

Investment Performance Review
Period Ending September 30, 2021

Employees' Retirement System of the City of Norfolk





Equities	Index Returns (%)					
	Month	3 M	YTD	1 Year	3 Yr Ann	5 Yr Ann
S&P 500 Total Return	(4.65)	0.58	15.92	30.00	15.99	16.90
Russell Midcap Index	(4.12)	(0.93)	15.17	38.11	14.22	14.39
Russell 2000 Index	(2.95)	(4.36)	12.41	47.68	10.54	13.45
Russell 1000 Growth Index	(5.60)	1.16	14.30	27.32	22.00	22.84
Russell 1000 Value Index	(3.48)	(0.78)	16.14	35.01	10.07	10.94
Russell 3000 Index	(4.49)	(0.10)	14.99	31.88	16.00	16.85
MSCI EAFE NR	(2.90)	(0.45)	8.35	25.73	7.62	8.81
MSCI EM NR	(3.97)	(8.09)	(1.25)	18.20	8.58	9.23

Fixed Income	Index Returns (%)					
	Month	3 M	YTD	1 Year	Mod. Adj. Duration	Yield to Worst
U.S. Aggregate	(0.87)	0.05	(1.56)	(0.90)	6.71	1.56
U.S. Corporate Investment Grade	(1.05)	(0.00)	(1.27)	1.74	8.71	2.13
U.S. Corporate High Yield	(0.01)	0.89	4.53	11.28	3.97	4.04
Global Aggregate	(1.78)	(0.88)	(4.06)	(0.91)	7.53	1.17

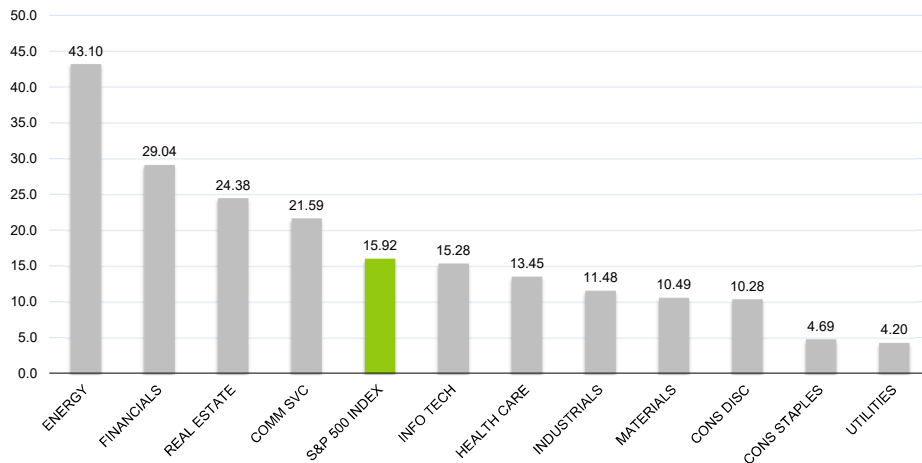
Key Rates	Levels (%)				
	09/30/21	12/31/20	12/31/19	12/31/18	12/31/17
US Generic Govt 3 Mth	0.03	0.06	1.54	2.35	1.38
US Generic Govt 2 Yr	0.28	0.12	1.57	2.49	1.88
US Generic Govt 10 Yr	1.49	0.91	1.92	2.68	2.41
US Generic Govt 30 Yr	2.04	1.64	2.39	3.01	2.74
ICE LIBOR USD 3M	0.13	0.24	1.91	2.81	1.69
Euribor 3 Month ACT/360	(0.55)	(0.55)	(0.38)	(0.31)	(0.33)
Bankrate 30Y Mortgage Rates Na	3.18	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	
L	16.1	15.2	14.3	L	2.8	20.9	38.4	
	18.2	15.2	9.6		M	4.9	17.0	35.5
	22.9	12.4	2.8		S	4.6	19.9	34.5

