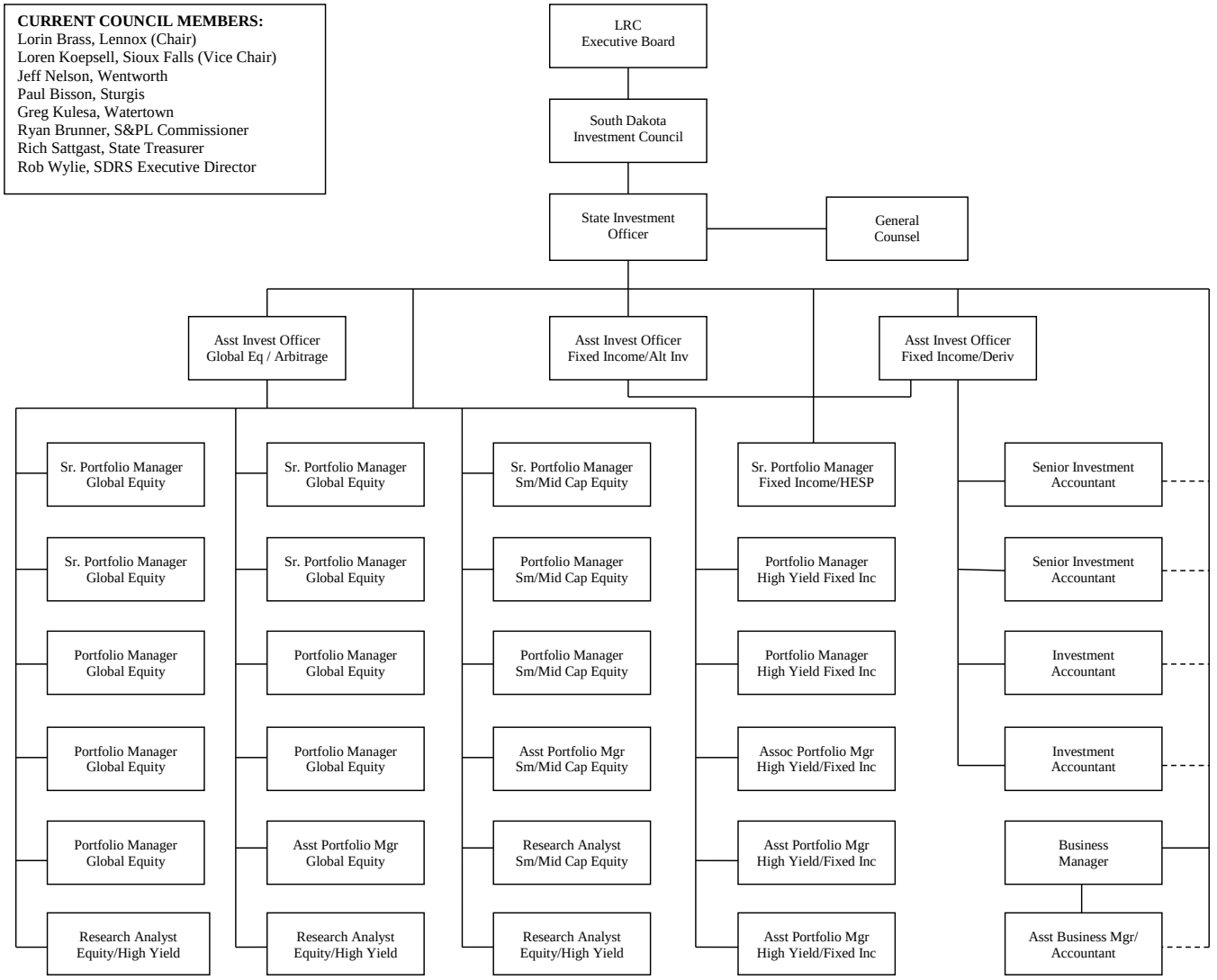
Investment Performance FY 2018
and
Budget Request FY 2020

