

Investment Performance Review
Period Ending August 31, 2021

Employees' Retirement System of the City of Norfolk (preliminary)





Equities	Index Returns (%)					
	Month	3 M	YTD	1 Year	3 Yr Ann	5 Yr Ann
S&P 500 Total Return	3.04	7.95	21.58	31.17	18.07	18.02
Russell Midcap Index	2.54	4.85	20.12	41.24	15.58	15.40
Russell 2000 Index	2.24	0.45	15.83	47.08	10.75	14.38
Russell 1000 Growth Index	3.74	13.88	21.08	28.53	24.60	24.35
Russell 1000 Value Index	1.98	1.62	20.32	36.44	11.45	11.68
Russell 3000 Index	2.85	7.17	20.39	33.04	17.85	17.97
MSCI EAFE NR	1.76	1.38	11.58	26.12	9.00	9.72
MSCI EM NR	2.62	(4.12)	2.84	21.12	9.87	10.40

Fixed Income	Index Returns (%)					
	Month	3 M	YTD	1 Year	Mod. Adj. Duration	Yield to Worst
U.S. Aggregate	(0.19)	1.63	(0.70)	(0.09)	6.65	1.42
U.S. Corporate Investment Grade	(0.30)	2.71	(0.22)	2.53	8.78	1.99
U.S. Corporate High Yield	0.51	2.25	4.55	10.14	3.87	3.87
Global Aggregate	(0.42)	0.02	(2.33)	0.52	7.55	1.03

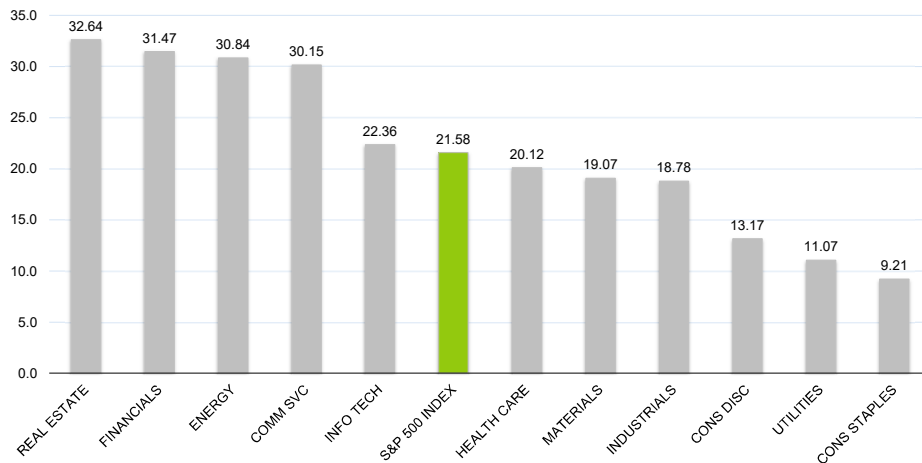
Key Rates	Levels (%)				
	08/31/21	12/31/20	12/31/19	12/31/18	12/31/17
US Generic Govt 3 Mth	0.04	0.06	1.54	2.35	1.38
US Generic Govt 2 Yr	0.21	0.12	1.57	2.49	1.88
US Generic Govt 10 Yr	1.31	0.91	1.92	2.68	2.41
US Generic Govt 30 Yr	1.93	1.64	2.39	3.01	2.74
ICE LIBOR USD 3M	0.12	0.24	1.91	2.81	1.69
Euribor 3 Month ACT/360	(0.55)	(0.55)	(0.38)	(0.31)	(0.33)
Bankrate 30Y Mortgage Rates Na	3.03	2.87	3.86	4.51	3.85
Prime	3.25	3.25	4.75	5.50	4.50

Russell Indices Style Returns *							
YTD			2020				
	V	B	G		V	B	G
	20.3	20.7	21.1	L	2.8	20.9	38.4
	22.8	20.1	15.2	M	4.9	17.0	35.5
	25.4	15.8	6.9	S	4.6	19.9	34.5

