Minutes of the Lehigh County Retirement Board Meeting

Lehigh County Government Center Public Hearing Room

Thursday, May 5, 2016

9:30 A.M.

A meeting of the Lehigh County Employees' Retirement Board was held at 9:30 A.M. in the Public Hearing Room of the Lehigh County Government Center. Members present were David Bausch, Glenn Eckhart, Daniel McCarthy, Brad Osborne and Tim Reeves.

Tom Muller and Tom Creighton were not present.

Skip Cowen, Kevin Karpuk and Chris Lakatosh from Cornerstone also attended.

Glenn Eckhart, County Controller, called the meeting to order at 9:33 A.M.

OLD BUSINESS

Meeting minutes for approval from January 28, 2016

Glenn Eckhart asked if there were any questions or corrections to the January 28, 2016 meeting minutes.

Glenn Eckhart called for a motion for acceptance of the minutes.

Brad Osborne made a motion to accept the January 28, 2016 Retirement Board minutes.

David Bausch seconded the motion.

Glenn Eckhart called for a voice vote. All were in favor.

Minutes were approved unanimously.

Meeting minutes for approval from February 4, 2016

Glenn Eckhart asked if there were any questions or corrections to the February 4, 2016 meeting minutes.

Glenn Eckhart called for a motion for acceptance of the minutes.

Daniel McCarthy made a motion to accept the February 4, 2016 Retirement Board minutes.

Tim Reeves seconded the motion.

Glenn Eckhart called for a voice vote. All were in favor.

Minutes were approved unanimously.

NEW BUSINESS

Skip Cowen (Cornerstone Consulting) gave an update on the first quarter 2016.

Skip referred to the attached handout:

Returns (page 1) - The year-to-date return on the S&P is 1.35%. The international markets were relatively flat. They were down about 38 basis points. However, that is somewhat misleading – the first quarter has been described as the most volatile quarter in the modern history of the markets. The market was down about 10% through February 11th. It turned around and roared back. It was up about 12% from the lows by March 31st. Oil during the first quarter went down to \$26 then went back up to \$40. There was a lot happening during that period of time. Again, 1.3 looks like a pretty mild quarter but it was anything but. Financial and healthcare stocks under-performed. The more defensive securities like utilities and telecom were a bit better in the quarter.

Net Portfolio Performance (page 2) - The portfolio did under-perform the benchmark slightly. Our blended benchmark was up about 1.08%. The portfolio returned net of fees 67 basis points. A little under-performance here -- primarily due to the security selection of our growth managers – both our large cap growth and mid cap growth managers under-performed by a measurable amount in the first quarter. I'm pleased to report the bulk of the under-performance has been recovered in the month of April.

Current Asset Allocation (page 3) – Our policy targets consist of 50% of the portfolio of stocks. It's broken down 35% domestic and 15% international. We have target of 35% for our bonds, 10% for alternative investments and 5% for cash. At the end of the quarter, we maintained an overweight to our equity positions. We had about 56% exposure to stocks. We're underweighting fixed income at 27% and overweighting our alternatives at 15%. Very little cash in the portfolio at that time.

Cash Flows (page 4) – I would like to point out a mistake in this piece. You'll see it says since the five year inception of our involvement – actually the numbers here are just for the last three years. What we're trying to articulate is over the last three years, the portfolio has grown from an investment perspective at about \$80 million. Over the last five years, it has grown by about \$140 million. The take-away from this slide is the components of the return - \$31 million for the last three years (almost \$32 million) has been income and dividends generated inside the portfolio. Almost \$50 million has been appreciation or change in market value. It's important for us to remember that even in a period of time with low interest rates and low yields, the compounding effect of those dividends that are produced every month, every quarter are a very big component to total return even in this very low interest rate climate.

Manager Performance (page 5) – The under performers in the quarter were SGA Large Cap Growth manager and Emerald Mid Cap Growth manager. Both struggled in the quarter. One was off 4.16, the other 5.31 relative to their benchmarks. We hit a little bit of a soft patch in the quarter with regard to those two managers. In general the one year performance of the manager, matrix has been absolutely outstanding. Lomax has been the top 12 percentile of their peer group nationally. The Vanguard Fund has also been in the top 12 percentile of its peer group. Sustainable has been in the top quartile, the 25th percentile. Emerald has been in the 40th and the Vanguard Small Cap in the 44th. We're seeing some positive contribution at the manager level all through security selection. That's been a big help to the portfolio. Quite frankly it changed over the previous 3-4 years where it's been difficult for managers to add value picking stocks.