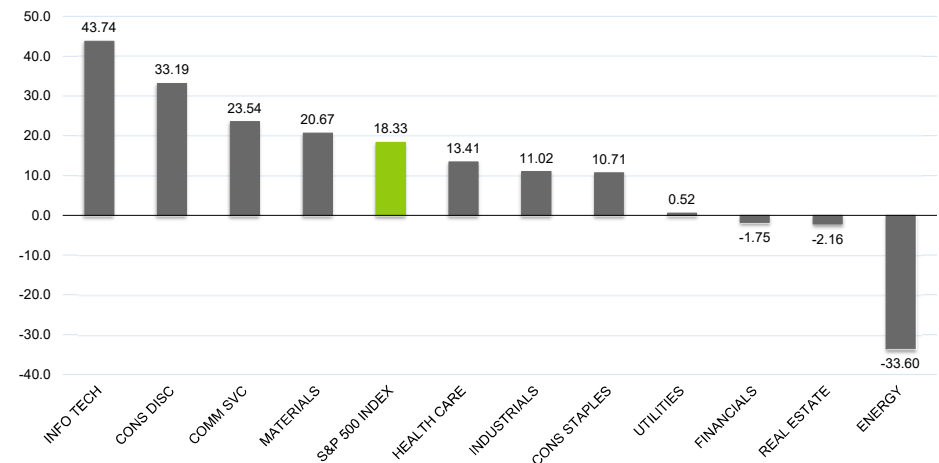
Currencies	Levels		
	09/30/21	12/31/20	12/31/19
Euro Spot	1.16	1.22	1.12
British Pound Spot	1.35	1.37	1.33
Japanese Yen Spot	111.29	103.25	108.61
Swiss Franc Spot	0.93	0.89	0.97

Commodities	Levels		
	09/30/21	12/31/20	12/31/19
Oil	75.03	47.85	53.24
Gasoline	3.19	2.25	2.59
Natural Gas	5.87	2.80	2.41
Gold	1,757.00	1,911.20	1,187.30
Silver	22.05	26.66	16.50
Copper	408.90	352.40	284.55
Corn	536.75	434.75	410.50
BBG Commodity TR Idx	215.17	166.63	172.00

