

State of Michigan Retirement Systems

DOMESTIC EQUITY REVIEW

Investment Advisory Committee Meeting

March 9, 2017



Jack A. Behar, CFA
Senior Investment Manager
Domestic Equity Division

EXECUTIVE SUMMARY

Performance

Total Domestic Equity, Gross	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	11.5%	8.2%	14.7%	12.5%	7.0%
S&P 1500	13.0%	8.9%	14.8%	13.0%	7.2%
Peer Median Return	11.5%	8.0%	14.2%	12.4%	6.8%
Rank vs. Peers	48	36	31	50	40

Total Domestic Equity, Net	1-Year	3-Years	5-Years	7-Years
Annualized Returns	11.5%	8.1%	14.5%	12.3%
S&P 1500	13.0%	8.9%	14.8%	13.0%
Lipper Multi Core	11.0%	6.2%	13.1%	11.4%
Rank vs. Lipper Multi Core	46	22	26	35

Total Active Equity, Net	1-Year	3-Years	5-Years	7-Years
Annualized Returns	10.2%	7.4%	14.1%	11.8%
S&P 1500	13.0%	8.9%	14.8%	13.0%
Lipper Multi Core	11.0%	6.2%	13.1%	11.4%
Rank vs. Lipper Multi Core	56	35	35	45

- Despite performance in the top half to top third of its peer group in all time periods, Total Domestic Equity (active & passive management combined) trailed the S&P 1500.
 - Over the past one and three years Total Domestic Equity's relative performance was likely 25 basis points (bps) better than detailed above. During that time SMRS paid 6 bps per year in domestic equity management fees, while its peer group was measured at 30 bps three years ago.
- The SMRS active management (Total Active Equity) group performed near the top third of its peers over three and five years, but such performance was not enough to outperform the S&P 1500. One year performance was more challenging, as the division was hurt in part by its underweight to commodity sectors as well as by its exposure to the health care sector.
 - Patience is required in order to have a successful active manager program. Research has shown that most managers that ultimately outperform go through significant periods of underperformance along the way.
 - Managers that are successful over the long term have five year performance numbers below the benchmark approximately 40% of the time.
 - Two-thirds of successful managers experience three consecutive years of underperformance along the way to long-term outperformance.

Strategy Update

- The division continues to emphasize allocating funds to managers with lower portfolio turnover as a means by which to further reduce costs at the division level.
 - Available research indicates that for every 100% of portfolio turnover, it costs SMRS 20 bps for large-cap stocks, 50 bps for mid-cap stocks, and 80 bps for small-cap stocks.
 - Not only are buy and hold strategies more cost effective, but they tend to have outperformed more actively managed approaches within our portfolio in recent years, sometimes by a wide margin.
 - By reducing portfolio turnover costs, minimizing fees paid and negating the impact of cash drag, the division aims to leverage the strengths of passive management.
 - This, combined with a value-oriented approach, which has been demonstrated to outperform the indices over the long run, positions the division to beat the benchmark with a significantly higher probability of success than is the case for most active managers.
- Total Active Equity's portfolio trades at roughly a 15% discount to the S&P 1500 on the basis of normalized earnings, with similar volatility and rates of growth going forward.
 - Eight of the division's top ten holdings trade at forward PE ratios of 15x or less, versus the market at 19x normalized earnings. All are high-quality companies with significant competitive advantages.
 - The division remains overweight to both the financial sector and to defensive stocks and underweighted to commodity-related companies.
 - We expect Total Active Equity's PE ratio to at least partially converge with that of the S&P 1500 over the next five years, driving annualized outperformance.
 - If PE ratios do not converge, we expect long-term outperformance on the basis of a higher net dividend yield (dividends + buybacks) than the benchmark alongside similar or faster rates of earnings reinvestment.

