



Investment Performance FY 2021

South Dakota Retirement System

South Dakota Investment Council

August 31, 2021

Capital Markets Benchmark Return and Market Index Components

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

	<u>Actual Asset Allocation</u>	<u>Benchmark Asset Allocation</u>	<u>Difference</u>	<u>Permissible Range</u>
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

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

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

Secondary Asset Allocation	
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>
Total Secondary Asset Allocation	-0.04%

Total Asset Allocation **-6.89%**

Portfolio Added Value (Alpha)	
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>
Total Portfolio Added Value (Alpha)	1.68%

Total Explained Difference **-5.21%**

Other - interperiod trading/asset allo -0.73%

Total Difference **-5.94%**

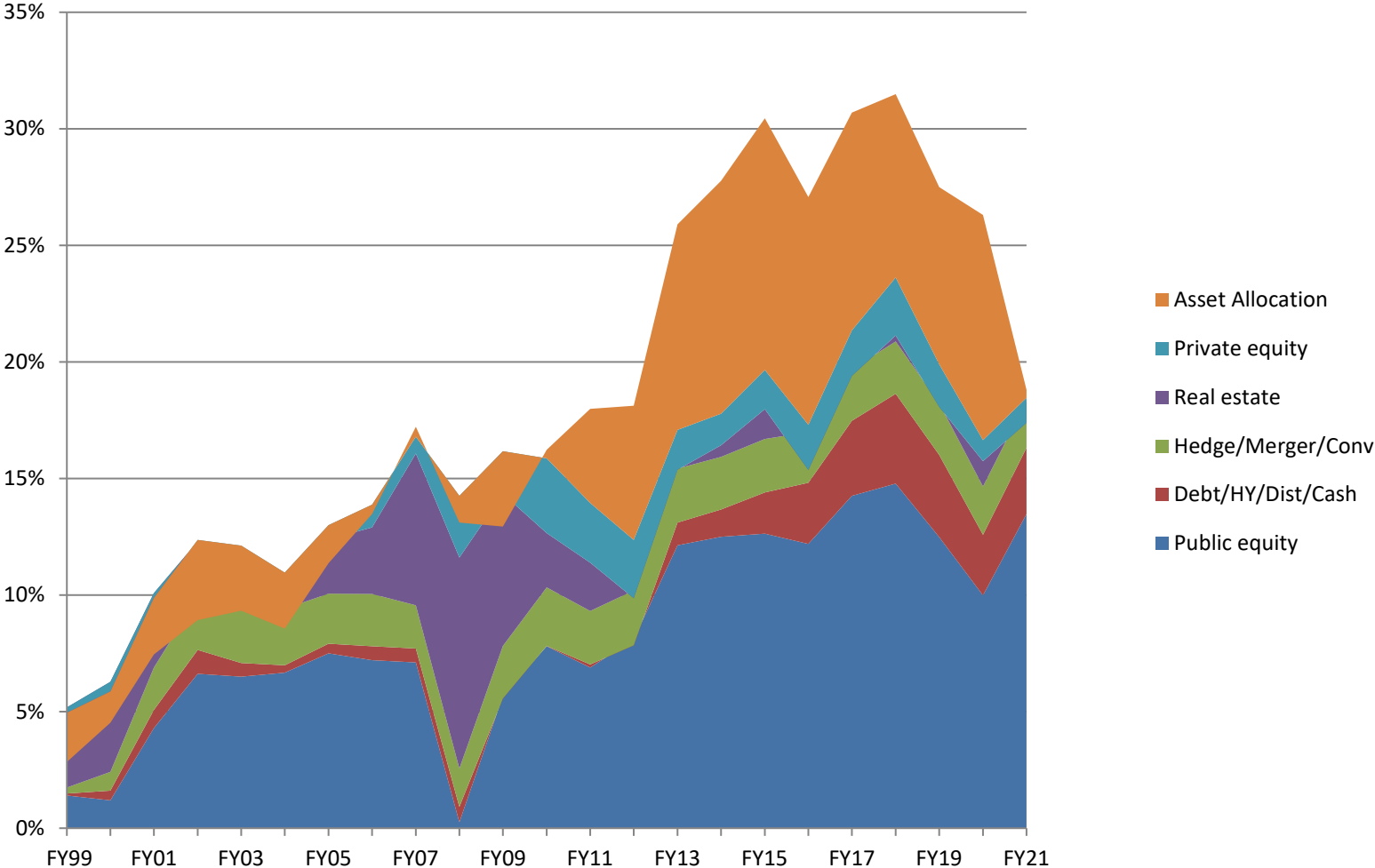
Total Fund Performance Attribution

SDRS to Capital Markets Benchmark History

	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	5 yr Ann	10 yr Ann	20 yr Ann	23 yr Ann
SDRS Total Return*	22.0%	1.6%	4.9%	7.9%	13.8%	9.8%	9.2%	7.1%	8.0%
Capital Markets Return	28.0%	2.5%	7.9%	7.3%	11.0%	11.0%	9.1%	6.2%	7.2%
Difference	-5.9%	-0.9%	-3.0%	0.6%	2.9%	-1.2%	0.1%	0.9%	0.8%
SDRS Total Return (Net)	22.0%	1.6%	4.9%	7.9%	13.8%	9.8%	9.1%	6.9%	7.8%
Capital Markets Return	28.0%	2.5%	7.9%	7.3%	11.0%	11.0%	9.0%	6.2%	7.0%
	-5.9%	-0.9%	-3.0%	0.6%	2.9%	-1.2%	0.1%	0.7%	0.7%
Primary Asset Allocation									
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	0.0%	0.4%	0.5%	0.3%	0.1%	0.3%	0.1%	0.1%	0.0%