YTD Sector Returns



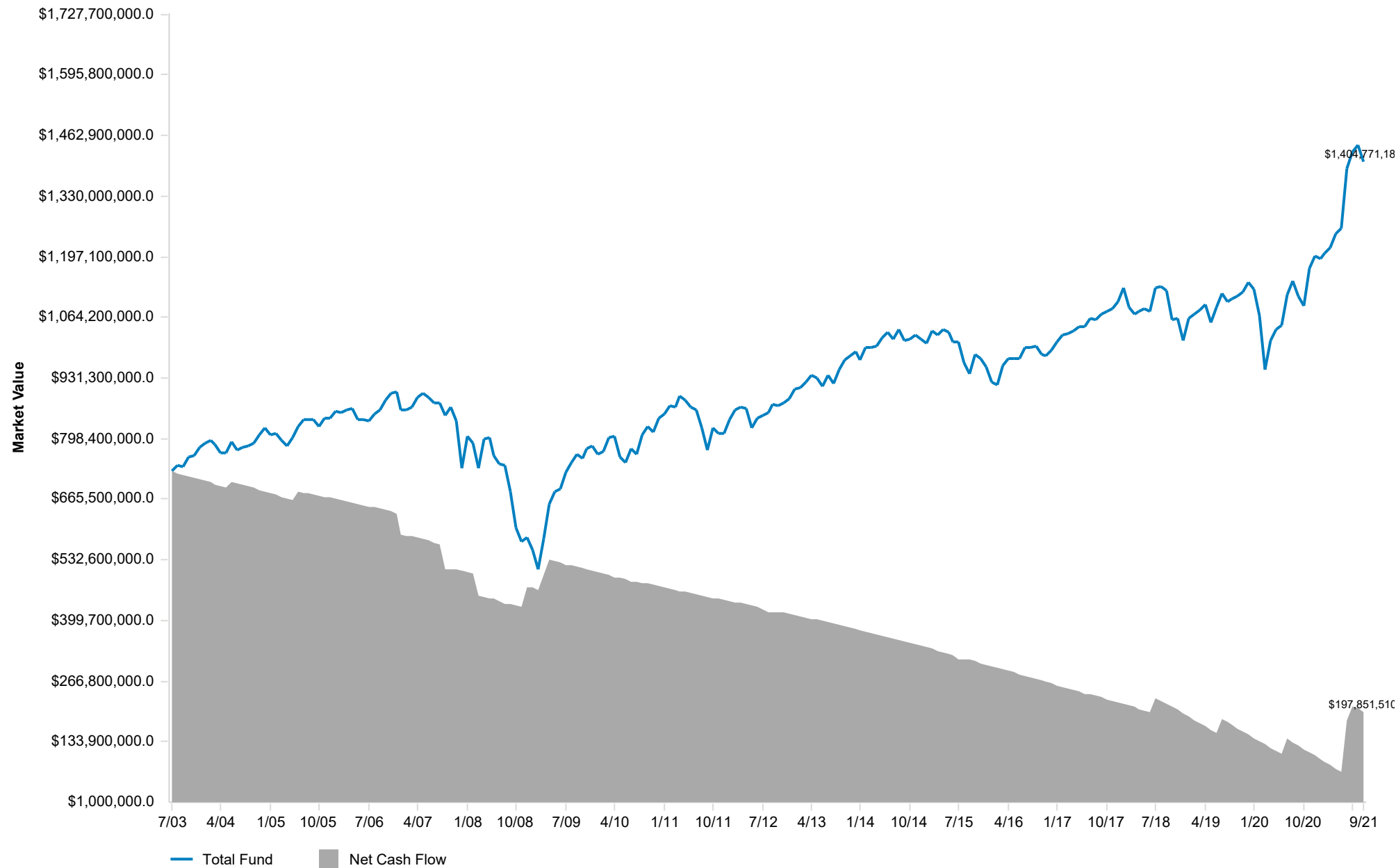
2020 Sector Returns



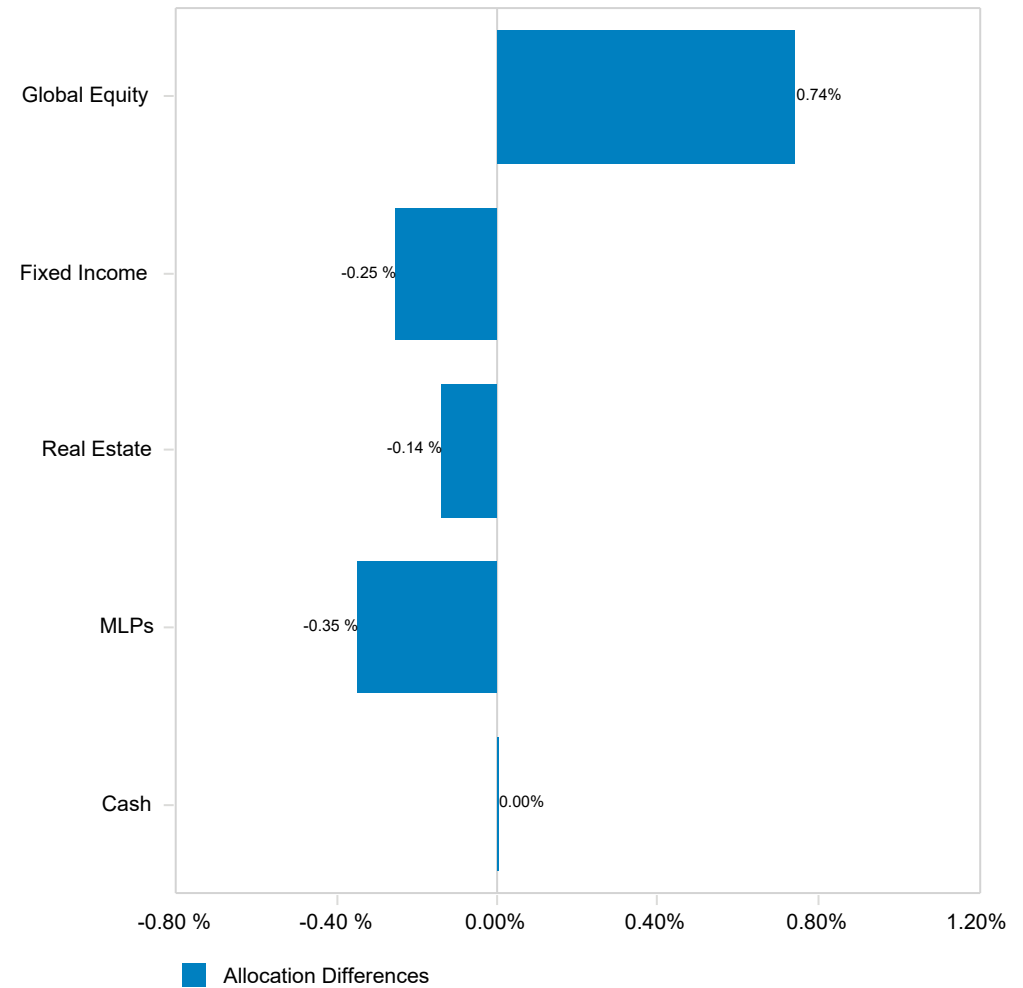
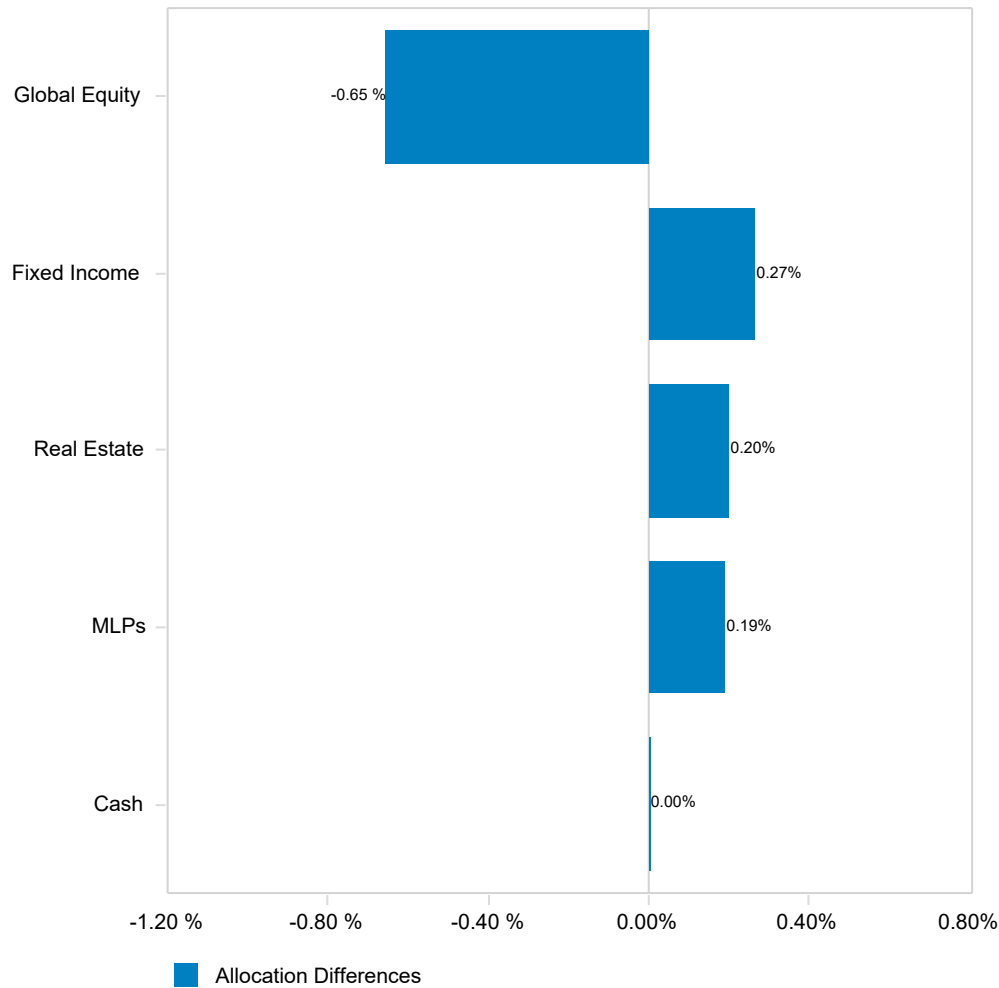
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*Heat maps are displayed utilizing a 9-color scale, with green as the highest return for the time period noted and red as the lowest return for the time period noted. Color scales within each time period are mutually exclusive.