Presented to

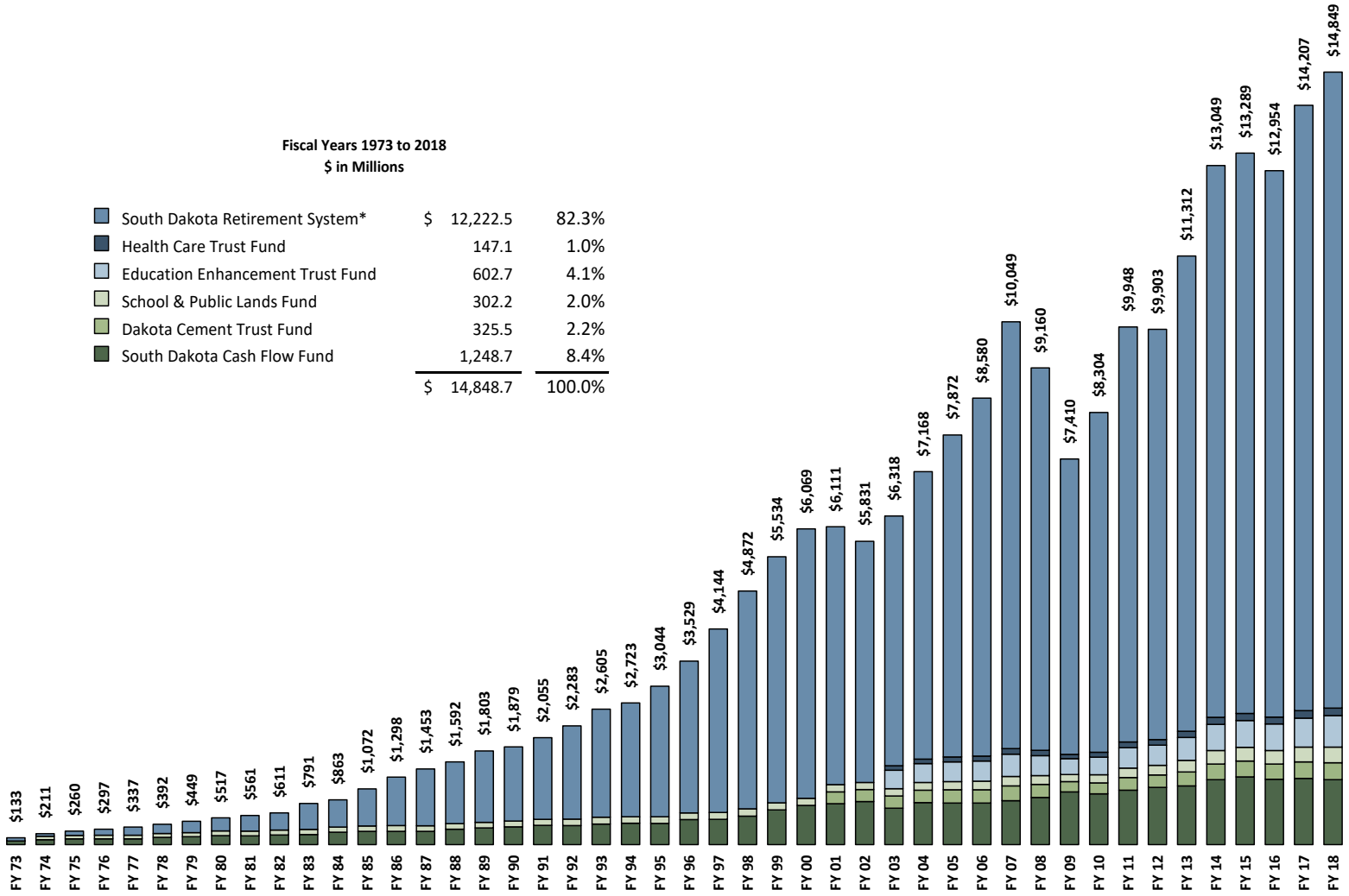
LRC Executive Board

August 27, 2018

Organization Chart



Assets


Fiscal Years 1973 to 2018
$ in Millions
South Dakota Retirement System* $ 12,222.5 82.3%
Health Care Trust Fund 147.1 1.0%
Education Enhancement Trust Fund 602.7 4.1%
School & Public Lands Fund 302.2 2.0%
Dakota Cement Trust Fund 325.5 2.2%
South Dakota Cash Flow Fund 1,248.7 8.4%
$ 14,848.7 100.0%
$133
$211
$260
$297
$337
$392
$449
$517
$561
$611
$791
$863
$1,072
$1,298
$1,453
$1,592
$1,803
$1,879
$2,055
$2,283
$2,605
$2,723
$3,044
$3,529
$4,144
$4,872
$5,534
$6,069
$6,111
$5,831
$6,318
$7,168
$7,872
$8,580
$10,049
$9,160
$7,410
$8,304
$9,948
$9,903
$11,312
$13,049
$13,289
$12,954
$14,207
$14,849
FY 73
FY 74
FY 75
FY 76
FY 77
FY 78
FY 79
FY 80
FY 81
FY 82
FY 83
FY 84
FY 85
FY 86
FY 87
FY 88
FY 89
FY 90
FY 91
FY 92
FY 93
FY 94
FY 95
FY 96
FY 97
FY 98
FY 99
FY 00
FY 01
FY 02
FY 03
FY 04
FY 05
FY 06
FY 07
FY 08
FY 09
FY 10
FY 11
FY 12
FY 13
FY 14
FY 15
FY 16
FY 17
FY 18

Investment Performance

Returns vs. Benchmarks (unaudited)

	FY 2018	4 Years Annualized FY 15 – 18	10 Years Annualized FY 09 – 18
▪ SDRS Total Fund	7.94%	6.44%	7.97%
▪ Capital Market Benchmark	7.33%	5.76%	6.52%
Added Value	.61%	.68%	1.46%
▪ State Fund Universe (est)	8.55%	6.37%	6.62%
Added Value	-.61%	.07%	1.35%

- Beginning FY 2018 SDRS Assets $11.632 billion
- Ending FY 2018 SDRS Assets $12.222 billion

Note: All time-weighted rates of return are net of fees

Investment Performance

Returns vs. Benchmarks (unaudited)