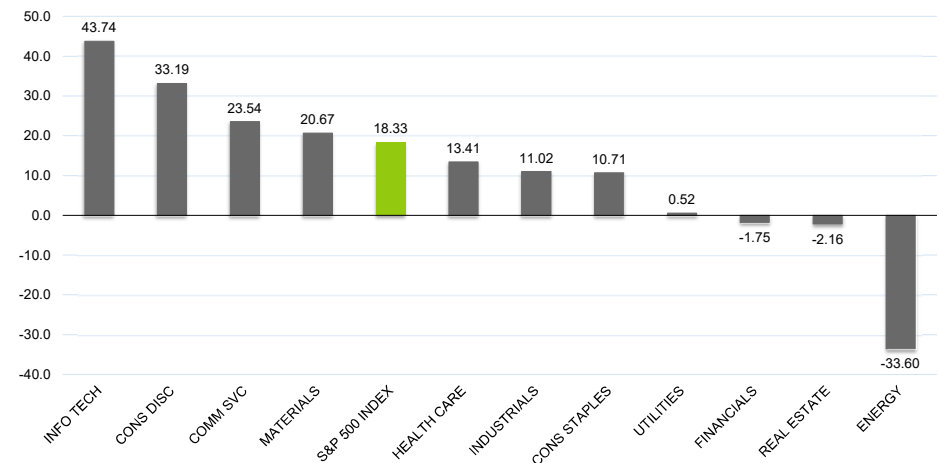
Currencies	Levels		
	08/31/21	12/31/20	12/31/19
Euro Spot	1.18	1.22	1.12
British Pound Spot	1.38	1.37	1.33
Japanese Yen Spot	110.02	103.25	108.61
Swiss Franc Spot	0.92	0.89	0.97

Commodities	Levels		
	08/31/21	12/31/20	12/31/19
Oil	68.50	48.19	53.64
Gasoline	3.17	2.25	2.59
Natural Gas	4.38	2.71	2.32
Gold	1,818.10	1,911.20	1,187.30
Silver	24.01	26.59	16.50
Copper	437.50	352.70	284.15
Corn	534.25	434.75	410.50
BBG Commodity TR Idx	204.97	166.63	172.00

