# CITY OF PONTIAC, MICHIGAN GENERAL EMPLOYEES RETIREMENT SYSTEM BOARD OF TRUSTEES SPECIAL MEETING SEPTEMBER 26, 2017

A special meeting of the Board of Trustees was held on Tuesday, September 26, 2017 at the Marriott Auburn Hills Pontiac Hotel on CenterPoint Parkway, Pontiac, Michigan. The meeting was called to order at 8:57 a.m.

### TRUSTEES PRESENT

Sheldon Albritton Jane Arndt Janice Gaffney Robert Giddings Walter Moore, Chairman (by Skype) Nevrus Nazarko (arrived @2:38 p.m.) Billie Swazer Patrice Waterman (arrived @1:00 p.m.)

## TRUSTEES ABSENT

Koné Bowman Deirdre Waterman, Mayor Kevin Williams, Vice Chair

# **OTHERS PRESENT**

David Lee, Dahab & Associates Steven Roth, Dahab & Associates Cynthia Billings, Sullivan Ward & Asher Deborah Munson, Interim Executive Director Les Bond, Attucks Asset Mgmt. Patrick Silvestri, Attucks Asset Mgmt. Cathy Sweeney, Attucks Asset Mgmt. Earl Robinson, Consequent Capital Amanda Baron, First Eagle Theresa Boyd, Invesco Chas Duvall, Invesco Valerie Malter, Matarin Bill Taki, Mesirow Isaac Green, Piedmont Investment Advisors Clarissa Parker, Piedmont Investment Advisors Anit Sanyal, Piedmont Investment Advisors Craig Haynes, PNC Capital Natalie Marvi-Romeo, PNC Capital Tal Gunn, Robinson Capital Jim Robinson, Robinson Capital Aman Patel, Systematic Rick Plummer, Systematic William Orke, WCM Jon Tringale, WCM Linda Watson, Retiree

Trustee Gaffney called the meeting to order at 8:57 a.m.

Chairman Moore asked for a moment of silence for the victims of the recent hurricanes.

# Dahab & Associates- Second Quarter 2016 Performance Review

Mr. Roth discussed the economic environment and the Fund's 2017 second quarter performance report. He stated that the economy has had modest growth of 2½% to 3%. The global economy has returned to growth. We should see slow modest growth with no bubbles or anything that can blow up.

He reviewed the major index quarter returns. Growth beat value across all market capitalizations. Non-U.S. markets performed very well during the quarter at 6.4%

He provided an overview of the Fund's performance summary. For the quarter the fund performance returns were 2.7% gross of fees and 2.6% net of fees versus the index at 3.1% ranking in the 69<sup>th</sup> percentile. The System currently has no dedicated emerging market managers. The one-year performance was 11.9% gross of fees ranking in the 59<sup>th</sup> percentile. Five-year performance saw active managers outperform the index but underperformed the shadow index. The Fund grew to \$483.4 million versus \$477.4 million at the start of the quarter.

Meeting Break at 9:20 a.m. Meeting Resumed at 9:30 a.m.

## First Eagle Investment Management – Global Value Equities

Amanda Barron, Assistant Vice President

Ms. Barron introduced herself to the Board. She indicated that the five-year anniversary of their relationship with the System was in May of this year.

She told the Board that First Eagle recently opened an office in London to provide marketing and client service in Europe and the Middle East.

First Eagle currently has \$110 billion in assets under management with over half being invested and managed with their global value team. She also stated that the key employees and owners pay the same fees in the global value strategy as the System.

Miss Munson questioned their IPS and Ethics Policy disclosure which indicated "to the best of their knowledge" they are in compliance with the System's Ethics Policy.

Ms. Barron indicated that First Eagle is in compliance with the System's ethics policy.

She reviewed the firm's organizational chart noting that they have increased the head count of the firm by 15% in their operations, IT and compliance departments. She noted that they have fifteen analysts with diverse coverage of the market.

They employ a bottom-up strategy and rely on return on capital versus return of capital. They have only had one year of negative returns which was in 2008.

By looking for opportunities at both ends they find companies that are out of favor and in places like Mexico and South Korea that may be experiencing geopolitical issues. They look for a margin of safety at a 30% discount before putting the capital at risk.

They seek to avoid high valuations; high levels of leverage; "black box" balance sheets; vulnerable global business models and aggressive management behavior.

Mr. Lee explained that black box balance sheets are computer-oriented balance sheets that cannot be understood and are too difficult to understand.

She explained how they use non-equity securities including gold; cash and cash equivalents; fixed income and currency hedges when the market is too expensive and to counter cyclical equities.

She reviewed their monthly returns which demonstrate how they protect on the downside.

She provided an overview of their annual returns and indicated that 2016 was a strong year with gross returns of 11.38% and net returns of 10.46% versus the benchmark at 7.51%. They were strong during the first half of the first quarter. Gold outperformed in 2016 and gold miners provided most of the returns. They did underperform during the fourth quarter of 2016.

Mr. Lee asked about their underperformance in 2013.

Ms. Barron stated that they underperformed the strong equity market in 2013 and gold underperformed.

