



Pennsylvania Municipal Retirement System

Executive Summary (Finalized) June 2020

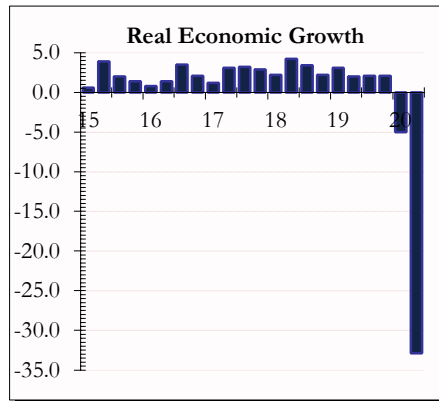


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ECONOMIC ENVIRONMENT

Stabilizing?

The first half of 2020 has been a tale of two markets. Q1 2020 was marked by unprecedented volatility as the coronavirus pandemic



spread globally. The quarter culminated in the fastest descent into a bear market in the history of the United States. The second quarter, however, turned out to be the best quarter for domestic equity markets in over 20 years. Aggressive fiscal stimulus, rapid Fed policy

action, vaccine and therapeutics optimism, and faster-than-expected rebounds in economic data contributed to strong performance.

While equity markets have rebounded sharply, with broad market indices hovering near all-time highs, the state of the economy remains varied. Advance estimates of Q2 2020 GDP from the U.S. Bureau of Economic Analysis decreased at an annual rate of 32.9%.

Several data points indicate that we may be on the path to a V-shaped recovery:

- The U.S. manufacturing ISM for June was strong, coming in at 52.6, up from 43.1 in May, and ahead of Wall Street estimates of 49.8. Figures over 50 represent expansion.
- The housing market has remained stunningly resilient.

- U.S. retail sales rose 17% month-over-month in May.
- Private-sector payrolls rose by 2.4 million in June according to the ADP National Employment Report and Moody's Analytics.

There are indications though that the headline data and substantial stimulus has masked the real underlying problems in the economy:

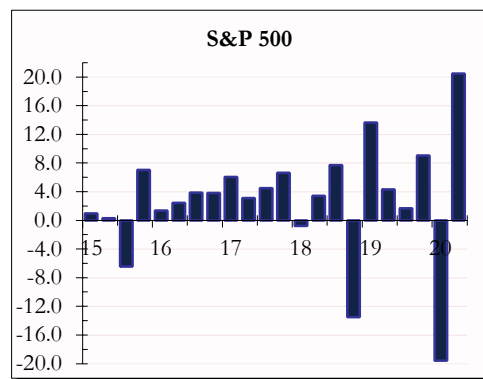
- Unemployment in the United States has been, and remains, in the double digits for three months straight. The economy lost approximately 13 million jobs throughout Q2.
- More than 180 companies in the S&P 500 have withdrawn their forecasts for 2020, according to FactSet. Only 49 companies have issued guidance for the second quarter, the lowest since 2006.
- Incomes in the United States have been supported, thus far, by stimulus checks and unusually generous unemployment benefits, which are due to expire at the end of July. If these payments are not maintained, there could be a significant reduction in household incomes in the second half of the year.
- In the U.S., the number of infections is rising again.

Full-year estimates for GDP are between -4% and -10%, according to Bloomberg.

DOMESTIC EQUITIES

Duck Market

Calm on the surface, but turbulent underneath, the United States equity markets rebounded sharply and outperformed all other



major equity markets. However, while on the surface, domestic equity markets seem to be pricing in a V-shaped economic recovery, sector and sub-sector performance tells a much more differentiated story.

For example, online retailers are up substantially on the year, while department stores are down sharply with some declaring outright bankruptcy. Many of the worst-performing sectors in the first quarter continued to lag in the Q2 rally, the exception being energy stocks. The energy sector, the single worst-performing industry in Q1, rebounded sharply as oil prices partially recovered.

Growth markets continue to outpace their value counterparts. Most of the growth performance advantage can be explained by comparing the performance of the technology sector to the financial industry, the dominant sectors in their respective benchmarks. The technology sector gained 31.3% in the second quarter, bringing its year-to-date return to 15.9%. In comparison, the financial sector gained only 16.3%, bringing its year-to-date return to -16.4%. The differential is 15.0% for the quarterly returns, and 32.3% year-to-date.

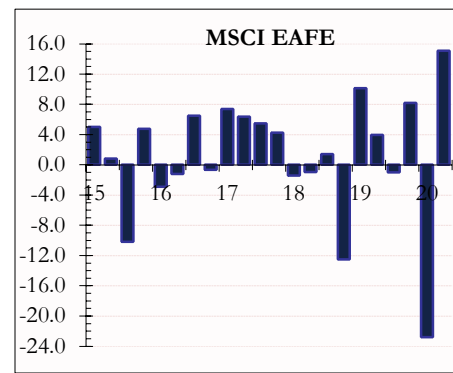
While the growth factor continues to outpace the struggling value factor, there was a slight change in another well-known factor: size. For the first time in close to three years, small capitalization companies outperformed their larger counterparts. Small-capitalization stocks, as measured by the Russell 2000, outperformed the Russell 1000 by 3.6%. This divergence was peculiar, given the indices differing technology, energy, and financial exposures.

The sectors that tend to be more income-focused and “risk-off” underperformed in Q2. U.S. REITs gained 9.6% as fears of delinquencies hindered them from keeping pace with the broad market. Utilities were the worst-performing sector in the quarter, with the largest companies holding up best. Large capitalization utilities were up 4% compared to their smaller peers who lost 0.5%.

INTERNATIONAL EQUITIES

Bounce Back

Developed international stocks, as measured by the MSCI EAFE, made substantial gains during the quarter (+15.2%). It was a solid

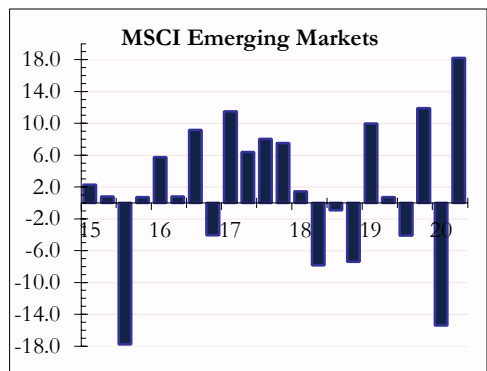


quarter for equities as central banks and governments provided enormous amounts of stimulus, and economies started to reopen. All but one country among those in the EAFE index saw positive returns over the quarter. The five most heavily weighted

countries in the index saw gains above 9%. Their combined weighting of 70% bolstered the total return.

The Eurozone did well as countries began to lift lockdown restrictions. Germany gained 27.4%, as the government announced a fresh stimulus of €130 billion to jumpstart the economy. This round will bring its total stimulus to €1.2 trillion in 2020, roughly equivalent to 35% of 2019 GDP.

Emerging Market equities gained 18.1% in Q2 2020 (as measured by the MSCI Emerging Markets index), 2.9% more than their more developed international peers.



This was the index's most substantial quarterly return in over a decade. The top five countries by weighting, which total 73% of the index, all gained more than 16% in the quarter.

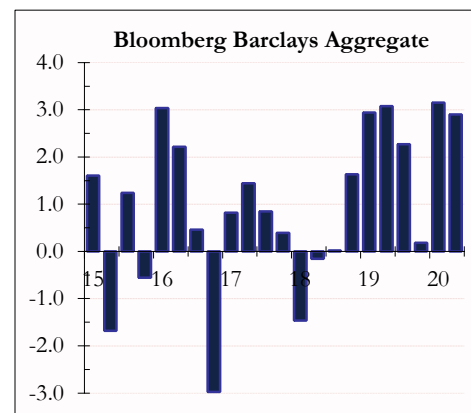
Exporter markets Thailand (+23.8%) and Taiwan (+21.4%) outperformed the general index on the hope of a recovery in global exports in the second half of the year.

BOND MARKET

Risk On

The broad U.S. fixed income market, as measured by the Bloomberg Barclays Aggregate, delivered positive returns in Q2, increasing 2.9%. Credit spreads tightened as government

programs started bearing fruit, and fundamental concerns were pushed aside. The sectors that were hardest hit in Q1 saw the



largest rebound. High yield securities gained 10.2%, as investors' appetite for yield assuaged fears of more delinquencies. The laggards for the quarter were the securities that tend to be the most risk-off, treasuries (+0.5%) and mortgage-backed securities (+0.7%).

Yields along the treasury curve stayed relatively range-bound in Q2. For 5-year notes, the yield decreased 8 basis points to 0.29%. While with the 30-year notes, yields increased by 6 basis points to 1.41%.

The global aggregate index was up 3.3% while emerging market debt surged 10.0%.

A decline of 22 basis points to 1.26% for Italian yields was a surprise in the international bond market. Italian bonds benefited from a coordinated effort by Eurozone countries to support member countries.

CASH EQUIVALENTS

Effectively Zero

The three-month T-Bill returned 0.03% for the second quarter. Return expectations are as low as they have ever been.

Economic Statistics

	Current Quarter	Previous Quarter
GDP*	-32.9%	-5.0%
Unemployment	11.2%	4.4%
CPI All Items Year/Year	0.6%	1.5%
Fed Funds Rate	0.25%	0.25%
Industrial Capacity	68.6%	73.5%
U.S. Dollars per Euro	1.12	1.10

Major Index Returns

Index	Quarter	12 Months
Russell 3000	22.0%	6.5%
S&P 500	20.5%	7.5%
Russell Midcap	24.6%	-2.3%
Russell 2000	25.4%	-6.7%
MSCI EAFE	15.1%	-4.7%
MSCI Emg Markets	18.2%	-3.0%
NCREIF ODCE	-1.6%	3.8%
U.S. Aggregate	2.9%	8.7%
90 Day T-bills	0.0%	1.2%

Domestic Equity Return Distributions

Quarter	Trailing Year		
	VAL	COR	GRO
LC	14.3	21.8	27.8
MC	19.9	24.6	30.3
SC	18.9	25.4	30.6

Trailing Year	Quarter		
	VAL	COR	GRO
LC	-8.9	7.5	23.3
MC	-11.8	-2.3	11.9
SC	-17.5	-6.7	3.4

Market Summary

- Global Equity markets rebound sharply
- Growth continues to outpace value
- Small-cap outpaces Large-Cap
- Credit spreads tighten
- Estimates of Q2 GDP show a large contraction

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System was valued at \$2,649,623,811, representing an increase of \$291,147,259 from the March quarter's ending value of \$2,358,476,552. Last quarter, the Fund posted withdrawals totaling \$25,062,863, which partially offset the portfolio's net investment return of \$316,210,122. Income receipts totaling \$6,650,024 plus net realized and unrealized capital gains of \$309,560,098 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the total portfolio returned 13.5%, which was 1.3% above the Shadow Index's return of 12.2% and ranked in the 30th percentile of the Public Fund universe. Over the trailing year, the portfolio returned 2.5%, which was 0.7% above the benchmark's 1.8% return, ranking in the 63rd percentile. Since December 1985, the portfolio returned 8.6% annualized. The Shadow Index returned an annualized 8.9% over the same period.

Large Cap Equity

The large cap equity portion of the portfolio returned 23.1% last quarter; that return was 2.6% greater than the S&P 500 Index's return of 20.5% and ranked in the 30th percentile of the Large Cap universe. Over the trailing twelve-month period, this component returned 8.5%, 1.0% above the benchmark's 7.5% performance, ranking in the 35th percentile. Since December 1985, this component returned 10.9% on an annualized basis. The S&P 500 returned an annualized 10.6% during the same period.

Small Cap Equity

During the second quarter, the small cap equity component returned 26.1%, which was 0.7% greater than the Russell 2000 Index's return of 25.4% and ranked in the 45th percentile of the Small Cap universe. Over the trailing year, the small cap equity portfolio returned -8.5%, which was 1.8% less than the benchmark's -6.7% return, and ranked in the 52nd percentile.

International Equity

The international equity portfolio gained 20.4% in the second quarter, 5.3% above the Blended International Index's return of 15.1% and ranked in the 32nd percentile of the International Equity universe. Over the trailing year, this segment returned 1.8%, 6.5% above the benchmark's -4.7% performance, and ranked in the 29th percentile.

Emerging Markets Equity

The emerging markets equity segment returned 19.0% during the second quarter; that return was 0.8% above the Blended Emerging Markets Index's return of 18.2% and ranked in the 53rd percentile of the Emerging Markets universe. Over the trailing twelve months, the emerging markets equity portfolio returned -3.0%, equal to the benchmark's -3.0% performance, ranking in the 45th percentile.

Real Estate

For the second quarter, the real estate segment lost 1.9%, which was 0.9% below the NCREIF Property Index's return of -1.0%. Over the trailing year, this segment returned 0.8%, which was 1.9% below the benchmark's 2.7% performance. Since December 1985, this component returned 6.8% on an annualized basis, while the NCREIF Property Index returned an annualized 7.7% over the same period.

Fixed Income

During the second quarter, the fixed income component gained 3.0%, which was 0.1% greater than the Bloomberg Barclays Aggregate Index's return of 2.9% and ranked in the 84th percentile of the Core Fixed Income universe. Over the trailing twelve months, the fixed income portfolio returned 8.8%, which was 0.1% above the benchmark's 8.7% performance, ranking in the 67th percentile. Since December 1985, this component returned 6.5% annualized. The Bloomberg Barclays Aggregate Index returned an annualized 6.5% over the same time frame.

ASSET ALLOCATION

On June 30, 2020, the allocation of assets was as follows*:

TOTAL PORTFOLIO	100.0%	\$2,649,623,811
Domestic Large Cap	25.4%	\$672,849,167
Domestic Small Cap	15.2%	\$401,745,302
Total Domestic Equity	40.6%	\$1,074,594,469
International Developed Markets	14.8%	\$391,042,620
International Emerging Markets	9.5%	\$250,547,615
Total International Equity	24.2%	\$641,590,235
Total Equity	64.8%	\$1,716,184,704
Real Estate	18.6%	\$491,882,776
Fixed Income	15.5%	\$409,985,424
Cash and Equivalents	1.2%	\$31,570,907

* Numbers may not add to 100% due to rounding.

EXECUTIVE SUMMARY - GROSS OF FEES

PERFORMANCE SUMMARY

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year	Since 12/85
Total Portfolio	13.5	-3.9	2.5	6.5	6.6	9.0	8.6
<i>PUBLIC FUND RANK</i>	(30)	(76)	(63)	(29)	(18)	(19)	----
Shadow Index	12.2	-4.5	1.8	5.3	5.9	8.6	8.9
Domestic Equity	24.2	-6.3	2.5	9.2	8.9	13.0	----
<i>DOMESTIC EQUITY RANK</i>	(40)	(43)	(41)	(39)	(40)	(45)	----
Russell 3000	22.0	-3.5	6.5	10.0	10.0	13.7	10.4
Large Cap Equity	23.1	-2.1	8.5	13.3	12.0	14.9	10.9
<i>LARGE CAP RANK</i>	(30)	(35)	(35)	(29)	(28)	(29)	----
S&P 500	20.5	-3.1	7.5	10.7	10.7	14.0	10.6
Small Cap Equity	26.1	-14.5	-8.5	1.7	3.5	10.8	----
<i>SMALL CAP RANK</i>	(45)	(49)	(52)	(50)	(59)	(55)	----
Russell 2000	25.4	-13.0	-6.7	2.0	4.3	10.5	8.8
International Equity	20.4	-7.7	1.8	4.7	5.5	8.3	----
<i>INTERNATIONAL EQUITY RANK</i>	(32)	(36)	(29)	(28)	(28)	(28)	----
Int'l Index	15.1	-11.1	-4.7	1.3	2.5	6.2	----
S&P BMI Ex US	16.8	-10.8	-4.0	1.3	2.9	6.4	----
MSCI World Ex US	14.6	-12.7	-6.7	0.8	2.2	5.8	6.9
MSCI EAFE	15.1	-11.1	-4.7	1.3	2.5	6.2	7.3
Emerging Markets Equity	19.0	-9.4	-3.0	2.1	3.0	3.2	----
<i>EMERGING MARKETS RANK</i>	(53)	(43)	(45)	(41)	(47)	(83)	----
EM Index	18.2	-9.7	-3.0	2.3	3.2	3.6	----
S&P BMI EMGM	19.3	-10.0	-3.8	2.7	3.2	3.8	----
MSCI Emg Mkts	18.2	-9.7	-3.0	2.3	3.2	3.6	----
Real Estate	-1.9	-0.8	0.8	5.3	6.8	8.4	6.8
NCREIF NPI	-1.0	-0.3	2.7	5.4	6.8	9.7	7.7
Aggregate Index	2.9	6.1	8.7	5.3	4.3	3.8	6.5
Fixed Income	3.0	6.2	8.8	5.4	4.3	3.8	6.5
<i>CORE FIXED INCOME RANK</i>	(84)	(43)	(67)	(81)	(87)	(92)	----
Aggregate Index	2.9	6.1	8.7	5.3	4.3	3.8	6.5

ASSET ALLOCATION

Large Cap Equity	25.4%	\$ 672,849,167
Small Cap	15.2%	401,745,302
Int'l Equity	14.8%	391,042,620
Emerging Markets	9.5%	250,547,615
Real Estate	18.6%	491,882,776
Fixed Income	15.5%	409,985,424
Cash	1.2%	31,570,907
Total Portfolio	100.0%	2,649,623,811

INVESTMENT RETURN

Market Value 3/2020	\$ 2,358,476,552
Contribs / Withdrawals	- 25,062,863
Income	6,650,024
Capital Gains / Losses	309,560,098
Market Value 6/2020	\$ 2,649,623,811

EXECUTIVE SUMMARY - NET OF FEES**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Total Portfolio - Net	13.4	-4.2	2.1	6.0	6.1	8.5
Shadow Index	12.2	-4.5	1.8	5.3	5.9	8.6
Domestic Equity - Net	24.0	-6.6	2.0	8.7	8.4	12.5
Russell 3000	22.0	-3.5	6.5	10.0	10.0	13.7
Large Cap Equity - Net	22.9	-2.4	8.0	12.7	11.5	14.5
S&P 500	20.5	-3.1	7.5	10.7	10.7	14.0
Small Cap Equity - Net	26.0	-14.8	-9.0	1.1	2.9	10.3
Russell 2000	25.4	-13.0	-6.7	2.0	4.3	10.5
International Equity - Net	20.3	-7.9	1.4	4.2	5.0	7.8
Int'l Index	15.1	-11.1	-4.7	1.3	2.5	6.2
S&P BMI Ex US	16.8	-10.8	-4.0	1.3	2.9	6.4
MSCI World Ex US	14.6	-12.7	-6.7	0.8	2.2	5.8
MSCI EAFE	15.1	-11.1	-4.7	1.3	2.5	6.2
Emerging Markets Equity - Net	19.0	-9.5	-3.1	2.0	2.9	3.1
EM Index	18.2	-9.7	-3.0	2.3	3.2	3.6
S&P BMI EMGM	19.3	-10.0	-3.8	2.7	3.2	3.8
MSCI Emg Mkts	18.2	-9.7	-3.0	2.3	3.2	3.6
Real Estate - Net	-2.1	-1.3	-0.1	4.3	5.8	7.4
NCREIF NPI	-1.0	-0.3	2.7	5.4	6.8	9.7
Aggregate Index	2.9	6.1	8.7	5.3	4.3	3.8
Fixed Income - Net	3.0	6.1	8.7	5.3	4.3	3.8
Aggregate Index	2.9	6.1	8.7	5.3	4.3	3.8

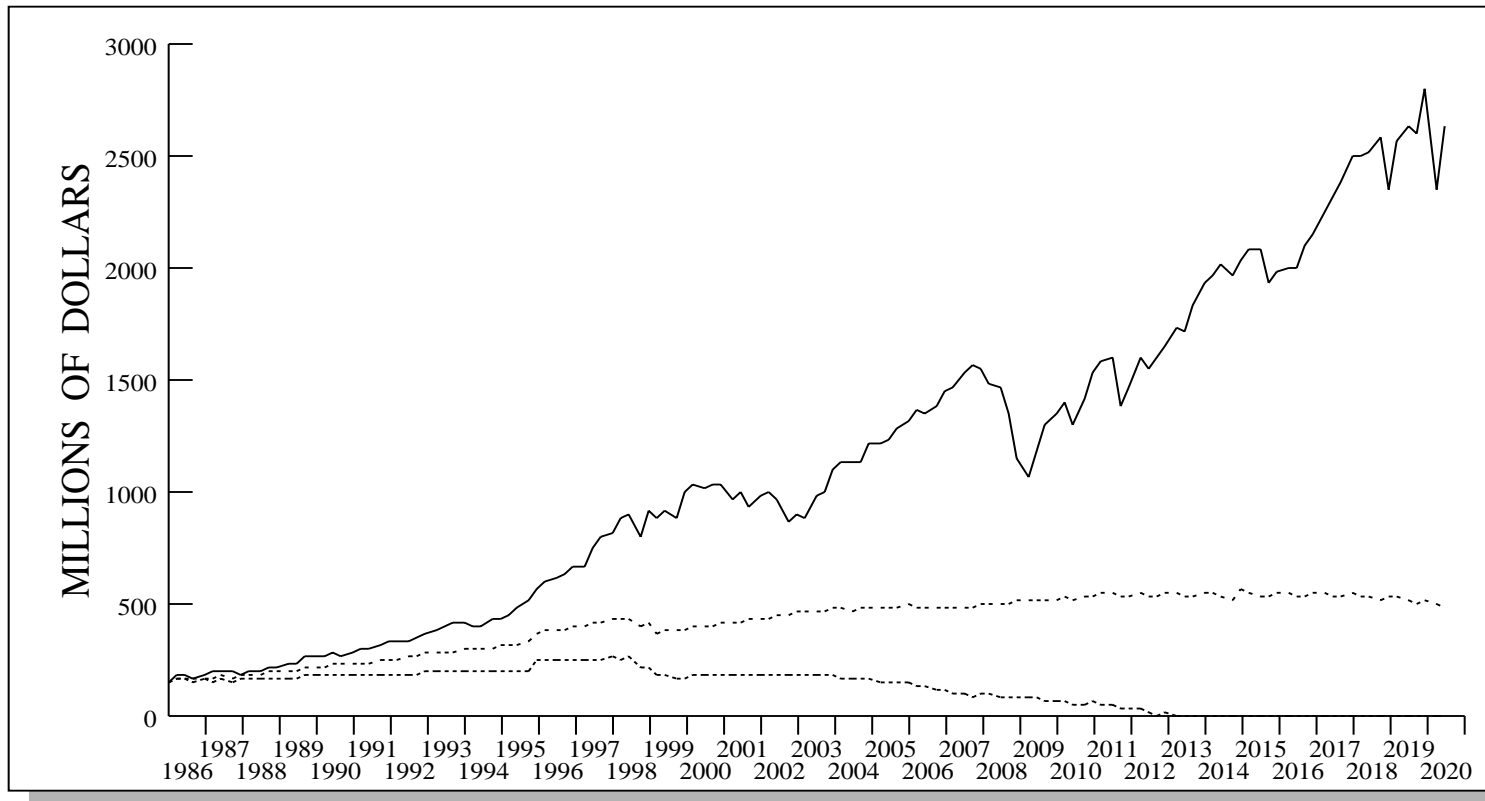
ASSET ALLOCATION

Large Cap Equity	25.4%	\$ 672,849,167
Small Cap	15.2%	401,745,302
Int'l Equity	14.8%	391,042,620
Emerging Markets	9.5%	250,547,615
Real Estate	18.6%	491,882,776
Fixed Income	15.5%	409,985,424
Cash	1.2%	31,570,907
Total Portfolio	100.0%	2,649,623,811

INVESTMENT RETURN

Market Value 3/2020	\$ 2,358,476,552
Contribs / Withdrawals	- 25,062,863
Income	6,650,024
Capital Gains / Losses	309,560,098
Market Value 6/2020	\$ 2,649,623,811

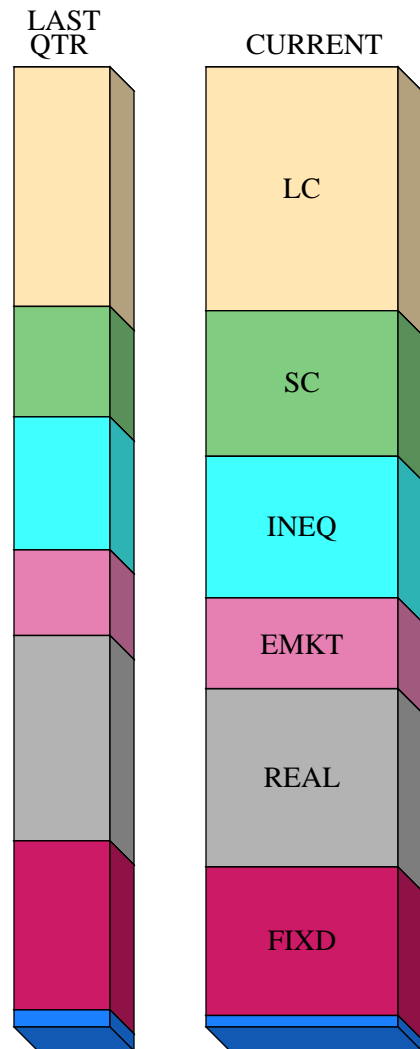
INVESTMENT GROWTH



— ACTUAL RETURN
 - - - 5.25%
 0.0%

VALUE ASSUMING
 5.25% RETURN \$ 493,339,691

	LAST QUARTER	PERIOD 12/85 - 6/20
BEGINNING VALUE	\$ 2,358,476,552	\$ 162,395,431
NET CONTRIBUTIONS	- 25,062,863	-414,574,318
<u>INVESTMENT RETURN</u>	<u>316,210,122</u>	<u>2,901,802,698</u>
ENDING VALUE	\$ 2,649,623,811	\$ 2,649,623,811
INCOME	6,650,024	581,505,405
<u>CAPITAL GAINS (LOSSES)</u>	<u>309,560,098</u>	<u>2,320,297,293</u>
INVESTMENT RETURN	316,210,122	2,901,802,698



	<u>VALUE</u>	<u>PERCENT</u>	<u>TARGET</u>	<u>DIFFERENCE</u> <u>+ / -</u>
■ LARGE CAP EQUITY	\$ 672, 849, 167	25.4%	25.0%	0.4%
■ SMALL CAP EQUITY	401, 745, 302	15.2%	15.0%	0.2%
■ INTERNATIONAL EQUITY	391, 042, 620	14.8%	15.0%	-0.2%
■ EMERGING MARKETS EQUITY	250, 547, 615	9.5%	10.0%	-0.5%
■ REAL ESTATE	491, 882, 776	18.6%	20.0%	-1.4%
■ FIXED INCOME	409, 985, 424	15.5%	15.0%	0.5%
■ CASH & EQUIVALENT	31, 570, 907	1.2%	0.0%	1.2%
TOTAL FUND	\$ 2, 649, 623, 811	100.0%		

**PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
ALLOCATIONS & TARGETS AS OF JUNE 2020**

Manager	Target	Market Value	%	+ / -	Market Value Ex-cash	%	+ / -
Total Portfolio	-	\$2,649,623,811	100%		\$2,649,623,811	100%	
Large Cap	25	682,385,366	25.8	0.8	672,849,167	25.4	0.4
Eagle		148,169,600	5.6		143,972,170	5.4	
Federated		2	0.0		0	0.0	
LSV Large Cap		143,936,827	5.4		143,333,415	5.4	
Polen		221,955,072	8.4		217,464,168	8.2	
SSgA S&P 500		113,121,142	4.3		113,121,142	4.3	
William Blair		55,202,723	2.1		54,958,272	2.1	
Small Cap	15	405,987,052	15.3	0.3	401,745,302	15.2	0.2
AMI		37,442,685	1.4		36,783,720	1.4	
Copeland		40,739,295	1.5		39,571,353	1.5	
Emerald		69,869,615	2.6		68,224,236	2.6	
LSV Small Cap		56,589,070	2.1		56,463,587	2.1	
Smith, Graham & Co		63,090,367	2.4		62,446,386	2.4	
SSgA Russell 2000		138,256,020	5.2		138,256,020	5.2	
International Equity	15	402,709,708	15.2	0.2	391,042,620	14.8	-0.2
GlobeFlex		4,292	0.0		4,292	0.0	
HGK		122,180,682	4.6		113,713,514	4.3	
Jarislowsky Fraser		303,979	0.0		303,935	0.0	
Johnston		125,362,457	4.7		122,162,581	4.6	
Mercator		18,151	0.0		18,151	0.0	
SSgA International		154,837,145	5.8		154,837,145	5.8	
WHV		3,002	0.0		3,002	0.0	
Emerging Markets	10	250,547,615	9.5	-0.5	250,547,615	9.5	-0.5
SSgA Emerging Mkts		250,547,615	9.5		250,547,615	9.5	
Real Assets	20	491,882,776	18.6	-1.4	491,882,776	18.6	-1.4
Forest		132,018,482	5.0		132,018,482	5.0	
PRISA I		51,721,737	2.0		51,721,737	2.0	
PRISA II		103,552,732	3.9		103,552,732	3.9	
TIAA N. Front St.		2,311,116	0.1		2,311,116	0.1	
TIAA CREF		202,278,709	7.6		202,278,709	7.6	
Fixed Income	15	409,985,424	15.5	0.5	409,985,424	15.5	0.5
SSgA BC Aggregate		409,985,424	15.5		409,985,424	15.5	
Cash & Equivalents	0	6,125,870	0.2	0.2	31,570,907	1.2	1.2
BNY Cash		947,803	0.0		947,803	0.0	
STIP Cash		5,169,338	0.2		5,169,338	0.2	
Abel Noser Transitional		8,729	0.0		0	0.0	
Manager Cash		n/a	-		25,453,766	1.0	

MANAGER QUARTERLY FEE SUMMARY

ALL FEES ARE ESTIMATED / ACCRUED

PORTFOLIO	TOTAL RETURN (GROSS OF FEES)	FEE	% FEE
AMI	32.4%	\$58,350	0.21%
Copeland	16.1%	\$74,025	0.21%
Eagle	19.4%	\$273,921	0.22%
Emerald	32.6%	\$82,393	0.16%
Forest	-1.3%	\$243,565	0.18%
Hardman Johnston	25.6%	\$180,966	0.18%
HGK	19.2%	\$195,057	0.19%
LSV Large Cap	18.7%	\$137,484	0.11%
LSV Small Cap	22.3%	\$81,285	0.18%
Polen	27.6%	\$217,554	0.10%
PRISA SA	-1.1%	\$123,766	0.24%
PRISA II SA	-2.4%	\$293,286	0.28%
Smith, Graham & Co	26.7%	\$109,302	0.22%
SSgA	12.1%	\$121,535	0.01%
SSgA S&P 500	20.5%	\$8,194	0.02%
SSgA Russell 2000	25.4%	\$13,251	0.02%
SSgA World Ex-US	15.5%	\$21,877	0.02%
SSgA Emerging Markets	19.0%	\$46,179	0.02%
SSgA Bond Market	3.0%	\$32,034	0.01%
TIAA CREF	-2.3%	\$469,710	0.22%
TIAA 1721 N. Front St.	1.7%	\$12,500	0.54%
William Blair*	----	\$44,190	0.08%

*William Blair was funded in May.

MANAGER PERFORMANCE SUMMARY - GROSS OF FEES

Portfolio	(Universe)	QTR	CYTD	1 Year	3 Years	5 Years	10 Years	Inception	
Composite	(Public Fund)	13.5 (30)	-3.9 (76)	2.5 (63)	6.5 (29)	6.6 (18)	9.0 (19)	8.6 ----	12/85
<i>Shadow Index</i>		<i>12.2 ----</i>	<i>-4.5 ----</i>	<i>1.8 ----</i>	<i>5.3 ----</i>	<i>5.9 ----</i>	<i>8.6 ----</i>	<i>8.9 ----</i>	<i>12/85</i>
SSgA	(Balanced)	12.1 (80)	-2.8 (46)	2.7 (75)	3.8 (72)	4.1 (78)	4.8 (92)	6.3 ----	03/97
<i>Shadow Index</i>		<i>11.4 ----</i>	<i>-3.4 ----</i>	<i>2.1 ----</i>	<i>3.7 ----</i>	<i>4.0 ----</i>	<i>5.0 ----</i>	<i>7.0 ----</i>	<i>03/97</i>
Polen	(LC Growth)	27.6 (39)	11.1 (33)	24.0 (21)	22.6 (14)	19.0 (5)	---- ----	18.0 (6)	09/10
<i>Russell 1000G</i>		<i>27.8 ----</i>	<i>9.8 ----</i>	<i>23.3 ----</i>	<i>19.0 ----</i>	<i>15.9 ----</i>	<i>17.2 ----</i>	<i>16.2 ----</i>	<i>09/10</i>
Eagle	(LC Value)	19.4 (28)	-9.0 (19)	0.1 (20)	9.3 (11)	---- ----	---- ----	12.7 (5)	03/16
<i>Russell 1000V</i>		<i>14.3 ----</i>	<i>-16.3 ----</i>	<i>-8.9 ----</i>	<i>1.8 ----</i>	<i>4.6 ----</i>	<i>10.4 ----</i>	<i>5.9 ----</i>	<i>03/16</i>
<i>Russell 1000</i>		<i>21.8 ----</i>	<i>-2.8 ----</i>	<i>7.5 ----</i>	<i>10.6 ----</i>	<i>10.5 ----</i>	<i>14.0 ----</i>	<i>12.3 ----</i>	
LSV Large Cap	(LC Value)	18.7 (32)	-17.5 (75)	-8.6 (62)	1.0 (72)	3.9 (74)	10.8 (50)	7.4 ----	03/04
<i>Russell 1000V</i>		<i>14.3 ----</i>	<i>-16.3 ----</i>	<i>-8.9 ----</i>	<i>1.8 ----</i>	<i>4.6 ----</i>	<i>10.4 ----</i>	<i>6.7 ----</i>	<i>03/04</i>
AMI	(SC Growth)	32.4 (54)	0.2 (62)	0.0 (79)	---- ----	---- ----	---- ----	1.4 (94)	09/17
<i>Russell 2000G</i>		<i>30.6 ----</i>	<i>-3.1 ----</i>	<i>3.5 ----</i>	<i>7.8 ----</i>	<i>6.8 ----</i>	<i>12.9 ----</i>	<i>6.2 ----</i>	<i>09/17</i>
Copeland	(SC Growth)	16.1 (99)	-14.7 (98)	-8.1 (96)	---- ----	---- ----	---- ----	3.9 (85)	09/17
<i>Russell 2000G</i>		<i>30.6 ----</i>	<i>-3.1 ----</i>	<i>3.5 ----</i>	<i>7.8 ----</i>	<i>6.8 ----</i>	<i>12.9 ----</i>	<i>6.2 ----</i>	<i>09/17</i>
Emerald	(SC Growth)	32.6 (54)	-0.1 (62)	4.5 (57)	10.7 (60)	8.3 (70)	16.1 (33)	11.1 ----	09/98
<i>Russell 2000G</i>		<i>30.6 ----</i>	<i>-3.1 ----</i>	<i>3.5 ----</i>	<i>7.8 ----</i>	<i>6.8 ----</i>	<i>12.9 ----</i>	<i>7.7 ----</i>	<i>09/98</i>
LSV Small Cap	(SC Value)	22.3 (41)	-27.4 (88)	-21.5 (91)	-6.6 (92)	---- ----	---- ----	-5.4 (85)	12/16
<i>Russell 2000V</i>		<i>18.9 ----</i>	<i>-23.5 ----</i>	<i>-17.5 ----</i>	<i>-4.4 ----</i>	<i>1.2 ----</i>	<i>7.8 ----</i>	<i>-3.6 ----</i>	<i>12/16</i>
Smith, Graham & Co	(SC Value)	26.7 (17)	-20.3 (35)	-10.3 (22)	-3.6 (61)	---- ----	---- ----	-1.9 (44)	12/16
<i>Russell 2000V</i>		<i>18.9 ----</i>	<i>-23.5 ----</i>	<i>-17.5 ----</i>	<i>-4.4 ----</i>	<i>1.2 ----</i>	<i>7.8 ----</i>	<i>-3.6 ----</i>	<i>12/16</i>
HGK	(Intl Eq)	19.2 (42)	-9.6 (44)	2.0 (29)	3.7 (33)	5.2 (30)	---- ----	8.6 (8)	03/12
<i>S&P BMI Ex US</i>		<i>16.8 ----</i>	<i>-10.8 ----</i>	<i>-4.0 ----</i>	<i>1.3 ----</i>	<i>2.9 ----</i>	<i>6.4 ----</i>	<i>5.0 ----</i>	<i>03/12</i>
Hardman Johnston	(Intl Eq)	25.6 (12)	-1.1 (15)	10.9 (10)	9.5 (7)	9.1 (7)	---- ----	9.5 (6)	03/12
<i>S&P BMI Ex US</i>		<i>16.8 ----</i>	<i>-10.8 ----</i>	<i>-4.0 ----</i>	<i>1.3 ----</i>	<i>2.9 ----</i>	<i>6.4 ----</i>	<i>5.0 ----</i>	<i>03/12</i>
PRISA II SA		-2.4 ----	-1.1 ----	2.7 ----	6.7 ----	8.8 ----	13.0 ----	4.6 ----	06/07
<i>NCREIF ODCE</i>		<i>-1.6 ----</i>	<i>-0.6 ----</i>	<i>2.2 ----</i>	<i>5.7 ----</i>	<i>7.3 ----</i>	<i>10.8 ----</i>	<i>5.3 ----</i>	<i>06/07</i>
PRISA SA		-1.1 ----	0.6 ----	3.5 ----	6.6 ----	8.0 ----	11.4 ----	7.8 ----	12/90
<i>NCREIF ODCE</i>		<i>-1.6 ----</i>	<i>-0.6 ----</i>	<i>2.2 ----</i>	<i>5.7 ----</i>	<i>7.3 ----</i>	<i>10.8 ----</i>	<i>7.4 ----</i>	<i>12/90</i>
TIAA CREF		-2.3 ----	-1.0 ----	4.2 ----	6.9 ----	8.0 ----	8.6 ----	3.7 ----	06/08
<i>NCREIF ODCE</i>		<i>-1.6 ----</i>	<i>-0.6 ----</i>	<i>2.2 ----</i>	<i>5.7 ----</i>	<i>7.3 ----</i>	<i>10.8 ----</i>	<i>5.1 ----</i>	<i>06/08</i>
TIAA 1721 N. Front St.		1.7 ----	2.4 ----	5.6 ----	4.7 ----	---- ----	---- ----	1.1 ----	06/16
<i>NCREIF NPI</i>		<i>-1.0 ----</i>	<i>-0.3 ----</i>	<i>2.7 ----</i>	<i>5.4 ----</i>	<i>6.8 ----</i>	<i>9.7 ----</i>	<i>5.8 ----</i>	<i>06/16</i>
Forest		-1.3 ----	-0.9 ----	-6.4 ----	1.7 ----	3.6 ----	4.3 ----	4.7 ----	03/99
<i>NCREIF Timber</i>		<i>0.1 ----</i>	<i>0.2 ----</i>	<i>0.3 ----</i>	<i>2.3 ----</i>	<i>2.7 ----</i>	<i>4.4 ----</i>	<i>6.0 ----</i>	<i>03/99</i>

MANAGER PERFORMANCE SUMMARY - NET OF FEES

Portfolio	QTR	CYTD	1 Year	3 Years	5 Years	10 Years	Inception	
Composite	13.4	-4.2	2.1	6.0	6.1	8.5	----	12/85
<i>Shadow Index</i>	<i>12.2</i>	<i>-4.5</i>	<i>1.8</i>	<i>5.3</i>	<i>5.9</i>	<i>8.6</i>	<i>8.9</i>	<i>12/85</i>
SSgA	12.1	-2.8	2.6	3.7	4.0	4.8	6.3	03/97
<i>Shadow Index</i>	<i>11.4</i>	<i>-3.4</i>	<i>2.1</i>	<i>3.7</i>	<i>4.0</i>	<i>5.0</i>	<i>7.0</i>	<i>03/97</i>
Polen	27.5	10.9	23.5	22.1	18.5	----	17.4	09/10
<i>Russell 1000G</i>	<i>27.8</i>	<i>9.8</i>	<i>23.3</i>	<i>19.0</i>	<i>15.9</i>	<i>17.2</i>	<i>16.2</i>	<i>09/10</i>
Eagle	19.1	-9.4	-0.6	8.4	----	----	11.9	03/16
<i>Russell 1000V</i>	<i>14.3</i>	<i>-16.3</i>	<i>-8.9</i>	<i>1.8</i>	<i>4.6</i>	<i>10.4</i>	<i>5.9</i>	<i>03/16</i>
<i>Russell 1000</i>	<i>21.8</i>	<i>-2.8</i>	<i>7.5</i>	<i>10.6</i>	<i>10.5</i>	<i>14.0</i>	<i>12.3</i>	
LSV Large Cap	18.6	-17.7	-9.0	0.6	3.4	10.4	6.9	03/04
<i>Russell 1000V</i>	<i>14.3</i>	<i>-16.3</i>	<i>-8.9</i>	<i>1.8</i>	<i>4.6</i>	<i>10.4</i>	<i>6.7</i>	<i>03/04</i>
AMI	32.2	-0.2	-0.7	----	----	----	0.6	09/17
<i>Russell 2000G</i>	<i>30.6</i>	<i>-3.1</i>	<i>3.5</i>	<i>7.8</i>	<i>6.8</i>	<i>12.9</i>	<i>6.2</i>	<i>09/17</i>
Copeland	15.9	-15.1	-8.9	----	----	----	3.0	09/17
<i>Russell 2000G</i>	<i>30.6</i>	<i>-3.1</i>	<i>3.5</i>	<i>7.8</i>	<i>6.8</i>	<i>12.9</i>	<i>6.2</i>	<i>09/17</i>
Emerald	32.5	-0.4	4.0	10.2	7.8	15.6	10.6	09/98
<i>Russell 2000G</i>	<i>30.6</i>	<i>-3.1</i>	<i>3.5</i>	<i>7.8</i>	<i>6.8</i>	<i>12.9</i>	<i>7.7</i>	<i>09/98</i>
LSV Small Cap	22.2	-27.7	-22.1	-7.1	----	----	-6.0	12/16
<i>Russell 2000V</i>	<i>18.9</i>	<i>-23.5</i>	<i>-17.5</i>	<i>-4.4</i>	<i>1.2</i>	<i>7.8</i>	<i>-3.6</i>	<i>12/16</i>
Smith, Graham & Co	26.5	-20.6	-10.9	-4.3	----	----	-2.6	12/16
<i>Russell 2000V</i>	<i>18.9</i>	<i>-23.5</i>	<i>-17.5</i>	<i>-4.4</i>	<i>1.2</i>	<i>7.8</i>	<i>-3.6</i>	<i>12/16</i>
HGK	19.0	-9.9	1.3	3.1	4.5	----	7.9	03/12
<i>S&P BMI Ex US</i>	<i>16.8</i>	<i>-10.8</i>	<i>-4.0</i>	<i>1.3</i>	<i>2.9</i>	<i>6.4</i>	<i>5.0</i>	<i>03/12</i>
Hardman Johnston	25.5	-1.4	10.2	8.9	8.4	----	8.8	03/12
<i>S&P BMI Ex US</i>	<i>16.8</i>	<i>-10.8</i>	<i>-4.0</i>	<i>1.3</i>	<i>2.9</i>	<i>6.4</i>	<i>5.0</i>	<i>03/12</i>
PRISA II SA	-2.7	-1.7	1.6	5.5	7.7	11.8	3.5	06/07
<i>NCREIF ODCE</i>	<i>-1.6</i>	<i>-0.6</i>	<i>2.2</i>	<i>5.7</i>	<i>7.3</i>	<i>10.8</i>	<i>5.3</i>	<i>06/07</i>
PRISA SA	-1.3	0.1	2.5	5.6	7.0	10.3	----	12/90
<i>NCREIF ODCE</i>	<i>-1.6</i>	<i>-0.6</i>	<i>2.2</i>	<i>5.7</i>	<i>7.3</i>	<i>10.8</i>	<i>7.4</i>	<i>12/90</i>
TIAA CREF	-2.5	-1.4	3.2	5.9	7.0	7.7	2.8	06/08
<i>NCREIF ODCE</i>	<i>-1.6</i>	<i>-0.6</i>	<i>2.2</i>	<i>5.7</i>	<i>7.3</i>	<i>10.8</i>	<i>5.1</i>	<i>06/08</i>
TIAA 1721 N. Front St.	1.2	1.3	3.4	2.6	----	----	-1.3	06/16
<i>NCREIF NPI</i>	<i>-1.0</i>	<i>-0.3</i>	<i>2.7</i>	<i>5.4</i>	<i>6.8</i>	<i>9.7</i>	<i>5.8</i>	<i>06/16</i>
Forest	-1.5	-1.3	-7.1	0.9	2.8	3.4	4.2	03/99
<i>NCREIF Timber</i>	<i>0.1</i>	<i>0.2</i>	<i>0.3</i>	<i>2.3</i>	<i>2.7</i>	<i>4.4</i>	<i>6.0</i>	<i>03/99</i>

MANAGER VALUE ADDED

Portfolio	Benchmark	1 Quarter	1 Year	3 Years	5 Years
SSgA	Shadow Index	0.7	0.6	0.1	0.1
Polen	Russell 1000G	-0.2	0.7	3.6	3.1
Eagle	Russell 1000V	5.1	9.0	7.5	N/A
LSV Large Cap	Russell 1000V	4.4	0.3	-0.8	-0.7
AMI	Russell 2000G	1.8	-3.5	N/A	N/A
Copeland	Russell 2000G	-14.5	-11.6	N/A	N/A
Emerald	Russell 2000G	2.0	1.0	2.9	1.5
LSV Small Cap	Russell 2000V	3.4	-4.0	-2.2	N/A
Smith, Graham & Co	Russell 2000V	7.8	7.2	0.8	N/A
HGK	S&P BMI Ex US	2.4	6.0	2.4	2.3
Hardman Johnston	S&P BMI Ex US	8.8	14.9	8.2	6.2
PRISA II SA	NCREIF ODCE	-0.8	0.5	1.0	1.5
PRISA SA	NCREIF ODCE	0.5	1.3	0.9	0.7
TIAA CREF	NCREIF ODCE	-0.7	2.0	1.2	0.7
TIAA 1721 N. Front St.	NCREIF NPI	2.7	2.9	-0.7	N/A
Forest	NCREIF Timber	-1.4	-6.7	-0.6	0.9
Total Portfolio	Shadow Index	1.3 	0.7 	1.2 	0.7

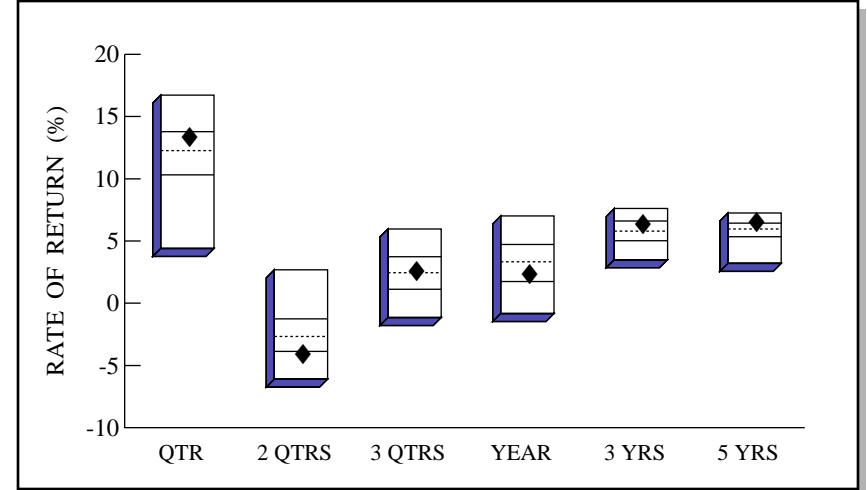
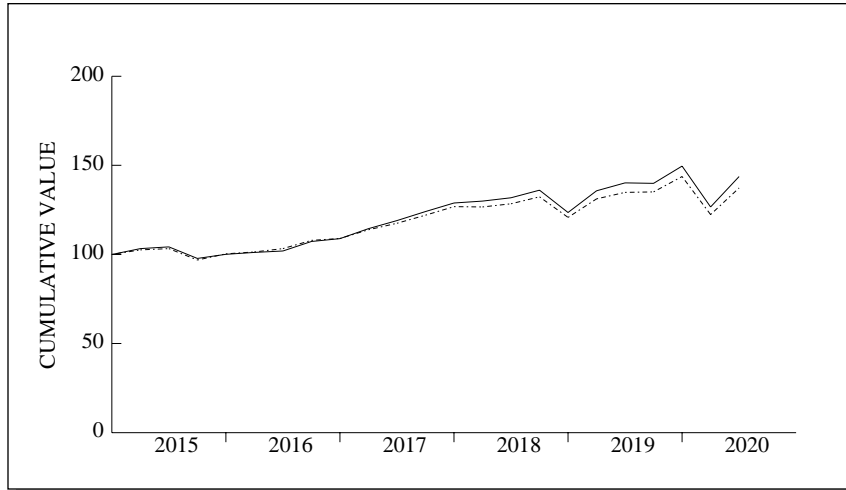
INVESTMENT RETURN SUMMARY - ONE QUARTER

Name	Quarter Total Return	Market Value March 31st, 2020	Net Cashflow	Net Investment Return	Market Value June 30th, 2020
Abel Noser Transition (LC)	---	0	-2,222,350	2,231,079	8,729
SSgA S&P 500 (LCC)	20.5	48,777,270	48,272,857	16,071,015	113,121,142
Federated (LCG)	---	92,989,446	-94,809,062	1,819,618	2
Polen (LCG)	27.6	217,553,364	-52,908,038	57,309,746	221,955,072
William Blair (LCG)	---	0	52,669,354	2,533,369	55,202,723
Eagle (LCV)	19.4	124,409,687	-276,192	24,036,105	148,169,600
LSV Large Cap (LCV)	18.7	121,382,935	-139,173	22,693,065	143,936,827
SSgA Russell 2000 (SMDC)	25.4	63,941,161	48,736,422	25,578,437	138,256,020
AMI (SCG)	32.4	28,343,080	-67,618	9,167,223	37,442,685
Copeland (SCG)	16.1	35,137,059	-52,198	5,654,434	40,739,295
Emerald (SCG)	32.6	52,750,893	-81,545	17,200,267	69,869,615
LSV Small Cap (SCV)	22.3	46,342,787	-90,022	10,336,305	56,589,070
Smith, Graham & Co (SCV)	26.7	49,898,253	-115,466	13,307,580	63,090,367
GlobeFlex (INEQ)	---	4,229	0	63	4,292
HGK (INEQ)	19.2	102,728,434	-198,378	19,650,626	122,180,682
Hardman Johnston (INEQ)	25.6	99,950,310	-178,004	25,590,151	125,362,457
Mercator (INEQ)	---	17,732	0	419	18,151
WHV (INEQ)	---	2,933	0	69	3,002
Jarislowsky Fraser (INEG)	---	519,575	-223,018	7,422	303,979
SSgA World Ex-US (INEQ)	15.5	134,036,562	0	20,800,583	154,837,145
SSgA Emerging Markets (EMKT)	19.0	210,526,987	0	40,020,628	250,547,615
PRISA II SA (REAL)	-2.4	106,418,646	-293,286	-2,572,628	103,552,732
PRISA SA (REAL)	-1.1	52,416,298	-123,766	-570,795	51,721,737
TIAA CREF (REAL)	-2.3	209,194,966	-1,653,979	-5,262,278	202,278,709
TIAA 1721 N. Front St. (REAL)	1.7	2,315,169	-30,591	26,538	2,311,116
Forest (TIMB)	-1.3	134,303,095	-550,000	-1,734,613	132,018,482
SSgA Bond Market (CFI)	3.0	415,403,984	-17,700,000	12,281,440	409,985,424
BNY Cash (CASH)	---	3,619,101	-2,680,456	9,158	947,803
Treasury STIP (CASH)	---	5,492,596	-348,354	25,096	5,169,338
Total Portfolio	13.5	2,358,476,552	-25,062,863	316,210,122	2,649,623,811

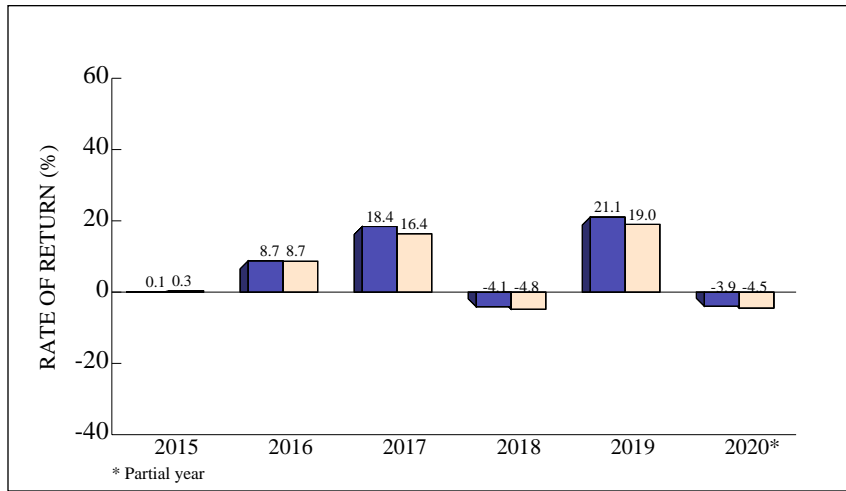
MANAGER RISK STATISTICS SUMMARY - FIVE-YEAR HISTORY

Name	Alpha	Batting Average	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
SSgA <i>Shadow Index</i>	0.02	0.700	0.34	0.19	100.3	99.6
SSgA S&P 500 <i>S&P 500</i>	0.00	0.900	0.66	-0.55	99.8	99.8
Polen <i>Russell 1000G</i>	4.19	0.650	1.11	0.68	101.6	73.4
LSV Large Cap <i>Russell 1000V</i>	-1.02	0.550	0.25	-0.04	105.6	109.9
SSgA Russell 2000 <i>Russell 2000</i>	0.08	0.950	0.27	1.64	100.3	99.8
Emerald <i>Russell 2000G</i>	1.43	0.650	0.42	0.38	106.7	99.5
HGK <i>S&P BMI Ex US</i>	2.34	0.600	0.32	0.56	113.0	95.7
Hardman Johnston <i>S&P BMI Ex US</i>	6.18	0.750	0.49	1.14	144.4	96.4
SSgA World Ex-US <i>MSCI World Ex US</i>	0.21	0.600	0.17	0.37	100.7	99.0
SSgA Emerging Markets <i>EM Index</i>	-0.28	0.450	0.20	-0.34	100.4	101.8
PRISA II SA <i>NCREIF ODCE</i>	-1.07	0.800	2.77	1.51	122.4	156.0
PRISA SA <i>NCREIF ODCE</i>	0.91	0.600	3.34	0.98	108.2	70.3
TIAA CREF <i>NCREIF ODCE</i>	1.01	0.650	2.53	0.36	111.1	148.9
Forest <i>NCREIF Timber</i>	3.60	0.450	0.56	0.22	103.9	----
SSgA Bond Market <i>Aggregate Index</i>	0.02	1.000	1.01	0.39	100.3	99.5

TOTAL RETURN COMPARISONS



Public Fund Universe

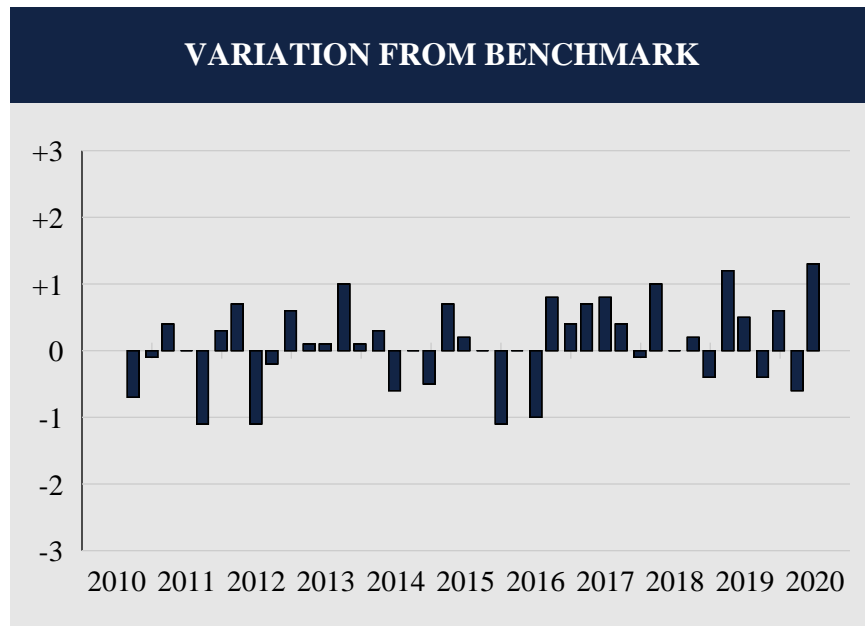


	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	13.5	-3.9	2.7	2.5	6.5	6.6
(RANK)	(30)	(76)	(46)	(63)	(29)	(18)
5TH %ILE	16.7	2.7	6.0	7.0	7.6	7.3
25TH %ILE	13.8	-1.3	3.7	4.7	6.6	6.4
MEDIAN	12.3	-2.7	2.4	3.3	5.8	6.0
75TH %ILE	10.3	-3.9	1.1	1.8	5.0	5.3
95TH %ILE	4.4	-6.1	-1.1	-0.8	3.5	3.2
<i>Shadow Idx</i>	<i>12.2</i>	<i>-4.5</i>	<i>1.6</i>	<i>1.8</i>	<i>5.3</i>	<i>5.9</i>

Public Fund Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

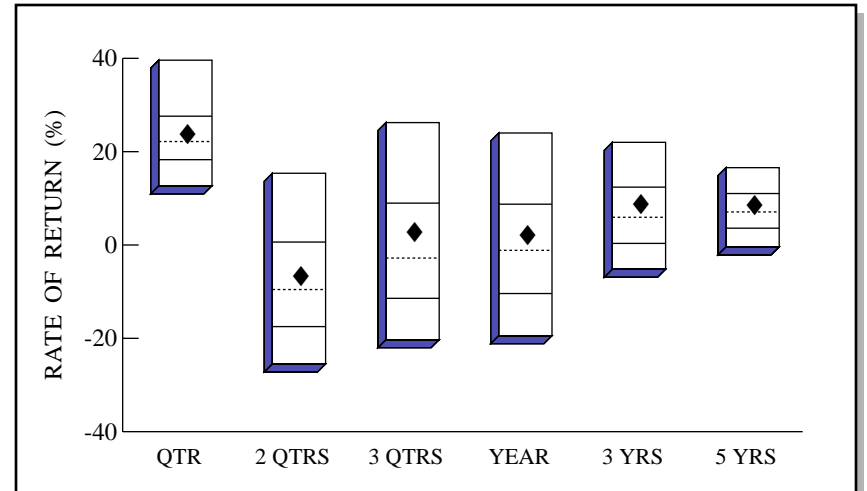
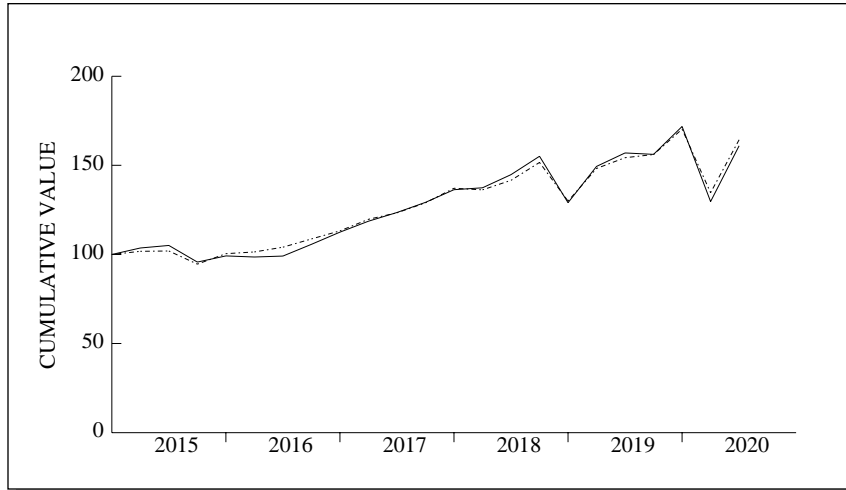
COMPARATIVE BENCHMARK: SHADOW INDEX



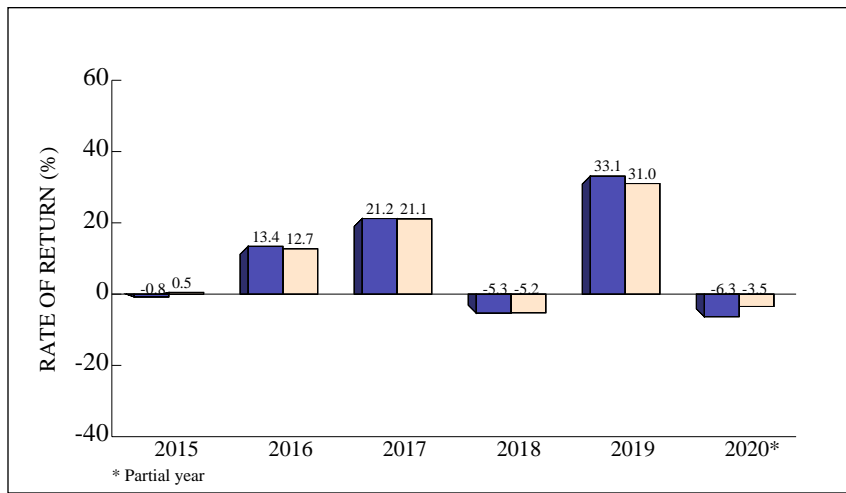
Total Quarters Observed	40
Quarters At or Above the Benchmark	27
Quarters Below the Benchmark	13
Batting Average	.675

RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	9.1	9.8	-0.7
12/10	7.3	7.4	-0.1
3/11	4.3	3.9	0.4
6/11	0.6	0.6	0.0
9/11	-12.1	-11.0	-1.1
12/11	6.6	6.3	0.3
3/12	9.2	8.5	0.7
6/12	-3.3	-2.2	-1.1
9/12	4.5	4.7	-0.2
12/12	2.5	1.9	0.6
3/13	5.5	5.4	0.1
6/13	0.4	0.3	0.1
9/13	6.6	5.6	1.0
12/13	5.8	5.7	0.1
3/14	1.8	1.5	0.3
6/14	3.3	3.9	-0.6
9/14	-1.5	-1.5	0.0
12/14	2.0	2.5	-0.5
3/15	3.3	2.6	0.7
6/15	0.9	0.7	0.2
9/15	-6.2	-6.2	0.0
12/15	2.4	3.5	-1.1
3/16	1.1	1.1	0.0
6/16	0.8	1.8	-1.0
9/16	5.2	4.4	0.8
12/16	1.5	1.1	0.4
3/17	5.1	4.4	0.7
6/17	4.0	3.2	0.8
9/17	4.2	3.8	0.4
12/17	3.9	4.0	-0.1
3/18	0.8	-0.2	1.0
6/18	1.4	1.4	0.0
9/18	3.3	3.1	0.2
12/18	-9.2	-8.8	-0.4
3/19	9.8	8.6	1.2
6/19	3.3	2.8	0.5
9/19	-0.2	0.2	-0.4
12/19	7.0	6.4	0.6
3/20	-15.4	-14.8	-0.6
6/20	13.5	12.2	1.3

DOMESTIC EQUITY RETURN COMPARISONS



Domestic Equity Universe

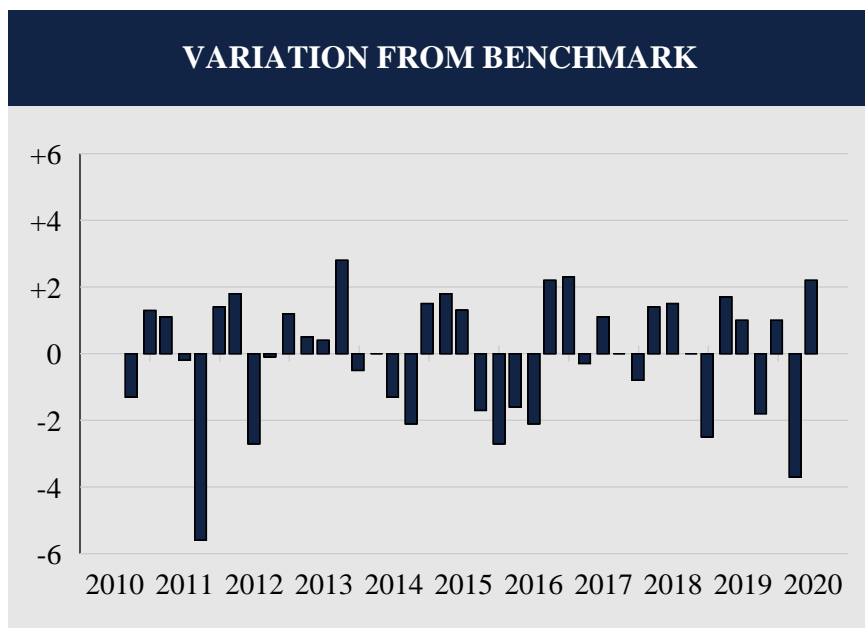


	QTR	2 QTRS	3 QTRS	YEAR	3 YRS	5 YRS
RETURN	24.2	-6.3	3.1	2.5	9.2	8.9
(RANK)	(40)	(43)	(38)	(41)	(39)	(40)
5TH %ILE	39.6	15.4	26.2	24.0	22.0	16.6
25TH %ILE	27.6	0.6	9.0	8.7	12.4	11.0
MEDIAN	22.2	-9.6	-2.8	-1.1	5.9	7.1
75TH %ILE	18.3	-17.5	-11.4	-10.4	0.3	3.6
95TH %ILE	12.7	-25.5	-20.3	-19.4	-5.2	-0.4
Russ 3000	22.0	-3.5	5.3	6.5	10.0	10.0

Domestic Equity Universe

DOMESTIC EQUITY QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: RUSSELL 3000



Total Quarters Observed	40
Quarters At or Above the Benchmark	23
Quarters Below the Benchmark	17
Batting Average	.575

RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	10.2	11.5	-1.3
12/10	12.9	11.6	1.3
3/11	7.5	6.4	1.1
6/11	-0.2	0.0	-0.2
9/11	-20.9	-15.3	-5.6
12/11	13.5	12.1	1.4
3/12	14.7	12.9	1.8
6/12	-5.8	-3.1	-2.7
9/12	6.1	6.2	-0.1
12/12	1.5	0.3	1.2
3/13	11.6	11.1	0.5
6/13	3.1	2.7	0.4
9/13	9.2	6.4	2.8
12/13	9.6	10.1	-0.5
3/14	2.0	2.0	0.0
6/14	3.6	4.9	-1.3
9/14	-2.1	0.0	-2.1
12/14	6.7	5.2	1.5
3/15	3.6	1.8	1.8
6/15	1.4	0.1	1.3
9/15	-8.9	-7.2	-1.7
12/15	3.6	6.3	-2.7
3/16	-0.6	1.0	-1.6
6/16	0.5	2.6	-2.1
9/16	6.6	4.4	2.2
12/16	6.5	4.2	2.3
3/17	5.4	5.7	-0.3
6/17	4.1	3.0	1.1
9/17	4.6	4.6	0.0
12/17	5.5	6.3	-0.8
3/18	0.8	-0.6	1.4
6/18	5.4	3.9	1.5
9/18	7.1	7.1	0.0
12/18	-16.8	-14.3	-2.5
3/19	15.7	14.0	1.7
6/19	5.1	4.1	1.0
9/19	-0.6	1.2	-1.8
12/19	10.1	9.1	1.0
3/20	-24.6	-20.9	-3.7
6/20	24.2	22.0	2.2

LARGE CAP EQUITY MANAGERS

The aggregate large cap portfolio (excluding cash) returned 23.1%, which was 2.6% above the S&P 500 return of 20.5%. All three active managers that had a full quarter of performance beat their respective benchmarks. William Blair was funded in May and its first full quarter of performance will appear in the September report.

**SSgA S&P 500
(Core)**

SSgA's S&P 500 fund continued to closely track the S&P 500 index over the short and long term. At quarter-end, this fund was valued at \$113,121,142.

**Polen
(Growth)**

Although the portfolio was situated mostly in well-performing sectors, representation in the Consumer Discretionary sector was low and the portfolio significantly underperformed in this sector, which was the top performer in the large cap growth market. The portfolio's invested portion came out ahead of the index, but the effect of cash caused the total return to sag below the index.

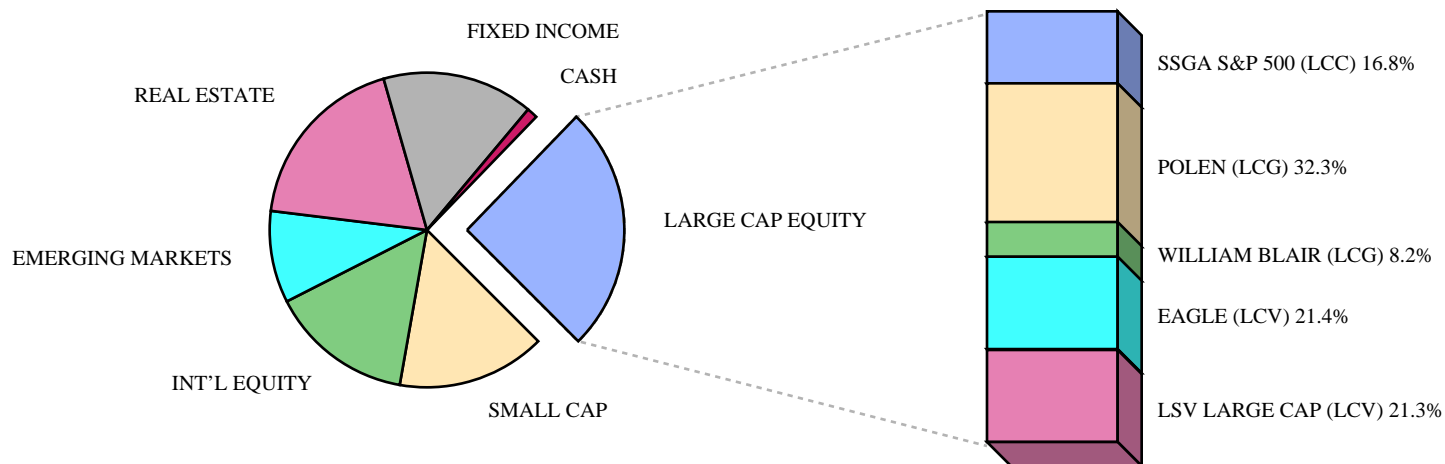
**Eagle
(Value)**

Strong selection in all but two of the invested sectors (Consumer Discretionary and Industrials) boosted the portfolio over its index. Gains in the Communication Services sector had a particularly large impact due to its towering position in the portfolio.

**LSV Large Cap
(Value)**

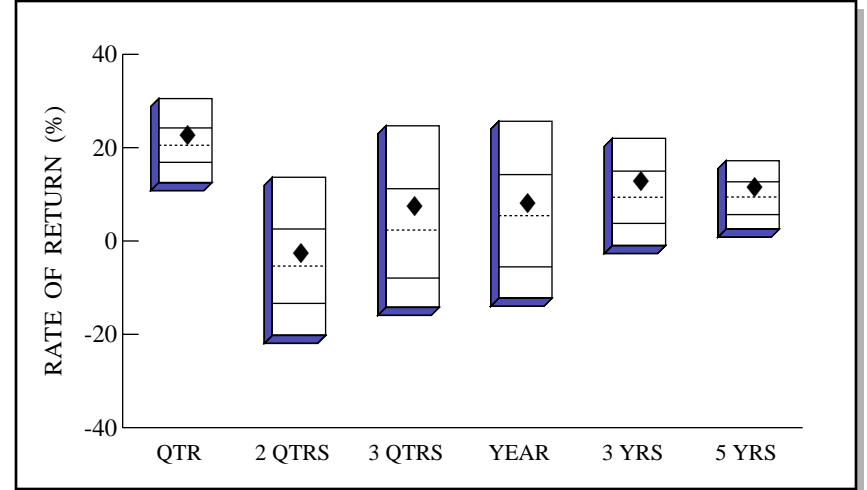
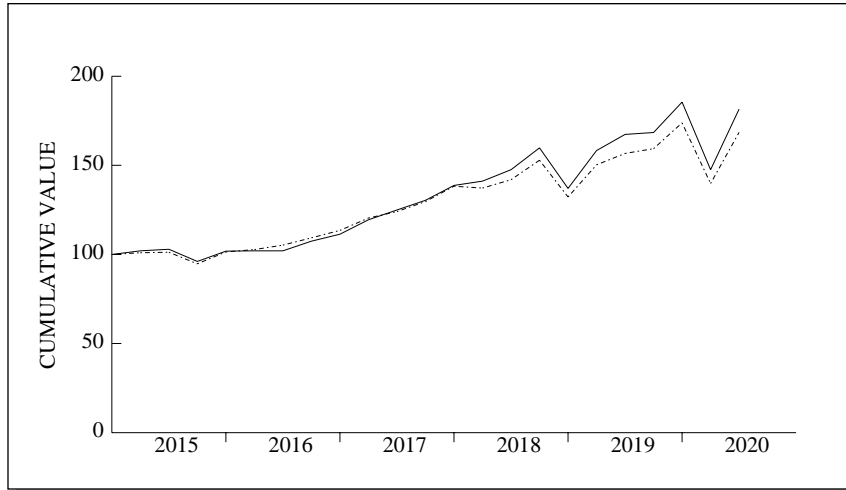
Favorable selection in the overweight Consumer Discretionary sector aided the portfolio in beating its benchmark over the quarter. The portfolio also enjoyed strong selection in the Energy, Financials, and Utilities sectors.

LARGE CAP EQUITY MANAGER SUMMARY

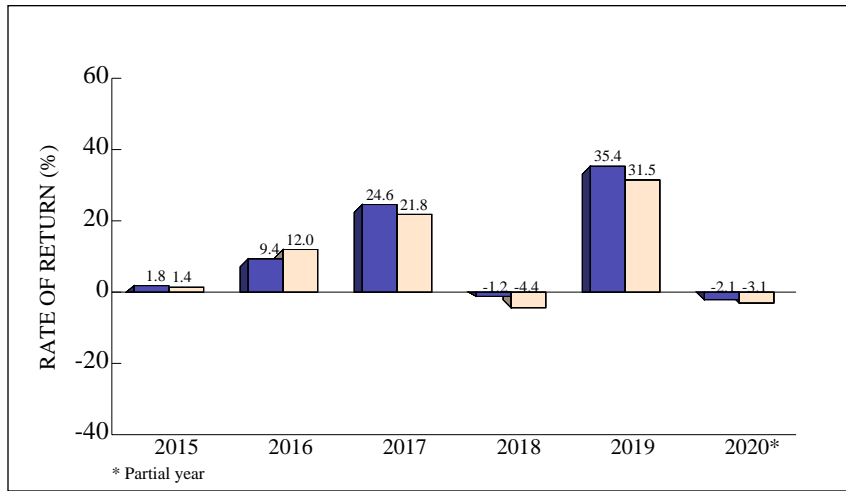


MANAGER	(UNIVERSE)	COMPONENT RETURNS AND RANKINGS					MARKET VALUE
		QTR	YTD	1 YEAR	3 YEARS	5 YEARS	
SSGA S&P 500	(Large Cap Core)	20.5 (46)	-3.1 (39)	7.5 (33)	10.7 (37)	10.7 (30)	\$113,121,142
<i>S&P 500</i>		<i>20.5 ---</i>	<i>-3.1 ---</i>	<i>7.5 ---</i>	<i>10.7 ---</i>	<i>10.7 ---</i>	---
POLEN	(Large Cap Growth)	28.8 (28)	11.8 (28)	25.0 (17)	23.6 (9)	19.8 (4)	\$217,464,168
WILLIAM BLAIR	(Large Cap Growth)	-----	-----	-----	-----	-----	\$54,958,272
<i>Russell 1000 Growth</i>		<i>27.8 ---</i>	<i>9.8 ---</i>	<i>23.3 ---</i>	<i>19.0 ---</i>	<i>15.9 ---</i>	---
EAGLE	(Large Cap Value)	20.1 (23)	-8.7 (19)	0.5 (19)	9.5 (10)	----	\$143,972,170
LSV LARGE CAP	(Large Cap Value)	18.9 (31)	-17.6 (75)	-8.7 (62)	1.0 (72)	3.9 (74)	\$143,333,415
<i>Russell 1000 Value</i>		<i>14.3 ---</i>	<i>-16.3 ---</i>	<i>-8.9 ---</i>	<i>1.8 ---</i>	<i>4.6 ---</i>	---
TOTAL	(Large Cap)	23.1 (30)	-2.1 (35)	8.5 (35)	13.3 (29)	12.0 (28)	\$672,849,167
<i>S&P 500</i>		<i>20.5 ---</i>	<i>-3.1 ---</i>	<i>7.5 ---</i>	<i>10.7 ---</i>	<i>10.7 ---</i>	---

LARGE CAP EQUITY RETURN COMPARISONS



Large Cap Universe



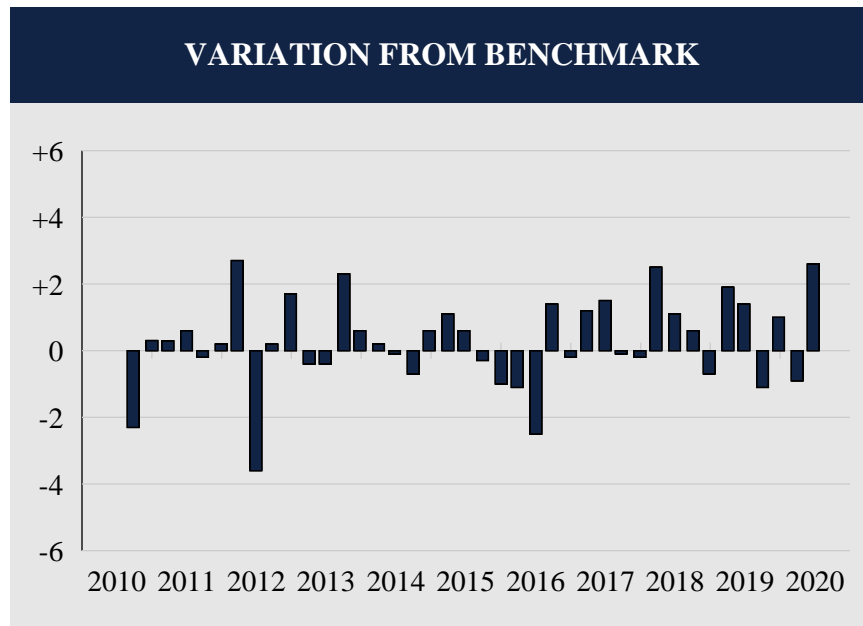
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	23.1	-2.1	7.8	8.5	13.3	12.0
(RANK)	(30)	(35)	(32)	(35)	(29)	(28)
5TH %ILE	30.5	13.6	24.7	25.7	22.0	17.2
25TH %ILE	24.2	2.6	11.2	14.2	15.0	12.7
MEDIAN	20.5	-5.4	2.3	5.4	9.4	9.4
75TH %ILE	16.8	-13.4	-8.0	-5.5	3.8	5.7
95TH %ILE	12.5	-20.2	-14.2	-12.3	-1.0	2.5
S&P 500	20.5	-3.1	5.7	7.5	10.7	10.7

Large Cap Universe

LARGE CAP EQUITY QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: S&P 500



Total Quarters Observed	40
Quarters At or Above the Benchmark	23
Quarters Below the Benchmark	17
Batting Average	.575

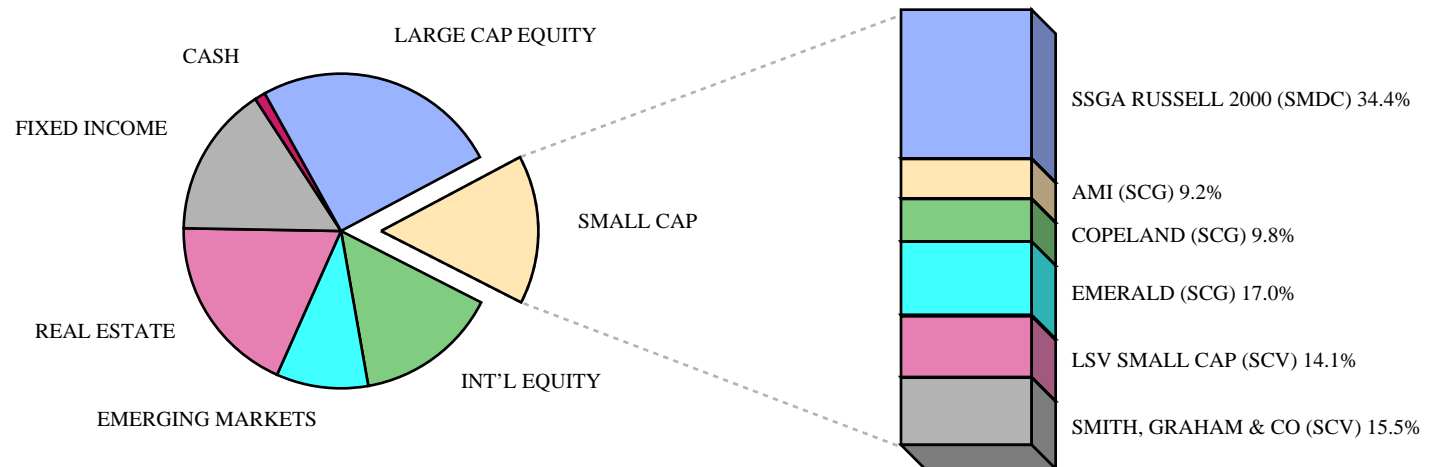
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	9.0	11.3	-2.3
12/10	11.1	10.8	0.3
3/11	6.2	5.9	0.3
6/11	0.7	0.1	0.6
9/11	-14.1	-13.9	-0.2
12/11	12.0	11.8	0.2
3/12	15.3	12.6	2.7
6/12	-6.4	-2.8	-3.6
9/12	6.5	6.3	0.2
12/12	1.3	-0.4	1.7
3/13	10.2	10.6	-0.4
6/13	2.5	2.9	-0.4
9/13	7.5	5.2	2.3
12/13	11.1	10.5	0.6
3/14	2.0	1.8	0.2
6/14	5.1	5.2	-0.1
9/14	0.4	1.1	-0.7
12/14	5.5	4.9	0.6
3/15	2.0	0.9	1.1
6/15	0.9	0.3	0.6
9/15	-6.7	-6.4	-0.3
12/15	6.0	7.0	-1.0
3/16	0.2	1.3	-1.1
6/16	0.0	2.5	-2.5
9/16	5.3	3.9	1.4
12/16	3.6	3.8	-0.2
3/17	7.3	6.1	1.2
6/17	4.6	3.1	1.5
9/17	4.4	4.5	-0.1
12/17	6.4	6.6	-0.2
3/18	1.7	-0.8	2.5
6/18	4.5	3.4	1.1
9/18	8.3	7.7	0.6
12/18	-14.2	-13.5	-0.7
3/19	15.5	13.6	1.9
6/19	5.7	4.3	1.4
9/19	0.6	1.7	-1.1
12/19	10.1	9.1	1.0
3/20	-20.5	-19.6	-0.9
6/20	23.1	20.5	2.6

SMALL CAP EQUITY MANAGERS

Last quarter, the Russell 2000 Growth Index returned 30.6% versus 18.9% for the Russell 2000 Value Index. The portfolio's small cap component (excluding cash) gained 26.1%, 0.7% above the Russell 2000 index return of 25.4%. Of the five active small cap managers, only Copeland fell behind its benchmark.

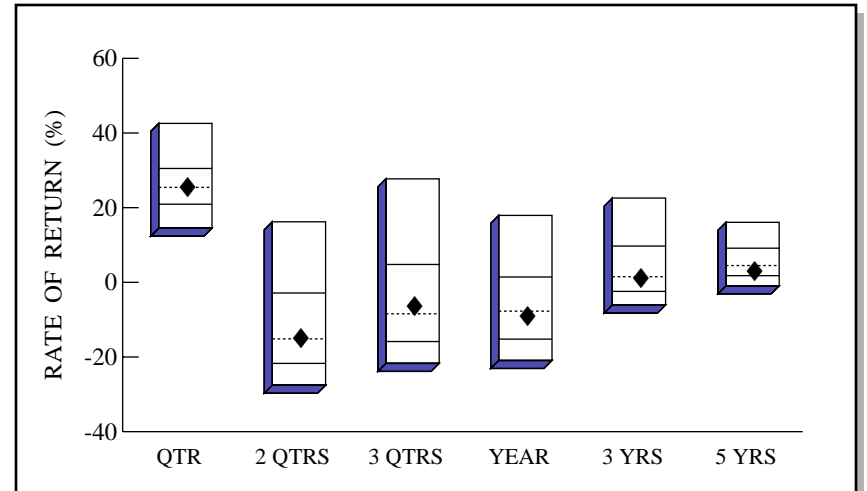
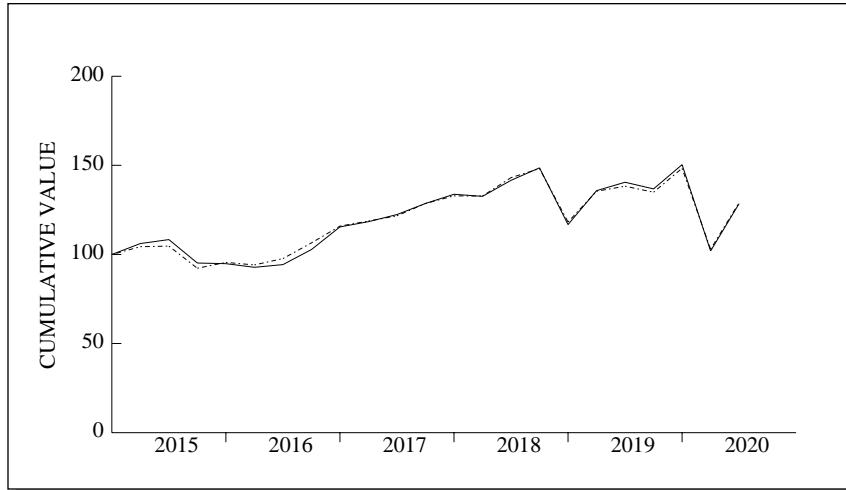
SSgA Russell 2000 (Core)	The SSgA small cap component performed in line with the Russell 2000 index. At quarter end, this investment was valued at \$138,256,020.
AMI (Growth)	Favorable selection in the Financials and Industrials sectors helped the portfolio to beat its benchmark last quarter. Sub-par performance in several other sectors, including the heavily weighted Information Technology sector prevented the portfolio from increasing its lead over the index.
Copeland (Growth)	By underweighting the Health Care and Consumer Discretionary sectors, the portfolio missed out on the growth potential those sectors offered last quarter. The portfolio also took a hit due to very unfavorable selection in all but two sectors (Financials and Materials), resulting in a double-digit performance deficit against the Russell 2000 Growth.
Emerald (Growth)	Selection effects were mixed last quarter and more sectors underperformed than outperformed. Fortunately, the effects of allocation helped to buoy the total return above the index. The increased position in the Consumer Discretionary sector allowed for greater impact of the best performing sector in the small cap growth market.
LSV Small Cap (Value)	Although the portfolio did not match the returns of the benchmarks three top-performing sectors (Consumer Discretionary, Energy, and Health Care), it succeeded in outperforming on the whole. Top stocks KB Home and Builders Firstsource Inc. were instrumental, both returning in the vicinity of 70%.
Smith, Graham & Co (Value)	Although the portfolio did not produce the blockbuster returns in its Health Care sector that were experienced in the small cap value, the total return still came in well above the benchmark. Top stocks Green Dot Corp (+93.3%) and Lithia Motors Inc. (+85.5%) added momentum to the portfolio's upswing during the second quarter.