Total Primary Asset Alloc	-6.9%	2.0%	0.2%	-1.2%	-1.5%	-1.5%	-0.6%	0.2%	-0.2%
Secondary Asset Allocation									
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						0.0%	0.1%	0.0%	0.0%
Total Secondary Asset Allo	0.0%	-0.5%	0.0%	-0.1%	0.2%	-0.1%	0.2%	0.1%	0.0%
Total Asset Allocation	-6.9%	1.5%	0.2%	-1.3%	-1.3%	-1.6%	-0.3%	0.3%	-0.2%
Portfolio Added Value									
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	0.2%	-0.6%	-0.5%	-0.4%	0.1%	-0.2%	-0.3%	-0.2%	-0.2%
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%
Total Difference	-5.9%	-0.9%	-3.0%	0.6%	2.9%	-1.4%	0.0%	0.7%	0.7%

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

Cumulative added value by source FY 1999 to FY 2021



Comparison to Peer Universes

Annualized Returns

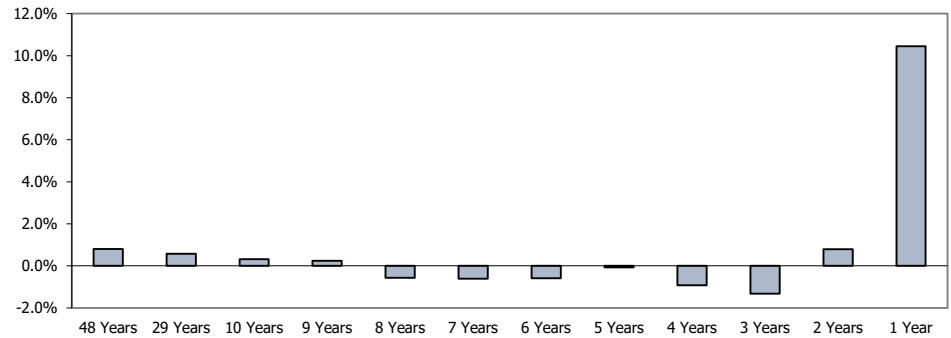
	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>30 Year</u>
SDRS (net)	22.0%	9.1%	9.8%	9.1%	9.3%
SDRS (gross)	22.5%	9.6%	10.2%	9.5%	9.7%
=====					
State Fund (net) - PRELIMINARY	28.6%	12.1%	11.5%	9.5%	8.6%
Northern Trust (gross)	26.4%	10.9%	10.9%	n/a	n/a
Wilshire TUCS (gross)	27.0%	11.9%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

Internal Public Global Equity Return Comparison

Annualized

	<u>SDRS Internal Public Gbl Eq</u>	<u>Benchmark</u>	<u>Over/Under Performance</u>
48 Years	10.77%	9.97%	0.80%
29 Years	10.32%	9.74%	0.58%
10 Years	12.47%	12.16%	0.31%
9 Years	14.00%	13.76%	0.24%
8 Years	12.52%	13.09%	-0.57%
7 Years	10.96%	11.57%	-0.61%
6 Years	12.36%	12.95%	-0.59%
5 Years	15.69%	15.76%	-0.06%
4 Years	14.05%	14.97%	-0.92%
3 Years	14.48%	15.80%	-1.32%
2 Years	20.64%	19.85%	0.79%
1 Year	49.66%	39.21%	10.45%