She described the contributors to their trailing one-year relative returns. Normally, they do not invest in healthcare but they liked Hoya Corporation which is an optical products company. They look for companies that will generate relative returns like Bristol Meyers, Pfizer and consumer staples. They were negative to materials and cash and cash equivalents.

North America was their major regional contributor to their trailing one-year relative returns at 0.60%. Investments included technology, American Express and John Deer. They avoid companies like Exxon, Verizon and General Electric. They now own cash and cash equivalents, gold and emerging markets. They like KT&G which is a South Korean tobacco company and Grupo Televisa, a Mexican company.

She reviewed their portfolio characteristics. The average number of holdings in the portfolio is 145. They have a low turnover of 12.43%. They do not put more than 2.5% of the capital into one company. They invest in a company for an average of seven to ten years. She stated that that take less risk with alpha of 0.15%; beta at 0.67%; annualized standard deviation of 7.24%; an annualized upmarket capture of 79.62% and an annualized down market capture of 58.06%.

The First Eagle Global Value Fund LP is an institutional commingled fund.

Miss Munson asked what the current spot price is for gold.

Ms. Barron indicated that the current spot price for gold is \$1,303.00.

Miss Munson stated that their returns demonstrate downside protection manager.

Trustee Albritton asked why First Eagle has so much held in cash.

Ms. Barron stated that as of June 30, 2017 they had an inflow of cash from clients. At that time they had 24% in cash. Their average is 20% and right now they have 17% in cash. They have a wish list of companies they all like but will only buy when it gets to an acceptable level at a given price.

They have invested in Grupo Televisa, however, based on the turmoil in Mexico the market is underperforming. They have not found any other companies they like.

Ms. Billings-Dunn asked if their investment is in North or South Korea.

Ms. Barron indicated that KT&G is a South Korean company.

Ms. Barron left at 9:55 a.m.

### *Robinson Capital Management – Intermediate Fixed Income* Talmadge Gunn, Senior Portfolio Manager

Mr. Gunn thanked the Board for the long-standing relationship and for the opportunity and their trust.

Robinson Capital was founded by Jim Robinson in 2012. The investment staff has an average of thirty plus years of experience. The team has worked together for more than fifteen years and there is a lot of continuity.

They currently manage an intermediate credit portfolio for the System.

He certified that Robinson Capital is in compliance with the System's ethics policy and there are no conflicts of interest, material personal or business relationships or non-de minimus exchanges to report.

He said that it is important to them they never forget that they are fixed income managers. This investment should be the System's mattress money to make current payments. They take a cautious and conservative approach.

They employ a simple process that begins with understanding where they are in the economic cycle. They use a quantitative approach when constructing the portfolio sectors and then issue the selection. They want to identify securities that have downside risk. Bonds do not go up in price but they can go down to zero. They have to be careful what issues and risk they take.

They do well in some environments when the market is fully priced and rates are low. When rates go up it reduces bond returns. They will not take more risk for performance. If they take too much downside risk it hurts performance. They currently are a little behind the index. They are behind for the year: not surprised but disappointed. They have outperformed every year since inception. They have had opportunities to perform in most years but will not take the risk. They have added approximately \$1.5 million in returns to the System.

Miss Munson asked how much has been added net of fees.

Mr. Gunn responded that it is over \$1 million. They want to add value but remain conservative and take less risk.

He provided an overview of their sector attribution. He told the Board that they were underweight to corporates because they did not like the names. They found other sectors to make up for the lack of corporate bonds in the portfolio. The duration, credit quality and yield in their portfolio is similar to that of the benchmark.

Their fee schedule – which is paid on a quarterly basis - is 22 basis points.

Trustee Giddings indicated that they had outperformed for a number of years and questioned whether 2017 was an anomaly.

Mr. Gunn stated that their performance was flat based on the Fed indicating they were going to raise rates. He told the Board that when interest rates increase bond valuations drop which makes it difficult for this segment of the market.

He also stated that when interest rates are neutral you do not know whether to take away or add bonds to the portfolio. You have to raise rates to get the economy growing and noted that the level of rates have been reduced in every recession. He indicated that quantitative easing and buying other bond sectors not at historical averages have affected the bond market.

They are still generating cash. They should be able to earn a yield of 2% but it is dependent on whether rates increase or decrease.

He stated that their turnover average is 11% which is low for a bond manager and observed that there are not a lot of opportunities in the market.

They are taking advantage of the maturity structure. With the Fed raising rates, they can find earnings on short and long-term bond strategies.

Mr. Gunn stated that the market has increased the transition costs but it has not impeded them or compelled them to change their strategy.

Mr. Lee asked if there are any Pontiac municipal bonds in the marketplace.

Mr. Gunn stated that they own some municipal bonds but Pontiac does not have any investment grade bonds that would be in compliance with the System's Investment Policy Statement.

He also noted that they cannot invest in derivatives.

Mr. Gunn left at 10:02 a.m.