April Flash Report (page 6) – These are unaudited numbers so I caution you that they are 99% accurate but a good reflection as to what happened in the quarter. You'll see the portfolio did exceed the blended benchmark and the index was up 90 basis points. We were up 96 basis points over that period of time.

I direct your attention to Sustainable. Again, one of our managers had struggled in the first quarter. It was up about 300 basis points relative to its benchmark. So it recovered a good bit of that 400 basis points of under-performance that we saw in the first quarter.

To summarize, the last 18 months of investment performance has been very, very flat. The markets really stuck – the Dow was roughly 18,000. Its bouncing around a little bit but it's been difficult to make money in the last 18 months. We're looking for a catalyst to improve that moving forward from here and it's not obvious that there is one, so we think we'll continue to see relatively low, single-digit numbers. Obviously, that's a guesstimate as to what we think might happen in the future.

Thoughts, questions, observations on the performance of the fund?

Dave Hemerly - Human Services - What happened with Philadelphia Trust?

Skip Cowen – Cornerstone – If you look at the Flash Report, you'll see that they were defunded in the month of April. We terminated that relationship and we moved the money primarily to the Vanguard Index Fund and to Lomax and Sustainable as the other growth investments.

Dave Hemerly - Some to cash, right?

Skip Cowen – About \$10 million to into cash so we can pay future payments. We terminated that relationship. It had been a fairly long business relationship between the County and Philadelphia Trust. But performance just didn't justify the fees that were being paid so we made a decision and changed. Good question.

Jason Kaiser - Children & Youth Services - Referring to page 5, how many quarters of decline do you look at before you consider reallocating into something better?

Skip Cowen – Would we either terminate a manager or defund them potentially? That's a really good question and that's much more of an art than it is a science. All great managers have periods of underperformance. That's just a reality in this business. So if we see under-performance, we understand where it's coming from. We understand that under-performance is consistent with the investment process. Its underlying in the portfolio. We don't see changes in that process nor do we see changes in personnel or key people at a particular organization. We're more likely to buckle our chin straps and bully our way through those periods of under-performance because good managers will come back. However, if we see a manager tweak or change how they do their investment process or if we see key people leaving the organization or assets leaving the organization, we'll move relatively quickly to terminate the relationship.

Glenn Eckhart – County Controller – Several months ago I had received several sell orders from Emerald Advisors, I even email cornerstone and they got back to me and told me they are selling off there sector we had gotten too heavy for our portfolio. What they actually did was defunded Emerald to the tune of about \$2 million before the market went down. What Cornerstone was able to do was trim back their wings or cut their wings. When you look at the data, it's obvious to see why they did it. I commend Cornerstone for doing that.

Skip Cowen - Defunding managers is never easy, but it is a decision that the Board has hired us to make.

Glenn Eckhart asked if the audience or Retirement Board had any comments or questions.

No comments or questions.

Tim Reeves gave an update on some things going on outside of the Retirement Board meetings:

- 1. We are currently engaged in an RFP as it relates to the investment consultants. We initiated that in April and expect to have bids back in sometime around May 11 or 12. Again, it's no reflection on Cornerstone. It's a best practice thing that we do and we are going through that process. I just want to make everyone aware that was happening.
- 2. There was a committee that was formed to look at various items.

 We had several meetings and will continue to have those meetings up and through August to come up with recommendations. The items we are discussing are everything from interest rate to cost of living to county contributions and the election process. We are charged to come up with some long-term solutions and so forth. Again, if anyone has any questions on that, we can certainly fill you in.

Glenn Eckhart asked if the audience or Retirement Board had any comments or questions.

No comments or questions.

There was no further business or Citizen's Input.

Glenn Eckhart called for a motion to adjourn.

Tim Reeves made the motion to adjourn.

Brad Osborne seconded the motion.

Glenn Eckhart called for a voice vote.

All were in favor.

Meeting was adjourned at 9:47 A.M.