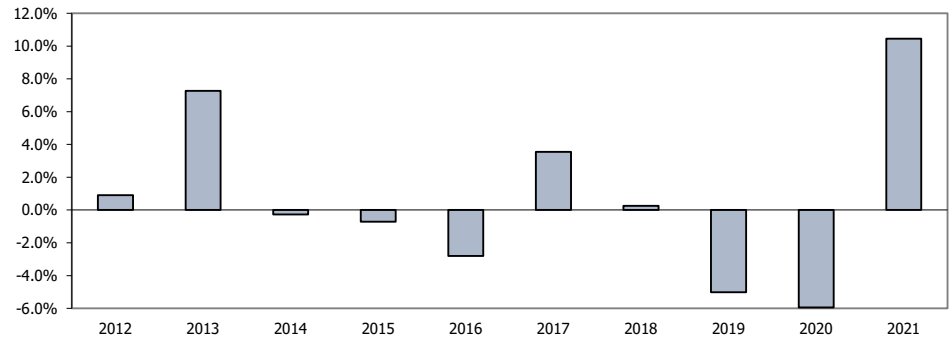
SDRS Internal Public Global Equity Over/Under Performance Chart



Annual Returns

	<u>SDRS Internal Public Gbl Eq</u>	<u>Benchmark</u>	<u>Over/Under Performance</u>
2012	-0.40%	-1.31%	0.90%
2013	26.57%	19.31%	7.26%
2014	24.10%	24.36%	-0.27%
2015	2.89%	3.60%	-0.71%
2016	-2.89%	-0.08%	-2.81%
2017	22.50%	18.96%	3.54%
2018	12.75%	12.50%	0.25%
2019	3.10%	8.11%	-5.01%
2020	-2.76%	3.18%	-5.94%
2021	49.66%	39.21%	10.45%

SDRS Internal Public Global Equity Over/Under Performance Chart



* Equity - Composite History

1973 - 1991 is domestic equity only

1992 - 2004 is a combined domestic and international composite

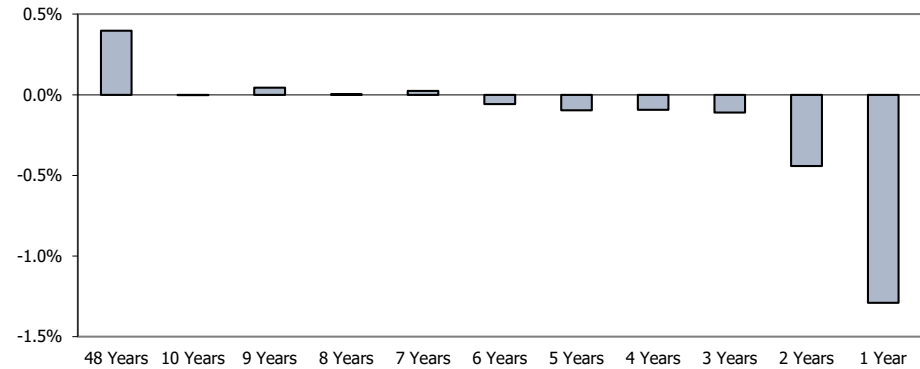
2005 - 2021 internal public global equity (small/mid, gem and high quality not included)

Investment Grade Debt Return Comparison

Annualized

	<u>SDRS IG Debt</u>	<u>Benchmark</u>	<u>Over/Under Performance</u>
48 Years	7.68%	7.28%	0.40%
10 Years	3.43%	3.43%	0.00%
9 Years	3.03%	2.99%	0.04%
8 Years	3.46%	3.45%	0.00%
7 Years	3.35%	3.33%	0.02%
6 Years	3.52%	3.57%	-0.06%
5 Years	3.00%	3.10%	-0.10%
4 Years	3.87%	3.96%	-0.09%
3 Years	5.37%	5.47%	-0.11%
2 Years	3.83%	4.28%	-0.44%
1 Year	-1.50%	-0.21%	-1.29%

