

TUCSON SUPPLEMENTAL RETIREMENT SYSTEM BOARD OF TRUSTEES MEETING MINUTES

DATE: Thursday, May 26, 2016
TIME: 8:30 a.m.
PLACE: Finance Department Conference Room, 5th floor
City Hall, 255 West Alameda
Tucson, Arizona 85701

Members Present: Robert Fleming, Chairman
Rebecca Hill, HR Director (arrived 8:38 AM)
Betsy Conroy, Deputy HR Director (departed 8:38 AM)
Silvia Amparano, Director of Finance
Michael Coffey, Elected Representative
Jorge Hernández, Elected Representative
John O'Hare, Elected Retiree Representative

Staff Present: Dave Deibel, Deputy City Attorney
Karen Tenace, Deputy Director of Finance
Neil Galassi, Pension Administrator
Silvia Navarro, Treasury Administrator
Dmitriy Adamia, Administrative Assistant

Guests Present: Gordon Weightman, Callan Associates
Claire Beaubien, CTRA Representative
Teri Smith, Aberdeen Asset Management
Marie Mitchell, Aberdeen Asset Management

Absent/Excused: Kevin Larson, City Manager Appointee

Chairman Fleming called the meeting to order at 8:32 AM

A. Consent Agenda

1. Approval of April 28th, 2016 TSRS Board Meeting Minutes
2. Retirement ratifications for May 2016
3. April 2016 TSRS Budget Vs Actual Expenses

Michael Coffey requested item A1 be considered separately.

Chairman Fleming asked for a vote on the approval of Consent Agenda items A2 and A3. Consent Agenda items A2 and A3 were approved by a vote of 5-0. (Chairman Fleming did not vote, Kevin Larson absent/excused).

Mr. Coffey stated on page 4 paragraph 2 stating bi-mobile should be bimodal, and rephrased the sentence to state "Michael Coffey asked about bimodal distribution of the expectations of growth rates". On page 4 paragraph 3 he corrected the spelling of the word monetary.

John O'Hare asked if staff still keeps CDs of the recordings.

Neil Galassi answered staff does keep audio files of the recordings on the City server.

Chairman Fleming asked for a vote on the approval of Consent Agenda item A1 with amendments. Consent Agenda item A1 with amendments was approved by a vote of 5-0. (Chairman Fleming did not vote, Kevin Larson absent/excused).

B. Investment Activity Report

1. Annual Investment Manager Review – Aberdeen Asset Management – Teri Smith, Sr. R.M. and Maree Mitchell, Sr. Equity Specialist

Teri Smith asked if there is any direction that the Board would like to give us on topics other than a review of the portfolio, and an update on the firm.

Chairman Fleming stated in terms of direction the Board is interested in knowing the status of the portfolio as it relates to the Trust.

Gordon Weightman requested Aberdeen provide a reminder to the Board of what the philosophy is and what Aberdeen is trying to do as a strategy.

Ms. Smith stated they wanted to start by thanking the Board for the additional investment allocation earlier this week. They appreciate that the Board stuck with Aberdeen through a period of relative under performance. They were happy to say so far this year that things that were working against Aberdeen, are now working for them this year, they are out performing by about 366 basis points versus the benchmark.

Marie Mitchell explained the team is based in Edinburgh, Scotland where they manage all of their international large and small cap portfolios. They use the research analysis provided by their 90 regional investment managers that are based around the world, who are out there meeting with management of potential companies, and doing a lot of due diligence before they will invest in a company. Last year they did over 2,000 company visits. They do not invest in a company before they have met the management at least once, but more often than not they will have met them at least three or four times over a potential one to two year period before they buy that company. Each of the regional teams are managing portfolios for their clients around the world that are invested in emerging markets covering the US, Asia, Japan, UK, and Europe. The global team based in Edinburgh will choose their 40 to 60 stocks and then they do additional analysis on those companies to whittle them down. They currently have 49 names in the portfolio and they believe that that is a good amount, every stock has to add value and they believe that they are investing in good quality stocks that will do well over the longer term.