SMALL CAP EQUITY MANAGER SUMMARY

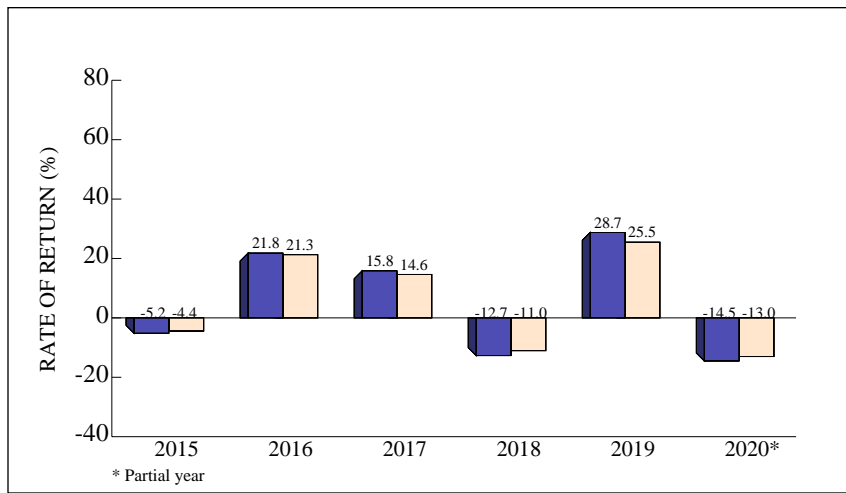


		COMPONENT RETURNS AND RANKINGS					
MANAGER	(UNIVERSE)	QTR	YTD	1 YEAR	3 YEARS	5 YEARS	MARKET VALUE
SSGA RUSSELL 2000	(Small Cap)	25.4 (51)	-13.0 (47)	-6.6 (47)	2.0 (49)	4.4 (52)	\$138,256,020
<i>Russell 2000</i>		<i>25.4 ---</i>	<i>-13.0 ---</i>	<i>-6.7 ---</i>	<i>2.0 ---</i>	<i>4.3 ---</i>	<i>---</i>
AMI	(Small Cap Growth)	33.5 (52)	-0.4 (64)	-0.6 (84)	--- ---	--- ---	\$36,783,720
COPELAND	(Small Cap Growth)	16.7 (99)	-15.0 (98)	-8.3 (96)	--- ---	--- ---	\$39,571,353
EMERALD	(Small Cap Growth)	33.8 (50)	0.0 (62)	4.7 (56)	11.0 (59)	8.5 (69)	\$68,224,236
<i>Russell 2000 Growth</i>		<i>30.6 ---</i>	<i>-3.1 ---</i>	<i>3.5 ---</i>	<i>7.8 ---</i>	<i>6.8 ---</i>	<i>---</i>
LSV SMALL CAP	(Small Cap Value)	22.5 (40)	-27.9 (91)	-22.0 (92)	-6.8 (94)	--- ---	\$56,463,587
SMITH, GRAHAM & CO	(Small Cap Value)	26.9 (16)	-20.5 (37)	-10.3 (22)	-3.6 (61)	--- ---	\$62,446,386
<i>Russell 2000 Value</i>		<i>18.9 ---</i>	<i>-23.5 ---</i>	<i>-17.5 ---</i>	<i>-4.4 ---</i>	<i>1.2 ---</i>	<i>---</i>
TOTAL	(Small Cap)	26.1 (45)	-14.5 (49)	-8.5 (52)	1.7 (50)	3.5 (59)	\$401,745,302
<i>Russell 2000</i>		<i>25.4 ---</i>	<i>-13.0 ---</i>	<i>-6.7 ---</i>	<i>2.0 ---</i>	<i>4.3 ---</i>	<i>---</i>

SMALL CAP EQUITY RETURN COMPARISONS



Small Cap Universe



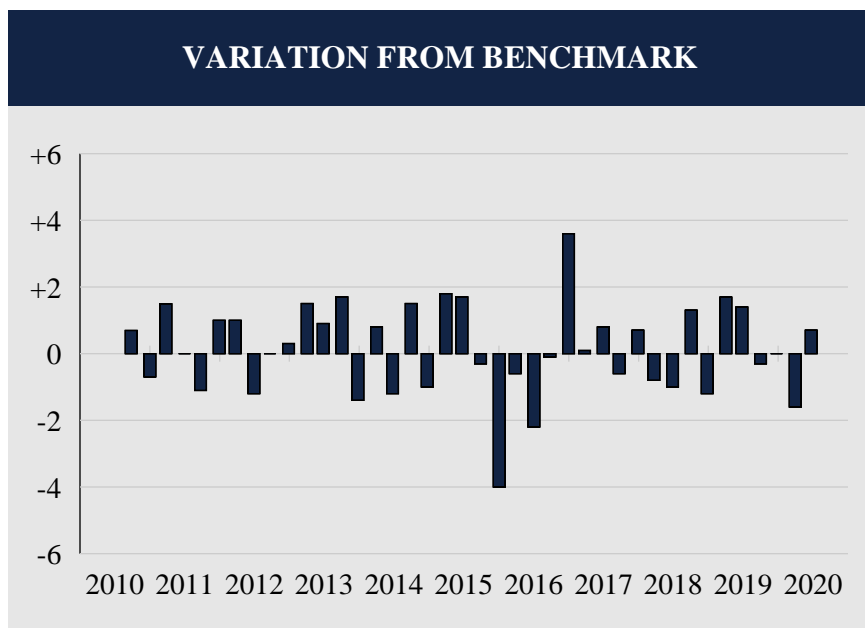
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED----- 3 YRS	5 YRS
RETURN	26.1	-14.5	-6.0	-8.5	1.7	3.5
(RANK)	(45)	(49)	(44)	(52)	(50)	(59)
5TH %ILE	42.6	16.2	27.7	18.0	22.6	16.1
25TH %ILE	30.5	-2.9	4.8	1.4	9.7	9.1
MEDIAN	25.4	-15.1	-8.5	-7.7	1.5	4.5
75TH %ILE	20.9	-21.7	-15.8	-15.2	-2.5	1.8
95TH %ILE	14.5	-27.6	-21.7	-20.9	-6.0	-0.9
Russ 2000	25.4	-13.0	-4.4	-6.7	2.0	4.3

Small Cap Universe

SMALL CAP EQUITY QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: RUSSELL 2000



Total Quarters Observed	40
Quarters At or Above the Benchmark	23
Quarters Below the Benchmark	17
Batting Average	.575

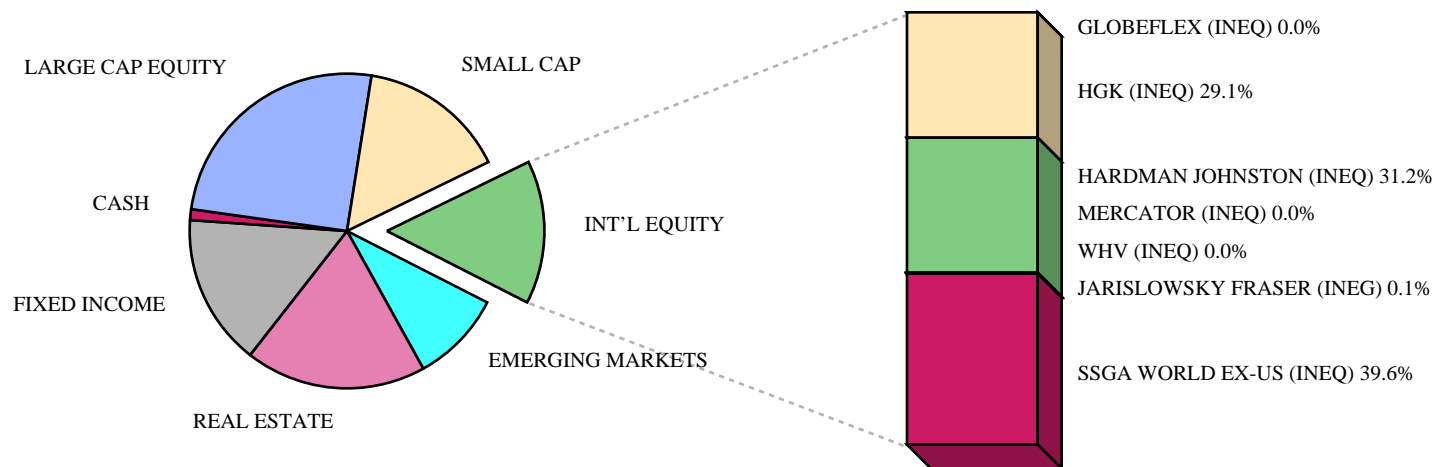
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	12.0	11.3	0.7
12/10	15.6	16.3	-0.7
3/11	9.4	7.9	1.5
6/11	-1.6	-1.6	0.0
9/11	-23.0	-21.9	-1.1
12/11	16.5	15.5	1.0
3/12	13.4	12.4	1.0
6/12	-4.7	-3.5	-1.2
9/12	5.2	5.2	0.0
12/12	2.1	1.8	0.3
3/13	13.9	12.4	1.5
6/13	4.0	3.1	0.9
9/13	11.9	10.2	1.7
12/13	7.3	8.7	-1.4
3/14	1.9	1.1	0.8
6/14	0.8	2.0	-1.2
9/14	-5.9	-7.4	1.5
12/14	8.7	9.7	-1.0
3/15	6.1	4.3	1.8
6/15	2.1	0.4	1.7
9/15	-12.2	-11.9	-0.3
12/15	-0.4	3.6	-4.0
3/16	-2.1	-1.5	-0.6
6/16	1.6	3.8	-2.2
9/16	8.9	9.0	-0.1
12/16	12.4	8.8	3.6
3/17	2.6	2.5	0.1
6/17	3.3	2.5	0.8
9/17	5.1	5.7	-0.6
12/17	4.0	3.3	0.7
3/18	-0.9	-0.1	-0.8
6/18	6.8	7.8	-1.0
9/18	4.9	3.6	1.3
12/18	-21.4	-20.2	-1.2
3/19	16.3	14.6	1.7
6/19	3.5	2.1	1.4
9/19	-2.7	-2.4	-0.3
12/19	9.9	9.9	0.0
3/20	-32.2	-30.6	-1.6
6/20	26.1	25.4	0.7

INTERNATIONAL & EMERGING MARKETS EQUITY MANAGERS

The aggregate developed international portfolio (excluding cash) returned 20.4% over the quarter, 5.3% above the MSCI EAFE Index return of 15.1%. The S&P BMI Developed Markets Ex US returned 16.8% vs 14.6% for the MSCI World Ex US. The Emerging Markets portfolio, driven by its only manager, SSgA, gained 19.0%, while the MSCI Emerging Markets Index returned -18.2%.

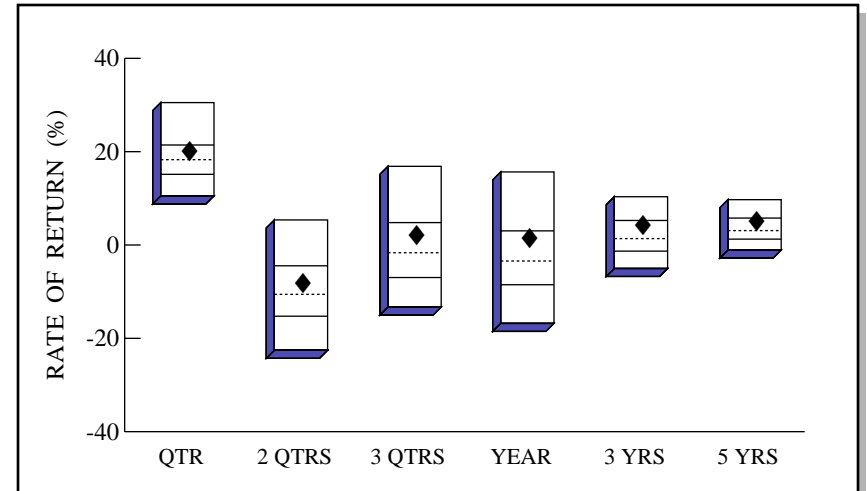
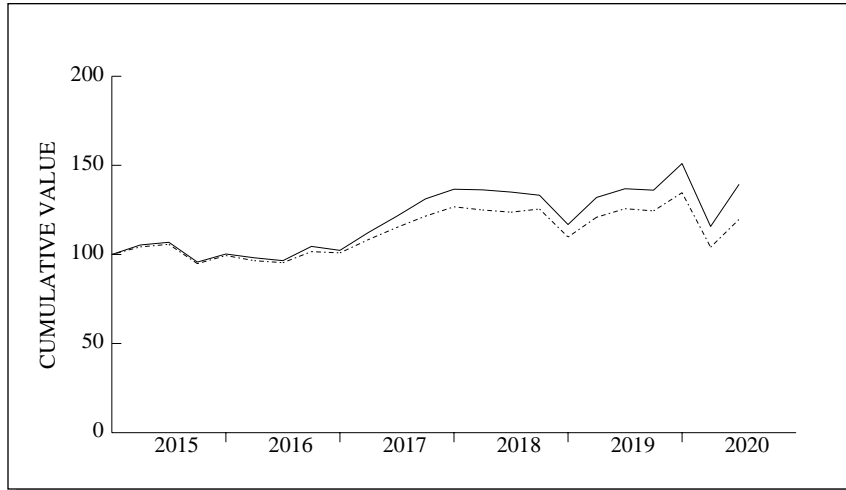
SSgA Developed	The SSgA developed markets component returned 15.5% during the quarter. Over the trailing year, this component was down 5.0%. This investment was valued at \$154,837,145 at quarter end.
Hardman Johnston	The Hardman Johnston international equity component earned 27.9% over the quarter. Over the last four quarters, the component gained 12.1%, while the S&P BMI Developed Ex US returned 16.8% and -4.0% over the quarter and trailing year.
HGK	HGK's equity component returned 20.1% last quarter. Over the trailing year, the HGK international equity component lost 1.7%.
SSgA Emerging	The SSgA emerging markets fund gained 19.0% during the quarter. Over the trailing year, this component returned -3.0%. At quarter end, this fund was valued at \$250,547,615.

INTERNATIONAL EQUITY MANAGER SUMMARY

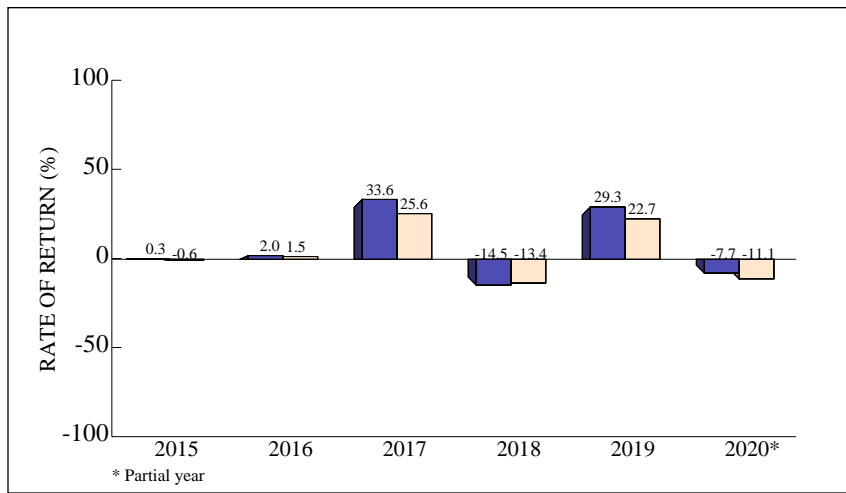


		COMPONENT RETURNS AND RANKINGS						
MANAGER	(UNIVERSE)	QTR	YTD	1 YEAR	3 YEARS	5 YEARS	MARKET VALUE	
GLOBEFLEX	(International Equity)	----	----	----	----	----	\$4,292	
HGK	(International Equity)	20.1 (34)	-10.1 (47)	1.7 (30)	3.8 (32)	5.3 (29)	\$113,713,514	
HARDMAN JOHNSTON	(International Equity)	27.9 (8)	-0.1 (12)	12.1 (9)	9.8 (6)	9.3 (6)	\$122,162,581	
MERCATOR	(International Equity)	-----	----	----	----	----	\$18,151	
WHV	(International Equity)	----	----	----	----	----	\$3,002	
<i>S&P BMI Developed Ex US Index</i>		16.8 ---	-10.8 ---	-4.0 ---	1.3 ---	2.9 ---	---	
JARISLOWSKY FRASER	(International Equity)	----	----	----	----	----	\$303,935	
<i>MSCI EAFE</i>		15.1 ---	-11.1 ---	-4.7 ---	1.3 ---	2.5 ---	---	
SSGA WORLD EX-US	(International Equity)	15.5 (73)	-11.2 (54)	-5.0 (59)	1.3 (52)	2.4 (58)	\$154,837,145	
<i>MSCI World Ex US</i>		14.6 ---	-12.7 ---	-6.7 ---	0.8 ---	2.2 ---	---	
TOTAL	(International Equity)	20.4 (32)	-7.7 (36)	1.8 (29)	4.7 (28)	5.5 (28)	\$391,042,620	
<i>Blended International Index</i>		15.1 ---	-11.1 ---	-4.7 ---	1.3 ---	2.5 ---	---	

INTERNATIONAL EQUITY RETURN COMPARISONS



International Equity Universe



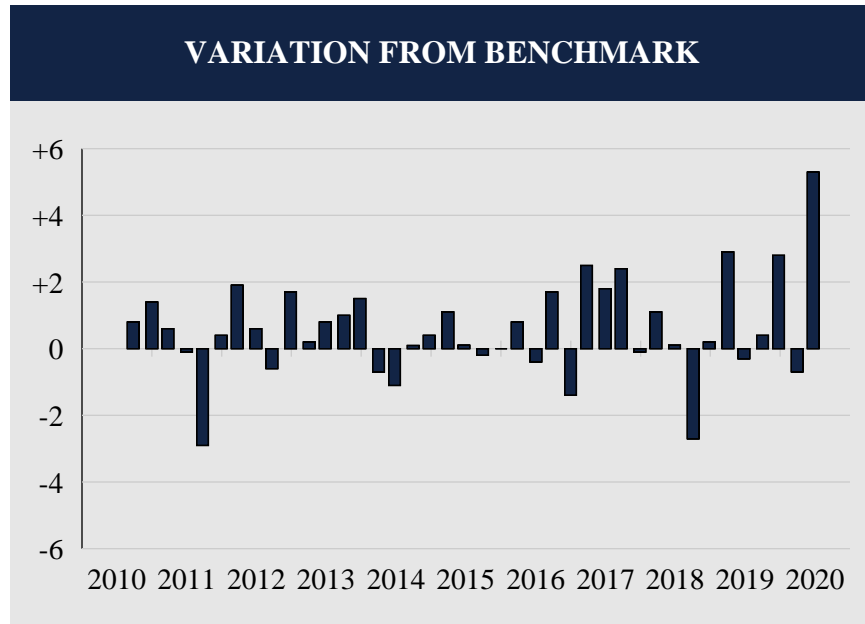
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	20.4	-7.7	2.4	1.8	4.7	5.5
(RANK)	(32)	(36)	(33)	(29)	(28)	(28)
5TH %ILE	30.5	5.4	16.9	15.7	10.4	9.7
25TH %ILE	21.4	-4.4	4.8	3.1	5.2	5.8
MEDIAN	18.3	-10.6	-1.7	-3.4	1.4	3.1
75TH %ILE	15.2	-15.3	-7.0	-8.5	-1.3	1.2
95TH %ILE	10.5	-22.6	-13.3	-16.8	-5.1	-1.1
Intl Index	15.1	-11.1	-3.8	-4.7	1.3	2.5

International Equity Universe

INTERNATIONAL EQUITY QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: BLENDED INTERNATIONAL INDEX

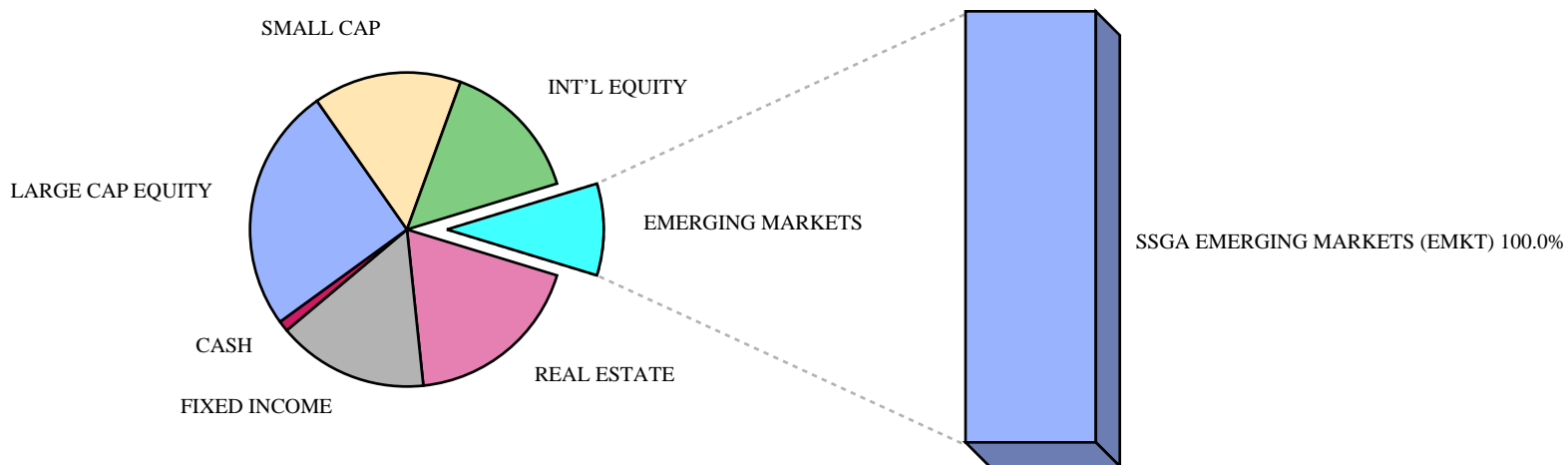


Total Quarters Observed	40
Quarters At or Above the Benchmark	28
Quarters Below the Benchmark	12
Batting Average	.700

RATES OF RETURN

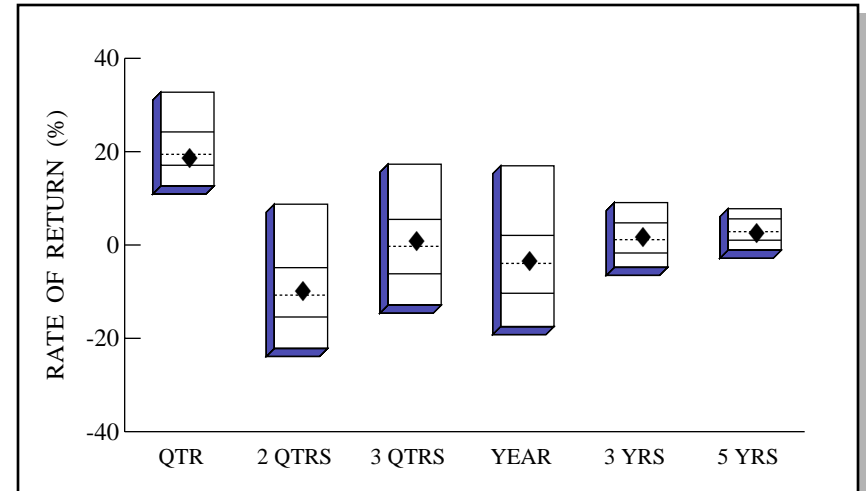
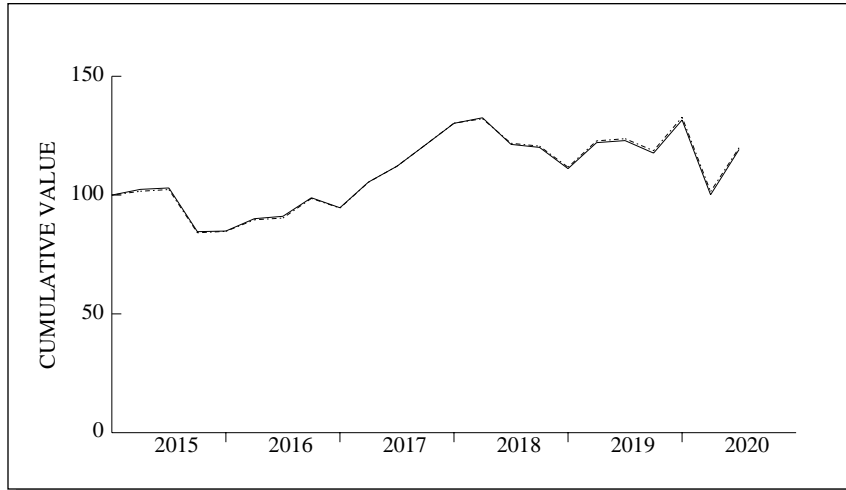
Date	Portfolio	Benchmark	Difference
9/10	17.3	16.5	0.8
12/10	9.5	8.1	1.4
3/11	4.6	4.0	0.6
6/11	0.5	0.6	-0.1
9/11	-22.2	-19.3	-2.9
12/11	3.7	3.3	0.4
3/12	14.2	12.3	1.9
6/12	-6.6	-7.2	0.6
9/12	7.1	7.7	-0.6
12/12	7.5	5.8	1.7
3/13	5.1	4.9	0.2
6/13	-1.0	-1.8	0.8
9/13	12.9	11.9	1.0
12/13	6.9	5.4	1.5
3/14	0.5	1.2	-0.7
6/14	3.7	4.8	-1.1
9/14	-5.8	-5.9	0.1
12/14	-3.3	-3.7	0.4
3/15	5.3	4.2	1.1
6/15	1.4	1.3	0.1
9/15	-10.4	-10.2	-0.2
12/15	4.7	4.7	0.0
3/16	-2.1	-2.9	0.8
6/16	-1.6	-1.2	-0.4
9/16	8.2	6.5	1.7
12/16	-2.1	-0.7	-1.4
3/17	9.9	7.4	2.5
6/17	8.2	6.4	1.8
9/17	7.9	5.5	2.4
12/17	4.2	4.3	-0.1
3/18	-0.3	-1.4	1.1
6/18	-0.9	-1.0	0.1
9/18	-1.3	1.4	-2.7
12/18	-12.3	-12.5	0.2
3/19	13.0	10.1	2.9
6/19	3.7	4.0	-0.3
9/19	-0.6	-1.0	0.4
12/19	11.0	8.2	2.8
3/20	-23.4	-22.7	-0.7
6/20	20.4	15.1	5.3

EMERGING MARKETS EQUITY MANAGER SUMMARY

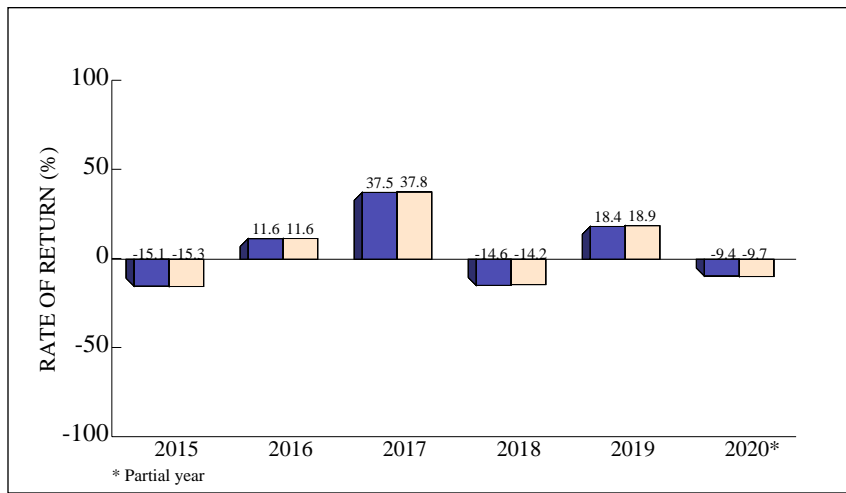
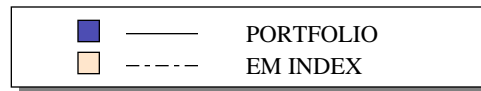


MANAGER	(UNIVERSE)	COMPONENT RETURNS AND RANKINGS					MARKET VALUE
		QTR	YTD	1 YEAR	3 YEARS	5 YEARS	
SSGA EMERGING MARKETS	(Emerging Markets)	19.0 (53)	-9.4 (43)	-3.0 (45)	2.1 (41)	3.0 (47)	\$250,547,615
<i>Blended Emerging Markets Index</i>		<i>18.2 ----</i>	<i>-9.7 ----</i>	<i>-3.0 ----</i>	<i>2.3 ----</i>	<i>3.2 ----</i>	<i>----</i>
TOTAL	(Emerging Markets)	19.0 (53)	-9.4 (43)	-3.0 (45)	2.1 (41)	3.0 (47)	\$250,547,615
<i>Blended Emerging Markets Index</i>		<i>18.2 ----</i>	<i>-9.7 ----</i>	<i>-3.0 ----</i>	<i>2.3 ----</i>	<i>3.2 ----</i>	<i>----</i>

EMERGING MARKETS EQUITY RETURN COMPARISONS



Emerging Markets Universe



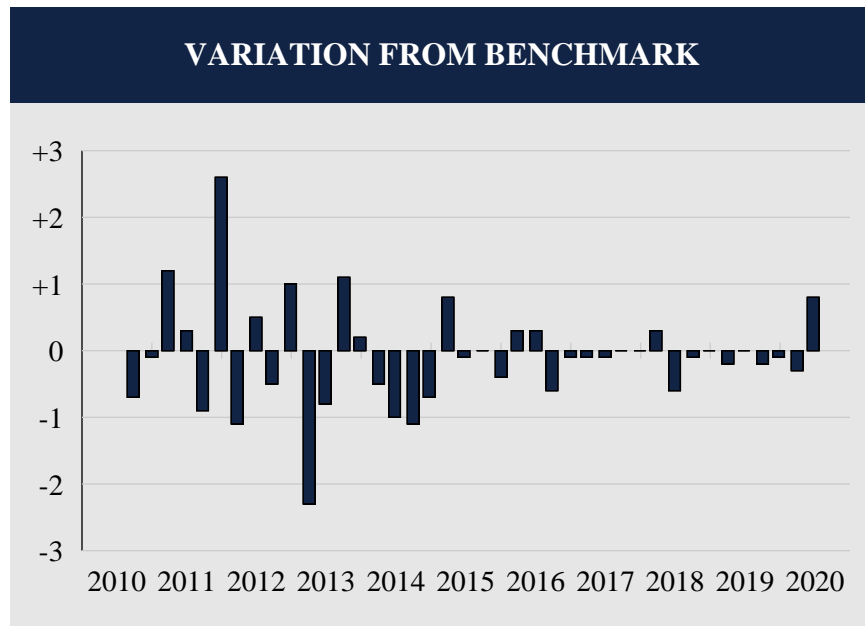
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	3 YRS	5 YRS
RETURN	19.0	-9.4	1.3	-3.0	2.1	3.0
(RANK)	(53)	(43)	(40)	(45)	(41)	(47)
5TH %ILE	32.7	8.8	17.3	17.0	9.1	7.8
25TH %ILE	24.3	-4.9	5.5	2.0	4.8	5.6
MEDIAN	19.5	-10.7	-0.3	-4.0	1.1	2.8
75TH %ILE	17.1	-15.4	-6.2	-10.4	-1.7	1.0
95TH %ILE	12.7	-22.2	-12.9	-17.5	-4.8	-1.2
EM Index	18.2	-9.7	1.1	-3.0	2.3	3.2

Emerging Markets Universe

EMERGING MARKETS EQUITY QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: BLENDED EMERGING MARKETS INDEX

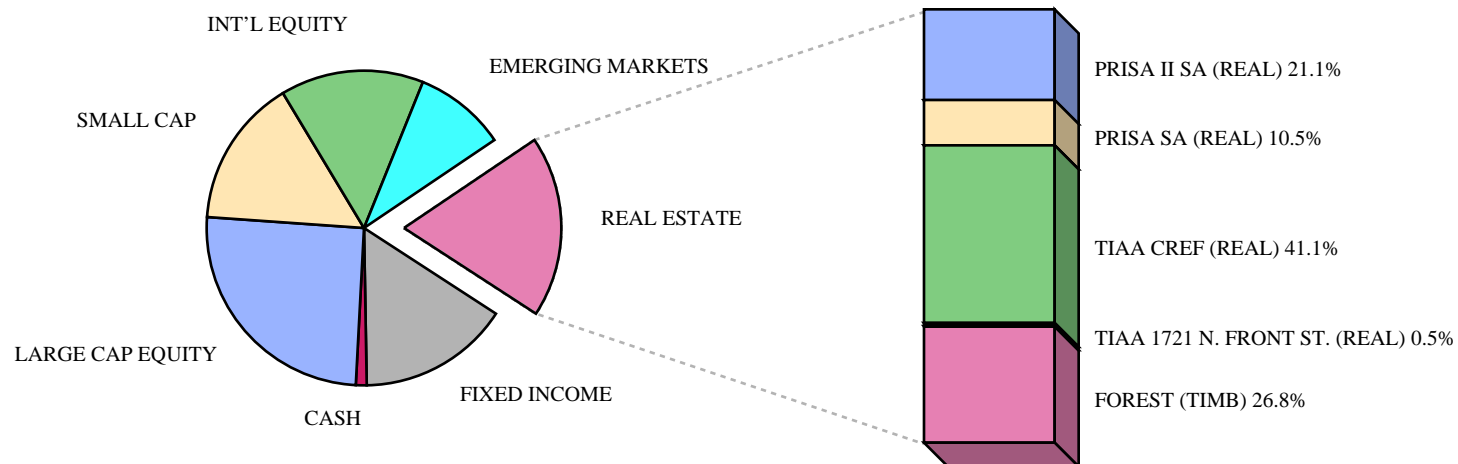


Total Quarters Observed	40
Quarters At or Above the Benchmark	17
Quarters Below the Benchmark	23
Batting Average	.425

RATES OF RETURN

Date	Portfolio	Benchmark	Difference
9/10	17.9	18.6	-0.7
12/10	7.2	7.3	-0.1
3/11	1.9	0.7	1.2
6/11	-1.2	-1.5	0.3
9/11	-23.4	-22.5	-0.9
12/11	5.7	3.1	2.6
3/12	13.8	14.9	-1.1
6/12	-8.4	-8.9	0.5
9/12	7.0	7.5	-0.5
12/12	6.6	5.6	1.0
3/13	-2.6	-0.3	-2.3
6/13	-8.1	-7.3	-0.8
9/13	5.8	4.7	1.1
12/13	2.2	2.0	0.2
3/14	-0.7	-0.2	-0.5
6/14	6.6	7.6	-1.0
9/14	-3.6	-2.5	-1.1
12/14	-4.7	-4.0	-0.7
3/15	2.4	1.6	0.8
6/15	0.6	0.7	-0.1
9/15	-17.8	-17.8	0.0
12/15	0.3	0.7	-0.4
3/16	6.1	5.8	0.3
6/16	1.1	0.8	0.3
9/16	8.6	9.2	-0.6
12/16	-4.2	-4.1	-0.1
3/17	11.4	11.5	-0.1
6/17	6.3	6.4	-0.1
9/17	8.0	8.0	0.0
12/17	7.5	7.5	0.0
3/18	1.8	1.5	0.3
6/18	-8.5	-7.9	-0.6
9/18	-1.0	-0.9	-0.1
12/18	-7.4	-7.4	0.0
3/19	9.8	10.0	-0.2
6/19	0.7	0.7	0.0
9/19	-4.3	-4.1	-0.2
12/19	11.8	11.9	-0.1
3/20	-23.9	-23.6	-0.3
6/20	19.0	18.2	0.8

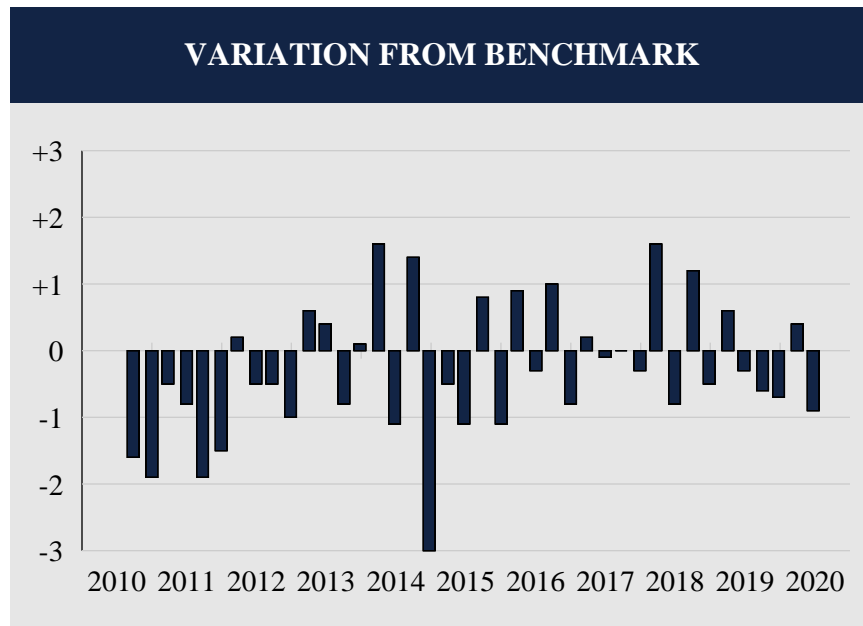
REAL ESTATE MANAGER SUMMARY



MANAGER	(UNIVERSE)	COMPONENT RETURNS AND RANKINGS					MARKET VALUE
		QTR	YTD	1 YEAR	3 YEARS	5 YEARS	
PRISA II SA		-2.4 ---	-1.1 ---	2.7 ---	6.7 ---	8.8 ---	\$103,552,732
PRISA SA		-1.1 ---	0.6 ---	3.5 ---	6.6 ---	8.0 ---	\$51,721,737
TIAA CREF		-2.3 ---	-1.0 ---	4.2 ---	6.9 ---	8.0 ---	\$202,278,709
<i>NCREIF NFI-ODCE Index</i>		<i>-1.6 ---</i>	<i>-0.6 ---</i>	<i>2.2 ---</i>	<i>5.7 ---</i>	<i>7.3 ---</i>	---
TIAA 1721 N. FRONT ST.		1.7 ---	2.4 ---	5.6 ---	4.7 ---	---	\$2,311,116
<i>NCREIF Property Index</i>		<i>-1.0 ---</i>	<i>-0.3 ---</i>	<i>2.7 ---</i>	<i>5.4 ---</i>	<i>6.8 ---</i>	---
FOREST		-1.3 ---	-0.9 ---	-6.4 ---	1.7 ---	3.6 ---	\$132,018,482
<i>NCREIF Timber Index</i>		<i>0.1 ---</i>	<i>0.2 ---</i>	<i>0.3 ---</i>	<i>2.3 ---</i>	<i>2.7 ---</i>	---
TOTAL		-1.9 ---	-0.8 ---	0.8 ---	5.3 ---	6.8 ---	\$491,882,776
<i>NCREIF Property Index</i>		<i>-1.0 ---</i>	<i>-0.3 ---</i>	<i>2.7 ---</i>	<i>5.4 ---</i>	<i>6.8 ---</i>	---

REAL ESTATE QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: NCREIF PROPERTY INDEX



RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	2.3	3.9	-1.6
12/10	2.7	4.6	-1.9
3/11	2.9	3.4	-0.5
6/11	3.1	3.9	-0.8
9/11	1.4	3.3	-1.9
12/11	1.5	3.0	-1.5
3/12	2.8	2.6	0.2
6/12	2.2	2.7	-0.5
9/12	1.8	2.3	-0.5
12/12	1.5	2.5	-1.0
3/13	3.2	2.6	0.6
6/13	3.3	2.9	0.4
9/13	1.8	2.6	-0.8
12/13	2.6	2.5	0.1
3/14	4.3	2.7	1.6
6/14	1.8	2.9	-1.1
9/14	4.0	2.6	1.4
12/14	0.0	3.0	-3.0
3/15	3.1	3.6	-0.5
6/15	2.0	3.1	-1.1
9/15	3.9	3.1	0.8
12/15	1.8	2.9	-1.1
3/16	3.1	2.2	0.9
6/16	1.7	2.0	-0.3
9/16	2.8	1.8	1.0
12/16	0.9	1.7	-0.8
3/17	1.7	1.5	0.2
6/17	1.7	1.8	-0.1
9/17	1.7	1.7	0.0
12/17	1.5	1.8	-0.3
3/18	3.3	1.7	1.6
6/18	1.0	1.8	-0.8
9/18	2.9	1.7	1.2
12/18	0.9	1.4	-0.5
3/19	2.4	1.8	0.6
6/19	1.2	1.5	-0.3
9/19	0.8	1.4	-0.6
12/19	0.8	1.5	-0.7
3/20	1.1	0.7	0.4
6/20	-1.9	-1.0	-0.9

Total Quarters Observed	40
Quarters At or Above the Benchmark	15
Quarters Below the Benchmark	25
Batting Average	.375

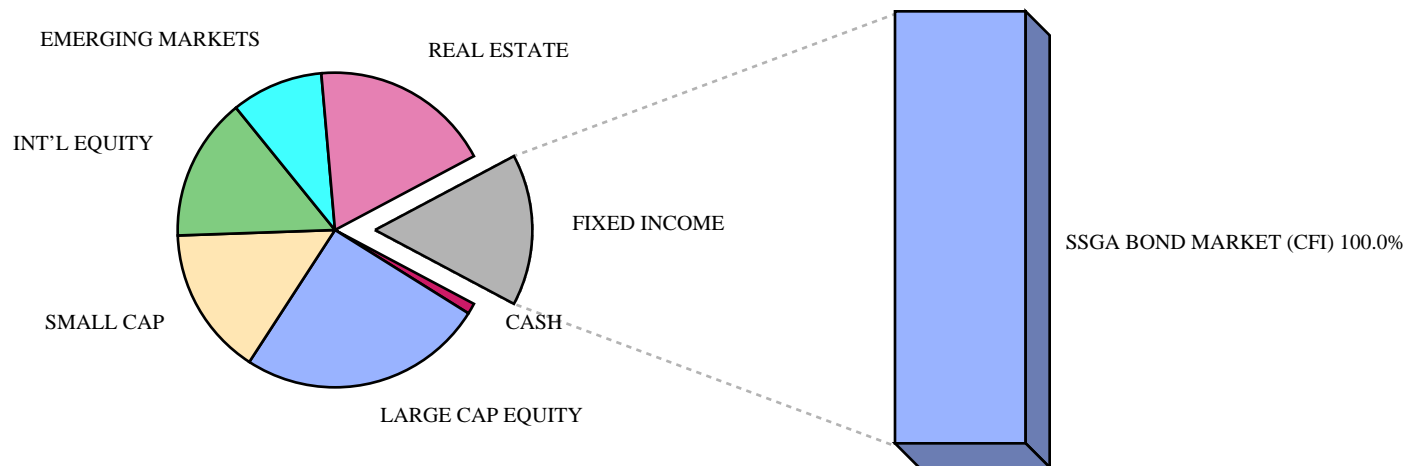
FIXED INCOME MANAGER

The Bloomberg Barclays US Aggregate Index returned 2.9% last quarter, while the Bloomberg Barclays Gov/Credit index was up 3.7%. For the trailing year they were up 8.7% and 10.0%, respectively.

**SSgA
(Broad Market)**

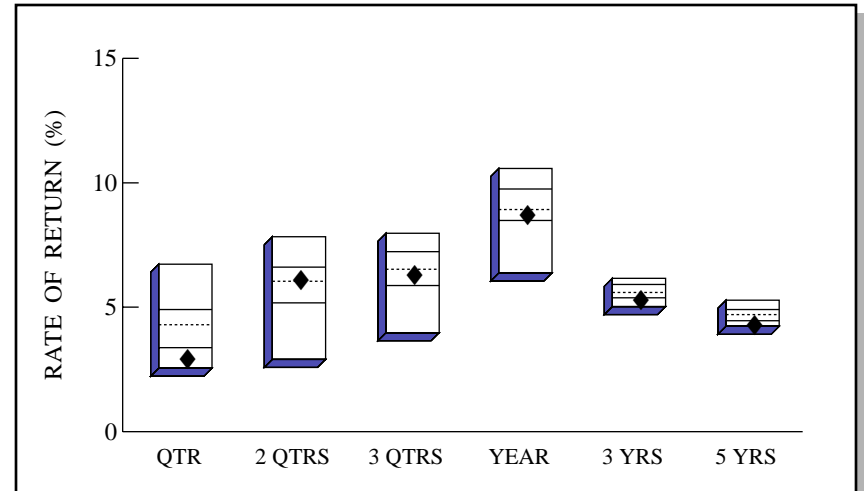
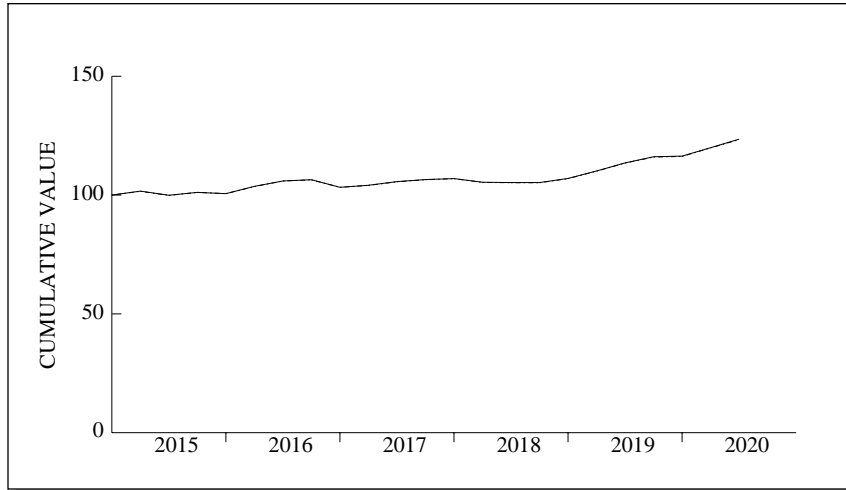
The SSgA fixed income component returned 3.0% last quarter. Over the trailing year, the fund rose 8.8%, in line with the Bloomberg Barclays Aggregate Index. At year end, this investment was valued at \$409,985,424.

FIXED INCOME MANAGER SUMMARY

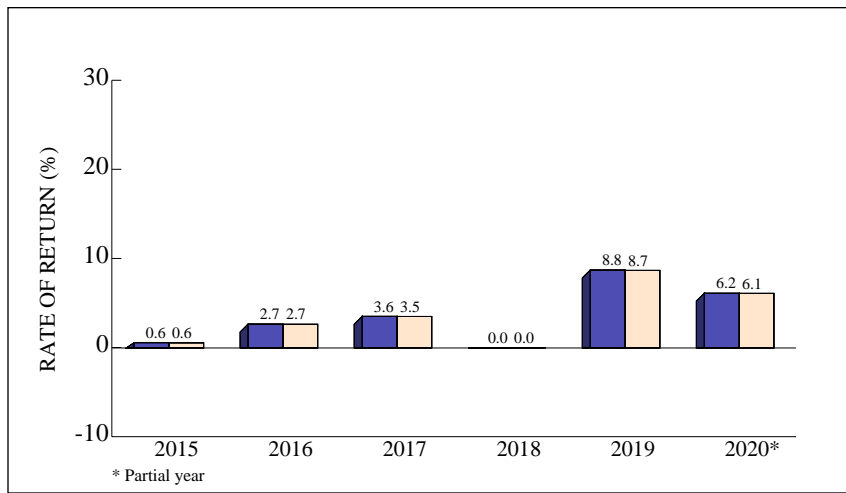


MANAGER	(UNIVERSE)	COMPONENT RETURNS AND RANKINGS					MARKET VALUE
		QTR	YTD	1 YEAR	3 YEARS	5 YEARS	
SSGA BOND MARKET	(Core Fixed Income)	3.0 (84)	6.2 (43)	8.8 (67)	5.4 (81)	4.3 (87)	\$409,985,424
<i>Bloomberg Barclays Aggregate Index</i>		2.9 ----	6.1 ----	8.7 ----	5.3 ----	4.3 ----	----
TOTAL	(Core Fixed Income)	3.0 (84)	6.2 (43)	8.8 (67)	5.4 (81)	4.3 (87)	\$409,985,424
<i>Bloomberg Barclays Aggregate Index</i>		2.9 ----	6.1 ----	8.7 ----	5.3 ----	4.3 ----	----

FIXED INCOME RETURN COMPARISONS



Core Fixed Income Universe



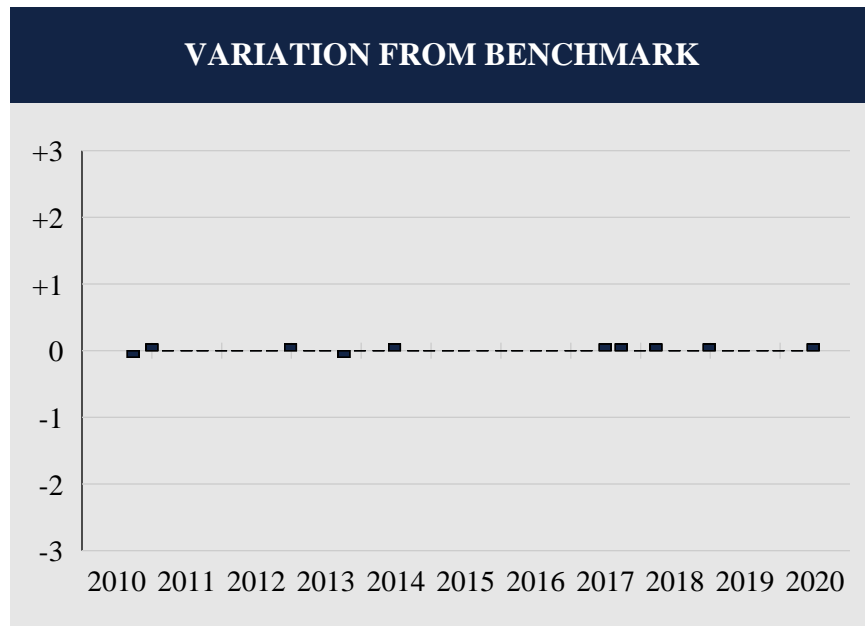
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	3.0	6.2	6.4	8.8	5.4	4.3
(RANK)	(84)	(43)	(65)	(67)	(81)	(87)
5TH %ILE	6.7	7.8	8.0	10.6	6.2	5.3
25TH %ILE	4.9	6.6	7.2	9.8	5.9	4.9
MEDIAN	4.3	6.0	6.5	8.9	5.6	4.7
75TH %ILE	3.4	5.2	5.9	8.5	5.4	4.5
95TH %ILE	2.6	2.9	4.0	6.4	5.0	4.2
Agg	2.9	6.1	6.3	8.7	5.3	4.3

Core Fixed Income Universe

FIXED INCOME QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

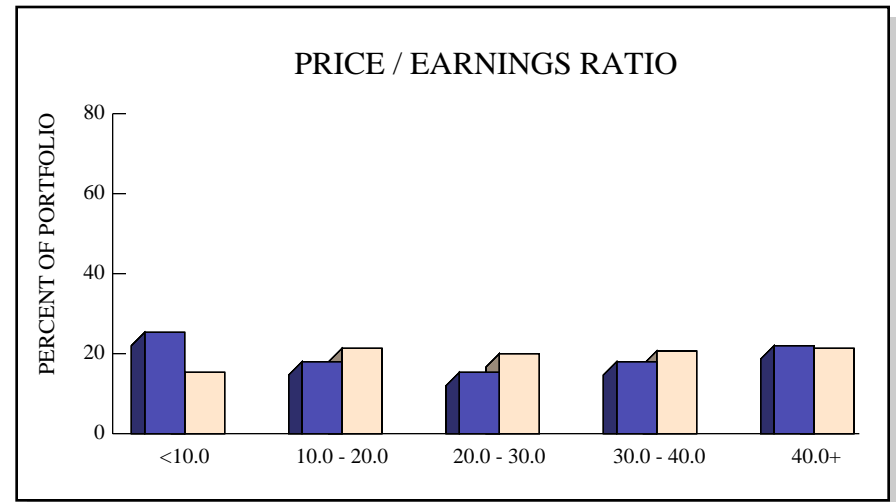
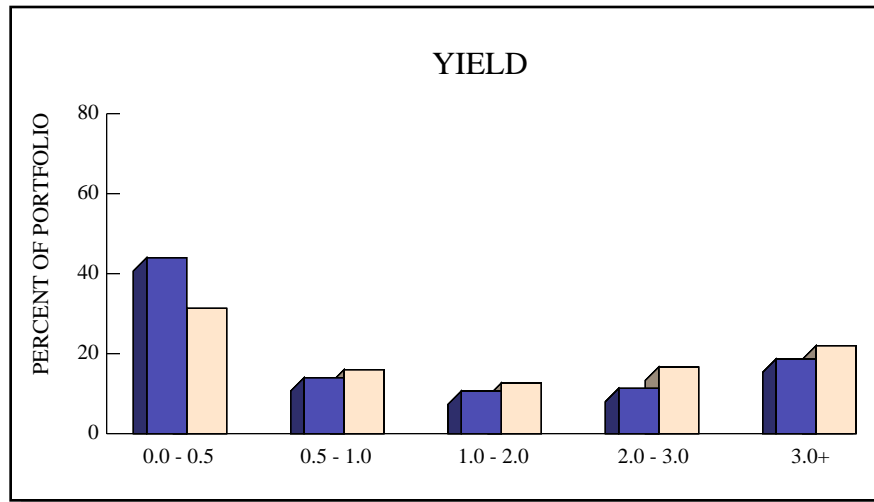
COMPARATIVE BENCHMARK: BLOOMBERG BARCLAYS AGGREGATE INDEX



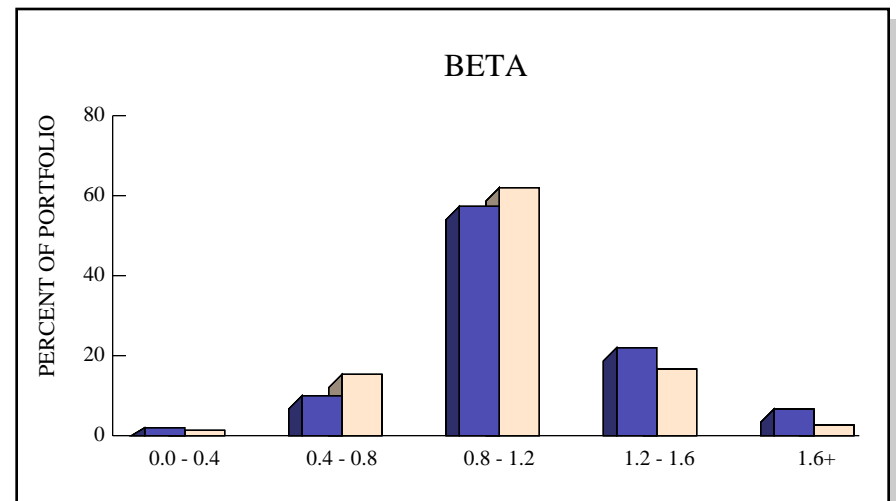
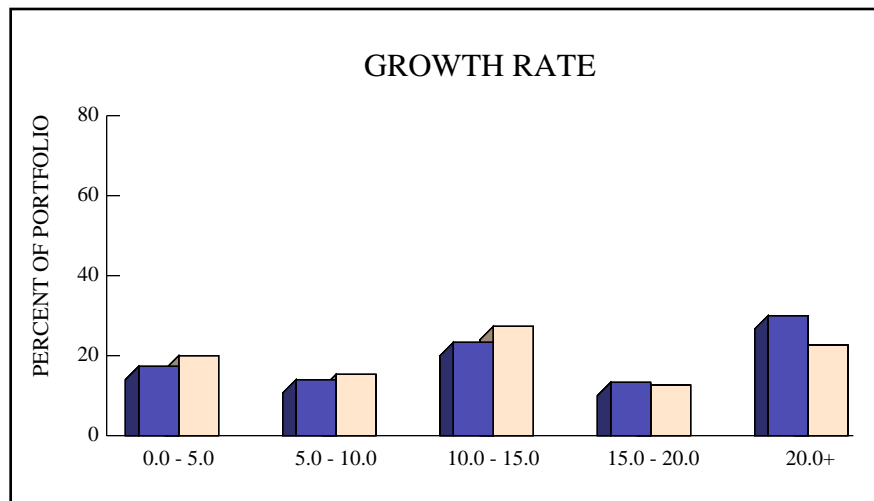
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	2.4	2.5	-0.1
12/10	-1.2	-1.3	0.1
3/11	0.4	0.4	0.0
6/11	2.3	2.3	0.0
9/11	3.8	3.8	0.0
12/11	1.1	1.1	0.0
3/12	0.3	0.3	0.0
6/12	2.1	2.1	0.0
9/12	1.6	1.6	0.0
12/12	0.3	0.2	0.1
3/13	-0.1	-0.1	0.0
6/13	-2.3	-2.3	0.0
9/13	0.5	0.6	-0.1
12/13	-0.1	-0.1	0.0
3/14	1.8	1.8	0.0
6/14	2.1	2.0	0.1
9/14	0.2	0.2	0.0
12/14	1.8	1.8	0.0
3/15	1.6	1.6	0.0
6/15	-1.7	-1.7	0.0
9/15	1.2	1.2	0.0
12/15	-0.6	-0.6	0.0
3/16	3.0	3.0	0.0
6/16	2.2	2.2	0.0
9/16	0.5	0.5	0.0
12/16	-3.0	-3.0	0.0
3/17	0.8	0.8	0.0
6/17	1.5	1.4	0.1
9/17	0.9	0.8	0.1
12/17	0.4	0.4	0.0
3/18	-1.4	-1.5	0.1
6/18	-0.2	-0.2	0.0
9/18	0.0	0.0	0.0
12/18	1.7	1.6	0.1
3/19	2.9	2.9	0.0
6/19	3.1	3.1	0.0
9/19	2.3	2.3	0.0
12/19	0.2	0.2	0.0
3/20	3.1	3.1	0.0
6/20	3.0	2.9	0.1

Total Quarters Observed	40
Quarters At or Above the Benchmark	38
Quarters Below the Benchmark	2
Batting Average	.950

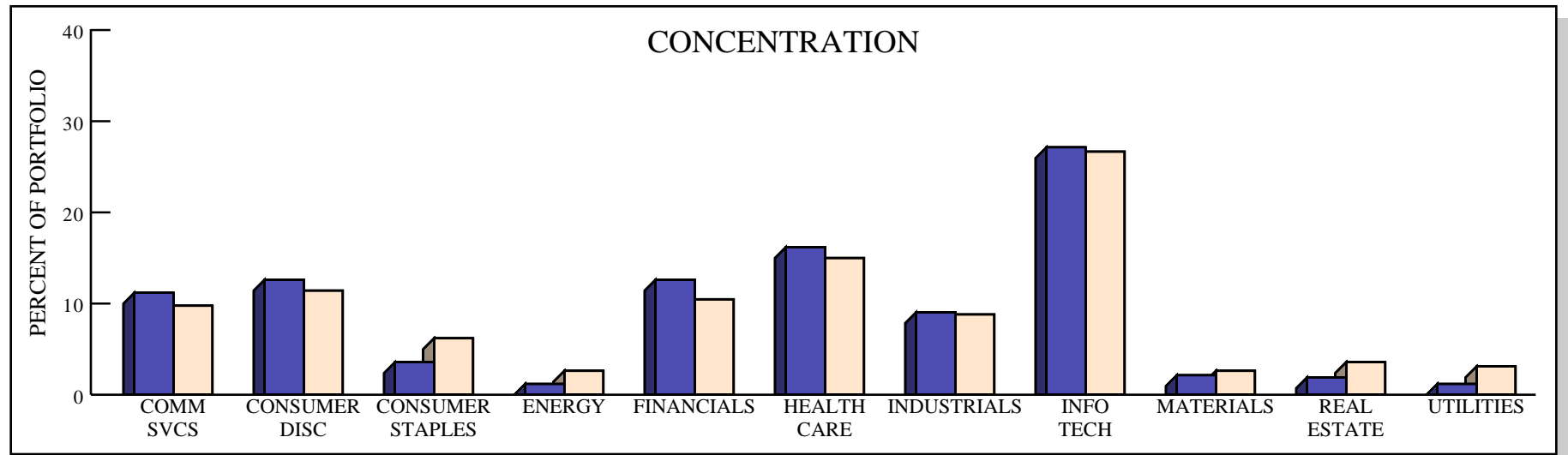
STOCK CHARACTERISTICS



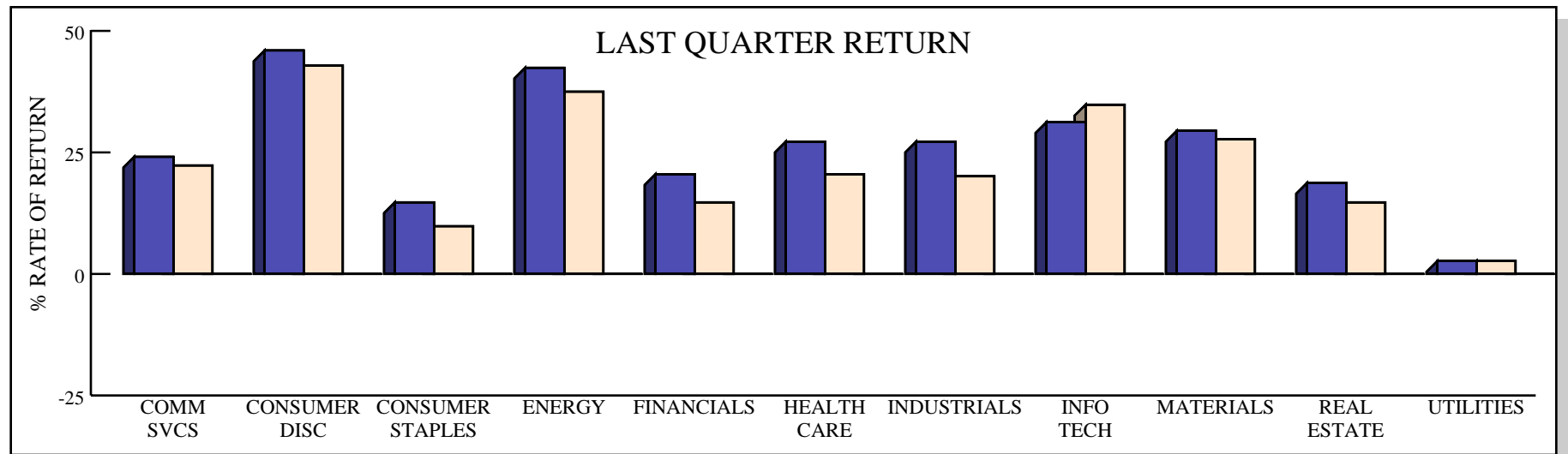
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	2,637	1.7%	17.8%	38.0	1.08
RUSSELL 3000	3,009	2.0%	14.9%	38.0	1.01



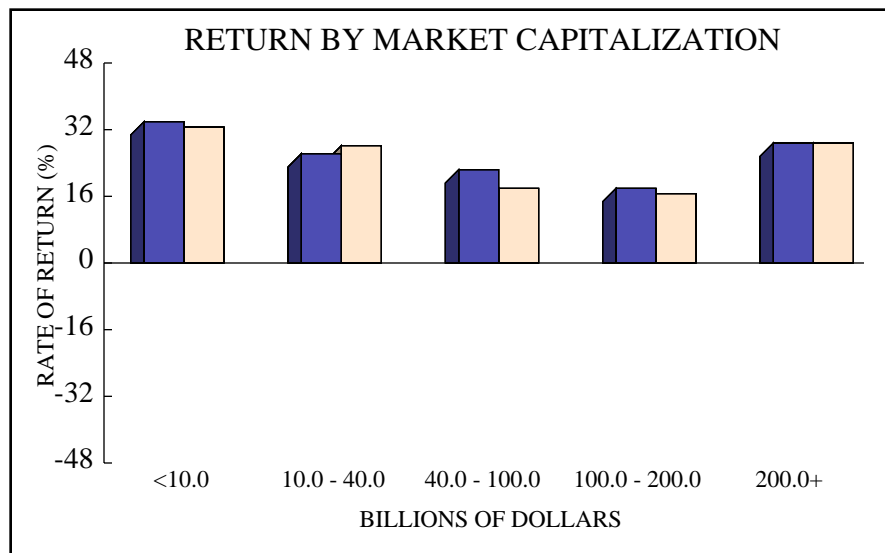
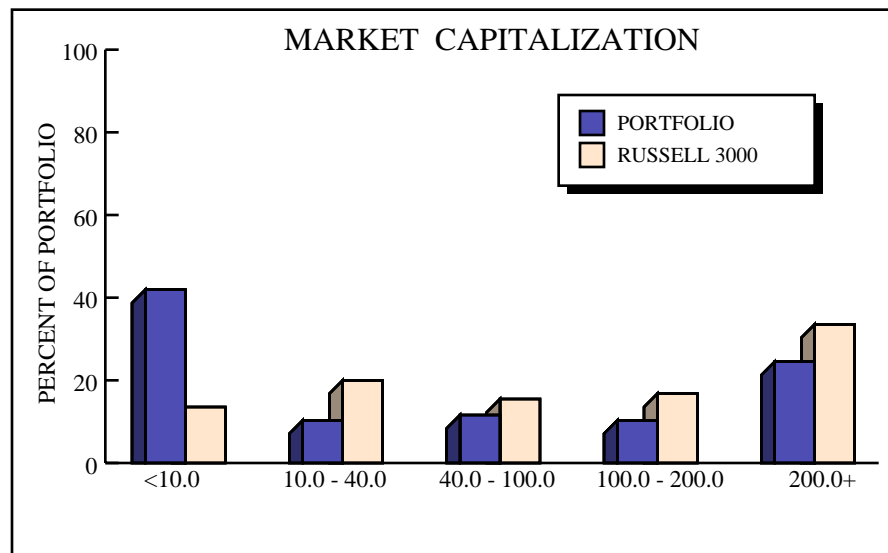
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 3000



TOP TEN HOLDINGS



TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	MICROSOFT CORP	\$ 53,666,807	4.99%	29.4%	Information Technology	\$ 1543.3 B
2	ALPHABET INC-CL C	31,228,058	2.91%	21.6%	Communication Services	475.2 B
3	FACEBOOK INC-CLASS A	27,916,895	2.60%	36.1%	Communication Services	546.5 B
4	AMAZON.COM INC	23,447,212	2.18%	41.5%	Consumer Discretionary	1376.0 B
5	ADOBE INC	19,102,709	1.78%	36.8%	Information Technology	208.8 B
6	MASTERCARD INC - A	14,266,934	1.33%	22.6%	Information Technology	293.6 B
7	PAYPAL HOLDINGS INC	13,852,853	1.29%	82.0%	Information Technology	204.6 B
8	ABBOTT LABORATORIES	13,799,713	1.28%	16.3%	Health Care	161.7 B
9	VISA INC-CLASS A SHARES	12,951,855	1.21%	20.1%	Information Technology	325.9 B
10	COMCAST CORP-CLASS A	12,591,826	1.17%	14.1%	Communication Services	177.5 B

Domestic Industry Sector Allocations
(Percent of Invested Equity)
As of June 30, 2020

	Comm Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Real Estate	Utilities
Eagle	32.6	17.5	0.0	0.0	24.9	5.6	6.7	11.3	1.3	0.0	0.0
LSV Large Cap	7.2	10.9	6.2	2.9	14.4	19.3	9.2	23.7	4.1	0.7	1.4
Russell 1000 Value	9.3	7.0	8.1	5.3	18.5	14.1	12.3	10.3	4.5	4.7	5.9
Polen	17.2	8.2	0.0	0.0	2.5	16.3	0.0	55.8	0.0	0.0	0.0
William Blair	11.0	16.7	5.1	0.0	3.6	13.1	7.1	41.8	1.6	0.0	0.0
Russell 1000 Growth	10.9	15.5	4.8	0.1	2.1	15.0	4.7	44.0	0.8	2.1	0.0
AMI	0.0	9.5	12.2	0.0	11.6	26.2	12.9	24.4	3.2	0.0	0.0
Copeland	3.8	9.6	8.2	0.0	15.4	13.4	17.7	14.4	3.2	8.7	5.6
Emerald	4.3	17.9	6.8	0.7	7.9	27.7	14.3	17.0	0.7	2.6	0.0
Russell 2000 Growth	2.6	12.6	3.2	0.1	4.3	34.3	13.1	21.3	2.7	3.8	1.9
LSV Small Cap	1.9	15.2	1.8	1.7	18.9	15.0	18.9	13.8	6.5	4.8	1.5
Smith, Graham & Co	0.0	16.8	2.7	1.3	20.1	17.4	14.3	22.6	2.7	0.9	1.1
Russell 2000 Value	2.4	12.0	3.5	4.4	28.3	6.1	16.4	5.8	5.2	10.6	5.3
S&P 500	10.8	10.8	7.0	2.8	10.1	14.6	8.0	27.5	2.5	2.8	3.1

Allocations may not total to 100% due to rounding.

International Industry Sector Allocations
(Percent of Invested Equity)
As of June 30, 2020

	Comm Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Real Estate	Utilities
HGK	5.0	19.3	9.3	1.7	9.7	0.0	32.7	11.3	3.9	4.1	2.9
Hardman Johnston	6.1	19.6	3.0	0.0	6.8	19.6	18.3	26.7	0.0	0.0	0.0
S&P Developed Ex US BMI	5.4	10.8	10.2	3.8	15.9	12.4	15.3	10.5	7.9	4.0	3.7

Allocations may not total to 100% due to rounding. Sector weights for international equity portfolios are provided by each respective manager and may differ slightly from custodian accounting.

APPENDIX - MAJOR MARKET INDEX RETURNS

Economic Data	Style	QTR	YTD	1 Year	3 years	5 Years
Consumer Price Index	Economic Data	-0.1	0.3	0.6	1.7	1.6
Domestic Equity	Style	QTR	YTD	1 Year	3 years	5 Years
Russell 3000	Broad Equity	22.0	-3.5	6.5	10.0	10.0
S&P 500	Large Cap Core	20.5	-3.1	7.5	10.7	10.7
Russell 1000	Large Cap	21.8	-2.8	7.5	10.6	10.5
Russell 1000 Growth	Large Cap Growth	27.8	9.8	23.3	19.0	15.9
Russell 1000 Value	Large Cap Value	14.3	-16.3	-8.9	1.8	4.6
Russell Mid Cap	Midcap	24.6	-9.1	-2.3	5.8	6.7
Russell Mid Cap Growth	Midcap Growth	30.3	4.2	11.9	14.8	11.6
Russell Mid Cap Value	Midcap Value	19.9	-18.1	-11.8	-0.6	3.3
Russell 2000	Small Cap	25.4	-13.0	-6.7	2.0	4.3
Russell 2000 Growth	Small Cap Growth	30.6	-3.1	3.5	7.8	6.8
Russell 2000 Value	Small Cap Value	18.9	-23.5	-17.5	-4.4	1.2
International Equity	Style	QTR	YTD	1 Year	3 years	5 Years
MSCI All Country World Ex US	Foreign Equity	16.3	-10.8	-4.4	1.6	2.7
MSCI EAFE	Developed Markets Equity	15.1	-11.1	-4.7	1.3	2.5
MSCI EAFE Growth	Developed Markets Growth	17.1	-3.3	4.5	6.3	5.9
MSCI EAFE Value	Developed Markets Value	12.7	-19.0	-14.0	-3.9	-1.0
MSCI Emerging Markets	Emerging Markets Equity	18.2	-9.7	-3.0	2.3	3.2
Domestic Fixed Income	Style	QTR	YTD	1 Year	3 years	5 Years
Bloomberg Barclays Aggregate Index	Core Fixed Income	2.9	6.1	8.7	5.3	4.3
Bloomberg Barclays Capital Gov't Bond	Treasuries	0.5	8.6	10.3	5.5	4.0
Bloomberg Barclays Capital Credit Bond	Corporate Bonds	8.2	4.8	9.1	6.1	5.5
Intermediate Aggregate	Core Intermediate	2.1	4.7	6.6	4.3	3.4
ML/BoA 1-3 Year Treasury	Short Term Treasuries	0.1	2.9	4.1	2.7	1.8
Bloomberg Barclays Capital High Yield	High Yield Bonds	10.2	-3.8	0.0	3.3	4.8
Alternative Assets	Style	QTR	YTD	1 Year	3 years	5 Years
Bloomberg Barclays Global Treasury Ex US	International Treasuries	4.1	0.8	1.0	2.9	3.3
NCREIF NFI-ODCE Index	Real Estate	-1.6	-0.6	2.2	5.7	7.3
HFRI FOF Composite	Hedge Funds	6.2	-0.4	0.9	2.4	1.6

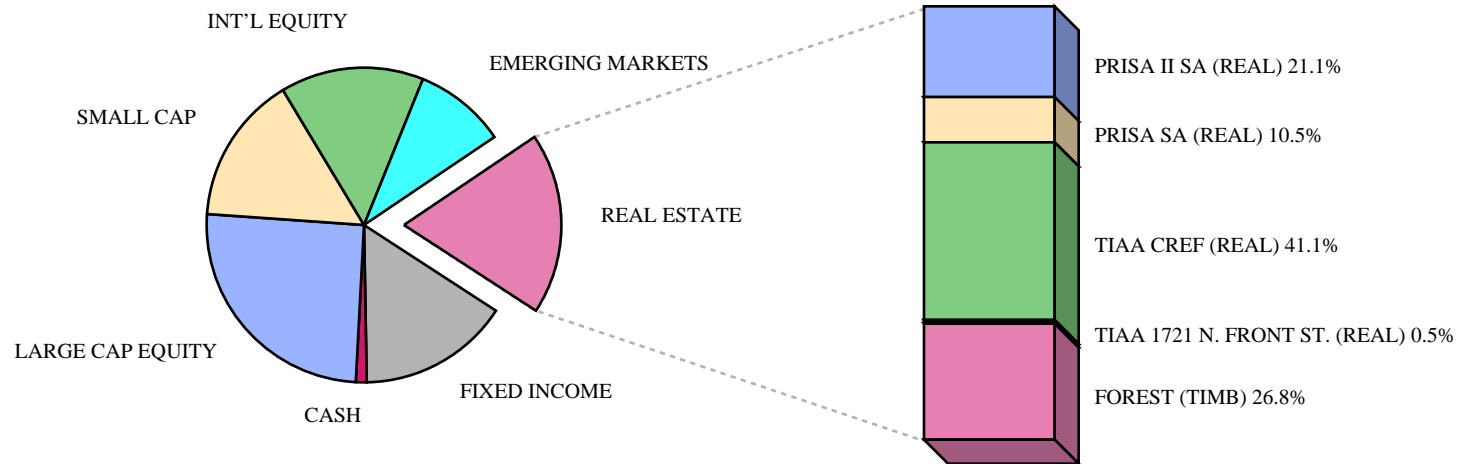
APPENDIX - DISCLOSURES

- * The shadow index is a customized index that matches your portfolio's asset allocation on a monthly basis. This index was calculated using the following asset classes and corresponding benchmarks:

Large Cap Equity	S&P 500
Small Cap Equity	Russell 2000
International Equity	Blended International Index
Emerging Markets Equity	Blended Emerging Markets Index
Real Estate	NCREIF Property Index
Fixed Income	Bloomberg Barclays Aggregate Index
Cash & Equivalent	90 Day T Bill
- * The Blended International Index utilizes the returns of the S&P Developed BMI through April 30, 2015 and the MSCI EAFE Index thereafter.
- * The Blended Emerging Markets Index utilizes the returns of the S&P Emerging BMI through April 30, 2015 and the MSCI Emerging Markets Index thereafter.
- * Dahab Associates utilizes data provided by a custodian and other vendors it believes are reliable. However, it cannot assume responsibility for errors and omissions therefrom.
- * All returns were calculated on a time-weighted basis, and are gross of fees unless otherwise noted.
- * All returns for periods greater than one year are annualized.
- * Dahab Associates uses the modified duration measure to present average duration.
- * All values are in US dollars.

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
REAL ESTATE
PERFORMANCE REVIEW
JUNE 2020

REAL ESTATE MANAGER SUMMARY

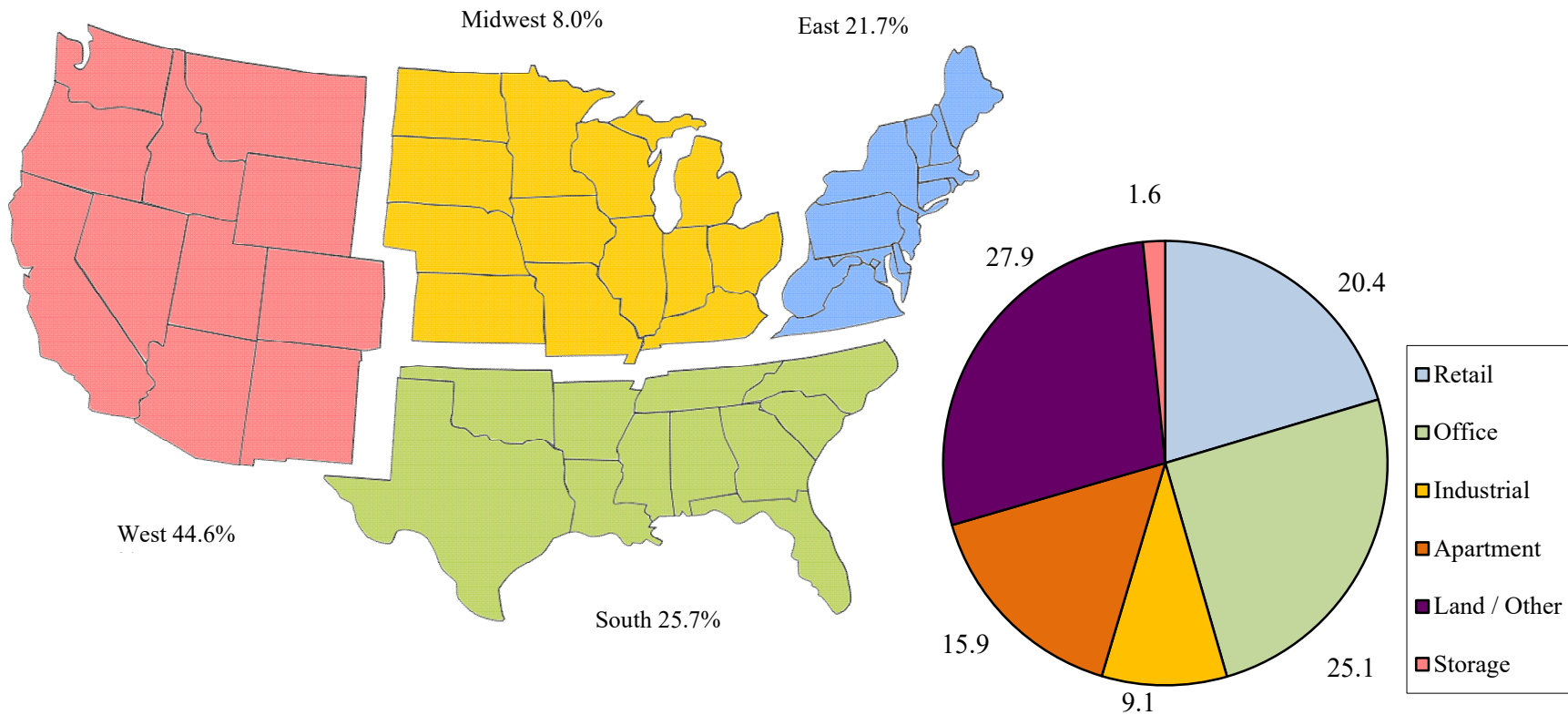


MANAGER	(UNIVERSE)	COMPONENT RETURNS AND RANKINGS					MARKET VALUE
		QTR	YTD	1 YEAR	3 YEARS	5 YEARS	
PRISA II SA		-2.4 ---	-1.1 ---	2.7 ---	6.7 ---	8.8 ---	\$103,552,732
PRISA SA		-1.1 ---	0.6 ---	3.5 ---	6.6 ---	8.0 ---	\$51,721,737
TIAA CREF		-2.3 ---	-1.0 ---	4.2 ---	6.9 ---	8.0 ---	\$202,278,709
<i>NCREIF NFI-ODCE Index</i>		<i>-1.6 ---</i>	<i>-0.6 ---</i>	<i>2.2 ---</i>	<i>5.7 ---</i>	<i>7.3 ---</i>	---
TIAA 1721 N. FRONT ST.		1.7 ---	2.4 ---	5.6 ---	4.7 ---	---	\$2,311,116
<i>NCREIF Property Index</i>		<i>-1.0 ---</i>	<i>-0.3 ---</i>	<i>2.7 ---</i>	<i>5.4 ---</i>	<i>6.8 ---</i>	---
FOREST		-1.3 ---	-0.9 ---	-6.4 ---	1.7 ---	3.6 ---	\$132,018,482
<i>NCREIF Timber Index</i>		<i>0.1 ---</i>	<i>0.2 ---</i>	<i>0.3 ---</i>	<i>2.3 ---</i>	<i>2.7 ---</i>	---
TOTAL		-1.9 ---	-0.8 ---	0.8 ---	5.3 ---	6.8 ---	\$491,882,776
<i>NCREIF Property Index</i>		<i>-1.0 ---</i>	<i>-0.3 ---</i>	<i>2.7 ---</i>	<i>5.4 ---</i>	<i>6.8 ---</i>	---

PMRS Real Estate Commitment

As of June 30th, the Pennsylvania Municipal Retirement System's aggregate real estate portfolio was valued at \$491,882,776, representing 18.6% of the total System's assets. TIAA distributed \$1,653,979 in April and FIA distributed \$550,000 in June. The North Front Street property produced two distributions: \$13,011 in May and \$17,580 in June. For reference, the NCREIF Property Index returned -1.0% in the second quarter. Over the trailing year, that index returned 2.7%, and an annualized 6.8% for the last five years. Over the same time frames, the Bloomberg Barclays Aggregate Index returned 2.9%, 8.7%, and an annualized 4.3%, respectively.

Property Type/Geographical Distribution



PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM REAL ESTATE MANAGERS

PRISA SA

PRISA is an open-end, commingled, broadly diversified, core real estate equity fund invested in completed, income producing and well-leased properties.

Investment Return

On June 30th, 2020, the Pennsylvania Municipal Retirement System's Prudential PRISA SA portfolio was valued at \$51,721,737, a decrease of \$694,561 from the March ending value of \$52,416,298. Last quarter, the account recorded total net withdrawals of \$123,766 in addition to \$570,795 in net investment losses. Because there were no income receipts during the second quarter, the portfolio's net investment losses were entirely made up of capital losses (realized and unrealized).

Property Type/Geographical Distribution

The office sector made up 35.5% of the PRISA SA portfolio. Industrial and retail properties made up 17.9% and 13.9% respectively. Apartments comprised 25.2% of the portfolio's value, storage was 6.2%, and the remaining 1.4% was in other sectors or vacant land.

Geographically, PRISA's portfolio was mostly situated in the East and West, whose percentages were 37.9% and 36.6%. Another 18.2% of the portfolio was situated in the South, while the remaining 7.3% resided in the Midwest.

Account Performance

During the second quarter, the Prudential PRISA SA portfolio returned -1.1%, which was 0.5% greater than the NCREIF NFI-ODCE Index's return of -1.6%. Over the trailing year, the account returned 3.5%, which was 1.3% greater than the benchmark's 2.2% return. Since December 1990, the portfolio returned 7.8% per annum, while the NCREIF NFI-ODCE Index returned an annualized 7.4% over the same time frame.

PRISA II

Investment Return

On June 30th, 2020, the Pennsylvania Municipal Retirement System's Prudential PRISA II SA portfolio was valued at \$103,552,732, which was a decrease of \$2,865,914 from the March ending value of \$106,418,646. During the last three months, the Fund posted \$293,286 in total net withdrawals as well as net investment losses of \$2,572,628. Because there were no income receipts for the second quarter, the portfolio's net investment losses were the result of capital losses (realized and unrealized).

Property Type/Geographical Distribution

PRISA II, like PRISA, situates the largest component of its portfolio in office properties: 36.2% in this case. Retail and apartments also comprised significant portions, with the former at 17.6%, and the latter at 33.5%. Storage made up 4.6%. Investment in land was 4.3%, and industrial properties represented 3.8%.

Geographically, 32.6% of this portfolio was situated in the West, 41.5% resided in the East, while 23.7% was in the South. The remaining 2.2% was located in the Midwest.

Account Performance

During the second quarter, the Prudential PRISA II SA account lost 2.4%, which was 0.8% below the NCREIF NFI-ODCE Index's return of -1.6%. Over the trailing year, the account returned 2.7%, which was 0.5% greater than the benchmark's 2.2% return. Since June 2007, the Prudential PRISA II SA portfolio returned 4.6% annualized, while the NCREIF NFI-ODCE Index returned an annualized 5.3% over the same period.

FOREST INVESTMENT ADVISORS

The Forest Investment Advisors account is a discretionary account invested in land holdings mostly in the South, with lesser representation in the East and West.

Investment Return

As of June 30th, 2020, the Pennsylvania Municipal Retirement System's Forest Investment Associates Keystone Forest Investments portfolio was valued at \$132,018,482, representing a decrease of \$2,284,613 from the March ending value of \$134,303,095. Over the last three months, the account posted \$550,000 in net withdrawals in addition to net investment losses totaling \$1,734,613. Since there were no income receipts during the quarter, the portfolio's net investment losses were solely the result of capital losses (realized and unrealized).

Property Type/Geographical Distribution

The Forest fund held 47.4% of its assets in the South, 22.6% in the East, and 30.0% in the West. The Forest Investment Advisors account was solely invested in Timberland.