Systematic – Mid Cap Value Aman Patel, CFA, Asst. Portfolio Manager Rick Plummer, CFA, Senior Equity Analyst, Asst. Portfolio Manager

Mr. Plummer introduced himself and Mr. Patel to the Board.

Mr. Plummer provided an overview of the firm. They currently have \$5.7 billion in assets under management in discretionary accounts with \$3 billion in their mid-cap value strategy. It has been a low interest rate environment which has hurt dividend yield. When rates stabilize and start to increase, it will help their performance.

He told the Board that the company's head trader and founder Gregory Wood who has been with the firm for over thirty years is going to retire. Roger Chang will take his place and has been training under Mr. Wood for twenty years.

He explained their philosophy and investment process. Their philosophy is that stock prices follow earnings and investors consistently underreact to changes in company fundamentals. They look for at the underlying earnings estimates, profit and loss trends, balance sheet quality and cash flow analysis. This provides them the optimal time in the earnings cycle when stock prices are cheap and undervalued. They focus on earnings and not being rewarded.

He told the Board that the dividend yield accelerated which created a headwind which caused investors to refocus on fundamentals and earnings along with interest rate increases.

He reviewed the market environment trends based on the ten-year treasury yields. When interest rates fell, their performance decreased and when rates rose their performance increased. Their strategy does not perform well in a low interest rate environment.

Mr. Lee asked that Mr. Plummer explain the chart depicting correlation between dividend yield and earnings-per-share.

Mr. Plummer indicated that the chart focuses on earnings and not dividend yield. The index is loaded with yield but their strategy focuses on earnings. Next year we should see an inversion of this chart due to the function of increasing interest rates.

He reviewed a chart showing the price-to-earnings ratio of high dividend yield stocks. Price-toearnings ratios are around 20 times the multiple which is 2 times the multiple you would normally see. This is because investors cannot get yield in the bond markets.

Mr. Lee asked if this is because people are searching for yield from those companies that are outperforming but don't buy based on their strategy.

Mr. Plummer confirmed that those investors are chasing yield.

Mr. Lee indicated that stock prices are increasing but with more risk and investors are trapped in a bubble.

Mr. Plummer stated that investors focus on low volatility stocks but returns and earnings are flat and have not increased. Low volatility is where everyone wants to be but they are being pushed by high yield.

The nature of their strategy is not to add more higher volatility stocks into their quality portfolio because it will increase volatility. It is all tied into interest rates.

Mr. Patel reviewed their performance. Their one-year performance through August was up more than 100 basis points at 13.4% net of fees versus the benchmark at 12.4%. There has been a

tailwind in September which should turn performance. Their performance since inception is 7.9% net of fees versus the benchmark at 8.3%.

He stated that their firm is in compliance with the System's IPS and they have no business or personal relationships.

He reviewed their portfolio attribution. Materials were a large contributor to their performance. They invested in Alcoa which supplies aluminum and materials needed to make appliances. They also like consumer staples such as Bird's Eye. Financials were a positive contributor to performance noting their holdings in E\*Trade Financial. He noted that real estate and industrials were negative contributors to their portfolio.

They employ a bottom-up strategy. With the big push to e-commerce they own companies that work with and make boxes.

He indicated that the later innings of the cycle work well with their strategy.

European banks and the Fed raising rates is a win for their strategy. Earnings will dictate where stocks go. The market has been flat in the third quarter. The last five years the bull market has been driven by dividend yield.

He reviewed the mid-cap value composite including annualized returns, investment results, portfolio characteristics and statistics. Their performance returns have been up as much as 5% over the benchmark and underperformed the benchmark since inception.

They have to follow their strategy even though there has been a push for yield in low value, high risk stocks. He also attributed their underperformance to the low interest rate environment.

Miss Munson stated that they did not indicate whether they were in compliance with the System's Ethics Policy.

Mr. Patel and Mr. Plummer left at 10:25 a.m.

Meeting Break at 10:25 a.m. Meeting Resumed at 10:30 a.m.

*Invesco Private Equity - Fund V* Theresa Boyd, Partner Chas Duvall, Director, Relationship Manager

Mr. Duvall introduced himself and Ms. Boyd to the Board.

He provided an update of their firm. Invesco has \$858 billion in assets under management. The firm is solely focused on investment management.

The System recently invested \$8 million in their core real estate fund and the capital was called on July 1, 2017. This is their flagship direct real estate fund. They are excited to work with the System.

The System invested in their Invesco Private Capital in 2007.

Ms. Boyd indicated that Invesco Private Capital has a bias toward smaller funds. They feel that smaller funds have better performance. They find that their venture capital partnerships have more consistent allocations and improved performance.

They maintain a senior management team who has been working together for a decade. They also gain a benefit working with the larger Invesco firm.

Mr. Lee asked about their investments to emerging managers.

Ms. Boyd indicated that emerging managers do not have a clear cut track record. However, they can create value for the company. Many use a basic vanilla approach which is choppier and not as clean but they have been able to determine the track record but it is harder to track down.

They look at themes within venture capital. There are a lot of prominent female investors in funds spinning out and creating their own funds.