Mr. Weightman asked how long does Aberdeen typically hold the stocks.

Ms. Mitchell stated the average turnover for this portfolio is always less than 35 percent, but last year there was a bit more activity because of volatility and the disappointing performance. They also cut a few stocks where they felt there were better opportunities elsewhere. Aberdeen's aim is to hold investments for at least five years over an economic cycle.

Overall performance

To 30 April 2016

Performance summary					
	One year to end Dec 2015	Year to date end Apr 2016	One year to end Apr 2016	Annualized three years to end Apr 2016	Annualized since inception (4/2/2012)
Fund (gross)	-13.63%	5.07%	-14.38%	-3.44%	0.69%
Fund (net)	-14.32%	4.79%	-15.07%	-4.21%	-0.11%
Benchmark	-5.25%	2.45%	-10.87%	0.42%	3.35%
Difference (gross)	-8.38%	2.62%	-3.51%	-3.86%	-2.66%

Account valuation as at end April 2016	
Tucson Supplemental Retirement System	\$37,327,481

Ms. Mitchell referenced the above tables. She stated performance was hugely disappointing for the Board since their initial investment, and they had good performance before the Board invested with Aberdeen. They have had a tough few years recently, certainly since 2013 when the Federal Reserve announced they are going to taper quantitative easing, especially in emerging markets. Direct exposure is about 20% in emerging markets. Looking at emerging markets they under performed developed by nearly 15%. Aberdeen's indirect and direct exposure to emerging markets was a negative for their relative performance last year, as well as exposure to some of the cyclical sectors, which obviously had a tougher time on the back of lower commodity and energy prices. In addition, in the last few years, they have seen stocks in parts of Europe and in Japan, moving on the hope that quantitative easing will help. In Japan there has been strong performance the last few years, but they have not invested with some of the companies in Japan because of the way that they are managed, and have given preference to companies outside of Japan. That has been a negative for Aberdeen in past years. This year investors are focusing on quantitative easing and asking if it is really helping. In Japan it does not seem to be having the desired effect thus far. So, the under rating of Japan companies, which has hurt them the last couple of years, has actually been a positive for them this year as people have that with realized post quantitative easing, the only thing left to do is cut into savings. However, this is not having the desired effect. In Denmark, they have had negative interest rates since 2012 with intent that negative interest rates will entice people to not leave their money in the bank but rather spend it. Actually, it is having the opposite effect because people think that things are so bad, their government had to cut interest rates because there was nothing else to do. In actuality, people are not spending money as intended because they are worried that the economy is even worse than the experts are saying.

Mr. Weightman stated a lot of countries are actually issuing smaller denominated currency and people cannot find the 500 euro, people are not able to take the money out and hold on to it. There is more of an encouragement to keep their money in the bank.

Ms. Mitchell answered in the affirmative. Aberdeen's performance has improved because emerging markets have started to outperform developed markets. The overall portfolio is up 95% to the benchmark at the end of April, and Aberdeen's returns are up to 70% above the benchmark so far this year. This is a huge turn around after being off the benchmark by 50% last year. In addition they have seen commodity and energy prices stabilize. That has benefited some of the cyclical sectors.

Mr. Weightman stated looking at the energy sector for example, basically it was a broad sell off in stocks, it did not matter what your fundamentals were, if you were an energy and commodity oriented company, you sold off.

Mr. Weightman asked what did Aberdeen see in some of these energy companies and material companies that Aberdeen liked and caused Aberdeen to continue to own them.