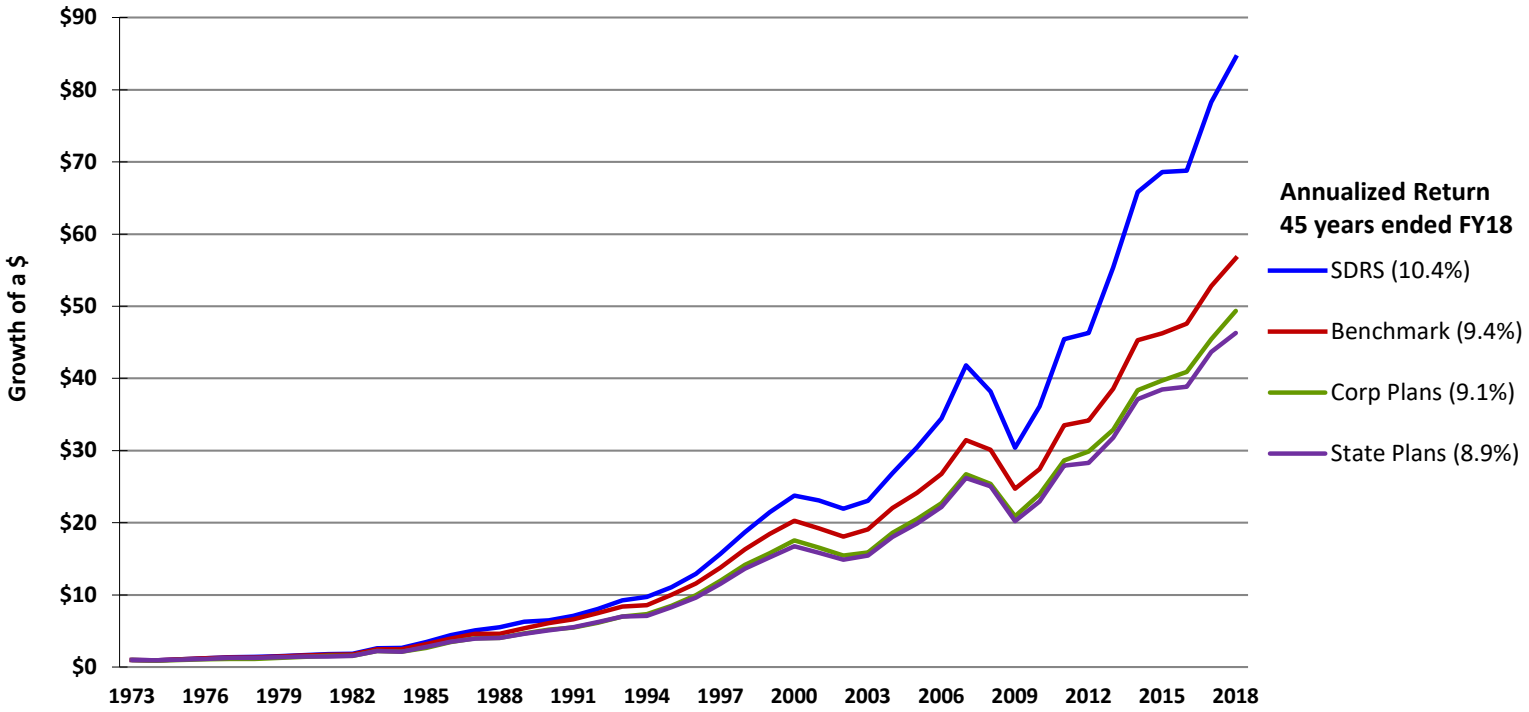
- Total SDRS dollars earned Fiscal Year 2018 $ 957 million
- Total SDRS dollars earned last 4 years $2.935 billion
- Total SDRS dollars earned last 10 years $7.535 billion

- **Extra earnings** resulting from last 1, 4 and 10 years of performance over benchmark (not including compounding):

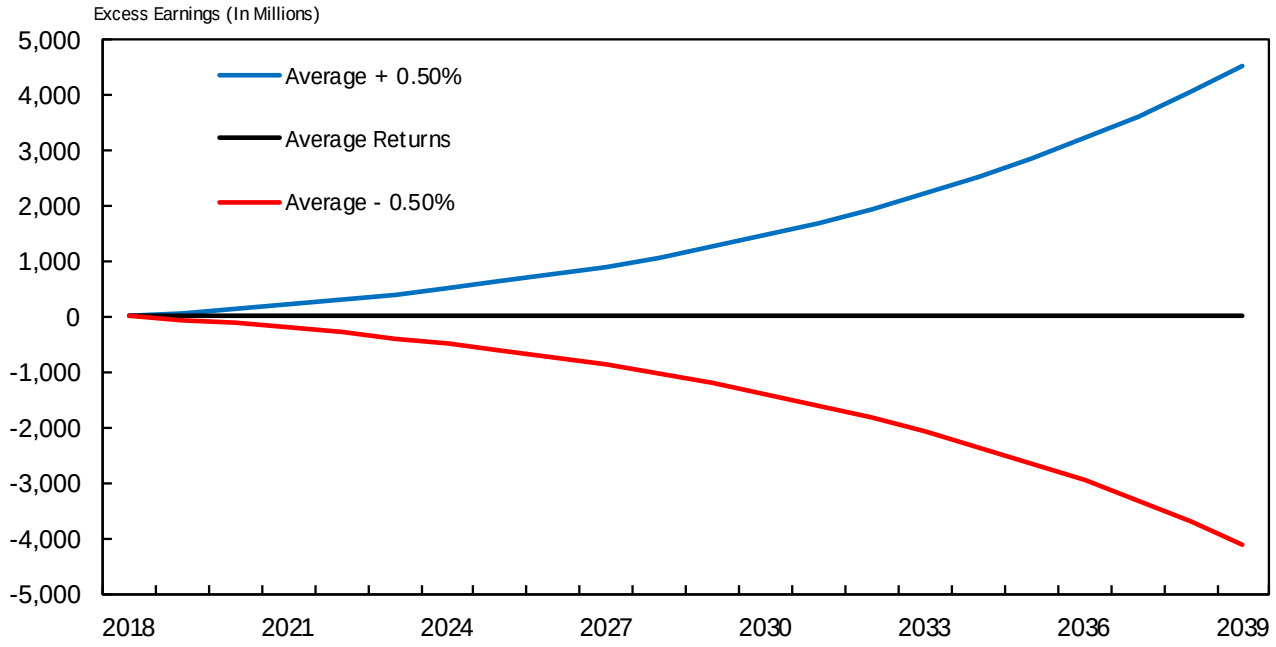
	1 year	4 years	10 years
o vs. Capital Markets Benchmark	$ 71 million	$313 million	$1.466 billion
o vs. State Funds	$-71 million	$ 65 million	$1.365 billion