Schedule of Investable Assets



Employees' Retirement System of the City of Norfolk
Asset Allocation vs. Target Allocation
As of September 30, 2021



September 30, 2021				August 31, 2021			
	Market Value \$	Allocation (%)	Target (%)		Market Value \$	Allocation (%)	Target (%)
Global Equity	763,429,269	54.3	55.0	Global Equity	803,341,313	55.7	55.0
Fixed Income	425,166,518	30.3	30.0	Fixed Income	428,727,948	29.7	30.0
Real Estate	108,165,577	7.7	7.5	Real Estate	106,057,196	7.4	7.5
MLPs	108,003,974	7.7	7.5	MLPs	103,108,478	7.2	7.5
Cash	5,844	0.0	0.0	Cash	6,094	0.0	0.0
Total Fund	1,404,771,182	100.0	100.0	Total Fund	1,441,241,028	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	1,404,771,182	100.0	-1.95	-0.29	9.36	-0.29	20.54	12.32	9.03	8.92	7.38	9.16	8.25	Oct-1990
Total Fund Policy (62.5% ACWI/37.5% Agg)			-2.82	-0.66	6.45	-0.66	17.09	13.11	10.15	9.46	7.80	9.05	8.40	
Excess Return			0.87	0.37	2.91	0.37	3.45	-0.79	-1.12	-0.54	-0.42	0.11	-0.15	
 Total Fund Strategy Index			-1.74	-0.49	9.46	-0.49	21.77	12.74	9.53	8.95	7.33	8.89	8.35	
Excess Return			-0.21	0.20	-0.10	0.20	-1.23	-0.42	-0.50	-0.03	0.05	0.27	-0.10	
Composite Returns														
Global Equity	763,429,269	54.3	-3.94	-1.06	12.00	-1.06	29.80	19.49	12.94	13.57	10.62	12.98	9.56	Oct-1990
Global Equity Policy			-3.99	-1.11	11.42	-1.11	28.92	18.85	12.38	13.06	10.15	12.60	9.79	
Excess Return			0.05	0.05	0.58	0.05	0.88	0.64	0.56	0.51	0.47	0.38	-0.23	
Fixed Income	425,166,518	30.3	-0.83	0.26	-1.20	0.26	-0.54	3.51	5.45	3.26	3.52	3.48	5.86	Oct-1990
Blmbg. U.S. Aggregate Index			-0.87	0.05	-1.56	0.05	-0.90	2.97	5.35	2.94	3.26	3.01	5.78	
Excess Return			0.04	0.21	0.36	0.21	0.36	0.54	0.10	0.32	0.26	0.47	0.08	
Real Estate	108,165,577	7.7	1.99	4.22	8.44	4.22	8.34	3.61	2.73	4.10	5.87	7.33	7.81	Apr-2011
NCREIF Fund Index-ODCE (VW) (Net)			6.42	6.42	12.42	6.42	13.65	6.88	6.13	6.56	7.93	8.92	9.26	
Excess Return			-4.43	-2.20	-3.98	-2.20	-5.31	-3.27	-3.40	-2.46	-2.06	-1.59	-1.45	
MLPs	108,003,974	7.7	4.75	-1.33	37.81	-1.33	71.61	-0.46	-3.32	-1.26	-4.95	-	0.56	Mar-2013
Alerian MLP Index			3.02	-5.71	39.40	-5.71	84.63	-2.35	-4.32	-2.42	-6.89	-	-2.37	
Excess Return			1.73	4.38	-1.59	4.38	-13.02	1.89	1.00	1.16	1.94	-	2.93	
Cash	5,844	0.0												

