

Public Investment Dashboard Project

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Introduction

Duke University Management Company. (DUMAC) was formed in 1989 as a separate nonprofit corporation that manages investment assets on behalf of Duke University (Long Term Pool) which includes endowment assets and most of the university's working capital, the university's defined benefit pension assets (Employee's Retirement Plan), Duke University Health System's investments, and The Duke Endowment, the private charitable trust established by Duke University's founder, James B. Duke..

One of the ways DUMAC invests is through separate manager accounts, but their scale puts them in an advantageous position to hand-pick investments, providing them with both expert insights and control. Its staff works with the assistance of about 250 investment advisory firms and partnerships.

Project Description

Management Issue

Difficult to track investments

No live data visualization to track performance

Creates Inefficiencies



DUMAC Scale

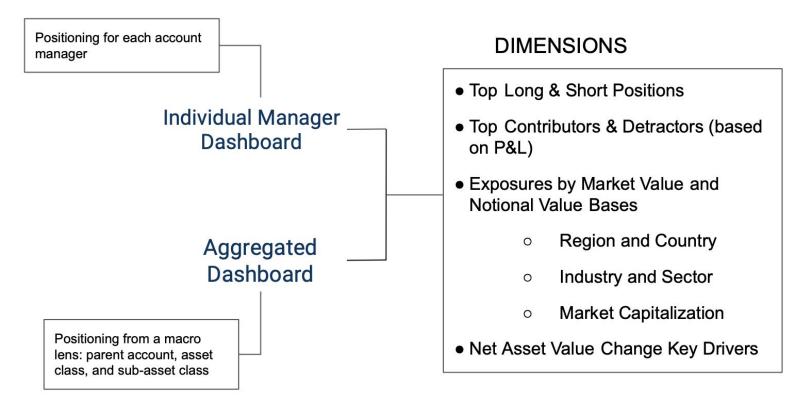
\$26Billion in Assets
4 Parent Accounts
128 Asset Managers
Investments in over 12 industries

Across the globe

Solution

Live portfolio dashboard using Tableau Well defined position indicators Curated visualizations for account

Overview



Individual Manager Dashboard

Region & Country Exposures

Top 5 NAV Increase in Security

The Individual Manager Dashboard focuses on investments under one specific portfolio. Users can track one specific fund's snapshot within a specified time frame with different exposure types through our filters. Then we explore the exposures and positionings of one portfolio across various dimensions.



Top 5 Co	ntribut	ors											Top 5 De	etractors	S					
Security Name													Security Name	2						
	1										10,334	,620		-2,588,	.262					
		8,375,252									-2,267,401									
				3,459,	696												-1,368,509			
		3,414,278											-1,06	4,124						
			2,85	59,989													-1,0	46,010		
	OM IM	2M	3M	4M	5M	6M	7M	8M	9M	10M	11M	12M		-3000K	-2500K	-2000K	-1500K	-1000K	-500K	ОК
					P	rofit or	Loss \$										Profit or Loss \$			