Market Environment and Outlook

- At ~19x normalized earnings, equity markets are on the rich side relative to history, but still reasonably priced for an environment where bond yields stay abnormally low.
- Assuming a 2.0% normalized dividend yield, expected share count reductions of 1.6% via share buybacks and 4.5% long-term expected earnings growth, the S&P 1500 is poised to return approximately 8.1% over the long term.
 - This compares to the 30-year U.S. Treasury at 3.1%, and a historical compound annual return for the S&P 500 of 9.5% from 1928 - 2016.

SMRS

Domestic Equities

12/31/16

Markets	Amount	Total	% of Total
Internal Indexed (in millions)			
Indexed Portfolios	\$7,325		
Total Indexed		\$7,325	45.6%
Internal			
Active Portfolios	\$5,018		
Total Active		\$5,018	31.3%
External/Active			
Los Angeles Capital	\$1,177		
Fisher Investments	662		
Seizert Capital Partners	546		
Clarkston Capital Partners	522		
ARK Investments	224		
Attucks Asset Management	213		
Bivium Capital	197		
Munder Capital Management	89		
Northpointe Capital	86		
Total		\$3,716	23.1%

TOTAL

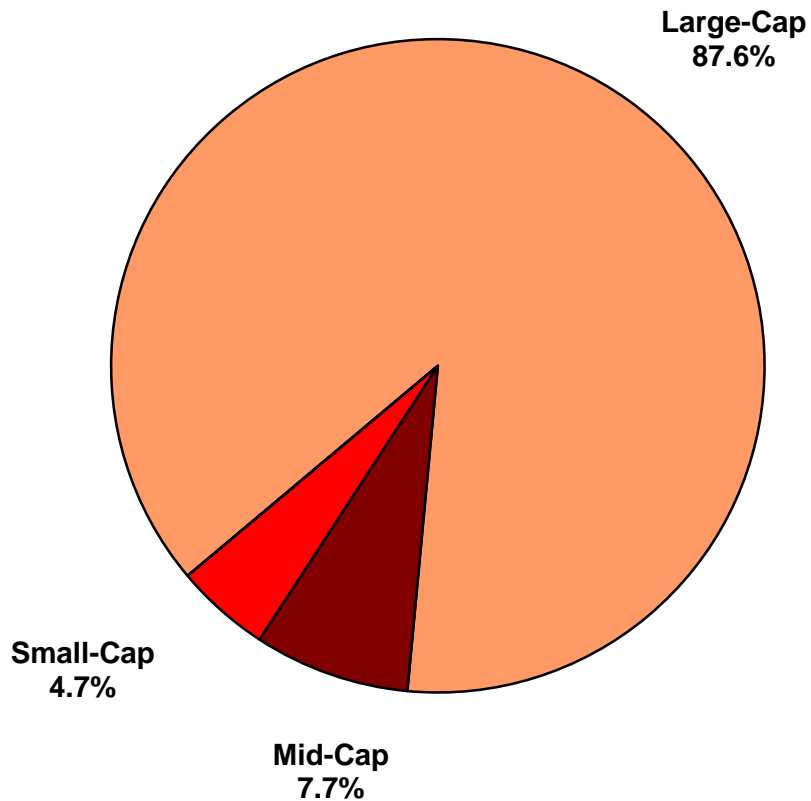
\$16,059

100.0%

SMRS

Domestic Equity Exposure By Market Cap

12/31/16



Market Value in Millions			
	<u>12/31/16</u>		
	<u>Assets</u>	<u>Percent</u>	<u>S&P 1500</u>
Large-Cap (>\$10B)	\$14,068	87.6%	84.9%
Mid-Cap (>\$4 <\$10B)	1,237	7.7%	8.5%
Small-Cap (<\$4B)	754	4.7%	6.6%
Total Domestic Equity	<u>\$16,059</u>	<u>100.0%</u>	<u>100.0%</u>

SMRS

Domestic Equities Composite

12/31/16

Date:	<u>12/31/16</u>	<u>9/30/16</u>	<u>6/30/16</u>	<u>3/31/16</u>
Assets (\$million):	\$16,059	\$15,842	\$16,059	\$16,294
Number of Securities:	1,322	1,316	1,329	1,305
Active Share:	37%	34%	33%	35%

Benchmark: S&P 1500

Description: The Domestic Equities Composite combines both the SMRS' Actively Managed Composite and its index funds.