Employees' Retirement System of the City of Norfolk
Asset Allocation & Performance - (net of fees)
As of September 30, 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	763,429,269	54.3	-3.94	-1.06	11.73	-1.06	29.50	19.35	12.85	13.52	-	-	13.48	May-2016	
MSCI AC World IMI (Net)			-3.99	-1.11	11.42	-1.11	28.92	18.85	12.38	13.06	-	-	13.02		
Excess Return			0.05	0.05	0.31	0.05	0.58	0.50	0.47	0.46	-	-	0.46		
Fixed Income															
PIMCO Total Return	212,943,906	15.2	-0.80	0.45	-0.91	0.45	-0.25	3.96	5.53	3.54	3.75	3.94	6.19	Jan-1991	
Blmbg. U.S. Aggregate Index			-0.87	0.05	-1.56	0.05	-0.90	2.97	5.35	2.94	3.26	3.01	5.66		
Excess Return			0.07	0.40	0.65	0.40	0.65	0.99	0.18	0.60	0.49	0.93	0.53		
SSgA Bond Market Index	212,222,612	15.1	-0.86	0.06	-1.51	0.06	-0.84	3.01	5.39	2.97	3.28	3.03	3.87	Jan-2009	
Blmbg. U.S. Aggregate Index			-0.87	0.05	-1.56	0.05	-0.90	2.97	5.35	2.94	3.26	3.01	3.85		
Excess Return			0.01	0.01	0.05	0.01	0.06	0.04	0.04	0.03	0.02	0.02	0.02		
Real Estate															
JP Morgan Asset Management Strategic Property Fund	48,288,973	3.4	3.19	6.47	11.06	6.47	12.94	6.82	5.61	6.04	7.43	8.80	9.22	Apr-2011	
NCREIF Fund Index-ODCE (VW) (Net)			6.42	6.42	12.42	6.42	13.65	6.88	6.13	6.56	7.93	8.92	9.26		
Excess Return			-3.23	0.05	-1.36	0.05	-0.71	-0.06	-0.52	-0.52	-0.50	-0.12	-0.04		
UBS Trumbull Property Fund	35,527,221	2.5	6.22	5.98	9.93	5.98	7.61	2.18	1.01	2.80	4.70	-	5.98	Jan-2012	
NCREIF Fund Index-ODCE (VW) (Net)			6.42	6.42	12.42	6.42	13.65	6.88	6.13	6.56	7.93	-	8.86		
Excess Return			-0.20	-0.44	-2.49	-0.44	-6.04	-4.70	-5.12	-3.76	-3.23	-	-2.88		
Vanguard Real Estate Index (VGSNX)	24,349,383	1.7	-5.67	0.67	-	0.67	-	-	-	-	-	-	0.67	Jul-2021	
Vanguard Spliced REIT Index			-5.65	0.70	-	0.70	-	-	-	-	-	-	0.70		
Excess Return			-0.02	-0.03	-	-0.03	-	-	-	-	-	-	-0.03		
MLPs															
Harvest MLP	60,375,177	4.3	4.89	-0.26	39.70	-0.26	71.09	1.88	-2.12	-0.41	-4.26	-	1.09	Mar-2013	
Alerian MLP Index			3.02	-5.71	39.40	-5.71	84.63	-2.35	-4.32	-2.42	-6.89	-	-2.37		
Excess Return			1.87	5.45	0.30	5.45	-13.54	4.23	2.20	2.01	2.63	-	3.46		
Tortoise Capital Advisors	47,628,798	3.4	4.57	-2.60	36.64	-2.60	73.33	-2.58	-4.36	-2.00	-5.60	-	-0.53	Apr-2013	
Alerian MLP Index			3.02	-5.71	39.40	-5.71	84.63	-2.35	-4.32	-2.42	-6.89	-	-2.99		
Excess Return			1.55	3.11	-2.76	3.11	-11.30	-0.23	-0.04	0.42	1.29	-	2.46		