Ms. Boyd also stated that they prefer investing in smaller firms and funds because they are hungry when they are coming out of larger firms.

Ms. Boyd stated that they are in compliance with the System's IPS and Ethics Policy.

They have a small and nimble team that thoroughly vets the investments. They are backed by a fulltime back-office.

Their philosophy is that you need to actively go out and seek quality managers at industry events, by networking, exploring companies and the funds they invest in, putting on conferences and going out on weekends with these managers.

They favor small funds which can augment returns by investing directly in companies versus funds.

She reviewed and explained their investment process which includes sourcing, due diligence and post-investment monitoring. They conduct a qualitative and quantitative analysis including onsite meetings and on- and off-list reference checks. Everyone puts their favorites on their lists. They do not underweight and will test the company's model.

The System invested \$2.5 million in the Invesco Partnership Fund V strategy. The fund only called 66% of the committed capital. They offset the invested capital with cash flow. To date there have been cumulative distributions of \$1.385 million and an estimated NAV of \$1.931

million for a total value of \$3.317 million. The total value to invested capital currently stands at 2.02 times the multiple net of fees.

She provided a progress report for Fund V. The fund has a diversified gross IRR of 15.1% as of the second quarter 2017. The diversified net IRR was 11.8%. The performance for Fund V continues to be strong particularly in the venture portfolio with a gross IRR of 21.0% which was the driving force of their performance. The U.S. Buyout portfolio gross IRR was 12.6% and the International portfolio gross IRR was 11.9%.

She reviewed the gross and net performance versus the benchmarks. The gross IRR as of the second quarter 2016 was 15.9 versus the Cambridge1 benchmark at 9.7 IRR. The gross IRR as of the second quarter 2017 was 15.1 versus the Cambridge1 benchmark at 9.2. The gross IRR as of the second quarter 2016 was 11.2 versus the Cambridge2 benchmark at 12.6 IRR. The gross IRR as IRR as of the second quarter 2017 was 11.0 versus the Cambridge2 benchmark at 11.8 IRR.

She also reviewed the gross aggregate fund performance estimating the estimated net asset value and distributions.

Mr. Lee asked Ms. Boyd for the performance percentile ranking.

Ms. Boyd indicated that the percentile ranking is just shy of the top quartile.

Miss Munson asked for the total amount of the management fees.

Mr. Lee asked about the chart highlighting the largest distributions.

Ms. Boyd indicated that it is a great time to buy small funds.

Ms. Boyd and Mr. Duvall left at 10:53 a.m.

# Mesirow Financial Private Equity

Billy Taki, Investment Associate

Mr. Taki introduced himself and thanked the Board for the longstanding relationship.

He provided an overview of the firm. Since inception they have \$5.7 billion in private equity commitments, 99% being institutional clients. Their deep and integrated team is based in Chicago. Their investment committee averages over twenty-five years of investment experience. They have long-term relationships with top tier, oversubscribed managers.

He explained that Fund IV is a more mature fund with a vintage 2006 year. It has a net IRR of 10.2% to 1.6 times. The System committed \$5.0 million with contributions of \$4.7 million called with distributions to date of 4.4 million. The fund is trading toward 2.0 times its multiple which means the System should double its money after fees.

Both funds have been highly successful investing in moderate sized middle market funds. They feel it is the most stable way to create returns. Their exposure is to premier U.S. funds at 80% and non-

U.S. private equity funds at 20%. They invest in U.S. buyout; non-U.S. buyout; venture capital and special situations. The non-U.S. buyouts are in developed private equity funds in Western Europe. The venture capital investments are fairly balanced with 25% in early stage growth equity managers. The special situations are invested in energy distressed and industry specific funds.

He explained their primary commitments and secondary purchases. Their primary commitments are to eight to twelve funds per year. They allocate 10% of their transactions to acquire opportunistic secondary limited partners from other managers. It is very competitive and there is a lot of money in this area.

He indicated that they have a strong relationship and make a large number of allocations to Thoma Bravo. They are currently invested in nine funds and co-investments with this manager.

Fund VI is mostly committed and has come out of the J curve. Fund VI is in a higher priced market. There has been a high conviction and prudent pricing by fund managers. Total contributions to-date for Fund VI is \$1.3 million.

He indicated that Fund VI has thirty-five underlying managers compared to Fund IV with fifty underlying managers. He provided an overview of some of the underlying managers in Fund VI including Vitruvian Partners a small European manager and two Thoma Bravo funds. This is a pretty young fund and the Board should expect similar performance from the underlying managers.

He provided an overview of their latest Fund VII-A and Fund VII-B.

Miss Munson asked about their written compliance statement stating that they are in compliance with the System's Investment Policy Statement and Ethics Policy.

Mr. Taki indicated he will provide the information to Miss Munson as soon as possible.

*Mr. Taki left at 11:16 a.m.* 

### WCM Investment Management – Focused Growth International Equity

William E. Orke, Portfolio Specialist Jon R. Tringale, Client Portfolio Manager

Mr. Orke introduced himself and Mr. Tringale to the Board. He told the Board that he understands the massive responsibility the Board has with regard to managing the assets of the Retirement System.