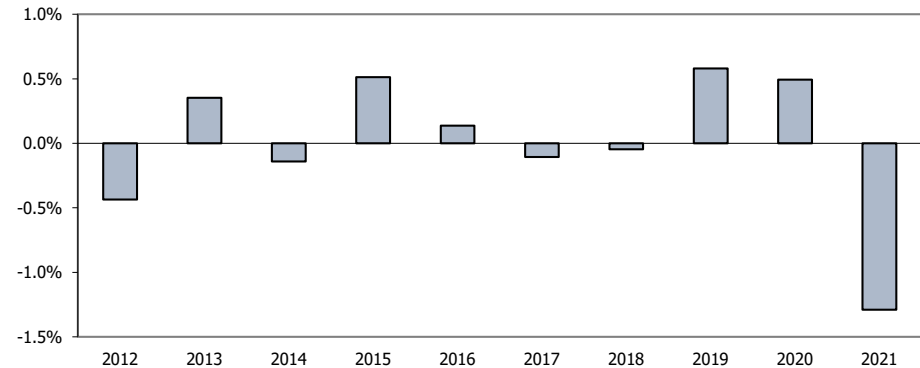
SDRS Investment Grade Debt Over/Under Performance Chart



Annual Returns

	<u>SDRS IG Debt</u>	<u>Benchmark</u>	<u>Over/Under Performance</u>
2012	7.07%	7.51%	-0.44%
2013	-0.30%	-0.65%	0.35%
2014	4.20%	4.34%	-0.14%
2015	2.38%	1.87%	0.51%
2016	6.12%	5.98%	0.14%
2017	-0.39%	-0.28%	-0.11%
2018	-0.49%	-0.45%	-0.05%
2019	8.49%	7.91%	0.58%
2020	9.46%	8.96%	0.49%
2021	-1.50%	-0.21%	-1.29%

SDRS Investment Grade Debt Over/Under Performance Chart



* Fixed Income - History

1973 - 2006 is investment grade & high yield managed together

2007 - 2010 is 80% investment grade portfolio + 20% high yield portfolio

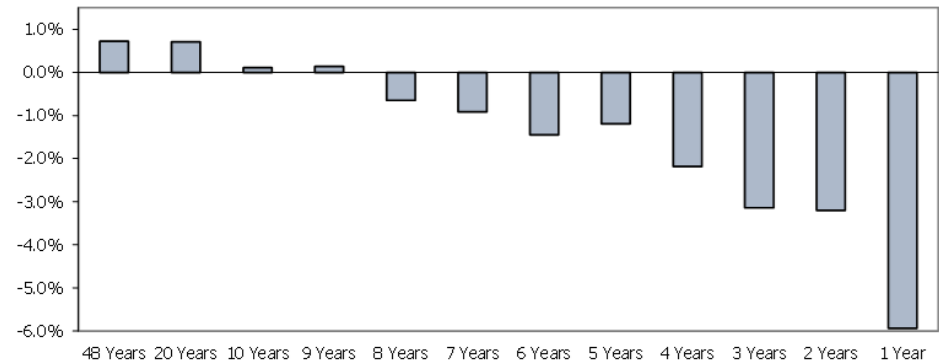
2011 - 2021 is investment grade portfolio only

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%

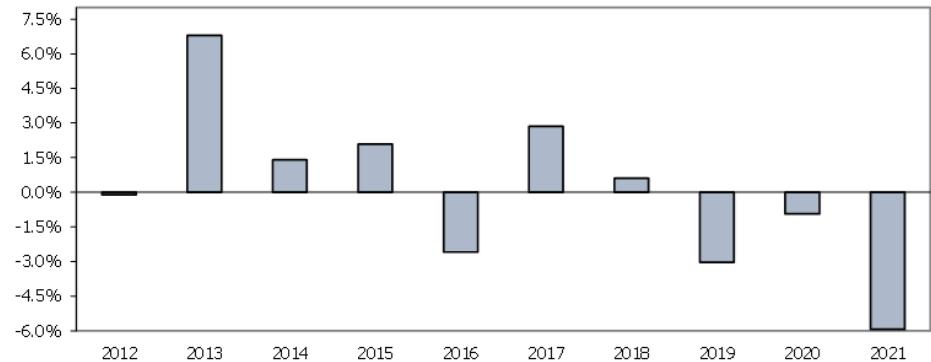
SDRS Total Fund Over/Under Performance Chart



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