# CLIFFWATERILL

Los Angeles • New York

#### Capital Budgets for Illiquid Asset Classes

Rhode Island State Investment Commission

Tom Lynch, Senior Managing Director, CFA

October 14, 2016

## Capital Budget Process

Utilized new target allocations of 11.25% for private equity, 1.5% for private credit, and 2.25% opportunistic real estate

After discussion with staff, moved four partnership, totaling approximately \$105 million of commitments, from the private equity allocation to the private credit allocation

Summit Partners Credit Fund, LP	20,000,000
Garrison Opportunity Fund IV, LLC	30,000,000
Summit Partners Credit Fund II, L.P.	25,000,000
CapitalSpring Investment Partners V	30,000,000

The eleven non-core real estate funds were transferred from the real estate allocation to the opportunistic real estate allocation

Capital budgeting or pacing planning quantifies the amount and timing of capital commitments

- The capital budget model projects cash flows and market values based on ERSRI's legacy portfolio, and new commitments both overall and by asset category (buyout, venture, non US, energy, debt, etc.).
- The objective is to determine the amount of commitments required each year to reach and maintain the target allocation and to maintain vintage year diversification
- The model projects capital calls, distributions and market value for each fund commitment based on historical averages for the strategy



## Pro Forma Capital Budget Model: Private Equity

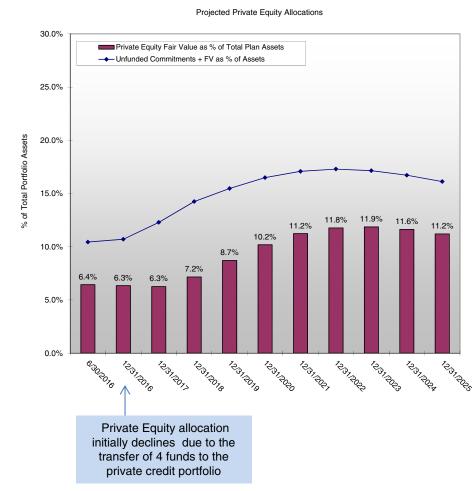
Allocation starts at 6.4% (current allocation), increasing to 11.25% by 2021

Unfunded commitments = 4-7% of total fund

Total fund growth = 3% per year

Be opportunistic, employ ranges Incorporates diversification

- Vintage year
  - New commitments average \$210-300mm per year
  - Last 5 years, commitments have averaged \$116 million per year
- Funds
  - ~5-10 funds per year/\$20-60mm per fund
- Stage/Strategy
  - US Buyouts = 40-60%
  - Venture Capital = 10-30%
  - Non-US = 20-40%





