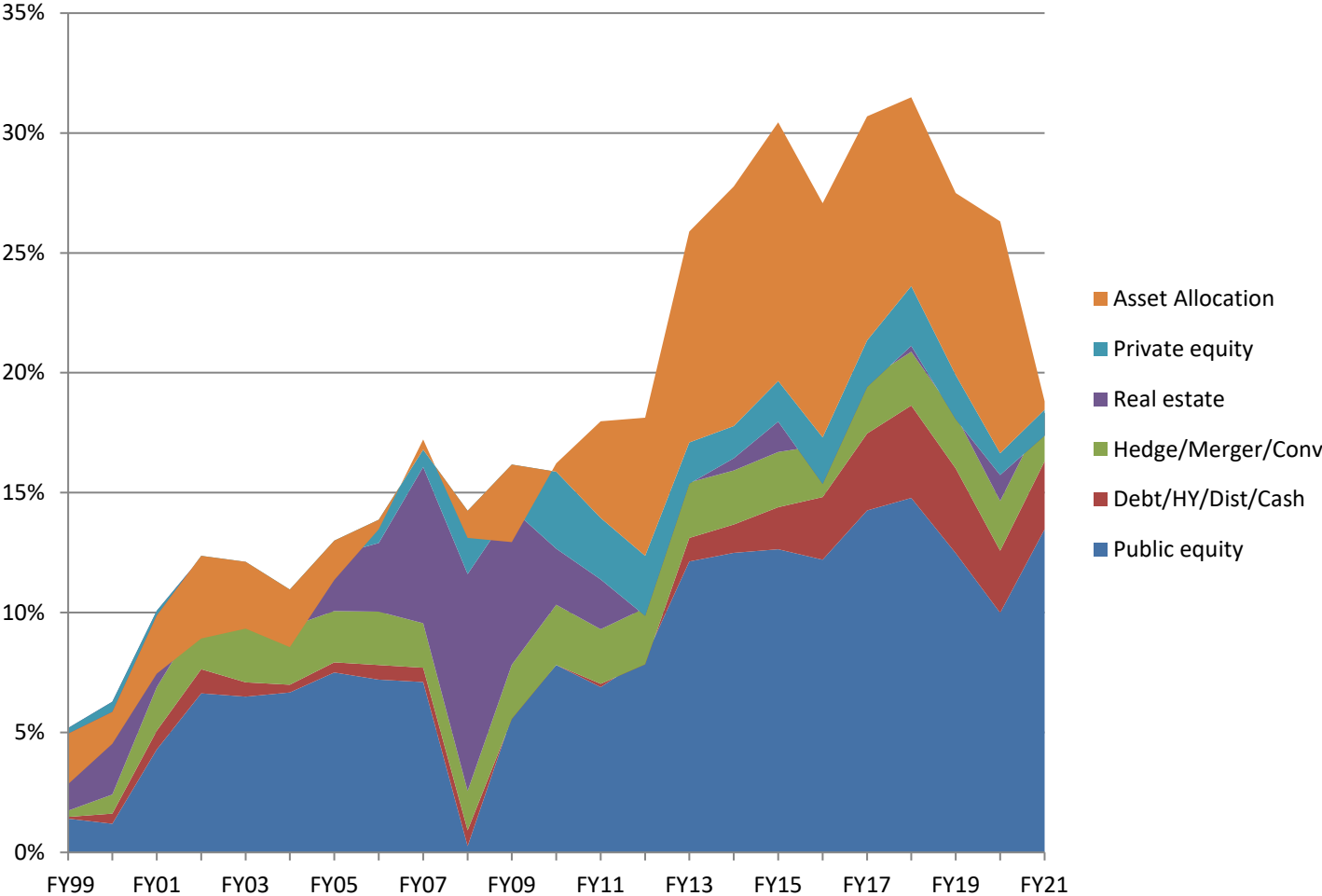
# Total Fund Performance Attribution

## SDRS to Capital Markets Benchmark History

	<u>FY 2021</u>	<u>FY 2020</u>	<u>FY 2019</u>	<u>FY 2018</u>	<u>FY 2017</u>	<u>5 yr Ann</u>	<u>10 yr Ann</u>	<u>20 yr Ann</u>	<u>23 yr Ann</u>
<b>SDRS Total Return*</b>	22.0%	1.6%	4.9%	7.9%	13.8%	9.8%	9.2%	7.1%	8.0%
Capital Markets Return	<u>28.0%</u>	<u>2.5%</u>	<u>7.9%</u>	<u>7.3%</u>	<u>11.0%</u>	<u>11.0%</u>	<u>9.1%</u>	<u>6.2%</u>	<u>7.2%</u>
Difference	<b>-5.9%</b>	<b>-0.9%</b>	<b>-3.0%</b>	<b>0.6%</b>	<b>2.9%</b>	<b>-1.2%</b>	<b>0.1%</b>	<b>0.9%</b>	<b>0.8%</b>
<b>SDRS Total Return (Net)</b>	22.0%	1.6%	4.9%	7.9%	13.8%	9.8%	9.1%	6.9%	7.8%
Capital Markets Return	<u>28.0%</u>	<u>2.5%</u>	<u>7.9%</u>	<u>7.3%</u>	<u>11.0%</u>	<u>11.0%</u>	<u>9.0%</u>	<u>6.2%</u>	<u>7.0%</u>
	<b>-5.9%</b>	<b>-0.9%</b>	<b>-3.0%</b>	<b>0.6%</b>	<b>2.9%</b>	<b>-1.2%</b>	<b>0.1%</b>	<b>0.7%</b>	<b>0.7%</b>
<b>Primary Asset Allocation</b>									
Equity Like Risk	-6.9%	2.4%	0.3%	-1.6%	-1.6%	-1.5%	-0.5%	0.4%	-0.1%
Bond Like Risk	0.0%	-0.8%	-0.6%	0.0%	0.0%	-0.3%	-0.2%	-0.3%	-0.2%
Cash Like Risk	<u>0.0%</u>	<u>0.4%</u>	<u>0.5%</u>	<u>0.3%</u>	<u>0.1%</u>	<u>0.3%</u>	<u>0.1%</u>	<u>0.1%</u>	<u>0.0%</u>
Total Primary Asset Alloc	-6.9%	2.0%	0.2%	-1.2%	-1.5%	-1.5%	-0.6%	0.2%	-0.2%
<b>Secondary Asset Allocation</b>									
REITS/Core	-0.3%	1.5%	-0.4%	0.6%	1.6%	0.6%	0.0%	-0.2%	-0.3%
High Yield Corporate Debt	0.2%	0.4%	0.0%	0.2%	-0.2%	0.1%	0.1%	-0.1%	-0.1%
High Yield Distressed (Agg)	-0.1%	-0.3%	0.0%	-0.2%	0.3%	-0.1%	0.0%	0.2%	0.1%
High Yield Corp Debt-CVI GV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