Glenn Eckhart, Secretary



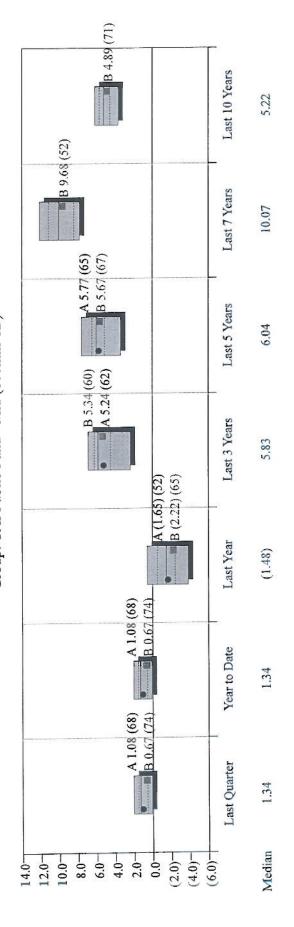
| Asset Class Index refromance | | | | Return | | | | | Std |
|---|-------|-------|--------|--------|--------|--------|--------|-------|----------------|
| | MTD | QTØ | TTD | 1 Year | 3 Year | 5 Year | 7 Year | 10 Yr | Yr (Mo-End) |
| Not Classified | | | | | | | | | |
| S&P 500 TR USD | 6.78 | 1.35 | 1.35 | 1.78 | 11.82 | 11.58 | 16.91 | 7.01 | 11.36 |
| Russell 3000 TR USD | 7.04 | 76.0 | 76.0 | -0.34 | 11.15 | 10.11 | 17.09 | 06'9 | 11.56 |
| NASDAQ Composite TR USD | 6.94 | -2.43 | -2.43 | 0.55 | 15.63 | 13.22 | 19.34 | 8.71 | 13.46 |
| DI Industrial Average TR USD | 7.22 | 2.20 | 2.20 | 2.08 | 9.29 | 10.27 | 15.79 | 7.54 | 11.63 |
| Russell 1000 Value TR USD | 7.20 | 1.64 | 1.64 | -1.54 | 9.38 | 10.25 | 16.31 | 5.72 | 11.41 |
| Russell 1000 Growth TR USD | 6.74 | 0.74 | 0.74 | 2.52 | 13.61 | 12.38 | 17.94 | 8.28 | 11.80 |
| Russell 2000 Value TR USD | 8.29 | 1.70 | 1.70 | -7.72 | 5.73 | 29.9 | 15.54 | 4.42 | 14.53 |
| Russell 2000 TR USD | 7.98 | -1.52 | -1.52 | -9.76 | 6.84 | 7.20 | 16.42 | 5.26 | 15.33 |
| Russell 2000 Growth TR USD | 7.66 | -4.68 | -4.68 | -11.84 | 7.91 | 7.70 | 17.23 | 6.00 | 16.66 |
| MSCI EAFE NR USD | 6.51 | -3.01 | -3.01 | -8.27 | 2.23 | 2.29 | 69'6 | 1.80 | 13.61 |
| MSCI ACWI Ex USA NR USD | 8.13 | -0.38 | -0.38 | 61.6- | 0.32 | 0.31 | 9.18 | 1.94 | 13.59 |
| MSCI EM NR USD | 13.23 | 5,71 | \$17,1 | -12,03 | -4.50 | 4.13 | 8.21 | 3.02 | 16.66 |
| DJ Composite All REIT TR USD | 10.15 | 5.88 | 5.88 | 3.69 | 8.72 | 10.88 | 22.49 | 5.74 | 14.64 |
| Bloomberg Commodity TR USD | 3.82 | 0.42 | 0.42 | -19.56 | -16.87 | -14.15 | -4.54 | -6.16 | 12.71 |
| BofAML ABS Master Floating Rate TR USD | 0.08 | -0.20 | -0.20 | -0.96 | 0.46 | 0.94 | 2.98 | -1.06 | 0.84 |
| BofAML Convertible Bonds All Qualities | 4.62 | -3.03 | -3.03 | -7.32 | 7.42 | 6.75 | 12.81 | 6.74 | 9.90 |
| S&P Preferred Stock TR USD | 2.52 | 1.21 | 1.21 | 3.67 | 5.63 | 6.63 | 16.67 | 5.03 | 4.33 |
| Barclays US Treasury US TIPS TR USD | 1.80 | 4.46 | 4.46 | 1.51 | -0.71 | 3.02 | 4.16 | 4.62 | 5.31 |
| Barclays US Agg Bond TR USD | 0.92 | 3:03 | 3,03 | 1.96 | 2.50 | 3,78 | 4.52 | 4.90 | 3.00 |
| Barclays US HY Interm TR USD | 4.22 | 3.09 | 3,09 | -3.84 | 1.58 | 4.65 | 11.85 | 02.9 | 5.82 |
| Barclays Municipal 1-10Y Blend 1-12Y TR | -0.07 | 1.24 | 1.24 | 2.86 | 2.50 | 3.68 | 3.83 | 4.21 | 2.20 |
| Barclays Global Aggregate TR USD | 2.70 | 5.90 | 5.90 | 4.57 | 0.87 | 11.811 | 8.72 | 4.35 | 4.43 |
| Blended Index Performance | | | | | | | | | |
| | | | | Return | | | | | Std |
| | MTD | QTD | CTY | 1 Year | 3 Year | 5 Year | 7 Year | 10 Yr | Yr (Mo-End) |
| Not Classified | | | | | | | | | |
| 100% Equity (70.30) | 7.37 | 0.57 | 0.57 | -3.03 | 7.85 | 7.76 | 14.74 | 5.47 | 11.75 |
| 80% Equity, 20% Fixed Income | 80.9 | 1.13 | 1.13 | -1.88 | 6.87 | 7.11 | 12.83 | 5.59 | 9.45 |
| 60% Equity, 40% Fixed Income | 4.79 | 1.66 | 1.66 | -0.80 | 5.85 | 6:39 | 10.85 | 5.59 | 7.21 |
| 40% Equity, 60% Fixed Income | 3.50 | 2.16 | 2.16 | 0.20 | 4.78 | 5.59 | 8.80 | 5.48 | 5.12 |
| 20% Equity, 80% Fixed Income | 2.21 | 2.61 | 2.61 | 1.12 | 3.66 | 4.72 | 69:9 | 5.24 | 3.44 |
| | | | | | | | | | |