Superior returns add up over time

Cumulative returns for SDRS, Benchmark, Corporate Plans, and other States



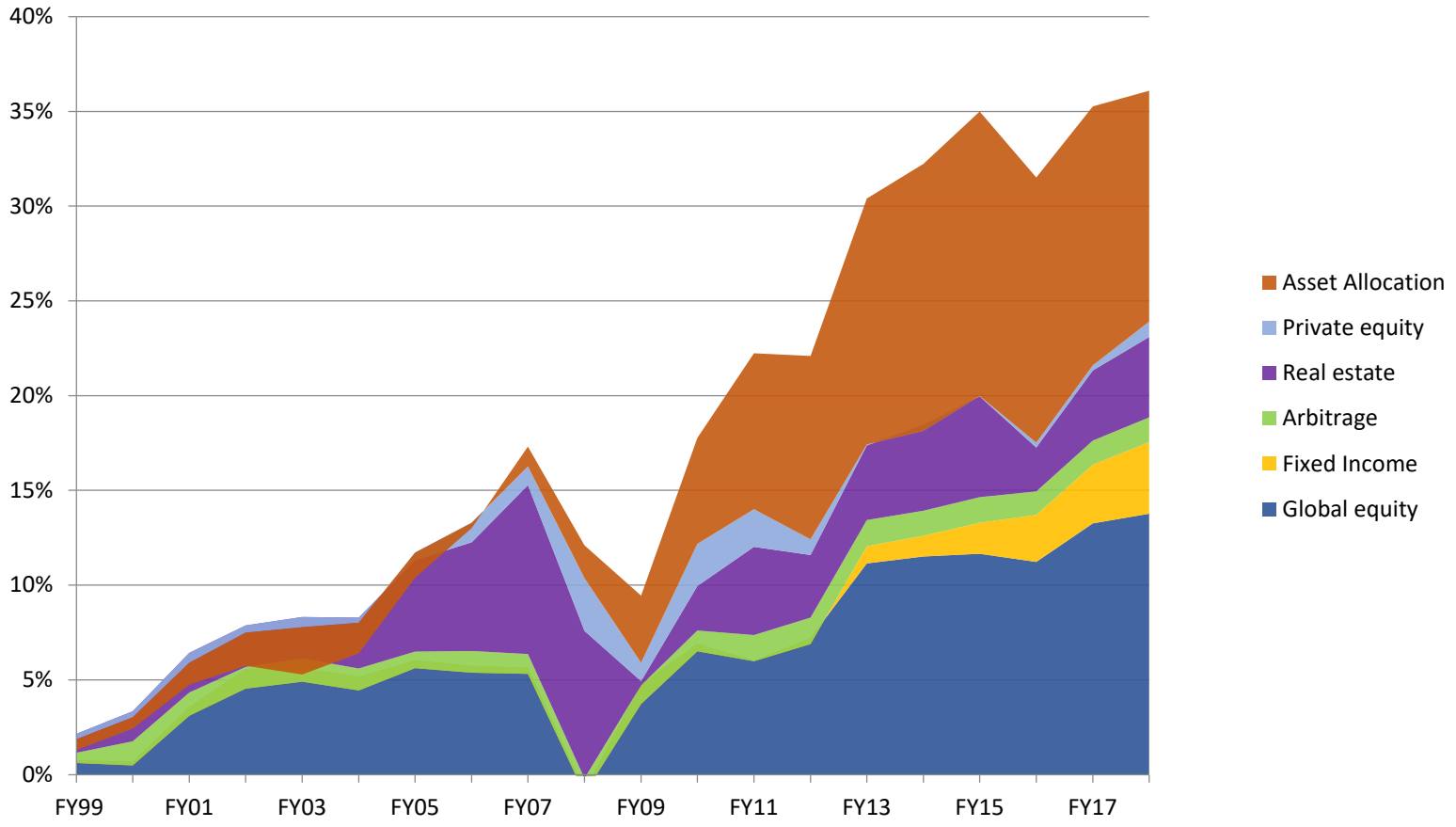
Potential Excess Earnings



- SDIC 45-year outperformance = 1% annualized vs. benchmark
- Outperformance of .5% next 20 years = extra $4.5 billion
- Underperformance of .5% = cost to retirement system of $4.1 billion.