Ms. Mitchell stated in regards to commodity prices, there are two ways of looking at this. First of all, they felt commodity prices had been overdone on the down side, and maybe a bit overdone on the up side now. So, from a valuation point of view versus their outlook they looked attractive. They have cut some energy and commodity related stocks, but they still own HP Bullion. HP Bullion is a materials commodity company and are one of the low cost producers. As commodity prices come down, the higher cost producers go out of business, but companies like HP Bullion remain strong. They have also seen changes in government policies for companies operating in global emerging markets over the last couple of years. As a result, Companies have begun to spend on infrastructure. The portfolio holds companies Aberdeen feels are some of the best in the class that will succeed over the coming decades. One of the reasons they underperformed over the last few years was over exposure to certain commodities with an indirect exposure to industrials. That is why over the last couple of years Aberdeen has worked to pick up some stocks they believe are of good quality, and will improve the overall quality of the portfolio. They reduced their overall exposure to industrials materials, energy, and increased their exposure to consumer staples, telecoms, IT, healthcare, and consumer discretionary.

Michael Coffey asked whether Great Brittan's exit from the Euro zone would have any effect on the Portfolio.

Ms. Mitchell stated Aberdeen does not believe the exit will have any effect on the portfolio. Most of their companies are global in nature, and Aberdeen believes the exit would not significantly affect them.

Mr. Weightman stated even if the citizens vote to exit the Euro zone, there is a huge negotiation process that will take years. The vote is not an end all be all.

Ms. Mitchell stated some of the things that had been negative for Aberdeen in the past were a positive this year. The biggest under performer last year was Bank of Bradesco which was down 51% vs. the benchmark, while this year the return is 70% above the benchmark return. They are conscious of such global rallies, and have been taking some money out of stocks that they think have gone too far on the up side. In regards to ongoing portfolio activity, Aberdeen is planning for top slicing, taking profits, or mitigating relative weaknesses, but the process and the team have not changed.

Chairman Fleming asked Ms. Mitchell to explain the portfolio characteristics and then the Board will ask questions.

Fund activity – one year to end April 2016*

Continued

	Stock Name	Date	Remarks
Exited	Schindler Holdings	Aug-15	Sold elevator and escalator manufacturer Schindler Holdings, on valuation and weakening end markets particularly China, which is the most important new installations market worldwide.
	South32	Sep-15	Sold out of the stock received from the BHP Billiton spin-off.
	Ericsson, Engie	Nov-15	Exited the positions to fund better opportunities elsewhere.
	Zurich Insurance	Jan-16	Exited the position. The European insurer faces a challenging operating environment with low yields and low interest rates. Our preference is towards AIA Group, which benefits from continued penetration of insurance products in Asia. Zurich Insurance has also struggled with management changes and poor results.
	Casino	Feb-16	Sold French retailer Casino, after it divested its Thai business, which we regarded as one of the attractive growth drivers of the company.
	Nordea Bank	Mar-16	Exited our position in Nordic bank, Nordea Bank. The company has done well since our initial investment and remains well capitalized, however compared to other investment opportunities we feel the business has limited future growth prospects and we are cautious over the exposure to the increasingly buoyant Nordic property market.
	Vale	Mar-16	Exited our remaining holding in Brazilian miner Vale on the back of a very strong rally in Brazilian assets year to date. This has been supported by the recent political news flow within Brazil and a sharp improvement in iron ore prices; however supply demand imbalances remain in this market.
	HSBC	Apr-16	Sold out given concerns over the continuing drag on returns from regulatory and compliance requirements to fund better opportunities.
	Schneider Electric	Apr-16	Sold the position to source the addition of Keyence, a more focused exposure to automation and sensors technology.

Aberdeen EAFE Plus Fund

Fund characteristics as at end April 2016

(%)	Aberdeen EAFE Plus Fund	MSCI AC World ex USA
P/E (x)	17.86	16.89
Dividend Yield	2.95	3.23
Dividend Growth (last 5 years)	11.68	10.01
Price/Book	2.02	1.50
Return on Assets (ROA)	7.06	5.18
Return on Equity (ROE)	18.20	14.44
Debt/Equity*	0.69	1.25