Characteristics:	<u>SMRS</u>	<u>S&P 1500</u>	<u>S&P 1500 Value</u>
Weighted Average Capitalization (\$billion)	\$155.7	\$133.7	\$112.8
P/E FY1	16.6x	18.4x	16.8x
P/E discount to S&P 1500	9.8%	0	8.7%
Price/Book	2.4x	2.7x	1.9x
Beta	0.98	1.00	1.04
Tracking Error	1.2%	0	3.0%
Dividend Yield	2.1%	2.0%	2.3%
3-5 Year EPS Growth Estimate	9.3%	10.3%	7.8%
Return on Equity	14.5%	14.7%	11.3%

TOP TEN HOLDINGS - Domestic Equities

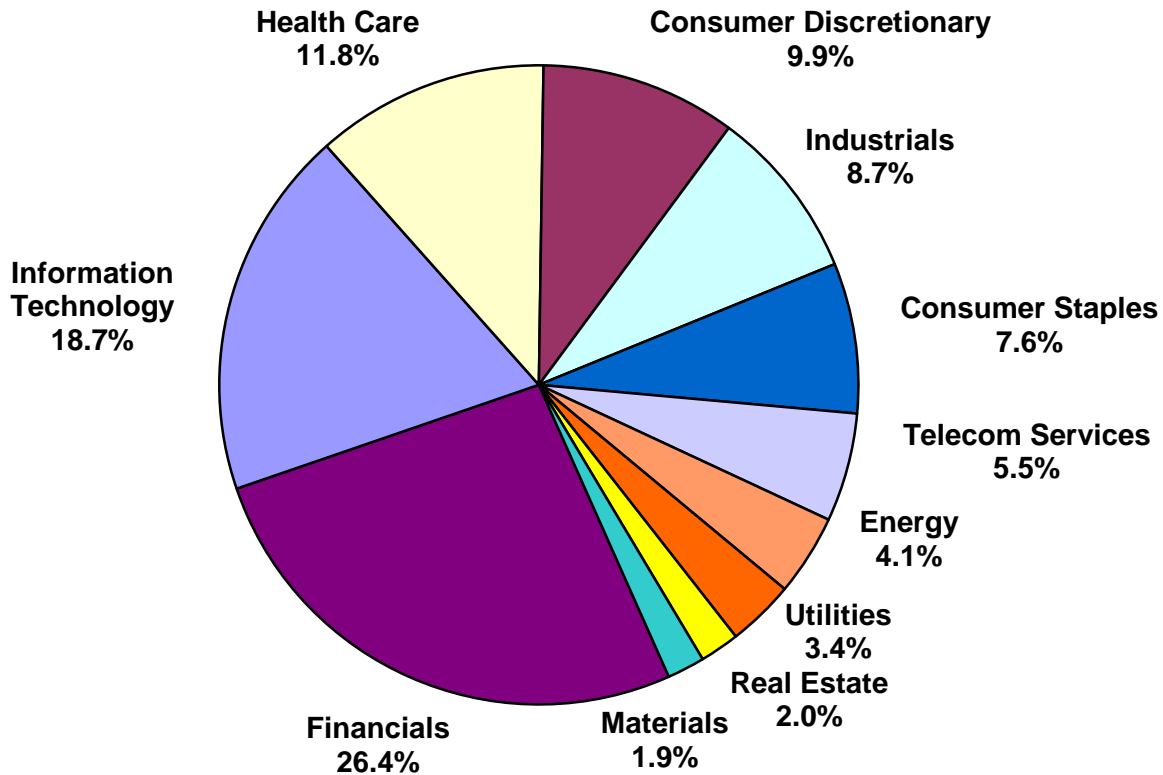
12/31/16

	<u>Portfolio Weight</u>	<u>Market Capitalization (\$B)</u>	<u>FY1 P/E</u>	<u>YTD Total Return</u>	<u>Market Value</u>
Berkshire Hathaway Inc. Class B	5.1%	401.9	22.6	23.4%	\$814,678,510
Verizon Communications Inc.	4.7%	217.6	13.7	20.7%	747,058,278
Apple Inc.	3.6%	608.7	12.9	12.5%	578,401,374
JPMorgan Chase & Co.	2.9%	307.3	14.6	34.6%	464,337,190
U.S. Bancorp	2.8%	87.2	15.9	23.4%	451,688,294
Wells Fargo & Company	2.1%	276.4	13.7	4.7%	333,857,537
SPDR S&P 500 ETF Trust	1.9%	133.7	18.2	12.0%	303,877,859
Microsoft Corporation	1.7%	480.3	20.9	15.1%	269,962,756
Gilead Sciences, Inc.	1.6%	94.7	6.3	-27.6%	249,377,027
Exelon Corporation	<u>1.5%</u>	32.8	13.2	32.8%	<u>246,698,017</u>
TOTAL	<u>27.8%</u>				<u>\$4,459,936,841</u>

SMRS

Domestic Equity By Sector

12/31/16



Market Value in Millions				
12/31/16				
	<u>Assets</u>	<u>Percent</u>	<u>Benchmark</u>	<u>Difference</u>
Financials	\$4,248	26.4%	15.1%	11.3%