Many pistons contribute

Cumulative added value by source FY99 to FY18

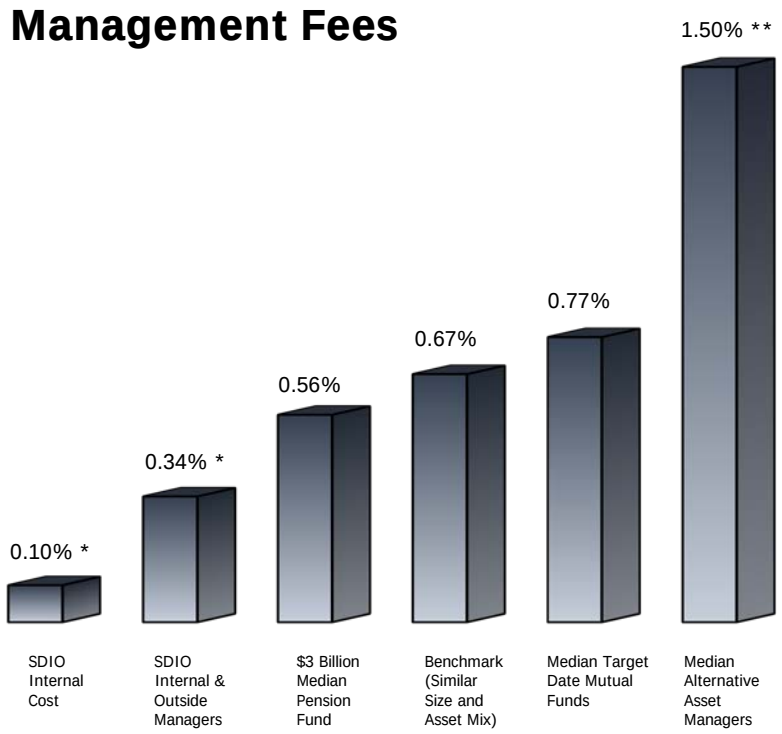


Every asset category has good and bad years

Annual added or detracted value by source

Asset Class	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Global equity	0.8%	-0.1%	2.9%	1.9%	0.0%	-0.4%	0.8%	-0.3%	-0.1%	-6.2%	5.6%	2.1%	-0.8%	1.1%	3.7%	0.3%	0.1%	-0.4%	1.8%	0.5%
Fixed Income	-0.1%	-0.1%	-0.3%	-0.6%	0.3%	0.0%	0.3%	0.1%	0.0%	0.2%	-0.9%	0.6%	0.4%	-0.3%	1.2%	0.2%	0.5%	0.8%	0.6%	0.7%
Arbitrage	0.5%	0.7%	0.0%	-0.1%	0.1%	-0.1%	-0.3%	0.3%	-0.1%	-0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	-0.1%	0.0%	-0.1%	0.1%	0.0%
Real estate	1.0%	0.6%	0.5%	0.1%	0.0%	0.5%	2.1%	0.9%	3.0%	-1.0%	-7.0%	2.1%	2.3%	-1.3%	0.6%	0.6%	0.8%	-2.9%	1.4%	0.5%
Private equity	-0.3%	0.0%	-0.2%	0.2%	-0.2%	0.3%	0.7%	0.6%	-0.1%	1.8%	-1.8%	1.2%	-0.2%	-1.1%	-0.8%	-0.4%	0.3%	0.3%	0.0%	0.5%
Asset Allocation	-0.6%	0.0%	-0.6%	-0.6%	-0.7%	0.8%	0.1%	0.8%	1.0%	1.0%	1.5%	1.4%	1.9%	1.5%	2.1%	0.8%	0.3%	-0.3%	-1.0%	-1.6%
Total	**1.3%**	**1.1%**	**2.3%**	**1.0%**	**-0.4%**	**1.1%**	**3.7%**	**2.4%**	**3.8%**	**-4.5%**	**-2.4%**	**7.6%**	**3.8%**	**-0.1%**	**6.8%**	**1.4%**	**2.1%**	**-2.6%**	**2.9%**	**0.6%**

Cost Efficiency



Difference between SDIC cost of .34% and benchmark cost of .67% is $49 million per year

* SDIC projected expenses for FY 2020 using adjusted assets and expected average performance incentives

