## Managers and Assets Under Management State of Hawaii Employees' Retirement System **Risk-Based Policy Framework**

Strategic Class	Sub-Class	Asset Class	Manager / Composite		% of Total	Inception
eti atogio elaco			manager / composite	Management (\$)	Fund	Date
Broad Growth						
Broau Growth	Public Growth					
		Global Equity - Passive	BlackRock	642,550,779	2.89%	06/01/2016
		Global Equity - Passive	Legal & General	807,454,079	3.63%	05/01/2016
		Global Equity - Mid-Large Cap	Alliance Bernstein	669,765,524	3.01%	03/01/2020
		Global Equity - Mid-Large Cap	Longview	888,260,138		09/01/2017
		Global Equity - Mid-Large Cap	Wellington	656,781,898		03/01/2020
		Global Equity - Small-Mid Cap	Wasatch	527,041,962 541,782,266		01/01/2019 04/01/2017
		Global Equity - Small-Mid Cap Global Equity - China	Wellington Hillhouse China A Shares	160,413,365		05/01/2022
		Global Equity - Low Volatility	Robeco	273,105,820		10/01/2016
		Global Equity - Low Volatility	TOBAM	2,698,926	0.01%	10/01/2016
		Convertibles	Lord Abbett	294,055,383	1.32%	05/01/2021
		Global Credit	Avenue Asia Imiloa	85,972,630		12/01/2022
		Global Credit	Carval	281,462,436		04/01/2020
		Global Credit	Fortress Lending	119,449,896		09/01/2022
		Global Credit Global Credit	HPS Jefferies Direct Lending	572,644,996 37,971,577		06/30/2019 09/01/2022
		Global Credit	Lafayette Square USA	34,198,741		07/01/2022
		Global Credit	OHA	134,805,951		07/01/2020
		Global Credit	PIMCO	99,261,466		10/01/2021
		Global Credit	SilverRock	304,351,582	1.37%	11/01/2019
		Global Credit	SilverRock 2022	170,841,747	0.77%	12/01/2022
	Private Growth	Privato Equity	Hamilton Lana	2 077 121 5/2	17 000/	11/01/1997
		Private Equity Private Equity	Hamilton Lane Secondary Private Equity	3,977,131,542 67,485,567		07/01/2018
		Private Equity	Direct Private Equity	6,736,103		07/01/2021
		HiTIP	Stafford	10,131,427		05/01/2009
		HiTIP	Stafford II	43,514,727	0.20%	04/01/2017
		HiTIP	Stafford III	27,777,633		02/01/2020
		Private Equity	Stafford Hoolu	10,554,436	0.05%	06/01/2023
	Real Assets					
	Real Assels	Core Real Estate	Heitman	736,738,143	3 31%	11/01/1995
		Core Real Estate	Heitman Core Real Estate Debt	45,849,490		02/01/2018
		Core Real Estate	Invesco Comm Mortgage	92,396,802	0.42%	05/01/2018
		Core Real Estate	Prime Property	204,446,083	0.92%	07/01/2022
		Core Real Estate	RREEF	132,625,057		08/01/2022
		Non-Core Real Estate - Opportunistic	AG Asia Realty Fund III	9,534,980		07/01/2016
		Non-Core Real Estate - Opportunistic Non-Core Real Estate - Opportunistic	AG Europe Realty II AG Europe Realty III	44,320,644 35,008,105		05/01/2018 05/01/2020
		Non-Core Real Estate - Opportunistic	BlackRock Asia IV	29,294,166		07/01/2017
		Non-Core Real Estate - Opportunistic	BlackSand Capital Fund I	1,936,968		09/01/2011
		Non-Core Real Estate - Opportunistic	BlackSand Capital Fund II	17,665,467		04/01/2019
		Non-Core Real Estate - Opportunistic	Blackstone Real Estate VII	3,729,089	0.02%	06/01/2012
		Non-Core Real Estate - Opportunistic	Blackstone REP Euro VI	30,874,706		12/01/2019
		Non-Core Real Estate - Opportunistic	Blackstone Real Estate IX	59,344,628		10/01/2019
		Non-Core Real Estate - Opportunistic Non-Core Real Estate - Opportunistic	Blackstone Real Estate X Cerberus IV	1,859,017		04/01/2023 01/01/2017
		Non-Core Real Estate - Opportunistic	EJF Opzone 1	32,319,419 69,107,718		04/01/2020
		Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund II	3,363,131		07/01/2012
		Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund III	15,484,552		01/01/2015
		Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund IV	14,078,536	0.06%	08/01/2018
		Non-Core Real Estate - Opportunistic	Kayne Anderson V	40,033,536		06/01/2018
