

Asset Allocation

South Dakota Trust Funds

Dakota Cement Trust

Education Enhancement Trust

Health Care Trust

School & Public Lands

South Dakota Investment Council

June 5-6, 2019

Dakota Cement Trust Fund Established

- Proceeds from the sale of the South Dakota Cement Plant in Rapid City in March of 2001
- Constitutional Amendment enacted April 2001 allows “stocks, bonds, mutual funds and other financial instruments as provided by law”
- Constitutional Amendment enacted November 2012 changed distribution calculation from \$12 million to 4% of average fair value
- Accompanying statute (SDCL 4-5-47) applies the prudent man standard
- Beginning principal value as of April 18, 2001 was \$238 million, current principal is the same

Education Enhancement Trust Fund Established

- Proceeds from South Dakota's share of the 1998 national tobacco lawsuit settlement and state youth-at-risk funds
- Constitutional Amendment enacted April 2001 allows "stocks, bonds, mutual funds and other financial instruments as provided by law"
- Accompanying statute (SDCL 10-50B-11.1) applies the prudent man standard effective July of 2001
- Separate investment fund established on July 1, 2002 (after distribution law effective) with \$81.8 million; current principal of \$404 million includes securitization of tobacco settlement payments refinancing in March of 2013 & tobacco arbitration settlement (the principal will continue to grow)
- Contains \$6.5 million principal for the South Dakota postsecondary scholarship grant fund

Health Care Trust Fund Established

- Proceeds from federal money for Medicare and Medicaid repayments to nursing home patients
- Constitutional Amendment enacted April 2001 allows “stocks, bonds, mutual funds and other financial instruments as provided by law”
- Accompanying statute (SDCL 28-6-33) applies the prudent man standard in July of 2001
- Separate investment fund established on July 1, 2002 (after distribution law established) with \$62.5 million; current principal of \$85.6 million includes additional federal and tobacco tax payments (no future principal increases expected)

School & Public Land Fund Established

- Proceeds from school land provided at statehood and other designated amounts
- Limited to government fixed income investments, including SBA & other non-marketable securities, until November 2000
- Constitutional Amendment enacted November 2000 allows “stocks, bonds, mutual funds and other financial instruments as provided by law”
- Accompanying statute (SDCL 5-10-18) applies the prudent man standard
- Governor may disapprove any investment per Constitution. Notified prior to committing to illiquid investments

Annual Distribution

Dakota Cement Trust Fund:

- Article XIII Sec. 21 of the Constitution requires annual distribution of 4% of the lesser of the 16 quarter average market value or the calendar year end market value
- Not limited by principal balance

Education Enhancement and Health Care Trust Funds:

- By codified law, annual distribution is 4% of the 4 year average fair value of the fund, as of December 31, distributed on July 1 of the following year as appropriated by the Legislature
- By Constitution, 4% distribution conditioned upon the Dec. 31 fair value of the fund being above the principal of the fund

School and Public Lands Fund:

- Art. VIII Sec. 3 of the Constitution requires all interest and income to be faithfully used and applied each year for the benefit of the public schools of the state after the principal is increased by an amount equal to the rate of inflation from realized gains or investment income. Land rent and mineral income is distributed without regard to inflation adjustment
- SDCL 5-10-18.3(4) allows the inflation offset to be satisfied by realized net capital gains if available, otherwise income

DCT HCT SPL Capital Market Benchmark

allocations, indexes, min max ranges, and equity-like risk (Continue 45% min Eq-like)

	<u>Public Equity</u>	<u>Real Estate REIT/Core</u>	<u>HY Corp Debt</u>	<u>Investment Grade Debt</u>	<u>Cash</u>	<u>Private Equity</u>	<u>Opportunistic Real Estate</u>	<u>HY Real Estate Debt</u>	<u>TIPS</u>	<u>Commodity</u>	<u>Equity Like Risk</u>
Maximum	75%	20% ²	15%	55%	50%	11%	14% ²	10%	10%	5%	77%
2020 Benchmark (proposed)	51%	10%	7%	30%	2% ³	0% ⁴	0% ⁴	0% ⁴	0% ⁴	0% ⁴	63%
Minimum	22.5% ¹	2%	0%	13% ¹	0%	0%	0%	0%	0%	0%	45%
Index	<i>MSCI AC IMI (3/4) +MSCI IMI US (1/4)</i>	<i>MSCI REIT</i>	<i>FTSE High Yield</i>	<i>FTSE BIG</i>	<i>FTSE 3 mo. Tsy bill</i>						