** Plus 20% profit participation after preferred return

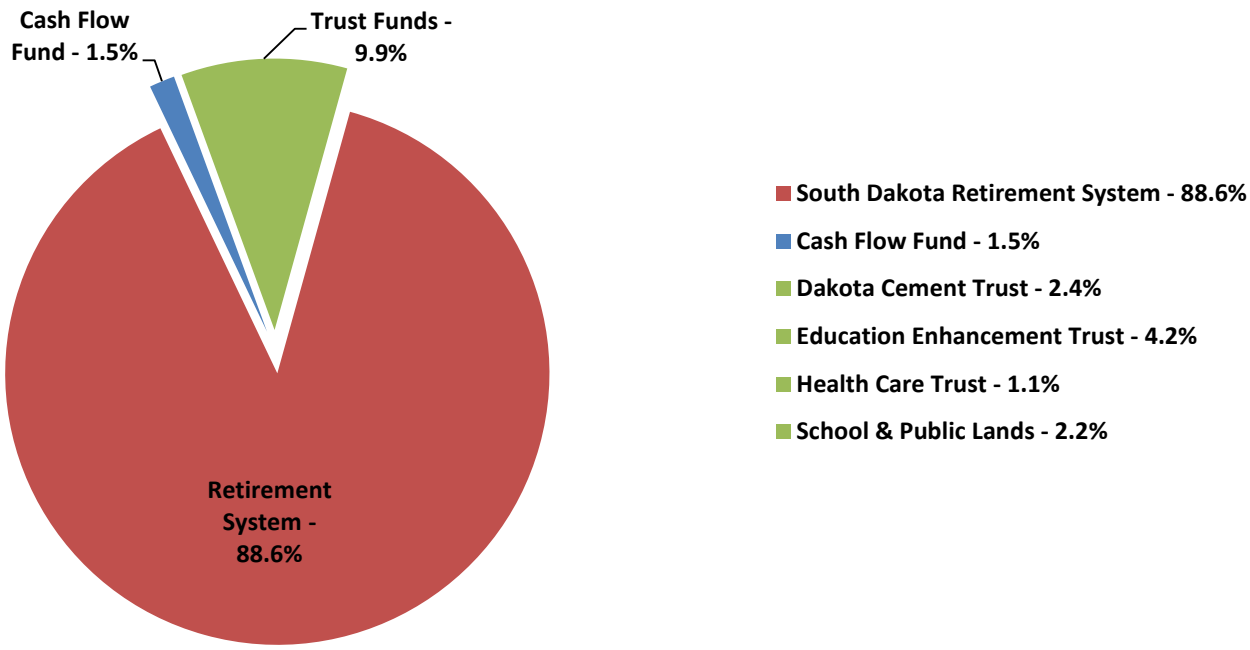
Compensation Overview

- Long term results have significantly exceeded benchmarks
  - Added 35% beyond benchmark to SDRS assets in the past 20 years
- Continued success dependent on high caliber team
  - Internally manage most assets using internally generated research
- Future team depends on retention of talent pipeline and trainers
  - Develop internally as cannot compete for top tier experienced talent
- Compensation plan aligned with goal of adding value over long term
  - Motivate superior long-term performance and retain successful staff
- Compensation plan updated in 2013
  - Council target is 70% of cost of living adjusted median industry pay to balance getting a good deal for South Dakota without losing the good deal if we cannot keep our people
  - Incorporates performance incentives
  - 2013 study showed compensation had fallen to 55%.

Compensation Overview, cont'd

- Council changes implemented in 2014 to get back to target
  - Expanded incentive compensation plan as opposed to adjusting base compensation
  - Incentives expanded to include longer term and stretch incentives and expected to average 80% (0% to 200%)
  - Incentives aligned with the goal of adding value and only paid if add value
- Compensation study updated in 2016
  - Indicated only modest slippage from target
- Cost efficient due to internal management capabilities
  - Securing team to preserve internal capabilities best chance to remain cost efficient
  - Internal cost .1% with expected average incentives

Budget Funding Sources



Budget funded by assets under management

0% General Fund appropriation

Note: S&PL share of SDIC expenses paid from earnings of Cash Flow Fund

Long-Term Plan Executive Summary

Projected LTP Budget

	FY 2020	FY 2025	FY 2030
INVESTMENT OFFICE BUDGET			
Personal Services			
Number of Employees	35.25	37.00	35.00
Base Compensation - Total Staff	5,879,642	7,864,836	9,659,299
Staff Attorney (1/4 FTE) & Interns	64,700	27,773	31,041
Investment Council	6,444	7,202	8,049
Flexibility funds-Retirements & Resignations	160,493	179,379	200,488
Investment Incentive Maximum	9,954,950	13,538,532	16,823,113
Benefits	2,499,691	3,301,720	4,043,586
Total Personal Services	18,565,919	24,919,443	30,765,578
Operating Expenses			
Contractual Services	2,117,259	2,338,286	2,585,323
Travel	85,000	95,003	106,182
Office Supplies & Postage	7,000	7,824	8,744
Capital Assets	40,520	52,653	59,484
Total Operating Expenses	2,249,779	2,493,766	2,759,733
Total Investment Council Budget	20,815,698	27,413,209	33,525,311
ASSET SUMMARY *			
Internal Assets	12,513,357,002	15,434,849,543	19,048,502,107
External Assets	3,632,910,097	4,481,085,351	5,530,210,289
Total Assets	16,146,267,100	19,915,934,894	24,578,712,396
EXPENSE SUMMARY			
Internal Expenses	20,815,698	27,413,209	33,525,311
External Manager Fees	39,962,011	49,291,939	60,832,313
Total Expenses	60,777,709	76,705,148	94,357,624
UNIT COST SUMMARY **			
Internal Expenses as % of Total Assets	0.094%	0.099%	0.097%
Total Expenses as % of Total Assets	0.341%	0.346%	0.344%

* Projections based on long-term assumed returns applied to 6/30/18 assets. Updated each June 30.
**Unit Cost Summary uses assumed average investment performance incentives

Note: FY 20 amounts differ from actual budget request. The LTP includes an assumed 2.25% salary policy

FY 2018 Budget and Actual

	Expended FY 2018	Received FY 2018	Unexpended
PERSONAL SERVICES			
TOTAL FTEs	34.25	34.25	
BASE COMPENSATION			
Base Compensation - Investment Staff	4,528,558	4,965,754	437,196 *
Base Comp - Accountants, Admin, Longevity	427,722	428,982	1,260
TOTAL STAFF - FULL TIME	4,956,280	5,394,736	438,456
P/T Staff Attorney & Interns	57,453	62,527	5,074
Investment Council	2,850	6,227	3,377
Retirement & resignation flexibility funds	0	155,100	155,100
Benefits	1,018,601	1,076,434	57,833
Total Base Compensation	6,035,183	6,695,024	659,840
Investment Performance Incentives			
Maximum Potential Investment Perf Incentive	4,072,212	9,461,327	5,389,115
Benefits	426,748	1,305,663	878,915
Total Investment Performance Incentives	4,498,960	10,766,990	6,268,030
Total Personal Services	10,534,143	17,462,014	6,927,871
OPERATING EXPENSES			
Contractual Total (see Appendix for further details)	1,572,594	1,729,197	156,603
Travel	56,549	85,000	28,451
Office Supplies & Postage	3,948	12,733	8,785
Capital Assets	59,194	40,520	(18,674)
Total Operating Expenses	1,692,285	1,867,450	175,165
TOTAL BUDGET	12,226,429	19,329,464	7,103,035