Their firm is 100% employee owned. They have \$21.8 billion in assets under management.

They are in full compliance with the System's Investment Policy Statement and Ethics Policy. The do not provide gifts or dinners.

He provided an overview of the focused growth international equity portfolio team. He told the Board that the team is comprised of four portfolio managers which make up the decision-making body. There are also nine support personnel in the team.

They manage a high quality traditional portfolio that mixes well in various market conditions. There are seventy-five to eighty stocks in the portfolio.

He reviewed their investment process. They look for high and rising stocks with return on investment capital with low or no debt that fit their growth strategy. Their approach to equity research is not constrained by the norm. They look to construct a portfolio that focuses on unique business elements with sustainable competitive advantages which he referred to as a moat trajectory. When you are competing versus your peers you need to get stronger not flat or weak.

Mr. Orke reviewed their performance and thanked the Board for their business allowing them to generate returns when the assets could be indexed for lower fees.

Year-to-date performance net of fees was 25.1% versus the MSCI EAFE at 17.5% and the MSCI ACWI ex US at 19.4%. Since inception returns versus the relative benchmarks net of fees was 9.9% versus 5.3% and 5.2%.

Mr. Tringale stated that in 2016 they saw a couple distinct markets starting with market rotation which into cyclicals starting in August 2016. They were making more specialty plays that were behind the benchmark. During the fourth quarter of 2016 they looked at how to generate returns searching for opportunities within their focus list. They had to decide whether to take action, move in or trim holdings. They normally look at four to five stock ideas per year.

AIA Group out of Hong Kong has strong earnings and cash flow growth. They like technology, healthcare and consumers discretionary as traditional growth sectors and feel they will outperform. Going forward the outlook is good. Their focus is on great businesses and some opportunistic trades through the end of the year.

Mr. Lee asked about their downside protection.

Mr. Tringale indicated that they constructed the portfolio to protect capital when the market is tough. They look at businesses that get revenue from around the world. They keep a reasonable exposure around the world.

Mr. Lee asked about their emerging market exposure.

Mr. Tringale indicated that 25% of their portfolio is invested in emerging markets.

Mr. Orke stated that they are invested in a high quality holding in Singapore that gets its revenue from domestic countries. It takes a thoughtful approach to determine where to find growth.

Mr. Lee indicated that WCM invests in companies with more emerging market revenues. They originally looked at WCM as an U.S. investor.

Mr. Orke indicated that it may be because their emerging market exposure uses a different benchmark.

Miss Munson asked about the material relationships within the compliance statement.

Mr. Orke noted that they have no material relationships with the System.

Mr. Orke and Mr. Tringale left at 11:50 a.m. Meeting break at 11:50 a.m. Meeting resumed at 1:00 p.m.

## **Economic Overview/Markets Roundtable**

Mr. Lee explained the format of the roundtable session.

He asked the managers if they feel that the markets are overvalued.

Isaac Green of Piedmont Capital stated that the markets are approaching fair value with some equity risk premium value. Price-to-earnings is good at 20 times earnings

Ms. Valerie Malter of Matarin Capital stated that there are certain submarkets that are speculative and getting expensive relative to the broad market view. Those stocks tend to outperform.

Mr. Orke of WCM stated that there is a global earnings cycle in the international equity market with certain pockets of opportunity in the marketplace.

Mr. Lee asked how concerns in Washington have changed investment expectations.

Mr. Plummer of Systematic stated that in management terms in Washington, D.C. there is a lot of uncertainty. They are waiting for policy changes to happen. A resolution could help.

Mr. Sanyal of Piedmont Capital indicated that there are four things including tax reform, active repatriation and personal tax codes which would add to the investment and employer side and capital spending would be a good boost.

Ms. Boyd of Invesco indicated that broad based changes would not provide any immediate impact. She commented about the talent pool drop in Silicon Valley if the immigration laws change.

Mr. Lee asked about the market and the overvalued stocks, bonds and liquidity.

Mr. Taki of Mesirow indicated that - on average - multiples are overvalued and traditionally they are seeing multiples appreciate. There is a lot of dry powder. Everything is hyper-sensitive.

Ms. Boyd stated there is a lot of leniency with investment periods and you cannot chase investment companies. You also do not stretch strategies that could cause problems due to chasing high multiples.

Mr. Lee asked with everything overvalued where does the future lie with portfolios.

Ms. Boyd stated that there are private equity risk concerns with too few assets in strategies. Early stage valuations are more modest. Investors are getting into private companies in the late stages. This has driven up valuations. Early stage valuations are increasing.

Mr. Sanyal said that the market is improving based on sector growth. There are a lot of changes in the tech space and referred to artificial intelligence. You want to be in-line in this space longterm. Commodities are underperforming with the oil commodities doing better. Fundamentals are improving and there are good balance sheets for those companies in those spaces.

Mr. Lee asked is there is an area of the portfolio that will be of concern due to interest rates falling in institutional banks.

Mr. Sylvestri said that an area of concern is quality-based managers. There are highly paid dividend stocks which is where managers are positioned. Aggressive growth managers have taken the hit. These managers do not change their stripes.