Information Technology	3,001	18.7%	20.4%	-1.7%
Health Care	1,896	11.8%	13.1%	-1.3%
Consumer Discretionary	1,592	9.9%	12.0%	-2.1%
Industrials	1,401	8.7%	10.9%	-2.2%
Consumer Staples	1,223	7.6%	8.8%	-1.2%
Telecom Services	884	5.5%	2.4%	3.1%
Energy	651	4.1%	7.1%	-3.0%
Utilities	544	3.4%	3.3%	0.1%
Real Estate	314	2.0%	3.6%	-1.6%
Materials	305	1.9%	3.3%	-1.4%
Total	<u>\$16,059</u>	<u>100.0%</u>	<u>100.0%</u>	

Benchmark: S&P 1500

SMRS

Actively Managed Composite

12/31/16

Date:	<u>12/31/16</u>	<u>9/30/16</u>	<u>6/30/16</u>	<u>3/31/16</u>
Assets (\$million):	\$8,734	\$8,403	\$8,625	\$9,018
Number of Securities:	980	1,015	1,023	969
Active Share:	66%	63%	62%	63%

Benchmark: S&P 1500

Description: The Actively Managed Composite is designed to add consistent alpha by investing in managers with value-added, but diverse strategies. While the expectation is that most will outperform over time, the composite is designed such that they do so during differing parts of the business cycle.

Characteristics:	<u>SMRS</u>	<u>S&P 1500</u>	<u>S&P 1500 Value</u>
Weighted Average Capitalization (\$billion)	\$169.2	\$133.7	\$112.8
P/E FY1	15.5x	18.4x	16.8x
P/E discount to S&P 1500	15.8%	0	8.7%
Price/Book	2.3x	2.7x	1.9x
Beta	0.96	1.00	1.04
Tracking Error	2.2%	0	3.0%
Dividend Yield	2.2%	2.0%	2.3%
3-5 Year EPS Growth Estimate	8.6%	10.3%	7.8%
Return on Equity	14.8%	14.7%	11.3%