# Private Equity Capital Budget

ERSRI - Capital Budget Model		6/30/2016	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
Forecast Plan Total Assets		7,674,319	7,788,583	8,022,241	8,262,908	8,510,795	8,766,119	9,029,103	9,299,976	9,578,975	9,866,344
New Commitments			155,000	300,000	300,000	230,000	220,000	210,000	210,000	210,000	210,000
Private Equity Fair Value by Sector:											
Private Equity Total		493,920	493,796	501,607	591,733	740,721	893,271	1,014,037	1,094,497	1,136,369	1,147,724
Strategy Diversification:	Target Range	6/30/2016	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
Buyout	30%-70%	40.2%	41.7%	47.0%	52.8%	56.5%	58.1%	58.8%	59.3%	59.7%	60.1%
Venture Capital	10%-30%	21.3%	19.2%	15.3%	14.5%	15.5%	16.8%	18.0%	18.9%	19.4%	19.7%
Non-U.S.	5%-30%	27.8%	28.2%	28.5%	27.2%	25.2%	23.6%	22.4%	21.5%	20.8%	20.2%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Private Equity Fair Value as % of Total F	Plan Assets	6.4%	6.3%	6.3%	7.2%	8.7%	10.2%	11.2%	11.8%	11.9%	11.6%
Private Equity Target Asset Allocation		11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%
Unfunded Commitments and Fair Value		6/30/2016	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
Private Equity Unfunded Commitments		307,112	339,759	484,127	585,274	576,239	552,333	528,555	514,092	506,138	501,763
Unfunded Commitments + FV		801,032	833,555	985,735	1,177,006	1,316,960	1,445,604	1,542,592	1,608,588	1,642,506	1,649,487
Unfunded Commitments + FV as % of A	ssets	10.4%	10.7%	12.3%	14.2%	15.5%	16.5%	17.1%	17.3%	17.1%	16.7%
Ratio of Unf Com + FV to Target Allocati	ion	0.93x	0.95x	1.09x	1.27x	1.38x	1.47x	1.52x	1.54x	1.52x	1.49x
Net Cash Flow Requirements			12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
Buyout			2,352	(9,430)	(53,607)	(75,380)	(59,398)	(26,305)	6,432	34,729	55,846
Venture Capital			15,610	26,920	(998)	(20,489)	(23,980)	(17,810)	(6,258)	6,261	16,254
Non-U.S.			4,825	10,141	(4,005)	(9,936)	(6,065)	4,190	14,664	22,464	27,388
Total Net Cash Flow to Private Equity			24,566	40,828	(40,717)	(90,703)	(79,588)	(32,779)	19,423	65,936	100,577
Annual Commitments by Strategy			12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
Existing Commitments			95,000	0	0	0	0	0	0	0	0
Buyout			30,000	180,000	180,000	130,000	130,000	130,000	130,000	130,000	130,000
Venture Capital			0	60,000	60,000	50,000	50,000	40,000	40,000	40,000	40,000
Non-U.S.			30,000	60,000	60,000	50,000	40,000	40,000	40,000	40,000	40,000
Total Annual Commitments to Private Ed	quity		155,000	300,000	300,000	230,000	220,000	210,000	210,000	210,000	210,000
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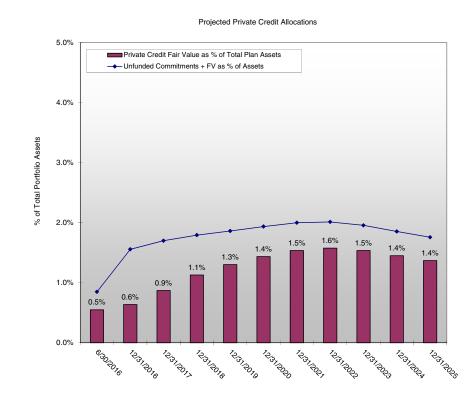


Total Plan Assets assumed to grow at 3.0%

#### Pro Forma Capital Budget Model: Private Credit

Allocation starts at 0.5%, increasing to 1.5% by 2021
Unfunded commitments = 0.4-1.0% of total fund
Total fund growth = 3% per year
More flexibility allowed by GPs
Incorporates diversification

- Vintage year
  - new commitments average \$30m per year
- Manager
  - ~1-2 funds
- Stage/Strategy
  - Illiquid Direct Lending (US & EU)
  - Illiquid Stressed
  - Illiquid Other (Specialty, Royalties)
- Geography
  - Non-US = 5-20%