Mr. Green stated that the retail debacle and apparel market are dangerous and there is a lot of over storage from the real estate bubble. He talked about online shopping and what it takes to capitalize in the retail market.

Ms. Barron of First Eagle stated that the energy space costs too much. By improving reserves they are looking to generate free cash flow.

Mr. Sanyal spoke about corporate debt as a percentage of the Gross Domestic Product. Apple is buying back stock with debt which is reaching 2007 highs. Quality managers might be concerned. It is a good idea to look at solid balance sheets.

Mr. Lee asked how you manage investment expectations with market expectations muted.

Mr. Plummer stated that it will be more of a uniform market going forward and there are opportunities for managers but it might be more of a secular market.

Mr. Tringale stated that for long-term investors they will stress staying committed to their strategy and longer term goals.

Mr. Green indicated that as long as ten-year treasuries stay under 3% it will equate to 20 times earnings barring a spike in interest rates of 150 basis points. The S&P has earning power but he does not see where the outperforming returns will come from.

Mr. Patel stated that it is in the later innings of the growth cycle. There should be decent growth to keep the economy going.

Mr. Lee asked the managers about their cushions and expectations for underperformance.

Ms. Barron stated that they have a commitment to invest capital but it is hard to find companies to invest in. They will not lower their cushion to invest in underperforming companies.

Mr. Haynes indicated that the relative valuations are important in the sectors and subsectors but it could be expensive. There are a number of dividend yielding stocks, staples, utilities, etc. that have a high amount of cash on their balance sheets. There could be a big deployment of cash.

Mr. Sylvestri told the Board that the domestic equity space is overvalued and there is a need to find opportunities.

Mr. Lee asked whether the relative and absolute value will get squeezed. He asked the managers about active versus passive strategies and whether their clients should buy the index or buy both. There is a lot of money going to passive and a lot of money going into high yield.

Mr. Plummer indicated they will have no difficulty buying stocks. Fundamentals have been good for their strategy and there should be no problem finding good stocks with earnings growth.

Ms. Marvi-Romeo stated that it has been hard sitting in front of clients and buying quality stocks with lower quality reward. There needs to be a pull back.

Mr. Sylvestri stated that equity stocks are having the most issues running through ETF's. The biggest concern is fixed income. In 2007 there was \$200 billion in the marketplace.

Mr. Lee asked the managers about corporate bonds. He stated that there has been a dramatic increase in tech allowing retail investors to buy and sell stocks for \$5.00 per trade. He asked if this has affected the pricing of stocks with there being more order takers. He asked if strategies are driven by quantitative or qualitative factors.

Mr. Orke stated that in the international and value-added market, the belief is in the index. Having an overweight to healthcare in the emerging markets has helped them. They look for legitimate valuations and identify best constituents. He has no idea what the markets will do.

Mr. Lee asked the managers to leave the Trustees with a thought.

Jim Robinson from Robinson Capital indicated for the last eight and a half years he has slept well. Since the early days of 2009 the rates have been called to go up and the Fed wants to raise rates. It will be a positive if the Fed persists to raise rates without inflation and would be good for long-term holdings in the portfolio. But even if things go south the bonds will hold their value.

Mr. Lee asked what if long-term rates hold and short-term rates increase.

Mr. Robinson stated that it could push the economy into a recession if the Feds do something that will hurt banks. Flat yield curves are not good for banks.

Alpha is made by good valuations. It is still a buying cycle. Earnings momentum gets rewarded based on the yield curve, quality and valuations out of the rubble. It is difficult to switch based on the cycle.

Ms. Boyd stated that if the economy keeps some market dynamics there should be decent liquidity to come off. Invest in small companies and managers selling at decent multiples.

Mr. Lee asked if they buy other private equity companies.

Mr. Boyd indicated that they have participated and benefitted from acquiring from other private equity firms and from others.

Meeting Break at 1:58 p.m. Meeting Resumed at 2:11 p.m.

Matarin Capital – Large Cap Core

Valerie Malter, Managing Principal

Ms. Malter stated that Matarin Capital was founded in July, 2010. Nelli Gilbert is a cofounder and the portfolio manager. Their assets under management have grown from \$1.5 million in January 2011 to \$1.15 billion as of August 30, 2017. Matarin is 100% employee-owned and all principles are invested in the strategies. They are a women-owned business that believes in diversity.

She reviewed their organizational chart indicating that it is clean and lean. The principals of the team all left jobs at high quality firms as portfolio managers. They wanted to be stewards of their client's assets. They also provide a fair fee structure and low trading costs with no soft dollars. Fees are charged net of performance.

She reviewed the high level schematic of their equity investment process. They look at diverse opinions and biases that play out in the markets. Behavioral biases are removed from their equation. They look at four fundamental concepts: good businesses; inexpensive valuations; shareholder-friendly leadership and drivers for near-term outperformance. There are many sources of risk which they avoid in their risk models. They do not take beta or sector exposure risk.