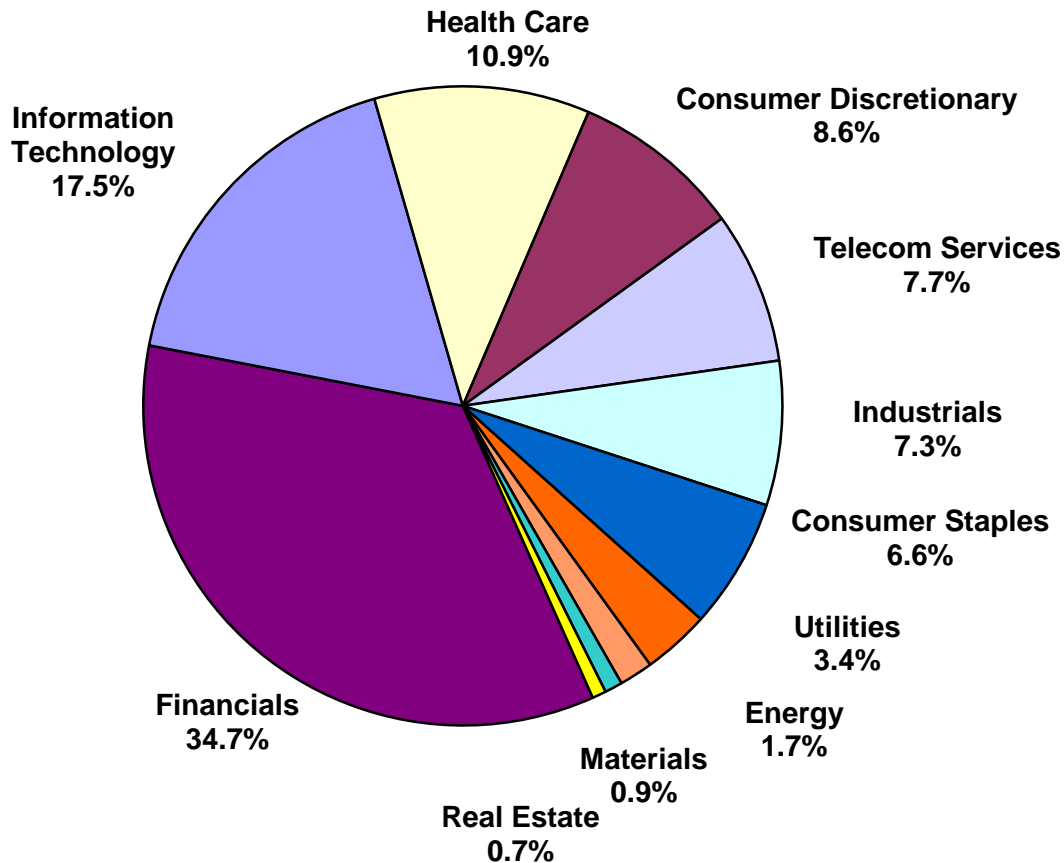
TOP TEN HOLDINGS - Actively Managed 12/31/16

	<u>Portfolio Weight</u>	<u>Market Capitalization (\$B)</u>	<u>FY1 P/E</u>	<u>YTD16 Total Return</u>	<u>Market Value</u>
Berkshire Hathaway Inc. Class B	8.5%	401.9	22.6	23.4%	\$741,767,451
Verizon Communications Inc.	7.7%	217.6	13.7	20.7%	675,892,115
U.S. Bancorp	4.9%	87.2	15.9	23.4%	424,845,311
Apple Inc.	4.3%	608.7	12.9	12.5%	376,423,918
JPMorgan Chase & Co.	4.2%	307.3	14.6	34.6%	363,361,926
Wells Fargo & Company	2.9%	276.4	13.7	4.7%	252,392,282
Exelon Corporation	2.7%	32.8	13.2	32.8%	235,983,692
Gilead Sciences, Inc.	2.5%	94.7	6.3	-27.6%	218,525,720
Aflac Incorporated	2.3%	28.2	10.1	19.1%	201,937,162
Validus Holdings, Ltd.	<u>2.2%</u>	4.4	14.4	22.3%	<u>193,797,094</u>
TOTAL	<u>42.2%</u>				<u>\$3,684,926,673</u>