# Private Credit Capital Budget

6/30/2016	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
7,674,316	7,788,580	8,022,237	8,262,905	8,510,792	8,766,116	9,029,099	9,299,972	9,578,971	9,866,340
	61,154	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
42,075	49,502	69,697	93,221	110,669	125,765	138,671	146,466	147,160	143,008
0.5%	0.6%	0.9%	1.1%	1.3%	1.4%	1.5%	1.6%	1.5%	1.4%
1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
6/20/2016	12/21/2016	10/21/2017	10/21/2019	12/21/2010	12/21/2020	10/21/2021	10/21/2022	10/21/2022	12/31/2024
									39,769
,	,	,	,	,	,	,	,	,	,
									182,777
									1.9%
0.56x	1.04x	1.13x	1.19x	1.24x	1.29x	1.33x	1.34x	1.30x	1.24x
	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
	(5,946)	(16,664)	(18,156)	(9,607)	(5,108)	(1,010)	5,656	13,666	18,632
	10/01/0010	10/01/0017	10/01/0010	10/01/0010	10/01/0000	10/01/0001	10/01/0000	10/01/0000	10/01/0001
									12/31/2024
	61,154	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
	7,674,316 <b>42,075</b> 0.5%	7,674,316 7,788,580 61,154  42,075 49,502  0.5% 0.6% 1.5% 1.5% 1.5%  6/30/2016 12/31/2016 22,921 71,699 64,997 121,201 0.8% 1.6% 0.56x 1.04x 12/31/2016 (5,946)  12/31/2016 12/31/2016	7,674,316 7,788,580 8,022,237 61,154 30,000  42,075 49,502 69,697  0.5% 0.6% 0.9% 1.5% 1.5% 1.5%  6/30/2016 12/31/2016 12/31/2017 22,921 71,699 66,588 64,997 121,201 136,285 0.8% 1.6% 1.7% 0.56x 1.04x 1.13x  12/31/2016 12/31/2017 (5,946) (16,664)	7,674,316         7,788,580 61,154         8,022,237 30,000         8,262,905 30,000           42,075         49,502         69,697         93,221           0.5%         0.6%         0.9%         1.1%           1.5%         1.5%         1.5%         1.5%           6/30/2016         12/31/2016         12/31/2017         12/31/2018           22,921         71,699         66,588         54,861           64,997         121,201         136,285         148,082           0.8%         1.6%         1.7%         1.8%           0.56x         1.04x         1.13x         1.19x           12/31/2016         12/31/2017         12/31/2018         (5,946)         (16,664)         (18,156)           12/31/2016         12/31/2017         12/31/2018         (2,946)         (12/31/2017         12/31/2018	7,674,316         7,788,580 61,154         8,022,237 30,000         8,262,905 30,000         8,510,792 30,000           42,075         49,502         69,697         93,221         110,669           0.5%         0.6%         0.9%         1.1%         1.3%           1.5%         1.5%         1.5%         1.5%         1.5%           6/30/2016         12/31/2016         12/31/2017         12/31/2018         12/31/2019           22,921         71,699         66,588         54,861         47,729           64,997         121,201         136,285         148,082         158,398           0.8%         1.6%         1.7%         1.8%         1.9%           0.56x         1.04x         1.13x         1.19x         1.24x           12/31/2016         12/31/2017         12/31/2018         12/31/2019           (5,946)         (16,664)         (18,156)         (9,607)	7,674,316         7,788,580 61,154         8,022,237 30,000         8,262,905 30,000         8,510,792 30,000         8,766,116 30,000           42,075         49,502         69,697         93,221         110,669         125,765           0.5%         0.6%         0.9%         1.1%         1.3%         1.4%           1.5%         1.5%         1.5%         1.5%         1.5%         1.5%           6/30/2016         12/31/2016         12/31/2017         12/31/2018         12/31/2019         12/31/2020           22,921         71,699         66,588         54,861         47,729         43,803           64,997         121,201         136,285         148,082         158,398         169,568           0.8%         1.6%         1.7%         1.8%         1.9%         1.9%           0.56x         1.04x         1.13x         1.19x         1.2/31/2019         12/31/2020           (5,946)         (16,664)         (18,156)         (9,607)         (5,108)           12/31/2016         12/31/2017         12/31/2018         12/31/2019         12/31/2020	7,674,316         7,788,580 61,154         8,022,237 30,000         8,262,905 30,000         8,510,792 30,000         8,766,116 30,000         9,029,099 30,000           42,075         49,502         69,697         93,221         110,669         125,765         138,671           0.5%         0.6%         0.9%         1.1%         1.3%         1.4%         1.5%           1.5%         1.5%         1.5%         1.5%         1.5%         1.5%         1.5%           6/30/2016         12/31/2016         12/31/2017         12/31/2018         12/31/2019         12/31/2020         12/31/2021           22,921         71,699         66,588         54,861         47,729         43,803         41,723           64,997         121,201         136,285         148,082         158,398         169,568         180,394           0.8%         1.6%         1.7%         1.8%         1.9%         1.9%         2.0%           0.56x         1.04x         1.13x         1.19x         1.24x         1.29x         1.33x           12/31/2016         12/31/2017         12/31/2018         12/31/2019         12/31/2020         12/31/2021           (5,946)         (16,664)         (18,156)         (9,607)         (	7,674,316         7,788,580 61,154         8,022,237 30,000         8,262,905 30,000         8,510,792 30,000         8,766,116 30,000         9,029,099 30,000         9,299,972 30,000           42,075         49,502         69,697         93,221         110,669         125,765         138,671         146,466           0.5%         0.6%         0.9%         1.1%         1.3%         1.4%         1.5%         1.6%           1.5%         1.5%         1.5%         1.5%         1.5%         1.5%         1.5%         1.5%           6/30/2016         12/31/2016         12/31/2017         12/31/2018         12/31/2019         12/31/2020         12/31/2021         12/31/2022           22,921         71,699         66,588         54,861         47,729         43,803         41,723         40,636           64,997         121,201         136,285         148,082         158,398         169,568         180,394         187,101           0.8%         1.6%         1.7%         1.8%         1.9%         1.9%         2.0%         2.0%           0.56x         1.04x         1.13x         1.19x         1.24x         1.29x         1.33x         1.34x           12/31/2016         12/31/2017         12/31/201	7,674,316         7,788,580         8,022,237         8,262,905         8,510,792         8,766,116         9,029,099         9,299,972         9,578,971           61,154         30,000