YTD Sector Returns



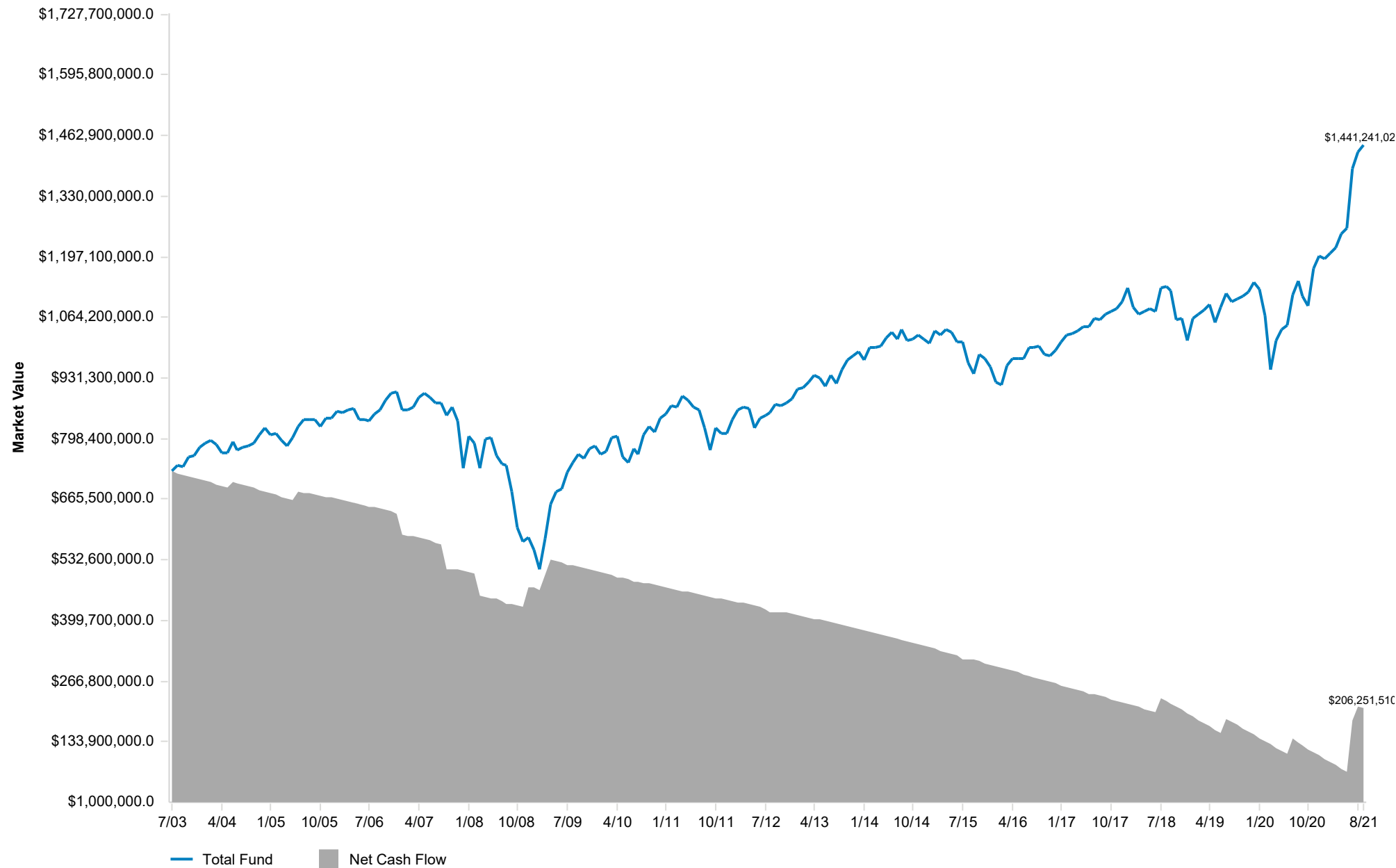
2020 Sector Returns



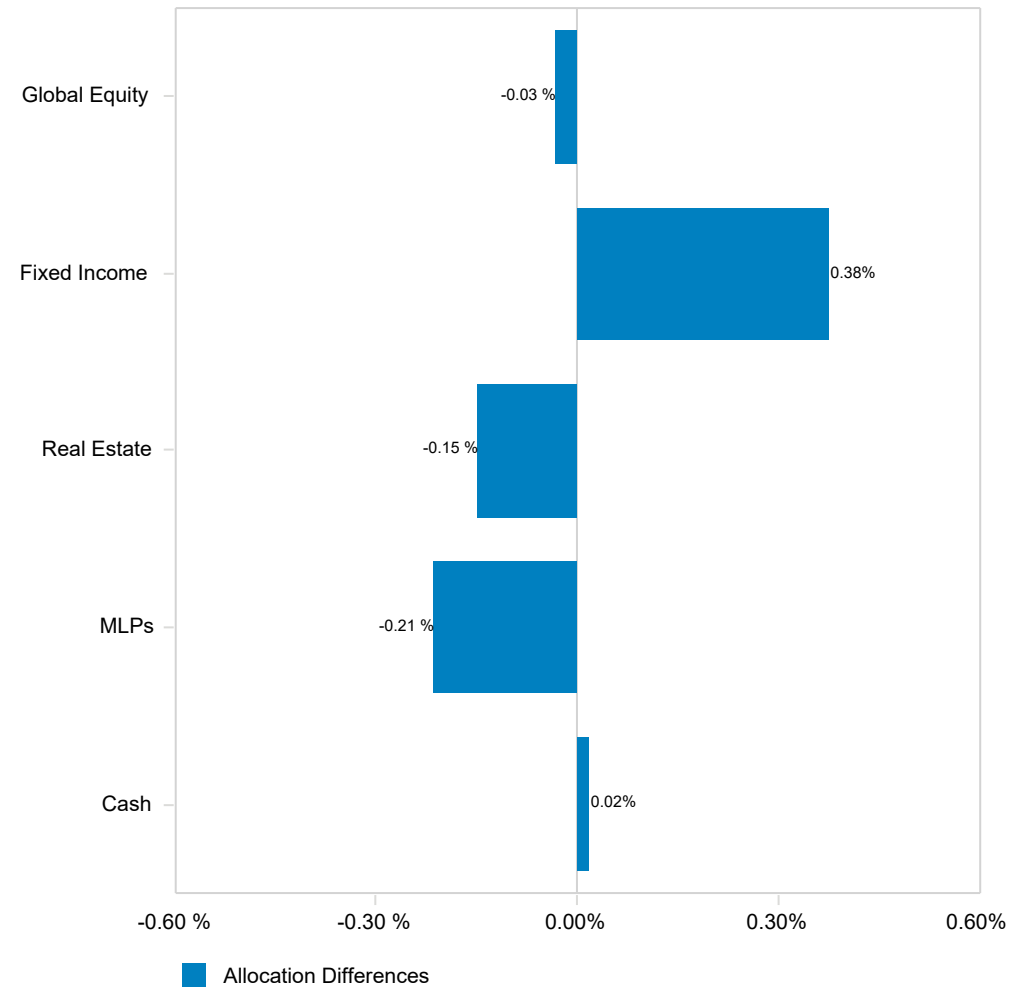
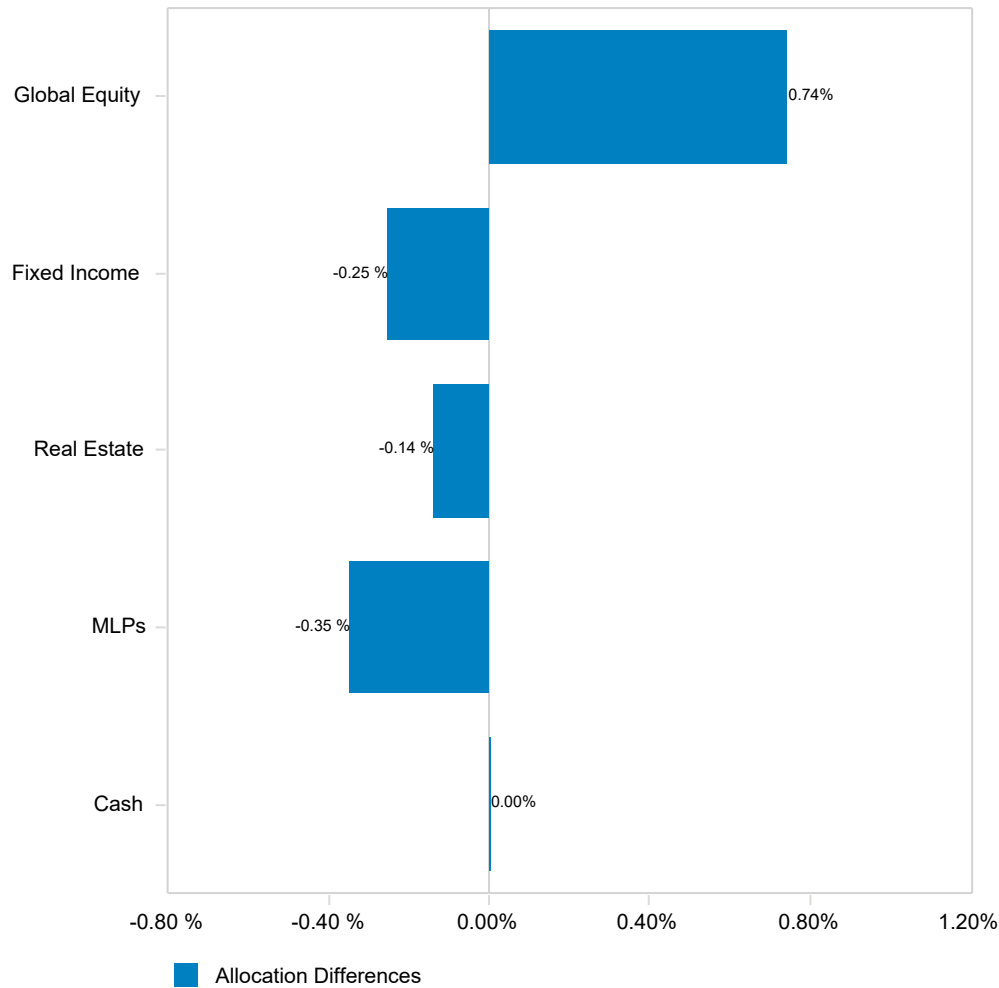
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*Heat maps are displayed utilizing a 9-color scale, with green as the highest return for the time period noted and red as the lowest return for the time period noted. Color scales within each time period are mutually exclusive.