SMRS

Active Equity By Sector

12/31/16



Market Value in Millions				
12/31/16				
	<u>Assets</u>	<u>Percent</u>	<u>Benchmark</u>	<u>Difference</u>
Financials	\$3,031	34.7%	15.1%	19.6%
Information Technology	1,530	17.5%	20.4%	-2.9%
Health Care	950	10.9%	13.1%	-2.2%
Consumer Discretionary	742	8.6%	12.0%	-3.4%
Telecom Services	673	7.7%	2.4%	5.3%
Industrials	637	7.3%	10.9%	-3.6%
Consumer Staples	578	6.6%	8.8%	-2.2%
Utilities	296	3.4%	3.3%	0.1%
Energy	151	1.7%	7.1%	-5.4%
Materials	80	0.9%	3.3%	-2.4%
Real Estate	66	0.7%	3.6%	-2.9%
Total	<u>\$8,734</u>	<u>100.0%</u>	<u>100.0%</u>	

Benchmark: S&P 1500

Manager Performance - Net of Fees
12/31/16

<u>Fund Name</u>	<u>Market Value</u>	<u>1-Year</u>	<u>3-Years</u>	<u>5-Years</u>	<u>7-Years</u>	<u>Inception</u>	<u>Inception Date</u>
SMRS Large-Cap Core	\$2,150,814,849	11.0%	7.4%	15.1%	11.8%	6.9%	8/31/07
S&P 500		12.0%	8.9%	14.7%	12.8%	7.0%	
Style & Risk Adjusted Benchmark		16.9%	6.7%	13.0%	12.0%	6.2%	
Lipper Large-Cap Core		10.3%	7.0%	13.3%	11.4%	6.2%	
<i>Excess Return</i>		-1.0%	-1.5%	0.4%	-1.0%	-0.1%	
<i>Alpha</i>		-5.9%	0.7%	2.1%	-0.2%	0.7%	
<i>Pct Rank vs Lipper Large-Cap Core</i>		44	53	12	44	26	
SMRS Large-Cap Growth	1,397,313,422	-3.0%	6.2%	13.7%	11.4%	8.1%	5/31/05
S&P 500 Growth Index		6.9%	9.0%	14.5%	13.1%	8.7%	
Style & Risk Adjusted Benchmark		7.9%	9.4%	15.5%	13.6%	8.8%	
Lipper Large Growth		2.4%	6.2%	13.3%	11.5%	8.0%	
<i>Excess Return</i>		-9.9%	-2.8%	-0.8%	-1.8%	-0.7%	
<i>Alpha</i>		-10.9%	-3.1%	-1.8%	-2.2%	-0.7%	
<i>Pct Rank vs Lipper Large-Cap Growth</i>		91	55	43	54	47	
SMRS All-Cap Garp	1,008,966,348	9.1%	8.0%	15.5%	--	13.6%	4/30/11
S&P 1500 Super Composite		13.0%	8.9%	14.8%	--	11.9%	
Style & Risk Adjusted Benchmark		11.7%	7.9%	13.8%	--	11.1%	
Lipper Multi Core		11.0%	6.2%	13.1%	--	9.8%	
<i>Excess Return</i>		-3.9%	-0.9%	0.7%	--	1.7%	
<i>Alpha</i>		-2.5%	0.0%	1.7%	--	2.5%	