		Non-Core Real Estate - Opportunistic	Kayne Anderson VI	18,542,860		07/01/2021
		Non-Core Real Estate - Opportunistic	KKR Rep Americas II	14,817,764		03/01/2018
		Non-Core Real Estate - Opportunistic Non-Core Real Estate - Opportunistic	Lone Star Fund II Lone Star Fund VII	59,208 118,799		06/01/2011 06/01/2011
		Non-Core Real Estate - Opportunistic	Starwood Fund XI	40,516,507		08/01/2018
		Non-Core Real Estate - Opportunistic	Starwood Dis Op XII Glob	11,119,818		02/01/2022
		Non-Core Real Estate - Opportunistic	Torchlight Debt Op. Fund V	3,908,494		06/01/2015
		Non-Core Real Estate - Opportunistic	Torchlight Debt Fund VI	37,121,061		03/01/2018
		Non-Core Real Estate - Opportunistic	Torchlight Debt Fund VII	27,334,202	0.12%	07/01/2020

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Strategic Class	Sub-Class	Asset Class	Manager / Composite	Assets Under Management (\$)	% of Total Fund	Inception Date
				Management (\$)	Funa	Date
Broad Growth						
	Real Assets	Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund III	176 260	0.00%	04/01/2012
		Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund IV	176,369 16,919,682	0.00%	06/01/2012
		Non-Core Real Estate - Value-Add	AG Realty Value X	34,238,803	0.15%	11/01/2019
		Non-Core Real Estate - Value-Add	AG Realty Value XI	3,781,303	0.02%	11/01/2022
		Non-Core Real Estate - Value-Add	Almanac VI	2,492,440	0.01%	11/01/2012
		Non-Core Real Estate - Value-Add	Almanac VII	22,828,392	0.10%	04/01/2015
		Non-Core Real Estate - Value-Add	Almanac VIII	30,942,389	0.14%	01/01/2019
		Non-Core Real Estate - Value-Add	Almanac IX	5,858,199	0.03%	12/01/2022
		Non-Core Real Estate - Value-Add Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value VII CBRE Strategic Partners Value 8	14,576 34,558,977	0.00% 0.16%	05/01/2015 10/01/2017
		Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value 9	27,557,916	0.10%	02/01/2020
		Non-Core Real Estate - Value-Add	DRA GR INC IX	27,167,994	0.12%	02/01/2017
		Non-Core Real Estate - Value-Add	DRA GR INC X	40,222,240	0.18%	04/01/2020
		Non-Core Real Estate - Value-Add	GLP Capital IV	41,727,694	0.19%	06/01/2021
		Non-Core Real Estate - Value-Add	Invesco RE VI	21,285,896	0.10%	10/01/2022
		Non-Core Real Estate - Value-Add	LaSalle Income & Growth Fund VII	12,838,547	0.06%	08/01/2016
		Non-Core Real Estate - Value-Add	LaSalle Income & Growth Fund VIII	30,911,310	0.14%	03/01/2020
		Non-Core Real Estate - Value-Add	Mesa West	12,305,079	0.06%	12/01/2021
		Non-Core Real Estate - Value-Add Non-Core Real Estate - Value-Add	Mesa West RE Fund IV Prudential Sr Housing Fund V	8,275,466 23,971,735	0.04% 0.11%	04/01/2017 05/01/2015
		Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund VI	38,432,104	0.17%	09/01/2019
		Infrastructure	KKR Global Infrastructure II	21,453,553	0.10%	12/01/2014
		Infrastructure	KKR Global Infrastructure IV	28,441,585	0.13%	05/01/2022
		Infrastructure	KKR Div Core Infrastructure	159,244,397	0.72%	05/01/2022
		Infrastructure	ISQ Global Infrastructure I	18,162,872	0.08%	06/01/2015
		Infrastructure	ISQ Global Infrastructure II	52,553,646	0.24%	07/01/2018
		Infrastructure	ISQ Global Infrastructure III	14,818,499	0.07%	01/01/2022
		Infrastructure Agriculture	IFM Global Infrastructure PGIM US Agriculture	168,808,386 74,223,052	0.76% 0.33%	05/01/2022 07/01/2022
		Agriculture	UBS Agrivest Farmland	106,003,363	0.33%	10/01/2021
		Agriculture	Fiera CG Agriculture	18,588,422	0.08%	01/01/2023
		Timber	Hancock	201,861,524	0.91%	09/01/1999
		Other Real Assets	Morgan Stanley Olomana	574,170,778	2.58%	04/01/2022
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Diversifying Stra	Liquid Defensiv					