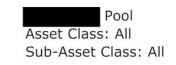
									Gross % along Table	Net % along Table
Market Region		Country	Long \$	Short \$	Gross\$	Net \$	(Down)	(Down)	(Down)	(Down)
Null	Null	Null	0	0	0	0	0.096	0.0%	0.0%	0.0%
Developed	DM - Asia Pacific	AUSTRALIA	0	-3,349,374	3,349,374	-3,349,374	0.0%	-2.8%	2.8%	-2.8%
International		HONG KONG	801,544	-454,569	1,256,113	346,975	0.796	-0.4%	1.0%	0.3%
		JAPAN	4,683,693	-15,085,882	19,769,574	-10,402,189	3.9%	-12.5%	16.3%	-8.6%
		SINGAPORE	0	-1,264,838	1,264,838	-1,264,838	0.0%	-1.0%	1.0%	-1.0%
	DM - Europe	AUSTRIA		-2,100,578	2,100,578	-2,100,578	0.0%	-1.7%	1.7%	-1.7%
		CYPRUS					0.0%	0.0%	0.0%	0.0%
		EUROPE	0	0	0	0	0.0%	0.096	0.0%	0.0%
		FRANCE					0.096	0.0%	0.0%	0.0%
		GERMANY	3,428,841	-526,972	3,955,813	2,901,869	2.8%	-0.496	3.3%	2.4%
		IRELAND					0.0%	0.0%	0.0%	0.0%
		JERSEY					0.096	0.0%	0.0%	0.0%
		LUXEMBOURG					0.096	0.0%	0.096	0.0%
		NETHERLANDS	3,505,905		3,505,905	3,505,905	2.9%	0.0%	2.9%	2.9%
		NORWAY	5,525,049	0	5,525,049	5,525,049	4.6%	0.0%	4.6%	4.696
		SPAIN					0.0%	0.0%	0.096	0.096
		SWEDEN	0	-3,051,018	3,051,018	-3,051,018	0.0%	-2.5%	2.5%	-2.5%
		SWITZERLAND	0	0	0	0	0.096	0.0%	0.0%	0.0%
		UNITED KINGDOM	5,640,333	-677,703	6,318,036	4,962,630	4.7%	-0.6%	5.2%	4.1%
	DM - Middle East	ISRAEL		-1,737,998	1,737,998	-1,737,998	0.0%	-1.4%	1.4%	-1.4%
	DM - North America	CANADA	2,674,807	-11,282,248	13,957,055	-8,607,440	2.2%	-9.3%	11.5%	-7.1%
Emerging	EM - Asia	CHINA	9,691,661	-8,577,082	18,268,743	1,114,578	8.0%	-7.1%	15.1%	0.9%
Markets		SOUTH KOREA	7,395,287	-5,683,942	13,079,229	1,711,344	6.1%	-4.796	10.8%	1.4%
		TAIWAN	0	-17,987,773	17,987,773	-17,987,773	0.0%	-14.9%	14.9%	-14.9%
	EM - Latin America	ARGENTINA					0.0%	0.0%	0.0%	0.0%
		BRAZIL	19,046,418	-5,203,948	24,250,366	13,842,471	15.7%	-4.3%	20.0%	11.4%
	EM - Others	CAYMAN ISLANDS					0.0%	0.0%	0.0%	0.0%
United States	United States	UNITED STATES	111,074,291	-75,303,275	186,377,566	35,771,017	91.8%	-62.2%	154.0%	29.6%
Grand Total			173,467,829	-152,287,200	325,755,029	21,180,629	143.3%	-125.8%	269.1%	17.5%