Schedule of Investable Assets



Employees' Retirement System of the City of Norfolk
Asset Allocation vs. Target Allocation
As of August 31, 2021



August 31, 2021				July 31, 2021			
	Market Value \$	Allocation (%)	Target (%)		Market Value \$	Allocation (%)	Target (%)
Global Equity	803,341,313	55.7	55.0	Global Equity	783,847,557	55.0	55.0
Fixed Income	428,727,948	29.7	30.0	Fixed Income	433,177,364	30.4	30.0
Real Estate	106,057,196	7.4	7.5	Real Estate	104,802,317	7.3	7.5
MLPs	103,108,478	7.2	7.5	MLPs	103,900,069	7.3	7.5
Cash	6,094	0.0	0.0	Cash	263,990	0.0	0.0
Total Fund	1,441,241,028	100.0	100.0	Total Fund	1,425,991,296	100.0	100.0



Asset Allocation & Performance														
	Allocation		Performance(%)											
	Market Value \$	%	1 Month	3 Month	CYTD	FYTD	1 Year	2 YR	3 Year	5 Year	7 Year	10 Year	Since Inception	Inception Date
Total Fund	1,441,241,028	100.0	1.37	3.14	11.54	1.70	20.12	14.09	9.70	9.50	7.37	8.75	8.35	Oct-1990
Total Fund Policy (62.5% ACWI/37.5% Agg)			1.48	3.26	9.53	2.22	18.13	15.38	11.15	10.18	7.90	8.78	8.52	
Excess Return			-0.11	-0.12	2.01	-0.52	1.99	-1.29	-1.45	-0.68	-0.53	-0.03	-0.17	
Total Fund Strategy Index			1.13	2.83	11.40	1.27	20.56	14.38	10.14	9.47	7.30	8.52	8.44	
Excess Return			0.24	0.31	0.14	0.43	-0.44	-0.29	-0.44	0.03	0.07	0.23	-0.09	
Composite Returns														
Global Equity	803,341,313	55.7	2.49	4.22	16.59	3.00	30.98	23.23	14.54	14.66	10.75	12.36	9.73	Oct-1990
Global Equity Policy			2.47	4.24	16.05	2.99	30.11	22.56	13.97	14.15	10.28	11.98	9.96	
Excess Return			0.02	-0.02	0.54	0.01	0.87	0.67	0.57	0.51	0.47	0.38	-0.23	
Fixed Income	428,727,948	29.7	-0.09	1.81	-0.37	1.10	0.24	3.69	5.53	3.46	3.54	3.52	5.91	Oct-1990
Blmbg. U.S. Aggregate Index			-0.19	1.63	-0.70	0.93	-0.09	3.14	5.43	3.11	3.29	3.18	5.83	
Excess Return			0.10	0.18	0.33	0.17	0.33	0.55	0.10	0.35	0.25	0.34	0.08	
Real Estate	106,057,196	7.4	1.20	4.16	6.32	2.19	5.93	2.78	2.40	3.89	5.85	7.24	7.67	Apr-2011
NCREIF Fund Index-ODCE (VW) (Net)			0.00	3.68	5.64	0.00	7.09	4.17	4.60	5.62	7.43	8.60	8.69	
Excess Return			1.20	0.48	0.68	2.19	-1.16	-1.39	-2.20	-1.73	-1.58	-1.36	-1.02	
MLPs	103,108,478	7.2	-0.76	-0.79	31.56	-5.81	45.85	-2.10	-5.43	-1.78	-5.82	-	0.01	Mar-2013
Alerian MLP Index			-2.31	-3.74	35.31	-8.48	54.80	-3.45	-5.76	-2.64	-7.50	-	-2.74	
Excess Return			1.55	2.95	-3.75	2.67	-8.95	1.35	0.33	0.86	1.68	-	2.75	
Cash	6,094	0.0												

Employees' Retirement System of the City of Norfolk

Asset Allocation & Performance - (net of fees)

