

Managers and Assets Under Management as of December 31, 2020
 State of Hawaii Employees' Retirement System

Risk-Based Policy Framework

Strategic Class	Sub-Class	Manager	Assets Under Management	% of Total	Inception Date			
Broad Growth	Public Growth	Global Small Cap Equity	747,634,491	3.82%	1/1/2019			
		Global Small Cap Equity	560,446,336	2.86%	4/1/2017			
		Global Mid-Large Cap Equity	801,150,961	4.10%	9/1/2017			
		Global Mid-Large Cap Equity	912,270,730	4.66%	3/1/2020			
		Global Mid-Large Cap Equity	817,086,049	4.18%	3/1/2020			
		Global Equity - Passive	BlackRock - Alpha Tilts	818,767,096	4.19%	6/1/2016		
		Global Equity - Passive	Legal & General	1,634,714,942	8.36%	5/1/2016		
		Public Extended Global Credit	HPS Credit	506,819,545	2.59%	6/30/2019		
		Public Extended Global Credit	Silverrock Credit	158,435,003	0.81%	11/1/2019		
		Public Extended Global Credit	PIMCO	209,598,544	1.07%	4/1/2015		
		Public Extended Global Credit	Carval Credit	93,945,744	0.48%	4/1/2020		
		Public Extended Global Credit	OHA Tactical	20,027,568	0.10%	7/1/2020		
		Low Volatility Equity	Robeco	585,346,545	2.99%	10/1/2016		
		Low Volatility Equity	TOBAM	582,899,091	2.98%	10/1/2016		
		Options-Based Equity	AQR	9,525	0.00%	6/30/2019		
		Options-Based Equity	AQR Prime Broker	(4,550)	0.00%	9/1/2020		
		Options-Based Equity	Gateway Investment Advisers LLC - Put-Write	775,739,995	3.97%	9/1/2016		
		Options-Based Equity	Geode	719,711,876	3.68%	10/1/2019		
		Options-Based Equity	Neuberger Berman	756,662,109	3.87%	10/1/2016		
		Private Growth	Private Equity	Hamilton Lane	2,200,386,014	11.25%	11/1/1997	
				Secondary Private Equity	47,148,155	0.24%	7/1/2018	
				HITIP	16,354,810	0.08%	5/1/2009	
				HITIP	16,660,157	0.09%	4/1/2017	
HITIP	2,060,828			0.01%	2/1/2020			
Real Assets	Core Real Estate	Core Real Estate (Separate)	482,285,607	2.47%	11/1/1995			
		Core Real Estate	Heitman Core RE Debt Fund	49,085,857	0.25%	2/1/2018		
		Core Real Estate	Cabot Ind Core	1	0.00%	8/1/2016		
		Core Real Estate	INVESCO Comm Mortgage	80,804,935	0.41%	5/1/2018		
		Non-Core Real Estate - Opportunistic	AG EUROPE REALTY III	6,566,214	0.03%	5/1/2020		
		Non-Core Real Estate - Opportunistic	BlackSand Capital Fund I	2,196,852	0.01%	9/1/2011		
		Non-Core Real Estate - Opportunistic	BlackSand Capital Fund II	3,674,289	0.02%	4/1/2019		
		Non-Core Real Estate - Opportunistic	Blackstone Real Estate VII	8,291,197	0.04%	6/1/2012		
		Non-Core Real Estate - Opportunistic	Blackstone REP EURO VI	11,657,553	0.06%	12/1/2019		
		Non-Core Real Estate - Opportunistic	Blackstone Real Estate IX	16,452,203	0.08%	10/1/2019		
		Non-Core Real Estate - Opportunistic	Cerberus IV	32,268,182	0.16%	1/1/2017		
		Non-Core Real Estate - Opportunistic	EJF OPZONE 1	31,614,385	0.16%	4/1/2020		
		Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund II	3,038,598	0.02%	7/1/2012		
		Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund III	13,231,235	0.07%	1/1/2015		
		Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund IV	4,598,405	0.02%	8/1/2018		
		Non-Core Real Estate - Opportunistic	Lone Star Fund II	404,434	0.00%	6/1/2011		
		Non-Core Real Estate - Opportunistic	Lone Star Fund VII	185,641	0.00%	6/1/2011		
		Non-Core Real Estate - Opportunistic	Torchlight Debt Opportunity Fund V	11,079,828	0.06%	6/1/2015		
		Non-Core Real Estate - Opportunistic	Torchlight Debt Fund VI	50,226,908	0.26%	3/1/2018		
		Non-Core Real Estate - Opportunistic	Torchlight Debt Fund VII	4,846,735	0.02%	7/1/2020		
		Non-Core Real Estate - Value-Add	AG Asia Realty Fund III	16,101,968	0.08%	7/1/2016		
		Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund II	496,328	0.00%	4/1/2008		
		Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund III	3,820,071	0.02%	4/1/2012		
		Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund IV	39,701,374	0.20%	6/1/2015		
		Non-Core Real Estate - Value-Add	AG Realty Value X	14,962,339	0.08%	11/1/2019		
		Non-Core Real Estate - Value-Add	AG Europe Realty II	52,769,462	0.27%	5/1/2018		
		Non-Core Real Estate - Value-Add	Almanac VI	2,549,538	0.01%	11/1/2012		
		Non-Core Real Estate - Value-Add	Almanac VII	19,482,004	0.10%	4/1/2015		
		Non-Core Real Estate - Value-Add	Almanac VIII	9,516,930	0.05%	1/1/2019		
		Non-Core Real Estate - Value-Add	BlackRock Asia IV	34,383,002	0.18%	7/1/2017		
		Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value Fund VI	0	0.00%	10/1/2012		
		Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value Fund VII	617,673	0.00%	5/1/2015		
		Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value 8	46,223,922	0.24%	10/1/2017		
		Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value 9	12,766,847	0.07%	2/1/2020		
		Non-Core Real Estate - Value-Add	DRA GR INC IX	34,367,377	0.18%	2/1/2017		
		Non-Core Real Estate - Value-Add	DRA GR INC X	6,443,230	0.03%	4/1/2020		
		Non-Core Real Estate - Value-Add	H2 CP (RE Debt)	2,314,830	0.01%	11/1/2016		
		Non-Core Real Estate - Value-Add	Kayne Anderson V	43,448,181	0.22%	6/1/2018		
		Non-Core Real Estate - Value-Add	KKR Rep Americas II	37,954,253	0.19%	3/1/2018		
		Non-Core Real Estate - Value-Add	LaSalle Income & Growth Fund VII	21,605,544	0.11%	8/1/2016		
		Non-Core Real Estate - Value-Add	LaSalle Income Growth Fund VIII	8,614,677	0.04%	3/1/2020		
		Non-Core Real Estate - Value-Add	Mesa West RE Inc Fund III	961,765	0.00%	9/1/2013		
		Non-Core Real Estate - Value-Add	Mesa West RE Fund IV	12,307,074	0.06%	4/1/2017		
		Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund IV	546,171	0.00%	4/1/2012		
		Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund V	25,014,931	0.13%	5/1/2015		
		Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund VI	7,576,344	0.04%	9/1/2019		
		Non-Core Real Estate - Value-Add	Starwood Fund XI	20,282,169	0.10%	8/1/2018		
		Infrastructure	KKR Global Infrastructure II	31,450,781	0.16%	12/1/2014		
		Infrastructure	ISQ Global Infrastructure (RE)	17,662,461	0.09%	6/1/2015		
