

Managers and Assets Under Management as of December 31, 2016
State of Hawaii Employees' Retirement System

Risk-Based Policy Framework

Strategic Class	Sub-Class	Manager	Assets Under Management	% of Total
Broad Growth	Traditional Growth			
	Domestic Large Cap Growth Equity	JP Morgan LCG	404,795,985	2.72%
	Domestic Large Cap Value Equity	Barrow Hanley	509,543,909	3.42%
	Domestic Large Cap Core Equity	Bank of Hawaii	190,687,273	1.28%
	Domestic Large Cap Core Equity	CM Bidwell & Associates	177,456,486	1.19%
	Domestic Small Cap Core Equity	Jennison Associates	323,724,025	2.17%
	Domestic Small Cap Core Equity	T Rowe Price Associates	332,746,821	2.23%
	World ex-US Equity	Franklin Templeton	435,609,931	2.92%
	Emerging Markets Equity	QMA	326,880,426	2.19%
	Global Equity - Passive	BlackRock - Alpha Tilts	800,222,888	5.37%
	Global Equity - Passive	Legal & General	2,010,801,858	13.49%
	Stabilized Growth			
	Public Extended Global Credit	Bradford & Marzec	306,561,242	2.06%
	Public Extended Global Credit	PIMCO	164,071,907	1.10%
	Public Extended Global Credit	Western Asset Management	528,211,046	3.54%
	Core Real Estate (Separate)	Heitman Capital	284,125,795	1.91%
	Core Real Estate (Separate)	INVESCO Realty	210,038,824	1.41%
	Core Real Estate	Cabot Ind Core	21,392,939	0.14%
	Core Real Estate	H2 Core Real Estate Debt Fund	30,336,393	0.20%
	Low Volatility Equity	Robeco	437,217,588	2.93%
	Low Volatility Equity	TOBAM	425,888,660	2.86%
	Options-Based Equity	Gateway Investment Advisers LLC - Put-Write	643,418,298	4.32%
	Options-Based Equity	Gateway Investment Advisers LLC - Non-Replication	1,042,426,504	6.99%
	Options-Based Equity	Neuberger Berman	611,309,530	4.10%
	Options-Based Equity	UBS	614,512,667	4.12%
	Private Growth			
	Private Equity	Hamilton Lane	872,692,524	5.85%
	HiTIP	Stafford	20,808,668	0.14%
	Non-Core Real Estate - Opportunistic	BlackSand Capital Fund I	7,958,956	0.05%
	Non-Core Real Estate - Opportunistic	Blackstone Real Estate VII	18,809,828	0.13%
	Non-Core Real Estate - Opportunistic	Cerberus IV	2,217,914	0.01%
	Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund II	14,156,604	0.09%
	Non-Core Real Estate - Opportunistic	Fortress Japan Opp Fund III	8,272,766	0.06%
	Non-Core Real Estate - Opportunistic	I-Squared Global Infrastructure	13,574,227	0.09%
	Non-Core Real Estate - Opportunistic	Lone Star Fund II	2,518,263	0.02%
	Non-Core Real Estate - Opportunistic	Lone Star Fund VII	2,521,198	0.02%
	Non-Core Real Estate - Opportunistic	Torchlight Debt Opportunity Fund V	10,404,351	0.07%
	Non-Core Real Estate - Value-Add	AG Asia Realty Fund III	10,930,958	0.07%
	Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund II	2,039,895	0.01%
	Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund III	10,378,528	0.07%
	Non-Core Real Estate - Value-Add	AG Core Plus Realty Fund IV	15,524,834	0.10%
	Non-Core Real Estate - Value-Add	Almanac VI	7,885,928	0.05%
	Non-Core Real Estate - Value-Add	Almanac VII	13,700,260	0.09%
	Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value Fund VI	10,049,310	0.07%
	Non-Core Real Estate - Value-Add	CBRE Strategic Partners Value Fund VII	20,191,129	0.14%
	Non-Core Real Estate - Value-Add	H2 CP (RE Debt)	20,201,620	0.14%
	Non-Core Real Estate - Value-Add	LaSalle Income & Growth Fund V	141,547	0.00%
	Non-Core Real Estate - Value-Add	LaSalle Income & Growth Fund VII	13,108,203	0.09%
	Non-Core Real Estate - Value-Add	Mesa West RE Inc Fund II	11,075	0.00%
	Non-Core Real Estate - Value-Add	Mesa West RE Inc Fund III	11,907,062	0.08%
	Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund IV	18,008,072	0.12%
	Non-Core Real Estate - Value-Add	Prudential Sr Housing Fund V	9,544,034	0.06%
Opportunities		Lowe Enterprises	26,924,624	0.18%
Principal Protection				
	US Intermediate	First Hawaiian Bank	355,488,698	2.38%
	US Intermediate	Pacific Income Advisors	353,581,080	2.37%
	Non-US Intermediate	PIMCO	361,656,023	2.43%
	Non-US Intermediate	Oeschle Intl. Advisors	712,117,683	4.78%
Real Return				
	Timber	Hancock Timber	205,208,580	1.38%
	GILS	BlackRock	473,850,604	3.18%
	Infrastructure	KKR Global Infrastructure II	13,257,561	0.09%
All Other Assets				
	Cash Account	BNY Mellon	108,957,175	0.73%
	Cash Account	Bank of Hawaii	35,645,071	0.24%
	Transition Account I	BNY Mellon	9,411,359	0.06%
	Transition Account II	BNY Mellon	278,783,813	1.87%
	Residual Account	BNY Mellon	2,324	0.00%
	Closing Accounts			
	Domestic Large Cap Value Equity	CS McKee Investment Mgrs	51,499	0.00%
	World ex-US Equity	JP Morgan Chase	986,690	0.01%
	World ex-US Equity	Mercator Asset Mgt LP	628,476	0.00%
	Emerging Markets Equity	Research Affiliates	620,357	0.00%
	Domestic Large Cap Growth	Sands Capital	0	0.00%
Total Fund Value			14,906,710,369	100.00%

Source: BNY Mellon