Employees' Retirement System of the City of Norfolk

Financial Reconciliation

1 Month Ending September 30, 2021

Financial Reconciliation								
	Market Value 09/01/2021	Net Transfers	Contributions	Distributions	Management Fees	Income	Apprec./ Deprec.	Market Value 09/30/2021
Total Fund	1,441,241,028	-	-	-8,400,000	-2,151	1,011,350	-29,079,045	1,404,771,182
Global Equity	803,341,313	-8,400,000	-	-	-	-	-31,512,044	763,429,269
SSgA MSCI ACWI IMI Index Fund	803,341,313	-8,400,000	-	-	-	-	-31,512,044	763,429,269
Fixed Income	428,727,948	-	-	-	-	752,621	-4,314,050	425,166,518
PIMCO Total Return	214,658,539	-	-	-	-	752,621	-2,467,254	212,943,906
SSgA Bond Market Index	214,069,409	-	-	-	-	-	-1,846,797	212,222,612
Real Estate	106,057,196	-	-	-	-2,151	157,456	1,953,076	108,165,577
JP Morgan Asset Management Strategic Property Fund	46,796,726	-	-	-	-	-	1,492,247	48,288,973
UBS Trumbull Property Fund	33,447,726	-	-	-	-	-	2,079,495	35,527,221
Vanguard Real Estate Index (VGSNX)	25,812,744	-	-	-	-2,151	157,456	-1,618,665	24,349,383
MLPs	103,108,478	-	-	-	-	101,299	4,794,198	108,003,974
Harvest MLP	57,559,702	-	-	-	-	94,583	2,720,891	60,375,177
Tortoise Capital Advisors	45,548,776	-	-	-	-	6,715	2,073,307	47,628,798
Cash	6,094	8,400,000	-	-8,400,000	-	-25	-225	5,844