Benchmark History

2019 Benchmark	51%	10%	7%	30%	2% ³	0% ⁴	0% ⁴	0% ⁴	0% ⁴	0% ⁴	63%
2018 Benchmark	51%	10%	7%	30%	2% ³	0% ⁴	0% ⁴	0% ⁴	0% ⁴	0% ⁴	63%
2017 Benchmark	51%	10%	7%	30%	2% ³	0% ⁴	0% ⁴	0% ⁴	0% ⁴	0% ⁴	63%
2016 Benchmark	51%	10%	7%	30%	2%	0%			0%	0%	63%
2015 Benchmark	53%	10%	7%	26%	2%	0%			2%	0%	63%
2014 Benchmark	52%	6%	5%	28%	2%	2%			5%	0%	
2013 Benchmark	52%	6%	5%	28%	2%	2%			5%	0%	
2012 Benchmark	52%	6%	5%	28%	2%	2%			5%	0%	
2011 Benchmark	48%	5%	5%	33%	2%	2%			5%		

1. Buffer for market drift of 1% for equity and 1/2% for debt (example: Investment Grade debt minimum of 13% can drift to 12.5%)

2. Real Estate (RE) maximum applies to REITS/Core RE and Opportunistic RE combined with Opportunistic RE count 1.3x against RE max. Base case allocation used for partnerships

3. Cash to provide liquidity for distributions and rebalancing

4. Skill and niche categories are not included in benchmark but do have a permitted range to invest in opportunistically

DCT HCT SPL Capital Market Benchmark

allocations, indexes, min max ranges, and equity-like risk (Eq-like min of 36%)

	<u>Public Equity</u>	<u>Real Estate REIT/Core</u>	<u>HY Corp Debt</u>	<u>Investment Grade Debt</u>	<u>Cash</u>	<u>Private Equity</u>	<u>Opportunistic Real Estate</u>	<u>HY Real Estate Debt</u>	<u>TIPS</u>	<u>Commodity</u>	<u>Equity Like Risk</u>
Maximum	75%	20% ²	15%	64%	50%	11%	14% ²	10%	10%	5%	77%
2020 Benchmark (proposed)	51%	10%	7%	30%	2% ³	0% ⁴	0% ⁴	0% ⁴	0% ⁴	0% ⁴	63%
Minimum	18% ¹	2%	0%	13% ¹	0%	0%	0%	0%	0%	0%	36%
Index	<i>MSCI AC IMI (3/4) +MSCI IMI US (1/4)</i>	<i>MSCI REIT</i>	<i>FTSE High Yield</i>	<i>FTSE BIG</i>	<i>FTSE 3 mo. Tsy bill</i>						

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DCT HCT SPL expected return and standard deviation using SDIC expected returns and fat-tail adjusted risk measures

	Expected Standard		Correlation Matrix								
	Return	Deviation	US Eq	Intl Eq	Debt	Cash	HY Debt	REITs	Private Equity	RE Opport	TIPS
Domestic (US) Equity	7.3%	22%	100%								
International Equity	7.3%	22%	100%	100%							
Investment Grade debt	4.0%	7%	0%	0%	100%						
Cash	3.6%	1%	0%	0%	0%	100%					
High Yield debt	5.6%	12%	75%	75%	23%	0%	100%				
REITs	6.9%	24%	75%	75%	0%	0%	50%	100%			
Private Equity	8.0%	30%	88%	88%	0%	0%	55%	70%	100%		
RE Opportunistic	7.6%	32%	75%	75%	2%	0%	60%	90%	60%	100%	
Tsy Inflation Protected Sec (TIPS)	4.0%	7%	0%	0%	100%	0%	24%	0%	0%	0%	100%

* Standard deviation is a measure of volatility. There is a 66% chance of being within plus or minus 1 standard deviation, a 95% chance of being within 2 standard deviations.

	US Equity	Intl Equity	Debt	Cash	High Yield	REITs	Private Equity	RE Opport	Tips	Mean Expected Return	1 year Standard Deviation	20 year Standard Deviation
70:30 Equity/Debt	70%	0%	30%	0%	0%	0%	0%	0%	0%	6.30%	15.5%	3.5%
2003-2005 allocation	20%	0%	55%	0%	10%	15%	0%	0%	0%	5.22%	9.3%	2.1%
2006 allocation	27%	13%	40%	0%	10%	10%	0%	0%	0%	5.75%	12.0%	2.7%
2007-2011 allocation	32%	16%	33%	2%	5%	5%	2%	0%	5%	5.86%	12.8%	2.9%
2012-2014 allocation	35%	17%	28%	2%	5%	6%	2%	0%	5%	6.02%	13.8%	3.1%
2015 allocation	37%	16%	26%	2%	7%	10%	0%	0%	2%	6.12%	14.3%	3.2%
2016-2019 allocation	34%	17%	30%	2%	7%	10%	0%	0%	0%	6.06%	13.9%	3.1%
Benchmark FY20 (proposed)	34%	17%	30%	2%	7%	10%	0%	0%	0%	6.06%	13.9%	3.1%