* Includes $55,634 Allianz reimbursement & unusued compensation

Note: Budget is funded as needed and ended year with a cash balance of $2,451,347 which is credited against FY 2019 authorized budget

FY 2020 Budget Request
Summary

	Received FY 2019	Request FY 2020	% change
PERSONAL SERVICES			
TOTAL FTEs	34.25	35.25	
BASE COMPENSATION			
Base Compensation - Investment Staff	4,977,473	5,161,675	3.70%
Base Comp - Accountants, Atty, Admin, Longevity	601,764	597,219	-0.76%
TOTAL STAFF - FULL TIME	5,579,237	5,758,894	3.22%
P/T Staff Attorney & Interns	63,277	63,277	0.00%
Investment Council	6,301	6,301	0.00%
Retirement & resignation flexibility funds	156,961	156,961	0.00%
Benefits	1,075,711	1,108,847	3.08%
Total Base Compensation	6,881,487	7,094,281	3.09%
Investment Performance Incentives			
Maximum Potential Investment Perf Incentive	9,931,508	9,954,945	0.24%
Benefits	1,370,548	1,373,782	0.24%
Total Investment Performance Incentives	11,302,056	11,328,728	0.24%
Total Personal Services	18,183,543	18,423,009	1.32%
OPERATING EXPENSES			
Contractual Total (see next page for further details)	1,864,960	2,117,259	13.53%
Travel	85,000	85,000	0.00%
Office Supplies & Postage	9,000	7,000	-22.22%
Capital Assets	40,520	40,520	0.00%
Total Operating Expenses	1,999,480	2,249,779	12.52%
TOTAL BUDGET	20,183,023	20,672,788	2.43%
UNIT COST SUMMARY *			
Internal Expenses as % of Total Adjusted Assets	0.094%	0.094% **	
Total Expenses as % of Total Adjusted Assets	0.341%	0.341%	

* Based on total assets adjusted to long-term value and expenses using assumed average investment performance incentives

** Unit cost includes an assumed 2.25% salary policy

FY 2020 Budget Request
Contractual services detail

	Received FY 2019	Request FY 2020	% chng
CONTRACTUAL SERVICES			
Investment Services			
Consulting Services	80,000	130,000	62.50%
Accounting, Benchmarking, Risk Systems	113,100	292,977	159.04%
Investment Databases, Newsfeeds, Quote Fees	553,636	555,436	0.33%
Investment Research Services	387,525	394,025	1.68%
Flexibility - From Brokerage to Independent Research	100,000	100,000	0.00%
Total Investment Services	1,234,261	1,472,438	19.30%
Administrative Expenses			
Office Rent	134,609	139,019	3.28%
Bond/Liability Insurance	8,190	8,385	2.38%
Telephone	18,000	18,000	0.00%
Office Equip Rental/Maintenance/Misc	6,003	10,000	66.58%
Bureau of Info & Telecommunications (BIT)	73,530	73,530	0.00%
State Central Services	12,858	12,858	0.00%
Legislative Audit	51,500	51,500	0.00%
Attorney General's Office - Legal Services	18,509	18,509	0.00%
Custodial Fees - Global	271,000	276,520	2.04%
Seminars/Educational Programs	33,500	33,500	0.00%
Business Publications	3,000	3,000	0.00%
Total Administrative Expenses	630,699	644,821	2.24%
TOTAL CONTRACTUAL SERVICES	1,864,960	2,117,259	13.53%

Trust Funds (unaudited)

Health Care Trust (established April 2001)

Principal as of 6/30/18	$ 85,631,024
Principal as of 6/30/18 adjusted for inflation	$ 118,588,235
Fair Value (FV) as of 6/30/18	$ 147,135,167
Difference - FV less principal	$ 61,504,143
Difference - FV less infl. adj. prin.	$ 28,546,932
Fiscal year to date return	6.76%
Longterm expected mean return	5.86%
Payout of 4% plus expected inflation of 3%	7.00%
Expected return cushion/shortfall	-1.14%
Distribution for FY 19 (July 2, 2018)	**5,414,857**
Distribution for FY 18 (July 3, 2017)	5,214,739

Asset Allocation	Current	FY 18 Benchmark
Global & Private Equity	31%	51%
Real Estate	7%	10%
Fixed Income-IG	19%	30%
Fixed Income-HY	4%	7%
HY RE Debt	6%	0%
Money Market	33%	2%
Total	100%	100%

Law allows up to 4% of the 16 quarter average to be distributed as long as principal is not violated as of December 31 each year.