<i>Pct. Rank vs. Lipper Multi Core</i>		67	24	10	--	1	
LA Capital Deep Value	709,701,931	16.7%	--	--	--	6.8%	4/1/15
S&P 1500 Value		18.5%	--	--	--	8.2%	
Style & Risk Adjusted Benchmark		16.5%	--	--	--	7.4%	
Lipper Multi-Cap Value		16.4%	--	--	--	5.1%	
<i>Excess Return</i>		-1.8%	--	--	--	-1.4%	
<i>Alpha</i>		0.2%	--	--	--	-0.6%	
<i>Pct. Rank vs. Lipper Multi-Cap Value</i>		49	--	--	--	32	
Fisher All-Cap	662,451,268	10.0%	9.3%	13.6%	12.7%	10.0%	10/31/04
S&P 1500/S&P 600 Value Blend		13.0%	8.9%	14.5%	13.4%	8.8%	
Style & Risk Adjusted Benchmark		13.0%	9.0%	15.1%	15.0%	9.9%	
Lipper Multi Core		11.0%	6.2%	13.1%	11.4%	7.5%	
<i>Excess Return</i>		-3.1%	0.4%	-0.8%	-0.7%	1.2%	
<i>Alpha</i>		-3.0%	0.3%	-1.5%	-2.3%	0.1%	
<i>Pct. Rank vs. Lipper Multi Core</i>		59	8	45	26	2	
Seizert Capital Partners	546,074,744	20.1%	7.1%	15.5%	14.2%	14.8%	11/30/09
S&P 1500/S&P 400 Value Blend		13.0%	8.9%	14.8%	14.8%	16.0%	
Style & Risk Adjusted Benchmark		16.1%	8.7%	15.7%	13.0%	13.8%	
Lipper Multi Core		11.0%	6.2%	13.1%	11.4%	12.4%	
<i>Excess Return</i>		7.1%	-1.8%	0.7%	-0.6%	-1.2%	
<i>Alpha</i>		3.9%	-1.6%	-0.2%	1.2%	1.0%	
<i>Pct. Rank vs. Lipper Multi Core</i>		3	40	10	6	7	
LA Capital All-Cap Growth	467,259,929	11.5%	10.8%	16.8%	15.0%	11.3%	5/31/05
S&P 1500 Growth		7.9%	9.0%	14.6%	13.3%	8.9%	
Style & Risk Adjusted Benchmark		8.1%	6.8%	12.3%	12.9%	9.5%	
Lipper Multi-Cap Growth		3.3%	4.9%	12.4%	11.1%	8.1%	
<i>Excess Return</i>		3.6%	1.9%	2.2%	1.6%	2.4%	
<i>Alpha</i>		3.5%	4.0%	4.5%	2.1%	1.7%	
<i>Pct. Rank vs. Lipper Multi-Cap Growth</i>		2	1	3	1	2	
Clarkston Capital Large-Cap	292,091,683	14.0%	--	--	--	9.5%	4/1/15
S&P 500		12.0%	--	--	--	6.9%	
Style & Risk Adjusted Benchmark		8.3%	--	--	--	4.9%	
Lipper Large-Cap Core		10.3%	--	--	--	5.0%	
<i>Excess Return</i>		2.0%	--	--	--	2.6%	
<i>Alpha</i>		5.7%	--	--	--	4.6%	
<i>Pct. Rank vs. Lipper Large-Cap Core</i>		14	--	--	--	2	