		Infrastructure	ISQ Global Infrastructure II	34,103,528	0.17%	7/1/2018		
		Timber	Timber	182,921,896	0.94%	9/1/1999		
		Diversifying Strategies	Liquid Defensive	Alternative Return Capture	P/E Global Macro	270,884,031	1.38%	4/1/2017
				Systematic Trend Following	AlphaSimplex	244,893,555	1.25%	1/1/2018
				Systematic Trend Following	Aspect Core Fund	233,699,629	1.19%	4/1/2017
				Systematic Trend Following	Crabel Advanced Trend	383,315,842	1.96%	4/1/2017
				Systematic Trend Following	Mount Lucas	210,978,545	1.08%	4/1/2019
				US Intermediate	Bank of Hawaii	340,414,841	1.74%	11/1/2017
				GILS	BlackRock	207,940,325	1.06%	9/1/2011
				US Intermediate	First Hawaiian Bank	338,749,387	1.73%	11/1/1991
				Non-US Intermediate	Neuberger Global Fixed	(4,370)	0.00%	9/1/2019
				Treasury Duration Capture	Ryan Labs Long Treasury	0	0.00%	4/1/2017
				Treasury Duration Capture	Ryan Labs Treasury Custody	679,652,075	3.47%	10/1/2019
			Liquid Diversifying	Alternative Return Capture	ARP Alternative Return Capture	97,980,071	0.50%	4/1/2019
Alternative Return Capture	Graham Quant Macro			337,310,836	1.72%	4/1/2017		
Alternative Return Capture	Lombard Odier Risk Premia			180,415,263	0.92%	4/1/2019		
Alternative Return Capture	AB TALE OPPORTUNITY 2020			0	0.00%	7/1/2020		
Illiquid Diversifying	Treasury Duration Capture		NEPHILA ULU FUND	75,000,000	0.38%	1/1/2021		
	Treasury Duration Capture		PILLAR ENSO FUND	107,810,703	0.55%	7/1/2020		
	Treasury Duration Capture		PETERSHILL IV	39,229	0.00%	10/1/2020		
	Treasury Duration Capture		WELLINGTON TALE	7,012,089	0.04%	6/1/2020		
	Relative Value Arbitrage		AQUIM ARBITRAGE	54,603,646	0.28%	11/1/2020		
	Relative Value Arbitrage		AQUIM REL VAL ARBITRAGE	76,318,037	0.39%	12/1/2020		
	Relative Value Arbitrage	MONASHEE REL VAL ARBITRAGE	195,348,673	1.00%	12/1/2020			
	Opportunities	Lowe Enterprises	36,066,624	0.18%	1/1/2015			
	All Other Assets	Cash Account	BNY Mellon	323,663,135	1.65%	2/1/1998		
Bank of Hawaii			53,779,697	0.27%	1/1/1972			
Transition Account I			BNY Mellon	954,370	0.00%	4/1/2002		
Transition Account II		BNY Mellon	6,287,368	0.03%	7/1/2011			
		Residual Account	BNY Mellon	137,065	0.00%	6/1/2013		
Closing Accounts		Overlay	Parametric Overlay	547,498,227	2.80%	6/1/2019		
		Public Extended Global Credit	Western Asset	5,895,160	0.03%	7/1/2005		
		Core Real Estate	INVESCO REALTY	3,283	0.00%	7/1/2013		
		Non-US Intermediate	Eaton Vance	591,743	0.00%	6/1/1989		
		Public Extended Global Credit	Tortoise Credit	5,453,124	0.03%	5/1/1990		
		World ex-US Equity	Franklin Templeton	718,312	0.00%	11/1/2011		
		World ex-US Equity	JP Morgan Chase	55,477	0.00%	9/1/2005		
World ex-US Equity		Franklin Templeton	86,693	0.00%	12/1/2003			
Emerging Markets Equity	QMA	3,515,544	0.02%	12/1/2011				
Non-US Intermediate	PIMCO	2,672	0.00%	3/1/1979				
Non-US Intermediate	Fidelity Institutional	185,083	0.00%	4/1/2017				
Total Fund Value			19,563,603,876	100.00%				

Source: BNY Mellon