As of August 31, 2021

Asset Allocation & Performance														
	Allocation		Performance(%)											
	Market Value \$	%	1 Month	3 Month	CYTD	FYTD	1 Year	2 YR	3 Year	5 Year	7 Year	10 Year	Since Inception	Inception Date
Global Equity														
SSgA MSCI ACWI IMI Index Fund	803,341,313	55.7	2.49	4.22	16.32	3.00	30.67	23.08	14.45	14.61	-	-	14.56	May-2016
MSCI AC World IMI (Net)			2.47	4.24	16.05	2.99	30.11	22.56	13.97	14.15	-	-	14.10	
Excess Return			0.02	-0.02	0.27	0.01	0.56	0.52	0.48	0.46	-	-	0.46	
Fixed Income														
PIMCO Total Return	214,658,539	14.9	0.01	1.96	-0.11	1.26	0.49	4.15	5.60	3.76	3.78	3.91	6.24	Jan-1991
Blmbg. U.S. Aggregate Index			-0.19	1.63	-0.70	0.93	-0.09	3.14	5.43	3.11	3.29	3.18	5.71	
Excess Return			0.20	0.33	0.59	0.33	0.58	1.01	0.17	0.65	0.49	0.73	0.53	
SSgA Bond Market Index	214,069,409	14.9	-0.20	1.65	-0.65	0.93	-0.02	3.18	5.47	3.13	3.31	3.19	3.96	Jan-2009
Blmbg. U.S. Aggregate Index			-0.19	1.63	-0.70	0.93	-0.09	3.14	5.43	3.11	3.29	3.18	3.95	
Excess Return			-0.01	0.02	0.05	0.00	0.07	0.04	0.04	0.02	0.02	0.01	0.01	
Real Estate														
JP Morgan Asset Management Strategic Property Fund	46,796,726	3.2	1.55	4.57	7.63	3.18	9.26	5.19	4.79	5.52	7.11	8.59	8.97	Apr-2011
NCREIF Fund Index-ODCE (VW) (Net)			0.00	3.68	5.64	0.00	7.09	4.17	4.60	5.62	7.43	8.60	8.69	
Excess Return			1.55	0.89	1.99	3.18	2.17	1.02	0.19	-0.10	-0.32	-0.01	0.28	
UBS Trumbull Property Fund	33,447,726	2.3	0.00	2.42	3.49	-0.22	0.91	-0.51	-0.61	1.86	4.23	-	5.37	Jan-2012
NCREIF Fund Index-ODCE (VW) (Net)			0.00	3.68	5.64	0.00	7.09	4.17	4.60	5.62	7.43	-	8.24	
Excess Return			0.00	-1.26	-2.15	-0.22	-6.18	-4.68	-5.21	-3.76	-3.20	-	-2.87	
Vanguard Real Estate Index (VGSNX)	25,812,744	1.8	2.14	-	-	6.72	-	-	-	-	-	-	6.72	Jul-2021
Vanguard Spliced REIT Index			2.16	-	-	6.73	-	-	-	-	-	-	6.73	
Excess Return			-0.02	-	-	-0.01	-	-	-	-	-	-	-0.01	
MLPs														
Harvest MLP	57,559,702	4.0	-0.63	-0.81	33.19	-4.91	45.80	0.00	-4.21	-0.97	-5.11	-	0.54	Mar-2013
Alerian MLP Index			-2.31	-3.74	35.31	-8.48	54.80	-3.45	-5.76	-2.64	-7.50	-	-2.74	
Excess Return			1.68	2.93	-2.12	3.57	-9.00	3.45	1.55	1.67	2.39	-	3.28	
Tortoise Capital Advisors	45,548,776	3.2	-0.93	-0.98	30.68	-6.85	46.89	-3.96	-6.49	-2.49	-6.47	-	-1.06	Apr-2013
Alerian MLP Index			-2.31	-3.74	35.31	-8.48	54.80	-3.45	-5.76	-2.64	-7.50	-	-3.37	
Excess Return			1.38	2.76	-4.63	1.63	-7.91	-0.51	-0.73	0.15	1.03	-	2.31	



Employees' Retirement System of the City of Norfolk

Financial Reconciliation

1 Month Ending August 31, 2021

Financial Reconciliation								
	Market Value 08/01/2021	Net Transfers	Contributions	Distributions	Management Fees	Income	Apprec./ Deprec.	Market Value 08/31/2021
Total Fund	1,425,991,296	-	-	-4,317,000	-87,828	-65,476	19,720,035	1,441,241,028
Global Equity	783,847,557	-	-	-	-76,501	-	19,570,257	803,341,313
SSgA MSCI ACWI IMI Index Fund	783,847,557	-	-	-	-76,501	-	19,570,257	803,341,313
Fixed Income	433,177,364	-4,059,000	-	-	-9,221	-989,345	608,149	428,727,948
PIMCO Total Return	218,689,009	-4,059,000	-	-	-	-989,345	1,017,875	214,658,539
SSgA Bond Market Index	214,488,355	-	-	-	-9,221	-	-409,726	214,069,409
Real Estate	104,802,317	-	-	-	-2,106	138,117	1,118,868	106,057,196
JP Morgan Asset Management Strategic Property Fund	46,083,676	-	-	-	-	138,117	574,933	46,796,726
UBS Trumbull Property Fund	33,447,726	-	-	-	-	-	-	33,447,726
Vanguard Real Estate Index (VGSNX)	25,270,915	-	-	-	-2,106	-	543,935	25,812,744
MLPs	103,900,069	-	-	-	-	785,678	-1,577,269	103,108,478
Harvest MLP	57,924,513	-	-	-	-	410,314	-775,124	57,559,702
Tortoise Capital Advisors	45,975,556	-	-	-	-	375,364	-802,145	45,548,776
Cash	263,990	4,059,000	-	-4,317,000	-	74	30	6,094