Lehigh County Retirement Fund Net Portfolio Performance

3 Months ending March 31, 2016

| | | | Reginning Market Ending Market | Ending Market |
|--------------------------|---------------|---------|--------------------------------|---------------|
| | Ending Weight | Returns | Value | Value |
| Domestic Equity | 39.8% | 0.04% | \$177,944,355 | \$176,471,448 |
| International Equity | 16.3% | (1.02%) | \$72,851,467 | \$72,111,178 |
| Domestic Fixed Income | 27.9% | 3.20% | \$120,047,380 | \$123,886,098 |
| Alternative | 15.4% | 0.04% | \$68,460,764 | \$68,491,405 |
| Cash & Equivalents | 0.5% | %80.0 | \$7,629,806 | \$2,384,904 |
| Total Portfolio | 100.0% | 0.67% | \$446,933,772 | \$443,345,032 |
| Lehigh County Blended BM | | 1.08% | | |

Net of Fee Returns for Period Ending March 31, 2016 Group: CAI Public Fund - Mid (100mm-1B)





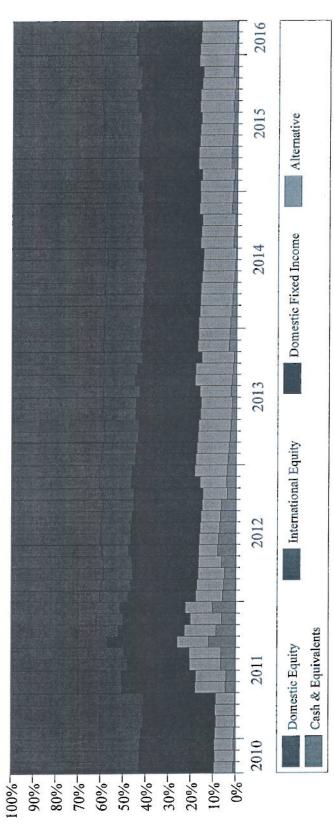
Lehigh County Retirement Fund Asset Allocation

January 1, 2016 to March 31, 2016

| | Beginning Weight | Ending Weight | IPS Tgt Weight | Deviation |
|-----------------------|---------------------|------------------|-------------------|-----------|
| Domestic Equity | 39.8% | 39.8% | 35.0% | 4.8% |
| International Equity | 16.3% | 16.3% | 15.0% | 1.3% |
| Domestic Fixed Income | 26.9% | 27.9% | 35.0% | (7.1%) |
| Alternative | 15.3% | 15.4% | 10.0% | 5.4% |
| Cash & Equivalents | 1.7% | 0.5% | 2.0% | (4.5%) |
| Total Portfolio | 100.0% | 100.0% | 100.0% | |