Forest held investments in Bear Island (Virginia), Fitz-Weller (New York), Carter-Pasture (Texas), Dupont (Georgia), Bennetts Creek (North Carolina), Black River (South Carolina), Coquille (Oregon), Bucktails (Pennsylvania), and North River (Washington).

Account Performance

For the second quarter, the Forest Investment Associates Keystone Forest Investments portfolio returned -1.3%, which was 1.4% below the NCREIF Timber Index's return of 0.1%. Over the trailing year, the portfolio returned -6.4%, which was 6.7% less than the benchmark's 0.3% return. Since March 1999, the account returned 4.7% annualized, while the NCREIF Timber Index returned an annualized 6.0% over the same time frame.

TIAA-CREF

TIAA CREF is a discretionary account with investments in office, retail, industrial, and multi-family properties. The account holds eight properties: The Shoppes at Monarch Lakes is a retail shopping center in Miramar, Florida, and Des Peres Corner, another retail shopping center, is located in Des Peres, Missouri. The SR Ranch Shopping Center and Copley Corporate Center are located in San Diego, California. Industrial properties include Republic Distribution Center in Pasadena, Texas and the 526 Rt. 46 property is located in Teterboro, New Jersey. Stream Uptown is an apartment building in Seattle, Washington. The portfolio's most recent acquisition, the Fairway Center, is located in Connecticut.

TIAA CREF is a non-leveraged investment, whereas portfolios in the NCREIF NFD-ODCE index do utilize leverage.

Investment Return

On June 30th, 2020, the Pennsylvania Municipal Retirement System's TIAA CREF portfolio was valued at \$202,278,709, a decrease of \$6,916,257 from the March ending value of \$209,194,966. Last quarter, the account recorded total net withdrawals of \$1,653,979 in addition to \$5,262,278 in net investment losses. The fund's net investment loss was a result of income receipts totaling \$2,712,355 and realized and unrealized capital losses totaling \$7,974,633.

Property Type/Geographical Distribution

As of the quarter end, the TIAA CREF portfolio was situated mostly in the West, which comprised 62.9%. The Midwest represented 16.4%, while the South made up 14.8% and the remaining 5.9% was in the East.

Retail space was the largest sector, making up 37.0%. Offices comprised 32.4%, while 15.1% was in apartments and 15.5% was industrial.

Account Performance

During the second quarter, the TIAA CREF portfolio lost 2.3%, which was 0.7% below the NCREIF NFI-ODCE Index's return of -1.6%. Over the trailing twelve-month period, the portfolio returned 4.2%, which was 2.0% greater than the benchmark's 2.2% return. Since June 2008, the TIAA CREF portfolio returned 3.7% on an annualized basis, while the NCREIF NFI-ODCE Index returned an annualized 5.1% over the same time frame.

TIAA NORTH FRONT STREET

The office building at 1721 N. Front St. in Harrisburg, PA was purchased in 2016.

Investment Return

On June 30th, 2020, the Pennsylvania Municipal Retirement System's TIAA CREF 1721 North Front Street portfolio was valued at \$2,311,116, which was a decrease of \$4,053 relative to the March quarter's ending value of \$2,315,169. Last quarter, the portfolio recorded a net withdrawal of \$30,591, which overshadowed the portfolio's net investment return of \$26,538. Since there were no income receipts for the quarter, the portfolio's net investment return was the result of \$26,538 in realized and unrealized capital gains.

Account Performance

During the second quarter, the TIAA CREF 1721 North Front Street account gained 1.7%, which was 2.7% above the NCREIF Property Index's return of -1.0%. Over the trailing year, the account returned 5.6%, which was 2.9% greater than the benchmark's 2.7% return. Since June 2016, the TIAA CREF 1721 North Front Street portfolio returned 1.1% annualized, while the NCREIF Property Index returned an annualized 5.8% over the same period.

Real Estate Investor Report
TIAA CREF (Excluding N. Front Street)

Net IRR Since Inception **6.49%**
Market Value **\$** **202,278,709** **As of**
6/30/2020

<u>Year</u>	<u>Capital Calls</u>	<u>Distributions</u>	<u>Fees</u>
2008	\$ 34,330,250	\$ -	\$ 244,006
2009	\$ -	\$ 1,168,000	\$ 319,220
2010	\$ 50,300,736	\$ -	\$ 422,549
2011	\$ 23,903,720	\$ 406,336	\$ 690,494
2012	\$ -	\$ 3,600,000	\$ 892,330
2013	\$ 15,642,440	\$ 6,240,000	\$ 972,519
2014	\$ 47,594,800	\$ 28,000,000	\$ 1,210,923
2015	\$ -	\$ 24,000,000	\$ 1,493,589
2016	\$ 26,333,676	\$ 6,308,805	\$ 1,604,408
2017	\$ -	\$ 8,062,624	\$ 1,709,860
2018	\$ -	\$ 7,721,531	\$ 1,756,438
2019	\$ -	\$ 7,209,262	\$ 1,813,349
2020	\$ -	\$ 3,100,356	\$ 938,400
Total	\$ 198,105,622	\$ 95,816,914	\$ 14,068,085



Pennsylvania Municipal Retirement System

Performance Report (Finalized) June 2020

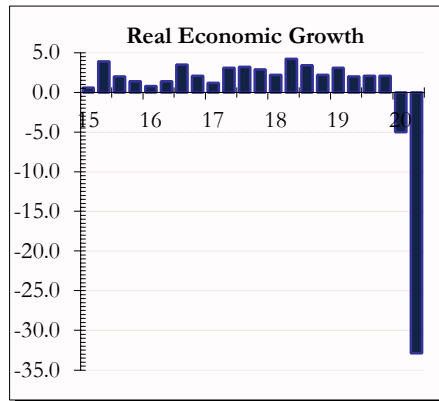


DAHAB ASSOCIATES
New York Massachusetts Pennsylvania Texas Florida

ECONOMIC ENVIRONMENT

Stabilizing?

The first half of 2020 has been a tale of two markets. Q1 2020 was marked by unprecedented volatility as the coronavirus pandemic



spread globally. The quarter culminated in the fastest descent into a bear market in the history of the United States. The second quarter, however, turned out to be the best quarter for domestic equity markets in over 20 years. Aggressive fiscal stimulus, rapid Fed policy

action, vaccine and therapeutics optimism, and faster-than-expected rebounds in economic data contributed to strong performance.

While equity markets have rebounded sharply, with broad market indices hovering near all-time highs, the state of the economy remains varied. Advance estimates of Q2 2020 GDP from the U.S. Bureau of Economic Analysis decreased at an annual rate of 32.9%.

Several data points indicate that we may be on the path to a V-shaped recovery:

- The U.S. manufacturing ISM for June was strong, coming in at 52.6, up from 43.1 in May, and ahead of Wall Street estimates of 49.8. Figures over 50 represent expansion.
- The housing market has remained stunningly resilient.

- U.S. retail sales rose 17% month-over-month in May.
- Private-sector payrolls rose by 2.4 million in June according to the ADP National Employment Report and Moody's Analytics.

There are indications though that the headline data and substantial stimulus has masked the real underlying problems in the economy:

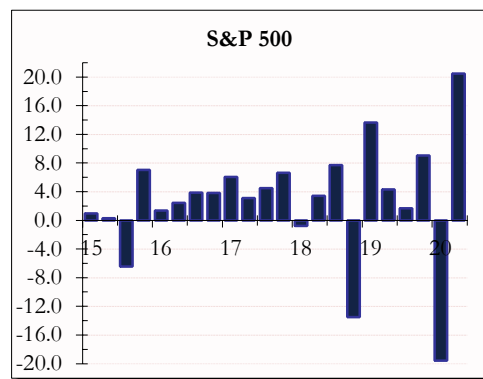
- Unemployment in the United States has been, and remains, in the double digits for three months straight. The economy lost approximately 13 million jobs throughout Q2.
- More than 180 companies in the S&P 500 have withdrawn their forecasts for 2020, according to FactSet. Only 49 companies have issued guidance for the second quarter, the lowest since 2006.
- Incomes in the United States have been supported, thus far, by stimulus checks and unusually generous unemployment benefits, which are due to expire at the end of July. If these payments are not maintained, there could be a significant reduction in household incomes in the second half of the year.
- In the U.S., the number of infections is rising again.

Full-year estimates for GDP are between -4% and -10%, according to Bloomberg.

DOMESTIC EQUITIES

Duck Market

Calm on the surface, but turbulent underneath, the United States equity markets rebounded sharply and outperformed all other



major equity markets. However, while on the surface, domestic equity markets seem to be pricing in a V-shaped economic recovery, sector and sub-sector performance tells a much more differentiated story.

For example, online retailers are up substantially on the year, while department stores are down sharply with some declaring outright bankruptcy. Many of the worst-performing sectors in the first quarter continued to lag in the Q2 rally, the exception being energy stocks. The energy sector, the single worst-performing industry in Q1, rebounded sharply as oil prices partially recovered.

Growth markets continue to outpace their value counterparts. Most of the growth performance advantage can be explained by comparing the performance of the technology sector to the financial industry, the dominant sectors in their respective benchmarks. The technology sector gained 31.3% in the second quarter, bringing its year-to-date return to 15.9%. In comparison, the financial sector gained only 16.3%, bringing its year-to-date return to -16.4%. The differential is 15.0% for the quarterly returns, and 32.3% year-to-date.

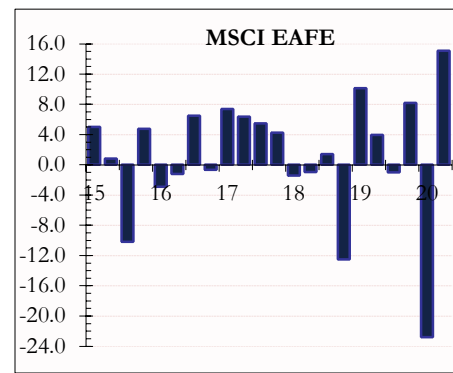
While the growth factor continues to outpace the struggling value factor, there was a slight change in another well-known factor: size. For the first time in close to three years, small capitalization companies outperformed their larger counterparts. Small-capitalization stocks, as measured by the Russell 2000, outperformed the Russell 1000 by 3.6%. This divergence was peculiar, given the indices differing technology, energy, and financial exposures.

The sectors that tend to be more income-focused and “risk-off” underperformed in Q2. U.S. REITs gained 9.6% as fears of delinquencies hindered them from keeping pace with the broad market. Utilities were the worst-performing sector in the quarter, with the largest companies holding up best. Large capitalization utilities were up 4% compared to their smaller peers who lost 0.5%.

INTERNATIONAL EQUITIES

Bounce Back

Developed international stocks, as measured by the MSCI EAFE, made substantial gains during the quarter (+15.2%). It was a solid

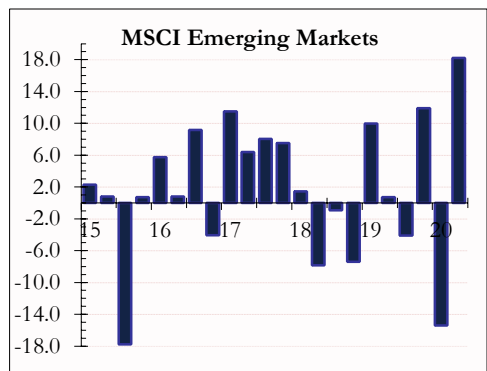


quarter for equities as central banks and governments provided enormous amounts of stimulus, and economies started to reopen. All but one country among those in the EAFE index saw positive returns over the quarter. The five most heavily weighted

countries in the index saw gains above 9%. Their combined weighting of 70% bolstered the total return.

The Eurozone did well as countries began to lift lockdown restrictions. Germany gained 27.4%, as the government announced a fresh stimulus of €130 billion to jumpstart the economy. This round will bring its total stimulus to €1.2 trillion in 2020, roughly equivalent to 35% of 2019 GDP.

Emerging Market equities gained 18.1% in Q2 2020 (as measured by the MSCI Emerging Markets index), 2.9% more than their more developed international peers.



This was the index's most substantial quarterly return in over a decade. The top five countries by weighting, which total 73% of the index, all gained more than 16% in the quarter.

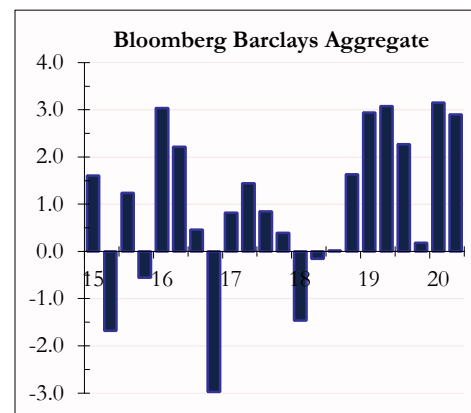
Exporter markets Thailand (+23.8%) and Taiwan (+21.4%) outperformed the general index on the hope of a recovery in global exports in the second half of the year.

BOND MARKET

Risk On

The broad U.S. fixed income market, as measured by the Bloomberg Barclays Aggregate, delivered positive returns in Q2, increasing 2.9%. Credit spreads tightened as government

programs started bearing fruit, and fundamental concerns were pushed aside. The sectors that were hardest hit in Q1 saw the



largest rebound. High yield securities gained 10.2%, as investors' appetite for yield assuaged fears of more delinquencies. The laggards for the quarter were the securities that tend to be the most risk-off, treasuries (+0.5%) and mortgage-backed securities (+0.7%).

Yields along the treasury curve stayed relatively range-bound in Q2. For 5-year notes, the yield decreased 8 basis points to 0.29%. While with the 30-year notes, yields increased by 6 basis points to 1.41%.

The global aggregate index was up 3.3% while emerging market debt surged 10.0%.

A decline of 22 basis points to 1.26% for Italian yields was a surprise in the international bond market. Italian bonds benefited from a coordinated effort by Eurozone countries to support member countries.

CASH EQUIVALENTS

Effectively Zero

The three-month T-Bill returned 0.03% for the second quarter. Return expectations are as low as they have ever been.

Economic Statistics

	Current Quarter	Previous Quarter
GDP*	-32.9%	-5.0%
Unemployment	11.2%	4.4%
CPI All Items Year/Year	0.6%	1.5%
Fed Funds Rate	0.25%	0.25%
Industrial Capacity	68.6%	73.5%
U.S. Dollars per Euro	1.12	1.10

Major Index Returns

Index	Quarter	12 Months
Russell 3000	22.0%	6.5%
S&P 500	20.5%	7.5%
Russell Midcap	24.6%	-2.3%
Russell 2000	25.4%	-6.7%
MSCI EAFE	15.1%	-4.7%
MSCI Emg Markets	18.2%	-3.0%
NCREIF ODCE	-1.6%	3.8%
U.S. Aggregate	2.9%	8.7%
90 Day T-bills	0.0%	1.2%

Domestic Equity Return Distributions

Quarter	Trailing Year		
	VAL	COR	GRO
LC	14.3	21.8	27.8
MC	19.9	24.6	30.3
SC	18.9	25.4	30.6

Market Summary

- Global Equity markets rebound sharply
- Growth continues to outpace value
- Small-cap outpaces Large-Cap
- Credit spreads tighten
- Estimates of Q2 GDP show a large contraction

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System was valued at \$2,649,623,811, representing an increase of \$291,147,259 from the March quarter's ending value of \$2,358,476,552. Last quarter, the Fund posted withdrawals totaling \$25,062,863, which partially offset the portfolio's net investment return of \$316,210,122. Income receipts totaling \$6,650,024 plus net realized and unrealized capital gains of \$309,560,098 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the total portfolio returned 13.5%, which was 1.3% above the Shadow Index's return of 12.2% and ranked in the 30th percentile of the Public Fund universe. Over the trailing year, the portfolio returned 2.5%, which was 0.7% above the benchmark's 1.8% return, ranking in the 63rd percentile. Since December 1985, the portfolio returned 8.6% annualized. The Shadow Index returned an annualized 8.9% over the same period.

Large Cap Equity

The large cap equity portion of the portfolio returned 23.1% last quarter; that return was 2.6% greater than the S&P 500 Index's return of 20.5% and ranked in the 30th percentile of the Large Cap universe. Over the trailing twelve-month period, this component returned 8.5%, 1.0% above the benchmark's 7.5% performance, ranking in the 35th percentile. Since December 1985, this component returned 10.9% on an annualized basis. The S&P 500 returned an annualized 10.6% during the same period.

Small Cap Equity

During the second quarter, the small cap equity component returned 26.1%, which was 0.7% greater than the Russell 2000 Index's return of 25.4% and ranked in the 45th percentile of the Small Cap universe. Over the trailing year, the small cap equity portfolio returned -8.5%, which was 1.8% less than the benchmark's -6.7% return, and ranked in the 52nd percentile.

International Equity

The international equity portfolio gained 20.4% in the second quarter, 5.3% above the Blended International Index's return of 15.1% and ranked in the 32nd percentile of the International Equity universe. Over the trailing year, this segment returned 1.8%, 6.5% above the benchmark's -4.7% performance, and ranked in the 29th percentile.

Emerging Markets Equity

The emerging markets equity segment returned 19.0% during the second quarter; that return was 0.8% above the Blended Emerging Markets Index's return of 18.2% and ranked in the 53rd percentile of the Emerging Markets universe. Over the trailing twelve months, the emerging markets equity portfolio returned -3.0%, equal to the benchmark's -3.0% performance, ranking in the 45th percentile.

Real Estate

For the second quarter, the real estate segment lost 1.9%, which was 0.9% below the NCREIF Property Index's return of -1.0%. Over the trailing year, this segment returned 0.8%, which was 1.9% below the benchmark's 2.7% performance. Since December 1985, this component returned 6.8% on an annualized basis, while the NCREIF Property Index returned an annualized 7.7% over the same period.

Fixed Income

During the second quarter, the fixed income component gained 3.0%, which was 0.1% greater than the Bloomberg Barclays Aggregate Index's return of 2.9% and ranked in the 84th percentile of the Core Fixed Income universe. Over the trailing twelve months, the fixed income portfolio returned 8.8%, which was 0.1% above the benchmark's 8.7% performance, ranking in the 67th percentile. Since December 1985, this component returned 6.5% annualized. The Bloomberg Barclays Aggregate Index returned an annualized 6.5% over the same time frame.

ASSET ALLOCATION

On June 30, 2020, the allocation of assets was as follows*:

TOTAL PORTFOLIO	100.0%	\$2,649,623,811
Domestic Large Cap	25.4%	\$672,849,167
Domestic Small Cap	15.2%	\$401,745,302
Total Domestic Equity	40.6%	\$1,074,594,469
International Developed Markets	14.8%	\$391,042,620
International Emerging Markets	9.5%	\$250,547,615
Total International Equity	24.2%	\$641,590,235
Total Equity	64.8%	\$1,716,184,704
Real Estate	18.6%	\$491,882,776
Fixed Income	15.5%	\$409,985,424
Cash and Equivalents	1.2%	\$31,570,907

* Numbers may not add to 100% due to rounding.

EXECUTIVE SUMMARY - GROSS OF FEES

PERFORMANCE SUMMARY

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year	Since 12/85
Total Portfolio	13.5	-3.9	2.5	6.5	6.6	9.0	8.6
<i>PUBLIC FUND RANK</i>	(30)	(76)	(63)	(29)	(18)	(19)	----
Shadow Index	12.2	-4.5	1.8	5.3	5.9	8.6	8.9
Domestic Equity	24.2	-6.3	2.5	9.2	8.9	13.0	----
<i>DOMESTIC EQUITY RANK</i>	(40)	(43)	(41)	(39)	(40)	(45)	----
Russell 3000	22.0	-3.5	6.5	10.0	10.0	13.7	10.4
Large Cap Equity	23.1	-2.1	8.5	13.3	12.0	14.9	10.9
<i>LARGE CAP RANK</i>	(30)	(35)	(35)	(29)	(28)	(29)	----
S&P 500	20.5	-3.1	7.5	10.7	10.7	14.0	10.6
Small Cap Equity	26.1	-14.5	-8.5	1.7	3.5	10.8	----
<i>SMALL CAP RANK</i>	(45)	(49)	(52)	(50)	(59)	(55)	----
Russell 2000	25.4	-13.0	-6.7	2.0	4.3	10.5	8.8
International Equity	20.4	-7.7	1.8	4.7	5.5	8.3	----
<i>INTERNATIONAL EQUITY RANK</i>	(32)	(36)	(29)	(28)	(28)	(28)	----
Int'l Index	15.1	-11.1	-4.7	1.3	2.5	6.2	----
S&P BMI Ex US	16.8	-10.8	-4.0	1.3	2.9	6.4	----
MSCI World Ex US	14.6	-12.7	-6.7	0.8	2.2	5.8	6.9
MSCI EAFE	15.1	-11.1	-4.7	1.3	2.5	6.2	7.3
Emerging Markets Equity	19.0	-9.4	-3.0	2.1	3.0	3.2	----
<i>EMERGING MARKETS RANK</i>	(53)	(43)	(45)	(41)	(47)	(83)	----
EM Index	18.2	-9.7	-3.0	2.3	3.2	3.6	----
S&P BMI EMGM	19.3	-10.0	-3.8	2.7	3.2	3.8	----
MSCI Emg Mkts	18.2	-9.7	-3.0	2.3	3.2	3.6	----
Real Estate	-1.9	-0.8	0.8	5.3	6.8	8.4	6.8
NCREIF NPI	-1.0	-0.3	2.7	5.4	6.8	9.7	7.7
Aggregate Index	2.9	6.1	8.7	5.3	4.3	3.8	6.5
Fixed Income	3.0	6.2	8.8	5.4	4.3	3.8	6.5
<i>CORE FIXED INCOME RANK</i>	(84)	(43)	(67)	(81)	(87)	(92)	----
Aggregate Index	2.9	6.1	8.7	5.3	4.3	3.8	6.5

ASSET ALLOCATION

Large Cap Equity	25.4%	\$ 672,849,167
Small Cap	15.2%	401,745,302
Int'l Equity	14.8%	391,042,620
Emerging Markets	9.5%	250,547,615
Real Estate	18.6%	491,882,776
Fixed Income	15.5%	409,985,424
Cash	1.2%	31,570,907
Total Portfolio	100.0%	2,649,623,811

INVESTMENT RETURN

Market Value 3/2020	\$ 2,358,476,552
Contribs / Withdrawals	- 25,062,863
Income	6,650,024
Capital Gains / Losses	309,560,098
Market Value 6/2020	\$ 2,649,623,811

EXECUTIVE SUMMARY - NET OF FEES**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Total Portfolio - Net	13.4	-4.2	2.1	6.0	6.1	8.5
Shadow Index	12.2	-4.5	1.8	5.3	5.9	8.6
Domestic Equity - Net	24.0	-6.6	2.0	8.7	8.4	12.5
Russell 3000	22.0	-3.5	6.5	10.0	10.0	13.7
Large Cap Equity - Net	22.9	-2.4	8.0	12.7	11.5	14.5
S&P 500	20.5	-3.1	7.5	10.7	10.7	14.0
Small Cap Equity - Net	26.0	-14.8	-9.0	1.1	2.9	10.3
Russell 2000	25.4	-13.0	-6.7	2.0	4.3	10.5
International Equity - Net	20.3	-7.9	1.4	4.2	5.0	7.8
Int'l Index	15.1	-11.1	-4.7	1.3	2.5	6.2
S&P BMI Ex US	16.8	-10.8	-4.0	1.3	2.9	6.4
MSCI World Ex US	14.6	-12.7	-6.7	0.8	2.2	5.8
MSCI EAFE	15.1	-11.1	-4.7	1.3	2.5	6.2
Emerging Markets Equity - Net	19.0	-9.5	-3.1	2.0	2.9	3.1
EM Index	18.2	-9.7	-3.0	2.3	3.2	3.6
S&P BMI EMGM	19.3	-10.0	-3.8	2.7	3.2	3.8
MSCI Emg Mkts	18.2	-9.7	-3.0	2.3	3.2	3.6
Real Estate - Net	-2.1	-1.3	-0.1	4.3	5.8	7.4
NCREIF NPI	-1.0	-0.3	2.7	5.4	6.8	9.7
Aggregate Index	2.9	6.1	8.7	5.3	4.3	3.8
Fixed Income - Net	3.0	6.1	8.7	5.3	4.3	3.8
Aggregate Index	2.9	6.1	8.7	5.3	4.3	3.8

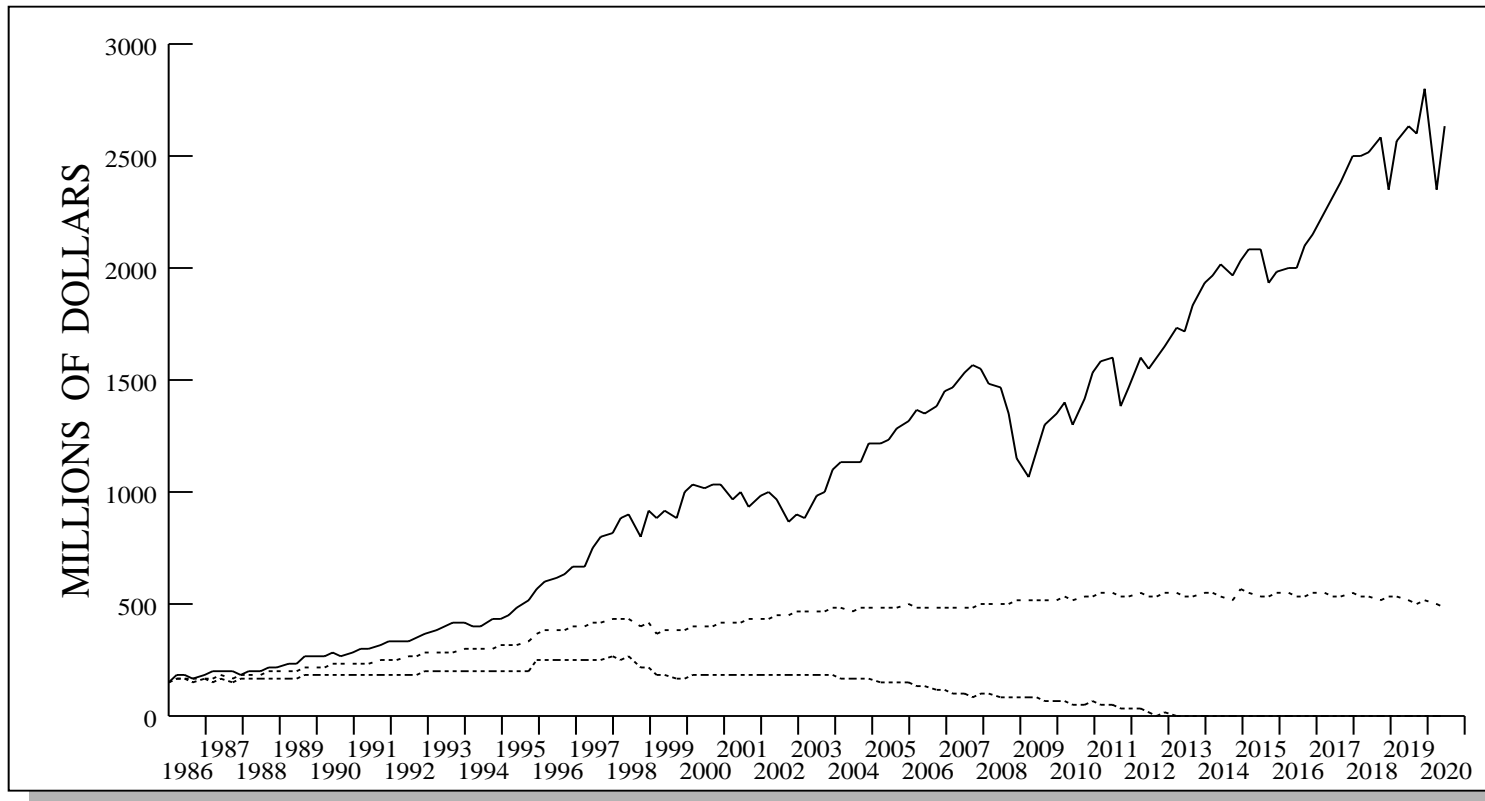
ASSET ALLOCATION

Large Cap Equity	25.4%	\$ 672,849,167
Small Cap	15.2%	401,745,302
Int'l Equity	14.8%	391,042,620
Emerging Markets	9.5%	250,547,615
Real Estate	18.6%	491,882,776
Fixed Income	15.5%	409,985,424
Cash	1.2%	31,570,907
Total Portfolio	100.0%	2,649,623,811

INVESTMENT RETURN

Market Value 3/2020	\$ 2,358,476,552
Contribs / Withdrawals	- 25,062,863
Income	6,650,024
Capital Gains / Losses	309,560,098
Market Value 6/2020	\$ 2,649,623,811

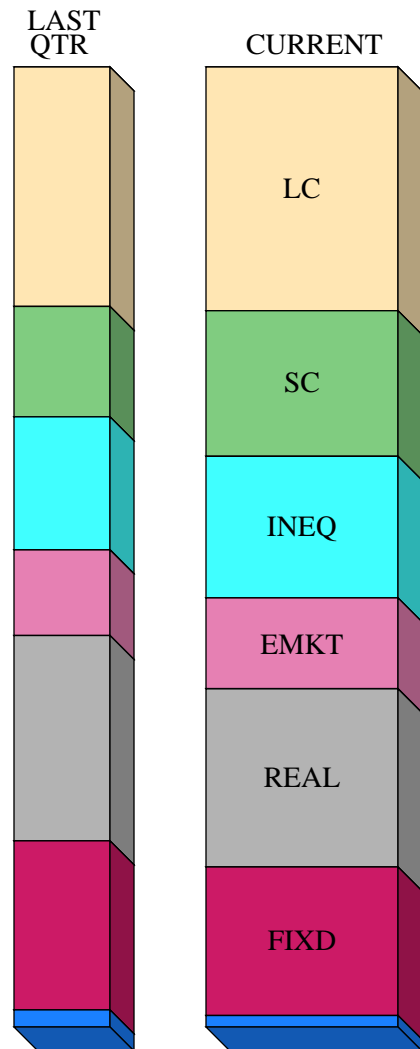
INVESTMENT GROWTH



— ACTUAL RETURN
 - - - 5.25%
 0.0%

VALUE ASSUMING
 5.25% RETURN \$ 493,339,691

	LAST QUARTER	PERIOD 12/85 - 6/20
BEGINNING VALUE	\$ 2,358,476,552	\$ 162,395,431
NET CONTRIBUTIONS	- 25,062,863	-414,574,318
<u>INVESTMENT RETURN</u>	<u>316,210,122</u>	<u>2,901,802,698</u>
ENDING VALUE	\$ 2,649,623,811	\$ 2,649,623,811
INCOME	6,650,024	581,505,405
<u>CAPITAL GAINS (LOSSES)</u>	<u>309,560,098</u>	<u>2,320,297,293</u>
INVESTMENT RETURN	316,210,122	2,901,802,698



	<u>VALUE</u>	<u>PERCENT</u>	<u>TARGET</u>	<u>DIFFERENCE</u> <u>+ / -</u>
■ LARGE CAP EQUITY	\$ 672, 849, 167	25.4%	25.0%	0.4%
■ SMALL CAP EQUITY	401, 745, 302	15.2%	15.0%	0.2%
■ INTERNATIONAL EQUITY	391, 042, 620	14.8%	15.0%	-0.2%
■ EMERGING MARKETS EQUITY	250, 547, 615	9.5%	10.0%	-0.5%
■ REAL ESTATE	491, 882, 776	18.6%	20.0%	-1.4%
■ FIXED INCOME	409, 985, 424	15.5%	15.0%	0.5%
■ CASH & EQUIVALENT	31, 570, 907	1.2%	0.0%	1.2%
TOTAL FUND	\$ 2, 649, 623, 811	100.0%		

**PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
ALLOCATIONS & TARGETS AS OF JUNE 2020**

Manager	Target	Market Value	%	+ / -	Market Value Ex-cash	%	+ / -
Total Portfolio	-	\$2,649,623,811	100%		\$2,649,623,811	100%	
Large Cap	25	682,385,366	25.8	0.8	672,849,167	25.4	0.4
Eagle		148,169,600	5.6		143,972,170	5.4	
Federated		2	0.0		0	0.0	
LSV Large Cap		143,936,827	5.4		143,333,415	5.4	
Polen		221,955,072	8.4		217,464,168	8.2	
SSgA S&P 500		113,121,142	4.3		113,121,142	4.3	
William Blair		55,202,723	2.1		54,958,272	2.1	
Small Cap	15	405,987,052	15.3	0.3	401,745,302	15.2	0.2
AMI		37,442,685	1.4		36,783,720	1.4	
Copeland		40,739,295	1.5		39,571,353	1.5	
Emerald		69,869,615	2.6		68,224,236	2.6	
LSV Small Cap		56,589,070	2.1		56,463,587	2.1	
Smith, Graham & Co		63,090,367	2.4		62,446,386	2.4	
SSgA Russell 2000		138,256,020	5.2		138,256,020	5.2	
International Equity	15	402,709,708	15.2	0.2	391,042,620	14.8	-0.2
GlobeFlex		4,292	0.0		4,292	0.0	
HGK		122,180,682	4.6		113,713,514	4.3	
Jarislowsky Fraser		303,979	0.0		303,935	0.0	
Johnston		125,362,457	4.7		122,162,581	4.6	
Mercator		18,151	0.0		18,151	0.0	
SSgA International		154,837,145	5.8		154,837,145	5.8	
WHV		3,002	0.0		3,002	0.0	
Emerging Markets	10	250,547,615	9.5	-0.5	250,547,615	9.5	-0.5
SSgA Emerging Mkts		250,547,615	9.5		250,547,615	9.5	
Real Assets	20	491,882,776	18.6	-1.4	491,882,776	18.6	-1.4
Forest		132,018,482	5.0		132,018,482	5.0	
PRISA I		51,721,737	2.0		51,721,737	2.0	
PRISA II		103,552,732	3.9		103,552,732	3.9	
TIAA N. Front St.		2,311,116	0.1		2,311,116	0.1	
TIAA CREF		202,278,709	7.6		202,278,709	7.6	
Fixed Income	15	409,985,424	15.5	0.5	409,985,424	15.5	0.5
SSgA BC Aggregate		409,985,424	15.5		409,985,424	15.5	
Cash & Equivalents	0	6,125,870	0.2	0.2	31,570,907	1.2	1.2
BNY Cash		947,803	0.0		947,803	0.0	
STIP Cash		5,169,338	0.2		5,169,338	0.2	
Abel Noser Transitional		8,729	0.0		0	0.0	
Manager Cash		n/a	-		25,453,766	1.0	

MANAGER QUARTERLY FEE SUMMARY

ALL FEES ARE ESTIMATED / ACCRUED

PORTFOLIO	TOTAL RETURN (GROSS OF FEES)	FEE	% FEE
AMI	32.4%	\$58,350	0.21%
Copeland	16.1%	\$74,025	0.21%
Eagle	19.4%	\$273,921	0.22%
Emerald	32.6%	\$82,393	0.16%
Forest	-1.3%	\$243,565	0.18%
Hardman Johnston	25.6%	\$180,966	0.18%
HGK	19.2%	\$195,057	0.19%
LSV Large Cap	18.7%	\$137,484	0.11%
LSV Small Cap	22.3%	\$81,285	0.18%
Polen	27.6%	\$217,554	0.10%
PRISA SA	-1.1%	\$123,766	0.24%
PRISA II SA	-2.4%	\$293,286	0.28%
Smith, Graham & Co	26.7%	\$109,302	0.22%
SSgA	12.1%	\$121,535	0.01%
SSgA S&P 500	20.5%	\$8,194	0.02%
SSgA Russell 2000	25.4%	\$13,251	0.02%
SSgA World Ex-US	15.5%	\$21,877	0.02%
SSgA Emerging Markets	19.0%	\$46,179	0.02%
SSgA Bond Market	3.0%	\$32,034	0.01%
TIAA CREF	-2.3%	\$469,710	0.22%
TIAA 1721 N. Front St.	1.7%	\$12,500	0.54%
William Blair*	----	\$44,190	0.08%

*William Blair was funded in May.

MANAGER PERFORMANCE SUMMARY - GROSS OF FEES

Portfolio	(Universe)	QTR	CYTD	1 Year	3 Years	5 Years	10 Years	Inception	
Composite	(Public Fund)	13.5 (30)	-3.9 (76)	2.5 (63)	6.5 (29)	6.6 (18)	9.0 (19)	8.6 ----	12/85
<i>Shadow Index</i>		<i>12.2 ----</i>	<i>-4.5 ----</i>	<i>1.8 ----</i>	<i>5.3 ----</i>	<i>5.9 ----</i>	<i>8.6 ----</i>	<i>8.9 ----</i>	<i>12/85</i>
SSgA	(Balanced)	12.1 (80)	-2.8 (46)	2.7 (75)	3.8 (72)	4.1 (78)	4.8 (92)	6.3 ----	03/97
<i>Shadow Index</i>		<i>11.4 ----</i>	<i>-3.4 ----</i>	<i>2.1 ----</i>	<i>3.7 ----</i>	<i>4.0 ----</i>	<i>5.0 ----</i>	<i>7.0 ----</i>	<i>03/97</i>
Polen	(LC Growth)	27.6 (39)	11.1 (33)	24.0 (21)	22.6 (14)	19.0 (5)	---- ----	18.0 (6)	09/10
<i>Russell 1000G</i>		<i>27.8 ----</i>	<i>9.8 ----</i>	<i>23.3 ----</i>	<i>19.0 ----</i>	<i>15.9 ----</i>	<i>17.2 ----</i>	<i>16.2 ----</i>	<i>09/10</i>
Eagle	(LC Value)	19.4 (28)	-9.0 (19)	0.1 (20)	9.3 (11)	---- ----	---- ----	12.7 (5)	03/16
<i>Russell 1000V</i>		<i>14.3 ----</i>	<i>-16.3 ----</i>	<i>-8.9 ----</i>	<i>1.8 ----</i>	<i>4.6 ----</i>	<i>10.4 ----</i>	<i>5.9 ----</i>	<i>03/16</i>
<i>Russell 1000</i>		<i>21.8 ----</i>	<i>-2.8 ----</i>	<i>7.5 ----</i>	<i>10.6 ----</i>	<i>10.5 ----</i>	<i>14.0 ----</i>	<i>12.3 ----</i>	
LSV Large Cap	(LC Value)	18.7 (32)	-17.5 (75)	-8.6 (62)	1.0 (72)	3.9 (74)	10.8 (50)	7.4 ----	03/04
<i>Russell 1000V</i>		<i>14.3 ----</i>	<i>-16.3 ----</i>	<i>-8.9 ----</i>	<i>1.8 ----</i>	<i>4.6 ----</i>	<i>10.4 ----</i>	<i>6.7 ----</i>	<i>03/04</i>
AMI	(SC Growth)	32.4 (54)	0.2 (62)	0.0 (79)	---- ----	---- ----	---- ----	1.4 (94)	09/17
<i>Russell 2000G</i>		<i>30.6 ----</i>	<i>-3.1 ----</i>	<i>3.5 ----</i>	<i>7.8 ----</i>	<i>6.8 ----</i>	<i>12.9 ----</i>	<i>6.2 ----</i>	<i>09/17</i>
Copeland	(SC Growth)	16.1 (99)	-14.7 (98)	-8.1 (96)	---- ----	---- ----	---- ----	3.9 (85)	09/17
<i>Russell 2000G</i>		<i>30.6 ----</i>	<i>-3.1 ----</i>	<i>3.5 ----</i>	<i>7.8 ----</i>	<i>6.8 ----</i>	<i>12.9 ----</i>	<i>6.2 ----</i>	<i>09/17</i>
Emerald	(SC Growth)	32.6 (54)	-0.1 (62)	4.5 (57)	10.7 (60)	8.3 (70)	16.1 (33)	11.1 ----	09/98
<i>Russell 2000G</i>		<i>30.6 ----</i>	<i>-3.1 ----</i>	<i>3.5 ----</i>	<i>7.8 ----</i>	<i>6.8 ----</i>	<i>12.9 ----</i>	<i>7.7 ----</i>	<i>09/98</i>
LSV Small Cap	(SC Value)	22.3 (41)	-27.4 (88)	-21.5 (91)	-6.6 (92)	---- ----	---- ----	-5.4 (85)	12/16
<i>Russell 2000V</i>		<i>18.9 ----</i>	<i>-23.5 ----</i>	<i>-17.5 ----</i>	<i>-4.4 ----</i>	<i>1.2 ----</i>	<i>7.8 ----</i>	<i>-3.6 ----</i>	<i>12/16</i>
Smith, Graham & Co	(SC Value)	26.7 (17)	-20.3 (35)	-10.3 (22)	-3.6 (61)	---- ----	---- ----	-1.9 (44)	12/16
<i>Russell 2000V</i>		<i>18.9 ----</i>	<i>-23.5 ----</i>	<i>-17.5 ----</i>	<i>-4.4 ----</i>	<i>1.2 ----</i>	<i>7.8 ----</i>	<i>-3.6 ----</i>	<i>12/16</i>
HGK	(Intl Eq)	19.2 (42)	-9.6 (44)	2.0 (29)	3.7 (33)	5.2 (30)	---- ----	8.6 (8)	03/12
<i>S&P BMI Ex US</i>		<i>16.8 ----</i>	<i>-10.8 ----</i>	<i>-4.0 ----</i>	<i>1.3 ----</i>	<i>2.9 ----</i>	<i>6.4 ----</i>	<i>5.0 ----</i>	<i>03/12</i>
Hardman Johnston	(Intl Eq)	25.6 (12)	-1.1 (15)	10.9 (10)	9.5 (7)	9.1 (7)	---- ----	9.5 (6)	03/12
<i>S&P BMI Ex US</i>		<i>16.8 ----</i>	<i>-10.8 ----</i>	<i>-4.0 ----</i>	<i>1.3 ----</i>	<i>2.9 ----</i>	<i>6.4 ----</i>	<i>5.0 ----</i>	<i>03/12</i>
PRISA II SA		-2.4 ----	-1.1 ----	2.7 ----	6.7 ----	8.8 ----	13.0 ----	4.6 ----	06/07
<i>NCREIF ODCE</i>		<i>-1.6 ----</i>	<i>-0.6 ----</i>	<i>2.2 ----</i>	<i>5.7 ----</i>	<i>7.3 ----</i>	<i>10.8 ----</i>	<i>5.3 ----</i>	<i>06/07</i>
PRISA SA		-1.1 ----	0.6 ----	3.5 ----	6.6 ----	8.0 ----	11.4 ----	7.8 ----	12/90
<i>NCREIF ODCE</i>		<i>-1.6 ----</i>	<i>-0.6 ----</i>	<i>2.2 ----</i>	<i>5.7 ----</i>	<i>7.3 ----</i>	<i>10.8 ----</i>	<i>7.4 ----</i>	<i>12/90</i>
TIAA CREF		-2.3 ----	-1.0 ----	4.2 ----	6.9 ----	8.0 ----	8.6 ----	3.7 ----	06/08
<i>NCREIF ODCE</i>		<i>-1.6 ----</i>	<i>-0.6 ----</i>	<i>2.2 ----</i>	<i>5.7 ----</i>	<i>7.3 ----</i>	<i>10.8 ----</i>	<i>5.1 ----</i>	<i>06/08</i>
TIAA 1721 N. Front St.		1.7 ----	2.4 ----	5.6 ----	4.7 ----	---- ----	---- ----	1.1 ----	06/16
<i>NCREIF NPI</i>		<i>-1.0 ----</i>	<i>-0.3 ----</i>	<i>2.7 ----</i>	<i>5.4 ----</i>	<i>6.8 ----</i>	<i>9.7 ----</i>	<i>5.8 ----</i>	<i>06/16</i>
Forest		-1.3 ----	-0.9 ----	-6.4 ----	1.7 ----	3.6 ----	4.3 ----	4.7 ----	03/99
<i>NCREIF Timber</i>		<i>0.1 ----</i>	<i>0.2 ----</i>	<i>0.3 ----</i>	<i>2.3 ----</i>	<i>2.7 ----</i>	<i>4.4 ----</i>	<i>6.0 ----</i>	<i>03/99</i>

MANAGER PERFORMANCE SUMMARY - NET OF FEES

Portfolio	QTR	CYTD	1 Year	3 Years	5 Years	10 Years	Inception	
Composite	13.4	-4.2	2.1	6.0	6.1	8.5	----	12/85
<i>Shadow Index</i>	<i>12.2</i>	<i>-4.5</i>	<i>1.8</i>	<i>5.3</i>	<i>5.9</i>	<i>8.6</i>	<i>8.9</i>	<i>12/85</i>
SSgA	12.1	-2.8	2.6	3.7	4.0	4.8	6.3	03/97
<i>Shadow Index</i>	<i>11.4</i>	<i>-3.4</i>	<i>2.1</i>	<i>3.7</i>	<i>4.0</i>	<i>5.0</i>	<i>7.0</i>	<i>03/97</i>
Polen	27.5	10.9	23.5	22.1	18.5	----	17.4	09/10
<i>Russell 1000G</i>	<i>27.8</i>	<i>9.8</i>	<i>23.3</i>	<i>19.0</i>	<i>15.9</i>	<i>17.2</i>	<i>16.2</i>	<i>09/10</i>
Eagle	19.1	-9.4	-0.6	8.4	----	----	11.9	03/16
<i>Russell 1000V</i>	<i>14.3</i>	<i>-16.3</i>	<i>-8.9</i>	<i>1.8</i>	<i>4.6</i>	<i>10.4</i>	<i>5.9</i>	<i>03/16</i>
<i>Russell 1000</i>	<i>21.8</i>	<i>-2.8</i>	<i>7.5</i>	<i>10.6</i>	<i>10.5</i>	<i>14.0</i>	<i>12.3</i>	
LSV Large Cap	18.6	-17.7	-9.0	0.6	3.4	10.4	6.9	03/04
<i>Russell 1000V</i>	<i>14.3</i>	<i>-16.3</i>	<i>-8.9</i>	<i>1.8</i>	<i>4.6</i>	<i>10.4</i>	<i>6.7</i>	<i>03/04</i>
AMI	32.2	-0.2	-0.7	----	----	----	0.6	09/17
<i>Russell 2000G</i>	<i>30.6</i>	<i>-3.1</i>	<i>3.5</i>	<i>7.8</i>	<i>6.8</i>	<i>12.9</i>	<i>6.2</i>	<i>09/17</i>
Copeland	15.9	-15.1	-8.9	----	----	----	3.0	09/17
<i>Russell 2000G</i>	<i>30.6</i>	<i>-3.1</i>	<i>3.5</i>	<i>7.8</i>	<i>6.8</i>	<i>12.9</i>	<i>6.2</i>	<i>09/17</i>
Emerald	32.5	-0.4	4.0	10.2	7.8	15.6	10.6	09/98
<i>Russell 2000G</i>	<i>30.6</i>	<i>-3.1</i>	<i>3.5</i>	<i>7.8</i>	<i>6.8</i>	<i>12.9</i>	<i>7.7</i>	<i>09/98</i>
LSV Small Cap	22.2	-27.7	-22.1	-7.1	----	----	-6.0	12/16
<i>Russell 2000V</i>	<i>18.9</i>	<i>-23.5</i>	<i>-17.5</i>	<i>-4.4</i>	<i>1.2</i>	<i>7.8</i>	<i>-3.6</i>	<i>12/16</i>
Smith, Graham & Co	26.5	-20.6	-10.9	-4.3	----	----	-2.6	12/16
<i>Russell 2000V</i>	<i>18.9</i>	<i>-23.5</i>	<i>-17.5</i>	<i>-4.4</i>	<i>1.2</i>	<i>7.8</i>	<i>-3.6</i>	<i>12/16</i>
HGK	19.0	-9.9	1.3	3.1	4.5	----	7.9	03/12
<i>S&P BMI Ex US</i>	<i>16.8</i>	<i>-10.8</i>	<i>-4.0</i>	<i>1.3</i>	<i>2.9</i>	<i>6.4</i>	<i>5.0</i>	<i>03/12</i>
Hardman Johnston	25.5	-1.4	10.2	8.9	8.4	----	8.8	03/12
<i>S&P BMI Ex US</i>	<i>16.8</i>	<i>-10.8</i>	<i>-4.0</i>	<i>1.3</i>	<i>2.9</i>	<i>6.4</i>	<i>5.0</i>	<i>03/12</i>
PRISA II SA	-2.7	-1.7	1.6	5.5	7.7	11.8	3.5	06/07
<i>NCREIF ODCE</i>	<i>-1.6</i>	<i>-0.6</i>	<i>2.2</i>	<i>5.7</i>	<i>7.3</i>	<i>10.8</i>	<i>5.3</i>	<i>06/07</i>
PRISA SA	-1.3	0.1	2.5	5.6	7.0	10.3	----	12/90
<i>NCREIF ODCE</i>	<i>-1.6</i>	<i>-0.6</i>	<i>2.2</i>	<i>5.7</i>	<i>7.3</i>	<i>10.8</i>	<i>7.4</i>	<i>12/90</i>
TIAA CREF	-2.5	-1.4	3.2	5.9	7.0	7.7	2.8	06/08
<i>NCREIF ODCE</i>	<i>-1.6</i>	<i>-0.6</i>	<i>2.2</i>	<i>5.7</i>	<i>7.3</i>	<i>10.8</i>	<i>5.1</i>	<i>06/08</i>
TIAA 1721 N. Front St.	1.2	1.3	3.4	2.6	----	----	-1.3	06/16
<i>NCREIF NPI</i>	<i>-1.0</i>	<i>-0.3</i>	<i>2.7</i>	<i>5.4</i>	<i>6.8</i>	<i>9.7</i>	<i>5.8</i>	<i>06/16</i>
Forest	-1.5	-1.3	-7.1	0.9	2.8	3.4	4.2	03/99
<i>NCREIF Timber</i>	<i>0.1</i>	<i>0.2</i>	<i>0.3</i>	<i>2.3</i>	<i>2.7</i>	<i>4.4</i>	<i>6.0</i>	<i>03/99</i>

MANAGER VALUE ADDED

Portfolio	Benchmark	1 Quarter	1 Year	3 Years	5 Years
SSgA	Shadow Index	0.7	0.6	0.1	0.1
Polen	Russell 1000G	-0.2	0.7	3.6	3.1
Eagle	Russell 1000V	5.1	9.0	7.5	N/A
LSV Large Cap	Russell 1000V	4.4	0.3	-0.8	-0.7
AMI	Russell 2000G	1.8	-3.5	N/A	N/A
Copeland	Russell 2000G	-14.5	-11.6	N/A	N/A
Emerald	Russell 2000G	2.0	1.0	2.9	1.5
LSV Small Cap	Russell 2000V	3.4	-4.0	-2.2	N/A
Smith, Graham & Co	Russell 2000V	7.8	7.2	0.8	N/A
HGK	S&P BMI Ex US	2.4	6.0	2.4	2.3
Hardman Johnston	S&P BMI Ex US	8.8	14.9	8.2	6.2
PRISA II SA	NCREIF ODCE	-0.8	0.5	1.0	1.5
PRISA SA	NCREIF ODCE	0.5	1.3	0.9	0.7
TIAA CREF	NCREIF ODCE	-0.7	2.0	1.2	0.7
TIAA 1721 N. Front St.	NCREIF NPI	2.7	2.9	-0.7	N/A
Forest	NCREIF Timber	-1.4	-6.7	-0.6	0.9
Total Portfolio	Shadow Index	1.3 	0.7 	1.2 	0.7

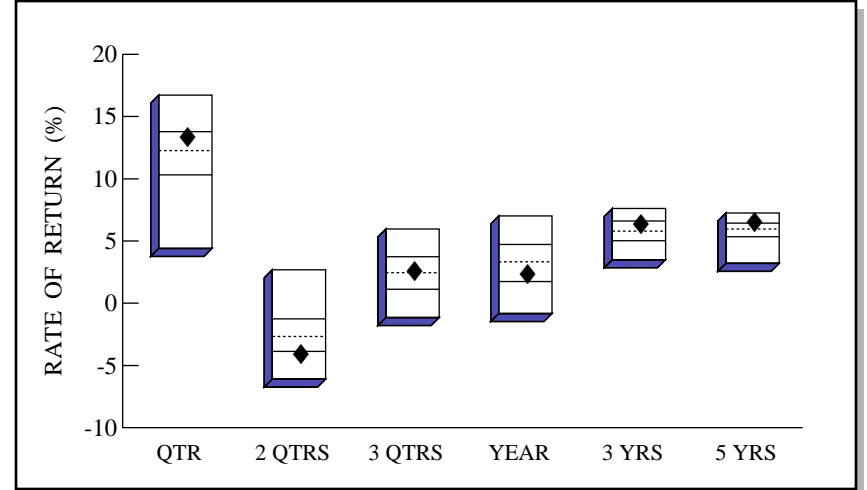
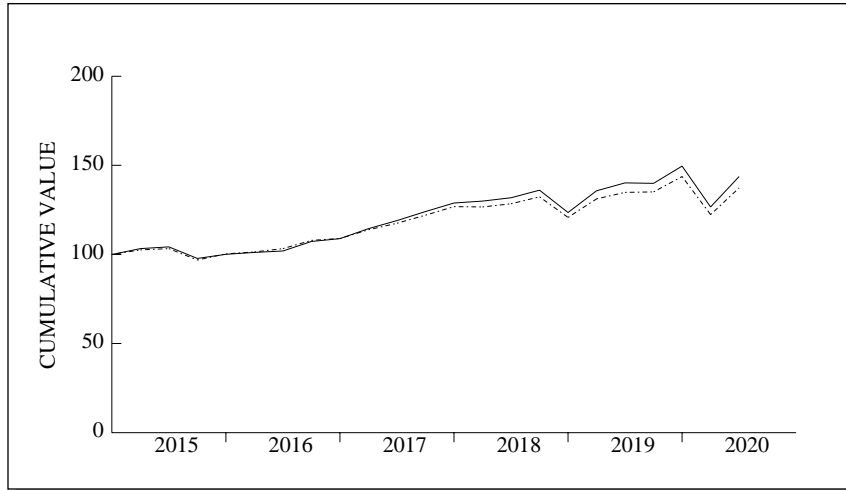
INVESTMENT RETURN SUMMARY - ONE QUARTER

Name	Quarter Total Return	Market Value March 31st, 2020	Net Cashflow	Net Investment Return	Market Value June 30th, 2020
Abel Noser Transition (LC)	---	0	-2,222,350	2,231,079	8,729
SSgA S&P 500 (LCC)	20.5	48,777,270	48,272,857	16,071,015	113,121,142
Federated (LCG)	---	92,989,446	-94,809,062	1,819,618	2
Polen (LCG)	27.6	217,553,364	-52,908,038	57,309,746	221,955,072
William Blair (LCG)	---	0	52,669,354	2,533,369	55,202,723
Eagle (LCV)	19.4	124,409,687	-276,192	24,036,105	148,169,600
LSV Large Cap (LCV)	18.7	121,382,935	-139,173	22,693,065	143,936,827
SSgA Russell 2000 (SMDC)	25.4	63,941,161	48,736,422	25,578,437	138,256,020
AMI (SCG)	32.4	28,343,080	-67,618	9,167,223	37,442,685
Copeland (SCG)	16.1	35,137,059	-52,198	5,654,434	40,739,295
Emerald (SCG)	32.6	52,750,893	-81,545	17,200,267	69,869,615
LSV Small Cap (SCV)	22.3	46,342,787	-90,022	10,336,305	56,589,070
Smith, Graham & Co (SCV)	26.7	49,898,253	-115,466	13,307,580	63,090,367
GlobeFlex (INEQ)	---	4,229	0	63	4,292
HGK (INEQ)	19.2	102,728,434	-198,378	19,650,626	122,180,682
Hardman Johnston (INEQ)	25.6	99,950,310	-178,004	25,590,151	125,362,457
Mercator (INEQ)	---	17,732	0	419	18,151
WHV (INEQ)	---	2,933	0	69	3,002
Jarislowsky Fraser (INEG)	---	519,575	-223,018	7,422	303,979
SSgA World Ex-US (INEQ)	15.5	134,036,562	0	20,800,583	154,837,145
SSgA Emerging Markets (EMKT)	19.0	210,526,987	0	40,020,628	250,547,615
PRISA II SA (REAL)	-2.4	106,418,646	-293,286	-2,572,628	103,552,732
PRISA SA (REAL)	-1.1	52,416,298	-123,766	-570,795	51,721,737
TIAA CREF (REAL)	-2.3	209,194,966	-1,653,979	-5,262,278	202,278,709
TIAA 1721 N. Front St. (REAL)	1.7	2,315,169	-30,591	26,538	2,311,116
Forest (TIMB)	-1.3	134,303,095	-550,000	-1,734,613	132,018,482
SSgA Bond Market (CFI)	3.0	415,403,984	-17,700,000	12,281,440	409,985,424
BNY Cash (CASH)	---	3,619,101	-2,680,456	9,158	947,803
Treasury STIP (CASH)	---	5,492,596	-348,354	25,096	5,169,338
Total Portfolio	13.5	2,358,476,552	-25,062,863	316,210,122	2,649,623,811

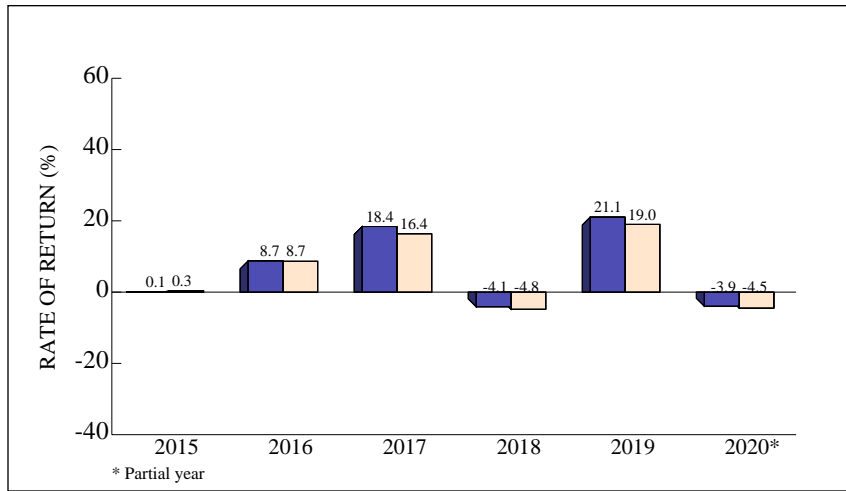
MANAGER RISK STATISTICS SUMMARY - FIVE-YEAR HISTORY

Name	Alpha	Batting Average	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
SSgA <i>Shadow Index</i>	0.02	0.700	0.34	0.19	100.3	99.6
SSgA S&P 500 <i>S&P 500</i>	0.00	0.900	0.66	-0.55	99.8	99.8
Polen <i>Russell 1000G</i>	4.19	0.650	1.11	0.68	101.6	73.4
LSV Large Cap <i>Russell 1000V</i>	-1.02	0.550	0.25	-0.04	105.6	109.9
SSgA Russell 2000 <i>Russell 2000</i>	0.08	0.950	0.27	1.64	100.3	99.8
Emerald <i>Russell 2000G</i>	1.43	0.650	0.42	0.38	106.7	99.5
HGK <i>S&P BMI Ex US</i>	2.34	0.600	0.32	0.56	113.0	95.7
Hardman Johnston <i>S&P BMI Ex US</i>	6.18	0.750	0.49	1.14	144.4	96.4
SSgA World Ex-US <i>MSCI World Ex US</i>	0.21	0.600	0.17	0.37	100.7	99.0
SSgA Emerging Markets <i>EM Index</i>	-0.28	0.450	0.20	-0.34	100.4	101.8
PRISA II SA <i>NCREIF ODCE</i>	-1.07	0.800	2.77	1.51	122.4	156.0
PRISA SA <i>NCREIF ODCE</i>	0.91	0.600	3.34	0.98	108.2	70.3
TIAA CREF <i>NCREIF ODCE</i>	1.01	0.650	2.53	0.36	111.1	148.9
Forest <i>NCREIF Timber</i>	3.60	0.450	0.56	0.22	103.9	----
SSgA Bond Market <i>Aggregate Index</i>	0.02	1.000	1.01	0.39	100.3	99.5

TOTAL RETURN COMPARISONS



Public Fund Universe

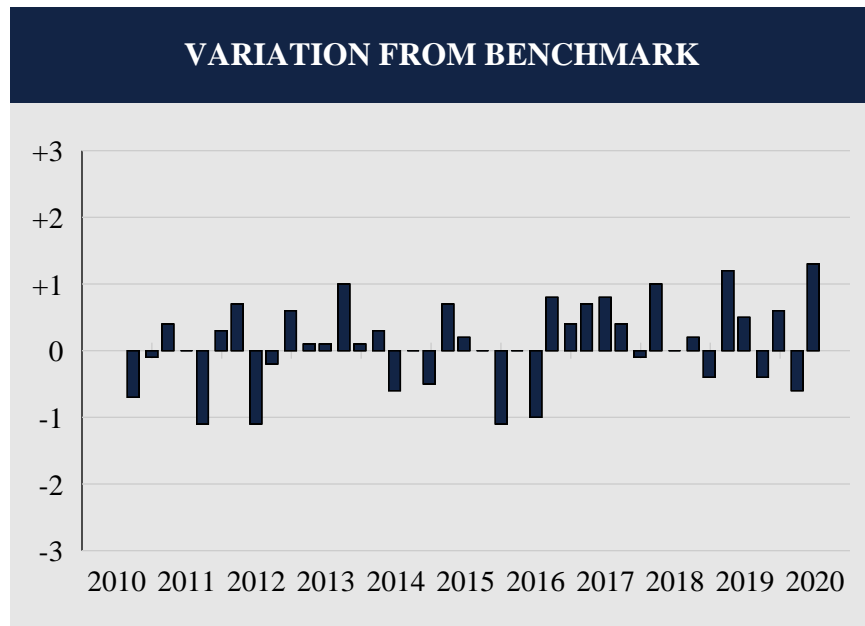


	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	13.5	-3.9	2.7	2.5	6.5	6.6
(RANK)	(30)	(76)	(46)	(63)	(29)	(18)
5TH %ILE	16.7	2.7	6.0	7.0	7.6	7.3
25TH %ILE	13.8	-1.3	3.7	4.7	6.6	6.4
MEDIAN	12.3	-2.7	2.4	3.3	5.8	6.0
75TH %ILE	10.3	-3.9	1.1	1.8	5.0	5.3
95TH %ILE	4.4	-6.1	-1.1	-0.8	3.5	3.2
<i>Shadow Idx</i>	<i>12.2</i>	<i>-4.5</i>	<i>1.6</i>	<i>1.8</i>	<i>5.3</i>	<i>5.9</i>

Public Fund Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

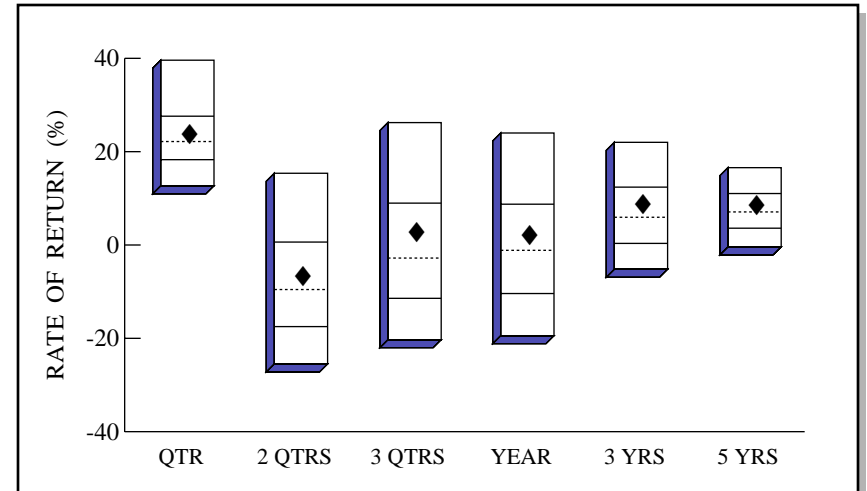
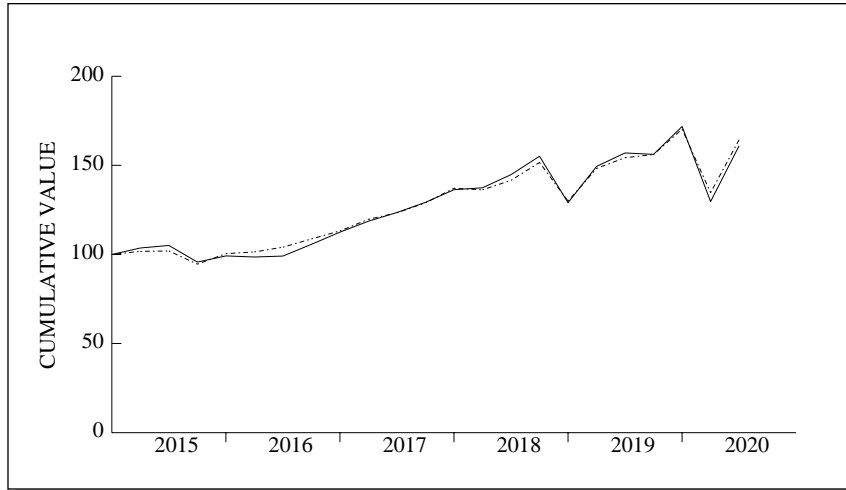
COMPARATIVE BENCHMARK: SHADOW INDEX



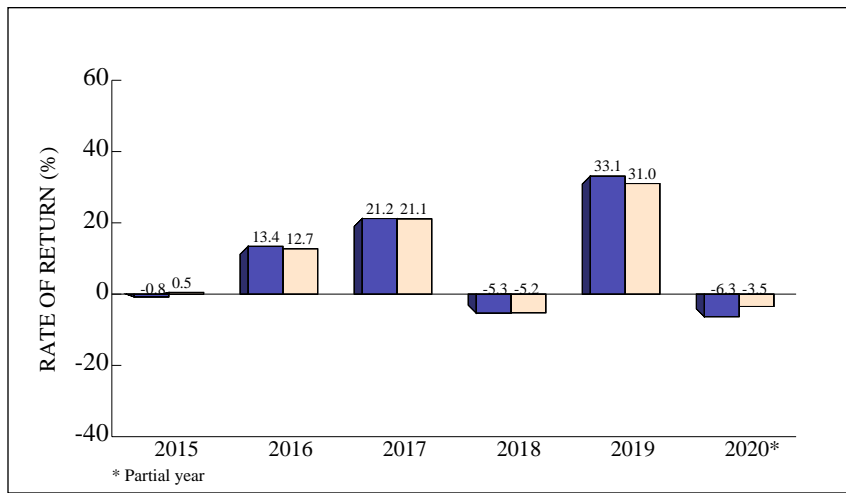
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	9.1	9.8	-0.7
12/10	7.3	7.4	-0.1
3/11	4.3	3.9	0.4
6/11	0.6	0.6	0.0
9/11	-12.1	-11.0	-1.1
12/11	6.6	6.3	0.3
3/12	9.2	8.5	0.7
6/12	-3.3	-2.2	-1.1
9/12	4.5	4.7	-0.2
12/12	2.5	1.9	0.6
3/13	5.5	5.4	0.1
6/13	0.4	0.3	0.1
9/13	6.6	5.6	1.0
12/13	5.8	5.7	0.1
3/14	1.8	1.5	0.3
6/14	3.3	3.9	-0.6
9/14	-1.5	-1.5	0.0
12/14	2.0	2.5	-0.5
3/15	3.3	2.6	0.7
6/15	0.9	0.7	0.2
9/15	-6.2	-6.2	0.0
12/15	2.4	3.5	-1.1
3/16	1.1	1.1	0.0
6/16	0.8	1.8	-1.0
9/16	5.2	4.4	0.8
12/16	1.5	1.1	0.4
3/17	5.1	4.4	0.7
6/17	4.0	3.2	0.8
9/17	4.2	3.8	0.4
12/17	3.9	4.0	-0.1
3/18	0.8	-0.2	1.0
6/18	1.4	1.4	0.0
9/18	3.3	3.1	0.2
12/18	-9.2	-8.8	-0.4
3/19	9.8	8.6	1.2
6/19	3.3	2.8	0.5
9/19	-0.2	0.2	-0.4
12/19	7.0	6.4	0.6
3/20	-15.4	-14.8	-0.6
6/20	13.5	12.2	1.3

Total Quarters Observed	40
Quarters At or Above the Benchmark	27
Quarters Below the Benchmark	13
Batting Average	.675

DOMESTIC EQUITY RETURN COMPARISONS



Domestic Equity Universe

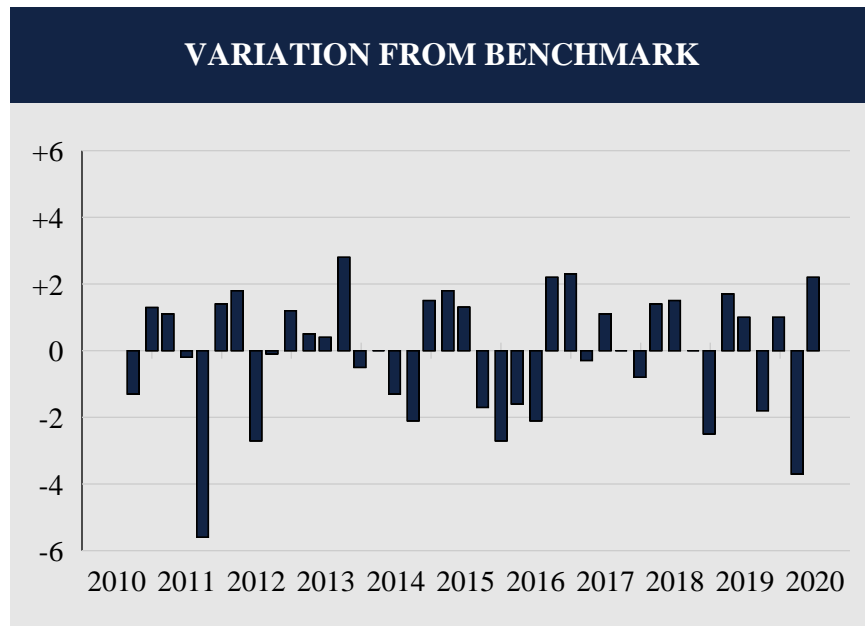


	QTR	2 QTRS	3 QTRS	YEAR	3 YRS	5 YRS
RETURN	24.2	-6.3	3.1	2.5	9.2	8.9
(RANK)	(40)	(43)	(38)	(41)	(39)	(40)
5TH %ILE	39.6	15.4	26.2	24.0	22.0	16.6
25TH %ILE	27.6	0.6	9.0	8.7	12.4	11.0
MEDIAN	22.2	-9.6	-2.8	-1.1	5.9	7.1
75TH %ILE	18.3	-17.5	-11.4	-10.4	0.3	3.6
95TH %ILE	12.7	-25.5	-20.3	-19.4	-5.2	-0.4
Russ 3000	22.0	-3.5	5.3	6.5	10.0	10.0

Domestic Equity Universe

DOMESTIC EQUITY QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: RUSSELL 3000



Total Quarters Observed	40
Quarters At or Above the Benchmark	23
Quarters Below the Benchmark	17
Batting Average	.575

RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	10.2	11.5	-1.3
12/10	12.9	11.6	1.3
3/11	7.5	6.4	1.1
6/11	-0.2	0.0	-0.2
9/11	-20.9	-15.3	-5.6
12/11	13.5	12.1	1.4
3/12	14.7	12.9	1.8
6/12	-5.8	-3.1	-2.7
9/12	6.1	6.2	-0.1
12/12	1.5	0.3	1.2
3/13	11.6	11.1	0.5
6/13	3.1	2.7	0.4
9/13	9.2	6.4	2.8
12/13	9.6	10.1	-0.5
3/14	2.0	2.0	0.0
6/14	3.6	4.9	-1.3
9/14	-2.1	0.0	-2.1
12/14	6.7	5.2	1.5
3/15	3.6	1.8	1.8
6/15	1.4	0.1	1.3
9/15	-8.9	-7.2	-1.7
12/15	3.6	6.3	-2.7
3/16	-0.6	1.0	-1.6
6/16	0.5	2.6	-2.1
9/16	6.6	4.4	2.2
12/16	6.5	4.2	2.3
3/17	5.4	5.7	-0.3
6/17	4.1	3.0	1.1
9/17	4.6	4.6	0.0
12/17	5.5	6.3	-0.8
3/18	0.8	-0.6	1.4
6/18	5.4	3.9	1.5
9/18	7.1	7.1	0.0
12/18	-16.8	-14.3	-2.5
3/19	15.7	14.0	1.7
6/19	5.1	4.1	1.0
9/19	-0.6	1.2	-1.8
12/19	10.1	9.1	1.0
3/20	-24.6	-20.9	-3.7
6/20	24.2	22.0	2.2

LARGE CAP EQUITY MANAGERS

The aggregate large cap portfolio (excluding cash) returned 23.1%, which was 2.6% above the S&P 500 return of 20.5%. All three active managers that had a full quarter of performance beat their respective benchmarks. William Blair was funded in May and its first full quarter of performance will appear in the September report.

**SSgA S&P 500
(Core)**

SSgA's S&P 500 fund continued to closely track the S&P 500 index over the short and long term. At quarter-end, this fund was valued at \$113,121,142.

**Polen
(Growth)**

Although the portfolio was situated mostly in well-performing sectors, representation in the Consumer Discretionary sector was low and the portfolio significantly underperformed in this sector, which was the top performer in the large cap growth market. The portfolio's invested portion came out ahead of the index, but the effect of cash caused the total return to sag below the index.

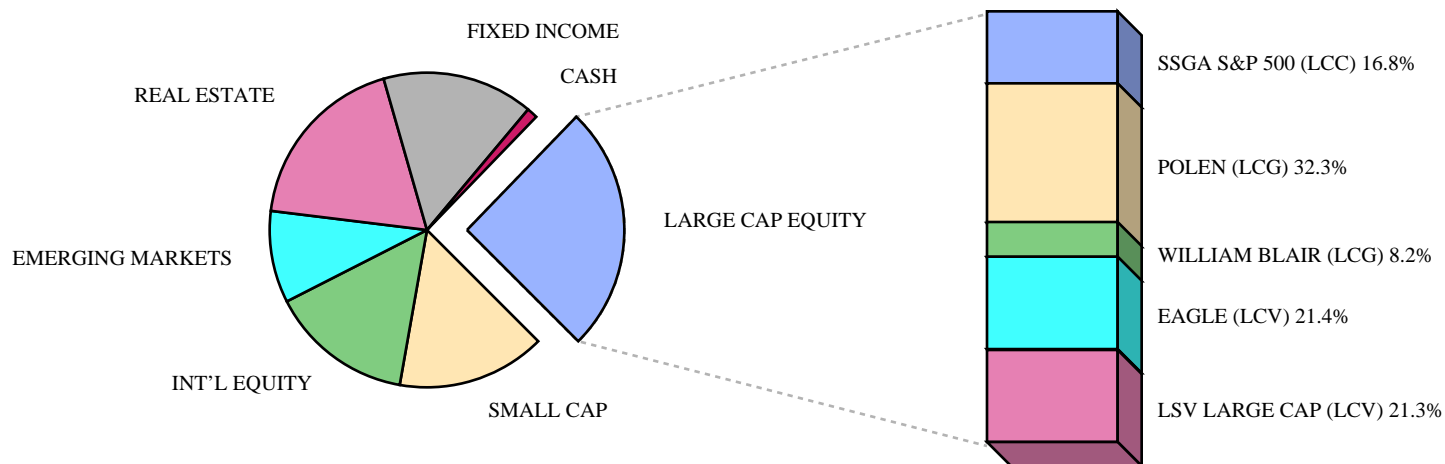
**Eagle
(Value)**

Strong selection in all but two of the invested sectors (Consumer Discretionary and Industrials) boosted the portfolio over its index. Gains in the Communication Services sector had a particularly large impact due to its towering position in the portfolio.

**LSV Large Cap
(Value)**

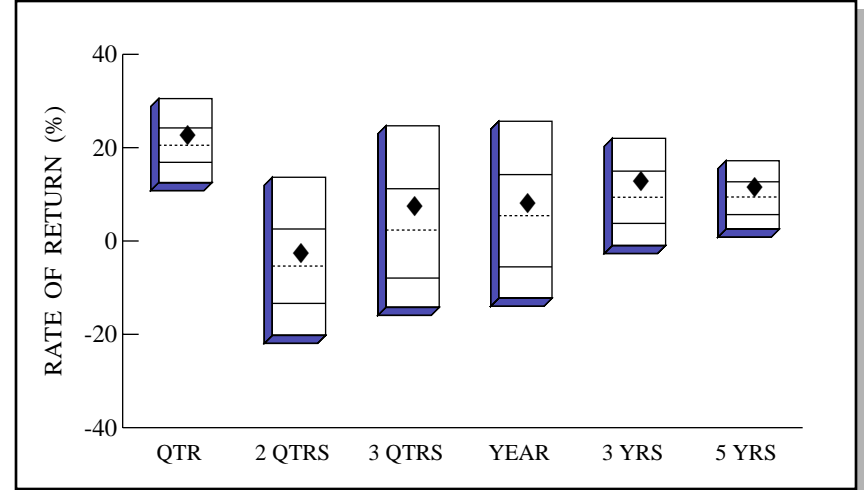
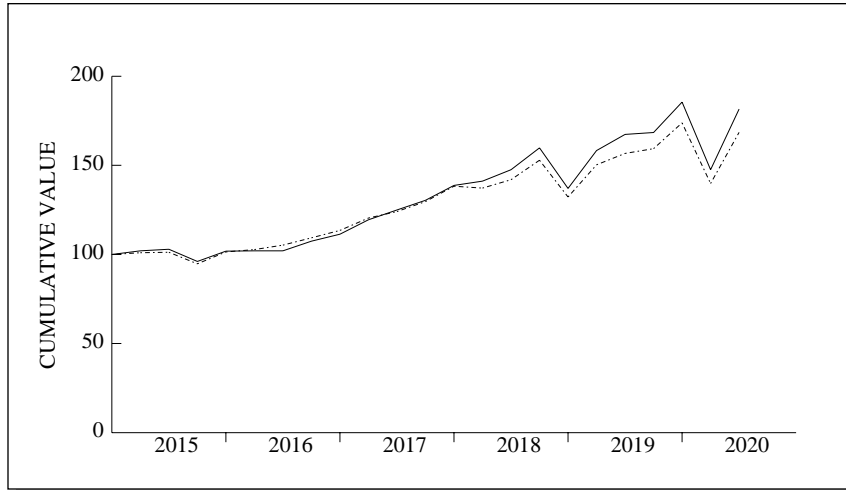
Favorable selection in the overweight Consumer Discretionary sector aided the portfolio in beating its benchmark over the quarter. The portfolio also enjoyed strong selection in the Energy, Financials, and Utilities sectors.

LARGE CAP EQUITY MANAGER SUMMARY

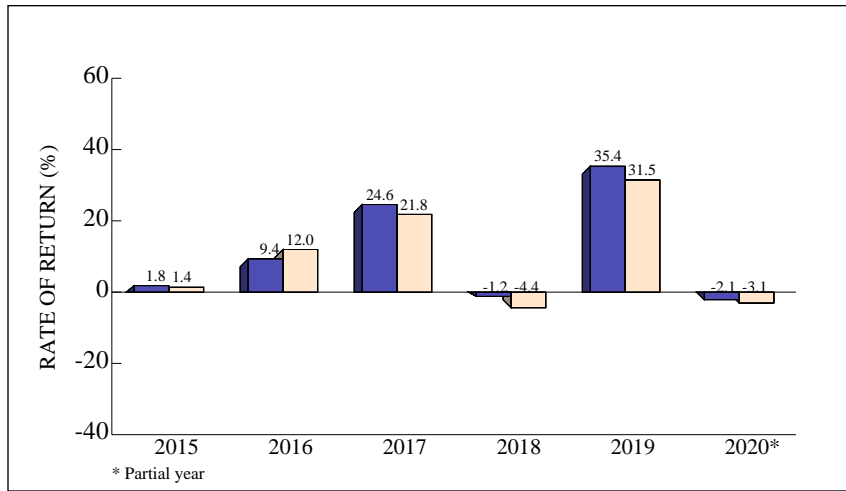


MANAGER	(UNIVERSE)	COMPONENT RETURNS AND RANKINGS					MARKET VALUE
		QTR	YTD	1 YEAR	3 YEARS	5 YEARS	
SSGA S&P 500	(Large Cap Core)	20.5 (46)	-3.1 (39)	7.5 (33)	10.7 (37)	10.7 (30)	\$113,121,142
<i>S&P 500</i>		<i>20.5 ---</i>	<i>-3.1 ---</i>	<i>7.5 ---</i>	<i>10.7 ---</i>	<i>10.7 ---</i>	---
POLEN	(Large Cap Growth)	28.8 (28)	11.8 (28)	25.0 (17)	23.6 (9)	19.8 (4)	\$217,464,168
WILLIAM BLAIR	(Large Cap Growth)	-----	-----	-----	-----	-----	\$54,958,272
<i>Russell 1000 Growth</i>		<i>27.8 ---</i>	<i>9.8 ---</i>	<i>23.3 ---</i>	<i>19.0 ---</i>	<i>15.9 ---</i>	---
EAGLE	(Large Cap Value)	20.1 (23)	-8.7 (19)	0.5 (19)	9.5 (10)	----	\$143,972,170
LSV LARGE CAP	(Large Cap Value)	18.9 (31)	-17.6 (75)	-8.7 (62)	1.0 (72)	3.9 (74)	\$143,333,415
<i>Russell 1000 Value</i>		<i>14.3 ---</i>	<i>-16.3 ---</i>	<i>-8.9 ---</i>	<i>1.8 ---</i>	<i>4.6 ---</i>	---
TOTAL	(Large Cap)	23.1 (30)	-2.1 (35)	8.5 (35)	13.3 (29)	12.0 (28)	\$672,849,167
<i>S&P 500</i>		<i>20.5 ---</i>	<i>-3.1 ---</i>	<i>7.5 ---</i>	<i>10.7 ---</i>	<i>10.7 ---</i>	---

LARGE CAP EQUITY RETURN COMPARISONS



Large Cap Universe



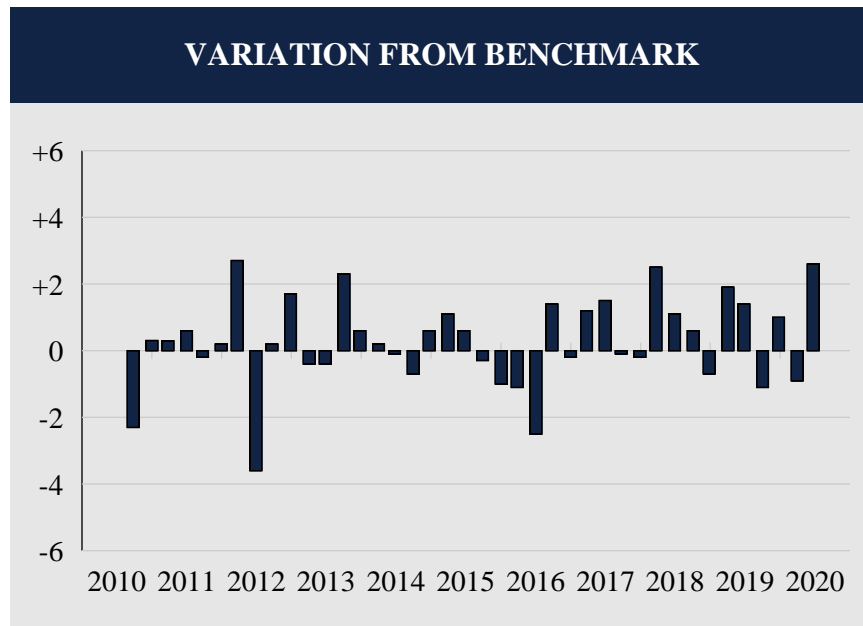
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	23.1	-2.1	7.8	8.5	13.3	12.0
(RANK)	(30)	(35)	(32)	(35)	(29)	(28)
5TH %ILE	30.5	13.6	24.7	25.7	22.0	17.2
25TH %ILE	24.2	2.6	11.2	14.2	15.0	12.7
MEDIAN	20.5	-5.4	2.3	5.4	9.4	9.4
75TH %ILE	16.8	-13.4	-8.0	-5.5	3.8	5.7
95TH %ILE	12.5	-20.2	-14.2	-12.3	-1.0	2.5
S&P 500	20.5	-3.1	5.7	7.5	10.7	10.7

Large Cap Universe

LARGE CAP EQUITY QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: S&P 500



RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	9.0	11.3	-2.3
12/10	11.1	10.8	0.3
3/11	6.2	5.9	0.3
6/11	0.7	0.1	0.6
9/11	-14.1	-13.9	-0.2
12/11	12.0	11.8	0.2
3/12	15.3	12.6	2.7
6/12	-6.4	-2.8	-3.6
9/12	6.5	6.3	0.2
12/12	1.3	-0.4	1.7
3/13	10.2	10.6	-0.4
6/13	2.5	2.9	-0.4
9/13	7.5	5.2	2.3
12/13	11.1	10.5	0.6
3/14	2.0	1.8	0.2
6/14	5.1	5.2	-0.1
9/14	0.4	1.1	-0.7
12/14	5.5	4.9	0.6
3/15	2.0	0.9	1.1
6/15	0.9	0.3	0.6
9/15	-6.7	-6.4	-0.3
12/15	6.0	7.0	-1.0
3/16	0.2	1.3	-1.1
6/16	0.0	2.5	-2.5
9/16	5.3	3.9	1.4
12/16	3.6	3.8	-0.2
3/17	7.3	6.1	1.2
6/17	4.6	3.1	1.5
9/17	4.4	4.5	-0.1
12/17	6.4	6.6	-0.2
3/18	1.7	-0.8	2.5
6/18	4.5	3.4	1.1
9/18	8.3	7.7	0.6
12/18	-14.2	-13.5	-0.7
3/19	15.5	13.6	1.9
6/19	5.7	4.3	1.4
9/19	0.6	1.7	-1.1
12/19	10.1	9.1	1.0
3/20	-20.5	-19.6	-0.9
6/20	23.1	20.5	2.6

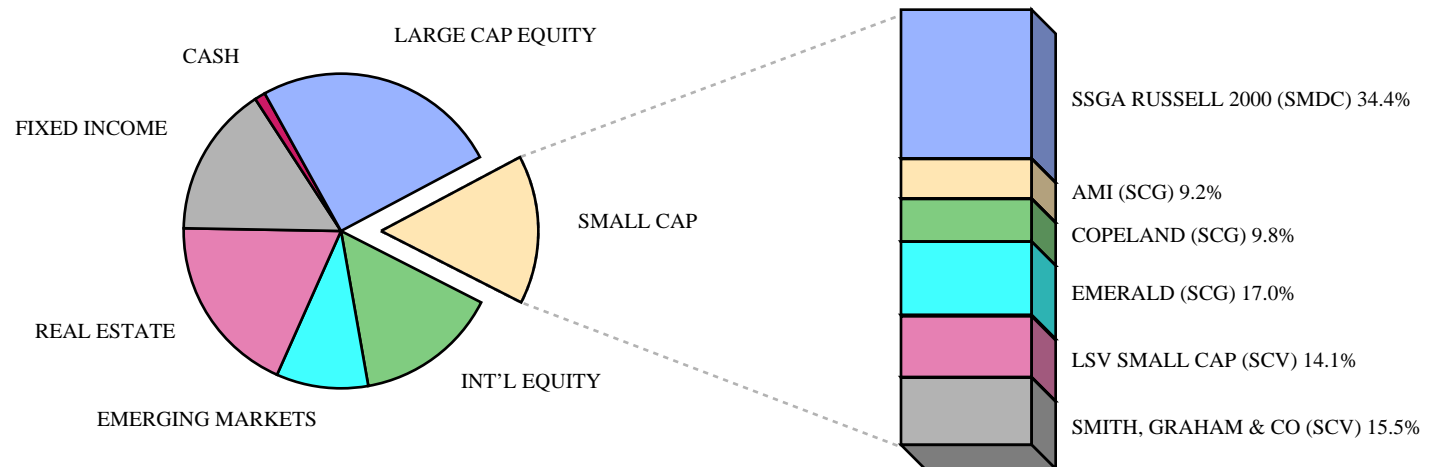
Total Quarters Observed	40
Quarters At or Above the Benchmark	23
Quarters Below the Benchmark	17
Batting Average	.575

SMALL CAP EQUITY MANAGERS

Last quarter, the Russell 2000 Growth Index returned 30.6% versus 18.9% for the Russell 2000 Value Index. The portfolio's small cap component (excluding cash) gained 26.1%, 0.7% above the Russell 2000 index return of 25.4%. Of the five active small cap managers, only Copeland fell behind its benchmark.