Return Ranges

	Mean Exp Ret	1 Year Horizon			20 Year Horizon		
		up 1 sd	dn 1 sd	dn 2 sd	up 1 sd	dn 1 sd	dn 2 sd
Benchmark FY20 (proposed)	6.06%	20.0%	-7.9%	-21.8%	9.2%	2.9%	-0.2%

EET Capital Market Benchmark

allocations, indexes, min max ranges, and equity-like risk (Continue 45% min Eq-like)

	<u>Public Equity</u>	<u>Real Estate REIT/Core</u>	<u>HY Corp Debt</u>	<u>Investment Grade Debt</u> ⁵	<u>Tax-exempt Debt</u> ⁵	<u>Cash</u>	<u>Private Equity</u>	<u>Opportunistic Real Estate</u>	<u>HY Real Estate Debt</u>	<u>TIPS</u>	<u>Commodity</u>	<u>Equity Like Risk</u>
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4. Skill and niche categories are not included in benchmark but do have a permitted range to invest in opportunistically

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allocations, indexes, min max ranges, and equity-like risk (Eq-like min of 36%)

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EET expected return and standard deviation

using SDIC expected returns and fat-tail adjusted risk measures

	Expected Standard		Correlation Matrix										
	Return	Deviation	US Eq	Intl Eq	Debt	Cash	Tax -Exe		HY	REITs	Private	RE	TIPS
							Debt	Debt	Equity		Opport		
Domestic (US) Equity	7.3%	22%	100%										
International Equity	7.3%	22%	100%	100%									
Investment Grade debt	4.0%	7%	0%	0%	100%								
Cash	3.6%	1%	0%	0%	0%	100%							
Tax exempt debt	3.2%	8%	0%	0%	100%	0%	100%						
High Yield debt	5.6%	12%	75%	75%	23%	0%	23%	100%					
REITs	6.9%	24%	75%	75%	0%	0%	0%	50%	100%				
Private Equity	8.0%	30%	88%	88%	0%	0%	0%	55%	70%	100%			
RE Opportunistic	7.6%	32%	75%	75%	2%	0%	2%	60%	90%	60%	100%		
Tsy Inflation Protected Sec (TIPS)	4.0%	7%	0%	0%	100%	0%	100%	24%	0%	0%	0%	0%	100%

* Standard deviation is a measure of volatility. There is a 66% chance of being within plus or minus 1 standard deviation, a 95% chance of being within 2 standard deviations.

	US		Intl		Tax		High		Private		RE	Mean	1 year	20 year
	Equity	Equity	Bonds	Cash	Exempt	Yield	REITs	Equity	Opport	Tips	Expected Return	Standard Deviation	Standard Deviation	
70:30 Equity/Debt	70%	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	6.30%	15.5%	3.5%
2003-2005 allocation	25%	0%	10%	0%	35%	10%	10%	0%	0%	10%	4.98%	9.5%	2.1%	
2006 allocation	27%	13%	3%	0%	32%	10%	10%	0%	0%	5%	5.51%	12.1%	2.7%	
2007-2011 allocation	32%	16%	0%	2%	35%	5%	5%	2%	0%	3%	5.60%	12.9%	2.9%	
2012-2013 allocation	35%	17%	0%	2%	30%	5%	6%	2%	0%	3%	5.80%	13.8%	3.1%	
2014 allocation	35%	17%	17%	2%	11%	5%	6%	2%	0%	5%	5.94%	13.8%	3.1%	
2015 allocation	37%	16%	16%	2%	10%	7%	10%	0%	0%	2%	6.05%	14.4%	3.2%	
2016-2018 allocation	34%	17%	20%	2%	10%	7%	10%	0%	0%	0%	5.98%	14.0%	3.1%	
2019 allocation	34%	17%	22%	2%	8%	7%	10%	0%	0%	0%	6.00%	13.9%	3.1%	
Benchmark FY20 (proposed)	34%	17%	22%	2%	8%	7%	10%	0%	0%	0%	6.00%	13.9%	3.1%	

Return Ranges	Mean	1 Year Horizon			20 Year Horizon		
	Exp Ret	up 1 sd	dn 1 sd	dn 2 sd	up 1 sd	dn 1 sd	dn 2 sd
	Benchmark FY20 (proposed)	6.00%	19.9%	-8.0%	-21.9%	9.1%	2.9%