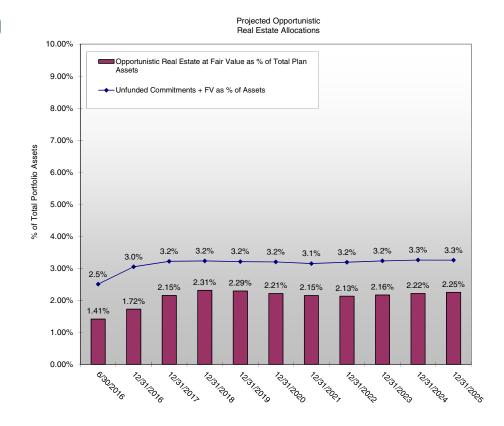


Total Plan Assets assumed to grow at 3.0%

#### Pro Forma Capital Budget Model: Opportunistic Real Estate

Allocation starts at 1.4%, increasing to 2.25% by 2021
Unfunded commitments = 1.3-1.0% of total fund
Total fund growth = 3% per year
More flexibility allowed by GPs
Incorporates diversification

- Vintage year
  - new commitments average \$50m-\$70mm per year
- Manager
  - ~1-3 funds
- Stage/Strategy
  - Value Add
  - Opportunistic
  - Distressed





# Opportunistic Real Estate Capital Budget

ERSRI - Capital Budget Model	6/30/2016	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
Forecast Plan Total Assets	7,674,319	7,863,837	8,257,029	8,669,880	9,103,374	9,558,543	10,036,470	10,538,294	11,065,208	11,618,469
New Commitments		50,000	40,000	40,000	50,000	60,000	60,000	70,000	70,000	70,000
Opportunistic Real Estate at Fair Value	108,430	135,497	177,469	200,305	208,490	211,288	215,385	224,390	239,488	257,355
Opportunistic Real Estate at Fair Value as % of Total Pla	1.41%	1.72%	2.15%	2.31%	2.29%	2.21%	2.15%	2.13%	2.16%	2.22%
Opportunistic Real Estate Target Asset Allocation	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%
Unfunded Commitments and Fair Value	6/30/2016	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
Private Equity Unfunded Commitments	83,708	104,031	88,109	79,530	83,490	94,339	100,382	111,653	117,908	121,035
Unfunded Commitments + FV	192,138	239,528	265,578	279,835	291,980	305,626	315,767	336,044	357,396	378,390
Unfunded Commitments + FV as % of Assets	2.5%	3.0%	3.2%	3.2%	3.2%	3.2%	3.1%	3.2%	3.2%	3.3%
Ratio of Unf Com + FV to Target Allocation	1.11x	1.35x	1.43x	1.43x	1.43x	1.42x	1.40x	1.42x	1.44x	1.45x
Net Cash Flow Requirements		12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
Total Net Cash Flow to Opportunistic Real Estate		(22,431)	(30,388)	(7,662)	8,941	15,028	13,968	9,410	4,088	2,609
<u> </u>			, ,		-			-		
Annual Commitments by Strategy		12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
Total Annual Commitments to Opportunistic Real Estate		50,000	40,000	40,000	50,000	60,000	60,000	70,000	70,000	70,000

Total Plan Assets assumed to grow at 5.0%



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