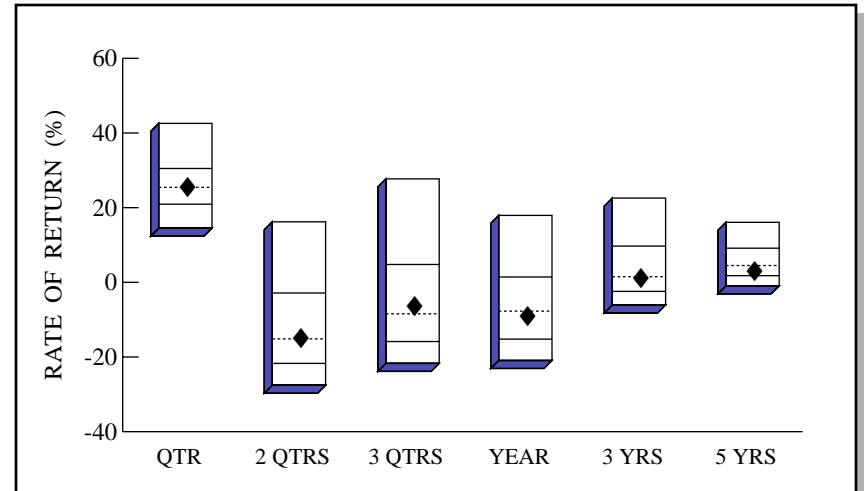
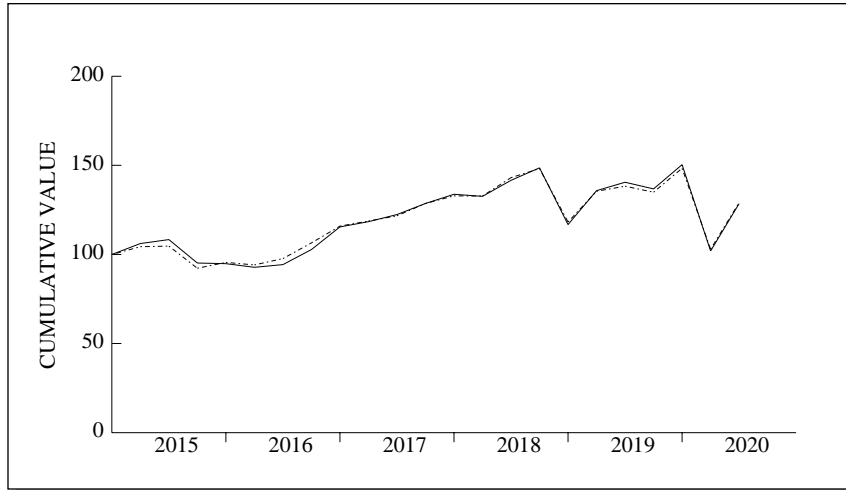
SSgA Russell 2000 (Core)	The SSgA small cap component performed in line with the Russell 2000 index. At quarter end, this investment was valued at \$138,256,020.
AMI (Growth)	Favorable selection in the Financials and Industrials sectors helped the portfolio to beat its benchmark last quarter. Sub-par performance in several other sectors, including the heavily weighted Information Technology sector prevented the portfolio from increasing its lead over the index.
Copeland (Growth)	By underweighting the Health Care and Consumer Discretionary sectors, the portfolio missed out on the growth potential those sectors offered last quarter. The portfolio also took a hit due to very unfavorable selection in all but two sectors (Financials and Materials), resulting in a double-digit performance deficit against the Russell 2000 Growth.
Emerald (Growth)	Selection effects were mixed last quarter and more sectors underperformed than outperformed. Fortunately, the effects of allocation helped to buoy the total return above the index. The increased position in the Consumer Discretionary sector allowed for greater impact of the best performing sector in the small cap growth market.
LSV Small Cap (Value)	Although the portfolio did not match the returns of the benchmarks three top-performing sectors (Consumer Discretionary, Energy, and Health Care), it succeeded in outperforming on the whole. Top stocks KB Home and Builders Firstsource Inc. were instrumental, both returning in the vicinity of 70%.
Smith, Graham & Co (Value)	Although the portfolio did not produce the blockbuster returns in its Health Care sector that were experienced in the small cap value, the total return still came in well above the benchmark. Top stocks Green Dot Corp (+93.3%) and Lithia Motors Inc. (+85.5%) added momentum to the portfolio's upswing during the second quarter.

SMALL CAP EQUITY MANAGER SUMMARY

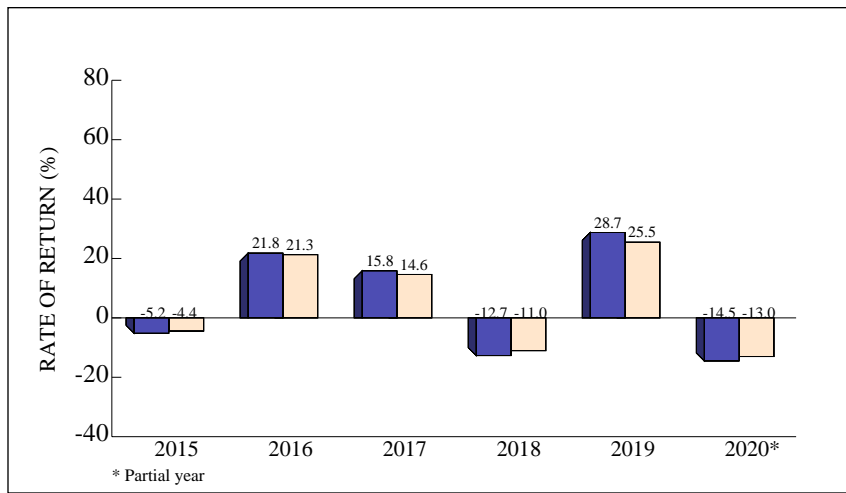


		COMPONENT RETURNS AND RANKINGS					
MANAGER	(UNIVERSE)	QTR	YTD	1 YEAR	3 YEARS	5 YEARS	MARKET VALUE
SSGA RUSSELL 2000	(Small Cap)	25.4 (51)	-13.0 (47)	-6.6 (47)	2.0 (49)	4.4 (52)	\$138,256,020
<i>Russell 2000</i>		<i>25.4 ---</i>	<i>-13.0 ---</i>	<i>-6.7 ---</i>	<i>2.0 ---</i>	<i>4.3 ---</i>	<i>---</i>
AMI	(Small Cap Growth)	33.5 (52)	-0.4 (64)	-0.6 (84)	--- ---	--- ---	\$36,783,720
COPELAND	(Small Cap Growth)	16.7 (99)	-15.0 (98)	-8.3 (96)	--- ---	--- ---	\$39,571,353
EMERALD	(Small Cap Growth)	33.8 (50)	0.0 (62)	4.7 (56)	11.0 (59)	8.5 (69)	\$68,224,236
<i>Russell 2000 Growth</i>		<i>30.6 ---</i>	<i>-3.1 ---</i>	<i>3.5 ---</i>	<i>7.8 ---</i>	<i>6.8 ---</i>	<i>---</i>
LSV SMALL CAP	(Small Cap Value)	22.5 (40)	-27.9 (91)	-22.0 (92)	-6.8 (94)	--- ---	\$56,463,587
SMITH, GRAHAM & CO	(Small Cap Value)	26.9 (16)	-20.5 (37)	-10.3 (22)	-3.6 (61)	--- ---	\$62,446,386
<i>Russell 2000 Value</i>		<i>18.9 ---</i>	<i>-23.5 ---</i>	<i>-17.5 ---</i>	<i>-4.4 ---</i>	<i>1.2 ---</i>	<i>---</i>
TOTAL	(Small Cap)	26.1 (45)	-14.5 (49)	-8.5 (52)	1.7 (50)	3.5 (59)	\$401,745,302
<i>Russell 2000</i>		<i>25.4 ---</i>	<i>-13.0 ---</i>	<i>-6.7 ---</i>	<i>2.0 ---</i>	<i>4.3 ---</i>	<i>---</i>

SMALL CAP EQUITY RETURN COMPARISONS



Small Cap Universe



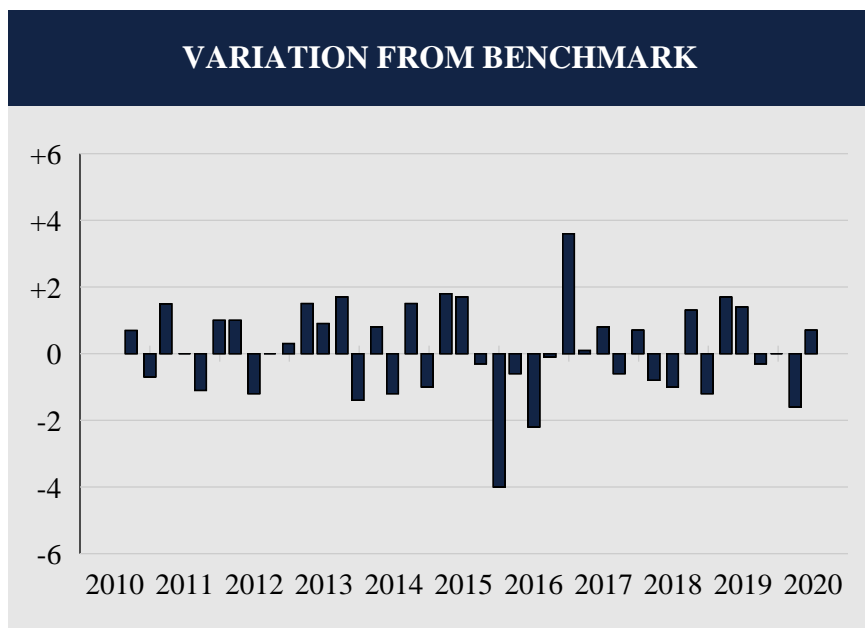
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	3 YRS	5 YRS
RETURN	26.1	-14.5	-6.0	-8.5	1.7	3.5
(RANK)	(45)	(49)	(44)	(52)	(50)	(59)
5TH %ILE	42.6	16.2	27.7	18.0	22.6	16.1
25TH %ILE	30.5	-2.9	4.8	1.4	9.7	9.1
MEDIAN	25.4	-15.1	-8.5	-7.7	1.5	4.5
75TH %ILE	20.9	-21.7	-15.8	-15.2	-2.5	1.8
95TH %ILE	14.5	-27.6	-21.7	-20.9	-6.0	-0.9
Russ 2000	25.4	-13.0	-4.4	-6.7	2.0	4.3

Small Cap Universe

SMALL CAP EQUITY QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: RUSSELL 2000



Total Quarters Observed	40
Quarters At or Above the Benchmark	23
Quarters Below the Benchmark	17
Batting Average	.575

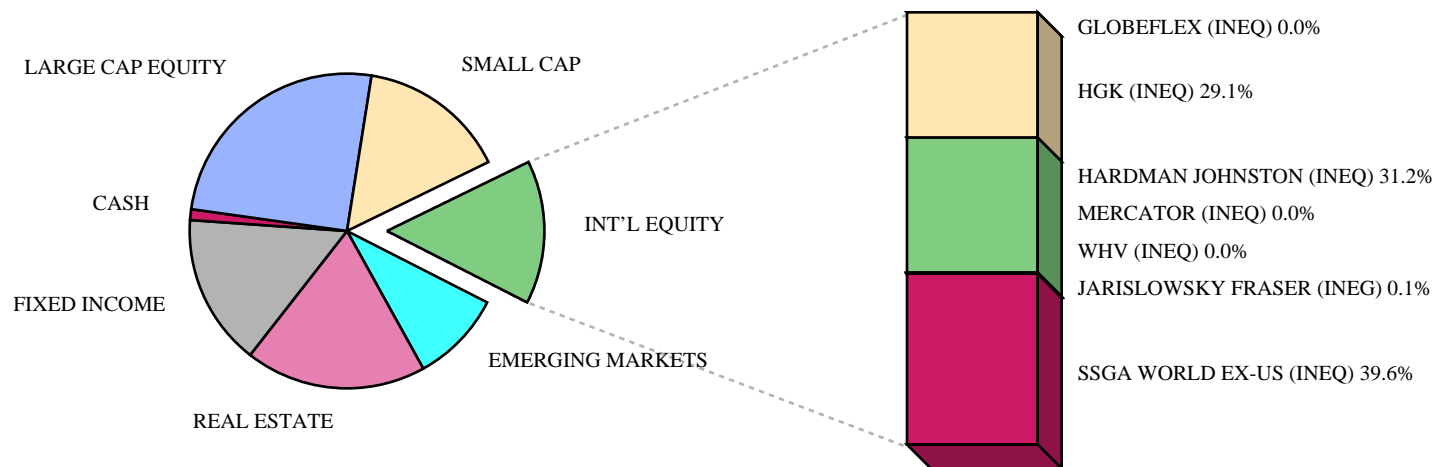
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	12.0	11.3	0.7
12/10	15.6	16.3	-0.7
3/11	9.4	7.9	1.5
6/11	-1.6	-1.6	0.0
9/11	-23.0	-21.9	-1.1
12/11	16.5	15.5	1.0
3/12	13.4	12.4	1.0
6/12	-4.7	-3.5	-1.2
9/12	5.2	5.2	0.0
12/12	2.1	1.8	0.3
3/13	13.9	12.4	1.5
6/13	4.0	3.1	0.9
9/13	11.9	10.2	1.7
12/13	7.3	8.7	-1.4
3/14	1.9	1.1	0.8
6/14	0.8	2.0	-1.2
9/14	-5.9	-7.4	1.5
12/14	8.7	9.7	-1.0
3/15	6.1	4.3	1.8
6/15	2.1	0.4	1.7
9/15	-12.2	-11.9	-0.3
12/15	-0.4	3.6	-4.0
3/16	-2.1	-1.5	-0.6
6/16	1.6	3.8	-2.2
9/16	8.9	9.0	-0.1
12/16	12.4	8.8	3.6
3/17	2.6	2.5	0.1
6/17	3.3	2.5	0.8
9/17	5.1	5.7	-0.6
12/17	4.0	3.3	0.7
3/18	-0.9	-0.1	-0.8
6/18	6.8	7.8	-1.0
9/18	4.9	3.6	1.3
12/18	-21.4	-20.2	-1.2
3/19	16.3	14.6	1.7
6/19	3.5	2.1	1.4
9/19	-2.7	-2.4	-0.3
12/19	9.9	9.9	0.0
3/20	-32.2	-30.6	-1.6
6/20	26.1	25.4	0.7

INTERNATIONAL & EMERGING MARKETS EQUITY MANAGERS

The aggregate developed international portfolio (excluding cash) returned 20.4% over the quarter, 5.3% above the MSCI EAFE Index return of 15.1%. The S&P BMI Developed Markets Ex US returned 16.8% vs 14.6% for the MSCI World Ex US. The Emerging Markets portfolio, driven by its only manager, SSgA, gained 19.0%, while the MSCI Emerging Markets Index returned -18.2%.

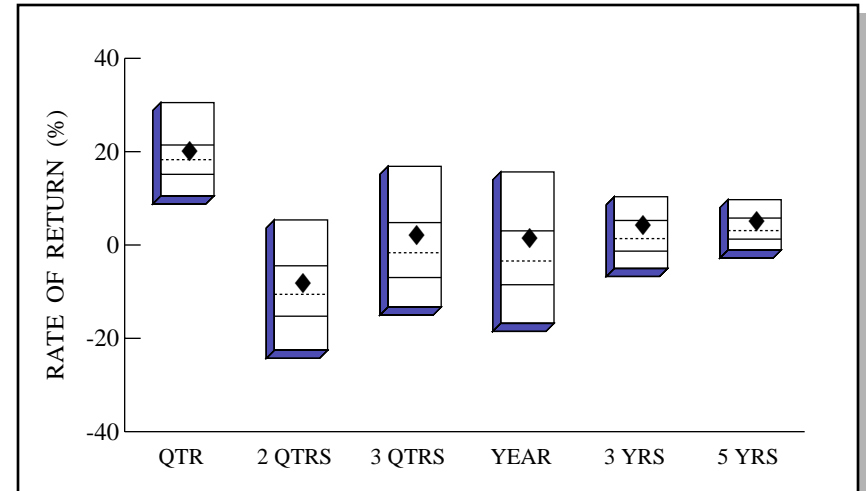
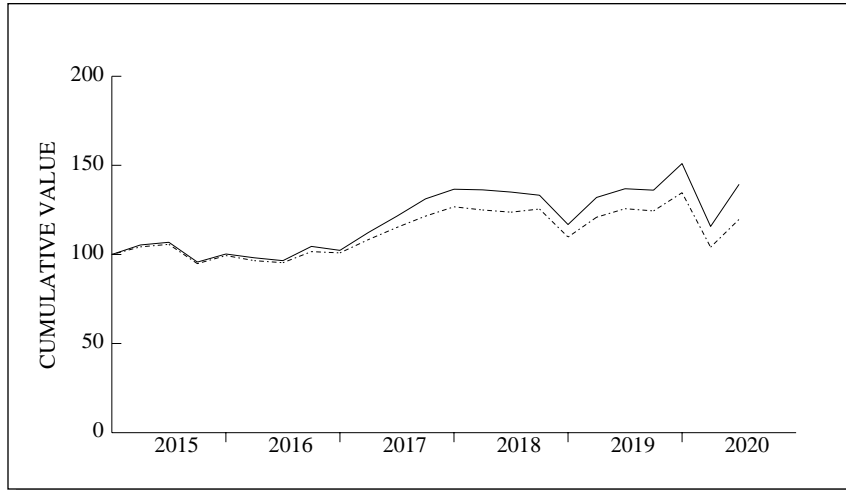
SSgA Developed	The SSgA developed markets component returned 15.5% during the quarter. Over the trailing year, this component was down 5.0%. This investment was valued at \$154,837,145 at quarter end.
Hardman Johnston	The Hardman Johnston international equity component earned 27.9% over the quarter. Over the last four quarters, the component gained 12.1%, while the S&P BMI Developed Ex US returned 16.8% and -4.0% over the quarter and trailing year.
HGK	HGK's equity component returned 20.1% last quarter. Over the trailing year, the HGK international equity component lost 1.7%.
SSgA Emerging	The SSgA emerging markets fund gained 19.0% during the quarter. Over the trailing year, this component returned -3.0%. At quarter end, this fund was valued at \$250,547,615.

INTERNATIONAL EQUITY MANAGER SUMMARY

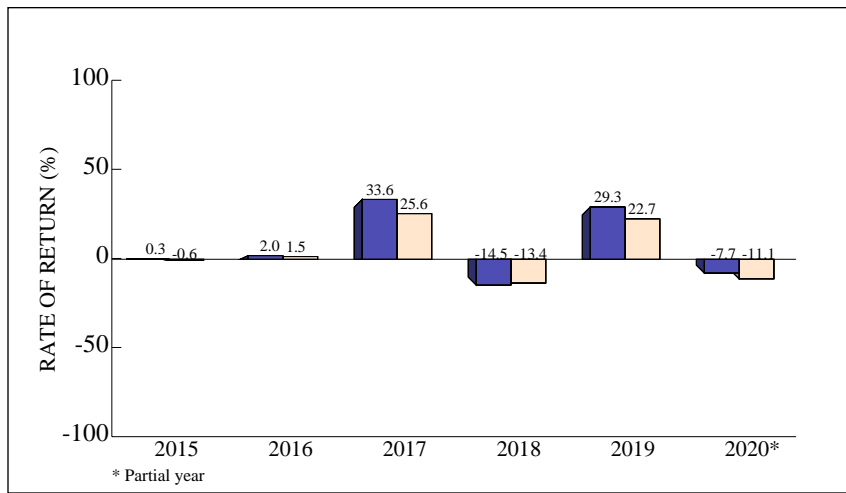


		COMPONENT RETURNS AND RANKINGS					
MANAGER	(UNIVERSE)	QTR	YTD	1 YEAR	3 YEARS	5 YEARS	MARKET VALUE
GLOBEFLEX	(International Equity)	----	----	----	----	----	\$4,292
HGK	(International Equity)	20.1 (34)	-10.1 (47)	1.7 (30)	3.8 (32)	5.3 (29)	\$113,713,514
HARDMAN JOHNSTON	(International Equity)	27.9 (8)	-0.1 (12)	12.1 (9)	9.8 (6)	9.3 (6)	\$122,162,581
MERCATOR	(International Equity)	-----	----	----	----	----	\$18,151
WHV	(International Equity)	----	----	----	----	----	\$3,002
<i>S&P BMI Developed Ex US Index</i>		16.8 ---	-10.8 ---	-4.0 ---	1.3 ---	2.9 ---	---
JARISLOWSKY FRASER	(International Equity)	----	----	----	----	----	\$303,935
<i>MSCI EAFE</i>		15.1 ---	-11.1 ---	-4.7 ---	1.3 ---	2.5 ---	---
SSGA WORLD EX-US	(International Equity)	15.5 (73)	-11.2 (54)	-5.0 (59)	1.3 (52)	2.4 (58)	\$154,837,145
<i>MSCI World Ex US</i>		14.6 ---	-12.7 ---	-6.7 ---	0.8 ---	2.2 ---	---
TOTAL	(International Equity)	20.4 (32)	-7.7 (36)	1.8 (29)	4.7 (28)	5.5 (28)	\$391,042,620
<i>Blended International Index</i>		15.1 ---	-11.1 ---	-4.7 ---	1.3 ---	2.5 ---	---

INTERNATIONAL EQUITY RETURN COMPARISONS



International Equity Universe



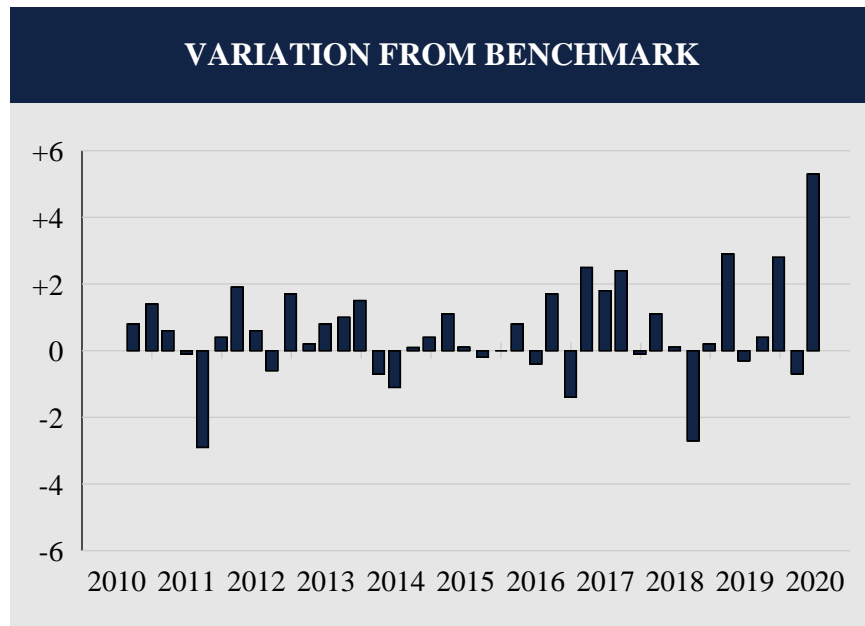
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	20.4	-7.7	2.4	1.8	4.7	5.5
(RANK)	(32)	(36)	(33)	(29)	(28)	(28)
5TH %ILE	30.5	5.4	16.9	15.7	10.4	9.7
25TH %ILE	21.4	-4.4	4.8	3.1	5.2	5.8
MEDIAN	18.3	-10.6	-1.7	-3.4	1.4	3.1
75TH %ILE	15.2	-15.3	-7.0	-8.5	-1.3	1.2
95TH %ILE	10.5	-22.6	-13.3	-16.8	-5.1	-1.1
Intl Index	15.1	-11.1	-3.8	-4.7	1.3	2.5

International Equity Universe

INTERNATIONAL EQUITY QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

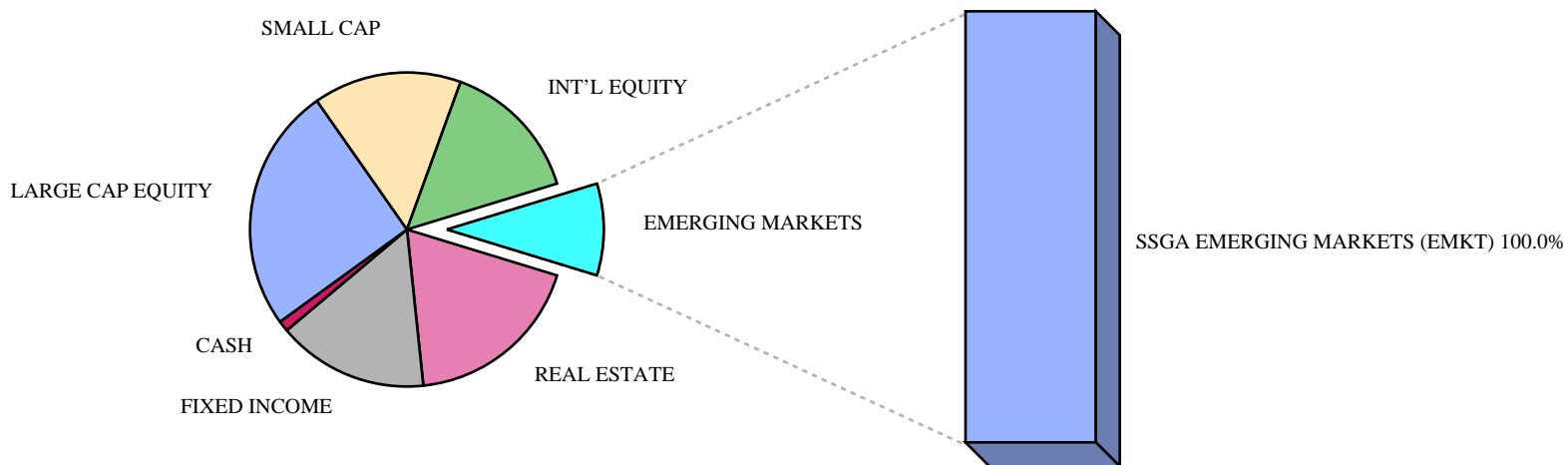
COMPARATIVE BENCHMARK: BLENDED INTERNATIONAL INDEX



RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	17.3	16.5	0.8
12/10	9.5	8.1	1.4
3/11	4.6	4.0	0.6
6/11	0.5	0.6	-0.1
9/11	-22.2	-19.3	-2.9
12/11	3.7	3.3	0.4
3/12	14.2	12.3	1.9
6/12	-6.6	-7.2	0.6
9/12	7.1	7.7	-0.6
12/12	7.5	5.8	1.7
3/13	5.1	4.9	0.2
6/13	-1.0	-1.8	0.8
9/13	12.9	11.9	1.0
12/13	6.9	5.4	1.5
3/14	0.5	1.2	-0.7
6/14	3.7	4.8	-1.1
9/14	-5.8	-5.9	0.1
12/14	-3.3	-3.7	0.4
3/15	5.3	4.2	1.1
6/15	1.4	1.3	0.1
9/15	-10.4	-10.2	-0.2
12/15	4.7	4.7	0.0
3/16	-2.1	-2.9	0.8
6/16	-1.6	-1.2	-0.4
9/16	8.2	6.5	1.7
12/16	-2.1	-0.7	-1.4
3/17	9.9	7.4	2.5
6/17	8.2	6.4	1.8
9/17	7.9	5.5	2.4
12/17	4.2	4.3	-0.1
3/18	-0.3	-1.4	1.1
6/18	-0.9	-1.0	0.1
9/18	-1.3	1.4	-2.7
12/18	-12.3	-12.5	0.2
3/19	13.0	10.1	2.9
6/19	3.7	4.0	-0.3
9/19	-0.6	-1.0	0.4
12/19	11.0	8.2	2.8
3/20	-23.4	-22.7	-0.7
6/20	20.4	15.1	5.3

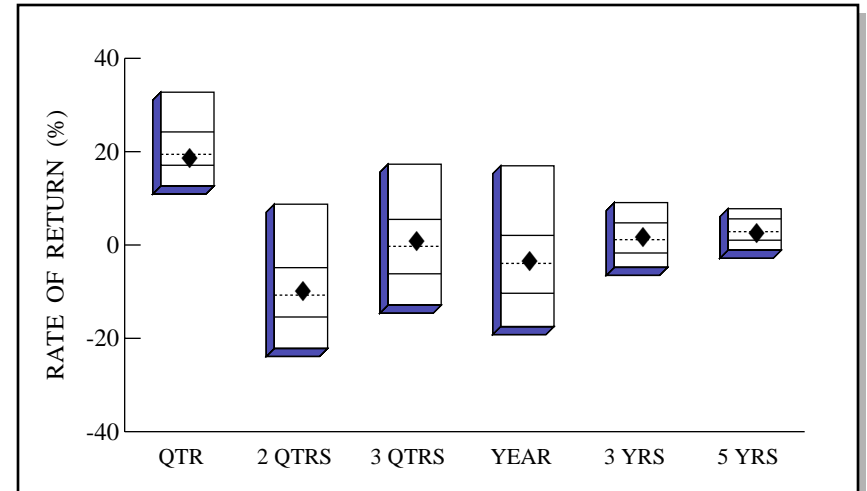
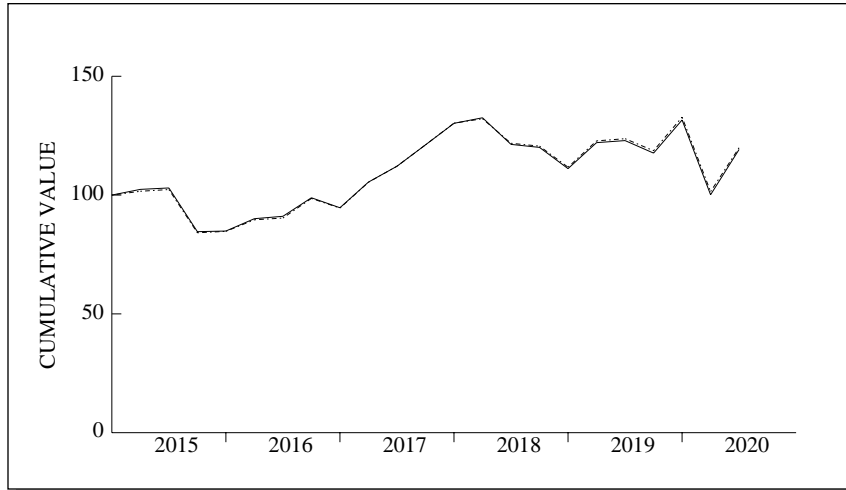
Total Quarters Observed	40
Quarters At or Above the Benchmark	28
Quarters Below the Benchmark	12
Batting Average	.700

EMERGING MARKETS EQUITY MANAGER SUMMARY

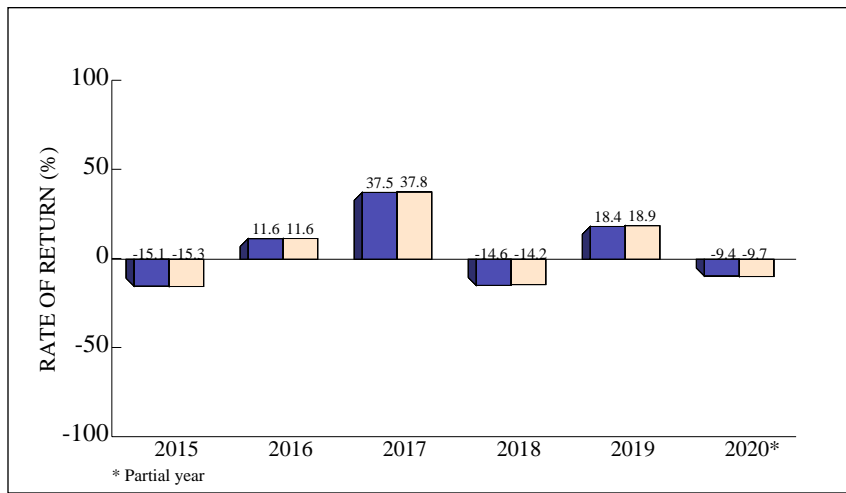
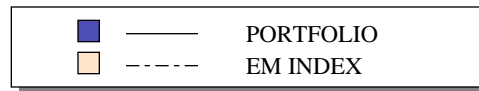


MANAGER	(UNIVERSE)	COMPONENT RETURNS AND RANKINGS					MARKET VALUE
		QTR	YTD	1 YEAR	3 YEARS	5 YEARS	
SSGA EMERGING MARKETS	(Emerging Markets)	19.0 (53)	-9.4 (43)	-3.0 (45)	2.1 (41)	3.0 (47)	\$250,547,615
<i>Blended Emerging Markets Index</i>		<i>18.2 ----</i>	<i>-9.7 ----</i>	<i>-3.0 ----</i>	<i>2.3 ----</i>	<i>3.2 ----</i>	<i>----</i>
TOTAL	(Emerging Markets)	19.0 (53)	-9.4 (43)	-3.0 (45)	2.1 (41)	3.0 (47)	\$250,547,615
<i>Blended Emerging Markets Index</i>		<i>18.2 ----</i>	<i>-9.7 ----</i>	<i>-3.0 ----</i>	<i>2.3 ----</i>	<i>3.2 ----</i>	<i>----</i>

EMERGING MARKETS EQUITY RETURN COMPARISONS



Emerging Markets Universe

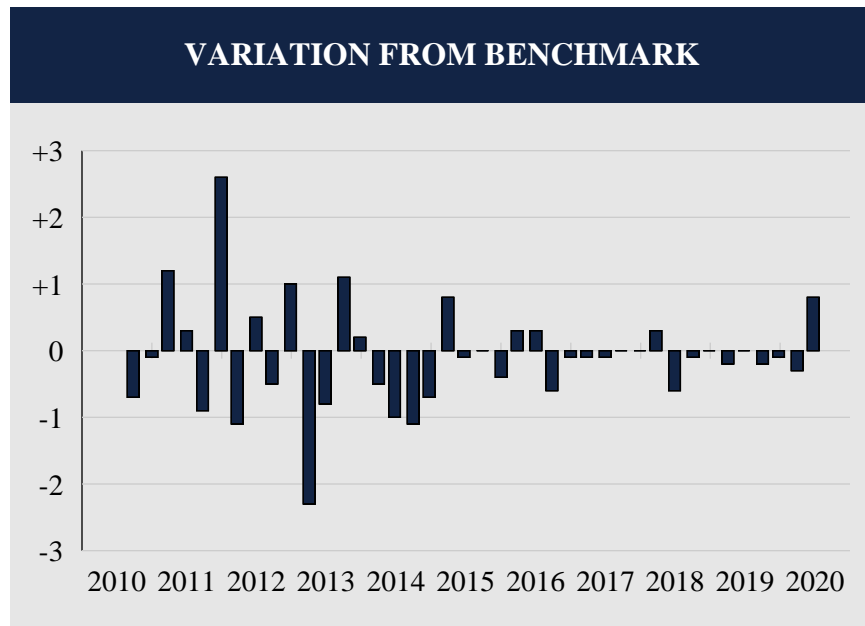


	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	19.0	-9.4	1.3	-3.0	2.1	3.0
(RANK)	(53)	(43)	(40)	(45)	(41)	(47)
5TH %ILE	32.7	8.8	17.3	17.0	9.1	7.8
25TH %ILE	24.3	-4.9	5.5	2.0	4.8	5.6
MEDIAN	19.5	-10.7	-0.3	-4.0	1.1	2.8
75TH %ILE	17.1	-15.4	-6.2	-10.4	-1.7	1.0
95TH %ILE	12.7	-22.2	-12.9	-17.5	-4.8	-1.2
EM Index	18.2	-9.7	1.1	-3.0	2.3	3.2

Emerging Markets Universe

EMERGING MARKETS EQUITY QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: BLENDED EMERGING MARKETS INDEX

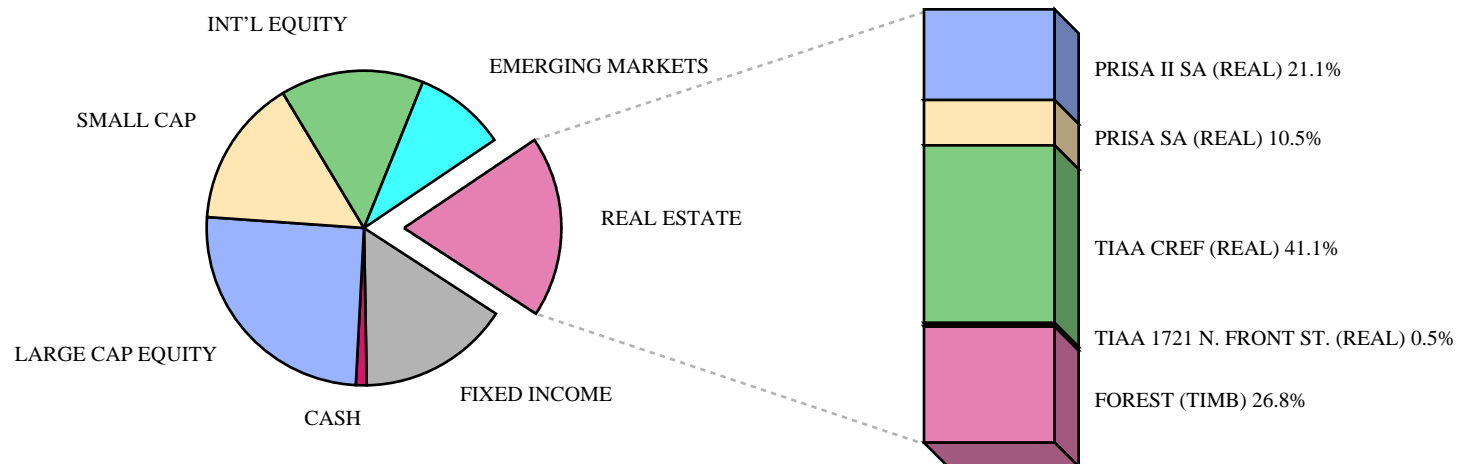


Total Quarters Observed	40
Quarters At or Above the Benchmark	17
Quarters Below the Benchmark	23
Batting Average	.425

RATES OF RETURN

Date	Portfolio	Benchmark	Difference
9/10	17.9	18.6	-0.7
12/10	7.2	7.3	-0.1
3/11	1.9	0.7	1.2
6/11	-1.2	-1.5	0.3
9/11	-23.4	-22.5	-0.9
12/11	5.7	3.1	2.6
3/12	13.8	14.9	-1.1
6/12	-8.4	-8.9	0.5
9/12	7.0	7.5	-0.5
12/12	6.6	5.6	1.0
3/13	-2.6	-0.3	-2.3
6/13	-8.1	-7.3	-0.8
9/13	5.8	4.7	1.1
12/13	2.2	2.0	0.2
3/14	-0.7	-0.2	-0.5
6/14	6.6	7.6	-1.0
9/14	-3.6	-2.5	-1.1
12/14	-4.7	-4.0	-0.7
3/15	2.4	1.6	0.8
6/15	0.6	0.7	-0.1
9/15	-17.8	-17.8	0.0
12/15	0.3	0.7	-0.4
3/16	6.1	5.8	0.3
6/16	1.1	0.8	0.3
9/16	8.6	9.2	-0.6
12/16	-4.2	-4.1	-0.1
3/17	11.4	11.5	-0.1
6/17	6.3	6.4	-0.1
9/17	8.0	8.0	0.0
12/17	7.5	7.5	0.0
3/18	1.8	1.5	0.3
6/18	-8.5	-7.9	-0.6
9/18	-1.0	-0.9	-0.1
12/18	-7.4	-7.4	0.0
3/19	9.8	10.0	-0.2
6/19	0.7	0.7	0.0
9/19	-4.3	-4.1	-0.2
12/19	11.8	11.9	-0.1
3/20	-23.9	-23.6	-0.3
6/20	19.0	18.2	0.8

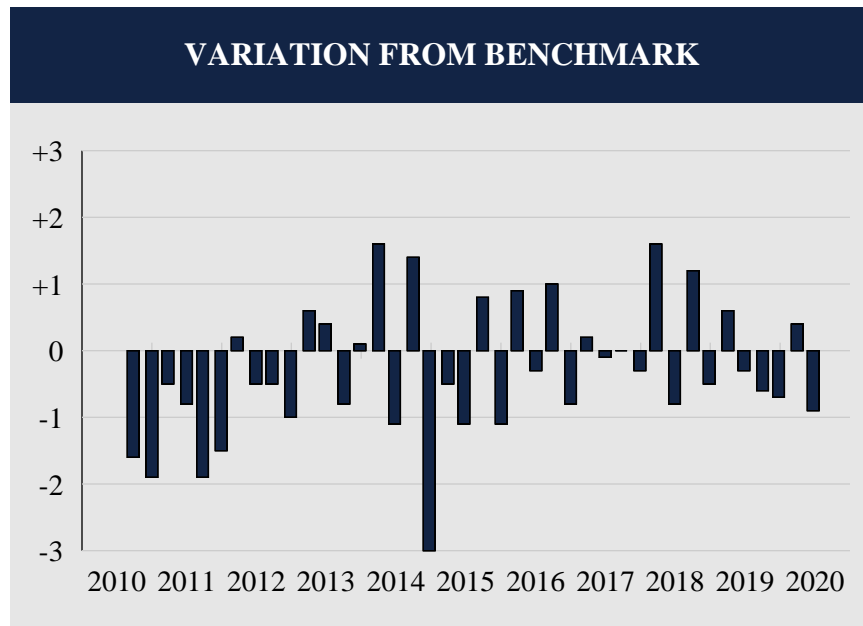
REAL ESTATE MANAGER SUMMARY



MANAGER	(UNIVERSE)	COMPONENT RETURNS AND RANKINGS					MARKET VALUE
		QTR	YTD	1 YEAR	3 YEARS	5 YEARS	
PRISA II SA		-2.4 ---	-1.1 ---	2.7 ---	6.7 ---	8.8 ---	\$103,552,732
PRISA SA		-1.1 ---	0.6 ---	3.5 ---	6.6 ---	8.0 ---	\$51,721,737
TIAA CREF		-2.3 ---	-1.0 ---	4.2 ---	6.9 ---	8.0 ---	\$202,278,709
<i>NCREIF NFI-ODCE Index</i>		<i>-1.6 ---</i>	<i>-0.6 ---</i>	<i>2.2 ---</i>	<i>5.7 ---</i>	<i>7.3 ---</i>	---
TIAA 1721 N. FRONT ST.		1.7 ---	2.4 ---	5.6 ---	4.7 ---	---	\$2,311,116
<i>NCREIF Property Index</i>		<i>-1.0 ---</i>	<i>-0.3 ---</i>	<i>2.7 ---</i>	<i>5.4 ---</i>	<i>6.8 ---</i>	---
FOREST		-1.3 ---	-0.9 ---	-6.4 ---	1.7 ---	3.6 ---	\$132,018,482
<i>NCREIF Timber Index</i>		<i>0.1 ---</i>	<i>0.2 ---</i>	<i>0.3 ---</i>	<i>2.3 ---</i>	<i>2.7 ---</i>	---
TOTAL		-1.9 ---	-0.8 ---	0.8 ---	5.3 ---	6.8 ---	\$491,882,776
<i>NCREIF Property Index</i>		<i>-1.0 ---</i>	<i>-0.3 ---</i>	<i>2.7 ---</i>	<i>5.4 ---</i>	<i>6.8 ---</i>	---

REAL ESTATE QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

COMPARATIVE BENCHMARK: NCREIF PROPERTY INDEX



Total Quarters Observed	40
Quarters At or Above the Benchmark	15
Quarters Below the Benchmark	25
Batting Average	.375

RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	2.3	3.9	-1.6
12/10	2.7	4.6	-1.9
3/11	2.9	3.4	-0.5
6/11	3.1	3.9	-0.8
9/11	1.4	3.3	-1.9
12/11	1.5	3.0	-1.5
3/12	2.8	2.6	0.2
6/12	2.2	2.7	-0.5
9/12	1.8	2.3	-0.5
12/12	1.5	2.5	-1.0
3/13	3.2	2.6	0.6
6/13	3.3	2.9	0.4
9/13	1.8	2.6	-0.8
12/13	2.6	2.5	0.1
3/14	4.3	2.7	1.6
6/14	1.8	2.9	-1.1
9/14	4.0	2.6	1.4
12/14	0.0	3.0	-3.0
3/15	3.1	3.6	-0.5
6/15	2.0	3.1	-1.1
9/15	3.9	3.1	0.8
12/15	1.8	2.9	-1.1
3/16	3.1	2.2	0.9
6/16	1.7	2.0	-0.3
9/16	2.8	1.8	1.0
12/16	0.9	1.7	-0.8
3/17	1.7	1.5	0.2
6/17	1.7	1.8	-0.1
9/17	1.7	1.7	0.0
12/17	1.5	1.8	-0.3
3/18	3.3	1.7	1.6
6/18	1.0	1.8	-0.8
9/18	2.9	1.7	1.2
12/18	0.9	1.4	-0.5
3/19	2.4	1.8	0.6
6/19	1.2	1.5	-0.3
9/19	0.8	1.4	-0.6
12/19	0.8	1.5	-0.7
3/20	1.1	0.7	0.4
6/20	-1.9	-1.0	-0.9

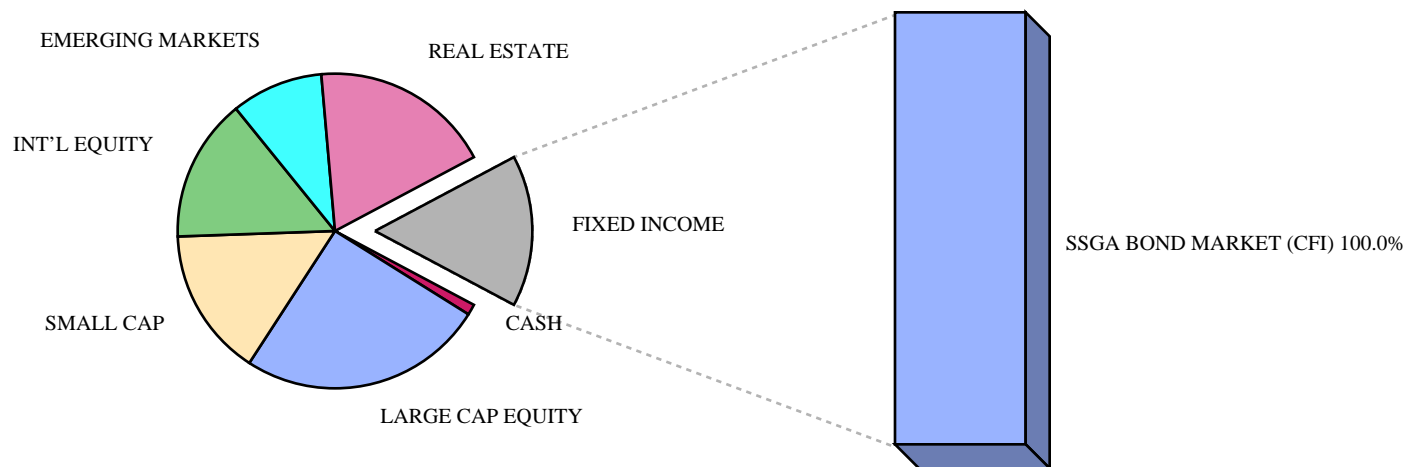
FIXED INCOME MANAGER

The Bloomberg Barclays US Aggregate Index returned 2.9% last quarter, while the Bloomberg Barclays Gov/Credit index was up 3.7%. For the trailing year they were up 8.7% and 10.0%, respectively.

**SSgA
(Broad Market)**

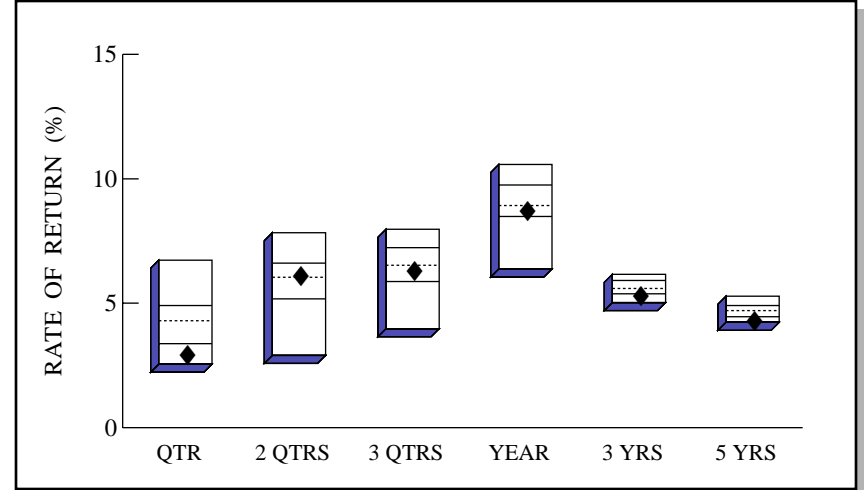
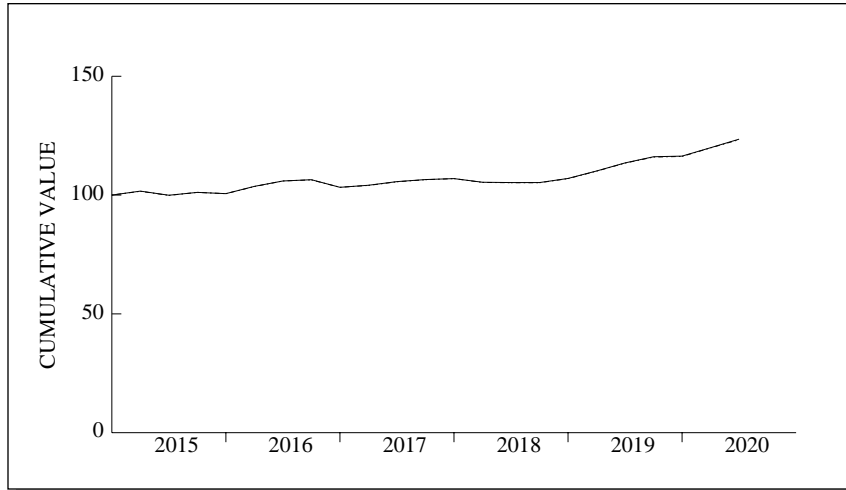
The SSgA fixed income component returned 3.0% last quarter. Over the trailing year, the fund rose 8.8%, in line with the Bloomberg Barclays Aggregate Index. At year end, this investment was valued at \$409,985,424.

FIXED INCOME MANAGER SUMMARY

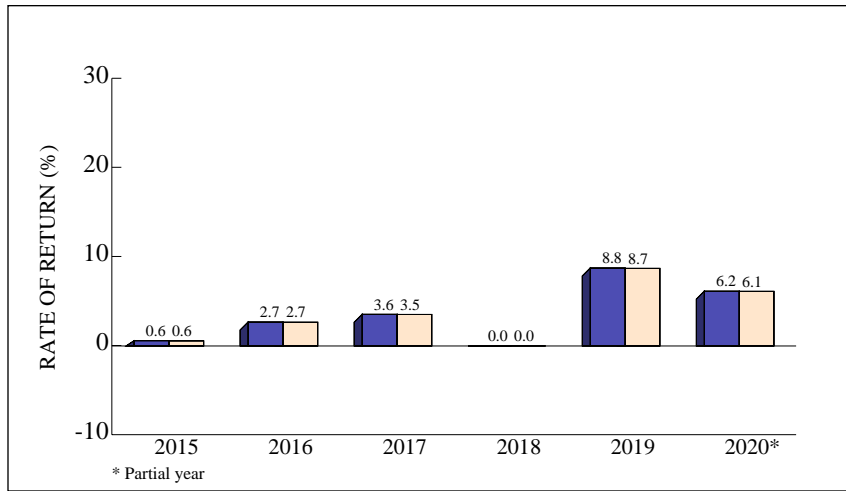


MANAGER	(UNIVERSE)	COMPONENT RETURNS AND RANKINGS					MARKET VALUE
		QTR	YTD	1 YEAR	3 YEARS	5 YEARS	
SSGA BOND MARKET	(Core Fixed Income)	3.0 (84)	6.2 (43)	8.8 (67)	5.4 (81)	4.3 (87)	\$409,985,424
<i>Bloomberg Barclays Aggregate Index</i>		2.9 ----	6.1 ----	8.7 ----	5.3 ----	4.3 ----	----
TOTAL	(Core Fixed Income)	3.0 (84)	6.2 (43)	8.8 (67)	5.4 (81)	4.3 (87)	\$409,985,424
<i>Bloomberg Barclays Aggregate Index</i>		2.9 ----	6.1 ----	8.7 ----	5.3 ----	4.3 ----	----

FIXED INCOME RETURN COMPARISONS



Core Fixed Income Universe



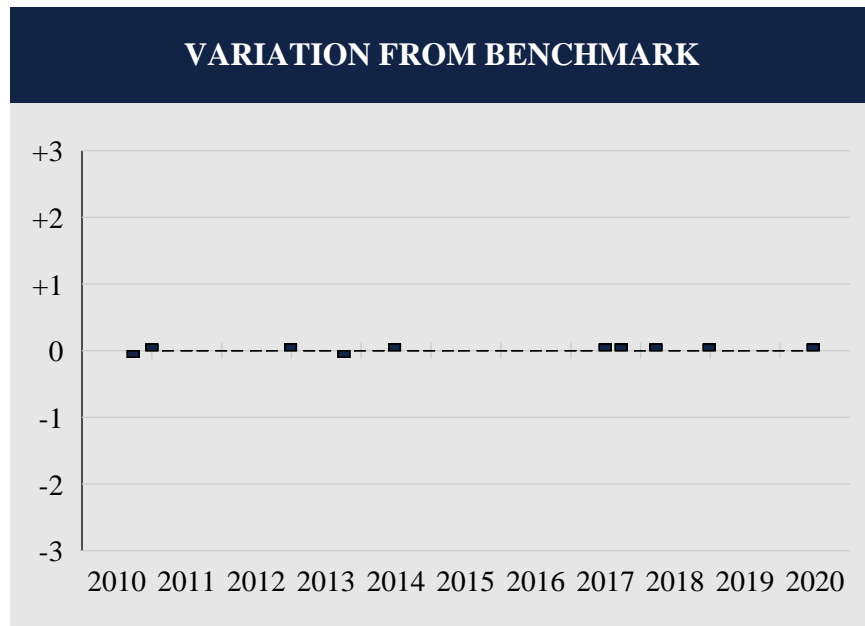
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	3.0	6.2	6.4	8.8	5.4	4.3
(RANK)	(84)	(43)	(65)	(67)	(81)	(87)
5TH %ILE	6.7	7.8	8.0	10.6	6.2	5.3
25TH %ILE	4.9	6.6	7.2	9.8	5.9	4.9
MEDIAN	4.3	6.0	6.5	8.9	5.6	4.7
75TH %ILE	3.4	5.2	5.9	8.5	5.4	4.5
95TH %ILE	2.6	2.9	4.0	6.4	5.0	4.2
Agg	2.9	6.1	6.3	8.7	5.3	4.3

Core Fixed Income Universe

FIXED INCOME QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

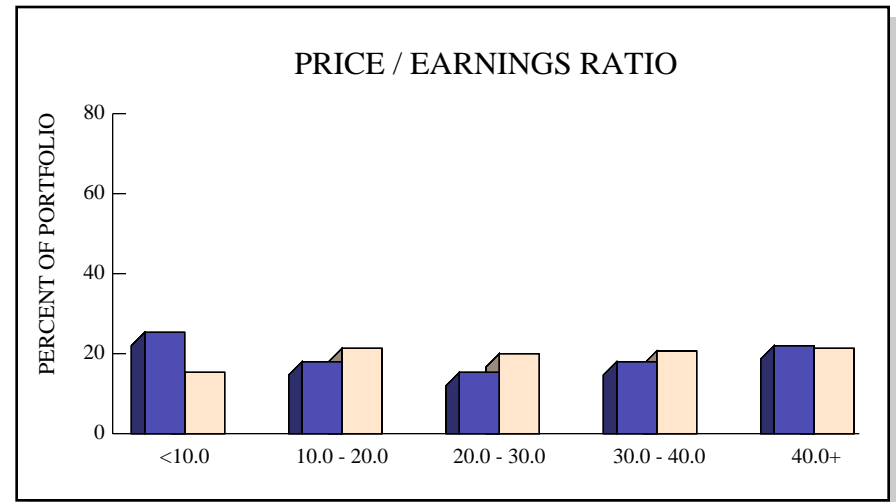
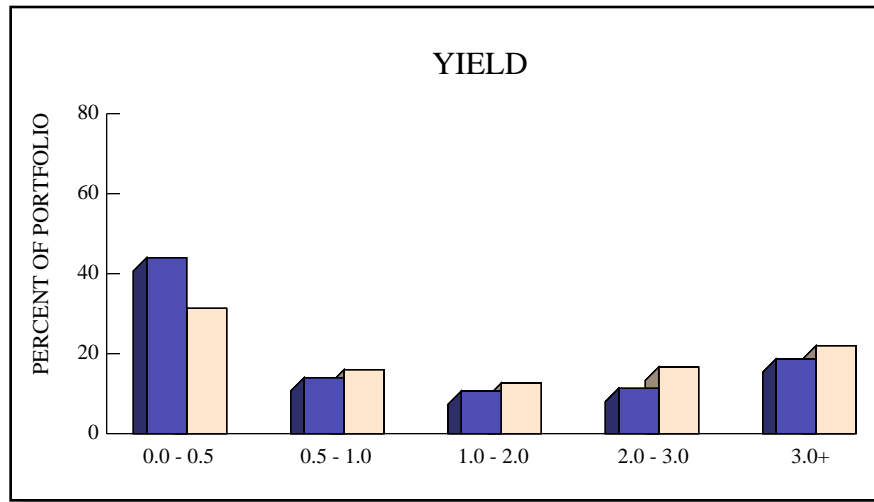
COMPARATIVE BENCHMARK: BLOOMBERG BARCLAYS AGGREGATE INDEX



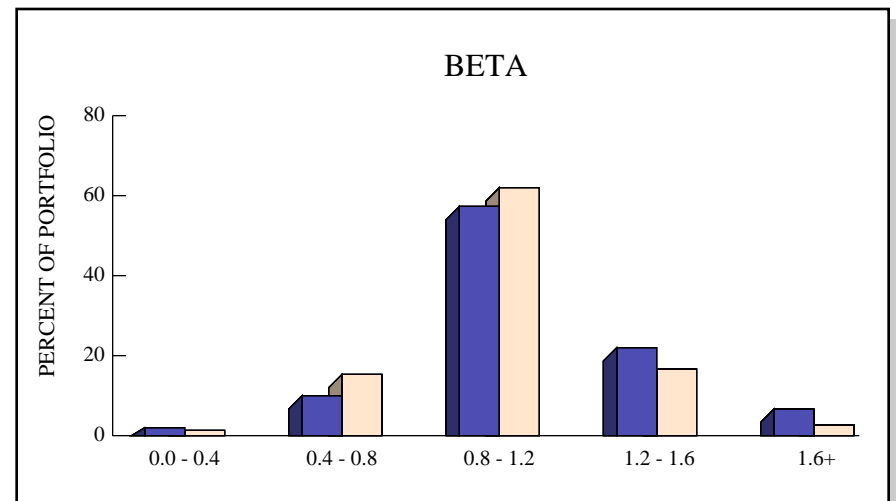
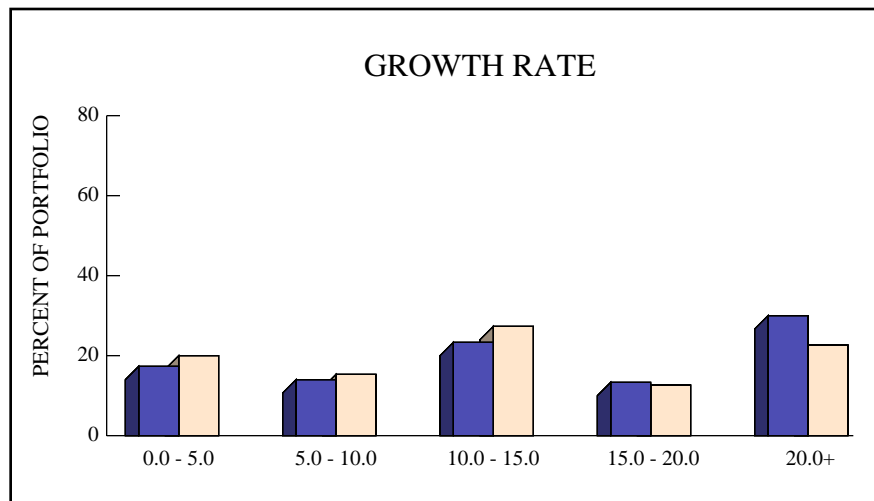
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	2.4	2.5	-0.1
12/10	-1.2	-1.3	0.1
3/11	0.4	0.4	0.0
6/11	2.3	2.3	0.0
9/11	3.8	3.8	0.0
12/11	1.1	1.1	0.0
3/12	0.3	0.3	0.0
6/12	2.1	2.1	0.0
9/12	1.6	1.6	0.0
12/12	0.3	0.2	0.1
3/13	-0.1	-0.1	0.0
6/13	-2.3	-2.3	0.0
9/13	0.5	0.6	-0.1
12/13	-0.1	-0.1	0.0
3/14	1.8	1.8	0.0
6/14	2.1	2.0	0.1
9/14	0.2	0.2	0.0
12/14	1.8	1.8	0.0
3/15	1.6	1.6	0.0
6/15	-1.7	-1.7	0.0
9/15	1.2	1.2	0.0
12/15	-0.6	-0.6	0.0
3/16	3.0	3.0	0.0
6/16	2.2	2.2	0.0
9/16	0.5	0.5	0.0
12/16	-3.0	-3.0	0.0
3/17	0.8	0.8	0.0
6/17	1.5	1.4	0.1
9/17	0.9	0.8	0.1
12/17	0.4	0.4	0.0
3/18	-1.4	-1.5	0.1
6/18	-0.2	-0.2	0.0
9/18	0.0	0.0	0.0
12/18	1.7	1.6	0.1
3/19	2.9	2.9	0.0
6/19	3.1	3.1	0.0
9/19	2.3	2.3	0.0
12/19	0.2	0.2	0.0
3/20	3.1	3.1	0.0
6/20	3.0	2.9	0.1

Total Quarters Observed	40
Quarters At or Above the Benchmark	38
Quarters Below the Benchmark	2
Batting Average	.950

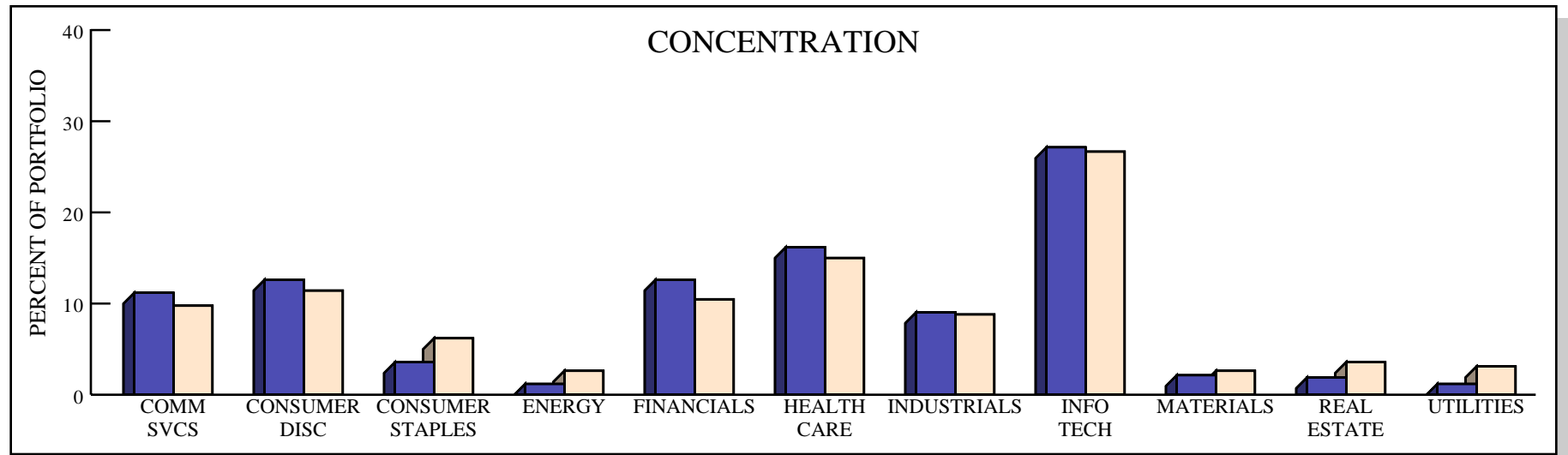
STOCK CHARACTERISTICS



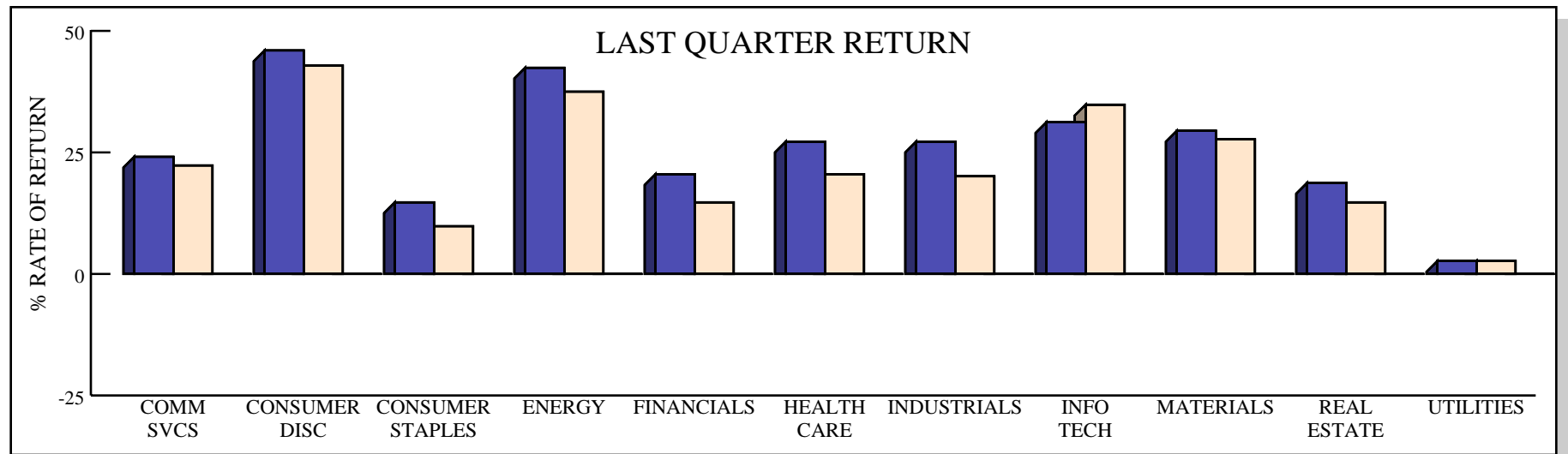
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	2,637	1.7%	17.8%	38.0	1.08
RUSSELL 3000	3,009	2.0%	14.9%	38.0	1.01



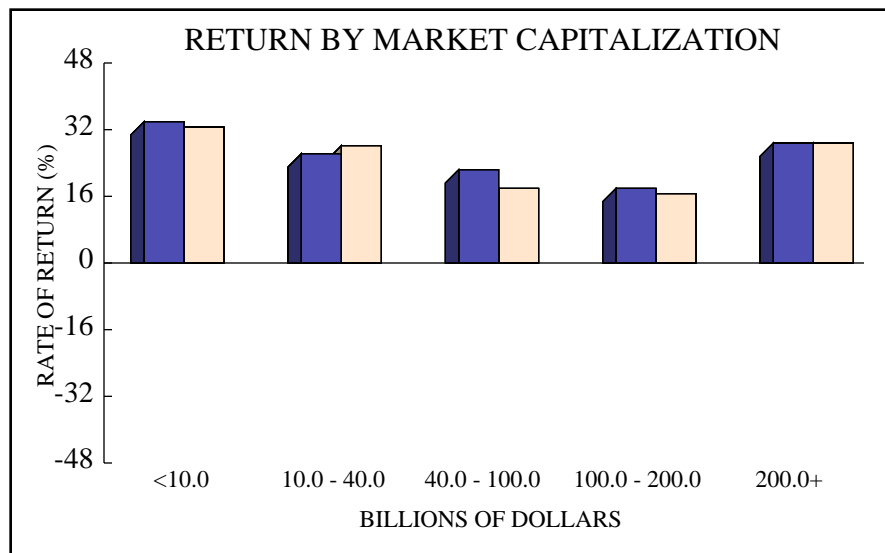
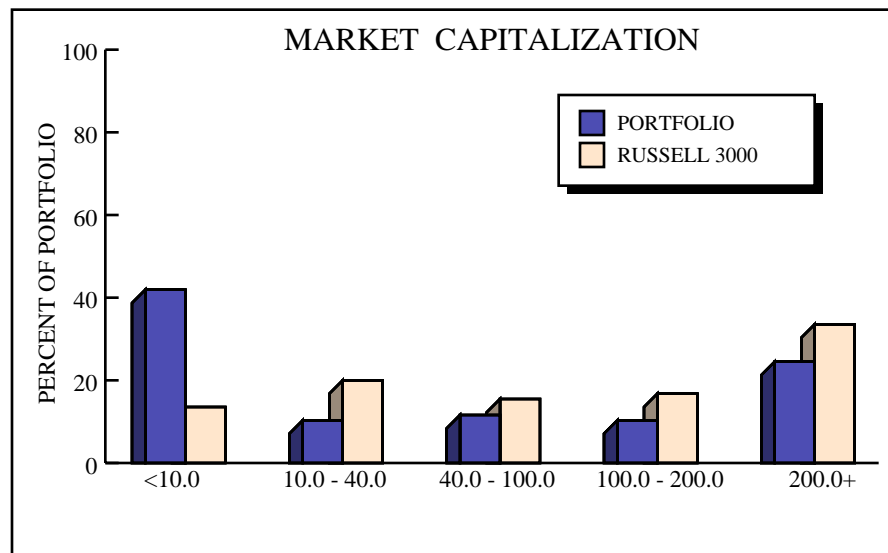
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 3000



TOP TEN HOLDINGS



TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	MICROSOFT CORP	\$ 53,666,807	4.99%	29.4%	Information Technology	\$ 1543.3 B
2	ALPHABET INC-CL C	31,228,058	2.91%	21.6%	Communication Services	475.2 B
3	FACEBOOK INC-CLASS A	27,916,895	2.60%	36.1%	Communication Services	546.5 B
4	AMAZON.COM INC	23,447,212	2.18%	41.5%	Consumer Discretionary	1376.0 B
5	ADOBE INC	19,102,709	1.78%	36.8%	Information Technology	208.8 B
6	MASTERCARD INC - A	14,266,934	1.33%	22.6%	Information Technology	293.6 B
7	PAYPAL HOLDINGS INC	13,852,853	1.29%	82.0%	Information Technology	204.6 B
8	ABBOTT LABORATORIES	13,799,713	1.28%	16.3%	Health Care	161.7 B
9	VISA INC-CLASS A SHARES	12,951,855	1.21%	20.1%	Information Technology	325.9 B
10	COMCAST CORP-CLASS A	12,591,826	1.17%	14.1%	Communication Services	177.5 B

Domestic Industry Sector Allocations
(Percent of Invested Equity)
As of June 30, 2020

	Comm Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Real Estate	Utilities
Eagle	32.6	17.5	0.0	0.0	24.9	5.6	6.7	11.3	1.3	0.0	0.0
LSV Large Cap	7.2	10.9	6.2	2.9	14.4	19.3	9.2	23.7	4.1	0.7	1.4
Russell 1000 Value	9.3	7.0	8.1	5.3	18.5	14.1	12.3	10.3	4.5	4.7	5.9
Polen	17.2	8.2	0.0	0.0	2.5	16.3	0.0	55.8	0.0	0.0	0.0
William Blair	11.0	16.7	5.1	0.0	3.6	13.1	7.1	41.8	1.6	0.0	0.0
Russell 1000 Growth	10.9	15.5	4.8	0.1	2.1	15.0	4.7	44.0	0.8	2.1	0.0
AMI	0.0	9.5	12.2	0.0	11.6	26.2	12.9	24.4	3.2	0.0	0.0
Copeland	3.8	9.6	8.2	0.0	15.4	13.4	17.7	14.4	3.2	8.7	5.6
Emerald	4.3	17.9	6.8	0.7	7.9	27.7	14.3	17.0	0.7	2.6	0.0
Russell 2000 Growth	2.6	12.6	3.2	0.1	4.3	34.3	13.1	21.3	2.7	3.8	1.9
LSV Small Cap	1.9	15.2	1.8	1.7	18.9	15.0	18.9	13.8	6.5	4.8	1.5
Smith, Graham & Co	0.0	16.8	2.7	1.3	20.1	17.4	14.3	22.6	2.7	0.9	1.1
Russell 2000 Value	2.4	12.0	3.5	4.4	28.3	6.1	16.4	5.8	5.2	10.6	5.3
S&P 500	10.8	10.8	7.0	2.8	10.1	14.6	8.0	27.5	2.5	2.8	3.1

Allocations may not total to 100% due to rounding.

International Industry Sector Allocations
(Percent of Invested Equity)
As of June 30, 2020

	Comm Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Real Estate	Utilities
HGK	5.0	19.3	9.3	1.7	9.7	0.0	32.7	11.3	3.9	4.1	2.9
Hardman Johnston	6.1	19.6	3.0	0.0	6.8	19.6	18.3	26.7	0.0	0.0	0.0
S&P Developed Ex US BMI	5.4	10.8	10.2	3.8	15.9	12.4	15.3	10.5	7.9	4.0	3.7

Allocations may not total to 100% due to rounding. Sector weights for international equity portfolios are provided by each respective manager and may differ slightly from custodian accounting.

APPENDIX - MAJOR MARKET INDEX RETURNS

Economic Data	Style	QTR	YTD	1 Year	3 years	5 Years
Consumer Price Index	Economic Data	-0.1	0.3	0.6	1.7	1.6
Domestic Equity	Style	QTR	YTD	1 Year	3 years	5 Years
Russell 3000	Broad Equity	22.0	-3.5	6.5	10.0	10.0
S&P 500	Large Cap Core	20.5	-3.1	7.5	10.7	10.7
Russell 1000	Large Cap	21.8	-2.8	7.5	10.6	10.5
Russell 1000 Growth	Large Cap Growth	27.8	9.8	23.3	19.0	15.9
Russell 1000 Value	Large Cap Value	14.3	-16.3	-8.9	1.8	4.6
Russell Mid Cap	Midcap	24.6	-9.1	-2.3	5.8	6.7
Russell Mid Cap Growth	Midcap Growth	30.3	4.2	11.9	14.8	11.6
Russell Mid Cap Value	Midcap Value	19.9	-18.1	-11.8	-0.6	3.3
Russell 2000	Small Cap	25.4	-13.0	-6.7	2.0	4.3
Russell 2000 Growth	Small Cap Growth	30.6	-3.1	3.5	7.8	6.8
Russell 2000 Value	Small Cap Value	18.9	-23.5	-17.5	-4.4	1.2
International Equity	Style	QTR	YTD	1 Year	3 years	5 Years
MSCI All Country World Ex US	Foreign Equity	16.3	-10.8	-4.4	1.6	2.7
MSCI EAFE	Developed Markets Equity	15.1	-11.1	-4.7	1.3	2.5
MSCI EAFE Growth	Developed Markets Growth	17.1	-3.3	4.5	6.3	5.9
MSCI EAFE Value	Developed Markets Value	12.7	-19.0	-14.0	-3.9	-1.0
MSCI Emerging Markets	Emerging Markets Equity	18.2	-9.7	-3.0	2.3	3.2
Domestic Fixed Income	Style	QTR	YTD	1 Year	3 years	5 Years
Bloomberg Barclays Aggregate Index	Core Fixed Income	2.9	6.1	8.7	5.3	4.3
Bloomberg Barclays Capital Gov't Bond	Treasuries	0.5	8.6	10.3	5.5	4.0
Bloomberg Barclays Capital Credit Bond	Corporate Bonds	8.2	4.8	9.1	6.1	5.5
Intermediate Aggregate	Core Intermediate	2.1	4.7	6.6	4.3	3.4
ML/BoA 1-3 Year Treasury	Short Term Treasuries	0.1	2.9	4.1	2.7	1.8
Bloomberg Barclays Capital High Yield	High Yield Bonds	10.2	-3.8	0.0	3.3	4.8
Alternative Assets	Style	QTR	YTD	1 Year	3 years	5 Years
Bloomberg Barclays Global Treasury Ex US	International Treasuries	4.1	0.8	1.0	2.9	3.3
NCREIF NFI-ODCE Index	Real Estate	-1.6	-0.6	2.2	5.7	7.3
HFRI FOF Composite	Hedge Funds	6.2	-0.4	0.9	2.4	1.6

APPENDIX - DISCLOSURES

- * The shadow index is a customized index that matches your portfolio's asset allocation on a monthly basis. This index was calculated using the following asset classes and corresponding benchmarks:

Large Cap Equity	S&P 500
Small Cap Equity	Russell 2000
International Equity	Blended International Index
Emerging Markets Equity	Blended Emerging Markets Index
Real Estate	NCREIF Property Index
Fixed Income	Bloomberg Barclays Aggregate Index
Cash & Equivalent	90 Day T Bill
- * The Blended International Index utilizes the returns of the S&P Developed BMI through April 30, 2015 and the MSCI EAFE Index thereafter.
- * The Blended Emerging Markets Index utilizes the returns of the S&P Emerging BMI through April 30, 2015 and the MSCI Emerging Markets Index thereafter.
- * Dahab Associates utilizes data provided by a custodian and other vendors it believes are reliable. However, it cannot assume responsibility for errors and omissions therefrom.
- * All returns were calculated on a time-weighted basis, and are gross of fees unless otherwise noted.
- * All returns for periods greater than one year are annualized.
- * Dahab Associates uses the modified duration measure to present average duration.
- * All values are in US dollars.

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
AMI ASSET MANAGEMENT - SMALL CAP GROWTH EQUITY
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's AMI Asset Management Small Cap Growth Equity portfolio was valued at \$37,442,685, representing an increase of \$9,099,605 from the March quarter's ending value of \$28,343,080. Last quarter, the Fund posted withdrawals totaling \$67,618, which partially offset the portfolio's net investment return of \$9,167,223. Income receipts totaling \$57,233 plus net realized and unrealized capital gains of \$9,109,990 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the AMI Asset Management Small Cap Growth Equity portfolio returned 32.4%, which was 1.8% above the Russell 2000 Growth Index's return of 30.6% and ranked in the 54th percentile of the Small Cap Growth universe. Over the trailing year, the portfolio returned 0.0%, which was 3.5% below the benchmark's 3.5% return, ranking in the 79th percentile. Since September 2017, the portfolio returned 1.4% annualized and ranked in the 94th percentile. The Russell 2000 Growth returned an annualized 6.2% over the same period.

ASSET ALLOCATION

At the end of the second quarter, small cap equities comprised 98.2% of the total portfolio (\$36.8 million), while cash & equivalents totaled 1.8% (\$658,965).

EQUITY ANALYSIS

Last quarter, the AMI portfolio utilized seven of the eleven industry sectors in our analysis. Relative to the Russell 2000 Growth index, the portfolio placed higher allocations in the Consumer Staples, Financials, and Information Technology sectors, while the Consumer Discretionary and Health Care sectors were underweight.

Favorable selection in the Financials and Industrials sectors helped the portfolio to beat its benchmark last quarter. Sub-par performance in several other sectors, including the heavily weighted Information Technology sector prevented the portfolio from increasing its lead over the index.