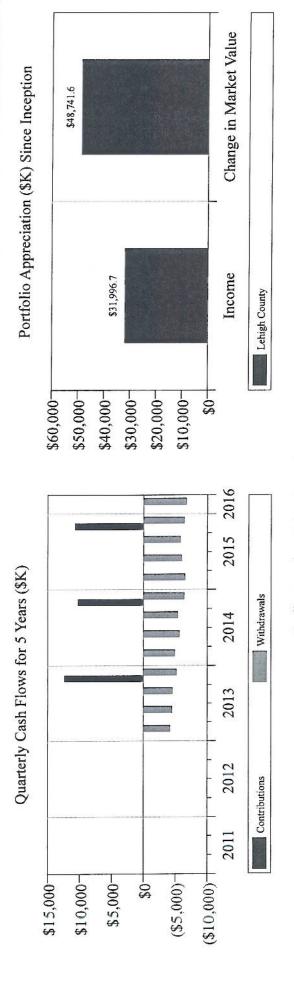
| | Beginning | Ending Market | |
|-----------------------|---------------|---------------|---------------|
| | Market Value | Value | Transfers |
| Domestic Equity | \$177,944,355 | \$176,471,448 | (\$1,500,000) |
| International Equity | \$72,851,467 | \$72,111,178 | 80 |
| Domestic Fixed Income | \$120,047,380 | \$123,886,098 | (\$20) |
| Alternative | \$68,460,764 | \$68,491,405 | \$59,022 |
| Cash & Equivalents | \$7,629,806 | \$2,384,904 | \$1,441,028 |
| Total Portfolio | \$446,933,772 | \$443,345,032 | 80 |

Actual Allocation for Since Inception Ended March 31, 2016

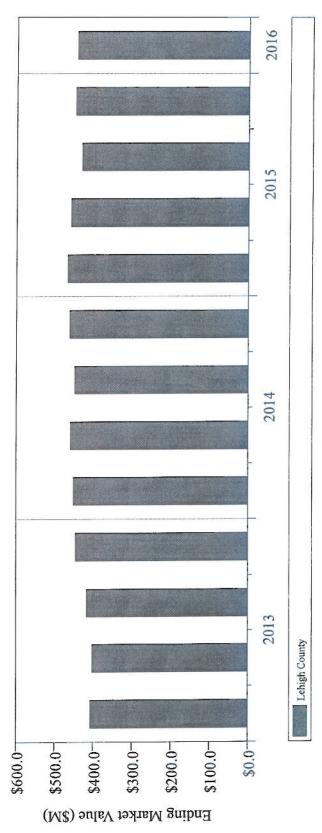




Lehigh County Retirement Fund Historical Cash Flow



Ending Market Value Since Inception (January 1, 2013)