She reviewed the cumulative returns since inception indicating that there systematic views have helped them with performance of 21.1% versus 23.2%. In May 2016 gross returns were 1.5% versus the benchmark at 1.8%.

She reviewed their percentile rankings. They ranked in the 19th percentile in excess returns and ranked in the 15th percentile in downside capture.

They are proud of their performance numbers. They do not take sector bets. She told the Board that consumer discretionary, real estate and speculative stocks were their outperformers.

They valuation measures worked to provide high dividend yields. Their recently published a white paper on dividend yields.

Trustee Albritton noted that in 2010 Ms. Malter seeded the company from her IRA. He asked if their firm would be willing to share information and put together a template to help inner city kids succeed.

Ms. Malter indicated that the firm works with many nonprofits. Ms. Gilbert works with girls helping them learn math.

They work with an organization that are sponsors for educational opportunities and follow students to help through high school and then onto college.

Ms. Malter left at 2:34 p.m.

*PNC Capital Advisors* Craig Haynes, CFA, LLC Senior Client Advisor Natalie Marvi-Romeo, CAIA, Client Portfolio Manager

Mr. Haynes introduced himself and Ms. Marvi-Romeo to the Board.

He noted that there have been no changes in the team that manages the System's portfolio. Doug Roman is the Managing Director of the team.

They currently have \$47 billion in assets under management with \$26 billion in their domestic equity strategy.

They are in compliance with the System's Investment Policy Statement and the Ethics Policy.

There have been no changes in their investment process. He stated that earnings drive stock prices but not in the case of 2016. He noted that the System looks for their active managers to protect on the downside.

Their investment process is a rules-based process focused on unanticipated positive earnings. They use a multi-factor model which looks at the ongoing stability of earnings, growth factors and value factors. They run a multi-factor model daily and a weekly portfolio and holdings review. The stocks are re-evaluated as earnings are reported. They utilize a strict sell discipline.

He reviewed the System's portfolio performance as of June 30, 2017. They outperformed during the last year at 12.37% versus the index at 15.53%. He stated that 2016 was not a favorable year for their strategy with growth earnings nonexistent. However, they have seen a shift in 2017 to an earnings growth driven market with returns in the second quarter not as high. Their year-to-date performance is 6.01% versus the benchmark at 4.66%. The performance is coming from stock selection. Their performance is currently 345 basis points higher than the benchmark.

Ms. Marvi-Romeo stated that their performance was hurt by their stock selections and being underweight in energy and utilities. Their overweight to financials was a positive.

Mr. Lee asked if their negative stock selection across all sectors was the reason for their underperformance.

Mr. Haynes stated that the deep value rallies are not in vogue with fundamentals. He stated that the portfolio is more short-term in nature, and not as long-term as the benchmark.

He described their rolling period analysis chart depicting their persistency in long-term performance. The chart showed the trends and their persistence providing performance in their strategy.

Miss Munson asked about their management fees.

Mr. Haynes stated that their fees are not paid from the accounts. Only two fees were paid out of the account in 2013.

Trustee Nazarko arrived at 2:54 p.m. Mr. Haynes and Ms. Marvi-Romeo left at 2:55 p.m.

### Piedmont Investment Advisors Large Cap Core

Isaac G, Green, CFA, President, CEO, Chief Investment Officer, Portfolio Manager Amit Sanyal, CFA, Sr. Vice President, Portfolio Manager Clarissa Parker, Vice President, Investor Services

Mr. Green introduced himself, Ms. Parker and Mr. Sanyal to the Board.

Ms. Parker reported that their firm was founded in August 2000 and they recently celebrated the firm's seventeenth anniversary. They currently have \$6.4 billion in assets under management. They are 100% employee-owned; 87% minority and woman owned; 85% minority owned and 24% woman-owned. She also told the Board that on September 30, 2016 they acquired NCM Capital Management.

They are in compliance with the System's Investment Policy Statement and Ethics Policy.

Their veteran investment team has an average industry experience of twenty-one years and average tenure of over ten years. They have various investment platform experience and all work together as a team.

Mr. Sanyal thanked the Board for letting their firm manage assets for the System.

He reviewed their investment philosophy and process. He told the Board that they look for companies with sustainable improvement and good balance sheet fundamentals. They have used a blend of qualitative and quantitative factors which is how they have done it for seventeen years.

As of August 31, 2017 they are slightly behind the benchmark with year-to-date performance of 11.01% net of fees versus 11.93%. During the first quarter of 2017 they did not capture as much alpha but the market fundamentals are improving. Fall of 2016 was the most difficult time for them due to issues like China and Brexit. They are always focused on good quality companies. They do believe that the market is on the right track which will provide improving performance.

They do not focus on bullish markets. They have been positioned this way for some time and believe that a manager can stay in and bring performance in the late stages of the market cycle.

He provided an overview of their strategic core trailing twelve month performance as of June 30, 2017. They invested in good household names and stayed with them including Western Digital, a memory chip company which performed well.