EXECUTIVE SUMMARY**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	Since 09/17
Total Portfolio - Gross	32.4	0.2	0.0	----	----	1.4
<i>SMALL CAP GROWTH RANK</i>	(54)	(62)	(79)	----	----	(94)
Total Portfolio - Net	32.2	-0.2	-0.7	----	----	0.6
Russell 2000G	30.6	-3.1	3.5	7.8	6.8	6.2
Small Cap Equity - Gross	33.5	-0.4	-0.6	----	----	1.2
<i>SMALL CAP GROWTH RANK</i>	(52)	(64)	(84)	----	----	(95)
Russell 2000G	30.6	-3.1	3.5	7.8	6.8	6.2

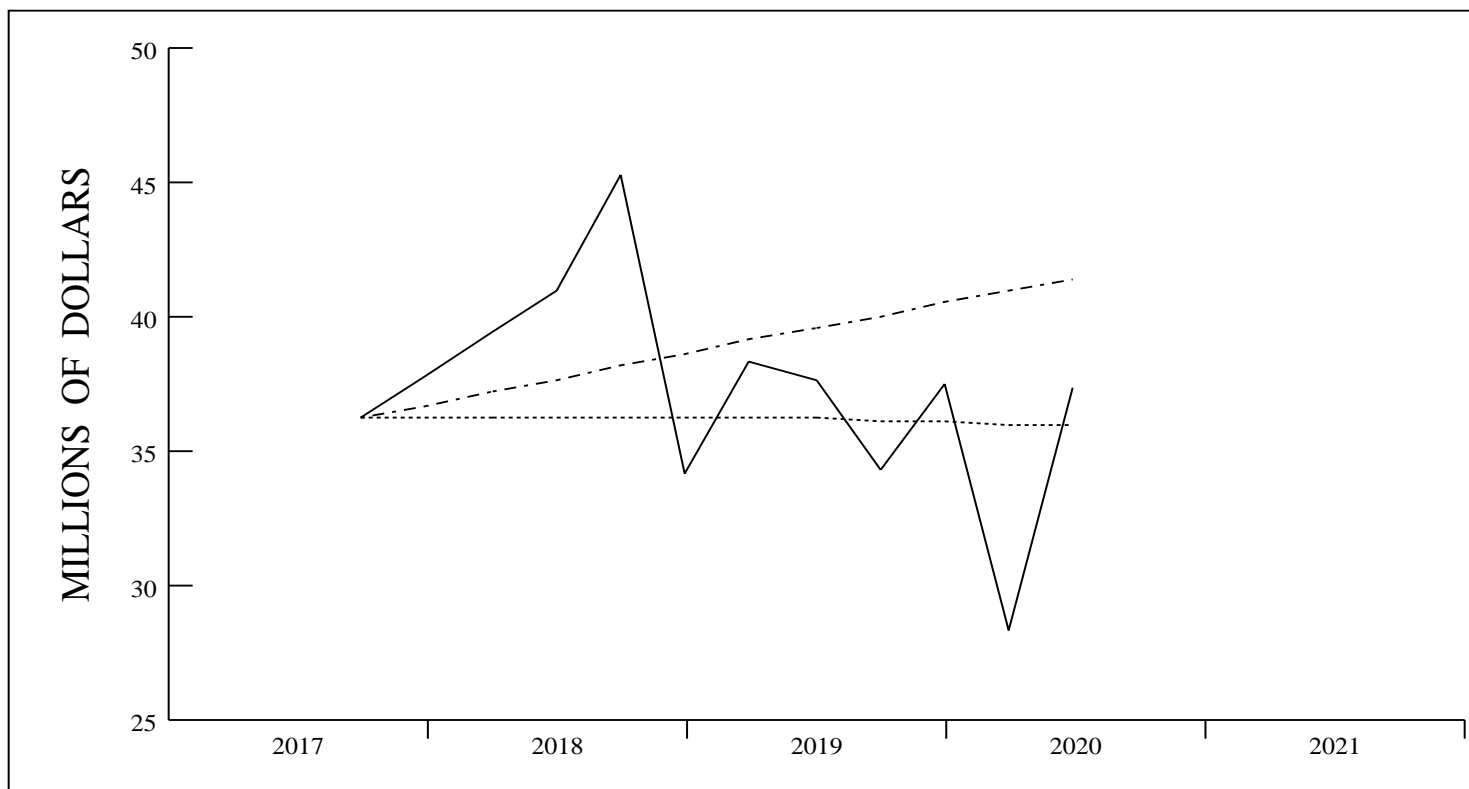
ASSET ALLOCATION

Small Cap	98.2%	\$ 36,783,720
Cash	1.8%	658,965
Total Portfolio	100.0%	\$ 37,442,685

INVESTMENT RETURN

Market Value 3/2020	\$ 28,343,080
Contribs / Withdrawals	- 67,618
Income	57,233
Capital Gains / Losses	9,109,990
Market Value 6/2020	\$ 37,442,685

INVESTMENT GROWTH

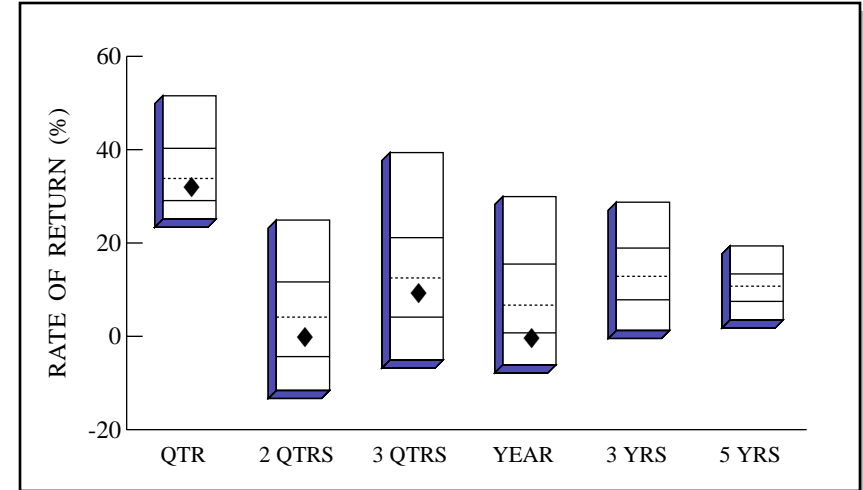
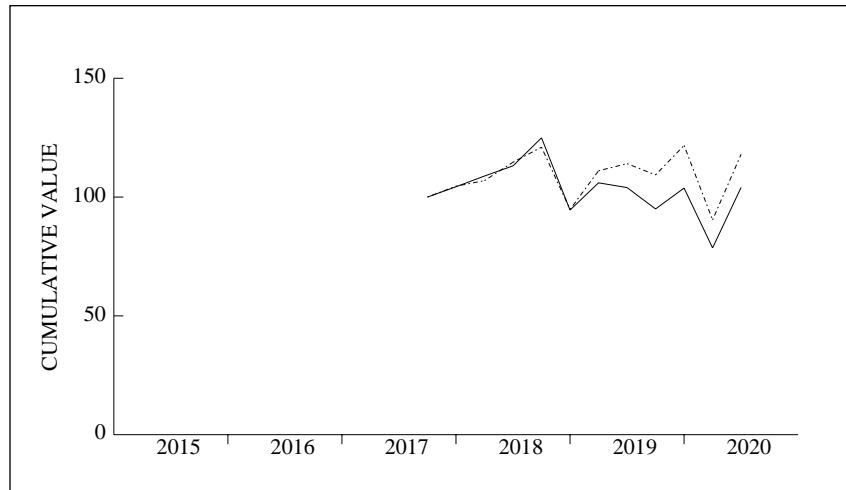


——— ACTUAL RETURN
 - - - - - 5.25%
 0.0%

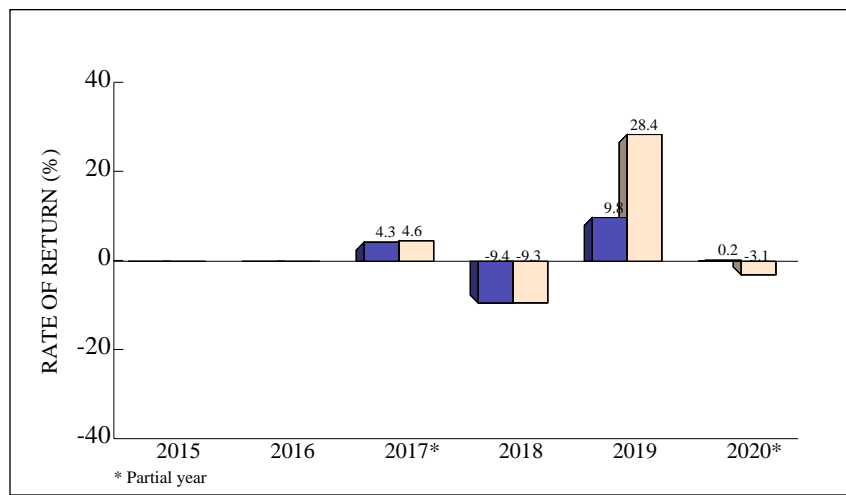
VALUE ASSUMING
 5.25% RETURN \$ 41,484,499

	LAST QUARTER	PERIOD 9/17 - 6/20
BEGINNING VALUE	\$ 28,343,080	\$ 36,293,387
NET CONTRIBUTIONS	- 67,618	-284,173
<u>INVESTMENT RETURN</u>	<u>9,167,223</u>	<u>1,433,471</u>
ENDING VALUE	\$ 37,442,685	\$ 37,442,685
INCOME	57,233	447,003
<u>CAPITAL GAINS (LOSSES)</u>	<u>9,109,990</u>	<u>986,468</u>
INVESTMENT RETURN	9,167,223	1,433,471

TOTAL RETURN COMPARISONS



Small Cap Growth Universe



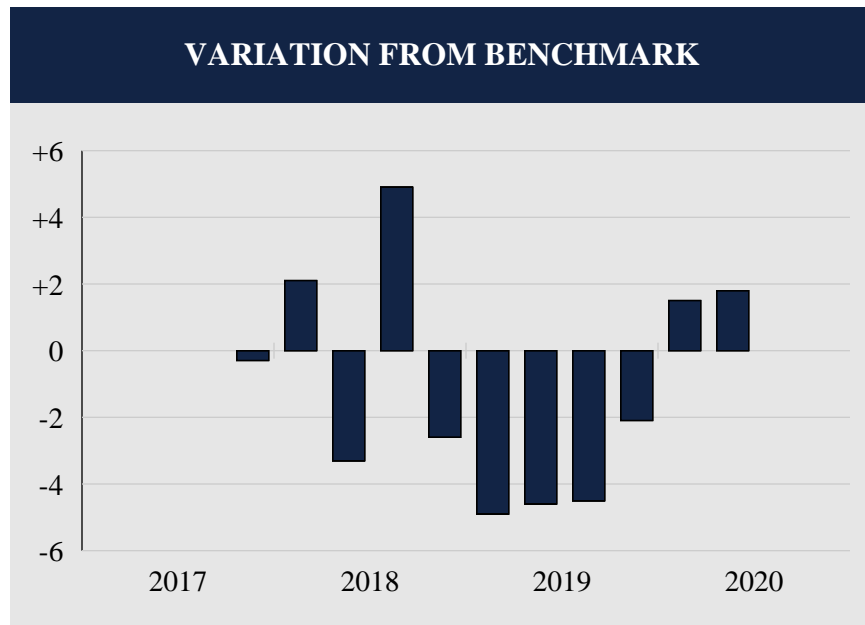
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	32.4	0.2	9.5	0.0	---	---
(RANK)	(54)	(62)	(57)	(79)	---	---
5TH %ILE	51.5	24.9	39.4	29.9	28.8	19.4
25TH %ILE	40.3	11.7	21.1	15.5	18.9	13.4
MEDIAN	33.8	4.1	12.5	6.7	12.9	10.7
75TH %ILE	29.1	-4.4	4.1	0.7	7.8	7.5
95TH %ILE	25.1	-11.6	-5.1	-6.1	1.3	3.5
Russ 2000G	30.6	-3.1	8.0	3.5	7.8	6.8

Small Cap Growth Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY

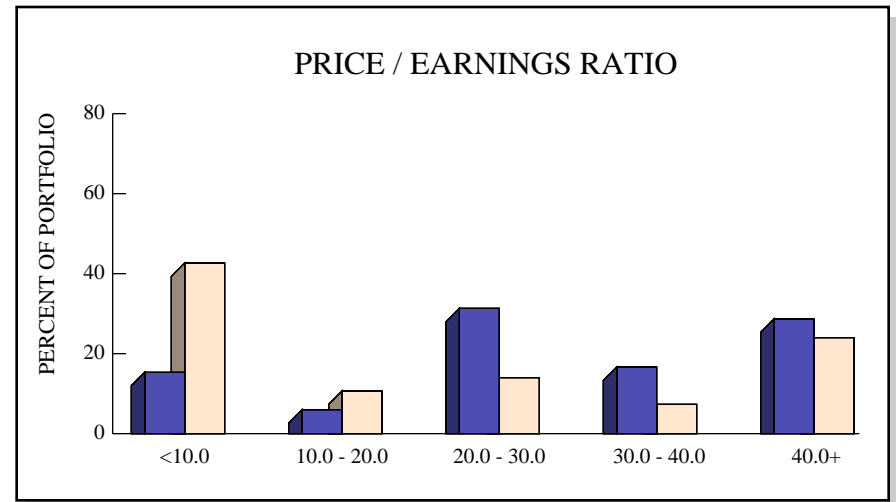
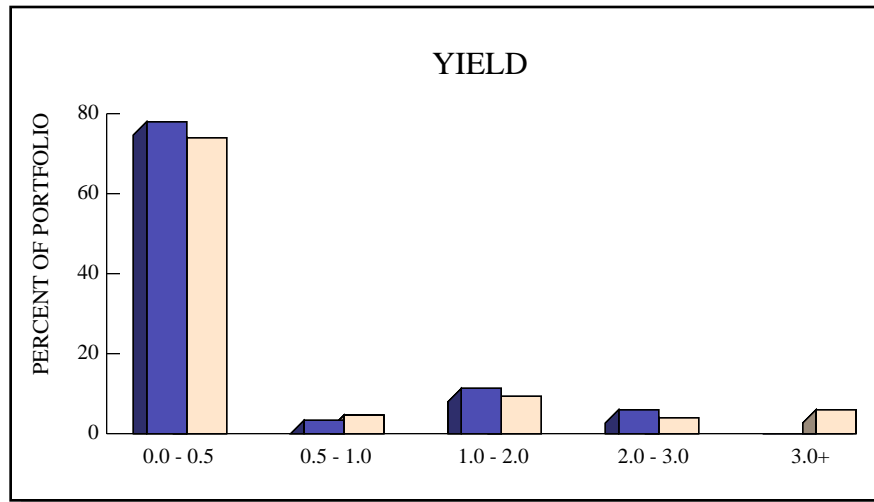
COMPARATIVE BENCHMARK: RUSSELL 2000 GROWTH



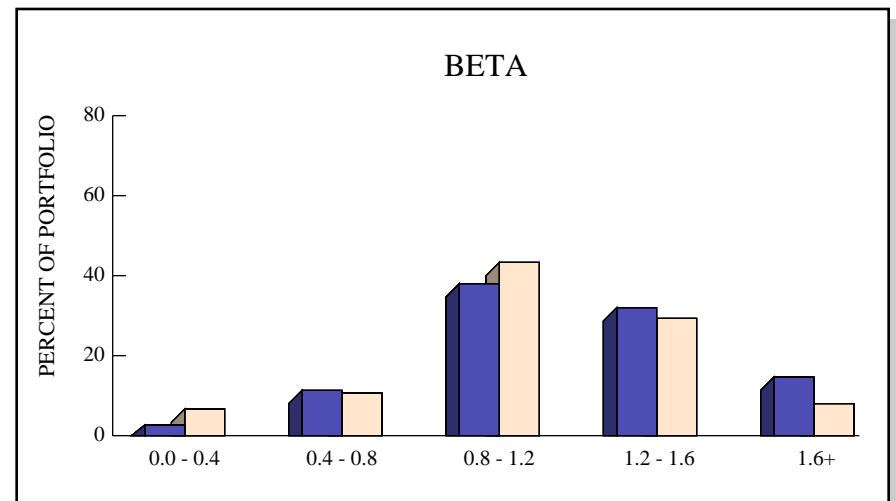
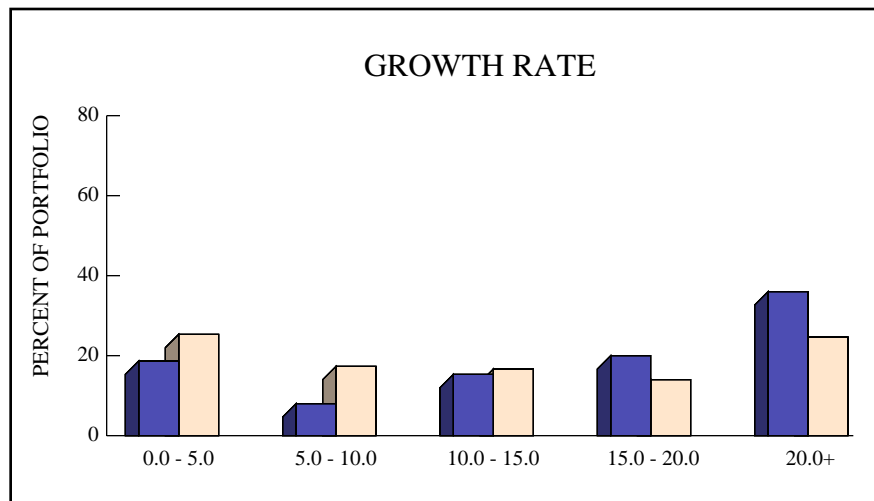
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
12/17	4.3	4.6	-0.3
3/18	4.4	2.3	2.1
6/18	3.9	7.2	-3.3
9/18	10.4	5.5	4.9
12/18	-24.3	-21.7	-2.6
3/19	12.2	17.1	-4.9
6/19	-1.9	2.7	-4.6
9/19	-8.7	-4.2	-4.5
12/19	9.3	11.4	-2.1
3/20	-24.3	-25.8	1.5
6/20	32.4	30.6	1.8

Total Quarters Observed	11
Quarters At or Above the Benchmark	4
Quarters Below the Benchmark	7
Batting Average	.364

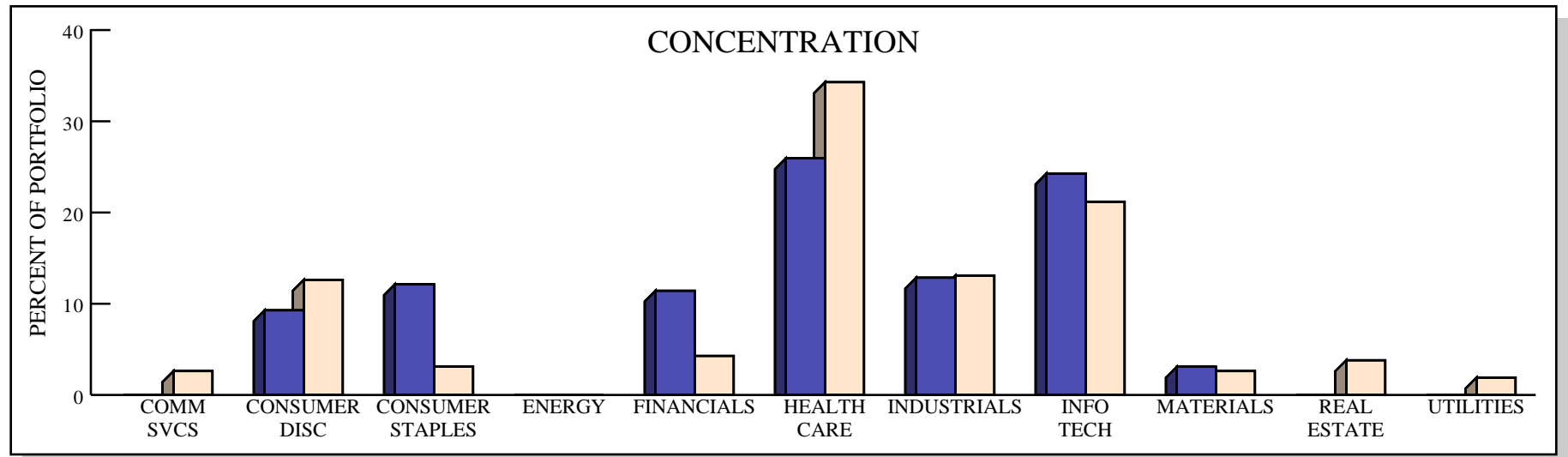
STOCK CHARACTERISTICS



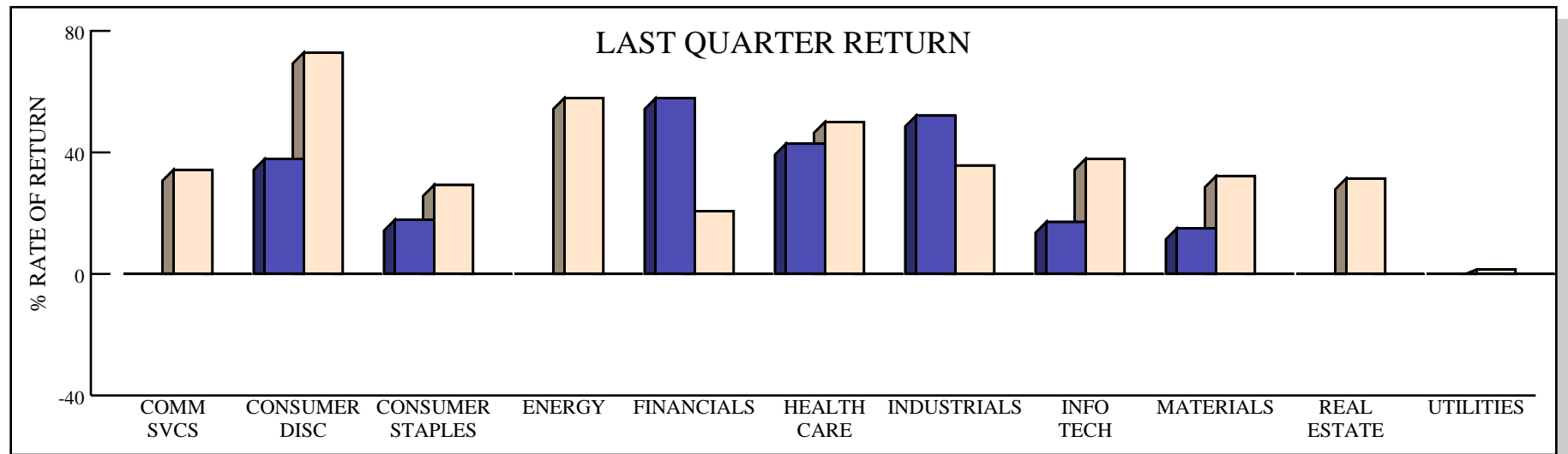
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	33	0.3%	19.7%	45.2	1.15
RUSSELL 2000G	1,081	0.7%	19.1%	12.3	1.08



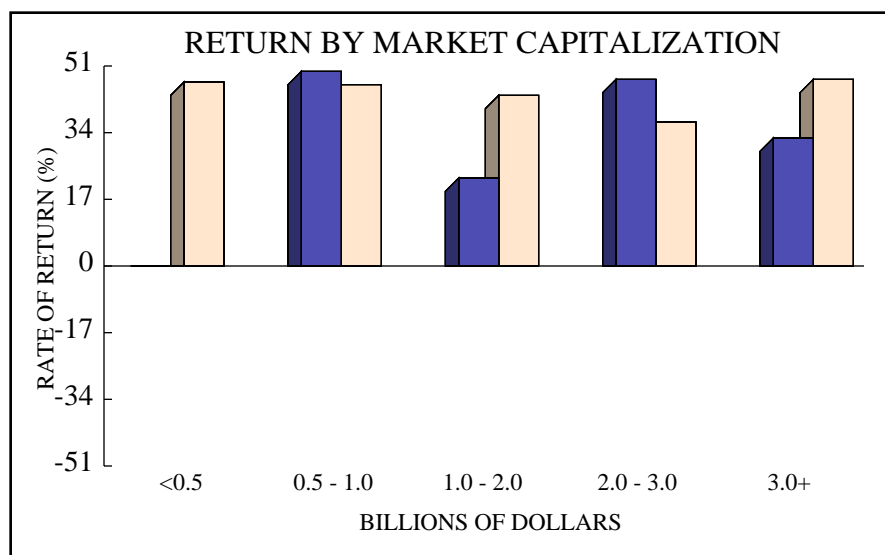
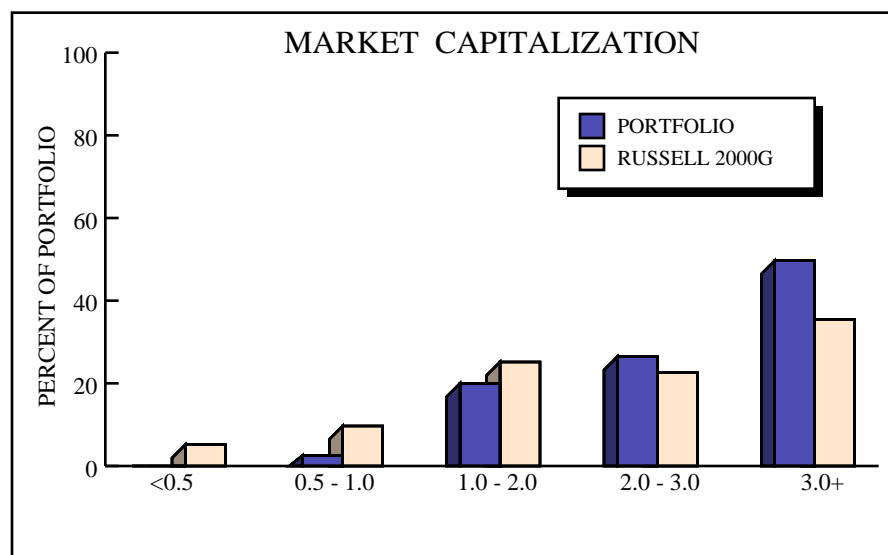
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 2000G



TOP TEN HOLDINGS



TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	GREEN DOT CORP-CLASS A	\$ 1,903,126	5.17%	93.3%	Financials	\$ 2.6 B
2	HALOZYME THERAPEUTICS INC	1,697,636	4.62%	49.0%	Health Care	3.6 B
3	MERIT MEDICAL SYSTEMS INC	1,499,511	4.08%	46.1%	Health Care	2.5 B
4	CUBIC CORP	1,443,974	3.93%	16.3%	Industrials	1.5 B
5	SYNEOS HEALTH INC	1,440,406	3.92%	47.8%	Health Care	6.1 B
6	LIGAND PHARMACEUTICALS	1,386,045	3.77%	53.8%	Health Care	1.8 B
7	SIMPLY GOOD FOODS CO/THE	1,378,004	3.75%	-3.5%	Consumer Staples	1.8 B
8	PERFICIENT INC	1,334,988	3.63%	32.1%	Information Technology	1.2 B
9	PRIMERICA INC	1,231,529	3.35%	32.3%	Financials	4.8 B
10	FRONTDOOR INC	1,224,794	3.33%	27.5%	Consumer Discretionary	3.8 B

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
COPELAND CAPITAL MANAGEMENT - SMALL CAP DIVIDEND GROWTH
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's Copeland Capital Management Small Cap Dividend Growth portfolio was valued at \$40,739,295, representing an increase of \$5,602,236 from the March quarter's ending value of \$35,137,059. Last quarter, the Fund posted withdrawals totaling \$52,198, which partially offset the portfolio's net investment return of \$5,654,434. Income receipts totaling \$187,479 plus net realized and unrealized capital gains of \$5,466,955 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the Copeland Capital Management Small Cap Dividend Growth portfolio returned 16.1%, which was 14.5% below the Russell 2000 Growth Index's return of 30.6% and ranked in the 99th percentile of the Small Cap Growth universe. Over the trailing year, the portfolio returned -8.1%, which was 11.6% below the benchmark's 3.5% return, ranking in the 96th percentile. Since September 2017, the portfolio returned 3.9% annualized and ranked in the 85th percentile. The Russell 2000 Growth returned an annualized 6.2% over the same period.

ASSET ALLOCATION

At the end of the second quarter, small cap equities comprised 97.1% of the total portfolio (\$39.6 million), while cash & equivalents totaled 2.9% (\$1.2 million).

EQUITY ANALYSIS

Last quarter, the Copeland portfolio held significantly less weight in the Health Care sector than its benchmark. Consumer Discretionary and Information Technology sectors were also underweight. Conversely, the Consumer Staples, Financials, Industrials, Real Estate, and Utilities sectors had heavier allocations.

By underweighting the Health Care and Consumer Discretionary sectors, the portfolio missed out on the growth potential those sectors offered last quarter. The portfolio also took a hit due to very unfavorable selection in all but two sectors (Financials and Materials), resulting in a double-digit performance deficit against the Russell 2000 Growth.

EXECUTIVE SUMMARY**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	Since 09/17
Total Portfolio - Gross	16.1	-14.7	-8.1	----	----	3.9
<i>SMALL CAP GROWTH RANK</i>	(99)	(98)	(96)	----	----	(85)
Total Portfolio - Net	15.9	-15.1	-8.9	----	----	3.0
Russell 2000G	30.6	-3.1	3.5	7.8	6.8	6.2
Small Cap Equity - Gross	16.7	-15.0	-8.3	----	----	4.0
<i>SMALL CAP GROWTH RANK</i>	(99)	(98)	(96)	----	----	(85)
Russell 2000G	30.6	-3.1	3.5	7.8	6.8	6.2

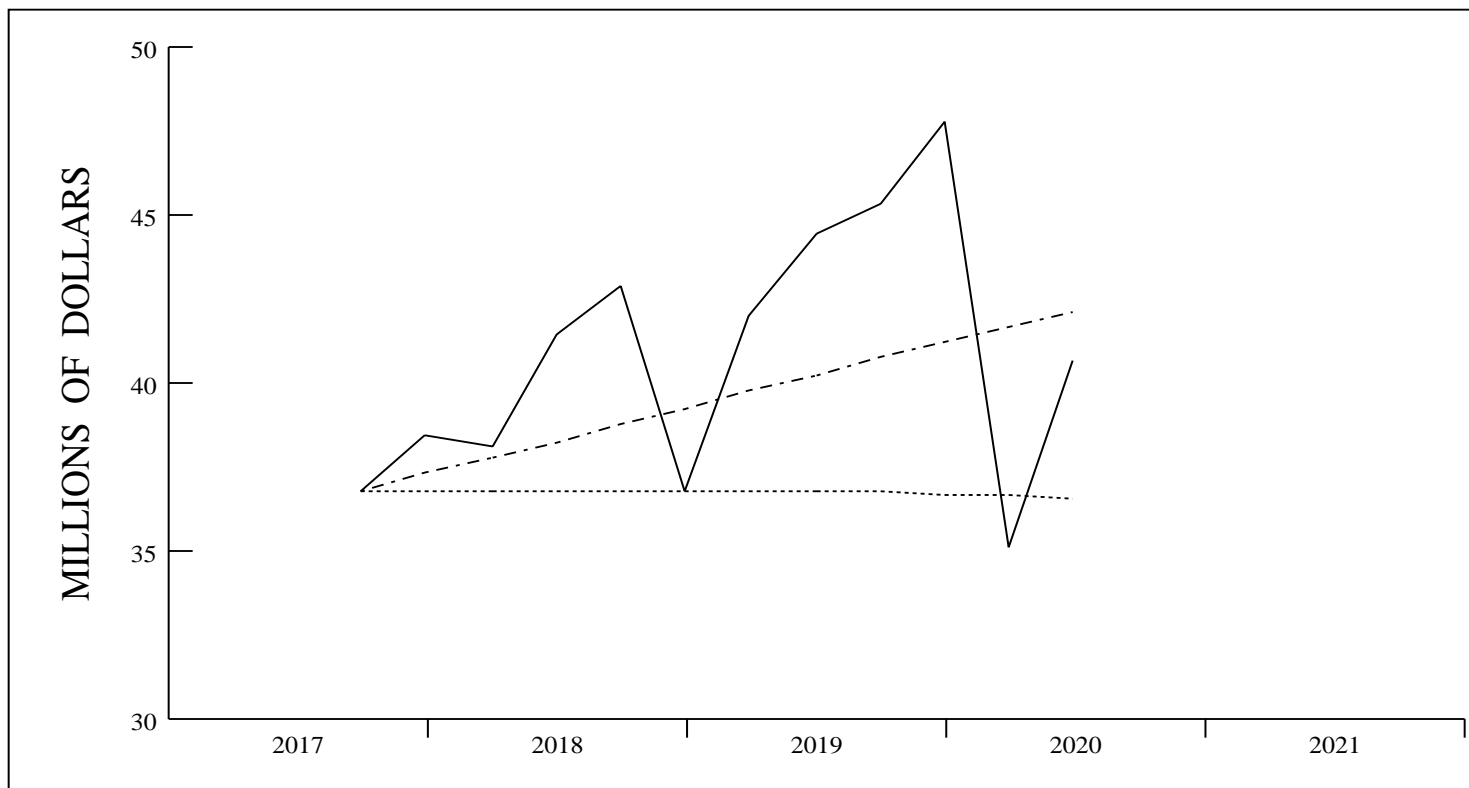
ASSET ALLOCATION

Small Cap	97.1%	\$ 39,571,353
Cash	2.9%	1,167,942
Total Portfolio	100.0%	\$ 40,739,295

INVESTMENT RETURN

Market Value 3/2020	\$ 35,137,059
Contribs / Withdrawals	- 52,198
Income	187,479
Capital Gains / Losses	5,466,955
Market Value 6/2020	\$ 40,739,295

INVESTMENT GROWTH

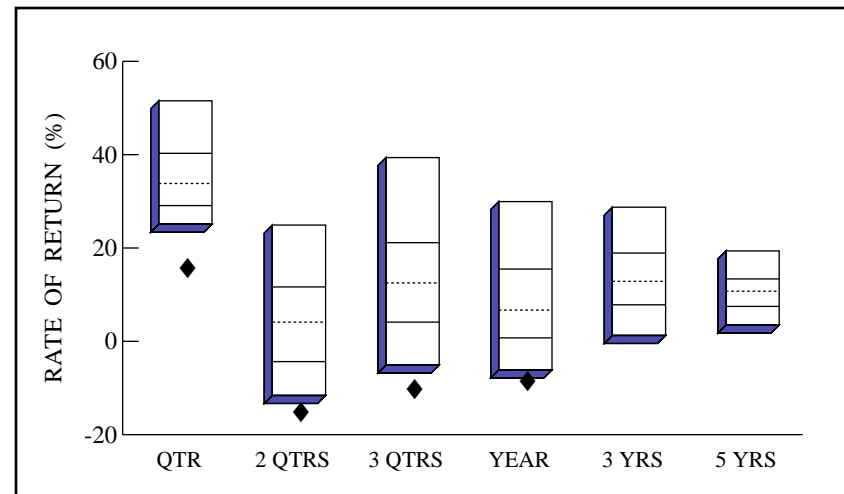
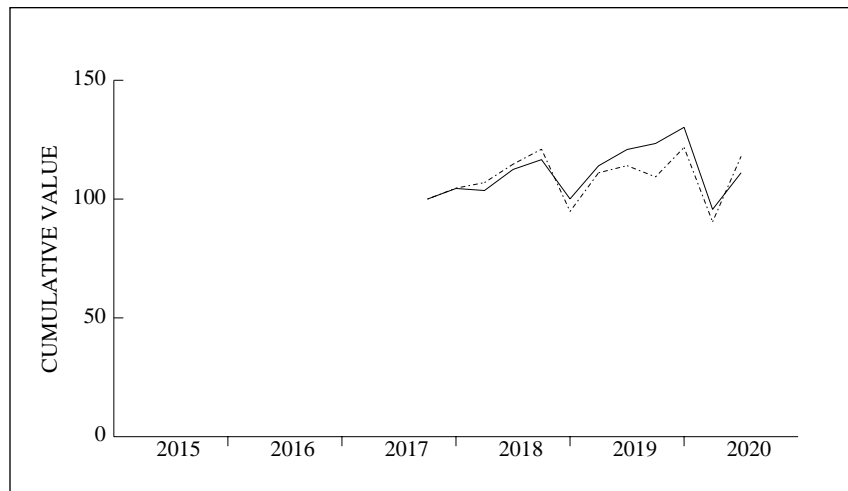


— ACTUAL RETURN
 - - - 5.25%
 . . . 0.0%

VALUE ASSUMING
 5.25% RETURN \$ 42,203,026

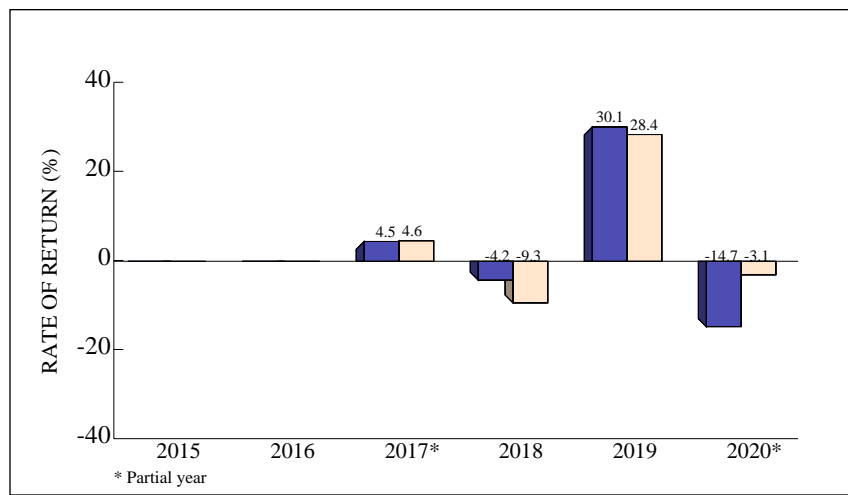
	LAST QUARTER	PERIOD 9/17 - 6/20
BEGINNING VALUE	\$ 35,137,059	\$ 36,860,615
NET CONTRIBUTIONS	- 52,198	-221,450
<u>INVESTMENT RETURN</u>	<u>5,654,434</u>	<u>4,100,130</u>
ENDING VALUE	\$ 40,739,295	\$ 40,739,295
INCOME	187,479	2,358,636
<u>CAPITAL GAINS (LOSSES)</u>	<u>5,466,955</u>	<u>1,741,494</u>
INVESTMENT RETURN	5,654,434	4,100,130

TOTAL RETURN COMPARISONS



■ ——— PORTFOLIO
■ - - - - RUSSELL 2000G

Small Cap Growth Universe



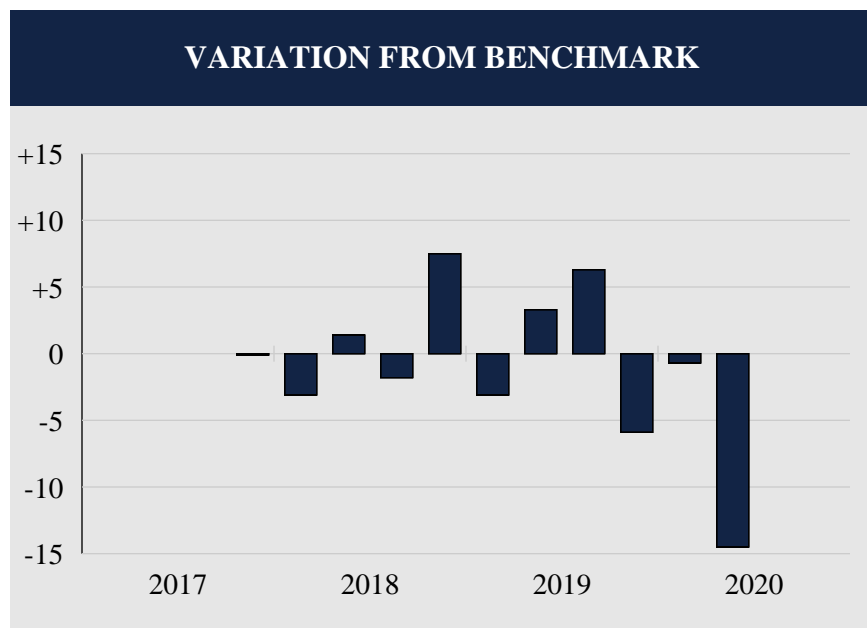
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	16.1	-14.7	-10.0	-8.1	----	----
(RANK)	(99)	(98)	(99)	(96)	----	----
5TH %ILE	51.5	24.9	39.4	29.9	28.8	19.4
25TH %ILE	40.3	11.7	21.1	15.5	18.9	13.4
MEDIAN	33.8	4.1	12.5	6.7	12.9	10.7
75TH %ILE	29.1	-4.4	4.1	0.7	7.8	7.5
95TH %ILE	25.1	-11.6	-5.1	-6.1	1.3	3.5
Russ 2000G	30.6	-3.1	8.0	3.5	7.8	6.8

Small Cap Growth Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY

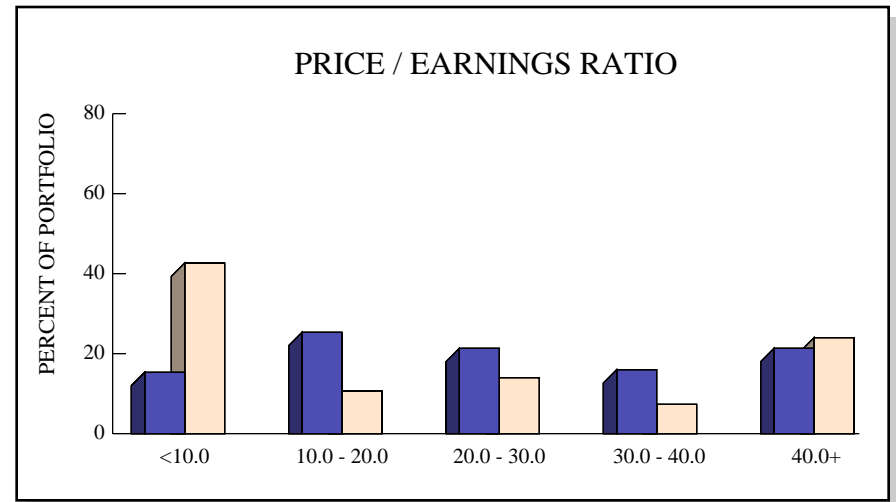
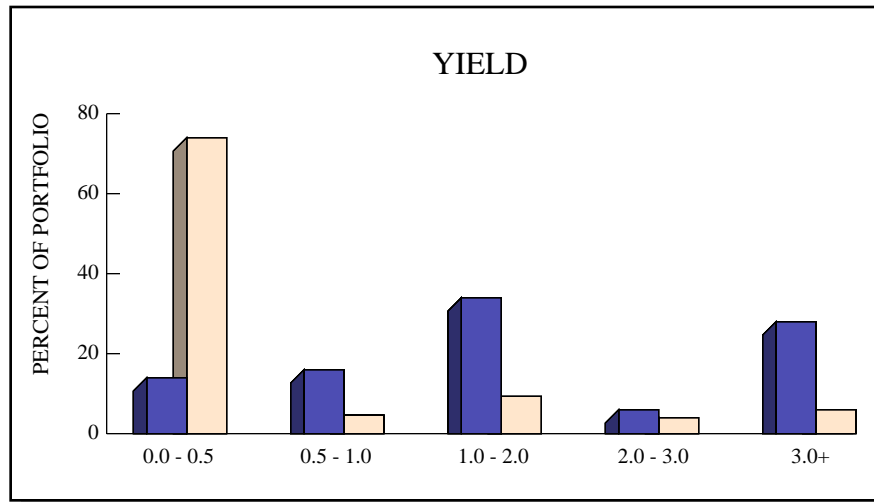
COMPARATIVE BENCHMARK: RUSSELL 2000 GROWTH



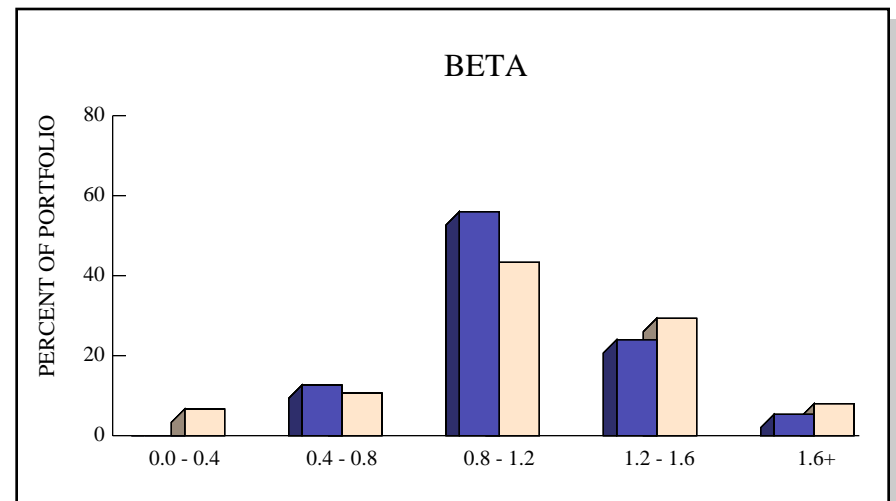
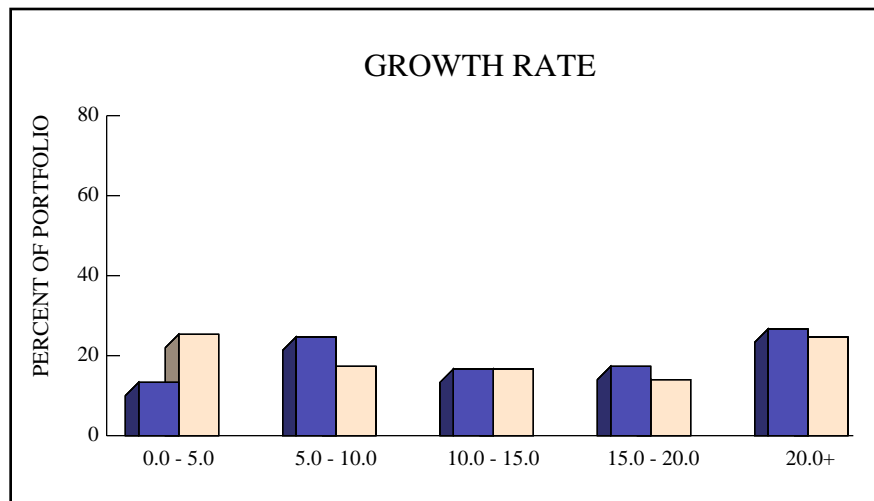
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
12/17	4.5	4.6	-0.1
3/18	-0.8	2.3	-3.1
6/18	8.6	7.2	1.4
9/18	3.7	5.5	-1.8
12/18	-14.2	-21.7	7.5
3/19	14.0	17.1	-3.1
6/19	6.0	2.7	3.3
9/19	2.1	-4.2	6.3
12/19	5.5	11.4	-5.9
3/20	-26.5	-25.8	-0.7
6/20	16.1	30.6	-14.5

Total Quarters Observed	11
Quarters At or Above the Benchmark	4
Quarters Below the Benchmark	7
Batting Average	.364

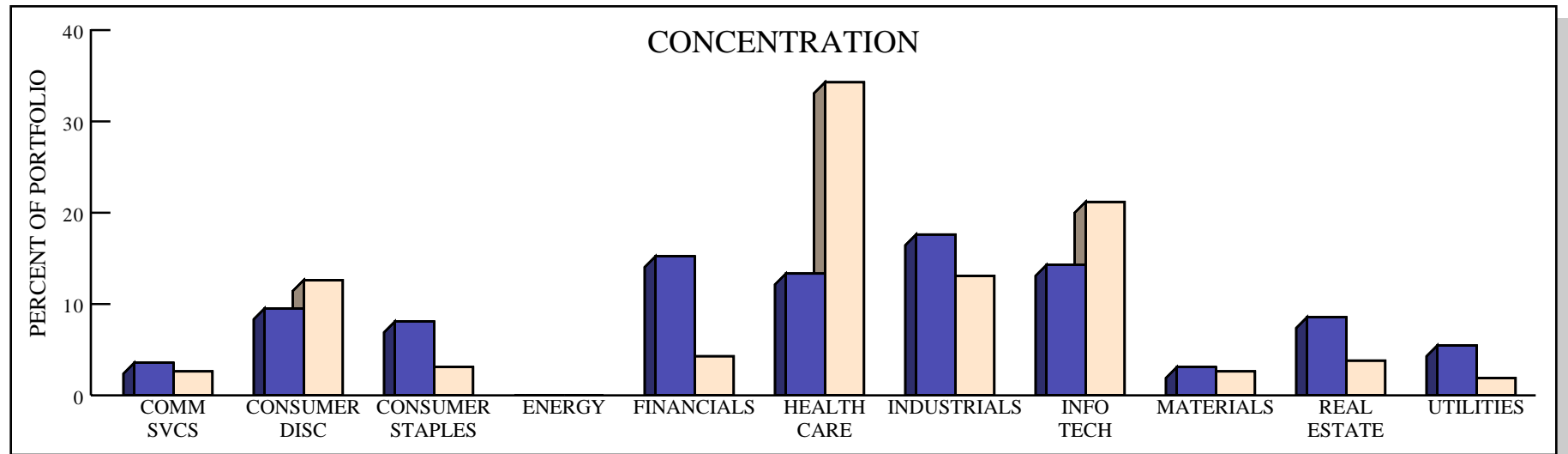
STOCK CHARACTERISTICS



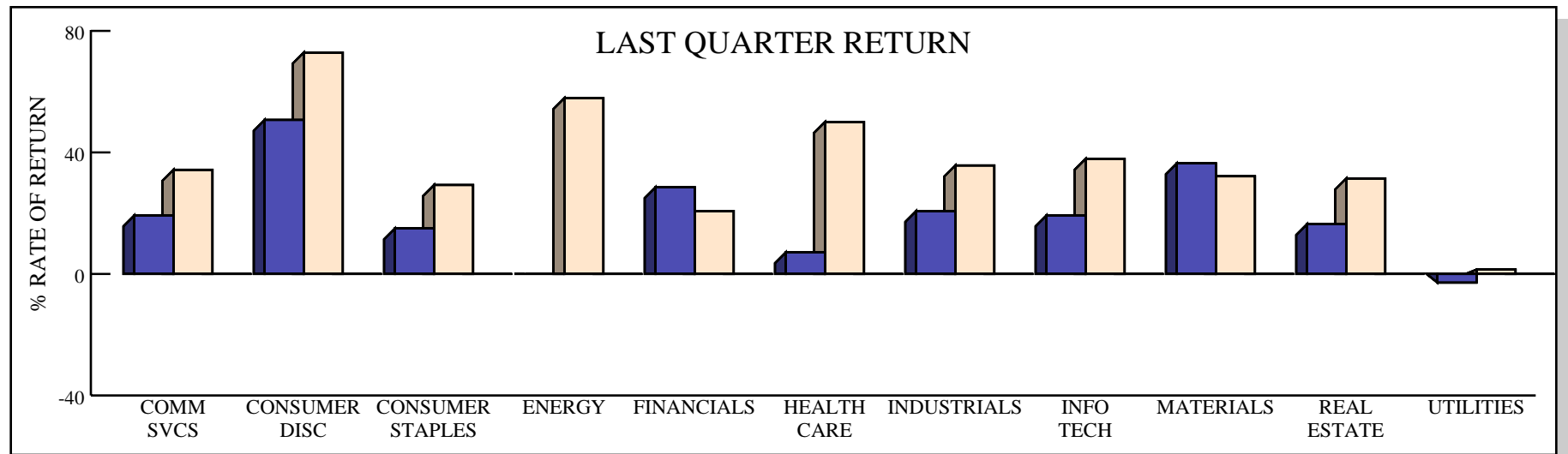
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	50	2.1%	19.3%	48.9	1.06
RUSSELL 2000G	1,081	0.7%	19.1%	12.3	1.08



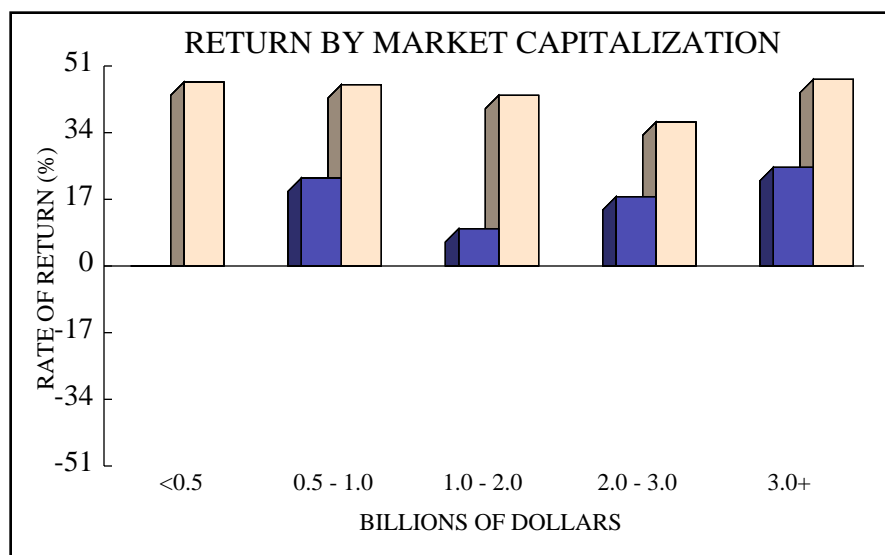
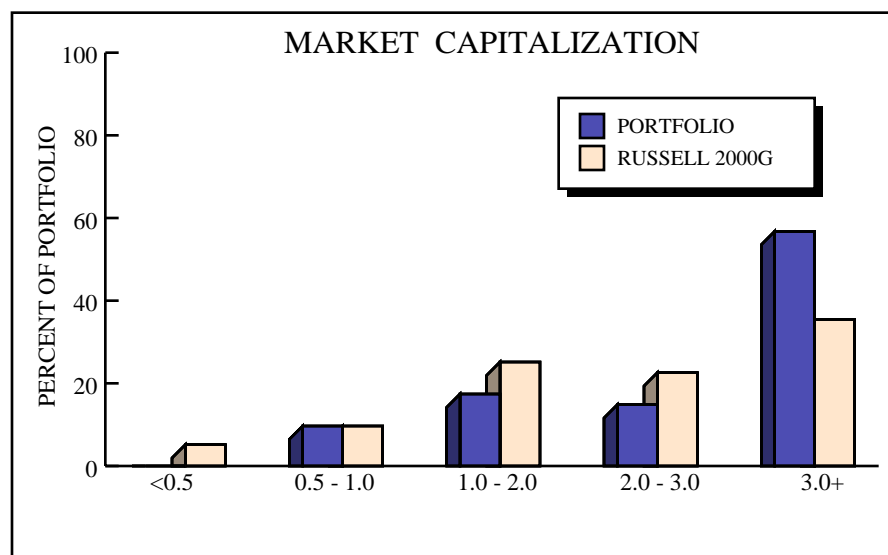
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 2000G



TOP TEN HOLDINGS



TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	CHEMED CORP	\$ 1,442,071	3.64%	4.2%	Health Care	\$ 7.2 B
2	COHEN & STEERS INC	1,132,012	2.86%	50.7%	Financials	3.3 B
3	ENSIGN GROUP INC/THE	1,103,961	2.79%	11.4%	Health Care	2.2 B
4	EXPONENT INC	1,061,559	2.68%	12.8%	Industrials	4.2 B
5	BWX TECHNOLOGIES INC	1,049,709	2.65%	16.7%	Industrials	5.4 B
6	TETRA TECH INC	1,036,630	2.62%	12.3%	Industrials	4.3 B
7	ENCOMPASS HEALTH CORP	1,030,453	2.60%	-2.8%	Health Care	6.2 B
8	POWER INTEGRATIONS INC	958,271	2.42%	34.0%	Information Technology	3.5 B
9	AARON'S INC	952,492	2.41%	99.5%	Consumer Discretionary	3.1 B
10	MSC INDUSTRIAL DIRECT CO-A	926,726	2.34%	34.2%	Industrials	3.3 B

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
EAGLE CAPITAL MANAGEMENT - EQUITY
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's Eagle Capital Management Equity portfolio was valued at \$148,169,600, representing an increase of \$23,759,913 from the March quarter's ending value of \$124,409,687. Last quarter, the Fund posted withdrawals totaling \$276,192, which partially offset the portfolio's net investment return of \$24,036,105. Income receipts totaling \$370,466 plus net realized and unrealized capital gains of \$23,665,639 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the Eagle Capital Management Equity portfolio returned 19.4%, which was 5.1% above the Russell 1000 Value Index's return of 14.3% and ranked in the 28th percentile of the Large Cap Value universe. Over the trailing year, the portfolio returned 0.1%, which was 9.0% above the benchmark's -8.9% return, ranking in the 20th percentile. Since March 2016, the portfolio returned 12.7% annualized and ranked in the 5th percentile. The Russell 1000 Value returned an annualized 5.9% over the same period.

ASSET ALLOCATION

At the end of the second quarter, large cap equities comprised 97.2% of the total portfolio (\$144.0 million), while cash & equivalents totaled 2.8% (\$4.2 million).

EQUITY ANALYSIS

The Eagle portfolio was concentrated last quarter into seven sectors, leaving vacant Consumer Staples, Energy, Reals Estate, and Utilities. The Communication Services and Financials sectors received the greatest allocations, making up a third and a quarter of the portfolio, respectively. The Consumer Discretionary sector was also notably overweight, while the Health Care, Industrials, and Materials sectors were underweight.

Strong selection in all but two of the invested sectors (Consumer Discretionary and Industrials) boosted the portfolio over its index. Gains in the Communication Service sector had a particularly large impact due to its towering position in the portfolio.

EXECUTIVE SUMMARY**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	Since 03/16
Total Portfolio - Gross	19.4	-9.0	0.1	9.3	----	12.7
<i>LARGE CAP VALUE RANK</i>	(28)	(19)	(20)	(11)	----	(5)
<i>LARGE CAP CORE RANK</i>	(62)	(82)	(79)	(54)	----	(13)
Total Portfolio - Net	19.1	-9.4	-0.6	8.4	----	11.9
Russell 1000V	14.3	-16.3	-8.9	1.8	4.6	5.9
Russell 1000	21.8	-2.8	7.5	10.6	10.5	12.3
Large Cap Equity - Gross	20.1	-8.7	0.5	9.5	----	13.2
<i>LARGE CAP VALUE RANK</i>	(23)	(19)	(19)	(10)	----	(4)
<i>LARGE CAP CORE RANK</i>	(54)	(82)	(76)	(51)	----	(11)
Russell 1000V	14.3	-16.3	-8.9	1.8	4.6	5.9
Russell 1000	21.8	-2.8	7.5	10.6	10.5	12.3

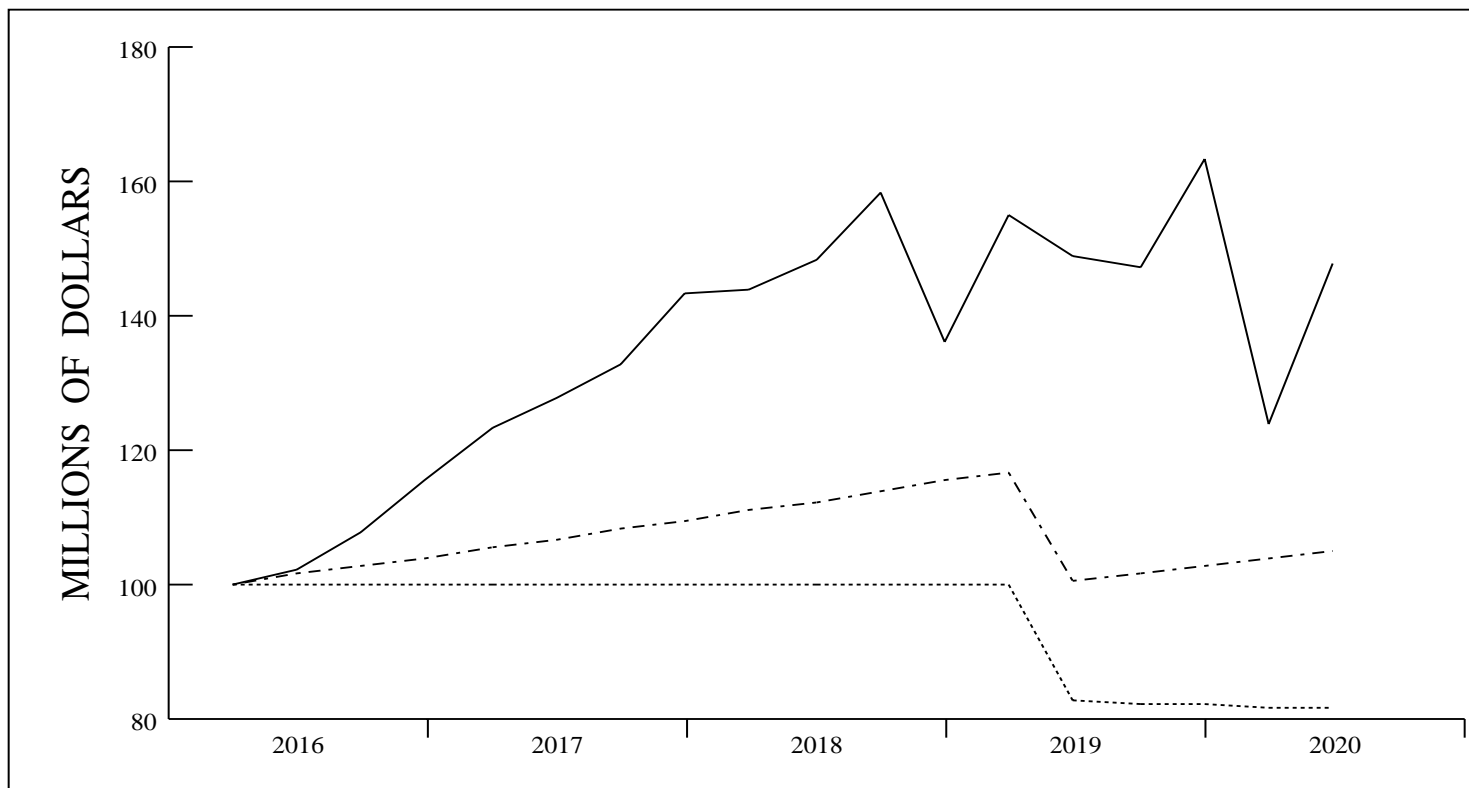
ASSET ALLOCATION

Large Cap Equity	97.2%	\$ 143,972,170
Cash	2.8%	4,197,430
Total Portfolio	100.0%	\$ 148,169,600

INVESTMENT RETURN

Market Value 3/2020	\$ 124,409,687
Contribs / Withdrawals	-276,192
Income	370,466
Capital Gains / Losses	23,665,639
Market Value 6/2020	\$ 148,169,600

INVESTMENT GROWTH

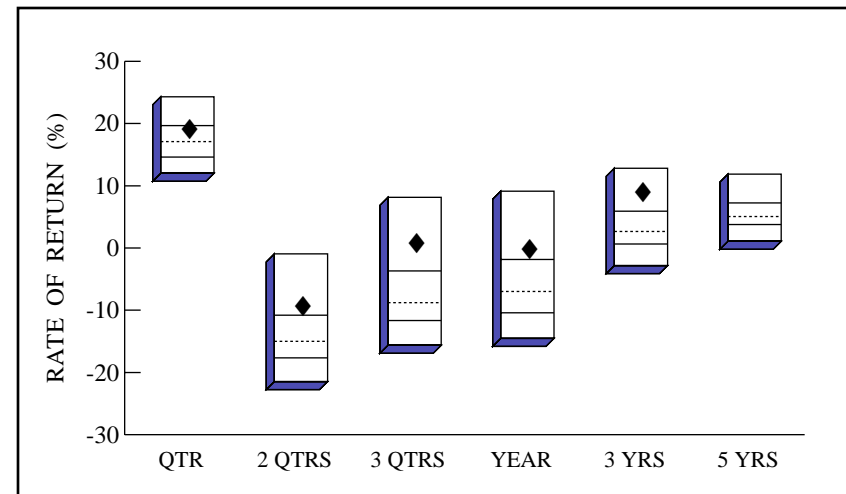
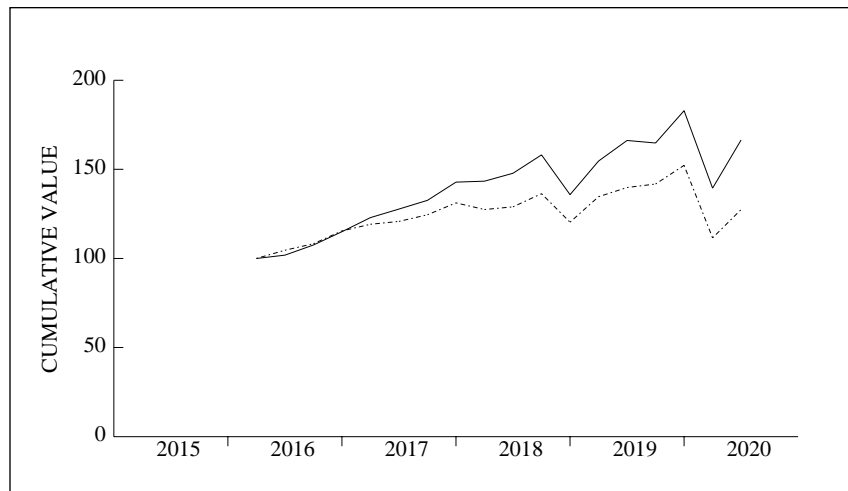


— ACTUAL RETURN
 - - - 5.25%
 0.0%

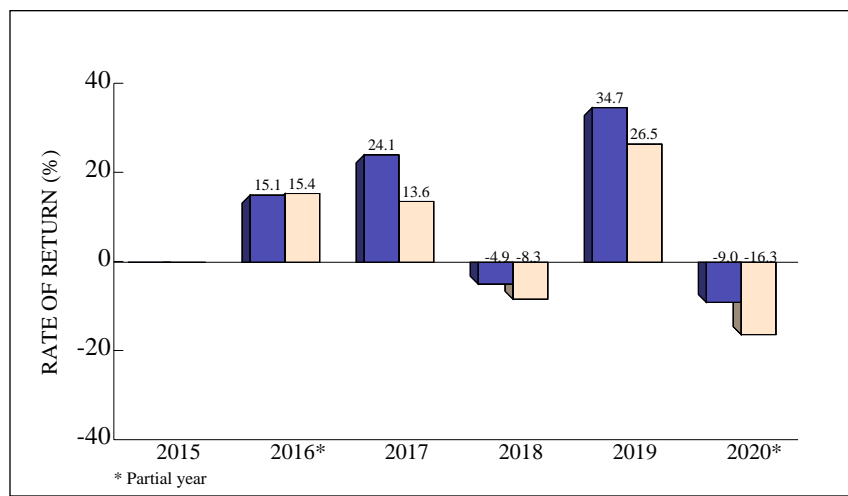
VALUE ASSUMING
 5.25% RETURN \$ 105,087,107

	LAST QUARTER	PERIOD 3/16 - 6/20
BEGINNING VALUE	\$ 124,409,687	\$ 100,475,791
NET CONTRIBUTIONS	-276,192	- 18,647,574
<u>INVESTMENT RETURN</u>	<u>24,036,105</u>	<u>66,341,383</u>
ENDING VALUE	\$ 148,169,600	\$ 148,169,600
INCOME	370,466	6,752,827
<u>CAPITAL GAINS (LOSSES)</u>	<u>23,665,639</u>	<u>59,588,556</u>
INVESTMENT RETURN	24,036,105	66,341,383

TOTAL RETURN COMPARISONS



Large Cap Value Universe

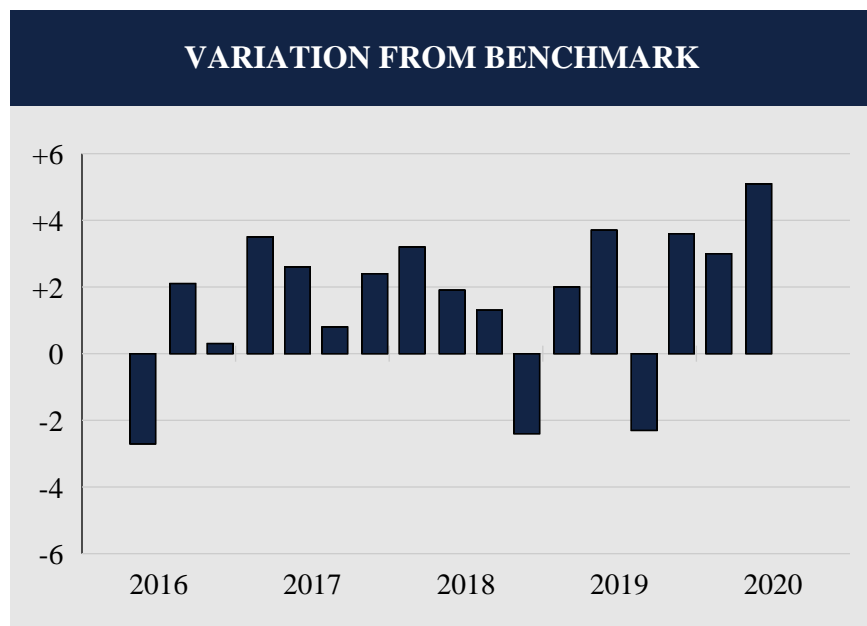


	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED----- 3 YRS	5 YRS
RETURN	19.4	-9.0	1.0	0.1	9.3	----
(RANK)	(28)	(19)	(16)	(20)	(11)	----
5TH %ILE	24.3	-1.0	8.2	9.1	12.8	11.9
25TH %ILE	19.7	-10.8	-3.7	-1.8	5.9	7.2
MEDIAN	17.1	-15.0	-8.8	-7.0	2.7	5.1
75TH %ILE	14.6	-17.7	-11.7	-10.4	0.6	3.8
95TH %ILE	12.0	-21.5	-15.7	-14.6	-2.8	1.1
Russ 1000V	14.3	-16.3	-10.1	-8.9	1.8	4.6

Large Cap Value Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY

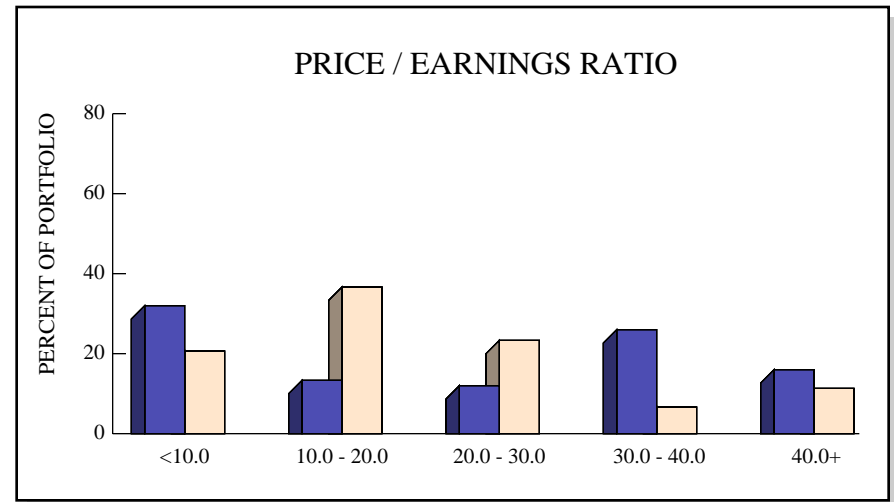
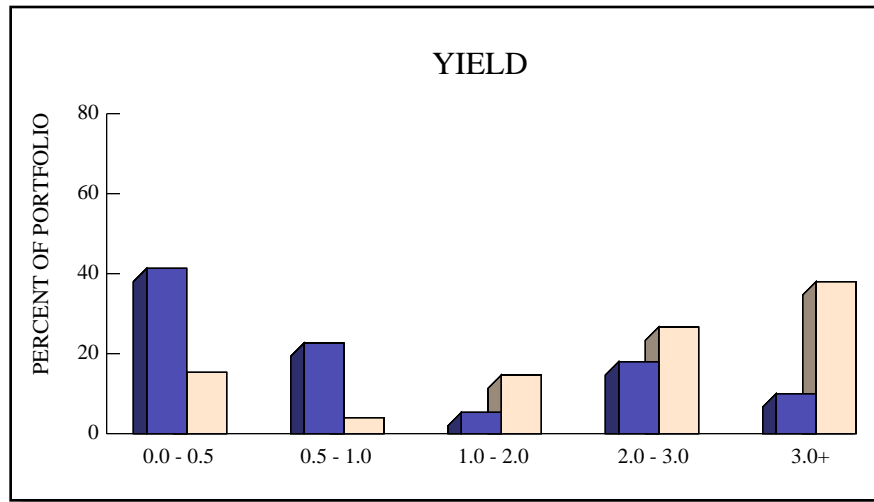
COMPARATIVE BENCHMARK: RUSSELL 1000 VALUE



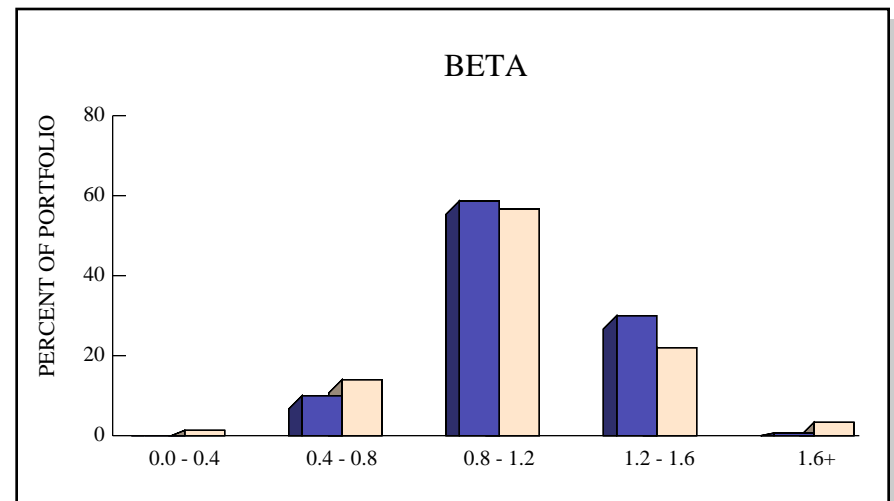
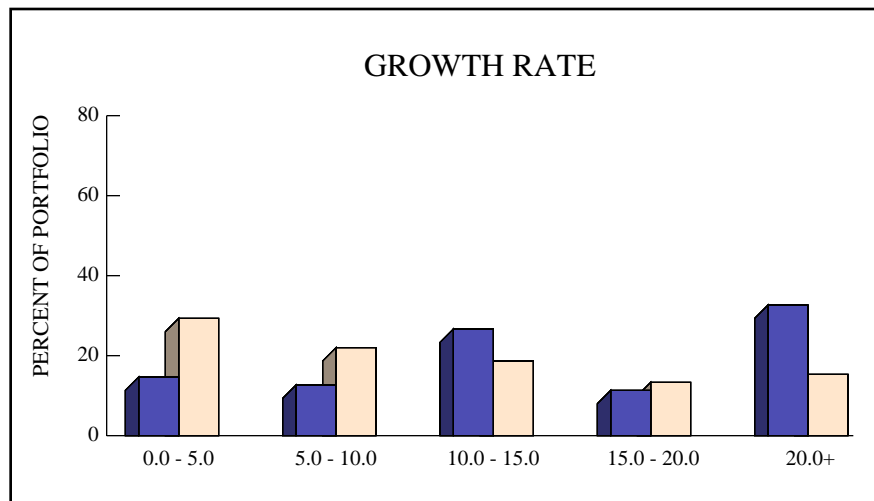
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
6/16	1.9	4.6	-2.7
9/16	5.6	3.5	2.1
12/16	7.0	6.7	0.3
3/17	6.8	3.3	3.5
6/17	3.9	1.3	2.6
9/17	3.9	3.1	0.8
12/17	7.7	5.3	2.4
3/18	0.4	-2.8	3.2
6/18	3.1	1.2	1.9
9/18	7.0	5.7	1.3
12/18	-14.1	-11.7	-2.4
3/19	13.9	11.9	2.0
6/19	7.5	3.8	3.7
9/19	-0.9	1.4	-2.3
12/19	11.0	7.4	3.6
3/20	-23.7	-26.7	3.0
6/20	19.4	14.3	5.1

Total Quarters Observed	17
Quarters At or Above the Benchmark	14
Quarters Below the Benchmark	3
Batting Average	.824

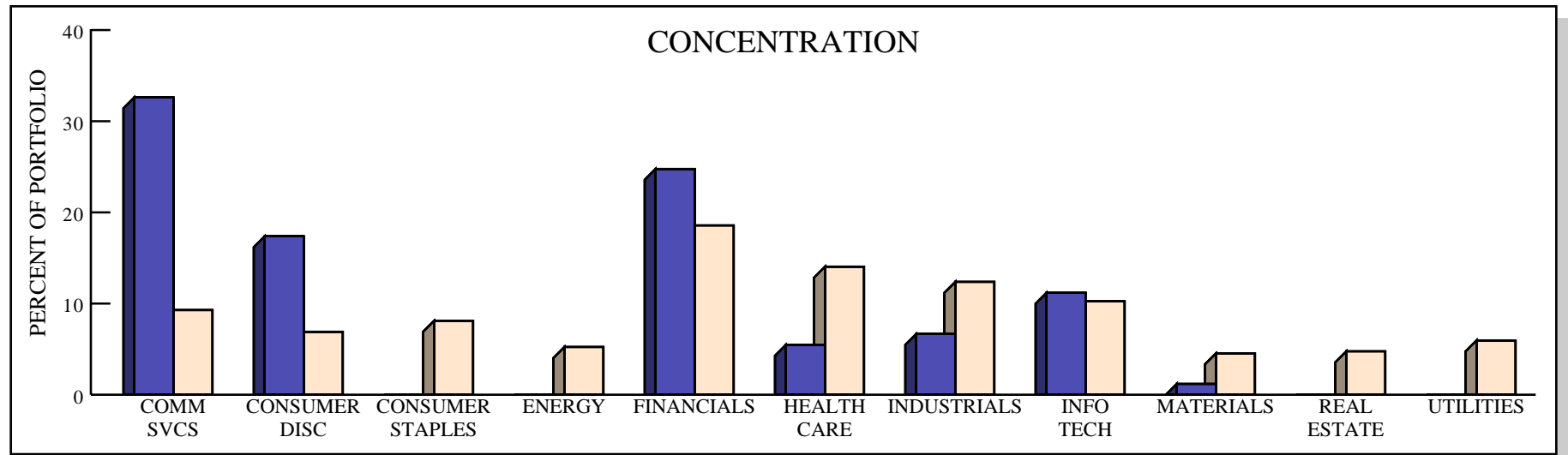
STOCK CHARACTERISTICS



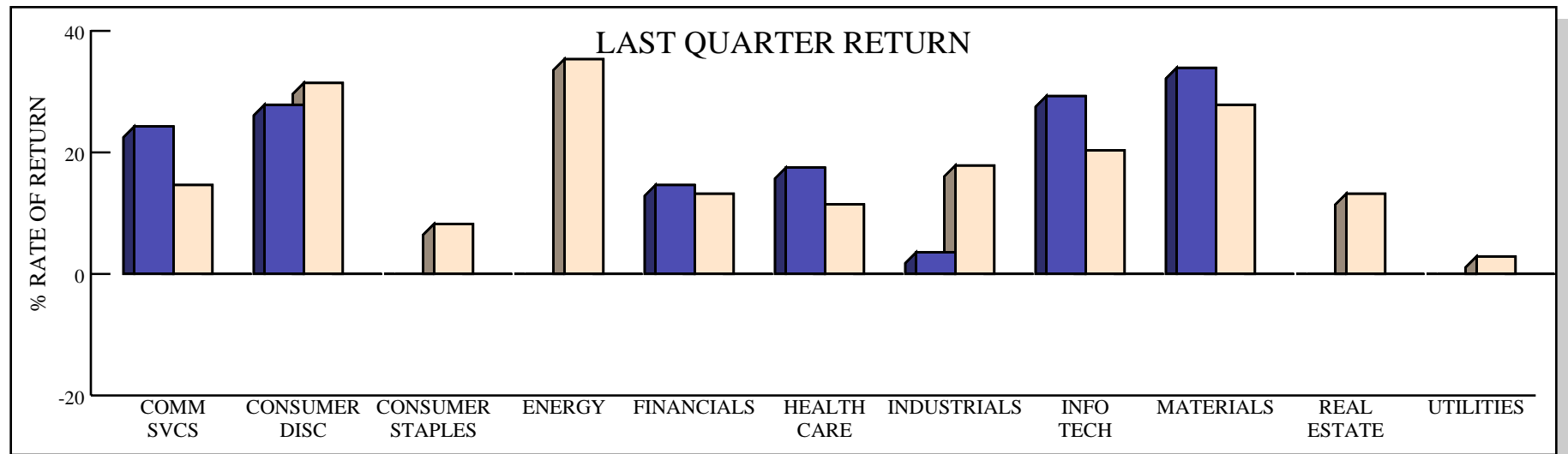
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	29	1.3%	19.9%	33.0	1.07
RUSSELL 1000V	839	2.9%	9.7%	17.2	1.05



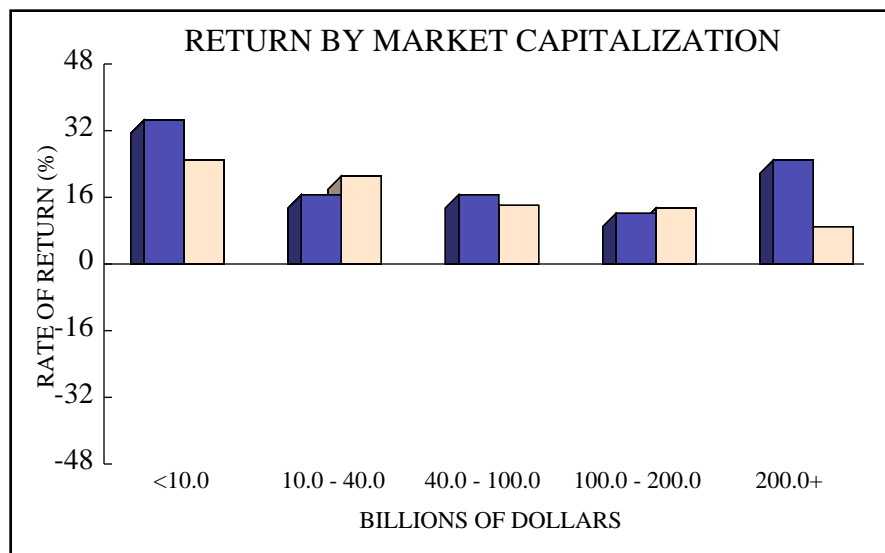
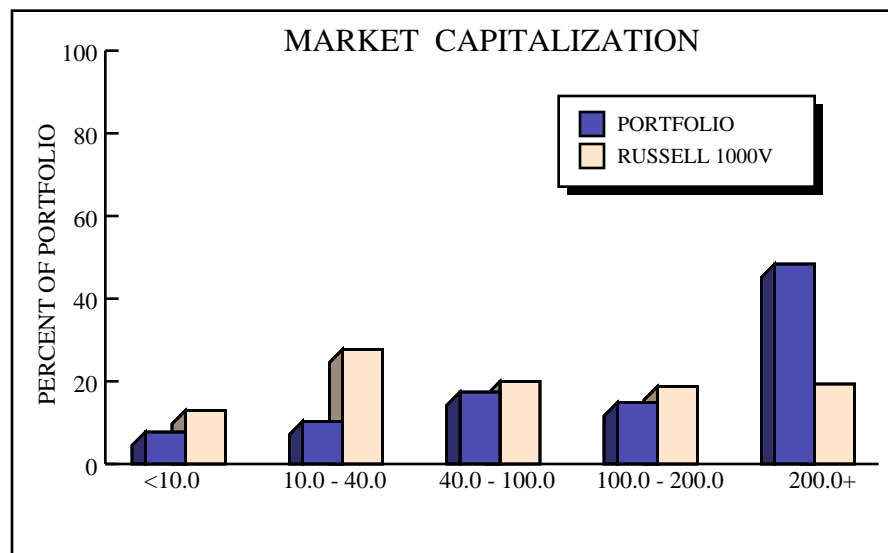
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 1000V



TOP TEN HOLDINGS



TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	MICROSOFT CORP	\$ 16,287,719	11.31%	29.4%	Information Technology	\$ 1543.3 B
2	ALPHABET INC-CL C	13,839,242	9.61%	21.6%	Communication Services	475.2 B
3	AMAZON.COM INC	12,938,866	8.99%	41.5%	Consumer Discretionary	1376.0 B
4	BERKSHIRE HATHAWAY INC-CL B	9,595,091	6.66%	-2.4%	Financials	248.3 B
5	COMCAST CORP-CLASS A	9,547,566	6.63%	14.1%	Communication Services	177.5 B
6	FACEBOOK INC-CLASS A	7,532,139	5.23%	36.1%	Communication Services	546.5 B
7	GOLDMAN SACHS GROUP INC	6,411,386	4.45%	28.7%	Financials	68.0 B
8	AON PLC	6,389,890	4.44%	17.0%	Financials	44.5 B
9	MARRIOTT INTERNATIONAL -CL A	6,114,864	4.25%	14.6%	Consumer Discretionary	27.8 B
10	CITIGROUP INC	5,852,381	4.06%	22.7%	Financials	106.4 B

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
EMERALD ADVISORS - DIVERSIFIED SMALL CAP GROWTH
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's Emerald Advisors Diversified Small Cap Growth portfolio was valued at \$69,869,615, representing an increase of \$17,118,722 from the March quarter's ending value of \$52,750,893. Last quarter, the Fund posted withdrawals totaling \$81,545, which partially offset the portfolio's net investment return of \$17,200,267. Income receipts totaling \$62,932 plus net realized and unrealized capital gains of \$17,137,335 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the Emerald Advisors Diversified Small Cap Growth portfolio returned 32.6%, which was 2.0% above the Russell 2000 Growth Index's return of 30.6% and ranked in the 54th percentile of the Small Cap Growth universe. Over the trailing year, the portfolio returned 4.5%, which was 1.0% above the benchmark's 3.5% return, ranking in the 57th percentile. Since September 1998, the portfolio returned 11.1% annualized. The Russell 2000 Growth returned an annualized 7.7% over the same period.

ASSET ALLOCATION

At the end of the second quarter, small cap equities comprised 97.6% of the total portfolio (\$68.2 million), while cash & equivalents totaled 2.4% (\$1.6 million).

EQUITY ANALYSIS

The Emerald portfolio, relative to its benchmark, placed more weight in the Communication Services, Consumer Discretionary, Consumer Staples, Financials, and Industrials sectors. Health Care and Information Technology received less weight, while the Utilities sector was vacant.

Selection effects were mixed last quarter and more sectors underperformed than outperformed. Fortunately, the effects of allocation helped to buoy the total return above the index. The increased position in the Consumer Discretionary sector allowed for greater impact of the best performing sector in the small cap growth market.