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Sector & In										
Sector	Industry Group		Long \$	Short \$	Gross \$					Net % along Table
Null	Null		17,871	0	17,871	17,871	0.0%			
Communication	Media & Entert	ainment	2,486,375	-10,656,361	13,142,736	-8,169,986	2.1%	-8.8	96 10.99	96 -6.7%
Services	Telecommunica	ation Services		-5,317,174	5,317,174	-5,317,174	0.0%		96 4.49	96 -4.496
Consumer	Automobiles &	Components		-1,893,306	1,893,306	-1,893,306	0.0%	-1.6	96 1.69	96 -1.6%
Discretionary	Consumer Dura	ibles & Apparel	0	-8,498,544	8,498,544	-8,498,544	0.0%	-7.0	96 7.09	96 -7.0%
	Consumer Serv	ices	0	-1,039,558	1,039,558	-1,039,558	0.0%	-0.9	96 0.99	96 -0.9%
	Retailing		7,606,320	-13,190,184	20,796,503	-5,583,864	6.3%	-10.9	% 17.29	96 -4.6%
Consumer	Food & Staples	Retailing	943,615		943,615	943,615	0.8%	0.0	96 0.89	96 0.8%
Staples	Food, Beverage	& Tobacco					0.0%	0.0	96 0.09	96 0.096
	Household & Pe	ersonal Products	718,664	-530,871	1,249,536	187,793	0.6%	-0.4	96 1.09	96 0.2%
Energy	Energy		4,781,746	-3,040,778	7,822,524	1,740,968	4.0%	-2.5	% 6.59	96 1.4%
Financials	Diversified Fina	ancials	7,019,380	-2,203,344	9,222,724	4,816,036	5.8%	-1.8	96 7.69	96 4.0%
	Insurance		0	-478,539	478,539	-478,539	0.096	-0.4	96 0.49	96 -0.4%
Health Care	Health Care Eq	uipment & Services	0	-1,566,239	1,566,239	-1,566,239	0.0%	-1.3	96 1.39	% -1.3%
	Pharmaceutica	ls, Biotechnology & Life Scie					0.0%	0.0	96 0.09	96 0.096
Industrials	Capital Goods		3,304,499	-2,188,777	5,493,276	1,115,721	2.796	-1.8	96 4.59	96 0.996
	Commercial & I	Professional Services	32,825,767	-2,143,689	34,969,455	30,682,078	27.1%	-1.8	96 28.99	% 25.3%
	Transportation			-123,427	123,427	-123,427	0.0%	-0.1	96 0.19	96 -0.196
Information	Semiconductor	s & Semiconductor Equipment	33,717,707	-27,288,620	61,006,327	6,429,087	27.9%	-22.5	96 50.49	% 5.3%
Technology	Software & Ser	vices	52,362,848	-36,327,860	88,690,707	16,034,988	43.3%	-30.0	96 73.39	96 13.2%
	Technology Hai	rdware & Equipment	21,554,873	-33,306,753	54,861,627	-11,751,880	17.8%	-27.5	% 45.39	96 -9.7%
Materials	Materials		779,168	-1,338,936	2,118,104	-559,769	0.6%			
Not Classified	Currency		0	0	0	0	0.0%	0.0	96 0.09	96 0.0%
Real Estate	Real Estate		5,348,997		5,348,997	5,348,997	4.4%			
Utilities	Utilities			-1.154.239	1.154.239	-1.154.239	0.0%			
Market Cap		Exposures								
Market Cap (USD	0)	Long \$	Short \$	Gross \$	Net \$	Long % along Table	(Do., Short % along	Table (Do., Gross	% along Table (Do N	let % along Table (Dow.
Large Cap (>\$10	B)	74,192,438	51,499,545	125,691,984	22,692,893		51.3%	-42.5%	103.8%	18.79
Mid Cap (\$2B-\$1			83,680,830	146,280,103	-21,081,556	5	51.796	-69.1%	120.8%	-17.49
Small Cap (<\$2B			17,106,825	53,782,942	19,569,292		30.3%	-14.196	44.4%	16.29
Grand Total	,		52,287,200	325,755,029	21,180,629		13.3%	-125.8%	269.1%	17.5%
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Security Ty	pe Exposu	res				Lana W ala	no Toble Shoot	V alasa Tabla	Cuasa N. alana Tabla	Not 0/ place Table
Asset Type As	set Sub-Type	Long \$	Short \$	Gross \$	Net	Long % alo	(Down)	% along Table ((Down)	Gross % along Table (Down)	Net % along Table (Down)
EQ AL		11,378,281	-6,375,131	17,753,412	5,003,15		9.4%	-5.3%	14.796	(DOWN)
CF		22,483,627	-48,978,706	71,462,332	-26,495,07		18.6%	-40.5%	59.0%	-21.9%
		EE,403,0E1	40,570,700	12,402,332	-20,453,01					
CS		139,605,921	-96,933,363	236,539,284	42,672,55	5.8	115.3%	-80.1%	195.4%	35.3%

Security Name | Market Value \$ Change | Market Value \$

Top 5 NAV Decrease in Security

Aggregate Level Dashboard





Asset Class All End Date Sub-Asset Clas All Exposure Type

Notional Value

Top 5 NAV Increase in Sector

Sector	Market Value \$ Change	Market Value % Change
	252,753,907.78	7.9%
	64,335,885.91	11.4%
	32,611,465.33	7.3%
	24,459,103.71	8.8%
	18,307,070.33	4.7%

Top 5 NAV Increase in Country

Country	Market Value \$ Change	Market Value % Change
	258,837,664.79	6.4%
	38,826,182.97	52.5%
	32,621,838.14	18.9%
	21,445,316.10	29.3%
	11,414,767.73	69.2%
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Top 5 NAV Decrease in Sector

Sector	Market Value \$ Change	Market Value % Change
	-75,964,926.84	22.5%
	-15,826,286.05	-12.3%
	-7,434,727.71	-2.5%
	-6,590,614.08	-2.1%
	-3,641,251.56	-2.1%

Top 5 NAV Decrease in Country

Country	Market Value \$ Change	Market Value % Change
	-30,501,258.89	-18.0%
	-30,335,592.40	-12.8%
	-23,339,746.91	13.0%
	-11,207,681.63	-19.5%
	-9,226,661.63	-9.5%

Next Steps

- Provide the finished Dashboards to the public investment team at DUMAC to enable comprehensive daily analysis of assets and manager portfolios
- Give DUMAC a field dictionary to optimize dashboards in the future.

Acknowledgement

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