Ms. Mitchell referred to the above tables. She stated it is been a tough last few years, but they believe they have a quality portfolio that should hold up well in the future. Aberdeen likes companies with low debt and good cash flow, and overall they feel the portfolio is cash generative. They are focused on emerging markets where portfolio exposure is up to 30%. They also have direct and indirect exposure with a lot of companies within UK and Europe that are global in nature. Aberdeen sees positive signs in global emerging markets. Companies in these markets have reduced their current debt over the last few years, and they are much less reliant on US dollars than they have been in the past. Aberdeen has also seen some positive election results over the last few years, and lower energy prices in many countries. They are starting to see economies in emerging markets picking up, and there is still plenty of room to cut interest rates in emerging markets to spur on their economies. China is obviously the main driver toward emerging markets. They are moving from an export and investment led economy to a sustainable consumption and services led economy. Those jobs coming out of manufacturing are being replaced with service jobs. Therefore, Aberdeen feels services are going to be a growth area for China. Overall this year, in emerging markets, GDP is 4.6% versus the developed markets GDP of 2.2%, it is slowing but it is still growing.

Mr. Weightman stated it is interesting because many experts are worried about the slow down the Chinese are going to have in buying materials, commodities, and natural resources. Maybe from an investment standpoint that is not great, however they are going to be using less natural resources and commodities. As some of these resources that are very finite, and are not going to last forever this is a positive from an environmental perspective.

Ms. Mitchell stated emerging markets have been focusing on cost cutting and margin improvement over the last few years. Earnings were up about 10% last year in emerging markets, and they expect the same for this year. They are seeing really stretched valuations in domestic markets, especially in the US, Europe, and Japan, where the fundamentals do not represent those stretch valuations while the opposite is true in emerging markets. In valuations, emerging market equities are still trading at a 24% discount to their 10 year average price, compared to a 15% premium for US equities. They are definitely remaining cautious on some of these stocks that have rallied on these earnings in Japan, and Europe. Aberdeen cut Zurich Insurance, Nordea Bank, and HSBC Bank because of negative interest rates. What they have done is they bought a bank in Thailand and another bank in Japan representing a movement away from banks Aberdeen feels will struggle with negative interest rates.

John O'Hare asked by how many basis points is Aberdeen expecting to exceed the benchmark.

Ms. Mitchell answered Aberdeen's aim is to do 300 basis points above the benchmark over a 3 year rolling period. They have achieved that this year, but they clearly have not for the last couple of years, they have got quite a long way to go.

Mr. O'Hare stated Aberdeen needs strong performance in the future to make up for the last few years.

Ms. Mitchell answered in the affirmative. They are not going to say that they are going to get the last two years of underperformance back in the next year, but there was very strong performance to start to this year. Looking back to the years prior to TSRS's investment with Aberdeen, they had shown strong performance. Aberdeen feels they will return to stronger overall performance as time moves forward from the underperforming years.

Mr. Weightman stated to give Aberdeen credit, when there are times of underperformance there are always firms that will re-look at the way that they are doing things and tweak things, maybe even change the philosophy and process. It is the Boards understanding that Aberdeen has not done that, Aberdeen is not stretching for performance because of the recent losses.

Ms. Mitchell answered absolutely not, and that is something that they have been adamant about. Over the last 20 years, they have always stuck to their process. They believe it is the greater process longer term however, it is just certain environments than do not necessarily work as well. Aberdeen is hopeful they will get back to an environment where people are focusing on the fundamentals rather than the macro news.

Mr. Weightman stated the Boards former allocation to equities was 75% US, 25% non US, and the Board decided to go 60-40, 40% non US. When thinking about big broad level asset allocation policy, the Board is not interested in timing the market, because this plan is open in perpetuity and has a very long time horizon.

Mr. Weightman asked what is Aberdeen's perception of the timing of this change in allocation.

Ms. Mitchell stated if the Board is talking about the emerging versus developed markets, Aberdeen thinks that

they will probably have at least another few quarters of volatility in emerging markets as economic conditions in China and Brazil settle, but they think people will focus less on that negative sentiment. In regards to money flowing in and out of emerging markets it is more sentiment driven as many large pension funds do not exist in these markets. They think on the institutional side, investors are definitely more focused on fundamentals, and other portfolios are looking similar to what the Board is doing within its portfolio. In the last three years, they have seen a lot of US companies doing share buyback programs as a form of financial engineering to look better.