EXECUTIVE SUMMARY**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year	Since 09/98
Total Portfolio - Gross	32.6	-0.1	4.5	10.7	8.3	16.1	11.1
<i>SMALL CAP GROWTH RANK</i>	(54)	(62)	(57)	(60)	(70)	(33)	----
Total Portfolio - Net	32.5	-0.4	4.0	10.2	7.8	15.6	10.6
Russell 2000G	30.6	-3.1	3.5	7.8	6.8	12.9	7.7
Small Cap Equity - Gross	33.8	0.0	4.7	11.0	8.5	16.3	11.3
<i>SMALL CAP GROWTH RANK</i>	(50)	(62)	(56)	(59)	(69)	(29)	----
Russell 2000G	30.6	-3.1	3.5	7.8	6.8	12.9	7.7
Russell 2000	25.4	-13.0	-6.7	2.0	4.3	10.5	8.0

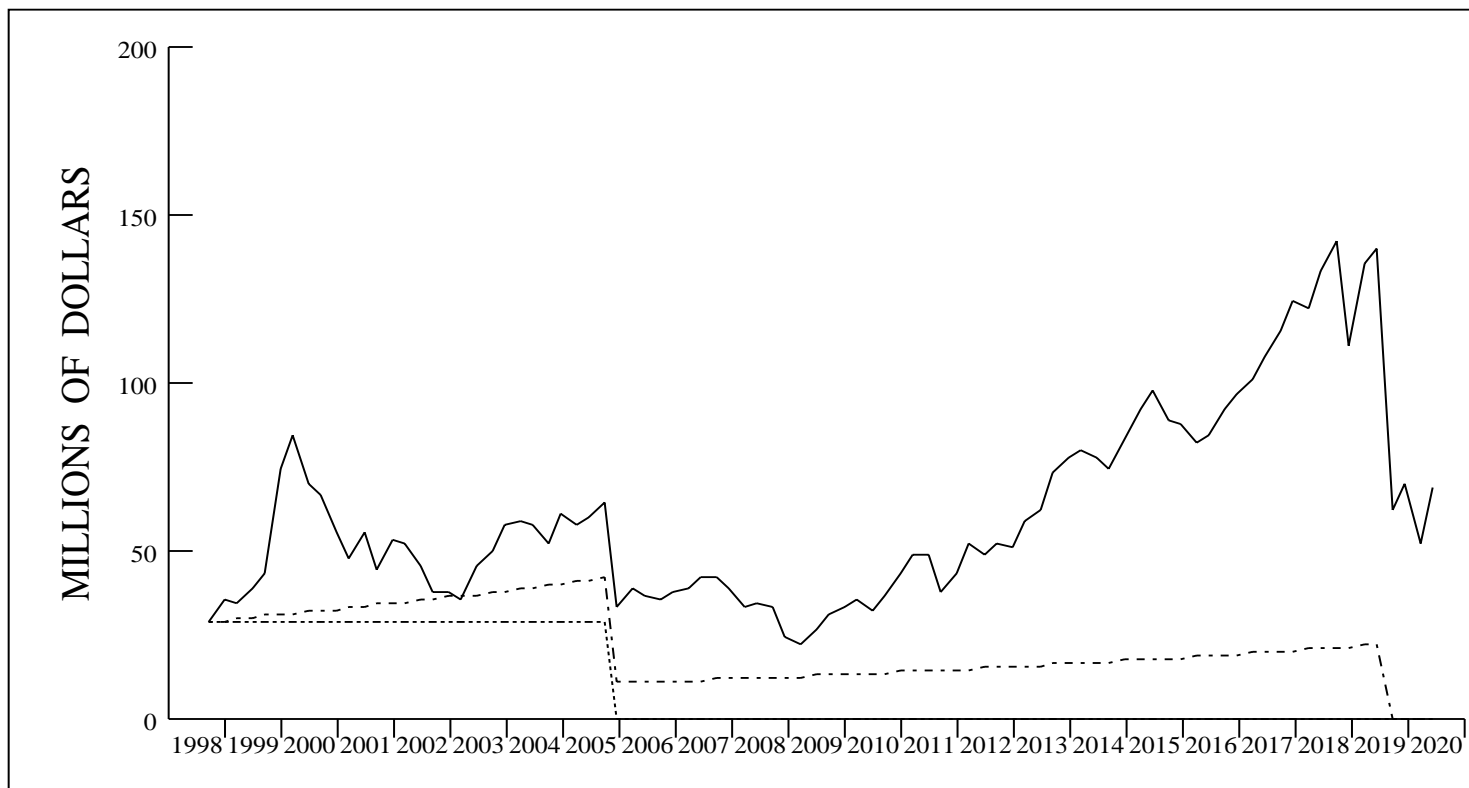
ASSET ALLOCATION

Small Cap	97.6%	\$ 68,224,236
Cash	2.4%	1,645,379
Total Portfolio	100.0%	\$ 69,869,615

INVESTMENT RETURN

Market Value 3/2020	\$ 52,750,893
Contribs / Withdrawals	- 81,545
Income	62,932
Capital Gains / Losses	17,137,335
Market Value 6/2020	\$ 69,869,615

INVESTMENT GROWTH

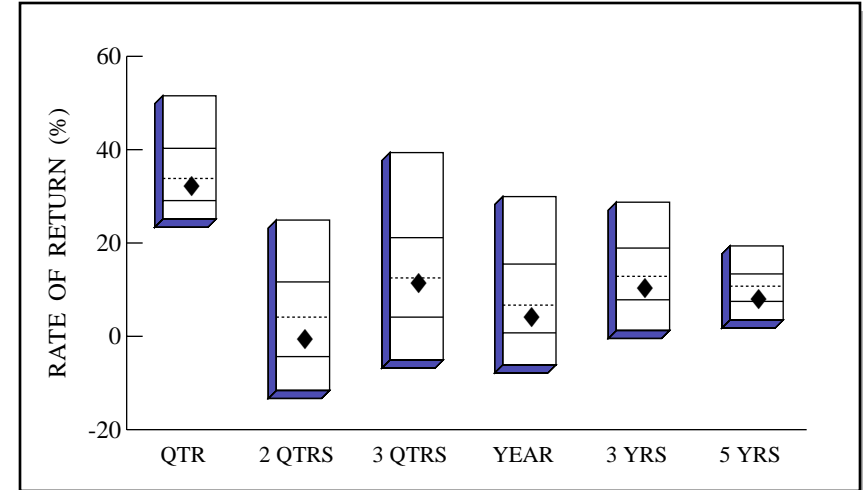
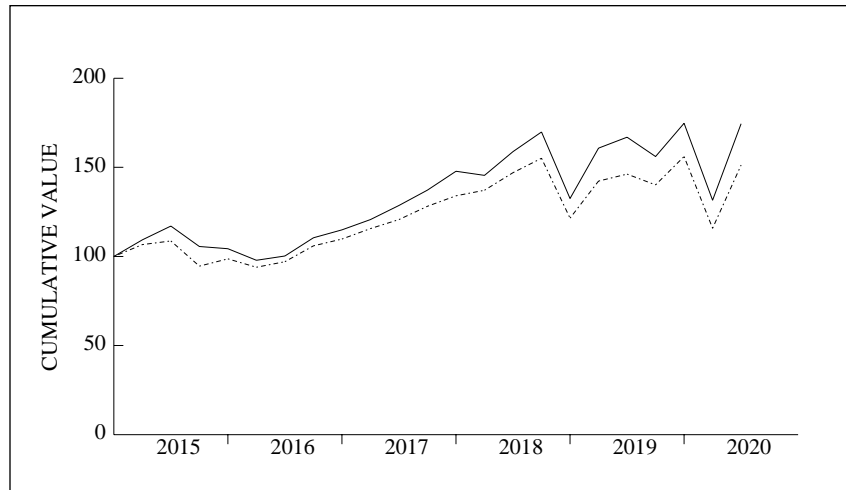


— ACTUAL RETURN
 - - - 5.25%
 0.0%

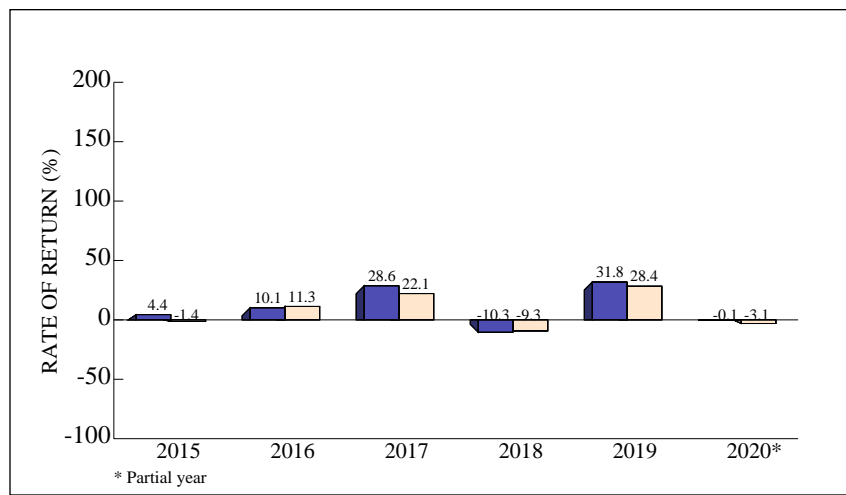
VALUE ASSUMING
 5.25% RETURN \$ -49,989,202

	LAST QUARTER	PERIOD 9/98 - 6/20
BEGINNING VALUE	\$ 52,750,893	\$ 29,601,782
NET CONTRIBUTIONS	- 81,545	-101,865,621
<u>INVESTMENT RETURN</u>	<u>17,200,267</u>	<u>142,133,454</u>
ENDING VALUE	\$ 69,869,615	\$ 69,869,615
INCOME	62,932	6,464,564
<u>CAPITAL GAINS (LOSSES)</u>	<u>17,137,335</u>	<u>135,668,890</u>
INVESTMENT RETURN	17,200,267	142,133,454

TOTAL RETURN COMPARISONS



Small Cap Growth Universe



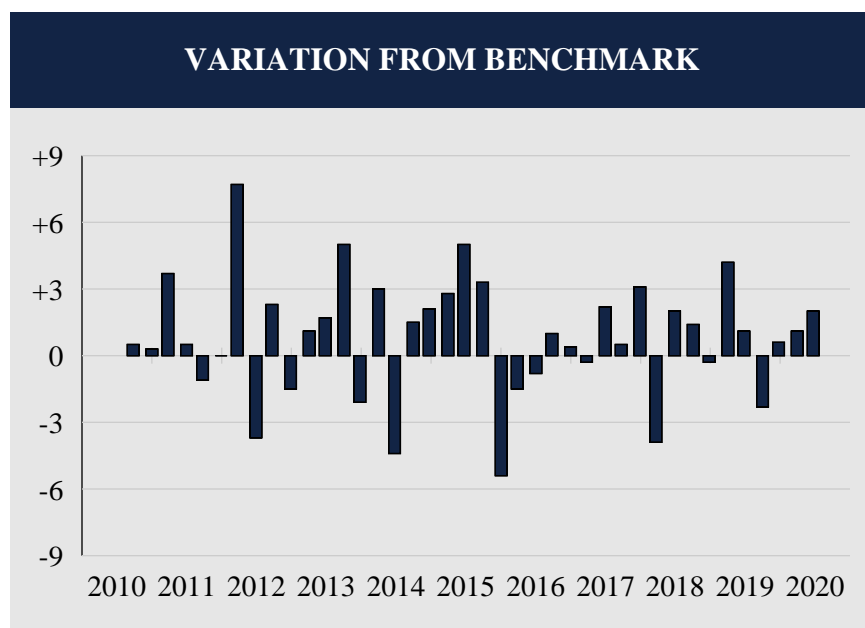
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	3 YRS	5 YRS
RETURN	32.6	-0.1	11.8	4.5	10.7	8.3
(RANK)	(54)	(62)	(52)	(57)	(60)	(70)
5TH %ILE	51.5	24.9	39.4	29.9	28.8	19.4
25TH %ILE	40.3	11.7	21.1	15.5	18.9	13.4
MEDIAN	33.8	4.1	12.5	6.7	12.9	10.7
75TH %ILE	29.1	-4.4	4.1	0.7	7.8	7.5
95TH %ILE	25.1	-11.6	-5.1	-6.1	1.3	3.5
Russ 2000G	30.6	-3.1	8.0	3.5	7.8	6.8

Small Cap Growth Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

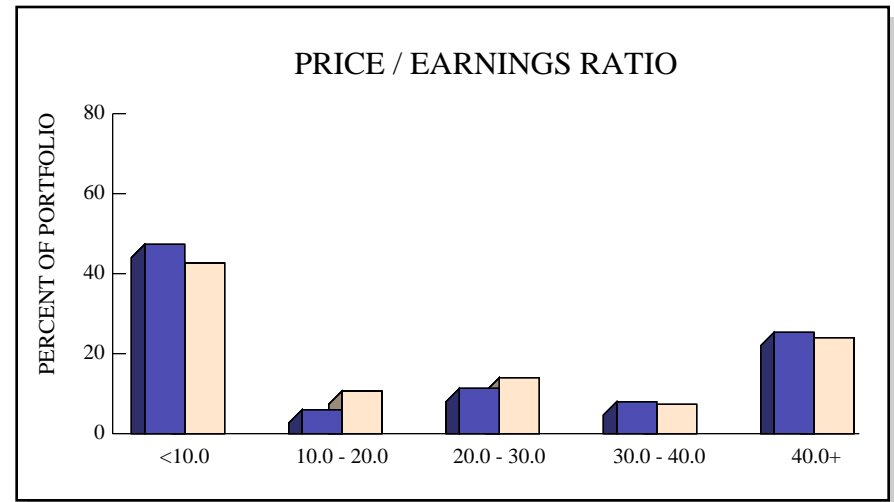
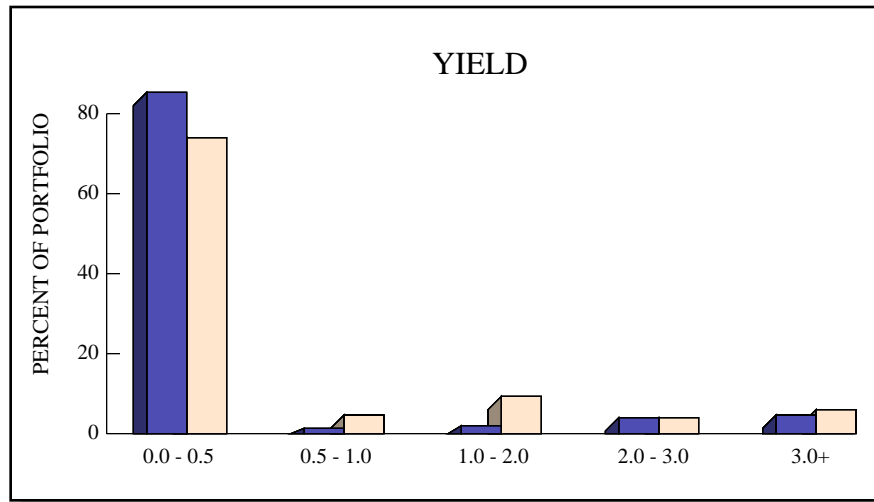
COMPARATIVE BENCHMARK: RUSSELL 2000 GROWTH



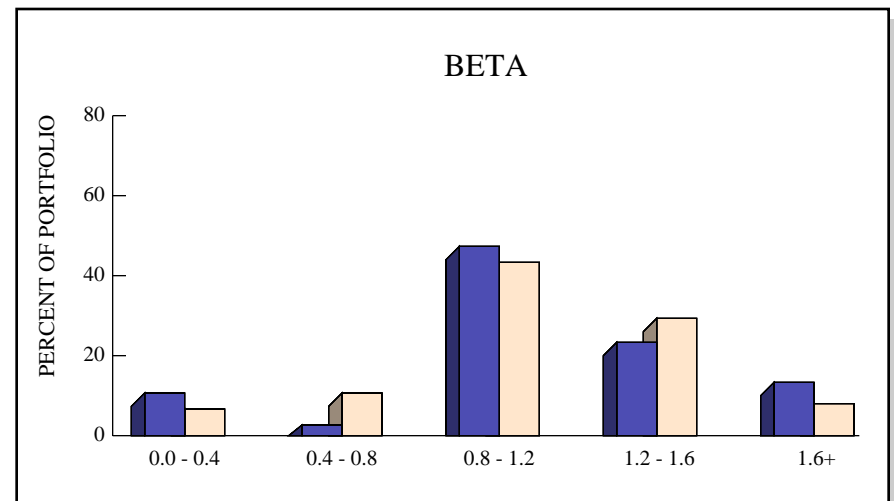
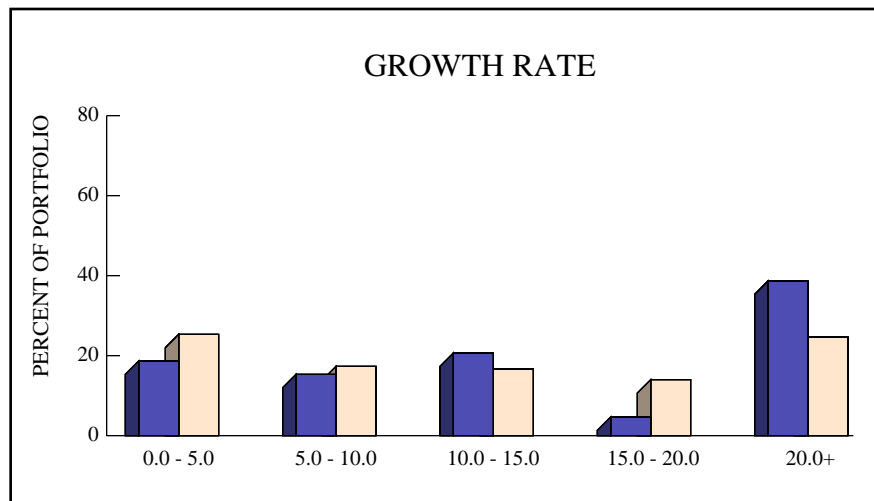
Total Quarters Observed	40
Quarters At or Above the Benchmark	28
Quarters Below the Benchmark	12
Batting Average	.700

RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	13.3	12.8	0.5
12/10	17.4	17.1	0.3
3/11	12.9	9.2	3.7
6/11	-0.1	-0.6	0.5
9/11	-23.4	-22.3	-1.1
12/11	15.0	15.0	0.0
3/12	21.0	13.3	7.7
6/12	-7.6	-3.9	-3.7
9/12	7.1	4.8	2.3
12/12	-1.1	0.4	-1.5
3/13	14.3	13.2	1.1
6/13	5.4	3.7	1.7
9/13	17.8	12.8	5.0
12/13	6.1	8.2	-2.1
3/14	3.5	0.5	3.0
6/14	-2.7	1.7	-4.4
9/14	-4.6	-6.1	1.5
12/14	12.2	10.1	2.1
3/15	9.4	6.6	2.8
6/15	7.0	2.0	5.0
9/15	-9.8	-13.1	3.3
12/15	-1.1	4.3	-5.4
3/16	-6.2	-4.7	-1.5
6/16	2.4	3.2	-0.8
9/16	10.2	9.2	1.0
12/16	4.0	3.6	0.4
3/17	5.0	5.3	-0.3
6/17	6.6	4.4	2.2
9/17	6.7	6.2	0.5
12/17	7.7	4.6	3.1
3/18	-1.6	2.3	-3.9
6/18	9.2	7.2	2.0
9/18	6.9	5.5	1.4
12/18	-22.0	-21.7	-0.3
3/19	21.3	17.1	4.2
6/19	3.8	2.7	1.1
9/19	-6.5	-4.2	-2.3
12/19	12.0	11.4	0.6
3/20	-24.7	-25.8	1.1
6/20	32.6	30.6	2.0

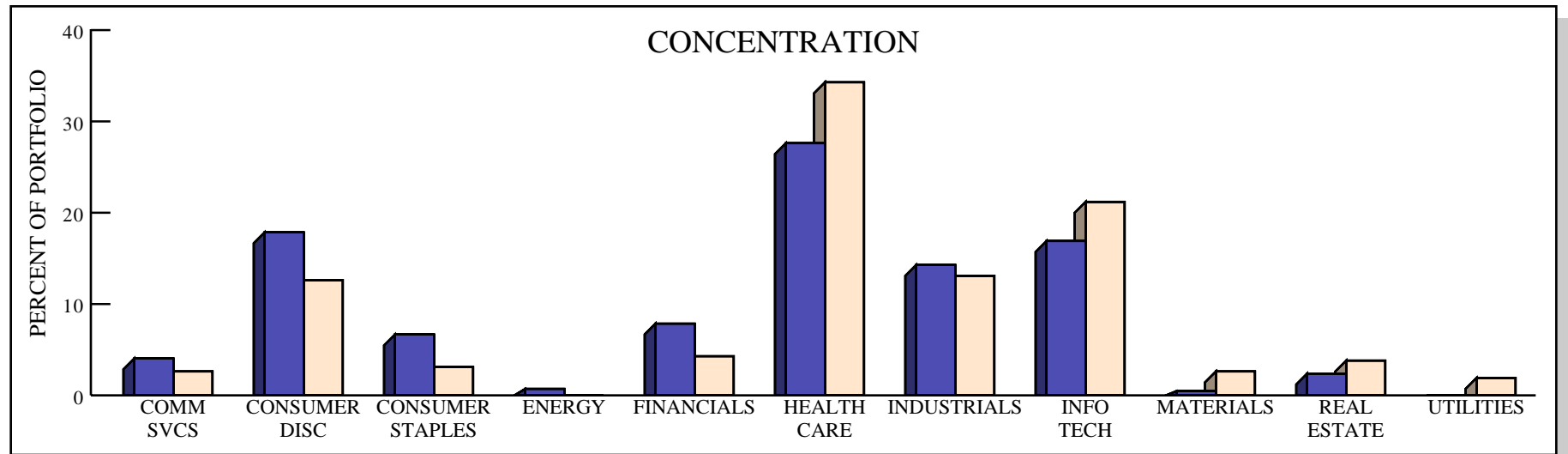
STOCK CHARACTERISTICS



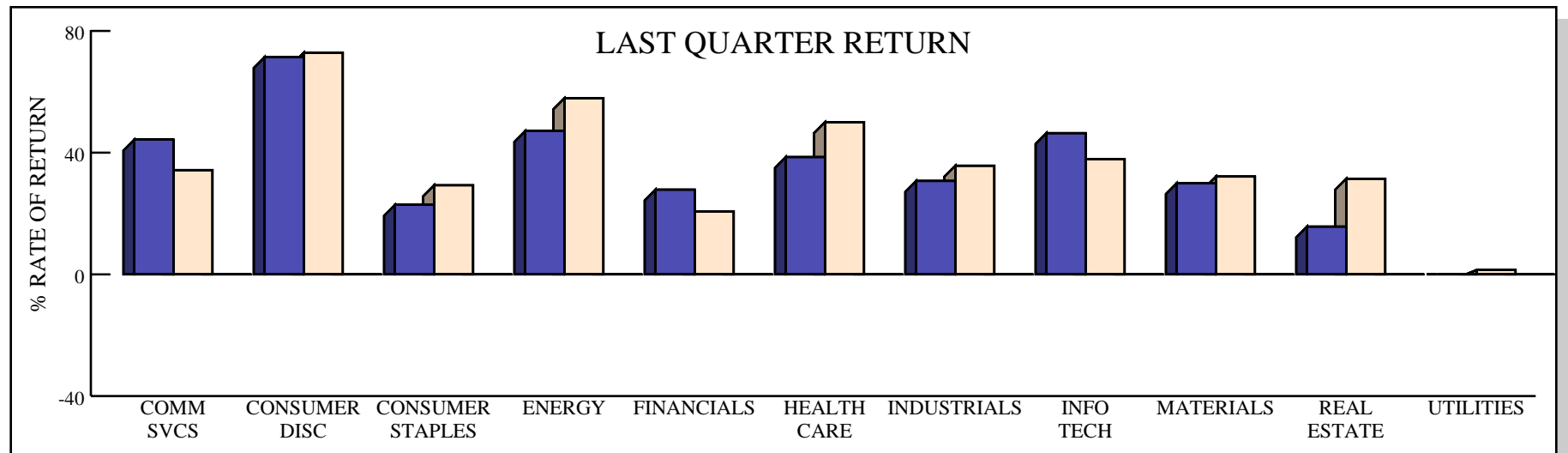
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	119	0.5%	31.1%	-39.6	1.08
RUSSELL 2000G	1,081	0.7%	19.1%	12.3	1.08



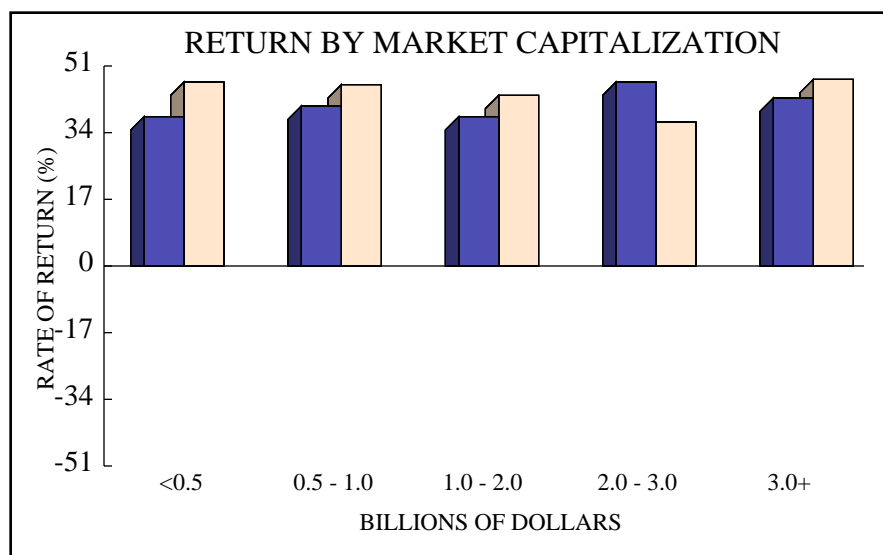
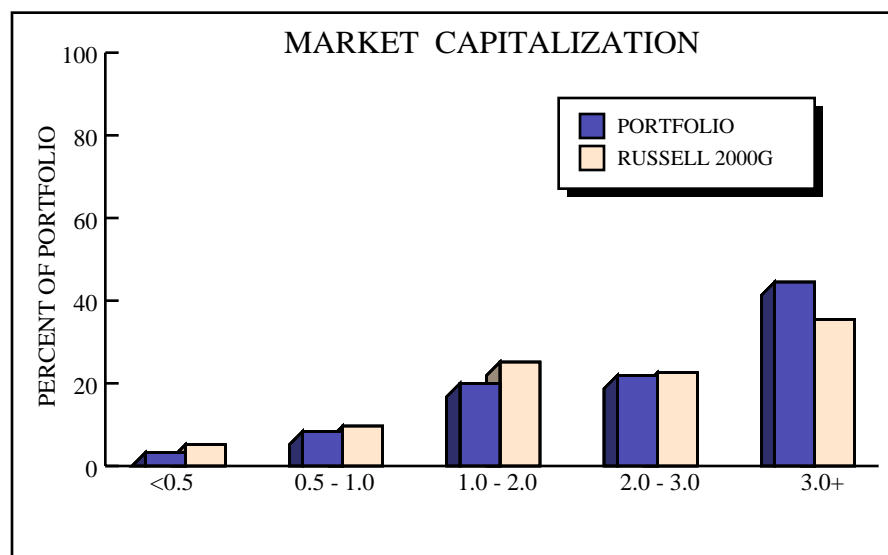
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 2000G



TOP TEN HOLDINGS



TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	CHEGG INC	\$ 2,323,968	3.41%	88.0%	Consumer Discretionary	\$ 8.3 B
2	FRESHPET INC	1,895,819	2.78%	31.0%	Consumer Staples	3.4 B
3	TREX COMPANY INC	1,388,497	2.04%	62.3%	Industrials	7.5 B
4	HORIZON PHARMA PLC	1,387,055	2.03%	87.6%	Health Care	10.6 B
5	NEOGENOMICS INC	1,376,225	2.02%	12.2%	Health Care	3.4 B
6	CHURCHILL DOWNS INC	1,370,380	2.01%	29.3%	Consumer Discretionary	5.3 B
7	PALOMAR HOLDINGS INC	1,252,096	1.84%	47.5%	Financials	2.2 B
8	VARONIS SYSTEMS INC	1,174,484	1.72%	39.0%	Information Technology	2.8 B
9	BIOHAVEN PHARMACEUTICAL HOLD	1,115,147	1.63%	114.8%	Health Care	4.3 B
10	RAPID7 INC	1,097,950	1.61%	17.8%	Information Technology	2.6 B

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
HARDMAN JOHNSTON GLOBAL ADVISORS - INTERNATIONAL EQUITY FULLY DISCRETIONARY
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's Hardman Johnston Global Advisors International Equity Fully Discretionary portfolio was valued at \$125,362,457, representing an increase of \$25,412,147 from the March quarter's ending value of \$99,950,310. Last quarter, the Fund posted withdrawals totaling \$178,004, which partially offset the portfolio's net investment return of \$25,590,151. Income receipts totaling \$377,461 plus net realized and unrealized capital gains of \$25,212,690 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the Hardman Johnston Global Advisors International Equity Fully Discretionary portfolio returned 25.6%, which was 8.8% above the S&P BMI Developed Ex US Index's return of 16.8% and ranked in the 12th percentile of the International Equity universe. Over the trailing year, the portfolio returned 10.9%, which was 14.9% above the benchmark's -4.0% return, ranking in the 10th percentile. Since March 2012, the portfolio returned 9.5% annualized and ranked in the 6th percentile. The S&P BMI Developed Ex US Index returned an annualized 5.0% over the same period.

ASSET ALLOCATION

At the end of the second quarter, international equities comprised 97.4% of the total portfolio (\$122.2 million), while cash & equivalents totaled 2.6% (\$3.2 million).

EXECUTIVE SUMMARY**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	Since 03/12
Total Portfolio - Gross	25.6	-1.1	10.9	9.5	9.1	9.5
<i>INTERNATIONAL EQUITY RANK</i>	(12)	(15)	(10)	(7)	(7)	(6)
Total Portfolio - Net	25.5	-1.4	10.2	8.9	8.4	8.8
S&P BMI Ex US	16.8	-10.8	-4.0	1.3	2.9	5.0
International Equity - Gross	27.9	-0.1	12.1	9.8	9.3	9.7
<i>INTERNATIONAL EQUITY RANK</i>	(8)	(12)	(9)	(6)	(6)	(5)
S&P BMI Ex US	16.8	-10.8	-4.0	1.3	2.9	5.0

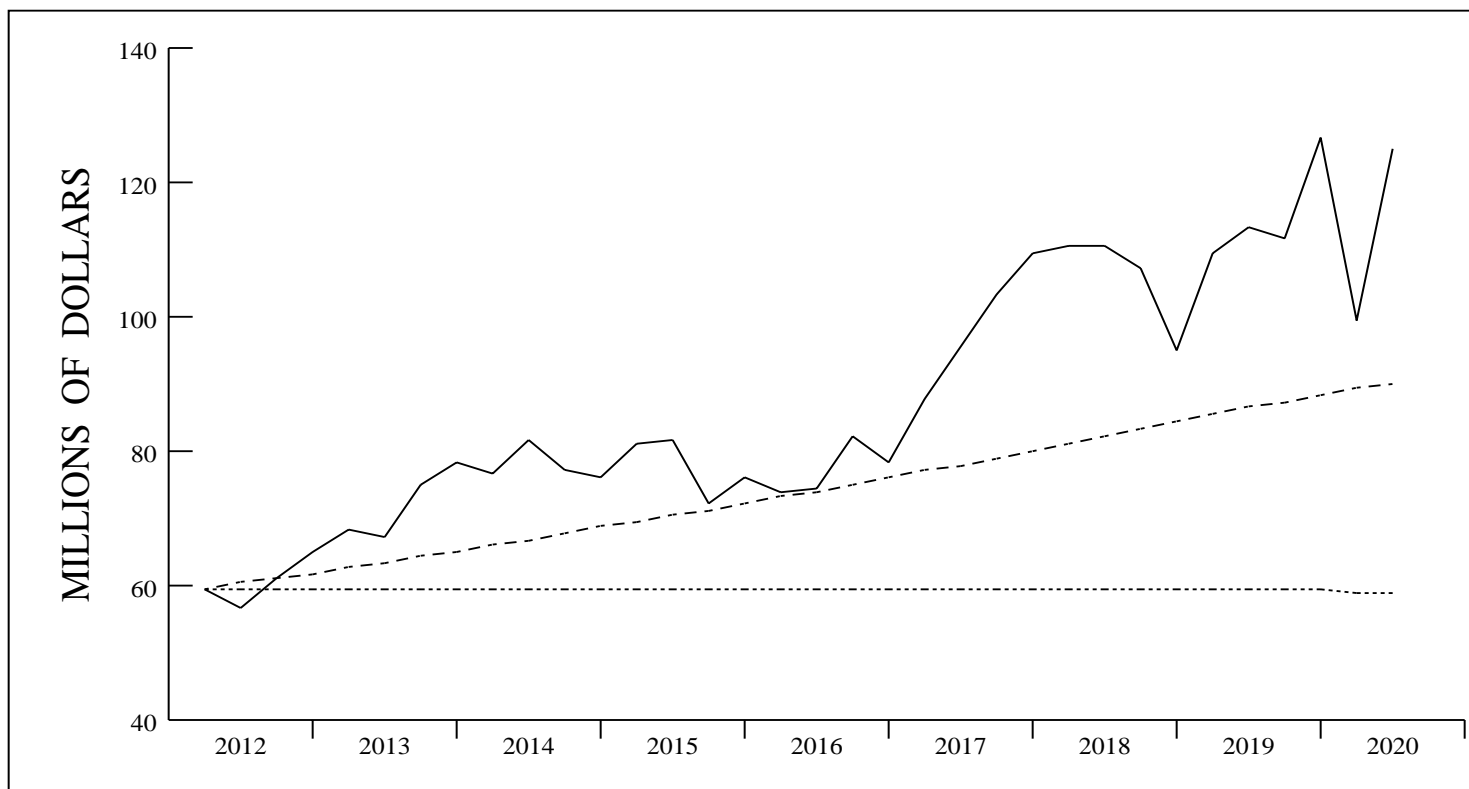
ASSET ALLOCATION

Int'l Equity	97.4%	\$ 122,162,581
Cash	2.6%	3,199,876
Total Portfolio	100.0%	\$ 125,362,457

INVESTMENT RETURN

Market Value 3/2020	\$ 99,950,310
Contribs / Withdrawals	-178,004
Income	377,461
Capital Gains / Losses	25,212,690
Market Value 6/2020	\$ 125,362,457

INVESTMENT GROWTH

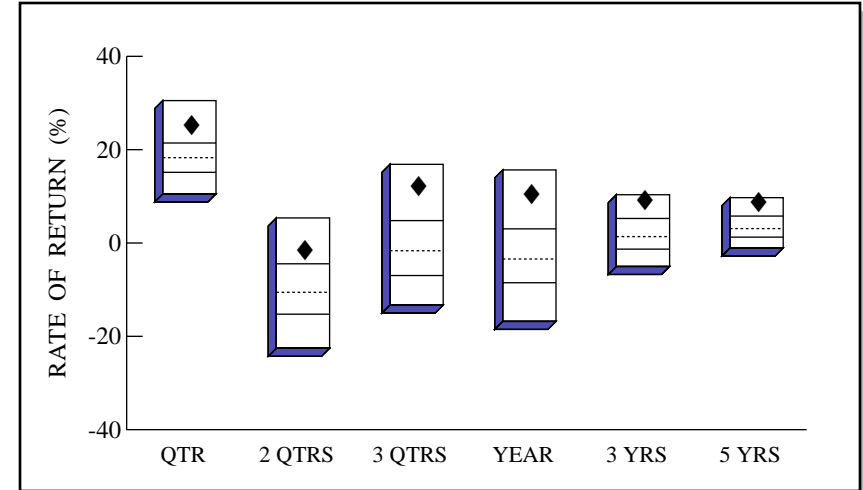
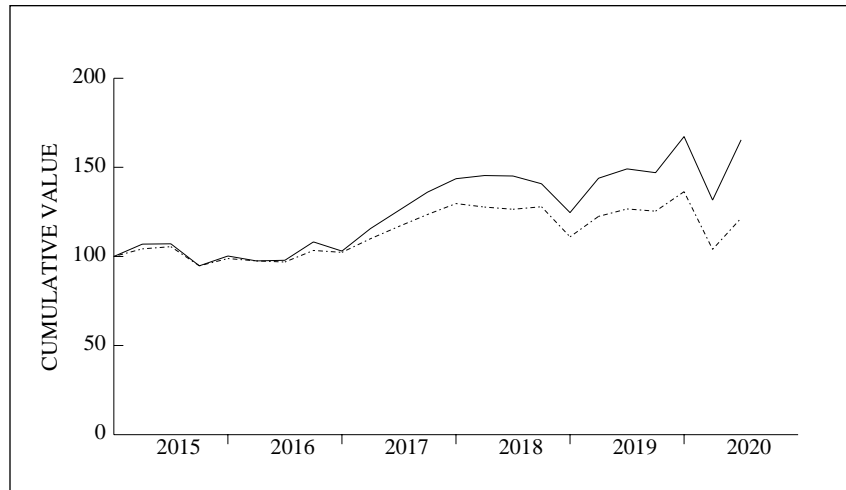


— ACTUAL RETURN
 - - - 5.25%
 0.0%

VALUE ASSUMING
 5.25% RETURN \$ 90,538,128

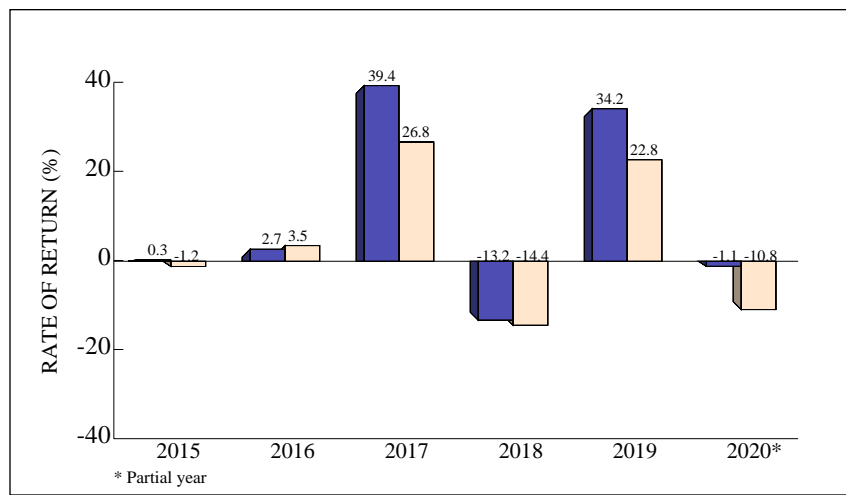
	LAST QUARTER	PERIOD 3/12 - 6/20
BEGINNING VALUE	\$ 99,950,310	\$ 59,853,568
NET CONTRIBUTIONS	-178,004	-729,945
<u>INVESTMENT RETURN</u>	<u>25,590,151</u>	<u>66,238,834</u>
ENDING VALUE	\$ 125,362,457	\$ 125,362,457
INCOME	377,461	10,930,912
<u>CAPITAL GAINS (LOSSES)</u>	<u>25,212,690</u>	<u>55,307,922</u>
INVESTMENT RETURN	25,590,151	66,238,834

TOTAL RETURN COMPARISONS



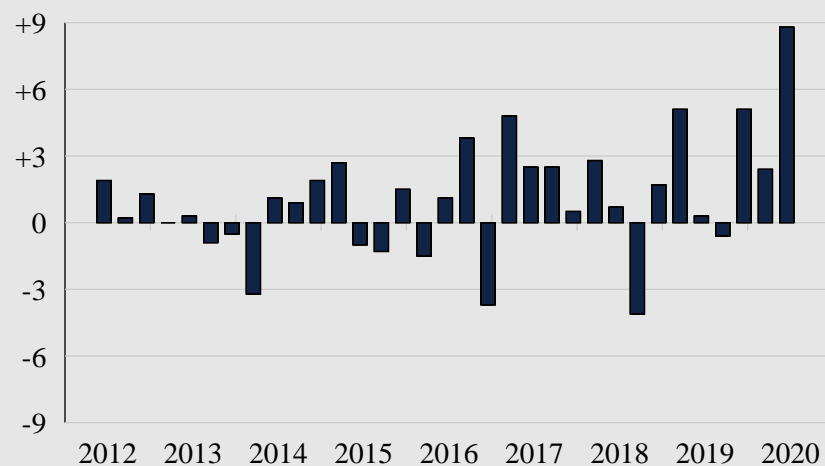
■ ——— PORTFOLIO
■ - - - - S&P BMI EX US

International Equity Universe



	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	25.6	-1.1	12.5	10.9	9.5	9.1
(RANK)	(12)	(15)	(9)	(10)	(7)	(7)
5TH %ILE	30.5	5.4	16.9	15.7	10.4	9.7
25TH %ILE	21.4	-4.4	4.8	3.1	5.2	5.8
MEDIAN	18.3	-10.6	-1.7	-3.4	1.4	3.1
75TH %ILE	15.2	-15.3	-7.0	-8.5	-1.3	1.2
95TH %ILE	10.5	-22.6	-13.3	-16.8	-5.1	-1.1
BMI Ex US	16.8	-10.8	-3.1	-4.0	1.3	2.9

International Equity Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY**COMPARATIVE BENCHMARK: S&P BMI DEVELOPED EX US INDEX****VARIATION FROM BENCHMARK**

Total Quarters Observed	33
Quarters At or Above the Benchmark	24
Quarters Below the Benchmark	9
Batting Average	.727

RATES OF RETURN

Date	Portfolio	Benchmark	Difference
6/12	-5.3	-7.2	1.9
9/12	7.9	7.7	0.2
12/12	7.1	5.8	1.3
3/13	4.9	4.9	0.0
6/13	-1.5	-1.8	0.3
9/13	11.0	11.9	-0.9
12/13	4.9	5.4	-0.5
3/14	-2.0	1.2	-3.2
6/14	5.9	4.8	1.1
9/14	-5.0	-5.9	0.9
12/14	-1.8	-3.7	1.9
3/15	6.9	4.2	2.7
6/15	0.2	1.2	-1.0
9/15	-11.5	-10.2	-1.3
12/15	5.8	4.3	1.5
3/16	-2.8	-1.3	-1.5
6/16	0.4	-0.7	1.1
9/16	10.5	6.7	3.8
12/16	-4.8	-1.1	-3.7
3/17	12.3	7.5	4.8
6/17	8.8	6.3	2.5
9/17	8.2	5.7	2.5
12/17	5.5	5.0	0.5
3/18	1.3	-1.5	2.8
6/18	-0.2	-0.9	0.7
9/18	-3.0	1.1	-4.1
12/18	-11.5	-13.2	1.7
3/19	15.4	10.3	5.1
6/19	3.7	3.4	0.3
9/19	-1.5	-0.9	-0.6
12/19	13.8	8.7	5.1
3/20	-21.3	-23.7	2.4
6/20	25.6	16.8	8.8

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
HGK ASSET MANAGEMENT - HGK INTERNATIONAL EQUITY
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's HGK Asset Management HGK International Equity portfolio was valued at \$122,180,682, representing an increase of \$19,452,248 from the March quarter's ending value of \$102,728,434. Last quarter, the Fund posted withdrawals totaling \$198,378, which partially offset the portfolio's net investment return of \$19,650,626. Income receipts totaling \$819,792 plus net realized and unrealized capital gains of \$18,830,834 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the HGK Asset Management HGK International Equity portfolio returned 19.2%, which was 2.4% above the S&P BMI Developed Ex US Index's return of 16.8% and ranked in the 42nd percentile of the International Equity universe. Over the trailing year, the portfolio returned 2.0%, which was 6.0% above the benchmark's -4.0% return, ranking in the 29th percentile. Since March 2012, the portfolio returned 8.6% annualized and ranked in the 8th percentile. The S&P BMI Developed Ex US Index returned an annualized 5.0% over the same period.

ASSET ALLOCATION

At the end of the second quarter, international equities comprised 93.1% of the total portfolio (\$113.7 million), while cash & equivalents totaled 6.9% (\$8.5 million).

EXECUTIVE SUMMARY**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	Since 03/12
Total Portfolio - Gross	19.2	-9.6	2.0	3.7	5.2	8.6
<i>INTERNATIONAL EQUITY RANK</i>	(42)	(44)	(29)	(33)	(30)	(8)
Total Portfolio - Net	19.0	-9.9	1.3	3.1	4.5	7.9
S&P BMI Ex US	16.8	-10.8	-4.0	1.3	2.9	5.0
International Equity - Gross	20.1	-10.1	1.7	3.8	5.3	9.0
<i>INTERNATIONAL EQUITY RANK</i>	(34)	(47)	(30)	(32)	(29)	(7)
S&P BMI Ex US	16.8	-10.8	-4.0	1.3	2.9	5.0

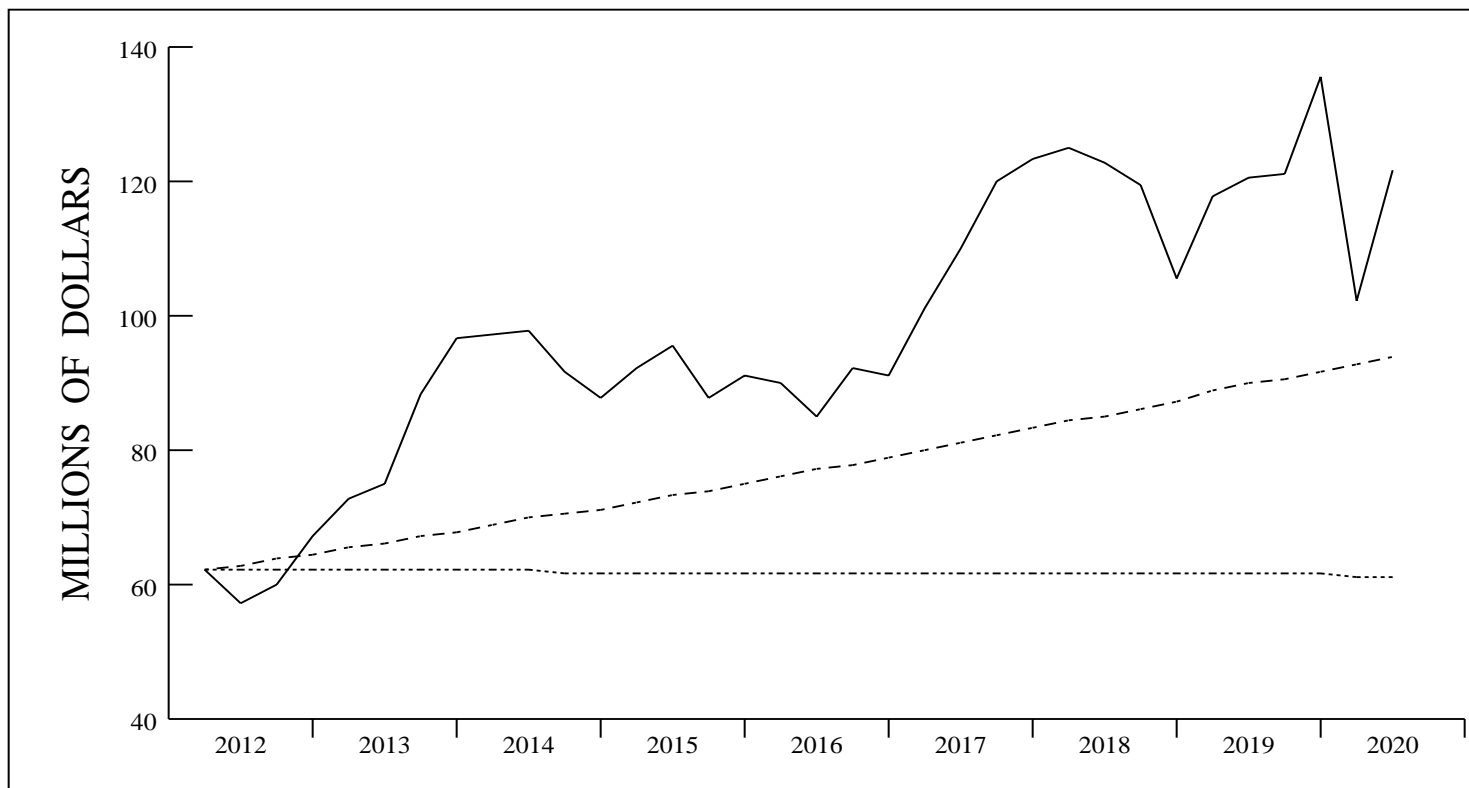
ASSET ALLOCATION

Int'l Equity	93.1%	\$ 113,713,514
Cash	6.9%	8,467,168
Total Portfolio	100.0%	\$ 122,180,682

INVESTMENT RETURN

Market Value 3/2020	\$ 102,728,434
Contribs / Withdrawals	-198,378
Income	819,792
Capital Gains / Losses	18,830,834
Market Value 6/2020	\$ 122,180,682

INVESTMENT GROWTH

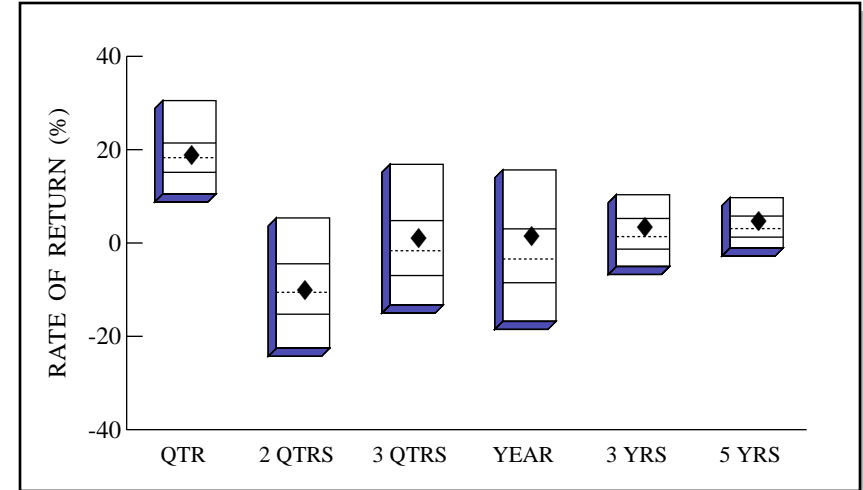
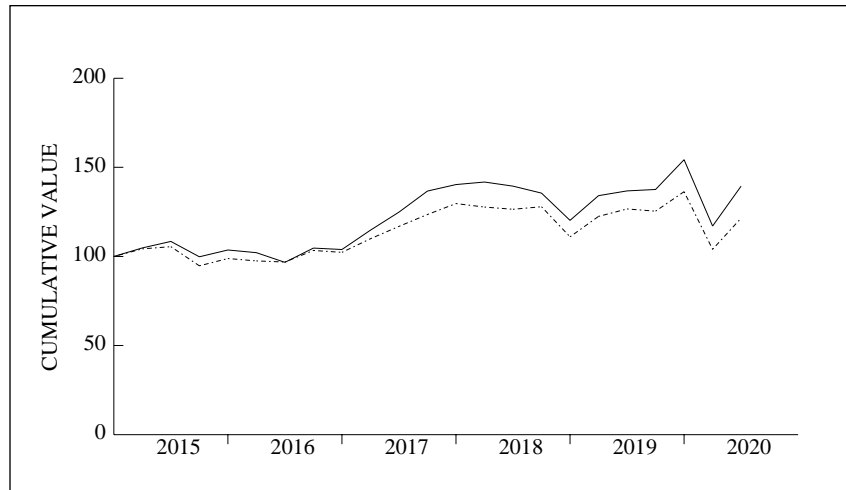


— ACTUAL RETURN
 - - - 5.25%
 0.0%

VALUE ASSUMING
 5.25% RETURN \$ 93,926,093

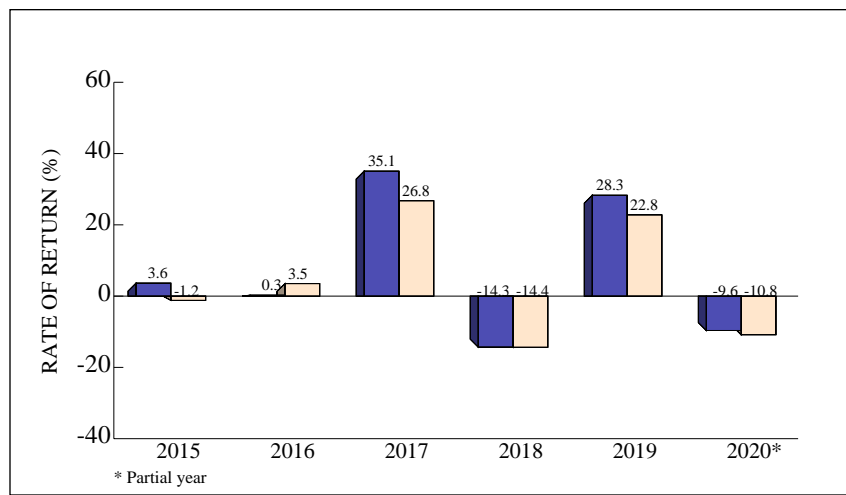
	LAST QUARTER	PERIOD 3/12 - 6/20
BEGINNING VALUE	\$ 102,728,434	\$ 62,430,922
NET CONTRIBUTIONS	-198,378	- 1,155,556
<u>INVESTMENT RETURN</u>	<u>19,650,626</u>	<u>60,905,316</u>
ENDING VALUE	\$ 122,180,682	\$ 122,180,682
INCOME	819,792	17,650,136
<u>CAPITAL GAINS (LOSSES)</u>	<u>18,830,834</u>	<u>43,255,180</u>
INVESTMENT RETURN	19,650,626	60,905,316

TOTAL RETURN COMPARISONS



■ ——— PORTFOLIO
■ - - - - S&P BMI EX US

International Equity Universe

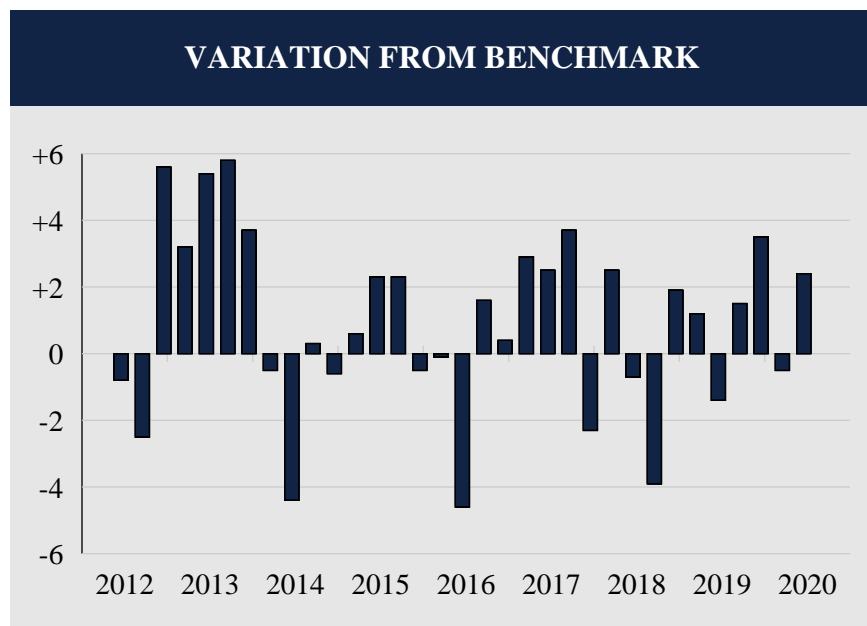


	QTR	2 QTRS	3 QTRS	YEAR	3 YRS	5 YRS
RETURN	19.2	-9.6	1.4	2.0	3.7	5.2
(RANK)	(42)	(44)	(37)	(29)	(33)	(30)
5TH %ILE	30.5	5.4	16.9	15.7	10.4	9.7
25TH %ILE	21.4	-4.4	4.8	3.1	5.2	5.8
MEDIAN	18.3	-10.6	-1.7	-3.4	1.4	3.1
75TH %ILE	15.2	-15.3	-7.0	-8.5	-1.3	1.2
95TH %ILE	10.5	-22.6	-13.3	-16.8	-5.1	-1.1
BMI Ex US	16.8	-10.8	-3.1	-4.0	1.3	2.9

International Equity Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY

COMPARATIVE BENCHMARK: S&P BMI DEVELOPED EX US INDEX



RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
6/12	-8.0	-7.2	-0.8
9/12	5.2	7.7	-2.5
12/12	11.4	5.8	5.6
3/13	8.1	4.9	3.2
6/13	3.6	-1.8	5.4
9/13	17.7	11.9	5.8
12/13	9.1	5.4	3.7
3/14	0.7	1.2	-0.5
6/14	0.4	4.8	-4.4
9/14	-5.6	-5.9	0.3
12/14	-4.3	-3.7	-0.6
3/15	4.8	4.2	0.6
6/15	3.5	1.2	2.3
9/15	-7.9	-10.2	2.3
12/15	3.8	4.3	-0.5
3/16	-1.4	-1.3	-0.1
6/16	-5.3	-0.7	-4.6
9/16	8.3	6.7	1.6
12/16	-0.7	-1.1	0.4
3/17	10.4	7.5	2.9
6/17	8.8	6.3	2.5
9/17	9.4	5.7	3.7
12/17	2.7	5.0	-2.3
3/18	1.0	-1.5	2.5
6/18	-1.6	-0.9	-0.7
9/18	-2.8	1.1	-3.9
12/18	-11.3	-13.2	1.9
3/19	11.5	10.3	1.2
6/19	2.0	3.4	-1.4
9/19	0.6	-0.9	1.5
12/19	12.2	8.7	3.5
3/20	-24.2	-23.7	-0.5
6/20	19.2	16.8	2.4

Total Quarters Observed	33
Quarters At or Above the Benchmark	20
Quarters Below the Benchmark	13
Batting Average	.606

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
LSV ASSET MANAGEMENT - US LARGE CAP VALUE
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's LSV Asset Management US Large Cap Value portfolio was valued at \$143,936,827, representing an increase of \$22,553,892 from the March quarter's ending value of \$121,382,935. Last quarter, the Fund posted withdrawals totaling \$139,173, which partially offset the portfolio's net investment return of \$22,693,065. Income receipts totaling \$1,058,588 plus net realized and unrealized capital gains of \$21,634,477 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the LSV Asset Management US Large Cap Value portfolio returned 18.7%, which was 4.4% above the Russell 1000 Value Index's return of 14.3% and ranked in the 32nd percentile of the Large Cap Value universe. Over the trailing year, the portfolio returned -8.6%, which was 0.3% above the benchmark's -8.9% return, ranking in the 62nd percentile. Since March 2004, the portfolio returned 7.4% annualized. The Russell 1000 Value returned an annualized 6.7% over the same period.

ASSET ALLOCATION

At the end of the second quarter, large cap equities comprised 99.6% of the total portfolio (\$143.3 million), while cash & equivalents totaled 0.4% (\$603,412).

EQUITY ANALYSIS

Last quarter, the LSV portfolio was diversified across all industry sectors in our analysis. Compared to the Russell 1000 Value benchmark, the portfolio placed greater emphasis on the Information Technology, Health Care, and Consumer Discretionary sectors.

Favorable selection in the overweight Consumer Discretionary sector aided the portfolio in beating its benchmark over the quarter. The portfolio also enjoyed strong selection in the Energy, Financials, and Utilities sectors.

EXECUTIVE SUMMARY**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year	Since 03/04
Total Portfolio - Gross	18.7	-17.5	-8.6	1.0	3.9	10.8	7.4
<i>LARGE CAP VALUE RANK</i>	(32)	(75)	(62)	(72)	(74)	(50)	----
Total Portfolio - Net	18.6	-17.7	-9.0	0.6	3.4	10.4	6.9
Russell 1000V	14.3	-16.3	-8.9	1.8	4.6	10.4	6.7
Large Cap Equity - Gross	18.9	-17.6	-8.7	1.0	3.9	10.9	7.4
<i>LARGE CAP VALUE RANK</i>	(31)	(75)	(62)	(72)	(74)	(48)	----
Russell 1000V	14.3	-16.3	-8.9	1.8	4.6	10.4	6.7
S&P 500	20.5	-3.1	7.5	10.7	10.7	14.0	8.6
Russell 1000G	27.8	9.8	23.3	19.0	15.9	17.2	10.6

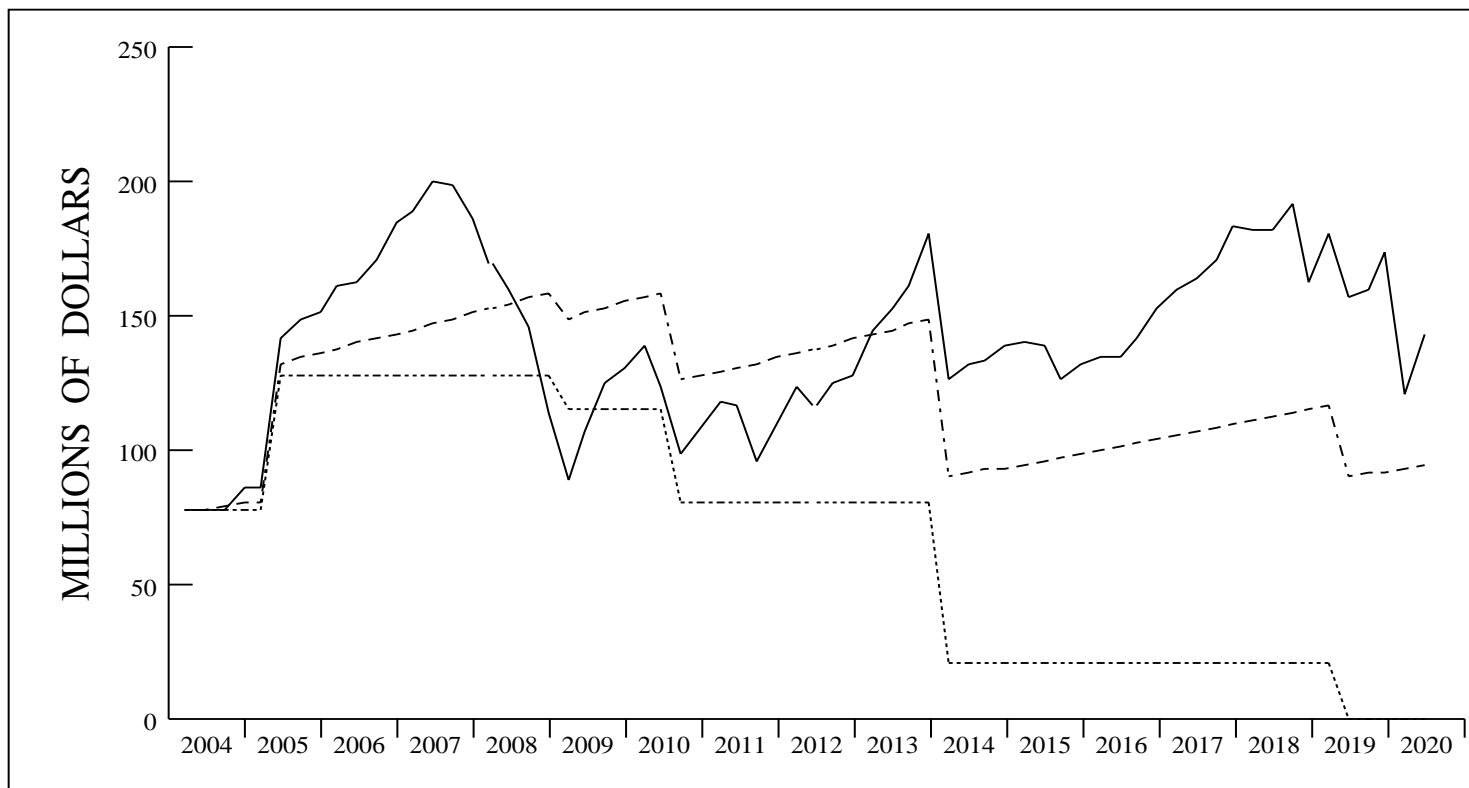
ASSET ALLOCATION

Large Cap Equity	99.6%	\$ 143,333,415
Cash	0.4%	603,412
Total Portfolio	100.0%	\$ 143,936,827

INVESTMENT RETURN

Market Value 3/2020	\$ 121,382,935
Contribs / Withdrawals	-139,173
Income	1,058,588
Capital Gains / Losses	21,634,477
Market Value 6/2020	\$ 143,936,827

INVESTMENT GROWTH

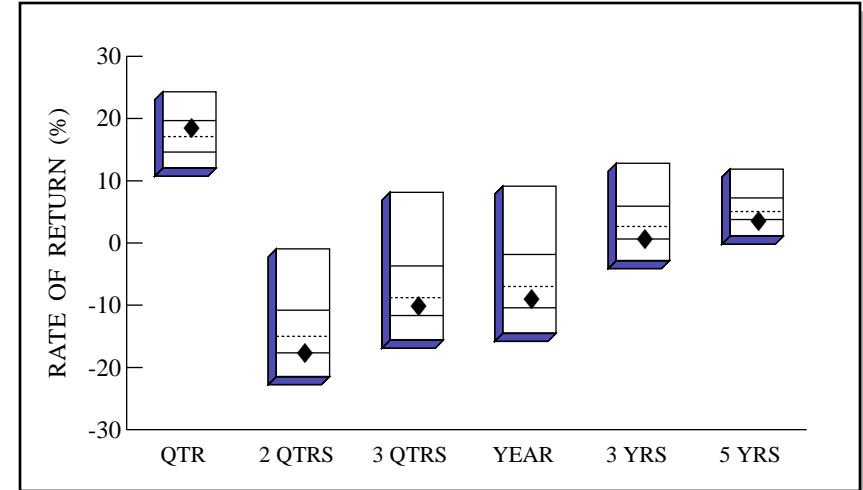
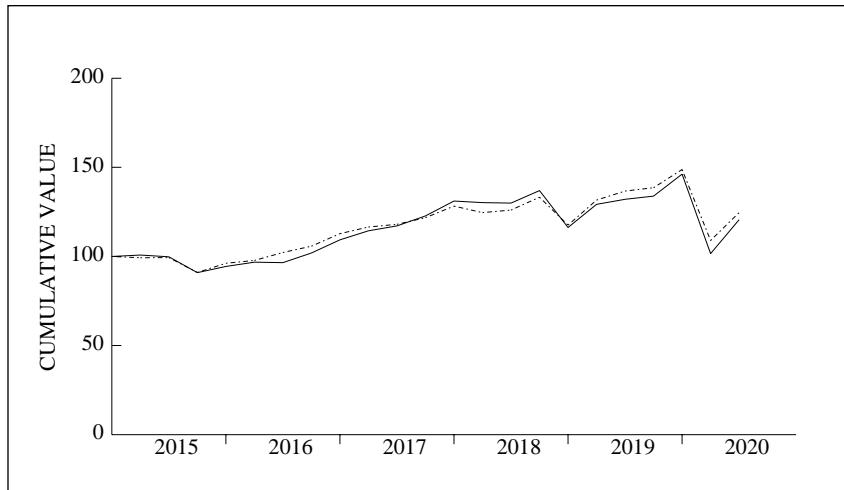


— ACTUAL RETURN
 - - - 5.25%
 . . . 0.0%

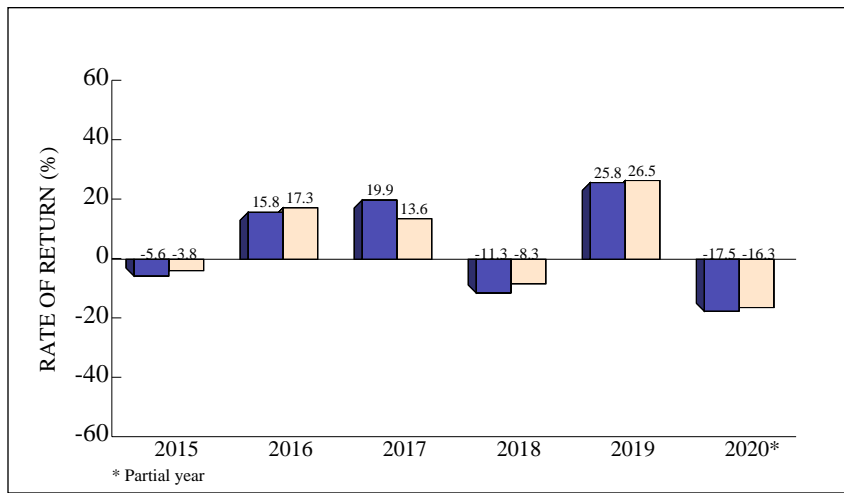
VALUE ASSUMING
 5.25% RETURN \$ 95,086,484

	LAST QUARTER	PERIOD 3/04 - 6/20
BEGINNING VALUE	\$ 121,382,935	\$ 77,834,544
NET CONTRIBUTIONS	-139,173	- 84,859,913
<u>INVESTMENT RETURN</u>	<u>22,693,065</u>	<u>150,962,196</u>
ENDING VALUE	\$ 143,936,827	\$ 143,936,827
INCOME	1,058,588	58,065,252
<u>CAPITAL GAINS (LOSSES)</u>	<u>21,634,477</u>	<u>92,896,944</u>
INVESTMENT RETURN	22,693,065	150,962,196

TOTAL RETURN COMPARISONS



Large Cap Value Universe

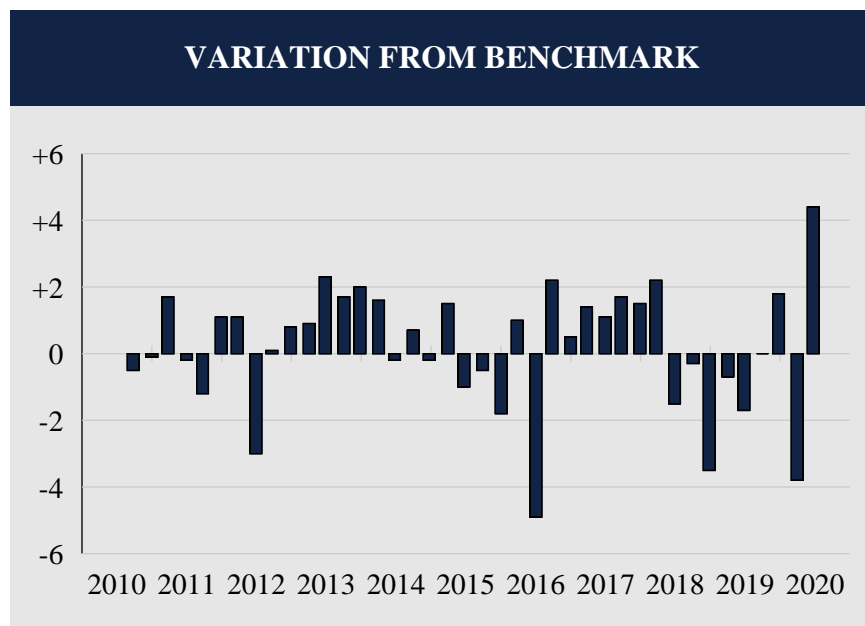


	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED----- 3 YRS	5 YRS
RETURN	18.7	-17.5	-9.9	-8.6	1.0	3.9
(RANK)	(32)	(75)	(62)	(62)	(72)	(74)
5TH %ILE	24.3	-1.0	8.2	9.1	12.8	11.9
25TH %ILE	19.7	-10.8	-3.7	-1.8	5.9	7.2
MEDIAN	17.1	-15.0	-8.8	-7.0	2.7	5.1
75TH %ILE	14.6	-17.7	-11.7	-10.4	0.6	3.8
95TH %ILE	12.0	-21.5	-15.7	-14.6	-2.8	1.1
Russ 1000V	14.3	-16.3	-10.1	-8.9	1.8	4.6

Large Cap Value Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY - 10 YEARS

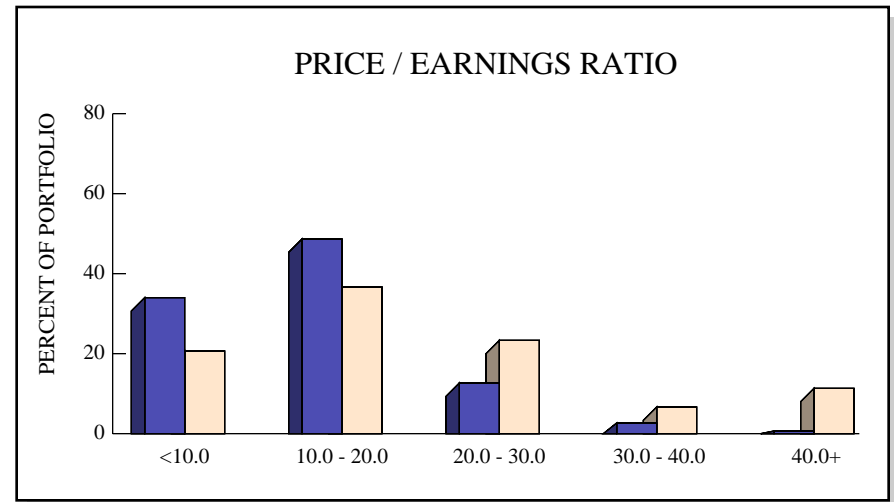
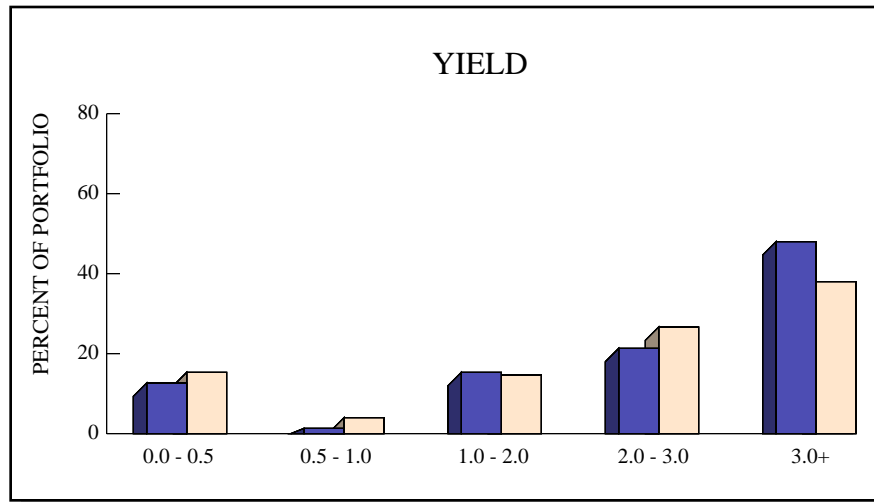
COMPARATIVE BENCHMARK: RUSSELL 1000 VALUE



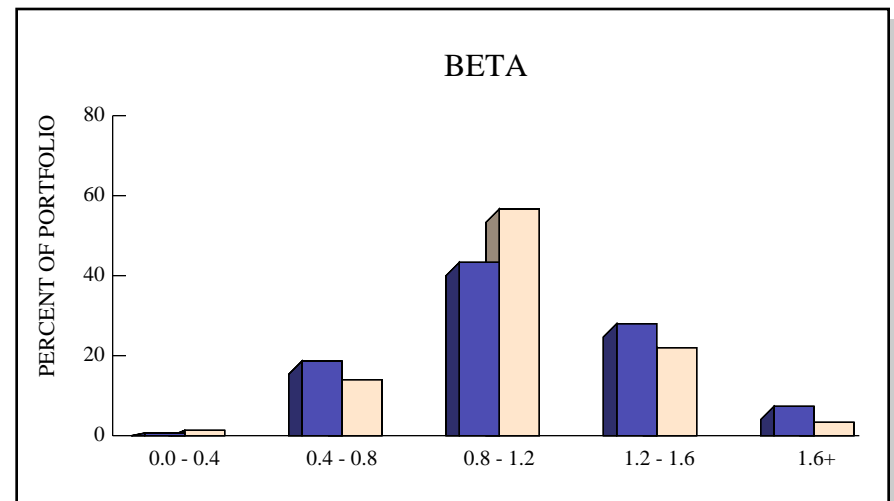
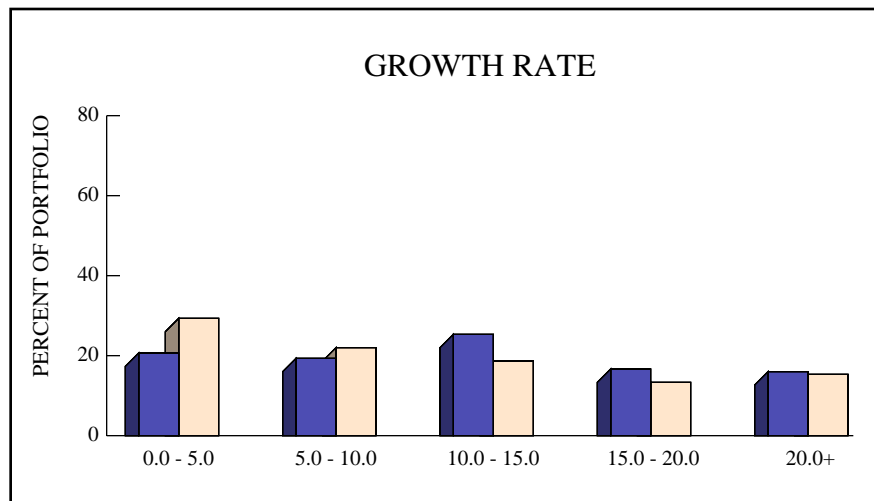
Total Quarters Observed	40
Quarters At or Above the Benchmark	23
Quarters Below the Benchmark	17
Batting Average	.575

RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
9/10	9.6	10.1	-0.5
12/10	10.4	10.5	-0.1
3/11	8.2	6.5	1.7
6/11	-0.7	-0.5	-0.2
9/11	-17.4	-16.2	-1.2
12/11	14.2	13.1	1.1
3/12	12.2	11.1	1.1
6/12	-5.2	-2.2	-3.0
9/12	6.6	6.5	0.1
12/12	2.3	1.5	0.8
3/13	13.2	12.3	0.9
6/13	5.5	3.2	2.3
9/13	5.6	3.9	1.7
12/13	12.0	10.0	2.0
3/14	4.6	3.0	1.6
6/14	4.9	5.1	-0.2
9/14	0.5	-0.2	0.7
12/14	4.8	5.0	-0.2
3/15	0.8	-0.7	1.5
6/15	-0.9	0.1	-1.0
9/15	-8.9	-8.4	-0.5
12/15	3.8	5.6	-1.8
3/16	2.6	1.6	1.0
6/16	-0.3	4.6	-4.9
9/16	5.7	3.5	2.2
12/16	7.2	6.7	0.5
3/17	4.7	3.3	1.4
6/17	2.4	1.3	1.1
9/17	4.8	3.1	1.7
12/17	6.8	5.3	1.5
3/18	-0.6	-2.8	2.2
6/18	-0.3	1.2	-1.5
9/18	5.4	5.7	-0.3
12/18	-15.2	-11.7	-3.5
3/19	11.2	11.9	-0.7
6/19	2.1	3.8	-1.7
9/19	1.4	1.4	0.0
12/19	9.2	7.4	1.8
3/20	-30.5	-26.7	-3.8
6/20	18.7	14.3	4.4

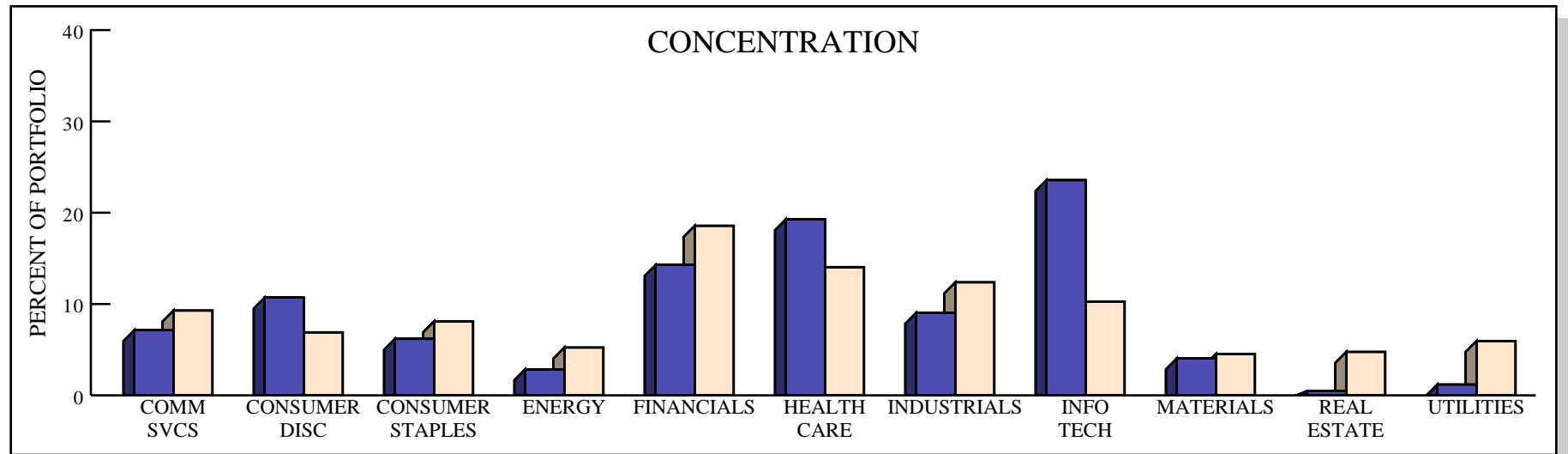
STOCK CHARACTERISTICS



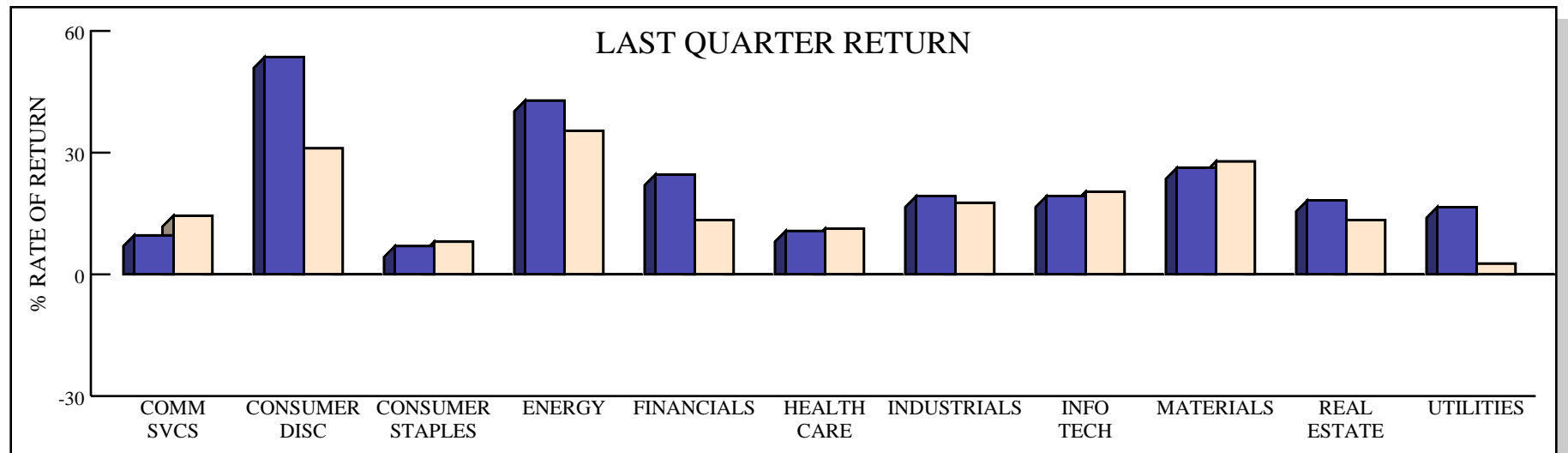
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	152	3.1%	14.3%	15.2	1.10
RUSSELL 1000V	839	2.9%	9.7%	17.2	1.05



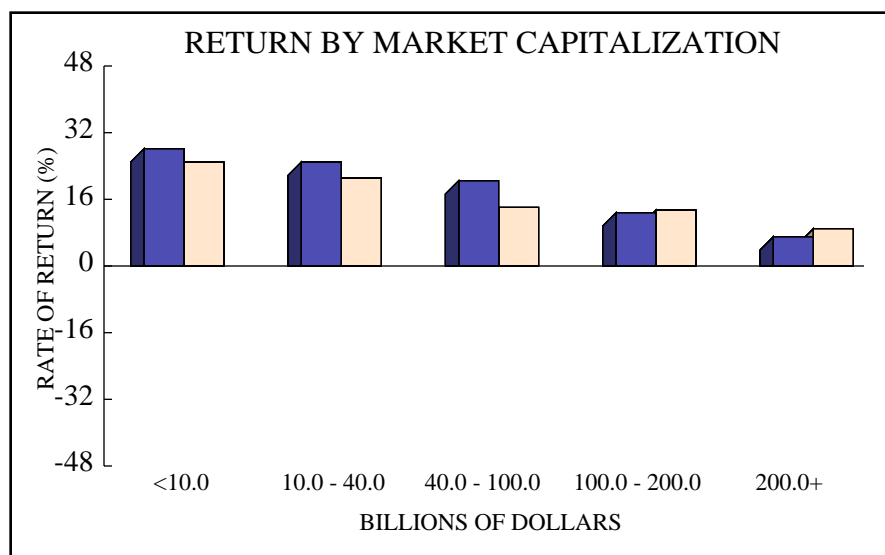
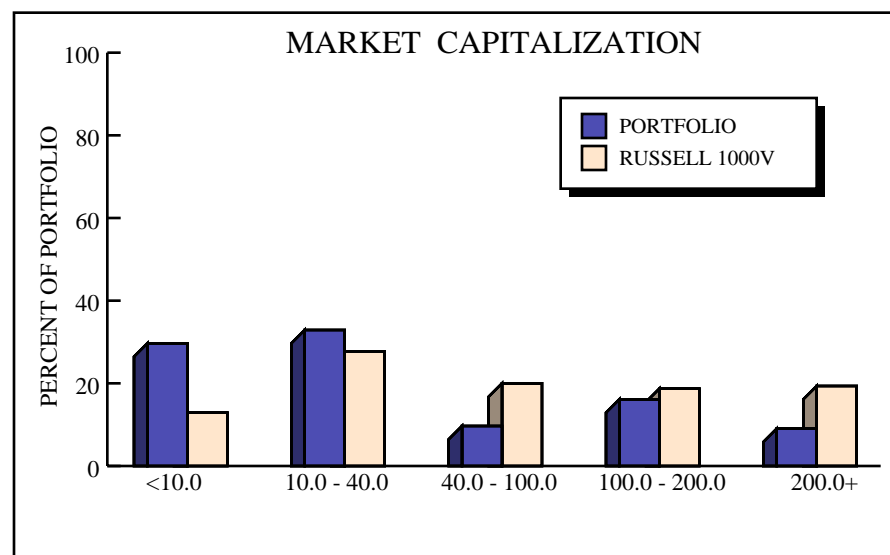
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 1000V



TOP TEN HOLDINGS



TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	INTEL CORP	\$ 4,253,913	2.97%	11.2%	Information Technology	\$ 253.3 B
2	VERIZON COMMUNICATIONS INC	3,302,287	2.30%	3.7%	Communication Services	228.1 B
3	ORACLE CORP	3,012,215	2.10%	14.9%	Information Technology	169.6 B
4	MERCK & CO. INC.	3,008,137	2.10%	1.3%	Health Care	195.2 B
5	CISCO SYSTEMS INC	2,928,992	2.04%	19.7%	Information Technology	196.9 B
6	AMGEN INC	2,877,492	2.01%	17.1%	Health Care	138.7 B
7	PFIZER INC	2,795,850	1.95%	1.2%	Health Care	181.6 B
8	AT&T INC	2,693,493	1.88%	5.5%	Communication Services	215.4 B
9	EBAY INC	2,522,845	1.76%	75.1%	Consumer Discretionary	36.9 B
10	TARGET CORP	2,506,537	1.75%	29.7%	Consumer Discretionary	60.0 B

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
LSV ASSET MANAGEMENT - US SMALL CAP VALUE EQUITY
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's LSV Asset Management US Small Cap Value Equity portfolio was valued at \$56,589,070, representing an increase of \$10,246,283 from the March quarter's ending value of \$46,342,787. Last quarter, the Fund posted withdrawals totaling \$90,022, which partially offset the portfolio's net investment return of \$10,336,305. Income receipts totaling \$359,289 plus net realized and unrealized capital gains of \$9,977,016 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the LSV Asset Management US Small Cap Value Equity portfolio returned 22.3%, which was 3.4% above the Russell 2000 Value Index's return of 18.9% and ranked in the 41st percentile of the Small Cap Value universe. Over the trailing year, the portfolio returned -21.5%, which was 4.0% below the benchmark's -17.5% return, ranking in the 91st percentile. Since December 2016, the portfolio returned -5.4% annualized and ranked in the 85th percentile. The Russell 2000 Value returned an annualized -3.6% over the same period.

ASSET ALLOCATION

At the end of the second quarter, small cap equities comprised 99.8% of the total portfolio (\$56.5 million), while cash & equivalents totaled 0.2% (\$125,483).

EQUITY ANALYSIS

The small cap LSV portfolio had a footprint in all sectors of our analysis at quarter end. Relative to the Russell 2000 Value index, the portfolio had larger positions in the Consumer Discretionary, Health Care, Industrials, and Information Technology.

Although the portfolio did not match the returns of the benchmarks three top-performing sectors (Consumer Discretionary, Energy, and Health Care), it succeeded in outperforming on the whole. Top stocks KB Home and Builders Firstsource Inc. were instrumental, both returning in the vicinity of 70%.