<u>Fund Name</u>	<u>Market Value</u>	<u>1-Year</u>	<u>3-Years</u>	<u>5-Years</u>	<u>7-Years</u>	<u>Inception</u>	<u>Inception Date</u>
Clarkston Capital Small-Cap	229,900,929	16.7%	13.0%	--	--	13.0%	1/1/14
S&P 600		26.6%	9.5%	--	--	9.5%	
Style & Risk Adjusted Benchmark		16.8%	7.0%	--	--	7.0%	
Lipper Small-Cap Core		20.6%	6.0%	--	--	6.0%	
<i>Excess Return</i>		-9.8%	3.5%	--	--	3.5%	
<i>Alpha</i>		0.0%	6.0%	--	--	6.0%	
<i>Pct. Rank vs. Lipper Small-Cap Core</i>		79	1	--	--	1	
Ark Investments	223,614,381	--	--	--	--	11.8%	3/1/16
S&P 1500 Growth		--	--	--	--	14.5%	
Style & Risk Adjusted Benchmark		--	--	--	--	23.8%	
Lipper All-Cap Growth		--	--	--	--	12.6%	
<i>Excess Return</i>		--	--	--	--	-2.7%	
<i>Alpha</i>		--	--	--	--	-11.9%	
<i>Pct. Rank vs. Lipper All-Cap Growth</i>		--	--	--	--	58	
Attucks Asset Management	213,010,446	11.2%	5.7%	12.6%	11.3%	5.8%	11/30/07
S&P 1500 Super Composite		13.0%	8.9%	14.8%	13.0%	6.6%	
Style & Risk Adjusted Benchmark		16.1%	8.2%	14.0%	12.7%	7.2%	
Lipper Multi Core		11.0%	6.2%	13.1%	11.4%	5.5%	
<i>Excess Return</i>		-1.8%	-3.2%	-2.2%	-1.7%	-0.8%	
<i>Alpha</i>		-4.9%	-2.5%	-1.4%	-1.3%	-1.4%	
<i>Pct. Rank vs. Lipper Multi Core</i>		48	64	66	57	47	
Bivium Capital Partners	197,046,688	12.8%	5.7%	12.6%	11.4%	5.5%	11/30/07
S&P 1500 Value		18.5%	8.6%	14.9%	12.7%	5.4%	
Style & Risk Adjusted Benchmark		17.8%	8.6%	14.4%	13.2%	6.9%	
Lipper Multi Cap Value		16.4%	6.4%	13.4%	11.4%	5.4%	
<i>Excess Return</i>		-5.7%	-2.9%	-2.3%	-1.3%	0.1%	
<i>Alpha</i>		-5.0%	-2.8%	-1.8%	-1.8%	-1.3%	
<i>Pct. Rank vs. Lipper Multi-Cap Value</i>		81	71	71	58	38	
Munder Concentrated SMID Cap	88,930,045	8.8%	4.3%	12.1%	11.9%	15.9%	4/30/09
S&P 400 Mid-Cap Growth		14.8%	8.0%	14.4%	14.2%	18.7%	
Style & Risk Adjusted Benchmark		24.7%	9.4%	15.8%	13.9%	17.5%	
Lipper Mid-Cap Growth		6.6%	4.1%	11.8%	11.4%	15.5%	
<i>Excess Return</i>		-6.0%	-3.7%	-2.3%	-2.3%	-2.8%	
<i>Alpha</i>		-16.0%	-5.0%	-3.7%	-2.0%	-1.6%	
<i>Pct. Rank vs. Lipper Mid-Cap Core</i>		28	42	46	39	42	
NorthPointe All-Cap Core	85,779,473	12.2%	4.4%	13.4%	10.6%	7.1%	10/31/04
NorthPointe Blended Benchmark		13.0%	8.9%	14.8%	13.0%	8.4%	
Style & Risk Adjusted Benchmark		16.2%	7.2%	14.4%	14.9%	9.8%	
Lipper Multi Core		11.0%	6.2%	13.1%	11.4%	7.5%	
<i>Excess Return</i>		-0.9%	-4.5%	-1.4%	-2.4%	-1.3%	
<i>Alpha</i>		-4.0%	-2.8%	-1.0%	-4.2%	-2.7%	
<i>Pct. Rank vs. Lipper Multi Core</i>		39	79	53	71	69	
Large-Cap Consistent Growth	49,582,495	0.9%	--	--	--	3.2%	3/1/15
S&P 500		12.0%	--	--	--	5.7%	
Style & Risk Adjusted Benchmark		8.1%	--	--	--	4.4%	
Lipper Large-Cap Core		10.3%	--	--	--	3.9%	
<i>Excess Return</i>		-11.0%	--	--	--	-2.4%	
<i>Alpha</i>		-7.2%	--	--	--	-1.1%	
<i>Pct. Rank vs. Lipper Large-Cap Core</i>		99	--	--	--	69	