

The Ithaka Group
PORTFOLIO APPRAISAL
North Carolina Retirement System
North Carolina Department of State Treasurer
October 31, 2015

Quantity	Security	Unit Cost	Total Cost	Price	Market Value	Pct. Assets	Cur. Yield
CASH AND EQUIVALENTS							
	BNY MELLON MMF		86,652.36		86,652.36	0.4	0.0
	Dividend Accruals		1,352.00		1,352.00	0.0	0.0
			88,004.36		88,004.36	0.4	0.0
COMMON STOCK							
12,470.0000	ARM Holdings plc	46.08	574,614.01	47.43	591,452.10	2.9	0.5
2,672.0000	Alexion Pharmaceuticals	123.80	330,801.33	176.00	470,272.00	2.3	0.0
849.0000	Alphabet, Inc.	596.78	506,669.71	710.81	603,477.69	3.0	0.0
1,195.0000	Amazon.com Inc.	252.55	301,797.25	625.90	747,950.50	3.7	0.0
4,809.0000	Apple Inc.	63.65	306,072.24	119.50	574,675.50	2.8	1.7
1,570.0000	Baidu, Inc. ADS	228.07	358,069.74	187.47	294,327.90	1.4	0.0
1,568.0000	BioMarin Pharmaceutical	124.55	195,297.07	117.04	183,518.72	0.9	0.0
1,285.0000	Biogen Inc.	335.05	430,537.96	290.51	373,305.35	1.8	0.0
6,677.0000	Celgene Corp.	78.01	520,847.32	122.71	819,334.67	4.0	0.0
457.0000	Chipotle Mexican Grill	452.13	206,621.41	640.23	292,585.11	1.4	0.0
1,780.0000	Domino's Pizza, Inc.	109.44	194,799.64	106.67	189,872.60	0.9	1.2
15,356.0000	Facebook, Inc. cl A	39.43	605,442.83	101.97	1,565,851.32	7.7	0.0
6,721.0000	FireEye, Inc.	59.75	401,599.89	26.15	175,754.15	0.9	0.0
3,081.0000	Illumina Inc	189.39	583,499.36	143.28	441,445.68	2.2	0.0
4,668.0000	LinkedIn Corp cl A	207.13	966,887.77	240.87	1,124,381.16	5.5	0.0
8,450.0000	Mastercard Inc.	54.55	460,972.85	98.99	836,465.50	4.1	0.6
3,550.0000	Middleby Corporation	84.56	300,184.17	116.94	415,137.00	2.0	0.0
1,501.0000	Nike Inc cl B	128.97	193,587.43	131.03	196,676.03	1.0	0.9
2,866.0000	Palo Alto Networks, Inc.	162.76	466,468.28	161.00	461,426.00	2.3	0.0
7,978.0000	PayPal Holdings, Inc.	38.44	306,649.59	36.01	287,287.78	1.4	0.0
1,721.0000	Regeneron Pharmaceuticals	287.18	494,240.48	557.39	959,268.19	4.7	0.0
1,916.0000	Restoration Hardware Hldgs Inc	99.71	191,042.64	103.09	197,520.44	1.0	0.0
13,833.0000	Salesforce.com Inc	47.74	660,439.62	77.71	1,074,962.43	5.3	0.0
6,155.0000	Splunk Inc.	43.57	268,164.60	56.16	345,664.80	1.7	0.0
21,672.0000	Starbucks Corporation	32.42	702,654.96	62.57	1,356,017.04	6.7	1.0
6,256.0000	TJX Companies Inc.	68.08	425,929.12	73.19	457,876.64	2.3	1.1
755.0000	The Priceline Group Inc.	707.95	534,502.25	1,454.24	1,097,951.20	5.4	0.0
2,145.0000	Transdigm Group, Inc.	123.35	264,580.94	219.85	471,578.25	2.3	0.0
3,730.0000	TripAdvisor, Inc.	89.91	335,382.84	83.78	312,499.40	1.5	0.0
3,400.0000	Ulta Salon, Cosmetics	161.00	547,411.91	173.96	591,464.00	2.9	0.0
8,529.0000	Under Armour, Inc. Cl A	29.42	250,957.10	95.08	810,937.32	4.0	0.0
13,678.0000	VISA Inc.	47.81	653,877.71	77.58	1,061,139.24	5.2	0.6
4,799.0000	Walt Disney Company	91.54	439,316.01	113.74	545,838.26	2.7	0.6
4,040.0000	Workday, Inc.	76.31	308,307.33	78.97	319,038.80	1.6	0.0
			14,288,227.36		20,246,952.77	99.6	0.3
TOTAL PORTFOLIO			14,376,231.72		20,334,957.13	100.0	0.3

The Ithaka Group
PERFORMANCE HISTORY
NET OF FEES
North Carolina Retirement System
From 05-02-13 to 10-31-15