Education Enhancement Trust (established April 2001)

Principal as of 6/30/18	$ 397,235,184
Principal as of 6/30/18 adjusted for inflation	$ 526,766,203
Fair Value (FV) as of 6/30/18	$ 602,643,318
Difference - FV less principal	$ 205,408,134
Difference - FV less infl. adj. prin.	$ 75,877,115
Fiscal year to date return	6.82%
Longterm expected return (lower due to tax-exempts)	5.81%
Payout of 4% plus expected inflation of 3%	7.00%
Expected return cushion/shortfall	-1.19%
Distribution for FY 19 (July 2, 2018)	**20,430,222**
Distribution for FY 18 (July 3, 2017)	19,377,842

Asset Allocation	Current	FY 18 Benchmark
Global & Private Equity	32%	51%
Real Estate	6%	10%
Fixed Income-IG	9%	20%
Fixed Income-tax ex	8%	10%
Fixed Income-HY	4%	7%
HY RE Debt	6%	0%
Money Market	36%	2%
Total	100%	100%

Law allows up to 4% of the 16 quarter average to be distributed as long as principal is not violated as of December 31 each year.

Trust Funds (unaudited)

Dakota Cement Trust (established April 2001)

Principal as of 6/30/18	$ 238,000,000
Principal as of 6/30/18 adjusted for inflation	$ 337,692,115
Fair Value (FV) as of 6/30/18	$ 325,465,103
Difference - FV less principal	$ 87,465,103
Difference - FV less infl. adj. principal	$ (12,227,012)
Fiscal year to date return	6.78%
Longterm expected mean return	5.86%
Payout of 4% plus expected inflation of 3%	7.00%
Expected return cushion/shortfall	-1.14%
Distribution for FY 18 (June 2018 to GF)	**12,442,947**
Distribution for FY 17 (May 2017 to GF)	11,981,721

Asset Allocation	Current	FY 18 Benchmark
Global & Private Equity	32%	51%
Real Estate	7%	10%
Fixed Income-IG	19%	30%
Fixed Income-HY	4%	7%
HY RE Debt	7%	0%
Money Market	31%	2%
Total	100%	100%

Constitution allows 4% of the lesser of 1) the 16 quarter average balance or 2) the current December 31 fair value, be distributed by June of the following year.

School & Public Lands

Inflation protection mandated by Constitutional Amendment -
(payout is reduced by inflation to extent inflation not offset by realized net gains)

Fair Value as of 6/30/18	$ 302,239,678
Fiscal year to date return	6.80%
Longterm expected mean return	5.86%
Distribution for FY 18 K-12 (2/7/18)	11,282,447
Distribution for FY 18 Board of Regents (6/6/18)	2,641,703
TOTAL	**13,924,150**

Asset Allocation	Current	FY 18 Benchmark
Global & Private Equity	33%	51%
Real Estate	6%	10%
Fixed Income-IG	17%	30%
Fixed Income-HY	4%	7%
HY RE Debt	6%	0%
Money Market	33%	2%
Total	100%	100%

Appendix

- Investment performance incentives
- Target discount rationale
- FY18 Budget and Actual - Contractual Services details

Investment performance incentives
Align compensation with goal of adding value

- Encourage superior performance
  - Counters underperformance career risk that can discourage efforts to add value
  - Multiyear timeframes encourage investing for the long term
- Encourage retention of successful staff
  - Team is most attractive to other organizations when winning
  - Shifts compensation higher when people more sought and down when losing
- Incentives paid only for added value
- Important to encourage adding value in good and bad markets
  - Added value in down markets more important than in up markets
  - Encourages adding value by reducing risk when markets expensive

Target discount rationale

- Need top caliber people long term
  - Unsuccessful people or job hoppers always available but no bargain, even if free
  - Compensation is too low to recruit veteran high-performers from elsewhere
  - Must develop team internally by training cream of crop local University graduates
  - Takes 15 to 20 years to fully develop seasoned talent
  - If lose talent pipeline or trainers, will jeopardized handoff to next generation
- Our past history and observation of others suggest 70% target
  - Only way to know for sure how large discounts can work is to risk damaging team
  - 50% discount levels in past led to difficulties
  - 30% discount believed significant relative to other high-end professionals
  - Industry subject to intense performance measurement with significant consequences for winning and losing which intensifies desire for financial security
  - Discounts for top SDIC performers may be much larger as industry pay for top quartile performers can be double the median

FY18 Budget and Actual
Contractual services detail

	Expended FY 2018	Received FY 2018	Unexpended
CONTRACTUAL SERVICES			
Investment Services			
Consulting Services	3,424	30,000	26,576
Accounting, Benchmarking, Risk Systems	111,079	106,000	(5,079)
Investment Databases, Newsfeeds & Quote Fees	511,226	547,436	36,210
Investment Research Services	357,664	338,185	(19,479)
Flexibility - From Brokerage to Independent Research	0	100,000	100,000
Total Investment Services	983,393	1,121,621	138,228
Administrative Expenses			
Office Rent	126,232	125,069	(1,163)
Bond/Liability Insurance	7,439	7,800	361
Telephone	15,794	18,000	2,206
Office Equip Rental/Maintenance/Misc	11,006	6,000	(5,006)
Bureau of Info & Telecommunications (BIT)	73,984	67,633	(6,351)
State Central Services	11,133	13,540	2,407
Legislative Audit	46,810	51,500	4,690
Attorney General's Office - Legal Services	0	18,509	18,509
Custodial Fees - Global	265,896	263,025	(2,871)
Seminars/Educational Programs	29,716	33,500	3,784
Business Publications	1,191	3,000	1,809
Total Administrative Expenses	589,201	607,576	18,375
TOTAL CONTRACTUAL SERVICES	1,572,594	1,729,197	156,603