Their allocation to consumer discretionary in retail did not work. The whole sector did not perform well and was hit hard. He indicated that Nordstrom will survive. TJX is also doing well. It is unfortunate to say but retailers like Home Depot will do well based on the recent disasters. They are also invested in Amazon.

No one knows whether the rates will increase or decrease but their portfolio is positioned for rising rates.

He also indicated that they sold their position in Kroger based on Amazon's purchase of Whole Foods.

Large cap growth companies are doing well with performance of 18.99% versus the index at 6.92% noting that these are high quality companies versus low quality companies. Some of the largest consumer discretionary companies like McDonalds and Kohl's are doing well but other are underperforming.

He indicated that they have holdings in Electronic Arts the company that produces the Madden NFL games also noting that digital content is cheap to produce. He also told the Board that OPEC is trying to balance the surplus with the price of energy down. He reviewed the ISM Purchasing Managers Index chart showing how purchasing managers are positioned to harness productivity.

Mr. Green indicated that it was challenging trying to provide performance last year with their outlook not stuck on being aggressive. They are looking forward to a good year.

Trustee Nazarko asked about their cumulative performance of 85.68% gross of fees and 79.42% net of fees versus the index at 108.80%.

Mr. Green stated that they want to provide outperformance versus the benchmark but this cycle has been challenging for active managers. Their strategy is to identify and trade in line with that strategy. They can get back inline.

The first six months of 2016 they underperformed but did well the back half of 2016. Energy has been flat during the six month timeframe. He has never seen such a bad market for energy. They recently bought a position in Devon Energy but they are not over weighted to that sector.

Miss Munson commented that the GIPS Audit report included in the presentation materials was a nice touch.

Ms. Parker indicated that they have a third party that verifies the way their returns are reported.

Mr. Green stated that they want to make sure that what they are saying is correct.

Mr. Green, Ms. Parker and Mr. Sanyal left at 3:23 p.m.

Attucks Asset Management – Manager of Manager Portfolios (Michigan Centric & Emerging) Attucks Asset Management – Manager of Manager Portfolios (Michigan Centric & Emerging) Les Bond, Chief Executive Officer Patrick Silvestri, Chief Investment Officer Cathy Sweeney, Management Director

Mr. Bond introduced himself, Ms. Sweeney and Mr. Silvestri to the Board. They have offices located in Chicago, Connecticut and Kansas. The Kansas Office has a Chief Compliance Office and an analyst.

They are an independent Entrepreneurial firm. They currently have \$1.8 billion in assets under management. They build customized emerging manager funds and currently manage sixteen manager funds and have funded over seventy-five manager products in all capitalization; large capitalization; best-in-class and international equity strategies.

Mr. Silvestri indicated that Attucks has a number of questions related to the emerging manager program and requested to meet with the finance committee at their 4:00 PM meeting that day to review the program.

Miss Munson indicated that that would not be possible to do today as there was no room on the finance committee agenda due to a full agenda and limited time.

Mr. Silvestri told the Board that their relationship started with the System in June 2015 when they took over the manager of managers portfolio from Gray & Company. At that time the System was in the process of an asset liability study. When they first inherited the portfolio there were three managers that overlapped in the space.

He stated that Gray & Company suggested transitioning the portfolio to a global equity strategy based on the asset liability study. They met with the finance committee in July 2016 and presented their global equity strategy for the portfolio.

During the September 2017 meeting he suggested removing NorthPointe and PNC and moving the assets to the cash account. He also told the Board that now is the time to answer the questions regarding how to move forward with the manager of managers portfolio.

Mr. Bond reviewed their flat organizational structure. He told the Board that they provide coaching and training for managers. Their investment team is very well educated and all of them are business development professionals noting that every member of the investment team is encouraged to discuss their own views.

Mr. Silvestri indicated that they take a high level view of the portfolio based on the System's definition of an emerging manager. Next they deconstruct the portfolio to determine the long-term characteristics in order to understand how the managers get their returns.

He told the Board that they have been managing the portfolio without a definition of what an emerging manager is. He explained that the current emerging manager portfolio has a regional bias and is minority based. They like some of the managers but they are all not emerging managers.

Mr. Bond indicated that some states have definitions for their programs and others are doing what this System is trying to do. He questioned what the Board's scope and purpose of the System's emerging manager program is.

Trustee Albritton and Trustee Patrice Waterman confirmed that Attucks has been managing the program without an understanding or definition of the emerging manager program.

Mr. Silvestri did note that they added Matarin to the System's portfolio in May 2016.

Trustee Albritton indicated that the definition of the emerging manager program has been discussed with the System's investment consultant.

Miss Munson apologized for her departure from the meeting and indicated that she had to leave in order to setup Mr. Moore's skype connection for a finance subcommittee meeting being held immediately following this meeting in another location.

The Attucks presentation was cut short by the Trustees and the meeting was adjourned at that time due to the System only having access to the room until 4:00 p.m. It was also noted that the room was scheduled for another event and the hotel staff were scheduled to begin their setup beginning at 4:00 p.m.

*Mr. Bond, Ms. Sweeney and Mr. Sylvestri left at 3:47 p.m. The meeting adjourned at 3:47 p.m.*