High Yield RE Debt	-0.1%	-0.2%	-0.1%	-0.1%	0.2%	-0.1%	-0.1%	0.0%	0.0%
High Yield RE Debt (Agg)	0.0%	0.0%	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
Real Estate Opportunistic	0.3%	-1.9%	0.4%	-0.5%	-1.7%	-0.7%	0.1%	0.2%	0.2%
TIPS						0.0%	0.0%	0.0%	0.0%
Commodities						<u>0.0%</u>	<u>0.1%</u>	<u>0.0%</u>	<u>0.0%</u>
Total Secondary Asset Allo	0.0%	-0.5%	0.0%	-0.1%	0.2%	-0.1%	0.2%	0.1%	0.0%
<b>Total Asset Allocation</b>	<b>-6.9%</b>	<b>1.5%</b>	<b>0.2%</b>	<b>-1.3%</b>	<b>-1.3%</b>	<b>-1.6%</b>	<b>-0.3%</b>	<b>0.3%</b>	<b>-0.2%</b>
<b>Portfolio Added Value</b>									
Public Equity	3.2%	-2.2%	-2.0%	0.5%	1.8%	0.2%	0.6%	0.2%	0.6%
Investment Grade Debt	-0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Cash	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
High Yield Distress (Internal)	0.5%	-0.9%	-0.4%	0.3%	0.5%	0.0%	0.0%	-0.1%	0.0%
High Yield Corp Debt	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
High Yield Real Estate Debt	-0.1%	0.1%	0.0%	0.3%	0.0%	0.1%	0.1%	0.1%	0.1%
High Yield RE Debt (Agg)	0.0%	-0.1%	0.0%	0.1%	0.2%	0.0%	0.1%	0.1%	0.1%
Real Estate Opportunistic	-2.0%	1.3%	-0.5%	0.5%	1.4%	0.1%	-0.3%	0.0%	0.0%
Private Equity	0.2%	-0.9%	-0.6%	0.5%	0.0%	-0.2%	-0.1%	0.0%	0.0%
Hedge Fund	-0.1%	-0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Short S & P 500 Futures	<u>0.2%</u>	<u>-0.6%</u>	<u>-0.5%</u>	<u>-0.4%</u>	<u>0.1%</u>	<u>-0.2%</u>	<u>-0.3%</u>	<u>-0.2%</u>	<u>-0.2%</u>
Total Portfolio Alpha difference	1.7%	-3.5%	-3.9%	1.8%	3.9%	0.0%	0.1%	0.0%	0.6%
Other	-0.7%	1.1%	0.7%	0.1%	0.2%	0.3%	0.3%	0.4%	0.3%
<b>Total Difference</b>	<b>-5.9%</b>	<b>-0.9%</b>	<b>-3.0%</b>	<b>0.6%</b>	<b>2.9%</b>	<b>-1.4%</b>	<b>0.0%</b>	<b>0.7%</b>	<b>0.7%</b>