EXECUTIVE SUMMARY**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	Since 12/16
Total Portfolio - Gross	22.3	-27.4	-21.5	-6.6	----	-5.4
<i>SMALL CAP VALUE RANK</i>	(41)	(88)	(91)	(92)	----	(85)
Total Portfolio - Net	22.2	-27.7	-22.1	-7.1	----	-6.0
Russell 2000V	18.9	-23.5	-17.5	-4.4	1.2	-3.6
Small Cap Equity - Gross	22.5	-27.9	-22.0	-6.8	----	-5.6
<i>SMALL CAP VALUE RANK</i>	(40)	(91)	(92)	(94)	----	(86)
Russell 2000V	18.9	-23.5	-17.5	-4.4	1.2	-3.6

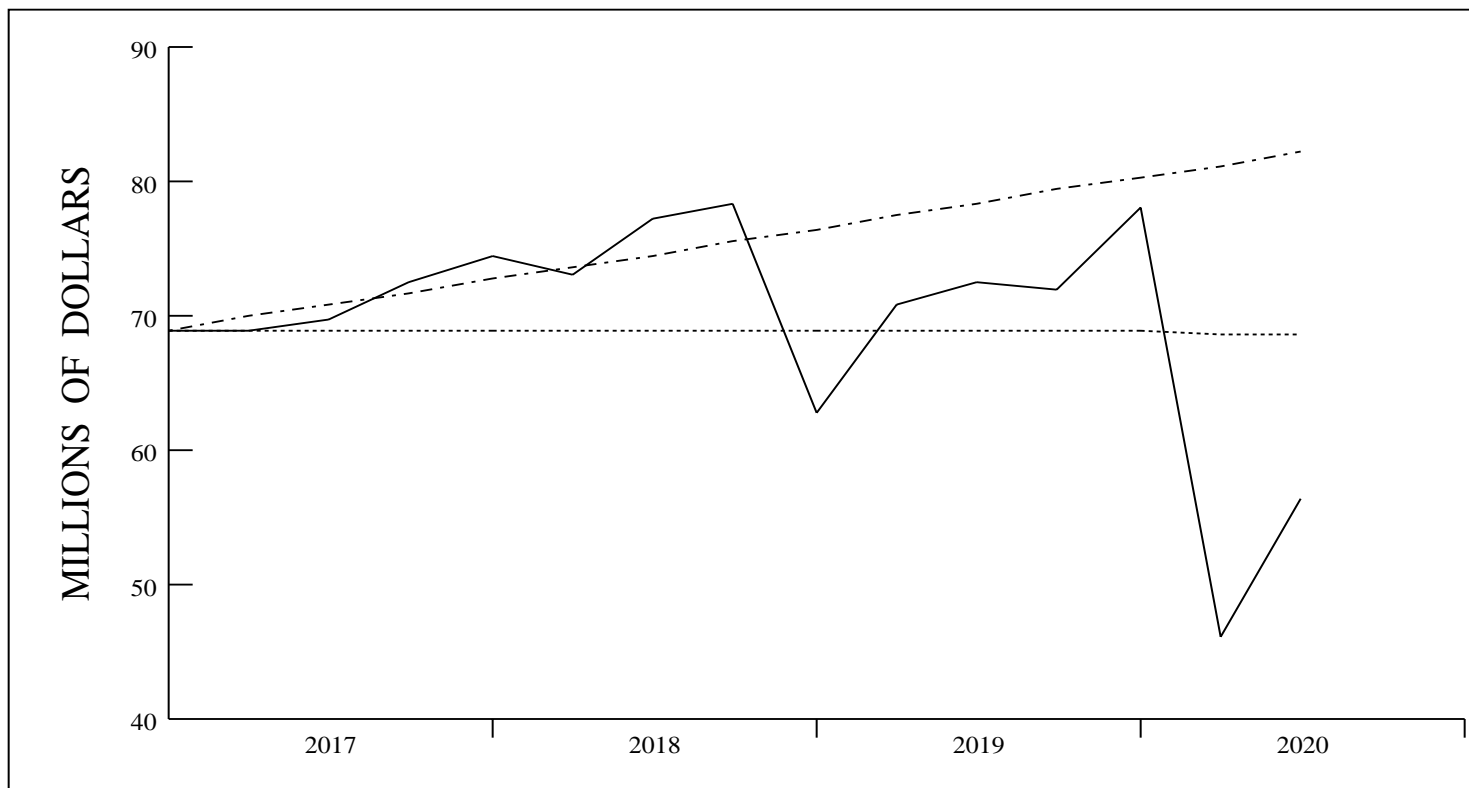
ASSET ALLOCATION

Small Cap	99.8%	\$ 56,463,587
Cash	0.2%	125,483
Total Portfolio	100.0%	\$ 56,589,070

INVESTMENT RETURN

Market Value 3/2020	\$ 46,342,787
Contribs / Withdrawals	- 90,022
Income	359,289
Capital Gains / Losses	9,977,016
Market Value 6/2020	\$ 56,589,070

INVESTMENT GROWTH

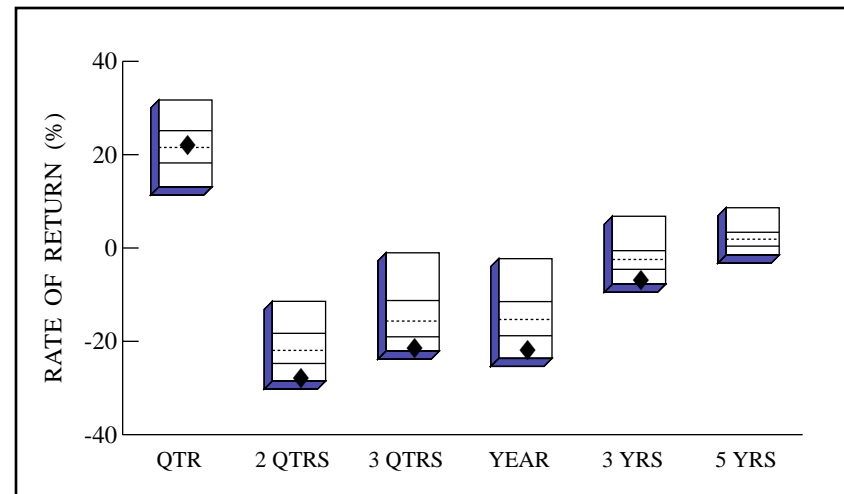
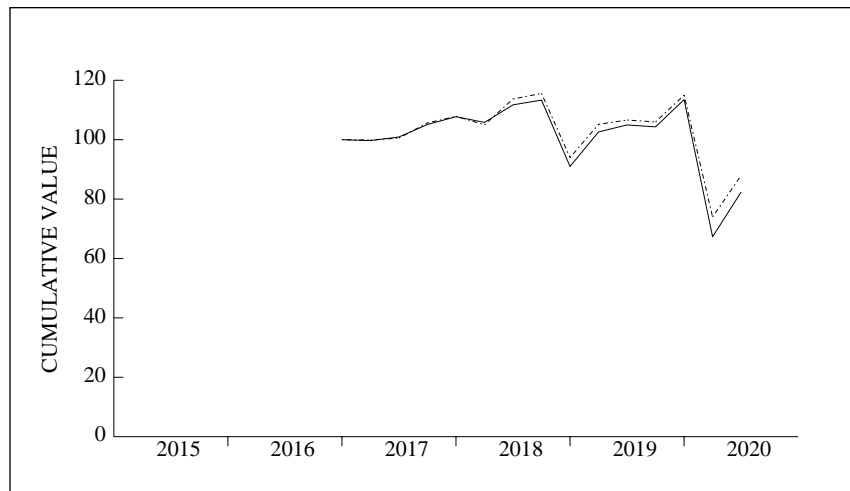


— ACTUAL RETURN
 - - - 5.25%
 . . . 0.0%

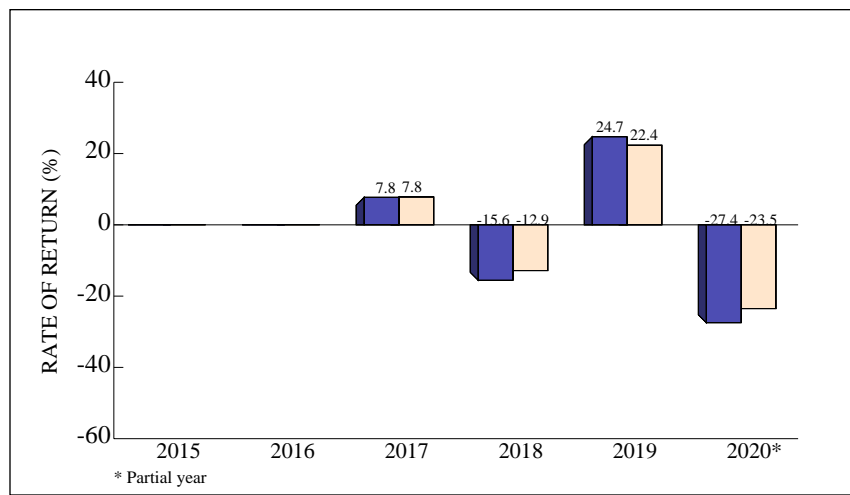
VALUE ASSUMING
 5.25% RETURN \$ 82,307,776

	LAST QUARTER	PERIOD 12/16 - 6/20
BEGINNING VALUE	\$ 46,342,787	\$ 69,163,490
NET CONTRIBUTIONS	- 90,022	-408,390
<u>INVESTMENT RETURN</u>	<u>10,336,305</u>	<u>- 12,166,030</u>
ENDING VALUE	\$ 56,589,070	\$ 56,589,070
INCOME	359,289	5,728,225
<u>CAPITAL GAINS (LOSSES)</u>	<u>9,977,016</u>	<u>- 17,894,255</u>
INVESTMENT RETURN	10,336,305	- 12,166,030

TOTAL RETURN COMPARISONS



Small Cap Value Universe



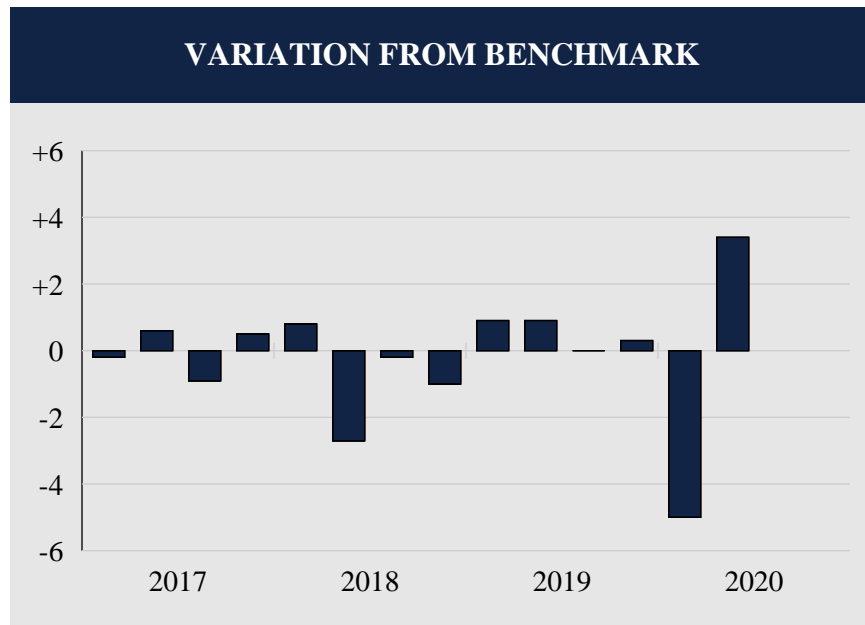
* Partial year

	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	22.3	-27.4	-21.1	-21.5	-6.6	---
(RANK)	(41)	(88)	(88)	(91)	(92)	---
5TH %ILE	31.7	-11.5	-1.0	-2.3	6.8	8.6
25TH %ILE	25.2	-18.3	-11.3	-11.5	-0.6	3.4
MEDIAN	21.6	-21.9	-15.7	-15.3	-2.5	1.9
75TH %ILE	18.2	-24.8	-19.0	-18.8	-4.6	0.4
95TH %ILE	13.1	-28.5	-22.1	-23.7	-7.8	-1.5
Russ 2000V	18.9	-23.5	-17.0	-17.5	-4.4	1.2

Small Cap Value Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY

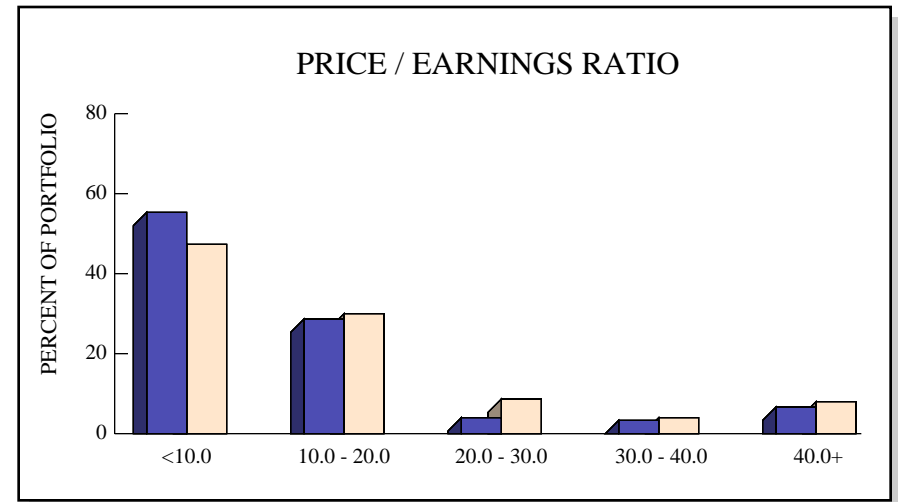
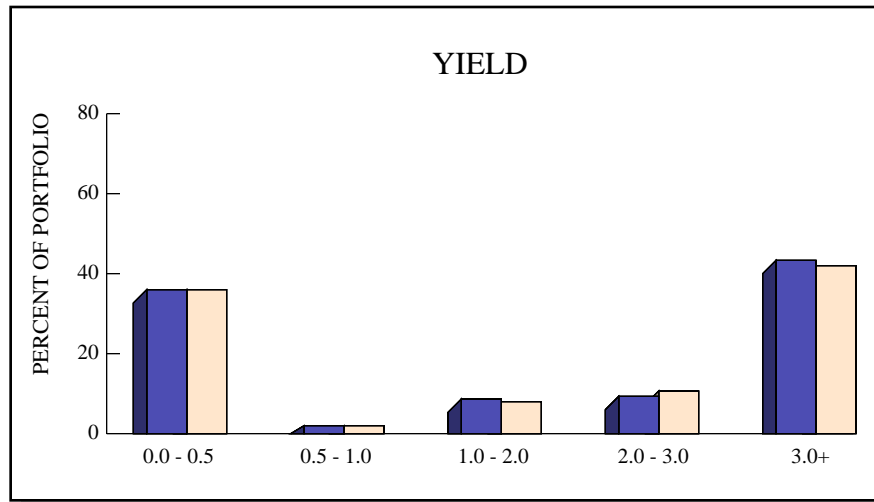
COMPARATIVE BENCHMARK: RUSSELL 2000 VALUE



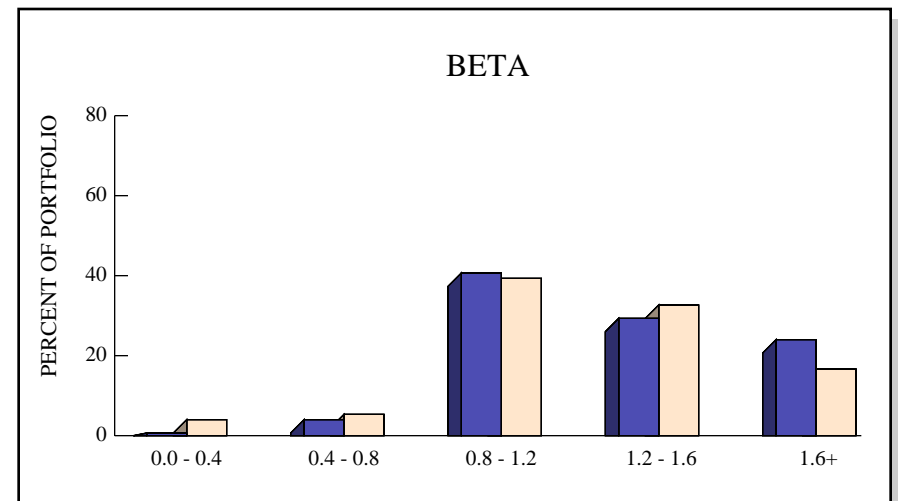
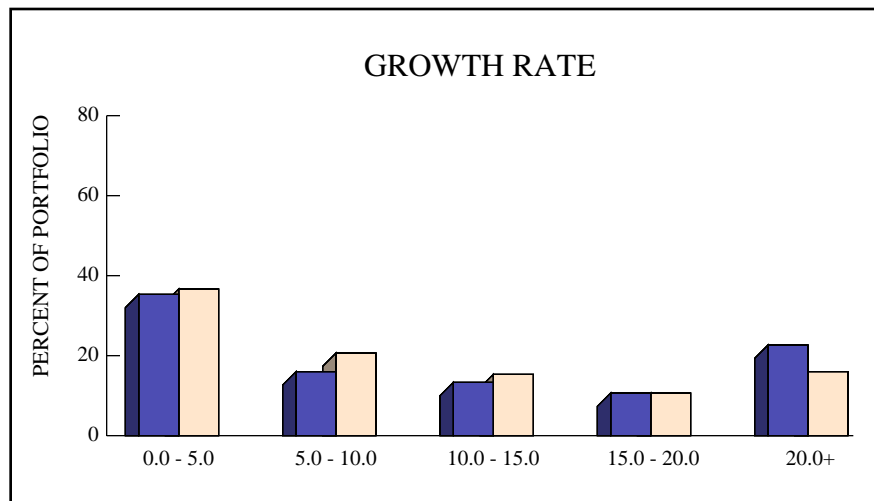
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
3/17	-0.3	-0.1	-0.2
6/17	1.3	0.7	0.6
9/17	4.2	5.1	-0.9
12/17	2.5	2.0	0.5
3/18	-1.8	-2.6	0.8
6/18	5.6	8.3	-2.7
9/18	1.4	1.6	-0.2
12/18	-19.7	-18.7	-1.0
3/19	12.8	11.9	0.9
6/19	2.3	1.4	0.9
9/19	-0.6	-0.6	0.0
12/19	8.8	8.5	0.3
3/20	-40.7	-35.7	-5.0
6/20	22.3	18.9	3.4

Total Quarters Observed	14
Quarters At or Above the Benchmark	8
Quarters Below the Benchmark	6
Batting Average	.571

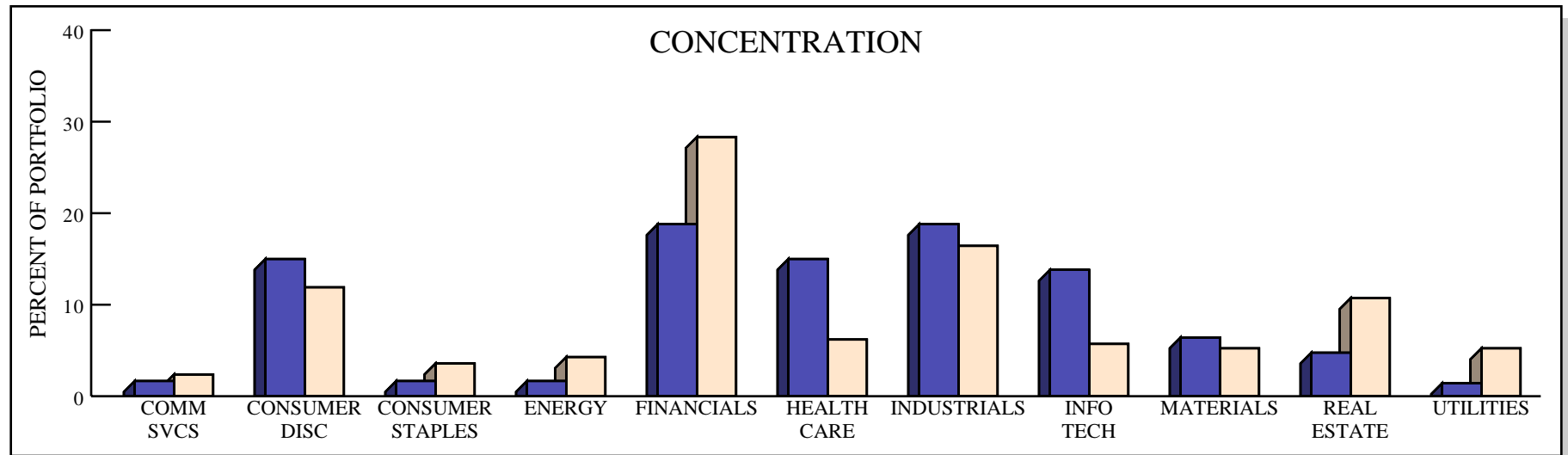
STOCK CHARACTERISTICS



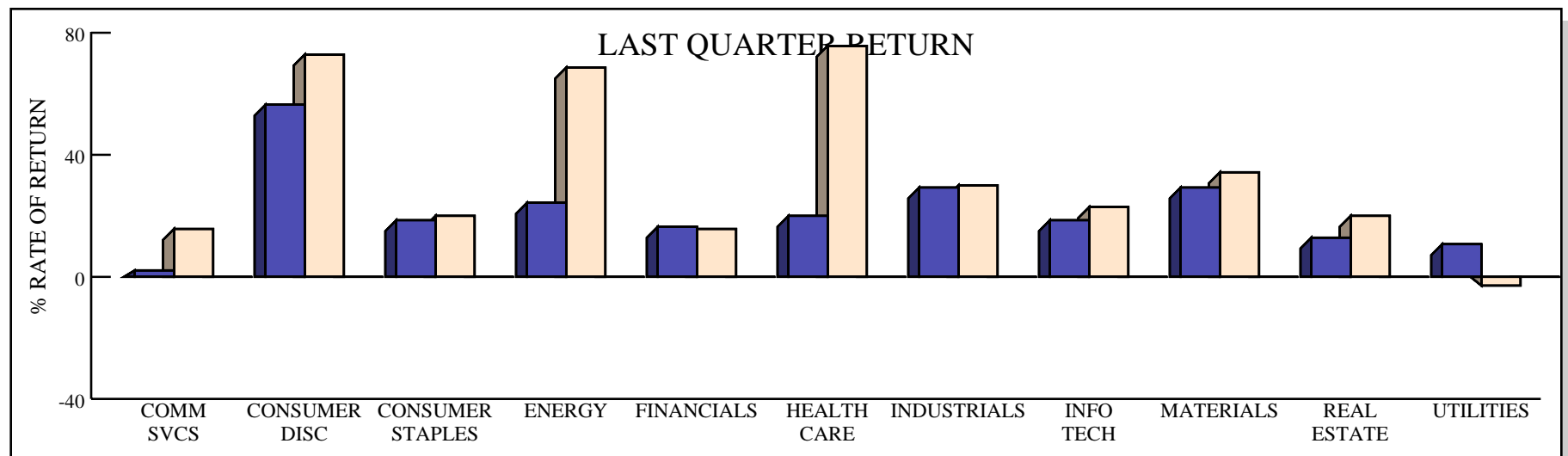
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	211	3.3%	11.0%	12.2	1.31
RUSSELL 2000V	1,439	5.4%	8.4%	27.0	1.22



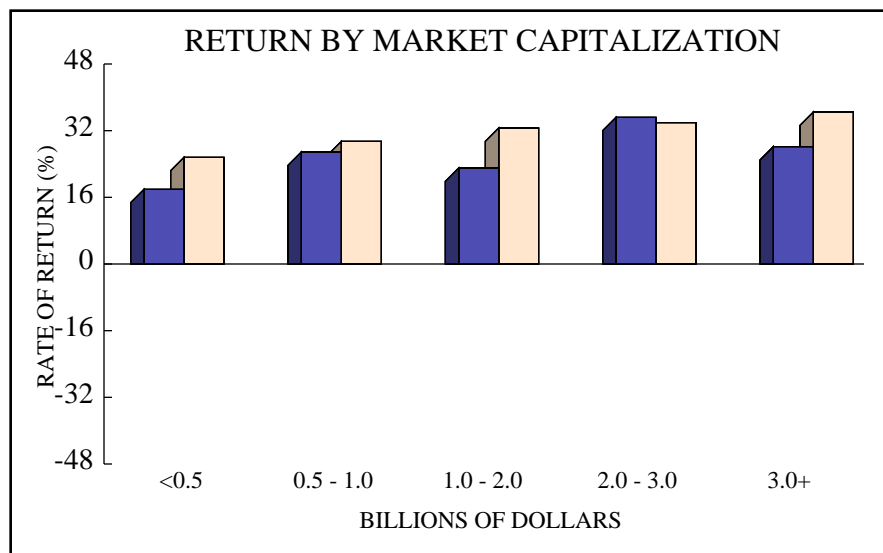
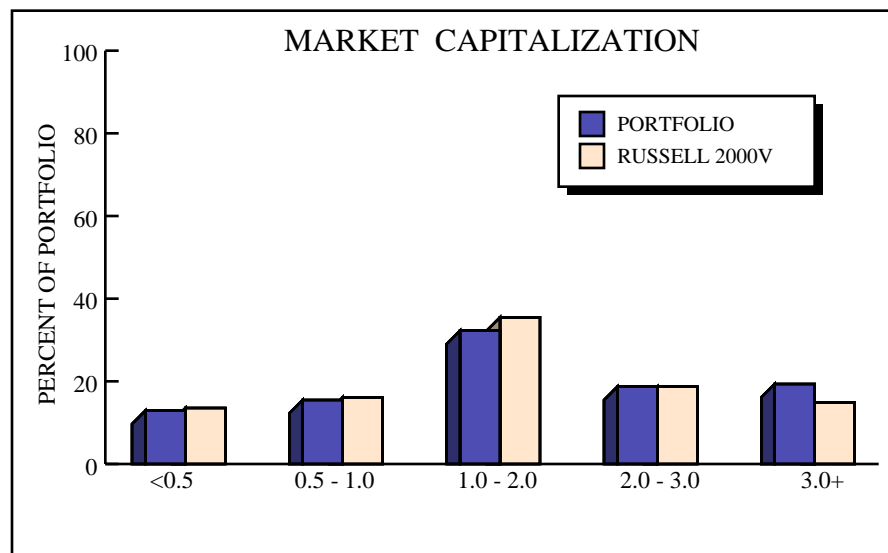
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 2000V



TOP TEN HOLDINGS



TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	OFFICE DEPOT INC	\$ 2,500,400	4.43%	43.3%	Consumer Discretionary	\$ 12.4 B
2	CORCEPT THERAPEUTICS INC	807,360	1.43%	41.5%	Health Care	1.9 B
3	KB HOME	797,680	1.41%	70.1%	Consumer Discretionary	2.8 B
4	UNITED THERAPEUTICS CORP	786,500	1.39%	27.6%	Health Care	5.3 B
5	CNO FINANCIAL GROUP INC	758,944	1.34%	26.6%	Financials	2.2 B
6	INNOVIVA INC	753,522	1.33%	18.9%	Health Care	1.4 B
7	SELECT MEDICAL HOLDINGS CORP	742,392	1.31%	-1.8%	Health Care	2.0 B
8	BUILDERS FIRSTSOURCE INC	732,780	1.30%	69.3%	Industrials	2.4 B
9	CIENA CORP	725,744	1.29%	36.1%	Information Technology	8.3 B
10	TCF FINANCIAL CORP	717,495	1.27%	31.8%	Financials	4.5 B

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
POLEN CAPITAL MANAGEMENT - FOCUS GROWTH
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's Polen Capital Management Focus Growth portfolio was valued at \$221,955,072, representing an increase of \$4,401,708 from the March quarter's ending value of \$217,553,364. Last quarter, the Fund posted withdrawals totaling \$52,908,038, which offset the portfolio's net investment return of \$57,309,746. Income receipts totaling \$375,764 plus net realized and unrealized capital gains of \$56,933,982 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the Polen Capital Management Focus Growth portfolio returned 27.6%, which was 0.2% below the Russell 1000 Growth Index's return of 27.8% and ranked in the 39th percentile of the Large Cap Growth universe. Over the trailing year, the portfolio returned 24.0%, which was 0.7% above the benchmark's 23.3% return, ranking in the 21st percentile. Since September 2010, the portfolio returned 18.0% annualized and ranked in the 6th percentile. The Russell 1000 Growth returned an annualized 16.2% over the same period.

ASSET ALLOCATION

At the end of the second quarter, large cap equities comprised 98.0% of the total portfolio (\$217.5 million), while cash & equivalents totaled 2.0% (\$4.5 million).

EQUITY ANALYSIS

The Polen portfolio maintained its heavy concentration in the Information Technology sector last quarter. The Communication Services and Health Care sectors had notable representation, while the Consumer Discretionary and Financials sectors made up small portions. The remaining sectors were vacant.

Although the portfolio was situated mostly in well-performing sectors, representation in the Consumer Discretionary sector was low and the portfolio significantly underperformed in this sector, which was the top performer in the large cap growth market.

EXECUTIVE SUMMARY**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	Since 09/10
Total Portfolio - Gross	27.6	11.1	24.0	22.6	19.0	18.0
<i>LARGE CAP GROWTH RANK</i>	(39)	(33)	(21)	(14)	(5)	(6)
Total Portfolio - Net	27.5	10.9	23.5	22.1	18.5	17.4
Russell 1000G	27.8	9.8	23.3	19.0	15.9	16.2
Large Cap Equity - Gross	28.8	11.8	25.0	23.6	19.8	18.8
<i>LARGE CAP GROWTH RANK</i>	(28)	(28)	(17)	(9)	(4)	(5)
Russell 1000G	27.8	9.8	23.3	19.0	15.9	16.2

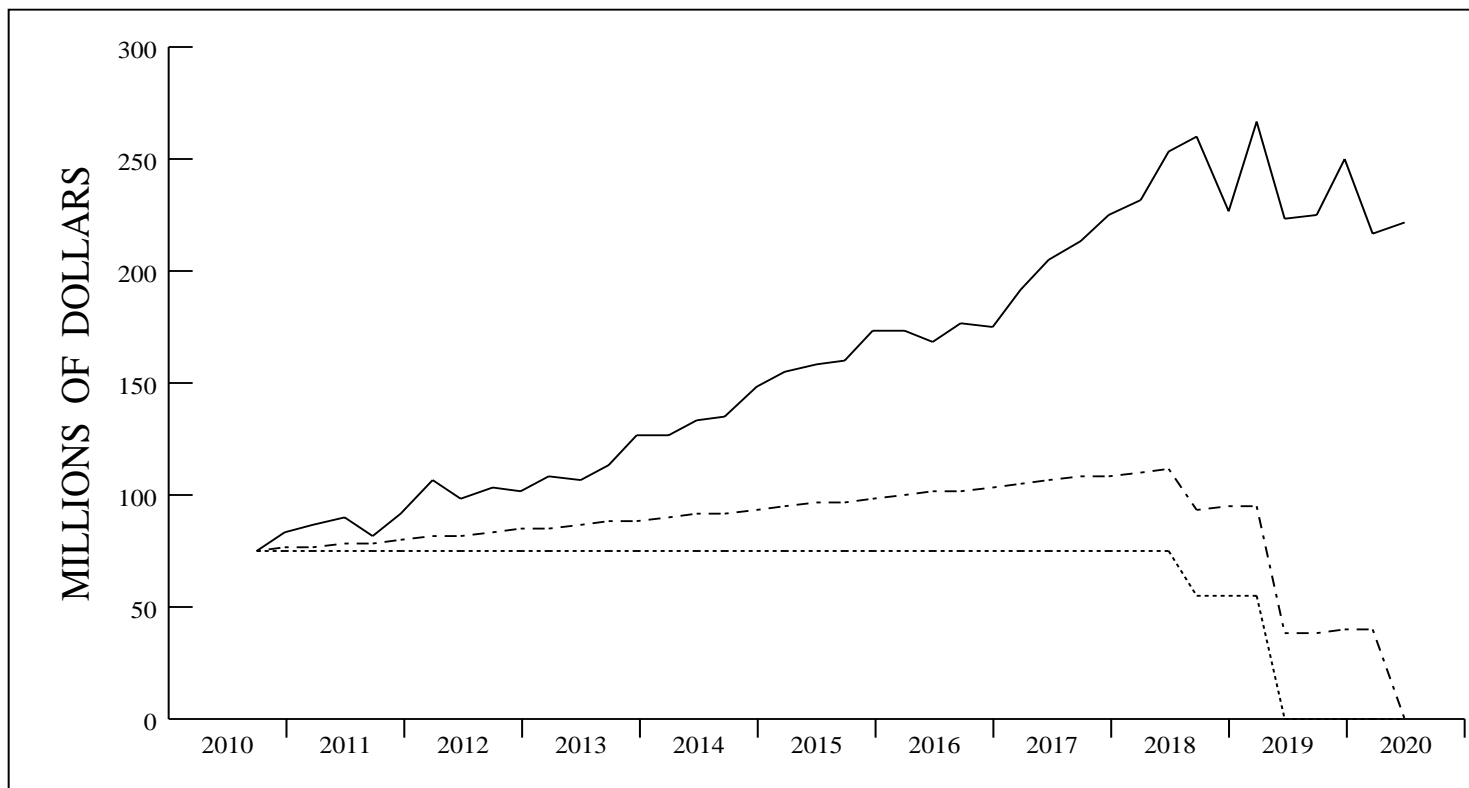
ASSET ALLOCATION

Large Cap Equity	98.0%	\$ 217,464,168
Cash	2.0%	4,490,904
Total Portfolio	100.0%	\$ 221,955,072

INVESTMENT RETURN

Market Value 3/2020	\$ 217,553,364
Contribs / Withdrawals	- 52,908,038
Income	375,764
Capital Gains / Losses	56,933,982
Market Value 6/2020	\$ 221,955,072

INVESTMENT GROWTH

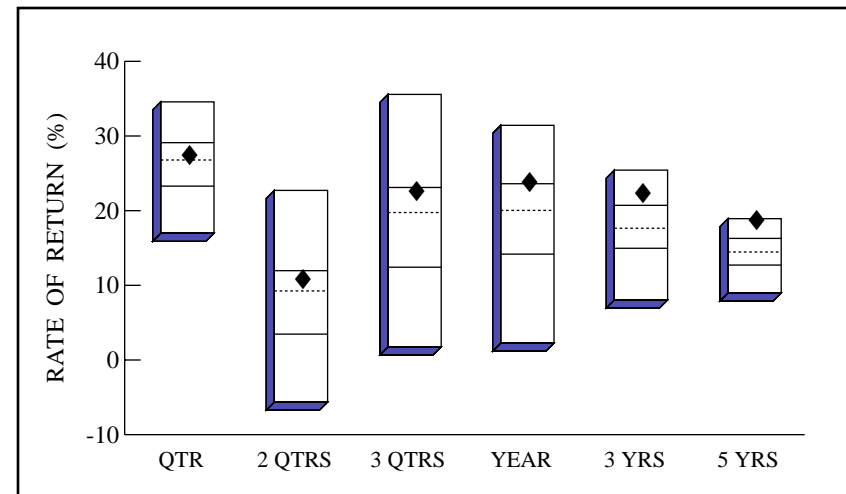
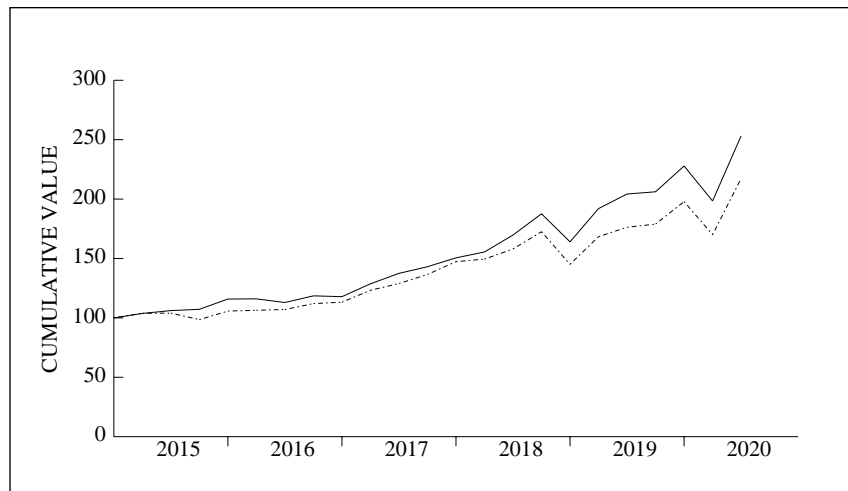


— ACTUAL RETURN
 - - - 5.25%
 . . . 0.0%

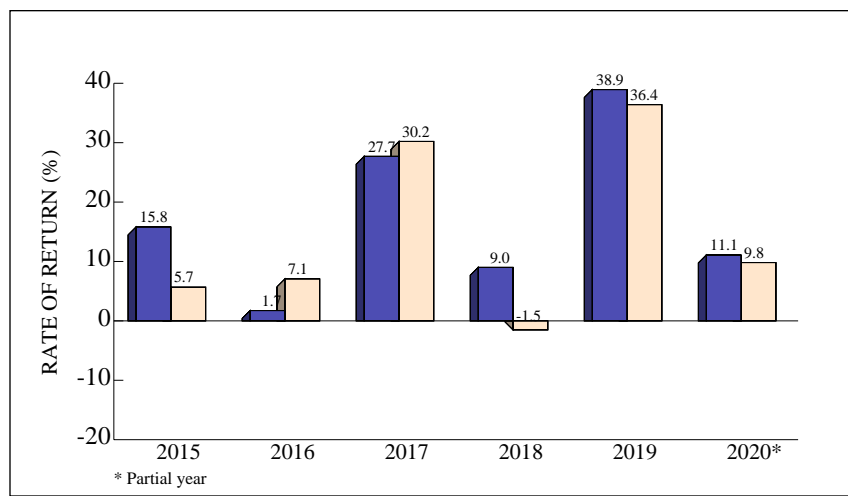
VALUE ASSUMING
 5.25% RETURN \$ -12,170,297

	LAST QUARTER	PERIOD 9/10 - 6/20
BEGINNING VALUE	\$ 217,553,364	\$ 75,827,096
NET CONTRIBUTIONS	- 52,908,038	-131,097,896
<u>INVESTMENT RETURN</u>	<u>57,309,746</u>	<u>277,225,872</u>
ENDING VALUE	\$ 221,955,072	\$ 221,955,072
INCOME	375,764	14,390,358
<u>CAPITAL GAINS (LOSSES)</u>	<u>56,933,982</u>	<u>262,835,514</u>
INVESTMENT RETURN	57,309,746	277,225,872

TOTAL RETURN COMPARISONS



Large Cap Growth Universe

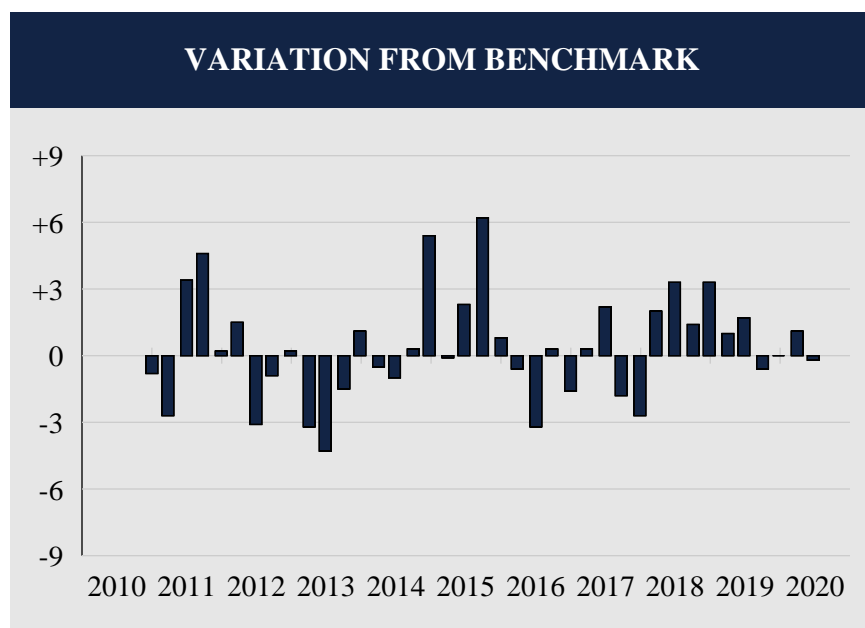


	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	27.6	11.1	22.8	24.0	22.6	19.0
(RANK)	(39)	(33)	(27)	(21)	(14)	(5)
5TH %ILE	34.6	22.7	35.6	31.4	25.4	18.9
25TH %ILE	29.1	12.0	23.1	23.6	20.7	16.3
MEDIAN	26.8	9.2	19.8	20.1	17.7	14.5
75TH %ILE	23.3	3.5	12.4	14.2	15.0	12.7
95TH %ILE	17.0	-5.6	1.8	2.2	8.1	9.0
Russ 1000G	27.8	9.8	21.5	23.3	19.0	15.9

Large Cap Growth Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY

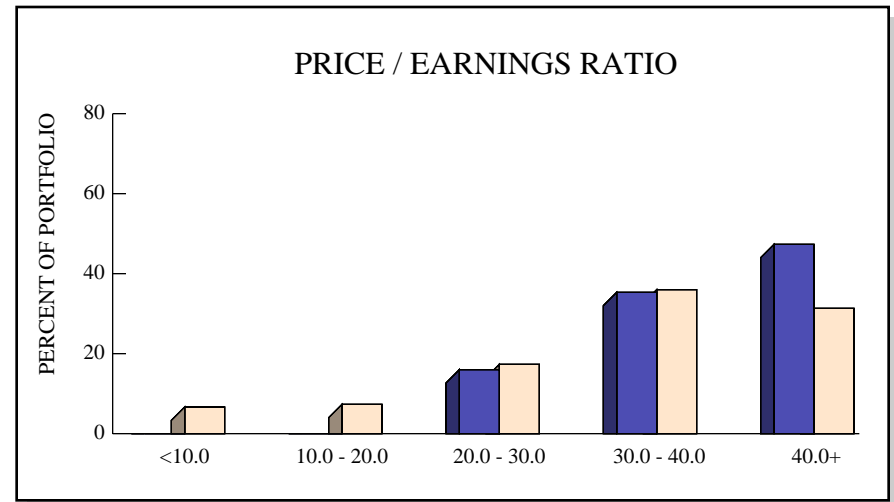
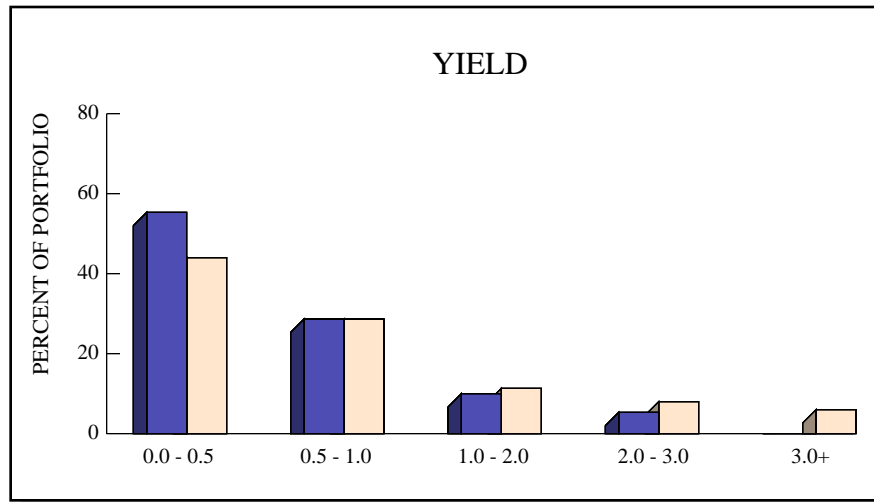
COMPARATIVE BENCHMARK: RUSSELL 1000 GROWTH



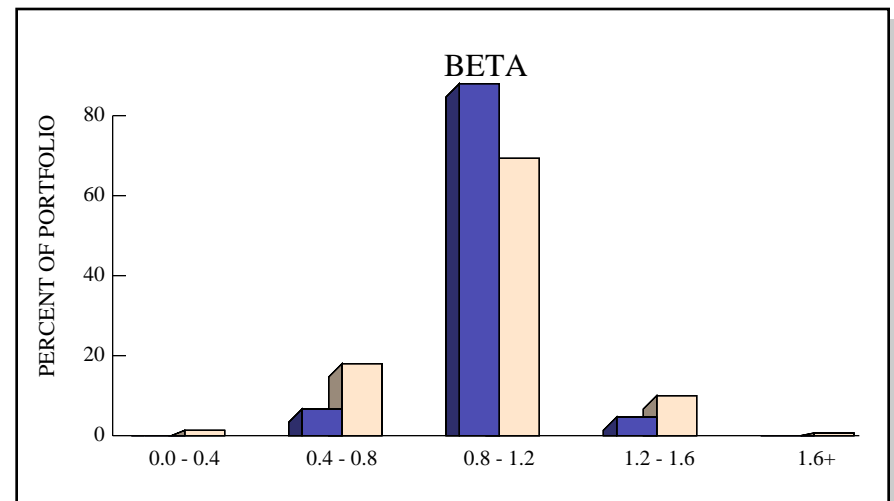
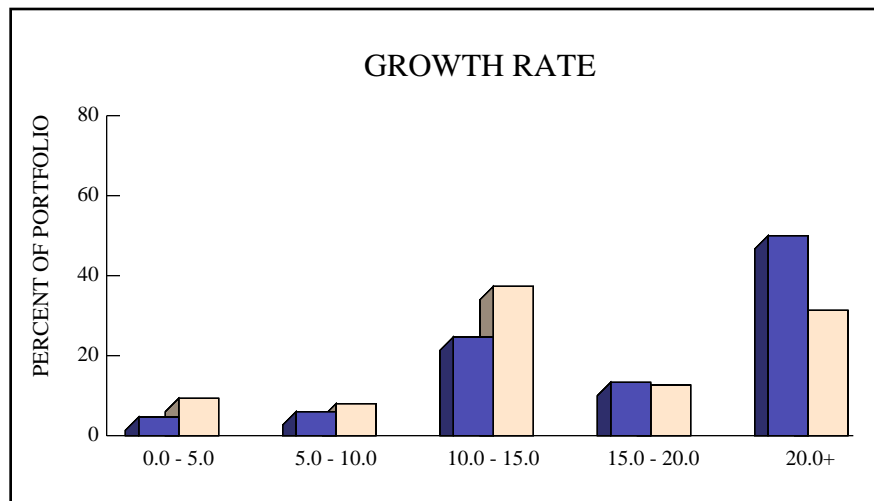
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
12/10	11.0	11.8	-0.8
3/11	3.3	6.0	-2.7
6/11	4.2	0.8	3.4
9/11	-8.5	-13.1	4.6
12/11	10.8	10.6	0.2
3/12	16.2	14.7	1.5
6/12	-7.1	-4.0	-3.1
9/12	5.2	6.1	-0.9
12/12	-1.1	-1.3	0.2
3/13	6.3	9.5	-3.2
6/13	-2.2	2.1	-4.3
9/13	6.6	8.1	-1.5
12/13	11.5	10.4	1.1
3/14	0.6	1.1	-0.5
6/14	4.1	5.1	-1.0
9/14	1.8	1.5	0.3
12/14	10.2	4.8	5.4
3/15	3.7	3.8	-0.1
6/15	2.4	0.1	2.3
9/15	0.9	-5.3	6.2
12/15	8.1	7.3	0.8
3/16	0.1	0.7	-0.6
6/16	-2.6	0.6	-3.2
9/16	4.9	4.6	0.3
12/16	-0.6	1.0	-1.6
3/17	9.2	8.9	0.3
6/17	6.9	4.7	2.2
9/17	4.1	5.9	-1.8
12/17	5.2	7.9	-2.7
3/18	3.4	1.4	2.0
6/18	9.1	5.8	3.3
9/18	10.6	9.2	1.4
12/18	-12.6	-15.9	3.3
3/19	17.1	16.1	1.0
6/19	6.3	4.6	1.7
9/19	0.9	1.5	-0.6
12/19	10.6	10.6	0.0
3/20	-13.0	-14.1	1.1
6/20	27.6	27.8	-0.2

Total Quarters Observed	39
Quarters At or Above the Benchmark	22
Quarters Below the Benchmark	17
Batting Average	.564

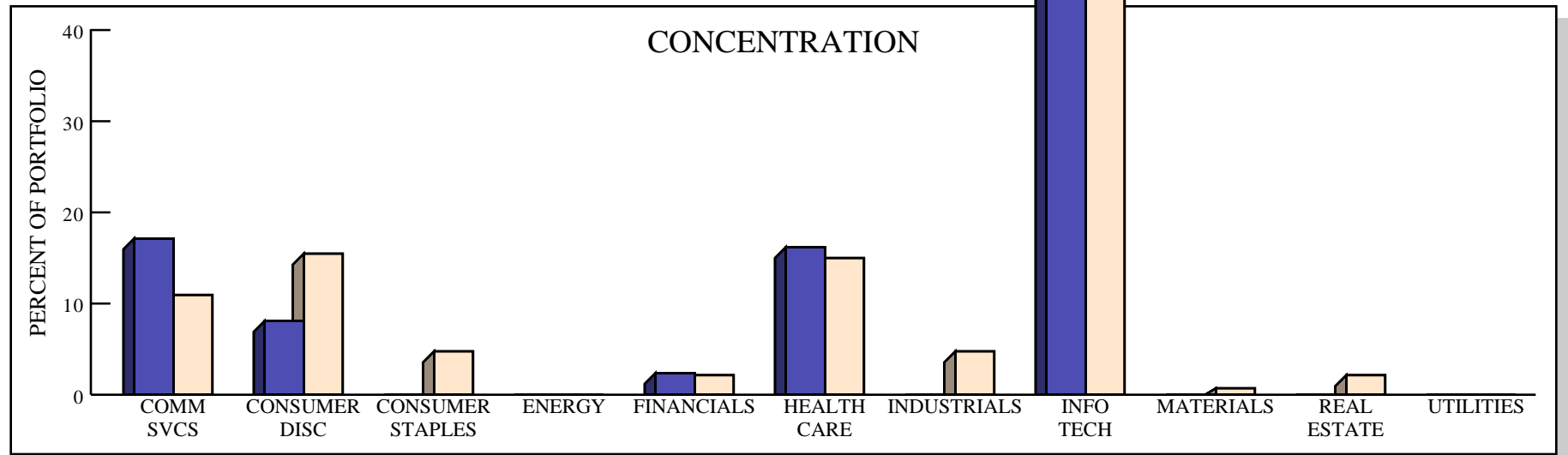
STOCK CHARACTERISTICS



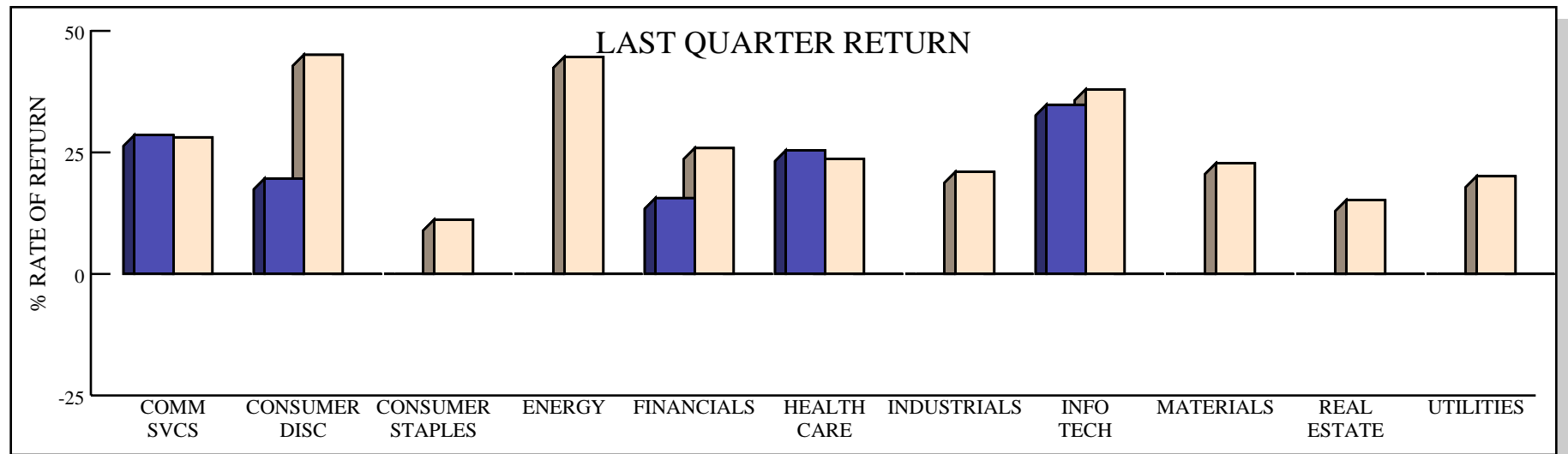
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	22	0.5%	24.7%	108.3	0.97
RUSSELL 1000G	435	1.0%	20.6%	60.1	0.95



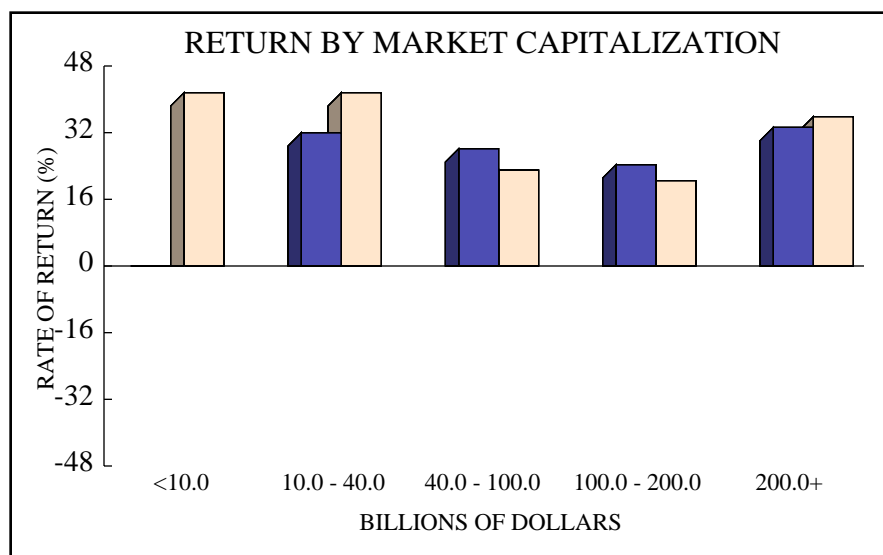
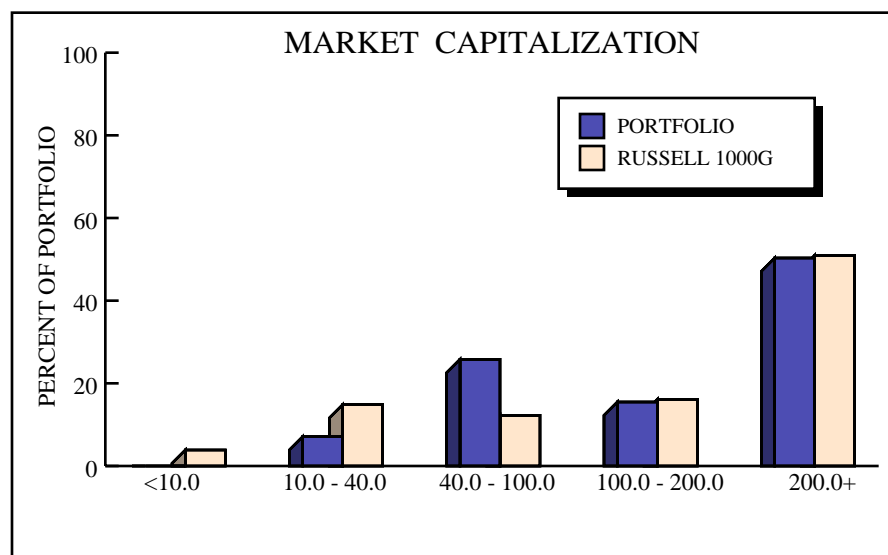
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 1000G



TOP TEN HOLDINGS



TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	MICROSOFT CORP	\$ 24,288,714	11.17%	29.4%	Information Technology	\$ 1543.3 B
2	FACEBOOK INC-CLASS A	17,975,543	8.27%	36.1%	Communication Services	546.5 B
3	ADOBE INC	16,223,133	7.46%	36.8%	Information Technology	208.8 B
4	ALPHABET INC-CL C	14,743,952	6.78%	21.6%	Communication Services	475.2 B
5	ABBOTT LABORATORIES	11,829,945	5.44%	16.3%	Health Care	161.7 B
6	VISA INC-CLASS A SHARES	11,513,898	5.29%	20.1%	Information Technology	325.9 B
7	MASTERCARD INC - A	10,633,077	4.89%	22.6%	Information Technology	293.6 B
8	PAYPAL HOLDINGS INC	10,260,056	4.72%	82.0%	Information Technology	204.6 B
9	ACCENTURE PLC-CL A	9,957,211	4.58%	32.1%	Information Technology	136.6 B
10	ZOETIS INC	9,905,251	4.55%	16.6%	Health Care	65.1 B

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
SMITH, GRAHAM & COMPANY - SMALL CAP VALUE
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's Smith, Graham & Company Small Cap Value portfolio was valued at \$63,090,367, representing an increase of \$13,192,114 from the March quarter's ending value of \$49,898,253. Last quarter, the Fund posted withdrawals totaling \$115,466, which partially offset the portfolio's net investment return of \$13,307,580. Income receipts totaling \$184,313 plus net realized and unrealized capital gains of \$13,123,267 combined to produce the portfolio's net investment return.

RELATIVE PERFORMANCE

Total Fund

For the second quarter, the Smith, Graham & Company Small Cap Value portfolio returned 26.7%, which was 7.8% above the Russell 2000 Value Index's return of 18.9% and ranked in the 17th percentile of the Small Cap Value universe. Over the trailing year, the portfolio returned -10.3%, which was 7.2% above the benchmark's -17.5% return, ranking in the 22nd percentile. Since December 2016, the portfolio returned -1.9% annualized and ranked in the 44th percentile. The Russell 2000 Value returned an annualized -3.6% over the same period.

ASSET ALLOCATION

At the end of the second quarter, small cap equities comprised 99.0% of the total portfolio (\$62.4 million), while cash & equivalents totaled 1.0% (\$643,981).

EQUITY ANALYSIS

The Smith, Graham portfolio was invested in ten of the eleven industry sectors in our analysis. Relative to the Russell 2000 Value index, the portfolio had greater weight in the Consumer Discretionary, Health Care, and Information Technology sectors. Financials, Real Estate, and Utilities were underweight, while the Communication Services sector was vacant.

Although the portfolio did not produce the blockbuster returns in its Health Care sector that were experienced in the small cap value, the total return still came in well above the benchmark. Top stocks Green Dot Corp (+93.3%) and Lithia Motors Inc. (+85.5%) added momentum to the portfolio's upswing during the second quarter.

EXECUTIVE SUMMARY**PERFORMANCE SUMMARY**

	Quarter	YTD	1 Year	3 Year	5 Year	Since 12/16
Total Portfolio - Gross	26.7	-20.3	-10.3	-3.6	----	-1.9
<i>SMALL CAP VALUE RANK</i>	(17)	(35)	(22)	(61)	----	(44)
Total Portfolio - Net	26.5	-20.6	-10.9	-4.3	----	-2.6
Russell 2000V	18.9	-23.5	-17.5	-4.4	1.2	-3.6
Small Cap Equity - Gross	26.9	-20.5	-10.3	-3.6	----	-1.9
<i>SMALL CAP VALUE RANK</i>	(16)	(37)	(22)	(61)	----	(44)
Russell 2000V	18.9	-23.5	-17.5	-4.4	1.2	-3.6

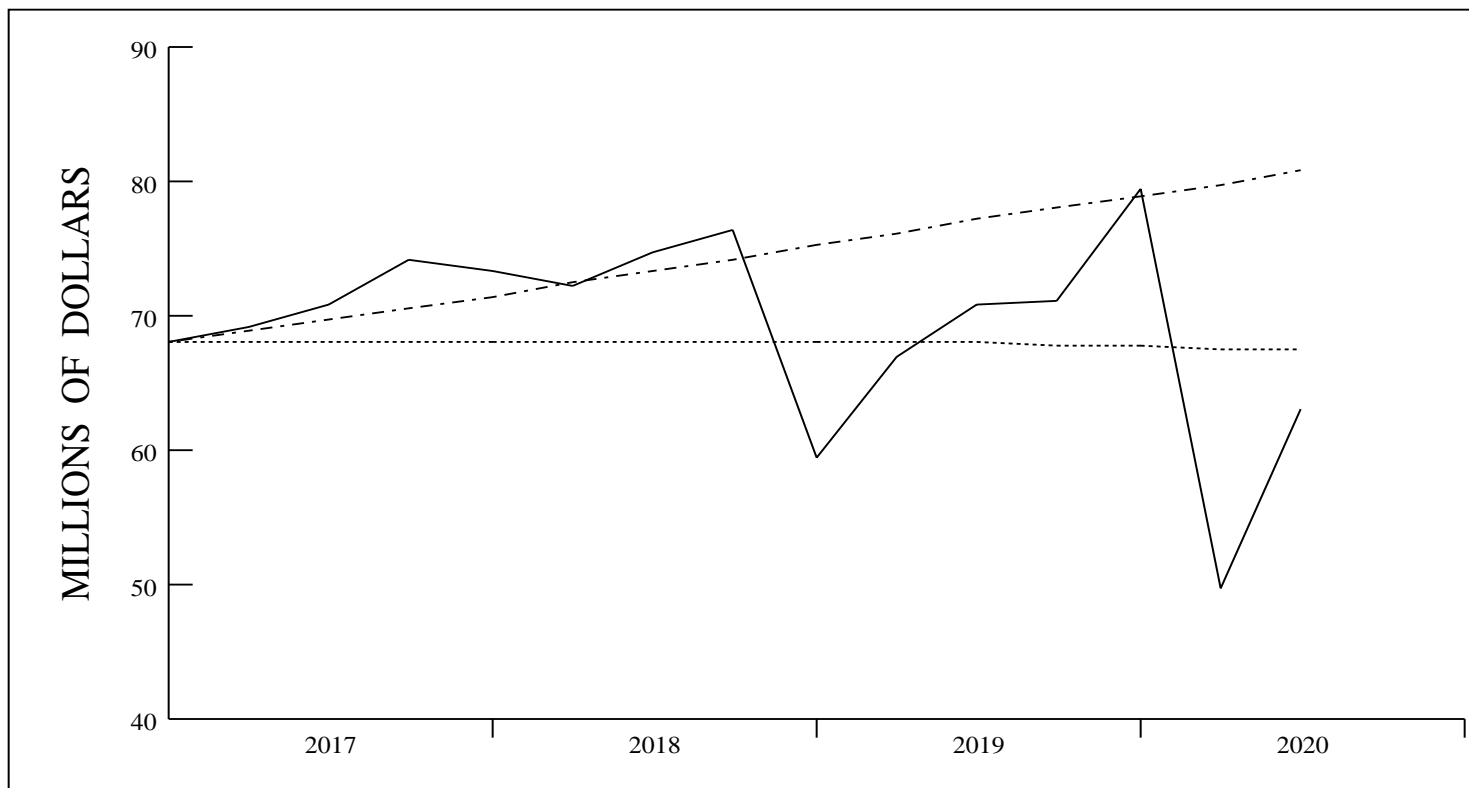
ASSET ALLOCATION

Small Cap	99.0%	\$ 62,446,386
Cash	1.0%	643,981
Total Portfolio	100.0%	\$ 63,090,367

INVESTMENT RETURN

Market Value 3/2020	\$ 49,898,253
Contribs / Withdrawals	-115,466
Income	184,313
Capital Gains / Losses	13,123,267
Market Value 6/2020	\$ 63,090,367

INVESTMENT GROWTH

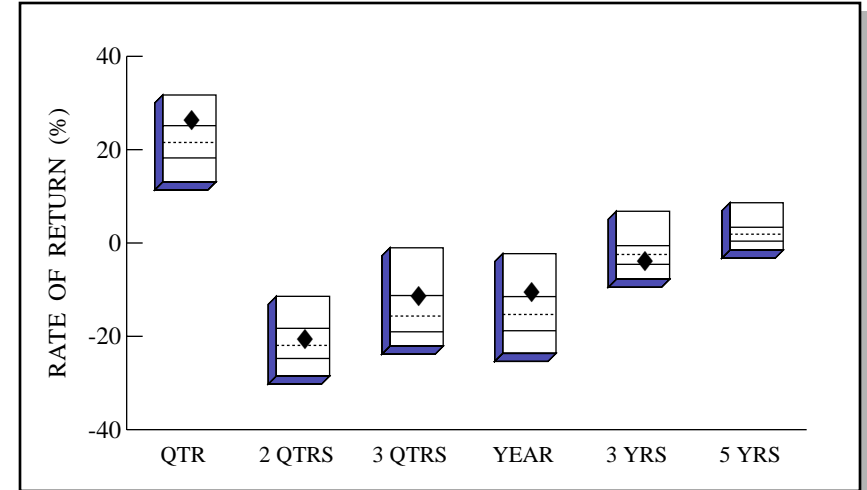
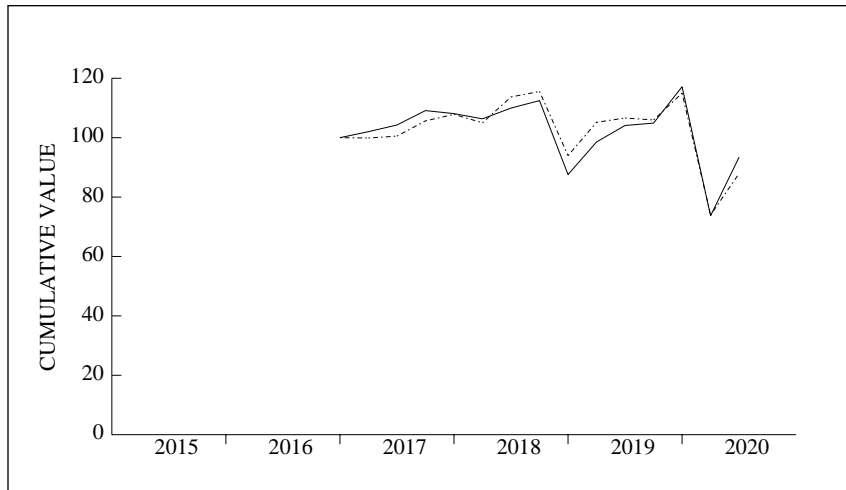


— ACTUAL RETURN
 - - - 5.25%
 . . . 0.0%

VALUE ASSUMING
 5.25% RETURN \$ 80,895,083

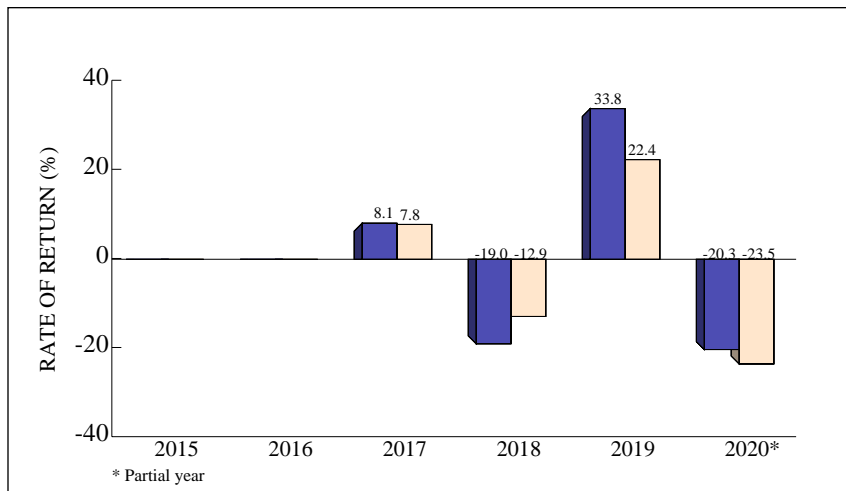
	LAST QUARTER	PERIOD 12/16 - 6/20
BEGINNING VALUE	\$ 49,898,253	\$ 68,056,392
NET CONTRIBUTIONS	-115,466	-495,023
<u>INVESTMENT RETURN</u>	<u>13,307,580</u>	<u>-4,471,002</u>
ENDING VALUE	\$ 63,090,367	\$ 63,090,367
INCOME	184,313	3,570,584
<u>CAPITAL GAINS (LOSSES)</u>	<u>13,123,267</u>	<u>-8,041,586</u>
INVESTMENT RETURN	13,307,580	-4,471,002

TOTAL RETURN COMPARISONS



■ ——— PORTFOLIO
■ - - - - RUSSELL 2000V

Small Cap Value Universe

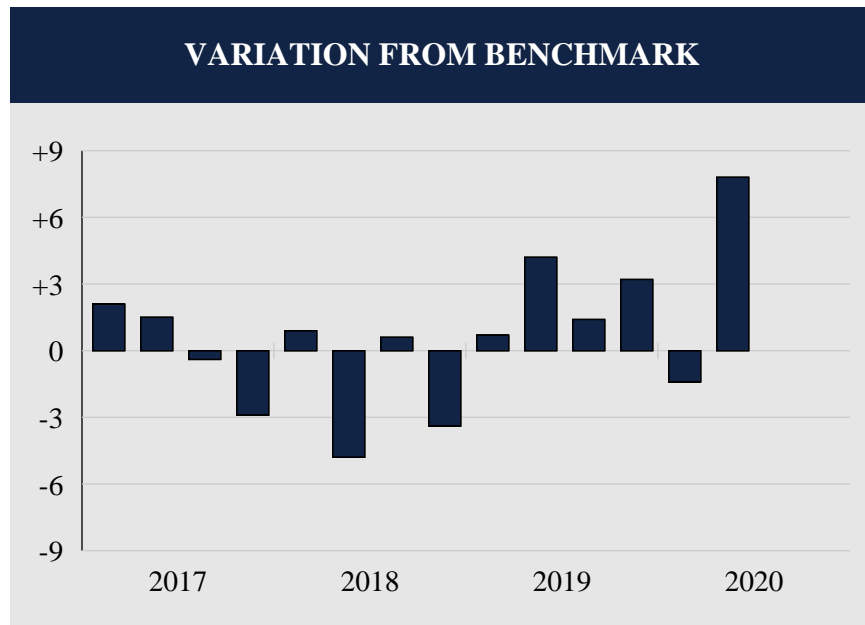


	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	26.7	-20.3	-10.9	-10.3	-3.6	---
(RANK)	(17)	(35)	(24)	(22)	(61)	---
5TH %ILE	31.7	-11.5	-1.0	-2.3	6.8	8.6
25TH %ILE	25.2	-18.3	-11.3	-11.5	-0.6	3.4
MEDIAN	21.6	-21.9	-15.7	-15.3	-2.5	1.9
75TH %ILE	18.2	-24.8	-19.0	-18.8	-4.6	0.4
95TH %ILE	13.1	-28.5	-22.1	-23.7	-7.8	-1.5
Russ 2000V	18.9	-23.5	-17.0	-17.5	-4.4	1.2

Small Cap Value Universe

TOTAL PORTFOLIO QUARTERLY PERFORMANCE SUMMARY

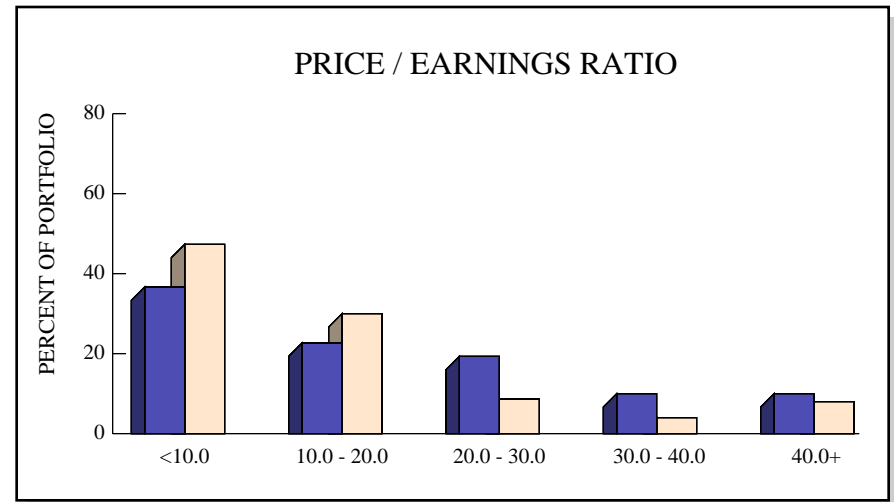
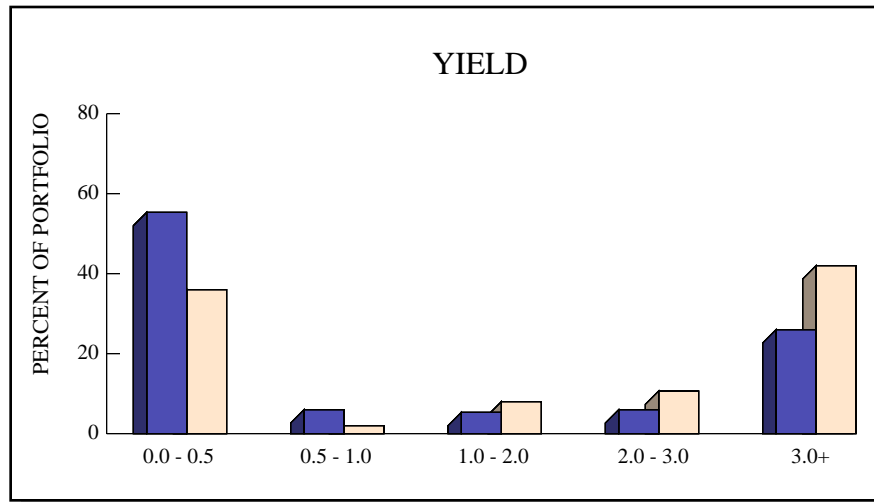
COMPARATIVE BENCHMARK: RUSSELL 2000 VALUE



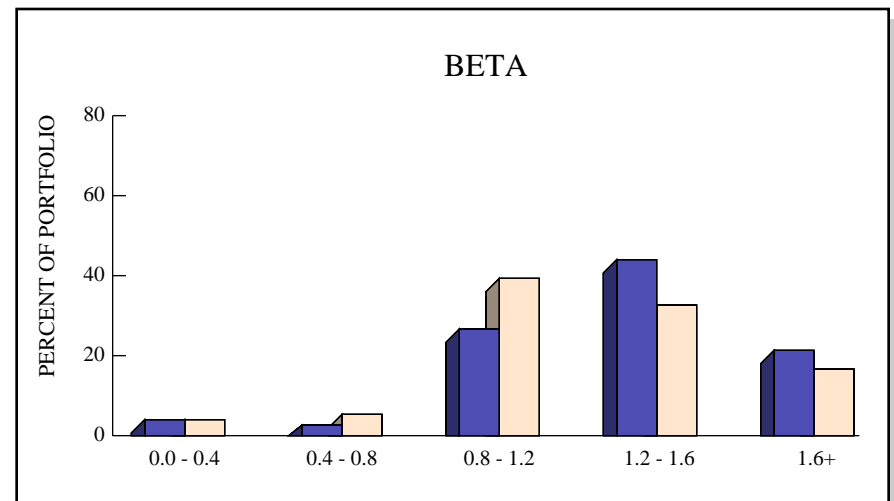
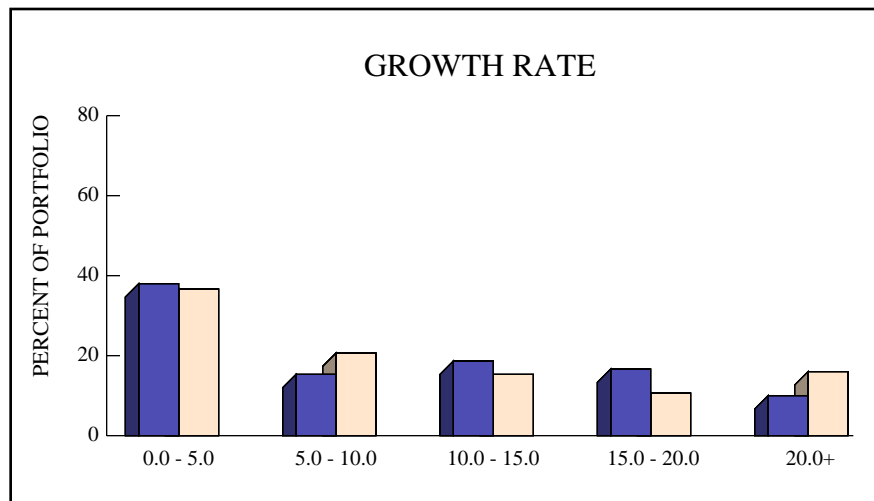
RATES OF RETURN			
Date	Portfolio	Benchmark	Difference
3/17	2.0	-0.1	2.1
6/17	2.2	0.7	1.5
9/17	4.7	5.1	-0.4
12/17	-0.9	2.0	-2.9
3/18	-1.7	-2.6	0.9
6/18	3.5	8.3	-4.8
9/18	2.2	1.6	0.6
12/18	-22.1	-18.7	-3.4
3/19	12.6	11.9	0.7
6/19	5.6	1.4	4.2
9/19	0.8	-0.6	1.4
12/19	11.7	8.5	3.2
3/20	-37.1	-35.7	-1.4
6/20	26.7	18.9	7.8

Total Quarters Observed	14
Quarters At or Above the Benchmark	9
Quarters Below the Benchmark	5
Batting Average	.643

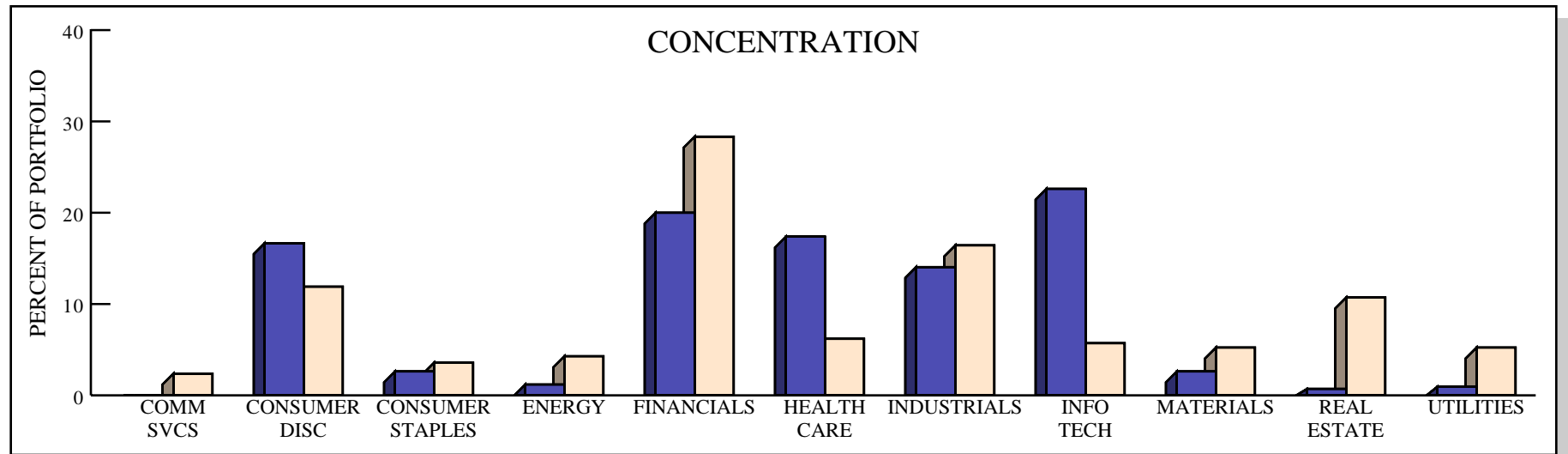
STOCK CHARACTERISTICS



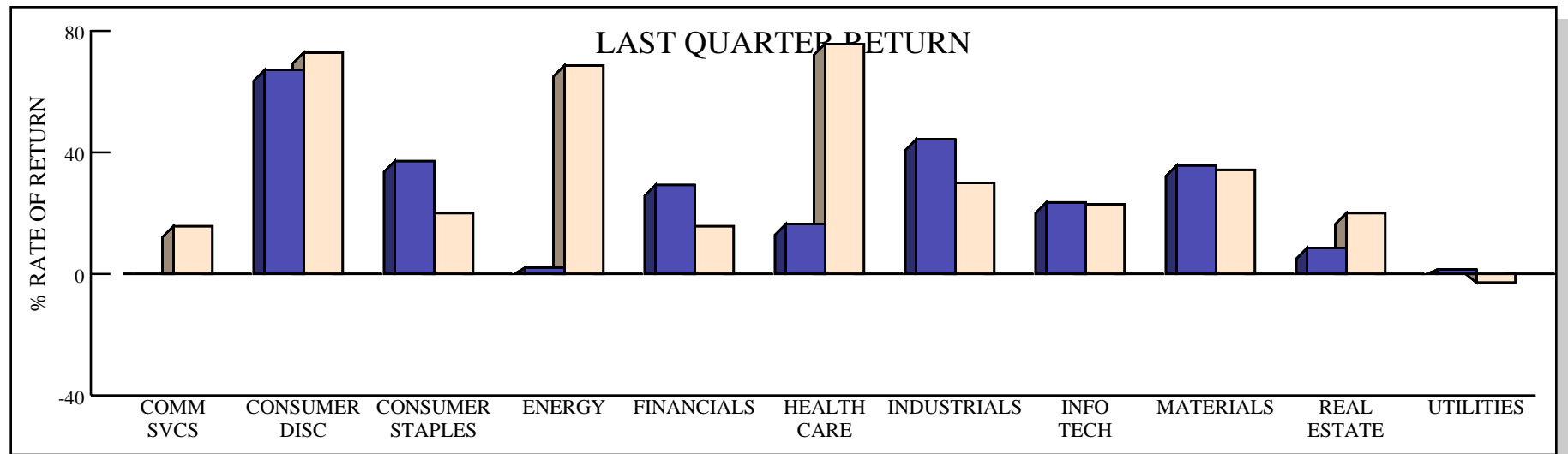
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	63	1.8%	5.4%	23.2	1.31
RUSSELL 2000V	1,439	5.4%	8.4%	27.0	1.22



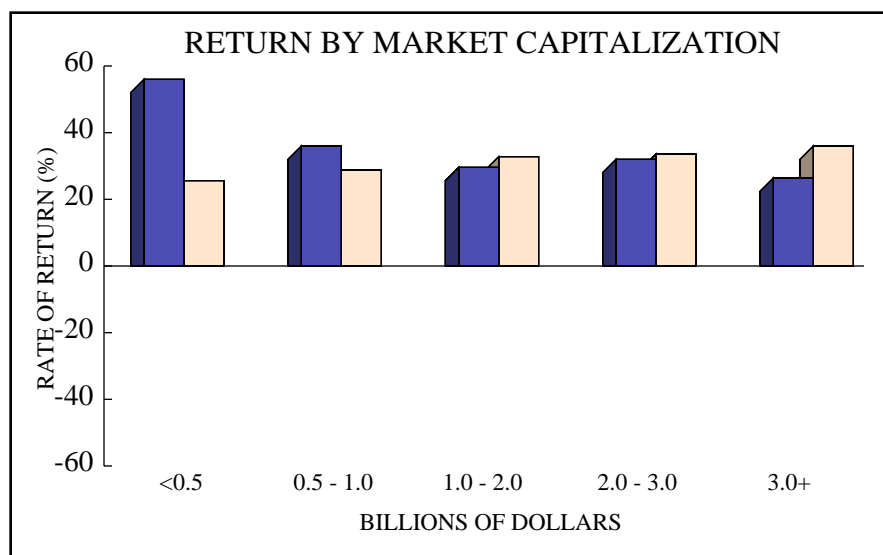
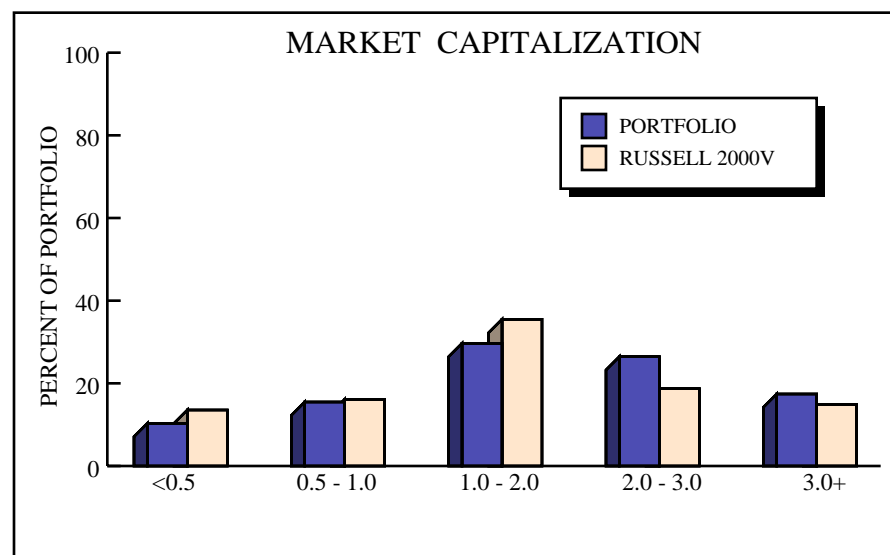
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 2000V



TOP TEN HOLDINGS



TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	GREEN DOT CORP-CLASS A	\$ 1,824,500	2.92%	93.3%	Financials	\$ 2.6 B
2	ATLAS AIR WORLDWIDE HOLDINGS	1,778,387	2.85%	67.6%	Industrials	1.1 B
3	B&G FOODS INC	1,696,604	2.72%	37.4%	Consumer Staples	1.6 B
4	MAGELLAN HEALTH INC	1,661,025	2.66%	51.7%	Health Care	1.8 B
5	DECKERS OUTDOOR CORP	1,575,048	2.52%	46.6%	Consumer Discretionary	5.5 B
6	LITHIA MOTORS INC-CL A	1,551,133	2.48%	85.5%	Consumer Discretionary	3.4 B
7	ULTRA CLEAN HOLDINGS INC	1,541,397	2.47%	64.0%	Information Technology	0.9 B
8	MDC HOLDINGS INC	1,401,225	2.24%	55.7%	Consumer Discretionary	2.3 B
9	INTEGER HOLDINGS CORP	1,393,940	2.23%	16.2%	Health Care	2.4 B
10	DYCOM INDUSTRIES INC	1,342,010	2.15%	59.4%	Industrials	1.3 B

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
STATE STREET GLOBAL ADVISORS
PERFORMANCE REVIEW
JUNE 2020

INVESTMENT RETURN

On June 30th, 2020, the Pennsylvania Municipal Retirement System's State Street Global Advisors portfolio was valued at \$1,066,747,346, representing an increase of \$194,061,382 from the March quarter's ending value of \$872,685,964. Last quarter, the Fund posted net contributions equaling \$79,309,279 plus a net investment gain equaling \$114,752,103. Since there were no income receipts during the quarter, the portfolio's net investment return was the result of net realized and unrealized capital gains totaling \$114,752,103.

RELATIVE PERFORMANCE

Total Portfolio

In the second quarter, the State Street Global Advisors portfolio gained 12.1%, which was 0.7% above the Shadow Index's return of 11.4% and ranked in the 80th percentile of the Balanced Fund universe. Over the trailing twelve-month period, the portfolio returned 2.7%, which was 0.6% above the benchmark's 2.1% performance, ranking in the 75th percentile. Since March 1997, the account returned 6.3% per annum. The Shadow Index returned an annualized 7.0% over the same time frame.

Large Cap Equity

The large cap equity portfolio gained 20.5% last quarter, equal to the S&P 500 Index's return of 20.5% and ranked in the 46th percentile of the Large Cap Core universe. Over the trailing year, this segment returned 7.5%; that return was equal to the benchmark's 7.5% performance, and ranked in the 33rd percentile. Since March 1997, this component returned 8.3% on an annualized basis. For comparison, the S&P 500 returned an annualized 8.3% over the same period.

Small Cap Equity

During the second quarter, the small cap equity segment gained 25.4%, which was equal to the Russell 2000 Index's return of 25.4% and ranked in the 51st percentile of the Small Cap universe. Over the trailing year, this segment returned -6.6%, which was 0.1% above the benchmark's -6.7% return, and ranked in the 47th percentile. Since March 1997, this component returned 7.7% on an annualized basis. The Russell 2000 returned an annualized 7.8% during the same period.

International Equity

The international equity portfolio returned 15.5% during the second quarter, 0.9% above the MSCI World Ex US Index's return of 14.6% and ranked in the 73rd percentile of the International Equity universe. Over the trailing year, the international equity portfolio returned -5.0%, 1.7% greater than the benchmark's -6.7% performance, and ranked in the 59th percentile.