Time Period		Percent Return			Cumulative TWR		
		Per Period			Basis = 100		
		Portfolio	Russell 1000 Growth	Russell 3000 Growth	Portfolio	Russell 1000 Growth	Russell 3000 Growth
	05-02-2013				100.00	100.00	100.00
05-02-2013	to 05-31-2013	1.82	1.69	2.00	101.82	101.69	102.00
05-31-2013	to 06-30-2013	-2.21	-1.88	-1.78	99.57	99.78	100.18
06-30-2013	to 07-31-2013	7.69	5.30	5.48	107.22	105.07	105.68
07-31-2013	to 08-31-2013	1.83	-1.71	-1.73	109.19	103.27	103.84
08-31-2013	to 09-30-2013	8.56	4.46	4.66	118.53	107.87	108.68
09-30-2013	to 10-31-2013	2.80	4.42	4.21	121.85	112.64	113.26
10-31-2013	to 11-30-2013	3.28	2.82	2.92	125.84	115.82	116.57
11-30-2013	to 12-31-2013	2.75	2.86	2.79	129.30	119.13	119.82
12-31-2013	to 01-31-2014	-1.21	-2.85	-2.76	127.74	115.73	116.51
01-31-2014	to 02-28-2014	6.81	5.15	5.12	136.44	121.69	122.48
02-28-2014	to 03-31-2014	-7.00	-1.01	-1.13	126.88	120.46	121.10
03-31-2014	to 04-30-2014	-5.12	0.00	-0.41	120.39	120.47	120.61
04-30-2014	to 05-31-2014	2.87	3.12	2.95	123.85	124.22	124.16
05-31-2014	to 06-30-2014	2.94	1.95	2.27	127.49	126.64	126.98
06-30-2014	to 07-31-2014	0.37	-1.53	-1.89	127.96	124.70	124.58
07-31-2014	to 08-31-2014	5.38	4.58	4.66	134.85	130.42	130.39
08-31-2014	to 09-30-2014	-2.44	-1.45	-1.75	131.56	128.53	128.11
09-30-2014	to 10-31-2014	3.03	2.64	2.90	135.55	131.91	131.82
10-31-2014	to 11-30-2014	1.56	3.17	2.98	137.66	136.09	135.74
11-30-2014	to 12-31-2014	-1.83	-1.04	-0.75	135.14	134.67	134.73
12-31-2014	to 01-31-2015	0.72	-1.53	-1.59	136.12	132.61	132.59
01-31-2015	to 02-28-2015	8.35	6.67	6.71	147.49	141.45	141.48
02-28-2015	to 03-31-2015	-1.45	-1.14	-0.92	145.36	139.84	140.18
03-31-2015	to 04-30-2015	-0.32	0.50	0.23	144.89	140.54	140.51
04-30-2015	to 05-31-2015	0.28	1.41	1.58	145.30	142.52	142.73
05-31-2015	to 06-30-2015	1.24	-1.76	-1.52	147.10	140.01	140.56
06-30-2015	to 07-31-2015	5.21	3.39	3.14	154.76	144.76	144.98
07-31-2015	to 08-31-2015	-6.87	-6.07	-6.19	144.14	135.97	136.00
08-31-2015	to 09-30-2015	-2.66	-2.47	-2.78	140.30	132.60	132.22
09-30-2015	to 10-31-2015	9.66	8.61	8.39	153.86	144.02	143.31
Date to Date							
05-02-2013	to 10-31-2015	53.86	44.02	43.31			
Annualized		18.82	15.72	15.49			

The Ithaka Group
PERFORMANCE HISTORY
GROSS OF FEES
North Carolina Retirement System
From 05-02-13 to 10-31-15