Employees' Retirement System of the City of Norfolk

Financial Reconciliation

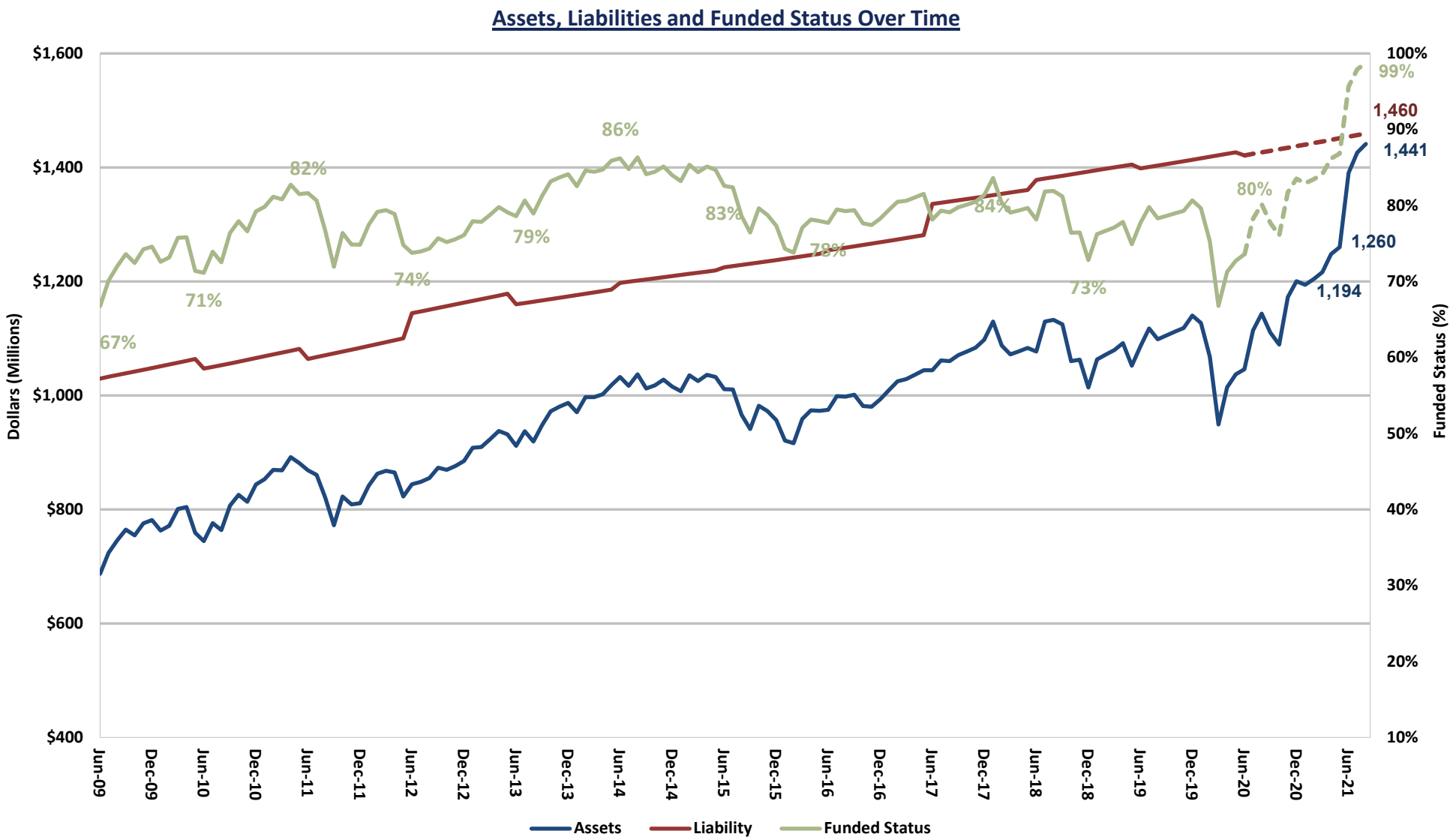
July 1, 2021 To August 31, 2021

Financial Reconciliation								
	Market Value 07/01/2021	Net Transfers	Contributions	Distributions	Management Fees	Income	Apprec./ Deprec.	Market Value 08/31/2021
Total Fund	1,390,335,588	-	31,093,069	-4,317,000	-270,451	2,460,678	21,939,144	1,441,241,028
Global Equity	779,940,629	-	-	-	-76,501	-	23,477,185	803,341,313
SSgA MSCI ACWI IMI Index Fund	779,940,629	-	-	-	-76,501	-	23,477,185	803,341,313
Fixed Income	428,086,879	-4,059,000	-	-	-9,221	403,521	4,305,768	428,727,948
PIMCO Total Return	215,989,678	-4,059,000	-	-	-	403,521	2,324,340	214,658,539
SSgA Bond Market Index	212,097,201	-	-	-	-9,221	-	1,981,429	214,069,409
Real Estate	81,594,793	22,285,534	-	-	-184,729	591,625	1,769,973	106,057,196
JP Morgan Asset Management Strategic Property Fund	45,356,339	-3	-	-	-106,357	263,635	1,283,113	46,796,726
UBS Trumbull Property Fund	36,238,454	-2,714,462	-	-	-76,266	327,989	-327,989	33,447,726
Vanguard Real Estate Index (VGSNX)	-	25,000,000	-	-	-2,106	-	814,850	25,812,744
MLPs	100,706,225	8,550,000	-	-	-	1,465,383	-7,613,131	103,108,478
Harvest MLP	51,807,422	8,550,000	-	-	-	711,081	-3,508,801	57,559,702
Tortoise Capital Advisors	48,898,803	-	-	-	-	754,302	-4,104,329	45,548,776
Cash	7,062	-26,776,534	31,093,069	-4,317,000	-	149	-652	6,094



Employees' Retirement System for the City of Norfolk

Asset Liability Scorecard Net of Fees*



*The dashed liability line and dashed funded status line are not actuarial calculations and are for projections purposes only.

As of July 1, 2019, Total Plan Actuarial Liability (AL) is \$1.398 billion and the Actuarial Value of assets (AVA) is \$1.097 billion for an Actuarial funded ratio (AVA/AL) of 79%. Using the Market Value of Assets (MVA), the Market Funded Ratio (MVA/AL) was approximately 98% in July 2021 and 99% in August 2021.



Employees' Retirement System of the City of Norfolk
Historical Hybrid Composition
As of August 31, 2021