Emerging Markets Equity

For the second quarter, the emerging markets equity portion of the portfolio gained 19.0%, which was 0.8% above the Blended Emerging Markets Index's return of 18.2% and ranked in the 53rd percentile of the Emerging Markets universe. Over the trailing year, this segment's return was -3.0%, which was equal to the benchmark's -3.0% performance, ranking in the 45th percentile.

Fixed Income

During the second quarter, the fixed income segment returned 3.0%, which was 0.1% greater than the Bloomberg Barclays Aggregate Index's return of 2.9% and ranked in the 84th percentile of the Core Fixed Income universe. Over the trailing twelve months, the fixed income portfolio returned 8.8%, which was 0.1% greater than the benchmark's 8.7% return, and ranked in the 67th percentile. Since March 1997, this component returned 5.4% annualized. The Bloomberg Barclays Aggregate Index returned an annualized 5.4% over the same period.

ASSET ALLOCATION

On June 30th, 2020, large cap equities comprised 10.6% of the total portfolio (\$113.1 million), while small cap equities totaled 13.0% (\$138.3 million). The account's international equity segment was valued at \$154.8 million, representing 14.5% of the portfolio, while the emerging markets equity component's \$250.5 million totaled 23.5%. The remaining 38.4% was comprised of fixed income (\$410.0 million).

EXECUTIVE SUMMARY

PERFORMANCE SUMMARY

	Quarter	YTD	1 Year	3 Year	5 Year	10 Year	Since 03/97
Total Portfolio - Gross	12.1	-2.8	2.7	3.8	4.1	4.8	6.3
<i>BALANCED FUND RANK</i>	(80)	(46)	(75)	(72)	(78)	(92)	----
Total Portfolio - Net	12.1	-2.8	2.6	3.7	4.0	4.8	6.3
Shadow Index	11.4	-3.4	2.1	3.7	4.0	5.0	7.0
Large Cap Equity - Gross	20.5	-3.1	7.5	10.7	10.7	14.0	8.3
<i>LARGE CAP CORE RANK</i>	(46)	(39)	(33)	(37)	(30)	(48)	----
S&P 500	20.5	-3.1	7.5	10.7	10.7	14.0	8.3
Russell 3000	22.0	-3.5	6.5	10.0	10.0	13.7	8.4
Russell 1000G	27.8	9.8	23.3	19.0	15.9	17.2	8.9
Russell 1000V	14.3	-16.3	-8.9	1.8	4.6	10.4	7.5
Small Cap Equity - Gross	25.4	-13.0	-6.6	2.0	4.4	10.6	7.7
<i>SMALL CAP RANK</i>	(51)	(47)	(47)	(49)	(52)	(58)	----
Russell 2000	25.4	-13.0	-6.7	2.0	4.3	10.5	7.8
Russell 2000G	30.6	-3.1	3.5	7.8	6.8	12.9	7.4
Russell 2000V	18.9	-23.5	-17.5	-4.4	1.2	7.8	7.7
International Equity - Gross	15.5	-11.2	-5.0	1.3	2.4	----	----
<i>INTERNATIONAL EQUITY RANK</i>	(73)	(54)	(59)	(52)	(58)	----	----
MSCI World Ex US	14.6	-12.7	-6.7	0.8	2.2	5.8	4.9
S&P BMI Ex US	16.8	-10.8	-4.0	1.3	2.9	6.4	5.5
MSCI EAFE	15.1	-11.1	-4.7	1.3	2.5	6.2	4.8
Emerging Markets Equity - Gross	19.0	-9.4	-3.0	2.1	3.0	3.2	----
<i>EMERGING MARKETS RANK</i>	(53)	(43)	(45)	(41)	(47)	(83)	----
S&P BMI EMGM	19.3	-10.0	-3.8	2.7	3.2	3.8	----
MSCI Emg Mkts	18.2	-9.7	-3.0	2.3	3.2	3.6	5.6
Fixed Income - Gross	3.0	6.2	8.8	5.4	4.3	3.8	5.4
<i>CORE FIXED INCOME RANK</i>	(84)	(43)	(67)	(81)	(87)	(92)	----
Aggregate Index	2.9	6.1	8.7	5.3	4.3	3.8	5.4
Gov/Credit	3.7	7.2	10.0	5.9	4.7	4.1	5.5

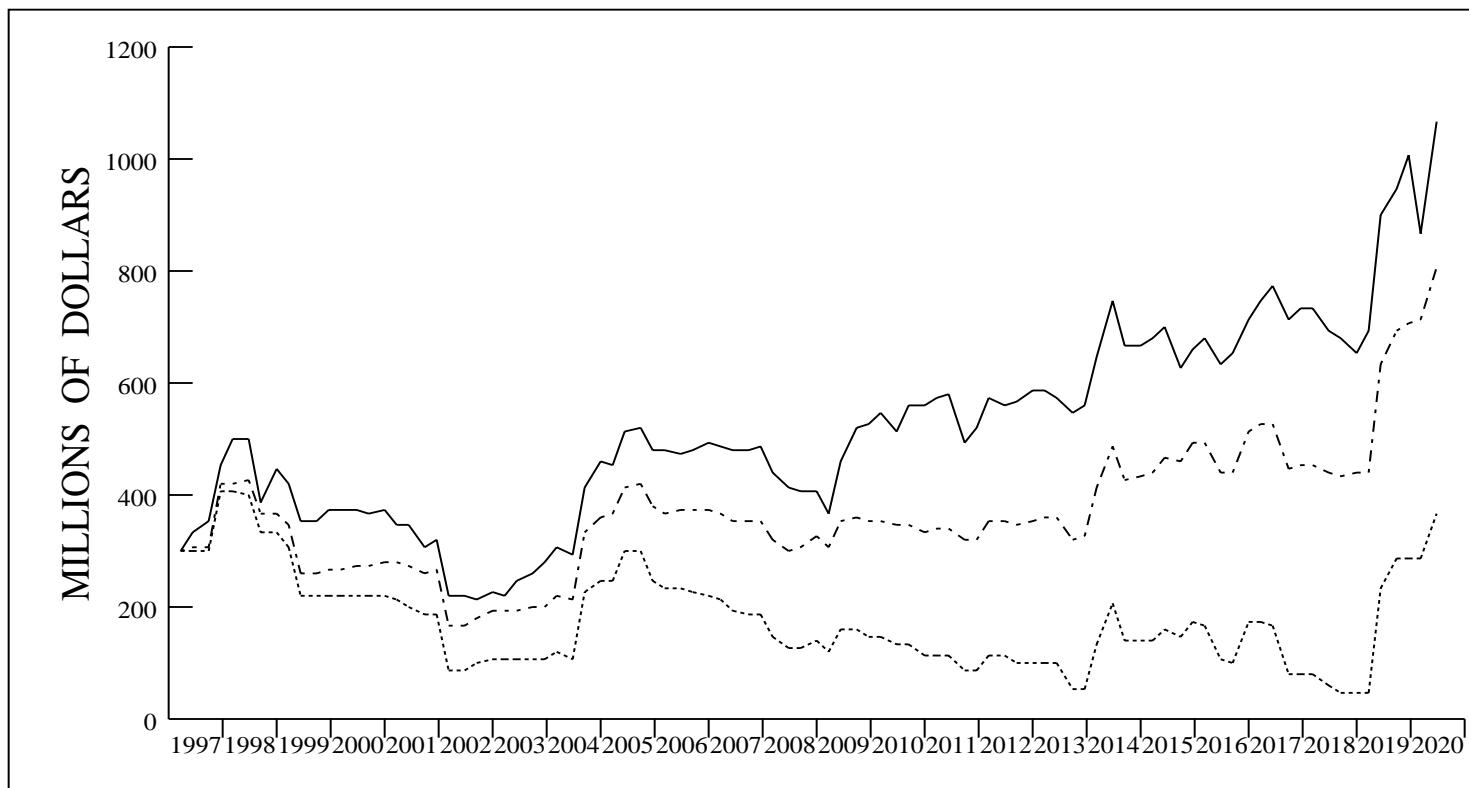
ASSET ALLOCATION

Large Cap Equity	10.6%	\$ 113,121,142
Small Cap	13.0%	138,256,020
Int'l Equity	14.5%	154,837,145
Emerging Markets	23.5%	250,547,615
Fixed Income	38.4%	409,985,424
Total Portfolio	100.0%	1,066,747,346

INVESTMENT RETURN

Market Value 3/2020	\$ 872,685,964
Contribs / Withdrawals	79,309,279
Income	0
Capital Gains / Losses	114,752,103
Market Value 6/2020	\$ 1,066,747,346

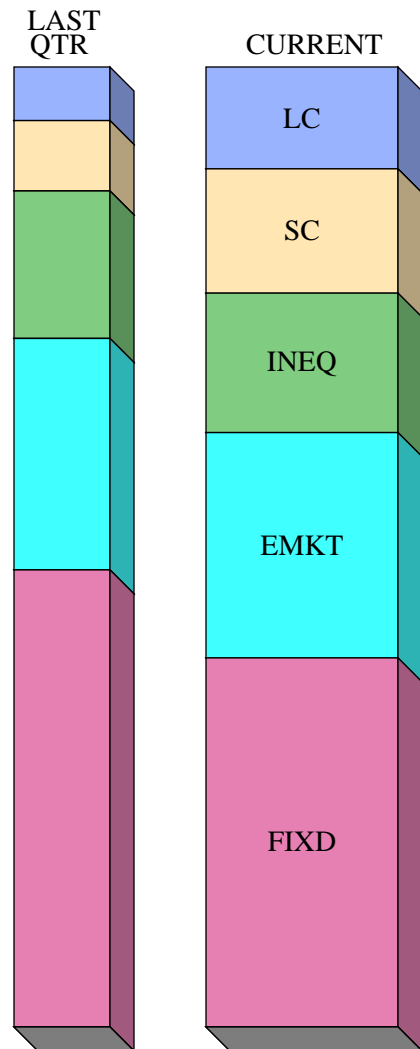
INVESTMENT GROWTH



— ACTUAL RETURN
 - - - 5.25%
 . . . 0.0%

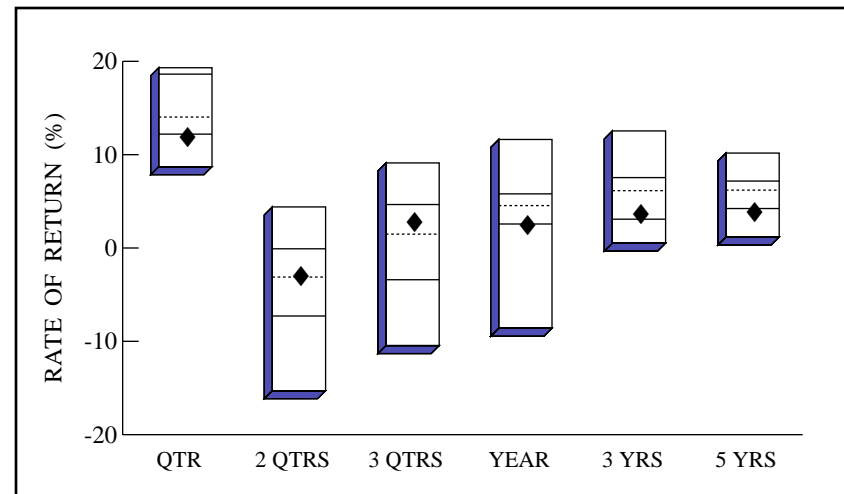
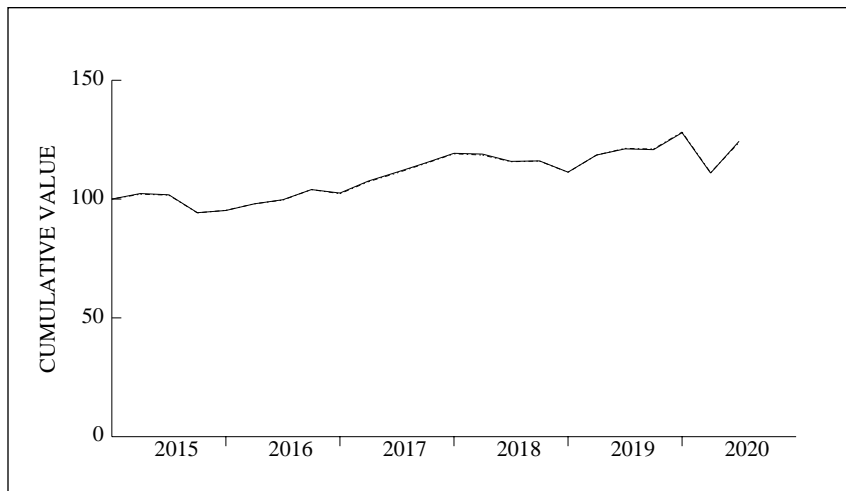
VALUE ASSUMING
 5.25% RETURN \$ 807,636,976

	LAST QUARTER	PERIOD 3/97 - 6/20
BEGINNING VALUE	\$ 872,685,964	\$ 304,615,360
NET CONTRIBUTIONS	79,309,279	62,099,569
<u>INVESTMENT RETURN</u>	<u>114,752,103</u>	<u>700,032,417</u>
ENDING VALUE	\$ 1,066,747,346	\$ 1,066,747,346
INCOME	0	7,438
<u>CAPITAL GAINS (LOSSES)</u>	<u>114,752,103</u>	<u>700,024,979</u>
INVESTMENT RETURN	114,752,103	700,032,417

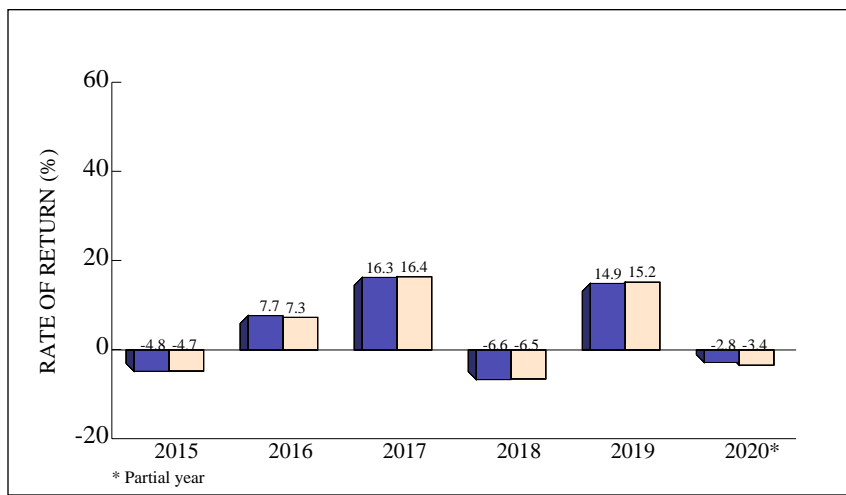


	<u>VALUE</u>	<u>PERCENT</u>
■ LARGE CAP EQUITY	\$ 113, 121, 142	10.6%
■ SMALL CAP EQUITY	138, 256, 020	13.0%
■ INTERNATIONAL EQUITY	154, 837, 145	14.5%
■ EMERGING MARKETS EQUITY	250, 547, 615	23.5%
■ FIXED INCOME	409, 985, 424	38.4%
<u>TOTAL FUND</u>	<u>\$ 1, 066, 747, 346</u>	<u>100.0%</u>

TOTAL RETURN COMPARISONS



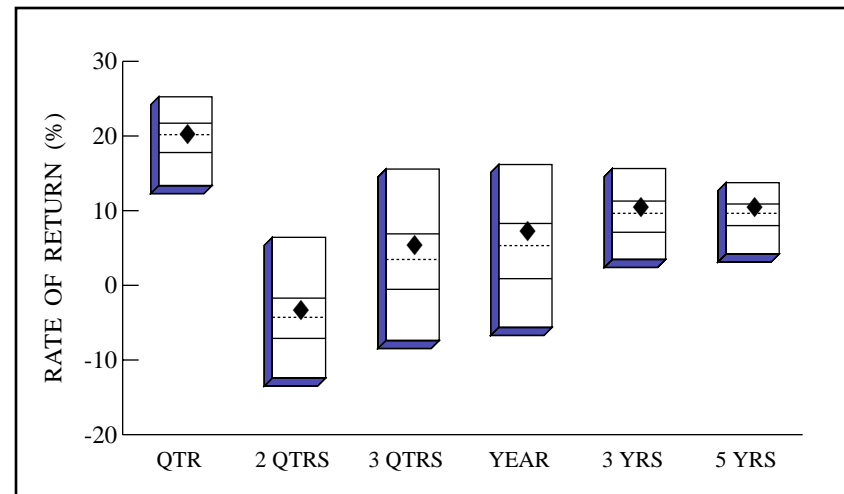
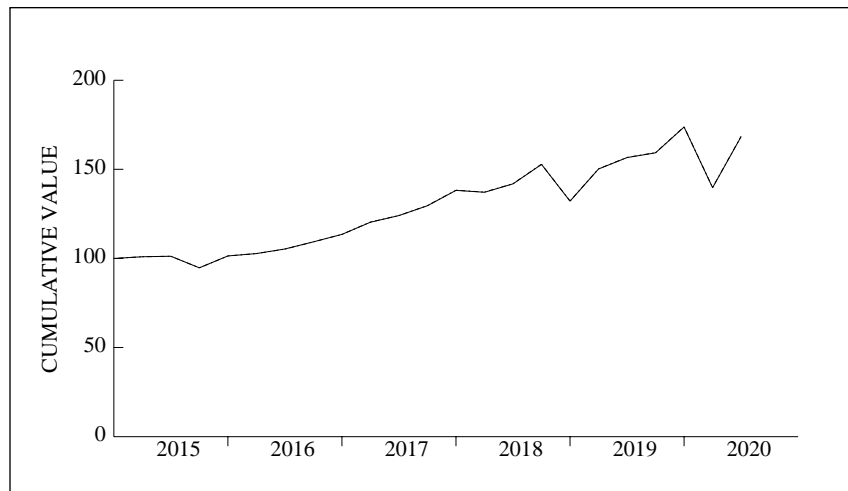
Balanced Fund Universe



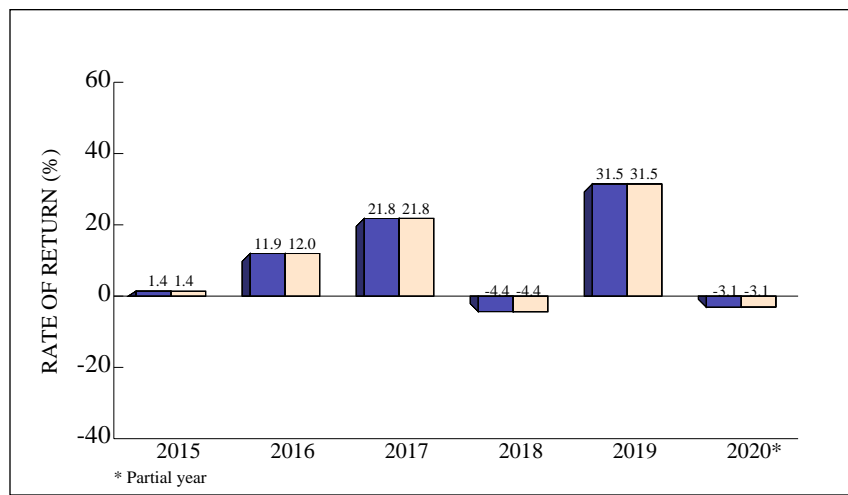
	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	12.1	-2.8	2.9	2.7	3.8	4.1
(RANK)	(80)	(46)	(47)	(75)	(72)	(78)
5TH %ILE	19.3	4.4	9.1	11.6	12.6	10.2
25TH %ILE	18.6	-0.1	4.7	5.8	7.5	7.2
MEDIAN	14.0	-3.1	1.5	4.6	6.1	6.2
75TH %ILE	12.2	-7.3	-3.4	2.6	3.1	4.2
95TH %ILE	8.7	-15.3	-10.5	-8.6	0.5	1.2
<i>Shadow Idx</i>	<i>11.4</i>	<i>-3.4</i>	<i>2.3</i>	<i>2.1</i>	<i>3.7</i>	<i>4.0</i>

Balanced Fund Universe

LARGE CAP EQUITY RETURN COMPARISONS



Large Cap Core Universe

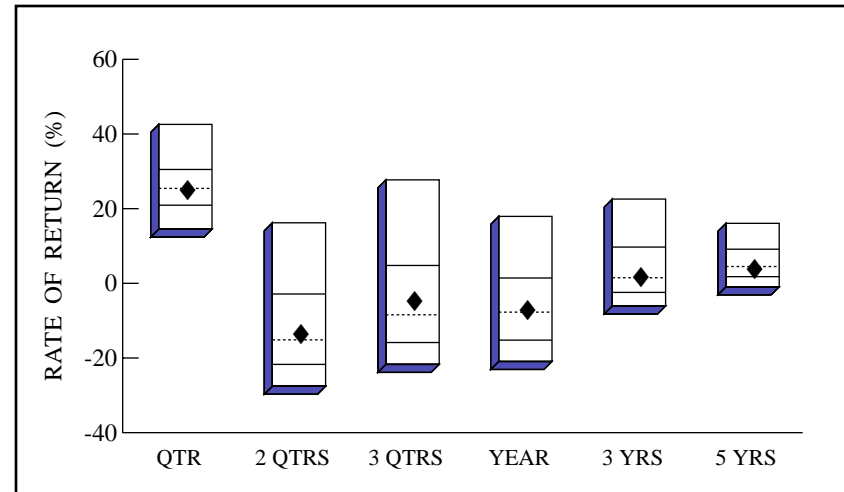
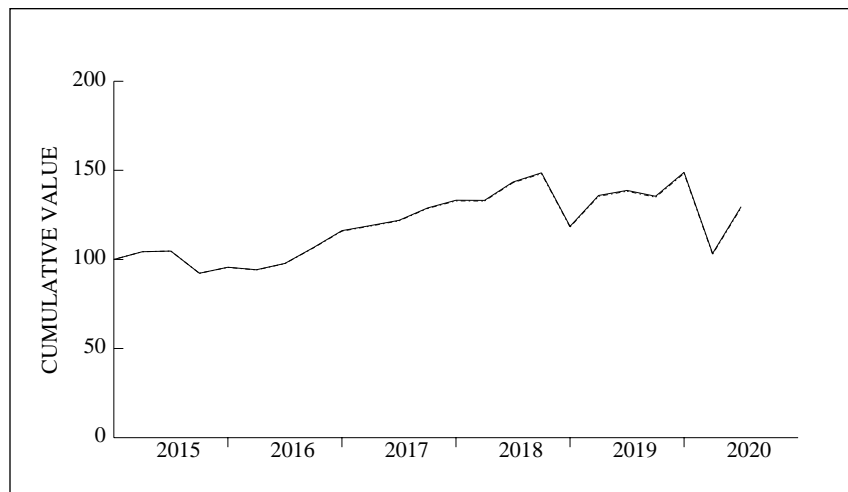


* Partial year

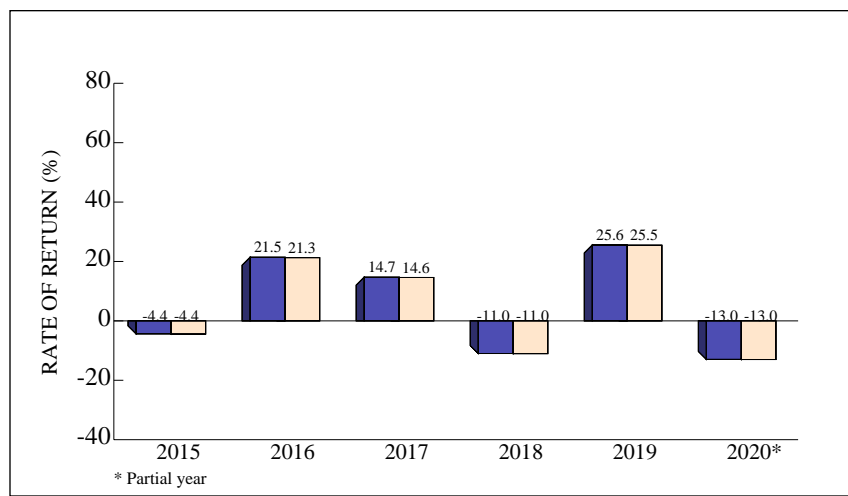
	QTR	2 QTRS	3 QTRS	YEAR	3 YRS	5 YRS
RETURN	20.5	-3.1	5.7	7.5	10.7	10.7
(RANK)	(46)	(39)	(33)	(33)	(37)	(30)
5TH %ILE	25.3	6.4	15.6	16.2	15.7	13.8
25TH %ILE	21.7	-1.7	6.9	8.3	11.3	10.9
MEDIAN	20.2	-4.3	3.5	5.3	9.6	9.7
75TH %ILE	17.8	-7.1	-0.6	0.9	7.1	8.0
95TH %ILE	13.4	-12.4	-7.4	-5.6	3.5	4.2
S&P 500	20.5	-3.1	5.7	7.5	10.7	10.7

Large Cap Core Universe

SMALL CAP EQUITY RETURN COMPARISONS



Small Cap Universe

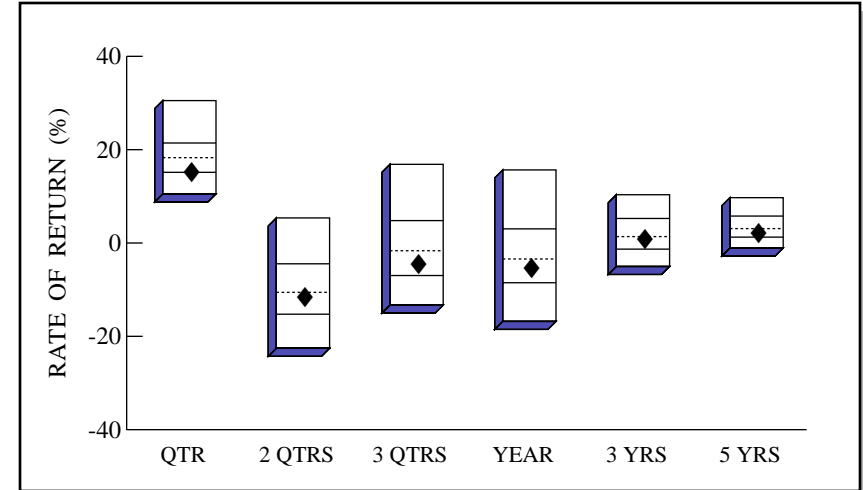
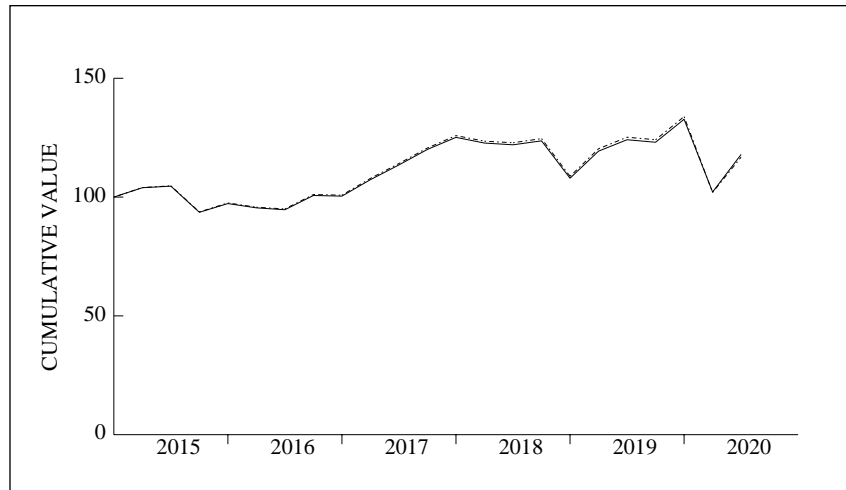


* Partial year

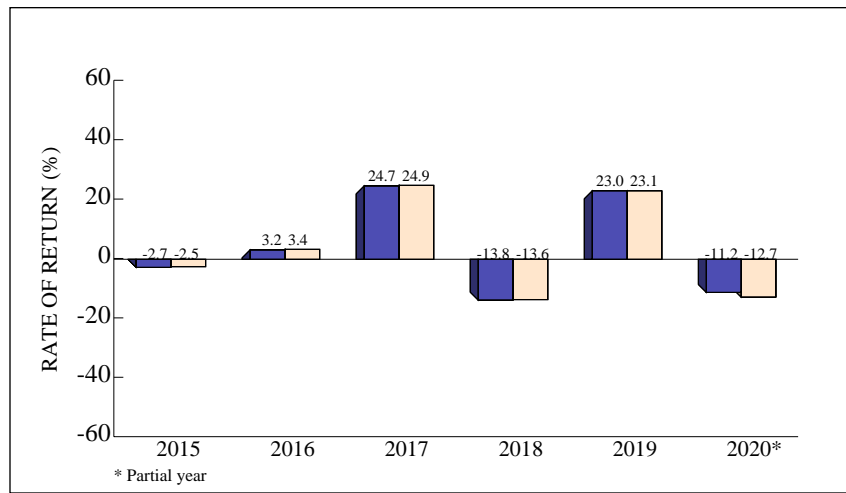
	QTR	2 QTRS	3 QTRS	YEAR	3 YRS	5 YRS
RETURN	25.4	-13.0	-4.3	-6.6	2.0	4.4
(RANK)	(51)	(47)	(41)	(47)	(49)	(52)
5TH %ILE	42.6	16.2	27.7	18.0	22.6	16.1
25TH %ILE	30.5	-2.9	4.8	1.4	9.7	9.1
MEDIAN	25.4	-15.1	-8.5	-7.7	1.5	4.5
75TH %ILE	20.9	-21.7	-15.8	-15.2	-2.5	1.8
95TH %ILE	14.5	-27.6	-21.7	-20.9	-6.0	-0.9
Russ 2000	25.4	-13.0	-4.4	-6.7	2.0	4.3

Small Cap Universe

INTERNATIONAL EQUITY RETURN COMPARISONS



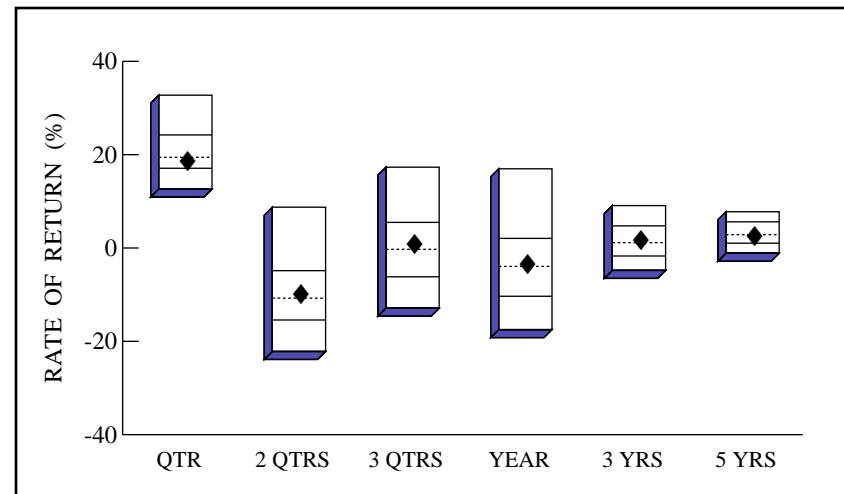
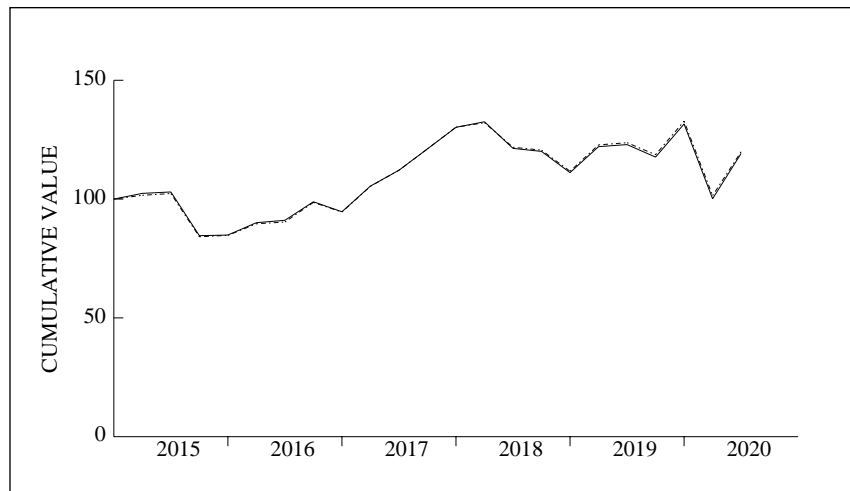
International Equity Universe



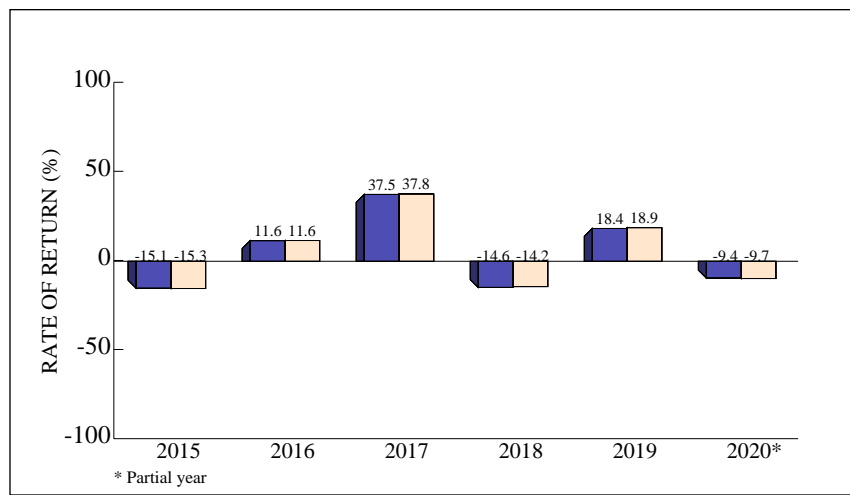
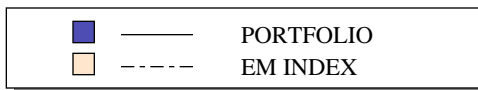
	QTR	2 QTRS	3 QTRS	YEAR	3 YRS	5 YRS
RETURN	15.5	-11.2	-4.1	-5.0	1.3	2.4
(RANK)	(73)	(54)	(63)	(59)	(52)	(58)
5TH %ILE	30.5	5.4	16.9	15.7	10.4	9.7
25TH %ILE	21.4	-4.4	4.8	3.1	5.2	5.8
MEDIAN	18.3	-10.6	-1.7	-3.4	1.4	3.1
75TH %ILE	15.2	-15.3	-7.0	-8.5	-1.3	1.2
95TH %ILE	10.5	-22.6	-13.3	-16.8	-5.1	-1.1
World Ex Us	14.6	-12.7	-5.9	-6.7	0.8	2.2

International Equity Universe

EMERGING MARKETS EQUITY RETURN COMPARISONS



Emerging Markets Universe

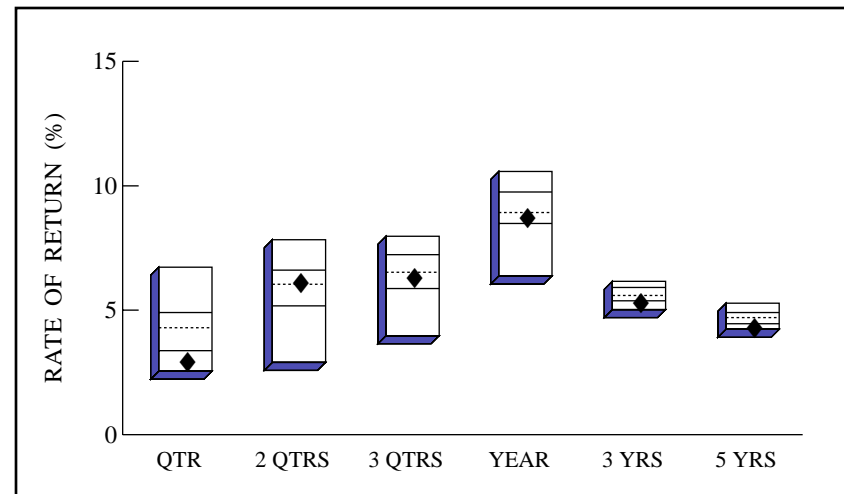
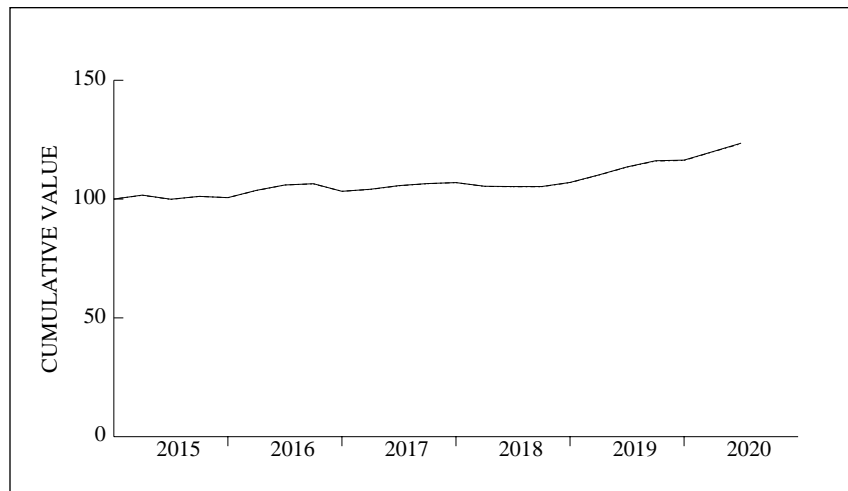


* Partial year

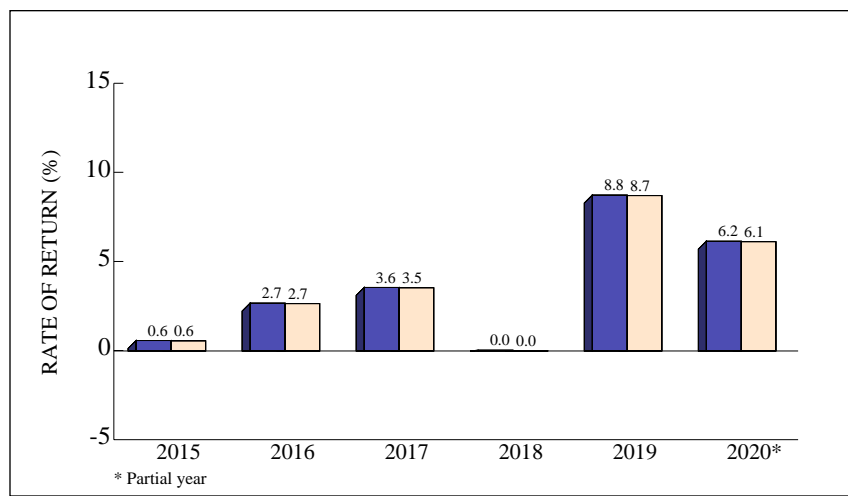
	QTR	2 QTRS	3 QTRS	YEAR	3 YRS	5 YRS
RETURN	19.0	-9.4	1.3	-3.0	2.1	3.0
(RANK)	(53)	(43)	(40)	(45)	(41)	(47)
5TH %ILE	32.7	8.8	17.3	17.0	9.1	7.8
25TH %ILE	24.3	-4.9	5.5	2.0	4.8	5.6
MEDIAN	19.5	-10.7	-0.3	-4.0	1.1	2.8
75TH %ILE	17.1	-15.4	-6.2	-10.4	-1.7	1.0
95TH %ILE	12.7	-22.2	-12.9	-17.5	-4.8	-1.2
EM Index	18.2	-9.7	1.1	-3.0	2.3	3.2

Emerging Markets Universe

FIXED INCOME RETURN COMPARISONS



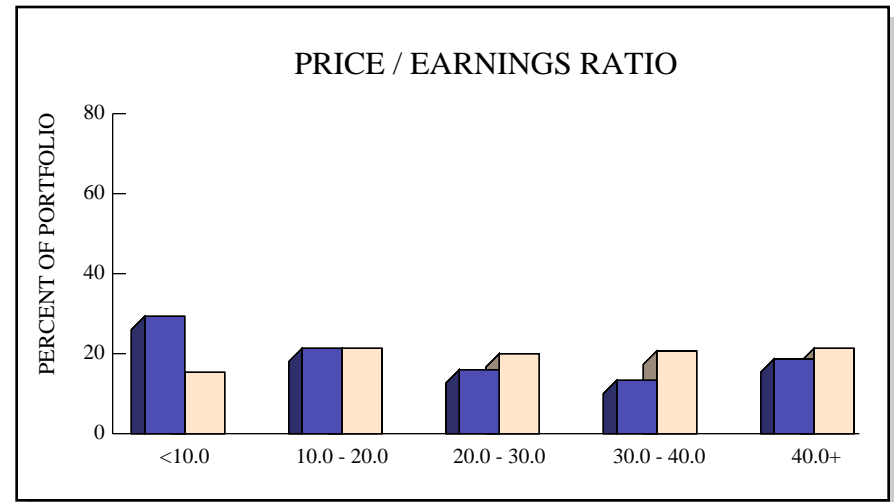
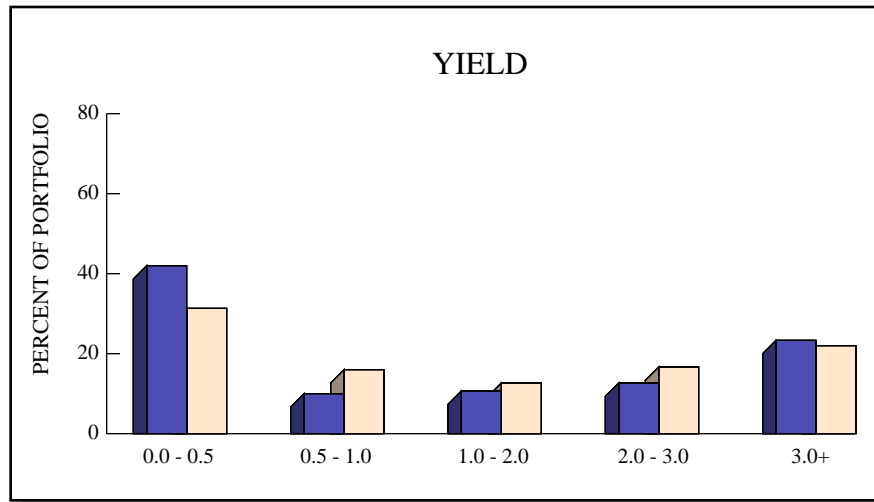
Core Fixed Income Universe



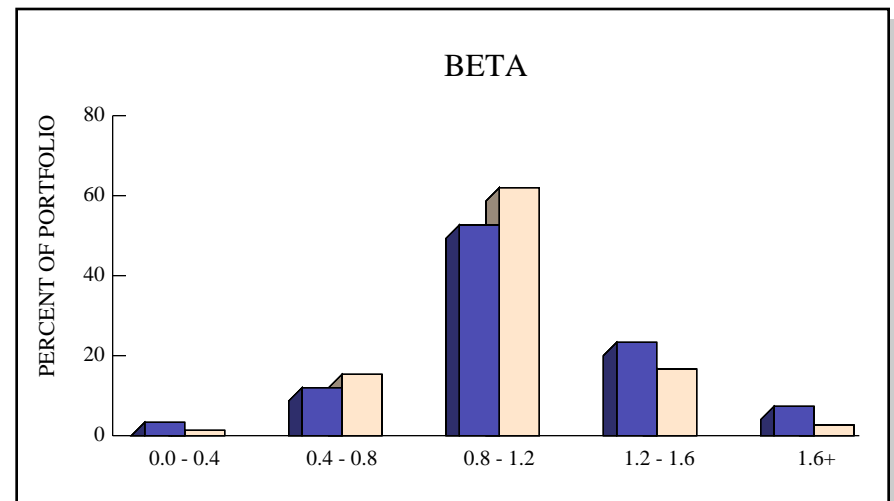
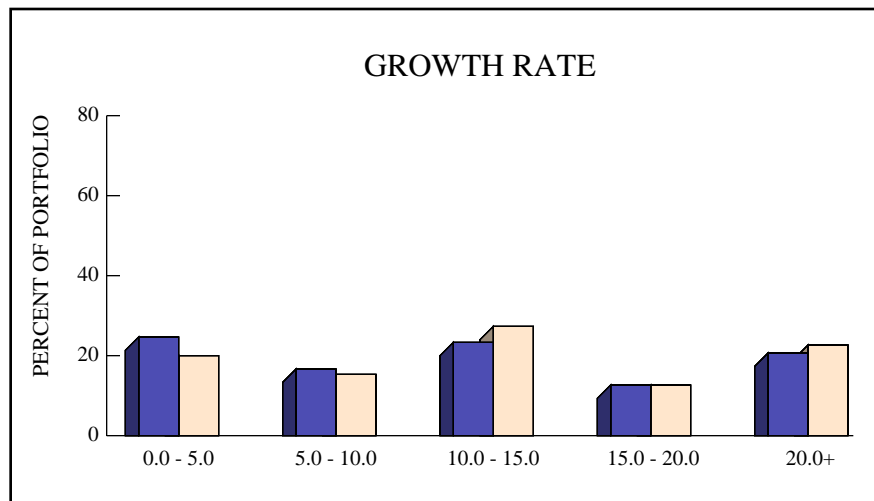
	QTR	2 QTRS	3 QTRS	YEAR	-----ANNUALIZED-----	
					3 YRS	5 YRS
RETURN	3.0	6.2	6.4	8.8	5.4	4.3
(RANK)	(84)	(43)	(65)	(67)	(81)	(87)
5TH %ILE	6.7	7.8	8.0	10.6	6.2	5.3
25TH %ILE	4.9	6.6	7.2	9.8	5.9	4.9
MEDIAN	4.3	6.0	6.5	8.9	5.6	4.7
75TH %ILE	3.4	5.2	5.9	8.5	5.4	4.5
95TH %ILE	2.6	2.9	4.0	6.4	5.0	4.2
Agg	2.9	6.1	6.3	8.7	5.3	4.3

Core Fixed Income Universe

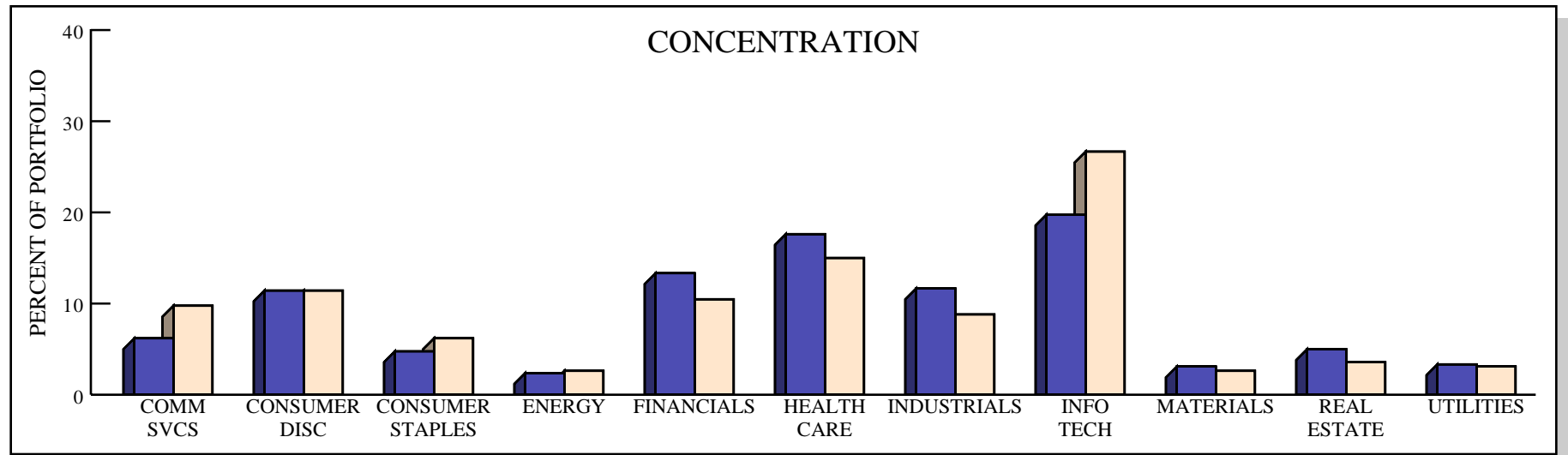
STOCK CHARACTERISTICS



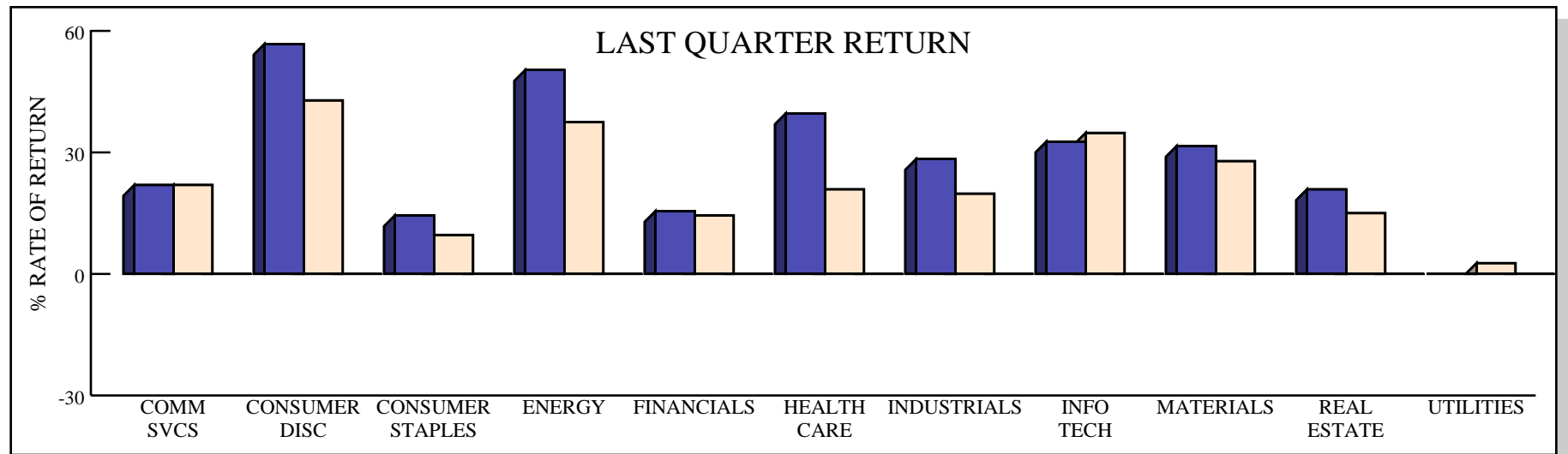
	# HOLDINGS	YIELD	GROWTH	P/E	BETA
PORTFOLIO	2,510	2.5%	13.8%	28.6	1.08
RUSSELL 3000	3,009	2.0%	14.9%	38.0	1.01



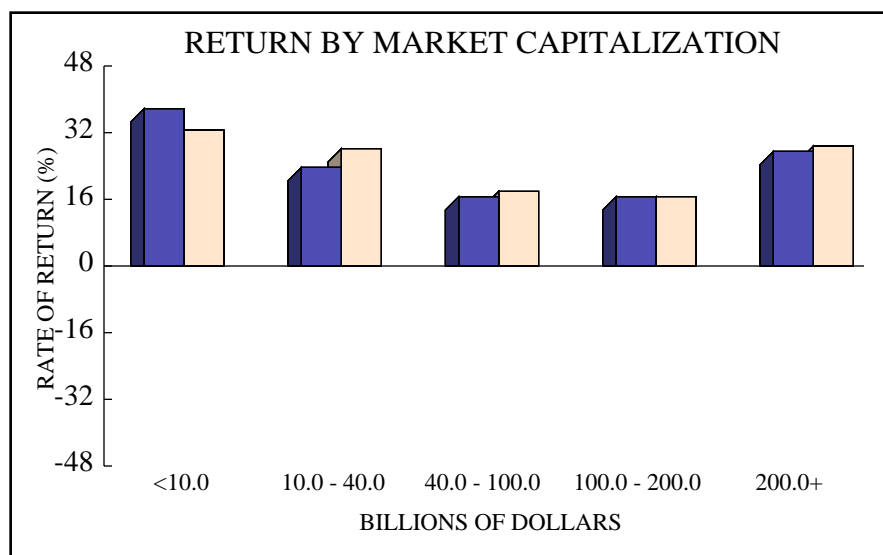
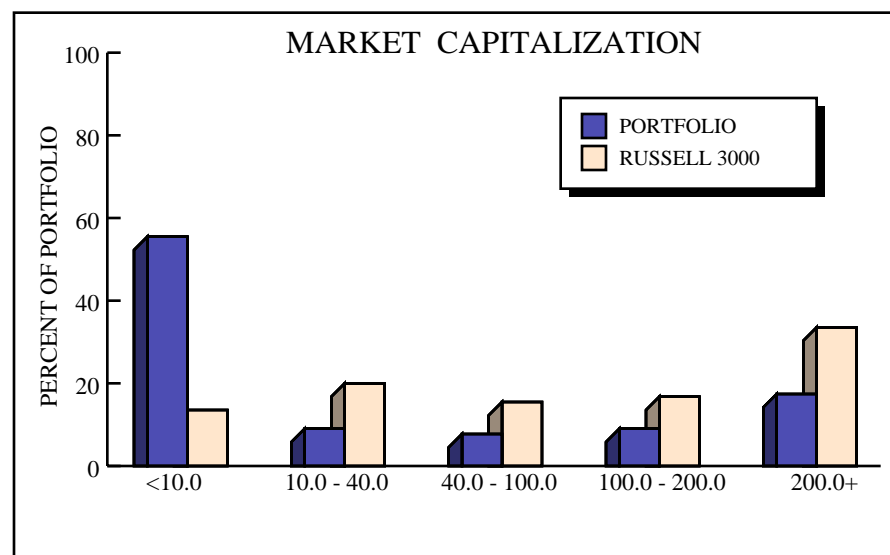
STOCK INDUSTRY ANALYSIS



■ PORTFOLIO ■ RUSSELL 3000



TOP TEN HOLDINGS

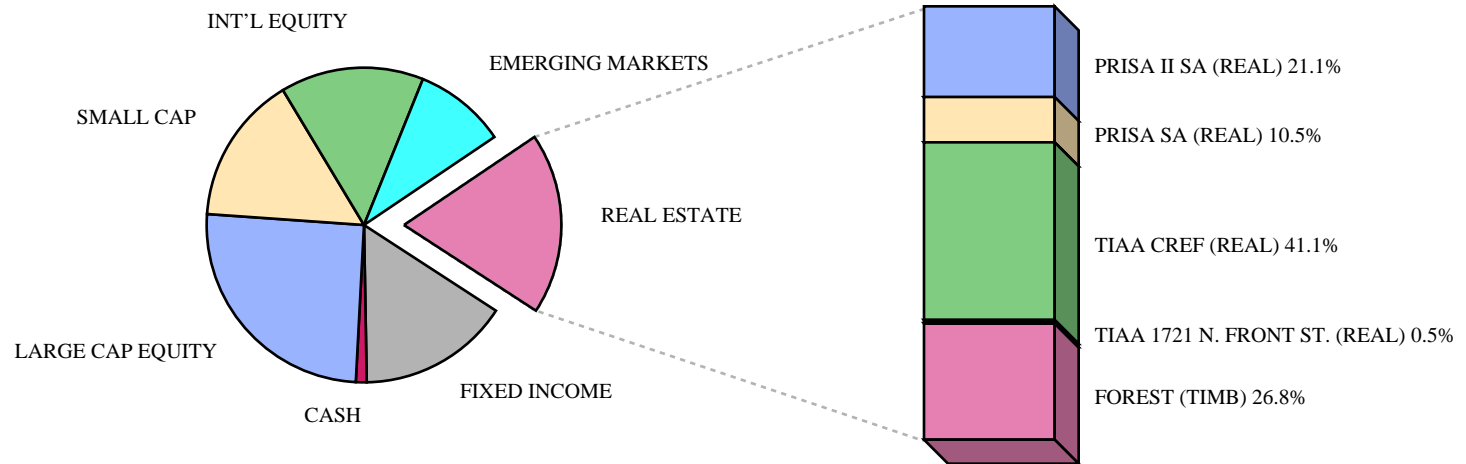


TOP TEN EQUITY HOLDINGS

RANK	NAME	VALUE	% EQUITY	RETURN	INDUSTRY SECTOR	MKT CAP
1	MICROSOFT CORP	\$ 6,809,851	2.71%	29.4%	Information Technology	\$ 1543.3 B
2	APPLE INC	6,558,374	2.61%	43.8%	Information Technology	1581.2 B
3	AMAZON.COM INC	5,101,058	2.03%	41.5%	Consumer Discretionary	1376.0 B
4	FACEBOOK INC-CLASS A	2,409,213	.96%	36.1%	Communication Services	546.5 B
5	ALPHABET INC-CL A	1,877,498	.75%	22.0%	Communication Services	425.5 B
6	ALPHABET INC-CL C	1,823,557	.73%	21.6%	Communication Services	475.2 B
7	JOHNSON & JOHNSON	1,634,824	.65%	8.0%	Health Care	370.5 B
8	BERKSHIRE HATHAWAY INC-CL B	1,531,259	.61%	-2.4%	Financials	248.3 B
9	VISA INC-CLASS A SHARES	1,437,957	.57%	20.1%	Information Technology	325.9 B
10	PROCTER & GAMBLE CO/THE	1,306,183	.52%	9.4%	Consumer Staples	296.0 B

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
REAL ESTATE
PERFORMANCE REVIEW
JUNE 2020

REAL ESTATE MANAGER SUMMARY

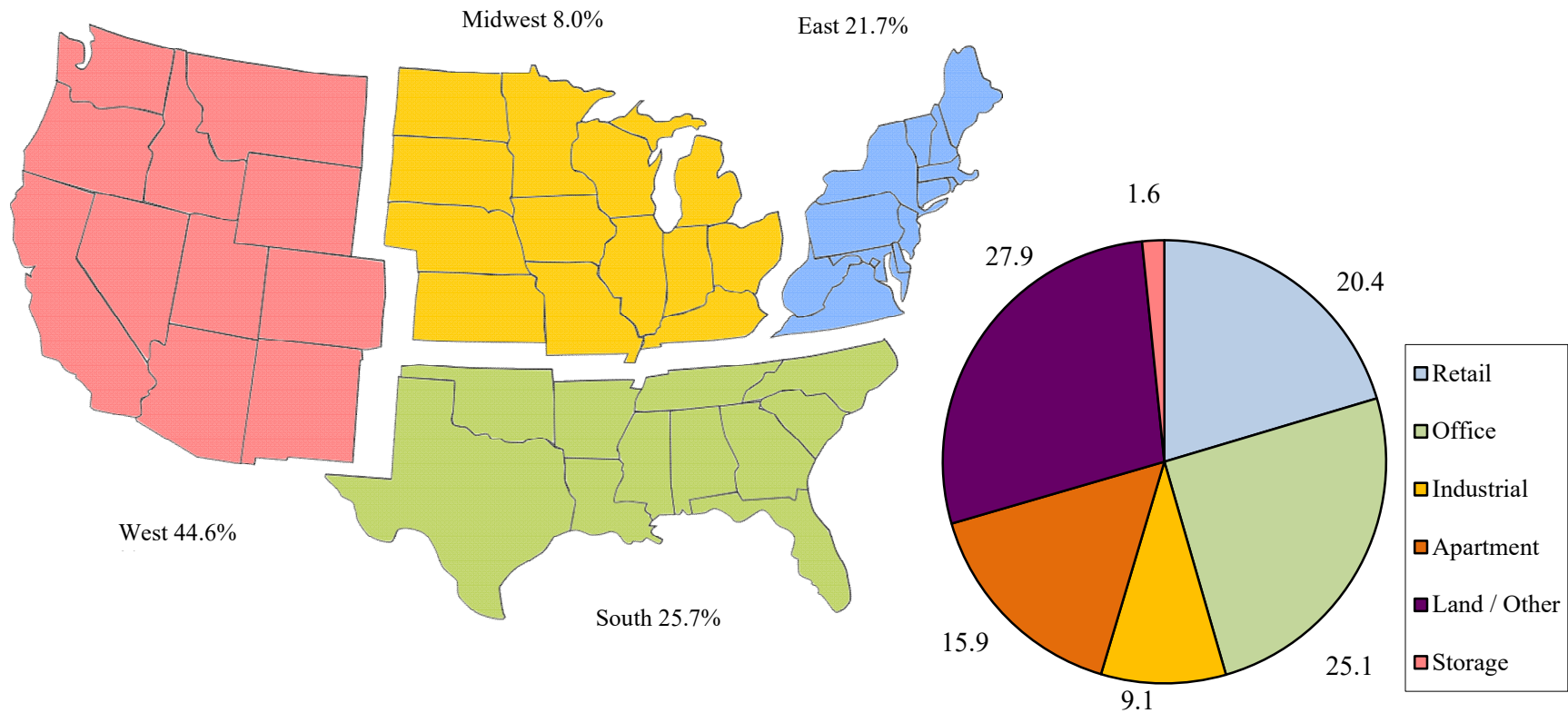


MANAGER	(UNIVERSE)	COMPONENT RETURNS AND RANKINGS					MARKET VALUE
		QTR	YTD	1 YEAR	3 YEARS	5 YEARS	
PRISA II SA		-2.4 ---	-1.1 ---	2.7 ---	6.7 ---	8.8 ---	\$103,552,732
PRISA SA		-1.1 ---	0.6 ---	3.5 ---	6.6 ---	8.0 ---	\$51,721,737
TIAA CREF		-2.3 ---	-1.0 ---	4.2 ---	6.9 ---	8.0 ---	\$202,278,709
<i>NCREIF NFI-ODCE Index</i>		<i>-1.6 ---</i>	<i>-0.6 ---</i>	<i>2.2 ---</i>	<i>5.7 ---</i>	<i>7.3 ---</i>	---
TIAA 1721 N. FRONT ST.		1.7 ---	2.4 ---	5.6 ---	4.7 ---	---	\$2,311,116
<i>NCREIF Property Index</i>		<i>-1.0 ---</i>	<i>-0.3 ---</i>	<i>2.7 ---</i>	<i>5.4 ---</i>	<i>6.8 ---</i>	---
FOREST		-1.3 ---	-0.9 ---	-6.4 ---	1.7 ---	3.6 ---	\$132,018,482
<i>NCREIF Timber Index</i>		<i>0.1 ---</i>	<i>0.2 ---</i>	<i>0.3 ---</i>	<i>2.3 ---</i>	<i>2.7 ---</i>	---
TOTAL		-1.9 ---	-0.8 ---	0.8 ---	5.3 ---	6.8 ---	\$491,882,776
<i>NCREIF Property Index</i>		<i>-1.0 ---</i>	<i>-0.3 ---</i>	<i>2.7 ---</i>	<i>5.4 ---</i>	<i>6.8 ---</i>	---

PMRS Real Estate Commitment

As of June 30th, the Pennsylvania Municipal Retirement System's aggregate real estate portfolio was valued at \$491,882,776, representing 18.6% of the total System's assets. TIAA distributed \$1,653,979 in April and FIA distributed \$550,000 in June. The North Front Street property produced two distributions: \$13,011 in May and \$17,580 in June. For reference, the NCREIF Property Index returned -1.0% in the second quarter. Over the trailing year, that index returned 2.7%, and an annualized 6.8% for the last five years. Over the same time frames, the Bloomberg Barclays Aggregate Index returned 2.9%, 8.7%, and an annualized 4.3%, respectively.

Property Type/Geographical Distribution



PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM REAL ESTATE MANAGERS

PRISA SA

PRISA is an open-end, commingled, broadly diversified, core real estate equity fund invested in completed, income producing and well-leased properties.

Investment Return

On June 30th, 2020, the Pennsylvania Municipal Retirement System's Prudential PRISA SA portfolio was valued at \$51,721,737, a decrease of \$694,561 from the March ending value of \$52,416,298. Last quarter, the account recorded total net withdrawals of \$123,766 in addition to \$570,795 in net investment losses. Because there were no income receipts during the second quarter, the portfolio's net investment losses were entirely made up of capital losses (realized and unrealized).

Property Type/Geographical Distribution

The office sector made up 35.5% of the PRISA SA portfolio. Industrial and retail properties made up 17.9% and 13.9% respectively. Apartments comprised 25.2% of the portfolio's value, storage was 6.2%, and the remaining 1.4% was in other sectors or vacant land.

Geographically, PRISA's portfolio was mostly situated in the East and West, whose percentages were 37.9% and 36.6%. Another 18.2% of the portfolio was situated in the South, while the remaining 7.3% resided in the Midwest.

Account Performance

During the second quarter, the Prudential PRISA SA portfolio returned -1.1%, which was 0.5% greater than the NCREIF NFI-ODCE Index's return of -1.6%. Over the trailing year, the account returned 3.5%, which was 1.3% greater than the benchmark's 2.2% return. Since December 1990, the portfolio returned 7.8% per annum, while the NCREIF NFI-ODCE Index returned an annualized 7.4% over the same time frame.

PRISA II

Investment Return

On June 30th, 2020, the Pennsylvania Municipal Retirement System's Prudential PRISA II SA portfolio was valued at \$103,552,732, which was a decrease of \$2,865,914 from the March ending value of \$106,418,646. During the last three months, the Fund posted \$293,286 in total net withdrawals as well as net investment losses of \$2,572,628. Because there were no income receipts for the second quarter, the portfolio's net investment losses were the result of capital losses (realized and unrealized).

Property Type/Geographical Distribution

PRISA II, like PRISA, situates the largest component of its portfolio in office properties: 36.2% in this case. Retail and apartments also comprised significant portions, with the former at 17.6%, and the latter at 33.5%. Storage made up 4.6%. Investment in land was 4.3%, and industrial properties represented 3.8%.

Geographically, 32.6% of this portfolio was situated in the West, 41.5% resided in the East, while 23.7% was in the South. The remaining 2.2% was located in the Midwest.

Account Performance

During the second quarter, the Prudential PRISA II SA account lost 2.4%, which was 0.8% below the NCREIF NFI-ODCE Index's return of -1.6%. Over the trailing year, the account returned 2.7%, which was 0.5% greater than the benchmark's 2.2% return. Since June 2007, the Prudential PRISA II SA portfolio returned 4.6% annualized, while the NCREIF NFI-ODCE Index returned an annualized 5.3% over the same period.

FOREST INVESTMENT ADVISORS

The Forest Investment Advisors account is a discretionary account invested in land holdings mostly in the South, with lesser representation in the East and West.

Investment Return

As of June 30th, 2020, the Pennsylvania Municipal Retirement System's Forest Investment Associates Keystone Forest Investments portfolio was valued at \$132,018,482, representing a decrease of \$2,284,613 from the March ending value of \$134,303,095. Over the last three months, the account posted \$550,000 in net withdrawals in addition to net investment losses totaling \$1,734,613. Since there were no income receipts during the quarter, the portfolio's net investment losses were solely the result of capital losses (realized and unrealized).

Property Type/Geographical Distribution

The Forest fund held 47.4% of its assets in the South, 22.6% in the East, and 30.0% in the West. The Forest Investment Advisors account was solely invested in Timberland.

Forest held investments in Bear Island (Virginia), Fitz-Weller (New York), Carter-Pasture (Texas), Dupont (Georgia), Bennetts Creek (North Carolina), Black River (South Carolina), Coquille (Oregon), Bucktails (Pennsylvania), and North River (Washington).

Account Performance

For the second quarter, the Forest Investment Associates Keystone Forest Investments portfolio returned -1.3%, which was 1.4% below the NCREIF Timber Index's return of 0.1%. Over the trailing year, the portfolio returned -6.4%, which was 6.7% less than the benchmark's 0.3% return. Since March 1999, the account returned 4.7% annualized, while the NCREIF Timber Index returned an annualized 6.0% over the same time frame.

TIAA-CREF

TIAA CREF is a discretionary account with investments in office, retail, industrial, and multi-family properties. The account holds eight properties: The Shoppes at Monarch Lakes is a retail shopping center in Miramar, Florida, and Des Peres Corner, another retail shopping center, is located in Des Peres, Missouri. The SR Ranch Shopping Center and Copley Corporate Center are located in San Diego, California. Industrial properties include Republic Distribution Center in Pasadena, Texas and the 526 Rt. 46 property is located in Teterboro, New Jersey. Stream Uptown is an apartment building in Seattle, Washington. The portfolio's most recent acquisition, the Fairway Center, is located in Connecticut.

TIAA CREF is a non-leveraged investment, whereas portfolios in the NCREIF NFD-ODCE index do utilize leverage.

Investment Return

On June 30th, 2020, the Pennsylvania Municipal Retirement System's TIAA CREF portfolio was valued at \$202,278,709, a decrease of \$6,916,257 from the March ending value of \$209,194,966. Last quarter, the account recorded total net withdrawals of \$1,653,979 in addition to \$5,262,278 in net investment losses. The fund's net investment loss was a result of income receipts totaling \$2,712,355 and realized and unrealized capital losses totaling \$7,974,633.

Property Type/Geographical Distribution

As of the quarter end, the TIAA CREF portfolio was situated mostly in the West, which comprised 62.9%. The Midwest represented 16.4%, while the South made up 14.8% and the remaining 5.9% was in the East.

Retail space was the largest sector, making up 37.0%. Offices comprised 32.4%, while 15.1% was in apartments and 15.5% was industrial.

Account Performance

During the second quarter, the TIAA CREF portfolio lost 2.3%, which was 0.7% below the NCREIF NFI-ODCE Index's return of -1.6%. Over the trailing twelve-month period, the portfolio returned 4.2%, which was 2.0% greater than the benchmark's 2.2% return. Since June 2008, the TIAA CREF portfolio returned 3.7% on an annualized basis, while the NCREIF NFI-ODCE Index returned an annualized 5.1% over the same time frame.

TIAA NORTH FRONT STREET

The office building at 1721 N. Front St. in Harrisburg, PA was purchased in 2016.

Investment Return

On June 30th, 2020, the Pennsylvania Municipal Retirement System's TIAA CREF 1721 North Front Street portfolio was valued at \$2,311,116, which was a decrease of \$4,053 relative to the March quarter's ending value of \$2,315,169. Last quarter, the portfolio recorded a net withdrawal of \$30,591, which overshadowed the portfolio's net investment return of \$26,538. Since there were no income receipts for the quarter, the portfolio's net investment return was the result of \$26,538 in realized and unrealized capital gains.

Account Performance

During the second quarter, the TIAA CREF 1721 North Front Street account gained 1.7%, which was 2.7% above the NCREIF Property Index's return of -1.0%. Over the trailing year, the account returned 5.6%, which was 2.9% greater than the benchmark's 2.7% return. Since June 2016, the TIAA CREF 1721 North Front Street portfolio returned 1.1% annualized, while the NCREIF Property Index returned an annualized 5.8% over the same period.

Real Estate Investor Report
TIAA CREF (Excluding N. Front Street)

Net IRR Since Inception **6.49%**
Market Value **\$ 202,278,709** **As of**
6/30/2020

<u>Year</u>	<u>Capital Calls</u>	<u>Distributions</u>	<u>Fees</u>
2008	\$ 34,330,250	\$ -	\$ 244,006
2009	\$ -	\$ 1,168,000	\$ 319,220
2010	\$ 50,300,736	\$ -	\$ 422,549
2011	\$ 23,903,720	\$ 406,336	\$ 690,494
2012	\$ -	\$ 3,600,000	\$ 892,330
2013	\$ 15,642,440	\$ 6,240,000	\$ 972,519
2014	\$ 47,594,800	\$ 28,000,000	\$ 1,210,923
2015	\$ -	\$ 24,000,000	\$ 1,493,589
2016	\$ 26,333,676	\$ 6,308,805	\$ 1,604,408
2017	\$ -	\$ 8,062,624	\$ 1,709,860
2018	\$ -	\$ 7,721,531	\$ 1,756,438
2019	\$ -	\$ 7,209,262	\$ 1,813,349
2020	\$ -	\$ 3,100,356	\$ 938,400
Total	\$ 198,105,622	\$ 95,816,914	\$ 14,068,085

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
PRELIMINARY GROSS OF FEES PERFORMANCE AS OF JULY 2020

Portfolio	QTD	YTD	Market Value
Total Portfolio	3.5	-0.6	\$2,730,492,269
<i>Total Portfolio Shadow Index</i>	<i>3.3</i>	<i>-1.3</i>	<i>----</i>
State Street Global Advisors	3.9	1.0	\$1,101,127,000
<i>SSgA Shadow Index</i>	<i>4.0</i>	<i>0.5</i>	<i>----</i>
State Street Global Advisors S&P Conservative Index	5.6	2.4	\$119,493,670
<i>S&P 500</i>	<i>5.6</i>	<i>2.4</i>	<i>----</i>
Polen Capital Management Focus Growth	4.5	16.1	\$231,740,956
<i>Russell 1000 Growth</i>	<i>7.7</i>	<i>18.3</i>	<i>----</i>
William Blair Large Cap Growth	7.0	----	\$59,064,319
<i>Russell 1000 Growth</i>	<i>7.7</i>	<i>18.3</i>	<i>----</i>
Eagle Capital Management Equity	4.0	-5.3	\$153,844,363
<i>Russell 1000 Value</i>	<i>4.0</i>	<i>-13.0</i>	<i>----</i>
<i>Russell 1000</i>	<i>5.9</i>	<i>2.9</i>	<i>----</i>
LSV Asset Management US Large Cap Value	2.8	-15.2	\$147,874,222
<i>Russell 1000 Value</i>	<i>4.0</i>	<i>-13.0</i>	<i>----</i>
State Street Global Advisors Russell 2000 Index Fund	2.8	-10.6	\$142,101,319
<i>Russell 2000</i>	<i>2.8</i>	<i>-10.6</i>	<i>----</i>
AMI Asset Management Small Cap Growth Equity	4.2	4.5	\$38,944,622
<i>Russell 2000 Growth</i>	<i>3.4</i>	<i>0.3</i>	<i>----</i>
Copeland Small Cap Dividend Growth	4.4	-10.9	\$42,534,239
<i>Russell 2000 Growth</i>	<i>3.4</i>	<i>0.3</i>	<i>----</i>
Emerald Advisors Diversified Small Cap Growth	6.7	6.5	\$74,427,455
<i>Russell 2000 Growth</i>	<i>3.4</i>	<i>0.3</i>	<i>----</i>
LSV Asset Management US Small Cap Value Equity	2.1	-25.9	\$57,681,238
<i>Russell 2000 Value</i>	<i>2.1</i>	<i>-21.9</i>	<i>----</i>
Smith, Graham & Company Small Cap Value	9.3	-12.8	\$68,872,926
<i>Russell 2000 Value</i>	<i>2.1</i>	<i>-21.9</i>	<i>----</i>
HGK Asset Management HGK International Equity	4.4	-5.6	\$127,414,573
<i>S&P BMI Developed Ex US Index</i>	<i>3.0</i>	<i>-8.1</i>	<i>----</i>
Hardman Johnston International Equity	5.3	4.1	\$132,008,269
<i>S&P BMI Developed Ex US Index</i>	<i>3.0</i>	<i>-8.1</i>	<i>----</i>
State Street Global Advisors World Ex-US	2.7	-8.8	\$158,974,784
<i>MSCI World Ex US</i>	<i>2.6</i>	<i>-10.5</i>	<i>----</i>
State Street Global Advisors Emerging Markets Index	8.6	-1.7	\$271,980,019
<i>Blended Emerging Markets Index</i>	<i>9.0</i>	<i>-1.5</i>	<i>----</i>
Prudential PRISA SA	----	0.6	\$51,721,737
<i>NCREIF NFI-ODCE Index</i>	<i>----</i>	<i>-0.6</i>	<i>----</i>
Prudential PRISA II SA	----	-1.1	\$103,552,732
<i>NCREIF NFI-ODCE Index</i>	<i>----</i>	<i>-0.6</i>	<i>----</i>
TIAA CREF	----	-1.0	\$200,766,870
<i>NCREIF NFI-ODCE Index</i>	<i>----</i>	<i>-0.6</i>	<i>----</i>
TIAA CREF 1721 North Front Street	----	2.4	\$2,311,116
<i>NCREIF Property Index</i>	<i>----</i>	<i>-0.3</i>	<i>----</i>
Forest Investment Associates	----	-0.9	\$132,018,482
<i>NCREIF Timber Index</i>	<i>----</i>	<i>0.2</i>	<i>----</i>
State Street Global Advisors Bond Market	1.5	7.7	\$408,577,208
<i>Bloomberg Barclays Aggregate Index</i>	<i>1.5</i>	<i>7.7</i>	<i>----</i>
Abel Noser (Transition)	----	----	\$1
BNY Cash	----	----	\$325,286
STIP Cash	----	----	\$3,916,335

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM

ALLOCATIONS & TARGETS AS OF JULY 2020

Manager	Target	Market Value	%	+ / -	Market Value Ex-cash	%	+ / -
Total Portfolio		\$2,730,492,269	100%		\$2,730,492,269	100%	
Large Cap	25	712,017,530	26.1	1.1	701,952,843	25.7	0.7
Eagle		153,844,363	5.6		150,241,930	5.5	
LSV Large Cap		147,874,222	5.4		147,291,798	5.4	
Polen		231,740,956	8.5		226,100,689	8.3	
SSgA S&P 500		119,493,670	4.4		119,493,670	4.4	
William Blair		59,064,319	2.2		58,824,756	2.2	
Small Cap	15	424,561,799	15.5	0.5	418,114,047	15.3	0.3
AMI		38,944,622	1.4		38,434,827	1.4	
Copeland		42,534,239	1.6		41,548,729	1.5	
Emerald		74,427,455	2.7		71,283,831	2.6	
LSV Small Cap		57,681,238	2.1		57,386,703	2.1	
Smith, Graham & Co		68,872,926	2.5		67,358,638	2.5	
SSgA Russell 2000		142,101,319	5.2		142,101,319	5.2	
International Equity	15	418,743,154	15.3	0.3	407,885,782	14.9	-0.1
GlobeFlex		4,436	0.0		4,436	0.0	
HGK		127,414,573	4.7		118,659,494	4.3	
Jarislowsky Fraser		318,821	0.0		318,821	0.0	
Johnston		132,008,269	4.8		129,905,976	4.8	
Mercator		19,110	0.0		19,110	0.0	
SSgA International		158,974,784	5.8		158,974,784	5.8	
WHV		3,161	0.0		3,161	0.0	
Emerging Markets	10	271,980,019	10.0	0.0	271,980,019	10.0	0.0
SSgA Emerging Mkts		271,980,019	10.0		271,980,019	10.0	
Real Assets	20	490,370,937	18.0	-2.0	490,370,937	18.0	-2.0
Forest		132,018,482	4.8		132,018,482	4.8	
PRISA I		51,721,737	1.9		51,721,737	1.9	
PRISA II		103,552,732	3.8		103,552,732	3.8	
TIAA N. Front St.		2,311,116	0.1		2,311,116	0.1	
TIAA CREF		200,766,870	7.4		200,766,870	7.4	
Fixed Income	15	408,577,208	15.0	0.0	408,577,208	15.0	0.0
SSgA BC Aggregate		408,577,208	15.0		408,577,208	15.0	
Cash & Equivalents	0	4,241,622	0.2	0.2	31,611,433	1.2	1.2
Abel Noser (Transition)		1	0.0		0	0.0	
BNY Cash		325,286	0.0		325,286	0.0	
STIP Cash		3,916,335	0.1		3,916,335	0.1	
Manager Cash		<i>n/a</i>	-		27,369,812	1.0	

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM
PRELIMINARY GROSS OF FEES PERFORMANCE AS OF AUGUST 2020

Portfolio	QTD	YTD	Market Value
Total Portfolio	7.4	3.2	\$2,825,141,898
<i>Total Portfolio Shadow Index</i>	<i>7.0</i>	<i>2.2</i>	<i>----</i>
State Street Global Advisors	6.6	3.6	\$1,120,716,561
<i>SSgA Shadow Index</i>	<i>6.6</i>	<i>3.0</i>	<i>----</i>
State Street Global Advisors S&P Conservative Index	13.2	9.7	\$128,067,019
<i>S&P 500</i>	<i>13.2</i>	<i>9.7</i>	<i>----</i>
Polen Capital Management Focus Growth	15.1	27.9	\$255,275,171
<i>Russell 1000 Growth</i>	<i>18.8</i>	<i>30.5</i>	<i>----</i>
William Blair Large Cap Growth	15.8	----	\$63,909,105
<i>Russell 1000 Growth</i>	<i>18.8</i>	<i>30.5</i>	<i>----</i>
Eagle Capital Management Equity	12.1	2.0	\$165,794,061
<i>Russell 1000 Value</i>	<i>8.3</i>	<i>-9.4</i>	<i>----</i>
<i>Russell 1000</i>	<i>13.6</i>	<i>10.4</i>	<i>----</i>
LSV Asset Management US Large Cap Value	6.5	-12.2	\$153,117,133
<i>Russell 1000 Value</i>	<i>8.3</i>	<i>-9.4</i>	<i>----</i>
State Street Global Advisors Russell 2000 Index Fund	8.6	-5.5	\$150,096,018
<i>Russell 2000</i>	<i>8.6</i>	<i>-5.5</i>	<i>----</i>
AMI Asset Management Small Cap Growth Equity	6.6	6.8	\$39,831,297
<i>Russell 2000 Growth</i>	<i>9.5</i>	<i>6.1</i>	<i>----</i>
Copeland Small Cap Dividend Growth	6.4	-9.2	\$43,363,883
<i>Russell 2000 Growth</i>	<i>9.5</i>	<i>6.1</i>	<i>----</i>
Emerald Advisors Diversified Small Cap Growth	11.8	11.7	\$78,041,682
<i>Russell 2000 Growth</i>	<i>9.5</i>	<i>6.1</i>	<i>----</i>
LSV Asset Management US Small Cap Value Equity	7.5	-22.0	\$60,745,027
<i>Russell 2000 Value</i>	<i>7.6</i>	<i>-17.7</i>	<i>----</i>
Smith, Graham & Company Small Cap Value	13.7	-9.4	\$71,602,076
<i>Russell 2000 Value</i>	<i>7.6</i>	<i>-17.7</i>	<i>----</i>
HGK Asset Management HGK International Equity	10.5	-0.1	\$134,857,699
<i>S&P BMI Developed Ex US Index</i>	<i>8.7</i>	<i>-3.1</i>	<i>----</i>
Hardman Johnston International Equity	13.6	12.4	\$142,270,205
<i>S&P BMI Developed Ex US Index</i>	<i>8.7</i>	<i>-3.1</i>	<i>----</i>
State Street Global Advisors World Ex-US	8.0	-4.1	\$167,193,696
<i>MSCI World Ex US</i>	<i>7.6</i>	<i>-6.1</i>	<i>----</i>
State Street Global Advisors Emerging Markets Index	10.9	0.5	\$277,971,563
<i>Blended Emerging Markets Index</i>	<i>11.5</i>	<i>0.7</i>	<i>----</i>
Prudential PRISA SA	----	0.6	\$51,721,737
<i>NCREIF NFI-ODCE Index</i>	<i>----</i>	<i>-0.6</i>	<i>----</i>
Prudential PRISA II SA	----	-1.1	\$103,552,732
<i>NCREIF NFI-ODCE Index</i>	<i>----</i>	<i>-0.6</i>	<i>----</i>
TIAA CREF	----	-1.0	\$200,766,870
<i>NCREIF NFI-ODCE Index</i>	<i>----</i>	<i>-0.6</i>	<i>----</i>
TIAA CREF 1721 North Front Street	----	2.4	\$2,311,116
<i>NCREIF Property Index</i>	<i>----</i>	<i>-0.3</i>	<i>----</i>
Forest Investment Associates	----	-0.9	\$132,018,482
<i>NCREIF Timber Index</i>	<i>----</i>	<i>0.2</i>	<i>----</i>
State Street Global Advisors Bond Market	0.7	6.9	\$397,388,265
<i>Bloomberg Barclays Aggregate Index</i>	<i>0.7</i>	<i>6.9</i>	<i>----</i>
BNY Cash	----	----	\$290,077
STIP Cash	----	----	\$4,608,878

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM

ALLOCATIONS & TARGETS AS OF AUGUST 2020

Manager	Target	Market Value	%	+ / -	Market Value Ex-cash	%	+ / -
Total Portfolio		\$2,825,141,898	100%		\$2,825,141,898	100%	
Large Cap	25	766,162,489	27.1	2.1	756,551,771	26.8	1.8
Eagle		165,794,061	5.9		161,073,101	5.7	
LSV Large Cap		153,117,133	5.4		152,272,846	5.4	
Polen		255,275,171	9.0		251,536,747	8.9	
SSgA S&P 500		128,067,019	4.5		128,067,019	4.5	
William Blair		63,909,105	2.3		63,602,058	2.3	
Small Cap	15	443,679,983	15.7	0.7	438,497,644	15.5	0.5
AMI		39,831,297	1.4		39,468,313	1.4	
Copeland		43,363,883	1.5		42,667,430	1.5	
Emerald		78,041,682	2.8		75,551,048	2.7	
LSV Small Cap		60,745,027	2.2		60,727,791	2.1	
Smith, Graham & Co		71,602,076	2.5		69,987,044	2.5	
SSgA Russell 2000		150,096,018	5.3		150,096,018	5.3	
International Equity	15	444,669,706	15.7	0.7	433,061,831	15.3	0.3
GlobeFlex		2,907	0.0		2,907	0.0	
HGK		134,857,699	4.8		125,634,189	4.4	
Jarislowsky Fraser		322,675	0.0		322,675	0.0	
Johnston		142,270,205	5.0		139,885,840	5.0	
Mercator		19,327	0.0		19,327	0.0	
SSgA International		167,193,696	5.9		167,193,696	5.9	
WHV		3,197	0.0		3,197	0.0	
Emerging Markets	10	277,971,563	9.8	-0.2	277,971,563	9.8	-0.2
SSgA Emerging Mkts		277,971,563	9.8		277,971,563	9.8	
Real Assets	20	490,370,937	17.4	-2.6	490,370,937	17.4	-2.6
Forest		132,018,482	4.7		132,018,482	4.7	
PRISA I		51,721,737	1.8		51,721,737	1.8	
PRISA II		103,552,732	3.7		103,552,732	3.7	
TIAA N. Front St.		2,311,116	0.1		2,311,116	0.1	
TIAA CREF		200,766,870	7.1		200,766,870	7.1	
Fixed Income	15	397,388,265	14.1	-0.9	397,388,265	14.1	-0.9
SSgA BC Aggregate		397,388,265	14.1		397,388,265	14.1	
Cash & Equivalents	0	4,898,955	0.2	0.2	31,299,887	1.1	1.1
BNY Cash		290,077	0.0		290,077	0.0	
STIP Cash		4,608,878	0.2		4,608,878	0.2	
Manager Cash		<i>n/a</i>	-		26,400,932	0.9	