\* Net FY 2014-21, Gross pre-FY 2014

# Cumulative added value by source FY 1999 to FY 2021





# Comparison to Peer Universes

## Annualized Returns

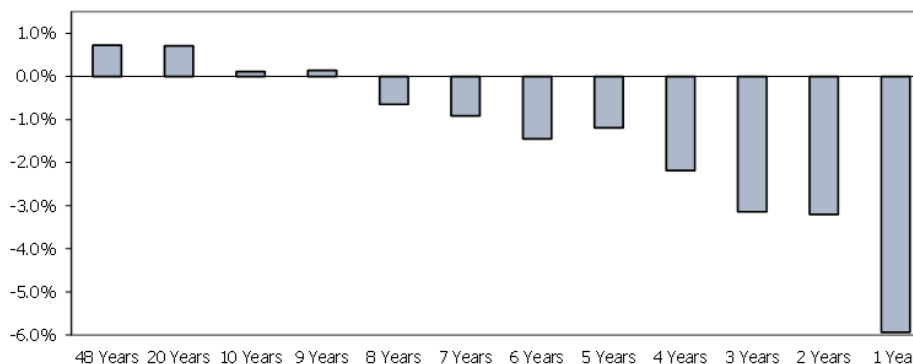
	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>30 Year</u>
<b>SDRS (net)</b>	<b>22.0%</b>	<b>9.1%</b>	<b>9.8%</b>	<b>9.1%</b>	<b>9.3%</b>
SDRS (gross)	22.5%	9.6%	10.2%	9.5%	9.7%
=====					
State Fund (net) - PRELIMINARY	28.6%	12.1%	11.5%	9.5%	8.6%
Northern Trust (gross)	26.4%	10.9%	10.9%	n/a	n/a
Wilshire TUCS (gross)	27.0%	11.9%	11.3%	n/a	n/a

# Total Fund Return Comparison

Annualized

	<u>SDRS Total Fund</u>	<u>SDRS Capital Markets Benchmark</u>	<u>Over/Under Performance</u>
48 Years	10.29%	9.56%	0.72%
20 Years	8.11%	7.40%	0.71%
10 Years	9.23%	9.12%	0.11%
9 Years	10.07%	9.94%	0.14%
8 Years	8.94%	9.59%	-0.65%
7 Years	7.59%	8.51%	-0.92%
6 Years	8.17%	9.62%	-1.45%
5 Years	9.82%	11.01%	-1.20%
4 Years	8.84%	11.03%	-2.19%
3 Years	9.14%	12.29%	-3.14%
2 Years	11.34%	14.54%	-3.20%
1 Year	22.03%	27.97%	-5.94%

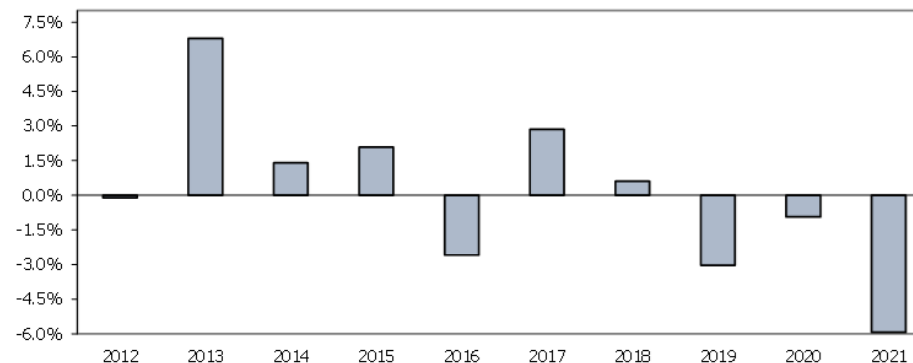
**SDRS Total Fund Over/Under Performance Chart**



Annual Returns

	<u>SDRS Total Fund</u>	<u>SDRS Capital Markets Benchmark</u>	<u>Over/Under Performance</u>
2012	1.91%	2.02%	-0.10%
2013	19.53%	12.73%	6.80%
2014	18.90%	17.49%	1.41%
2015	4.18%	2.09%	2.09%
2016	0.30%	2.88%	-2.59%
2017	13.81%	10.96%	2.85%
2018	7.94%	7.33%	0.61%
2019	4.88%	7.91%	-3.03%
2020	1.59%	2.52%	-0.93%
2021	22.03%	27.97%	-5.94%

**SDRS Total Fund Over/Under Performance Chart**



\* Total Fund Return History  
 1973 - 2013 is gross-of-fee  
 2014 - 2021 is net-of-fee