Lehigh County Retirement Fund Manager Performance

3 Months ending March 31, 2016

| | | | | | Beginning | Ending Market |
|--------------------------|---------------------------|---------------|---------|---------------|--------------|---------------|
| | Benchmark Name | Ending Weight | Returns | Excess Return | Market Value | Value |
| Lomax Large Value | Russell:1000 Value | 5.9% | 4.34% | 2.70% | \$24,990,584 | \$26,075,182 |
| Phila Trust GARP | S&P:500 | %8.6 | (0.49%) | (1.84%) | \$43,630,412 | \$43,414,598 |
| Vanguard Instl Indx;Inst | S&P:500 | %6.6 | 1.34% | (0.01%) | \$43,223,846 | \$43,802,983 |
| SGA Large Growth | Russell:1000 Growth | 6.3% | (3.42%) | (4.16%) | \$28,838,577 | \$27,851,623 |
| Emerald Mid Growth | Russell:Midcap Growth | 1.9% | (4.73%) | (5.31%) | \$8,660,108 | \$8,250,196 |
| Emerald Small Growth | Russell:2000 Growth | 2.1% | (6.24%) | (1.56%) | \$10,136,013 | \$9,503,365 |
| Vanguard SC Val Idx;Ins | Russell:2000 Value | 4.0% | 3.50% | 1.80% | \$18,464,816 | \$17,573,501 |
| Vanguard Dev Mkt;Adm | MSCI:EAFE | 5.1% | (2.01%) | 1.00% | \$23.047,327 | \$22.584.094 |
| Mondrian International | MSCI:ACWIxUS Gross | 5.2% | 1.56% | 1.82% | \$22,813,475 | \$23,168,687 |
| American Funds EuPc;F-2 | MSCI:ACWIxUS Gross | 5.9% | (2.34%) | (2.08%) | \$26,990,664 | \$26,358,397 |
| į | | | | | | |
| Agincourt Core Fixed | Barclays: Aggregate Index | 12.7% | 3.18% | 0.14% | \$54,504,790 | \$56,236,249 |
| CSMcKee Core Fixed | Barclays: Aggregate | 13.8% | 3.37% | 0.34% | \$59,107,853 | \$61,101,806 |
| Vanguard Sh-Tm Inv;Adm | Barclays:Credit 1-3 Yr Bd | 1.5% | 1.76% | 0.62% | \$6,434,737 | \$6,548,043 |
| Arbitrage Fund;I | CS:Risk Arb | 2.8% | 1.63% | (0.49%) | \$12,113,471 | \$12,311,280 |
| J Hancock II:G Ab Rt;I | HFRX Global Hedge Fund In | 2.6% | (3.46%) | (1.59%) | \$11,906,113 | \$11,493,978 |
| ALPS/CC Mgt CC S;I | BLMBRG:Commdty Idx | 2.3% | 1.98% | 1.64% | \$10,148,631 | \$10,349,747 |
| CBRE Clarion RE | FTSE:NAREIT All Eq Index | 2.9% | 5.47% | (0.37%) | \$12,099,580 | \$12,761,780 |
| Nuveen Pref Secs;I | S&P:US Pref Index | 2.7% | (0.32%) | (1.52%) | \$12,192,970 | \$12,154,620 |
| JPM Structured Note | JPM Structured Note Idx | 2.1% | (5.80%) | 0.01% | \$10,000,000 | \$9.420,000 |



Lehigh County Employees' Retirement Plan Monthly Flash Report

| | | Monthly Return April-2016 | Market Value Beginning of Period | Market Value End of Period |
|---|--------------------|------------------------------|-------------------------------------|-------------------------------|
| Lomax Russell 1000 Value | | 1 .90% 2.10% | \$26,035,460 | \$36,819,598 |
| Vanguard Institutional Index S&P 500 | | 0.44% 0.39% | \$43,802,983 | \$59,781,978 |
| Philadelphia Trust S&P 500 | | NA 0.39% | \$43,400,080 | \$0 |
| Sustainable Growth Advisors Russell 1000 Growth | | 2.20% -0.91% | \$27,819,988 | \$37,011,772 |
| Vanguard SCV Index Russell 2000 Value | | 2.08% 2.12% | \$17,573,501 | \$17,939,766 |
| Emerald Russell Mid-Cap Growth | | 0.36% -0.06% | \$8,246,850 | \$8,276,272 |
| Emerald Advisors Russell 2000 Growth | | -0.56% 1.00% | \$9,501,695 | \$9,448,238 |
| American Funds EuroPac MSCI ACWI ex US | | 1.34% 2.63% | \$26,358,397 | \$26,710,319 |
| Vanguard Developed Mkt Idx I MSCI EAFE | | 2.51% 3.01% | \$22,584,094 | \$23,151,632 |
| CSMcKee Barclays Capital Aggregate | | 0.32% 0.38% | \$60,797,871 | \$60,994,410 |
| Agincourt Barclays Capital Aggregate | | 0.77% 0.38% | \$55,804,809 | \$56,233,925 |
| CBRE Clarion Dow Jones US Total Market REIT Index | | -2.17% -1.71% | \$12,688,455 | \$12,413,391 |
| Liquid Alternatives Blended Alternatives Benchmark | | 1.98% 2.21% | \$55,611,143 | \$56,710,621 |
| Vanguard ST Investment Grade Barclays US Corp 1-3 YR | | 0.45% 0.41% | \$6,524,521 | \$6,554,926 |
| Cash Account 30 Day MM Yield | | 0.00% 0.00% | \$2,455,556 | \$9,086,851 |
| Weighted Rate of Return | Portfolio Index | 0.96% 0.90% | \$419,205,402 | \$421,133,698 |

Assets Not Valued Daily

| Assets Not valued Daily | Market Value Beginning of Period | Market Value End of Period |
|-------------------------|-------------------------------------|-------------------------------|
| Mondrian Intl | \$21,623,991 | \$23,168,687 |

Grand Total \$440,829,393 \$444,302,385

2016 YTD Performance

| Net Portfolio | 1.73% |
|---------------|-------|
| Index | 1.90% |