Total Fund Policy

Allocation Mandate	Weight (%)
May-2016	
MSCI AC World IMI (Net)	62.50
Blmbg. U.S. Aggregate Index	37.50

Total Fund Strategy Index

Allocation Mandate	Weight (%)
Jul-2016	
MSCI AC World IMI (Net)	55.00
Blmbg. U.S. Aggregate Index	30.00
NCREIF Fund Index-ODCE (VW) (Net)	7.50
Alerian MLP Index	7.50

Strategy Index is comprised of the returns of the various broad market benchmarks assigned to each manager and weighted to reflect the System's target asset allocation.



Global Equity Policy	
Allocation Mandate	Weight (%)
Oct-1990	
S&P 500 Index	100.00
Jun-2006	
Russell 3000 Index	70.00
MSCI EAFE Index	30.00
Jun-2009	
Russell 3000 Index	70.00
MSCI AC World ex USA (Net)	30.00
Sep-2009	
Russell 3000 Index	60.00
MSCI AC World ex USA (Net)	40.00
May-2016	
MSCI AC World IMI (Net)	100.00

Active Return	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
Alpha	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
Beta	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
Consistency	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
Distributed to Paid In (DPI)	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
Down Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
Downside Risk	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
Excess Return	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
Excess Risk	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
Public Market Equivalent (PME)	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
R-Squared	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
Return	- Compounded rate of return for the period.
Sharpe Ratio	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
Standard Deviation	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
Total Value to Paid In (TVPI)	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
Tracking Error	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
Treynor Ratio	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
Up Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

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