Time Period		Percent Return			Cumulative TWR		
		Per Period			Basis = 100		
		Portfolio	Russell 1000 Growth	Russell 3000 Growth	Portfolio	Russell 1000 Growth	Russell 3000 Growth
05-02-2013 to 05-02-2013					100.00	100.00	100.00
05-02-2013	to 05-31-2013	1.82	1.69	2.00	101.82	101.69	102.00
05-31-2013	to 06-30-2013	-2.21	-1.88	-1.78	99.57	99.78	100.18
06-30-2013	to 07-31-2013	7.78	5.30	5.48	107.32	105.07	105.68
07-31-2013	to 08-31-2013	1.83	-1.71	-1.73	109.28	103.27	103.84
08-31-2013	to 09-30-2013	8.60	4.46	4.66	118.68	107.87	108.68
09-30-2013	to 10-31-2013	2.94	4.42	4.21	122.17	112.64	113.26
10-31-2013	to 11-30-2013	3.28	2.82	2.92	126.18	115.82	116.57
11-30-2013	to 12-31-2013	2.75	2.86	2.79	129.64	119.13	119.82
12-31-2013	to 01-31-2014	-1.07	-2.85	-2.76	128.26	115.73	116.51
01-31-2014	to 02-28-2014	6.81	5.15	5.12	137.00	121.69	122.48
02-28-2014	to 03-31-2014	-7.00	-1.01	-1.13	127.41	120.46	121.10
03-31-2014	to 04-30-2014	-4.97	0.00	-0.41	121.07	120.47	120.61
04-30-2014	to 05-31-2014	2.87	3.12	2.95	124.55	124.22	124.16
05-31-2014	to 06-30-2014	2.94	1.95	2.27	128.21	126.64	126.98
06-30-2014	to 07-31-2014	0.51	-1.53	-1.89	128.87	124.70	124.58
07-31-2014	to 08-31-2014	5.38	4.58	4.66	135.81	130.42	130.39
08-31-2014	to 09-30-2014	-2.44	-1.45	-1.75	132.49	128.53	128.11
09-30-2014	to 10-31-2014	3.18	2.64	2.90	136.71	131.91	131.82
10-31-2014	to 11-30-2014	1.56	3.17	2.98	138.84	136.09	135.74
11-30-2014	to 12-31-2014	-1.83	-1.04	-0.75	136.30	134.67	134.73
12-31-2014	to 01-31-2015	0.87	-1.53	-1.59	137.48	132.61	132.59
01-31-2015	to 02-28-2015	8.35	6.67	6.71	148.97	141.45	141.48
02-28-2015	to 03-31-2015	-1.39	-1.14	-0.92	146.89	139.84	140.18
03-31-2015	to 04-30-2015	-0.32	0.50	0.23	146.42	140.54	140.51
04-30-2015	to 05-31-2015	0.28	1.41	1.58	146.83	142.52	142.73
05-31-2015	to 06-30-2015	1.44	-1.76	-1.52	148.95	140.01	140.56
06-30-2015	to 07-31-2015	5.21	3.39	3.14	156.71	144.76	144.98
07-31-2015	to 08-31-2015	-6.87	-6.07	-6.19	145.95	135.97	136.00
08-31-2015	to 09-30-2015	-2.45	-2.47	-2.78	142.37	132.60	132.22
09-30-2015	to 10-31-2015	9.81	8.61	8.39	156.33	144.02	143.31
Date to Date							
05-02-2013	to 10-31-2015	56.33	44.02	43.31			

The Ithaka Group
TRANSACTION SUMMARY
North Carolina Retirement System
North Carolina Department of State Treasurer
From 10-01-2015 To 10-31-2015

Tran Code	Security	Trade Date	Settle Date	Quantity	Close Meth.	S/D Type	S/D Symbol	Trade Amount	Lot
sl	Monsanto Co	10-02-2015	10-07-2015	1,850.0000	f	caus	BNYMMF	159,411.75	1
sl	Monsanto Co	10-02-2015	10-07-2015	1,300.0000	f	caus	BNYMMF	112,019.07	2
sl	Monsanto Co	10-02-2015	10-07-2015	40.0000	f	caus	BNYMMF	3,446.74	3
in	BNY MELLON MMF	10-02-2015	10-02-2015			caus	BNYMMF	37.75	
		DEPOSITORY SERVICE FEE CHARGED TO RD HOLDERS OF 10/2/15							
lo	BNY MELLON MMF	10-06-2015	10-06-2015			awus	client	31.40	
by	Salesforce.com Inc	10-07-2015	10-13-2015	1,427.0000		caus	BNYMMF	106,274.12	4
dv	Mastercard Inc.	10-07-2015	11-09-2015			caus	divacc	1,352.00	
sl	Twitter, Inc.	10-14-2015	10-19-2015	5,458.0000	f	caus	BNYMMF	156,380.83	1
sl	Twitter, Inc.	10-14-2015	10-19-2015	2,490.0000	f	caus	BNYMMF	71,342.66	2
by	Nike Inc cl B	10-15-2015	10-20-2015	1,501.0000		caus	BNYMMF	193,587.43	1
by	Palo Alto Networks, Inc.	10-15-2015	10-20-2015	673.0000		caus	BNYMMF	114,084.00	3
wd	Dividend Accruals	10-15-2015	10-15-2015			caus	BNYMMF	1,787.89	
		ARM HOLDINGS PLC ADR							
lo	BNY MELLON MMF	10-15-2015	10-15-2015			awus	client	214.55	
		ADR fee							
dp	Management Fee	10-20-2015	10-20-2015			caus	BNYMMF	26,683.06	
		3RD QTR MANAGEMENT FEES							
sl	Chipotle Mexican Grill	10-23-2015	10-28-2015	337.0000	f	caus	BNYMMF	217,964.74	1
by	VISA Inc.	10-26-2015	10-29-2015	1,598.0000		caus	BNYMMF	124,169.71	2
by	Walt Disney Company	10-26-2015	10-29-2015	854.0000		caus	BNYMMF	96,757.35	3