	Liquid Bolonon	Defensive Return Capture	36 South	241,674,615	1.09%	03/01/2022
		Defensive Return Capture	AHL Defensive	103,012,336	0.46%	07/01/2021
		Defensive Return Capture	Lombard Odier Bear Conv	141,897,335	0.64%	04/01/2019
		Defensive Return Capture	P/E Global	249,772,564	1.12%	04/01/2017
		Defensive Return Capture	SABA	218,012,151	0.98%	04/01/2022
		Systematic Trend Following Systematic Trend Following	AlphaSimplex	232,943,959		01/01/2018
		Systematic Trend Following	Aspect Crabel	248,120,414 372,728,937	1.12% 1.68%	04/01/2017 04/01/2017
		Systematic Trend Following	Mount Lucas	227,705,617	1.02%	04/01/2019
		Treasury Duration Capture	Bank of Hawaii	150,558,469	0.68%	11/01/2017
		Treasury Duration Capture	First Hawaiian Bank	150,418,318	0.68%	11/01/1991
		Treasury Duration Capture	SLC Management	383,494,627	1.73%	10/01/2019
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	Liquid Diversify	Alternative Return Capture	Brevan Howard	349,054,085	1.57%	11/01/2021
		Alternative Return Capture	Credit Suisse	209,030,708	0.94%	01/01/2022
		Alternative Return Capture	Graham	348,726,866	1.57%	04/01/2017
		Relative Value Arbitrage	Aequim Arbitrage	64,874,907	0.29%	11/01/2020
		Relative Value Arbitrage	Aequim Relative Value Arbitrage	273,011,600	1.23%	12/01/2020
		Relative Value Arbitrage	Aristeia	308,907,471	1.39%	07/01/2021
		Relative Value Arbitrage	Broad Reach	194,259,448	0.87%	09/01/2022
		Relative Value Arbitrage	Melqart Monashee	213,969,526	0.96%	09/01/2022
		Relative Value Arbitrage Relative Value Arbitrage	Monashee Shaolin	241,983,625 260,240,645	1.09% 1.17%	12/01/2020 05/01/2021
		Relative Value Arbitrage	UBS O'Conner	231,647,579	1.04%	01/01/2022
		Relative Value Arbitrage	Weiss	208,302,333	0.94%	09/01/2022

Strategic Class	Sub-Class	Asset Class	Manager / Composite	Assets Under Management (\$)	% of Total Fund	Inception Date		
Diversifying Strategies								
I	Iliquid Diversif	ying						
		Idiosyncratic Return Capture	Blackstone	271,031,221	1.22%	02/01/2021		
		Idiosyncratic Return Capture	Cloverlay Leahi	92,357,360	0.42%	01/01/2022		
		Idiosyncratic Return Capture	CommonFund Kaala	29,197,980	0.13%			
		Idiosyncratic Return Capture	MYAM Asia Opportunity	141,727,455	0.64%			
		Idiosyncratic Return Capture	Orthogon Partners III	3,710,618	0.02%			
		Idiosyncratic Return Capture	Parabellum Partners III	36,790,162	0.17%			
		Idiosyncratic Return Capture	Petershill IV	13,895,155	0.06%	10/01/2020		
		Idiosyncratic Return Capture	Stable Clear Sky	84,275,775	0.38%	02/01/2023		
		Insurance-linked	Nephila	182,468,705	0.82%	01/01/2021		
		Insurance-linked	Pillar	219,405,067	0.99%	07/01/2020		
All Other Assets								
	Cash-related							
		Cash Account	Operating Account	255,936,506	1.15%	02/01/1998		
		Cash Account	Other Cash	65,781,404	0.30%	01/01/1972		
		Cash Account	CRO Transition Account	9,716	0.00%	04/01/2017		
		Transition Account I	BNY Mellon	175,868	0.00%	04/01/2002		
		Transition Account II	BNY Mellon	1,444,724	0.01%	07/01/2011		
		Residual Account	BNY Mellon	402	0.00%	06/01/2013		
		Cash Overlay	Parametric	96,941,702	0.44%	06/01/2019		
		Other	Invest Summit	146,939	0.00%	06/01/2023		
Closing Accounts								
		Global Equity - Small Cap	Fidelity	51,641	0.00%	04/01/2017		
		World ex-US Equity	Mercator	77.276	0.00%	12/01/2003		
		Emerging Markets Equity	QMA	1,184,164	0.01%			
		Global Equity - Options-Based	Gateway	39	0.00%	09/01/2016		
		Global Credit	Western Asset	6,136,978	0.03%			
		Global Credit	PIMCO	7,221,959	0.03%			
		Non-US Intermediate Fixed Income	Eaton Vance	321,867	0.00%	06/01/1989		
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Total Fund				22,231,227,556	100.00%			