Employees' Retirement System of the City of Norfolk

Financial Reconciliation

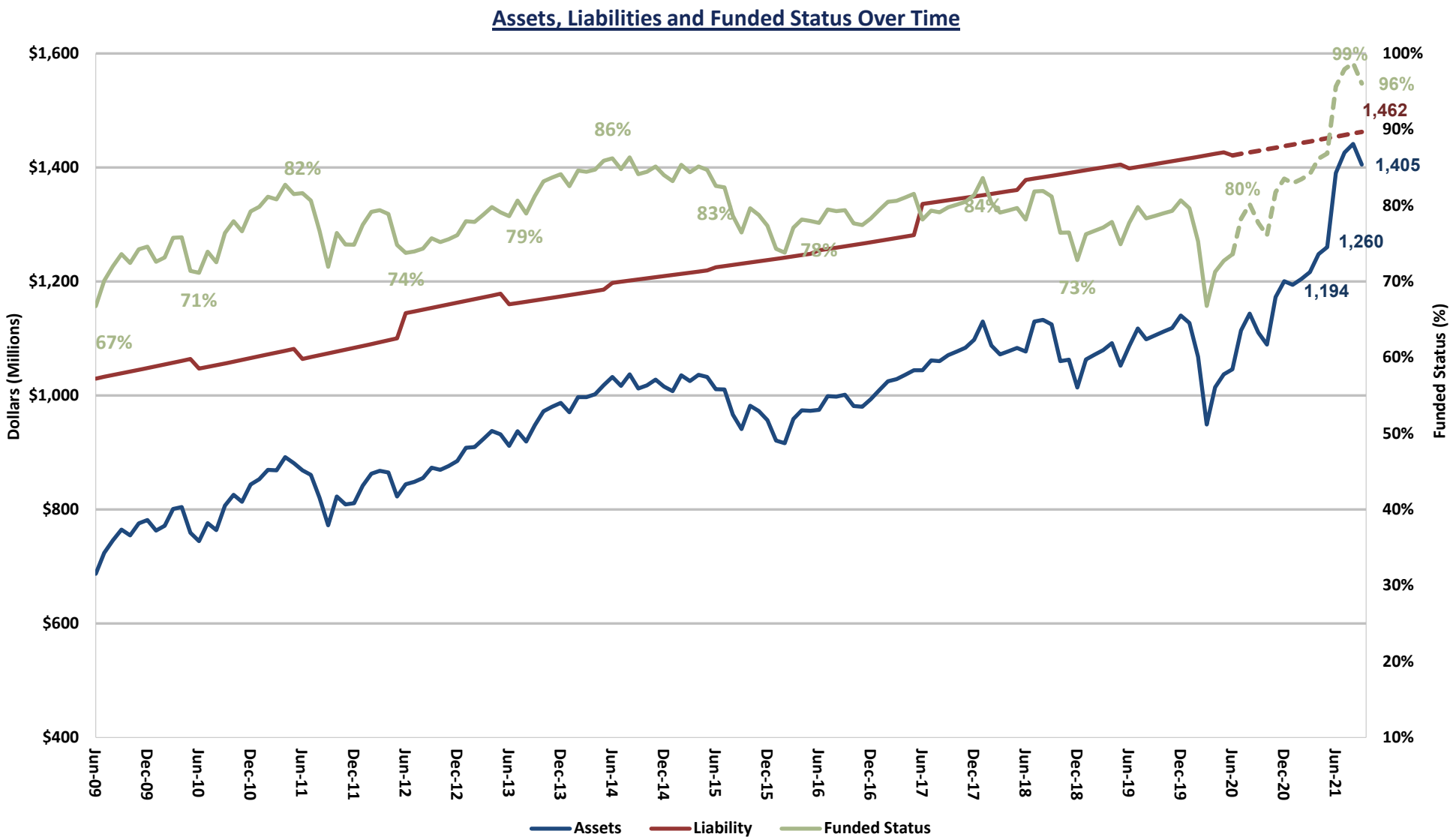
July 1, 2021 To September 30, 2021

Financial Reconciliation								
	Market Value 07/01/2021	Net Transfers	Contributions	Distributions	Management Fees	Income	Apprec./ Deprec.	Market Value 09/30/2021
Total Fund	1,390,335,588	-	31,093,069	-12,717,000	-272,602	3,472,028	-7,139,901	1,404,771,182
Global Equity	779,940,629	-8,400,000	-	-	-76,501	-	-8,034,859	763,429,269
SSgA MSCI ACWI IMI Index Fund	779,940,629	-8,400,000	-	-	-76,501	-	-8,034,859	763,429,269
Fixed Income	428,086,879	-4,059,000	-	-	-9,221	1,156,142	-8,282	425,166,518
PIMCO Total Return	215,989,678	-4,059,000	-	-	-	1,156,142	-142,914	212,943,906
SSgA Bond Market Index	212,097,201	-	-	-	-9,221	-	134,632	212,222,612
Real Estate	81,594,793	22,285,534	-	-	-186,880	749,080	3,723,049	108,165,577
JP Morgan Asset Management Strategic Property Fund	45,356,339	-3	-	-	-106,357	263,635	2,775,359	48,288,973
UBS Trumbull Property Fund	36,238,454	-2,714,462	-	-	-76,266	327,989	1,751,506	35,527,221
Vanguard Real Estate Index (VGSNX)	-	25,000,000	-	-	-4,257	157,456	-803,816	24,349,383
MLPs	100,706,225	8,550,000	-	-	-	1,566,682	-2,818,933	108,003,974
Harvest MLP	51,807,422	8,550,000	-	-	-	805,665	-787,910	60,375,177
Tortoise Capital Advisors	48,898,803	-	-	-	-	761,017	-2,031,023	47,628,798
Cash	7,062	-18,376,534	31,093,069	-12,717,000	-	124	-876	5,844



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 99% in August 2021 and 96% in September 2021.



Employees' Retirement System of the City of Norfolk
Historical Hybrid Composition
As of September 30, 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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