Mr. Weightman asked if companies are issuing long-term debt to conduct the share buybacks.

Ms. Mitchell answered affirmative and typically that is not optimal. What should be happening is not companies buying shares back at all-time high prices, but rather companies should be reinvesting into their business so that in three to five years the company is stronger. Aberdeen thinks that is going to come back to bite companies in a few years when they realize that they did not do that. Investment managers at Aberdeen are not market timers. They will systematically increase the investment if they like company and the situation, and Aberdeen believes that is the right way to do it. By the end of the year Aberdeen is expecting to see people taking money out of developed markets, and focusing more on emerging markets where opportunities are better based on fundamentals.

Ms. Smith stated the Trust portfolio will look more like the world looks like. They think over the long term, it is okay to have a little bit of a bias towards the US, but now the Trust portfolio is going to look more like the opportunity set.

Mr. O'Hare asked how many clients has Aberdeen gained and lost in the last year.

Ms. Smith stated they will have to gather the specific numbers to provide an answer.

Mr. O'Hare asked how large is this product.

Ms. Smith answered this product is \$4B.

Ms. Smith stated they have definitely seen more outflows than inflows, due to performance. One of the great things about having strong performance is Aberdeen gets a lot of interest from potential clients, the negative can be once Aberdeen under performs, some of the new clients may not be patient. New clients may hire Aberdeen based on great returns, but do not do as much work on how Aberdeen manages the money. Then as soon as they see a negative result, they leave Aberdeen. The flows have stabilized, but they definitely have lost clients in the global space, but they still have a healthy business in this area. They think it will take a few years before you see some new clients coming in because they want to see the positive performance as well.

Mr. Weightman stated peak assets in 2013 were \$9.2B.

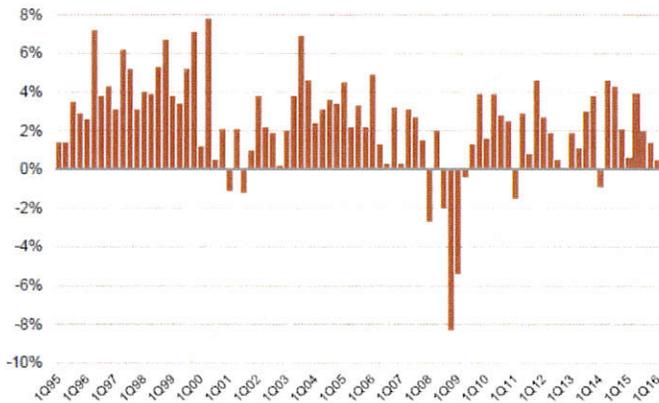
Ms. Smith stated some of that is outflows, and some of that is market action.

Ms. Mitchell stated certainly the pickup in performance, has helped us this year.

U.S. Economy

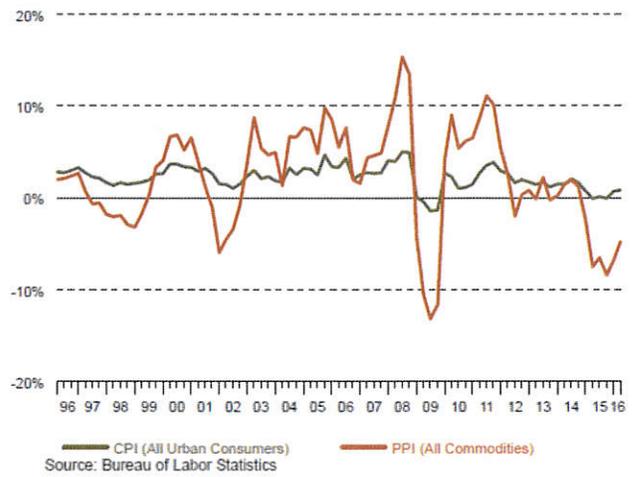
Periods Ending March 31, 2016

Quarterly Real GDP Growth (20 Years)*



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

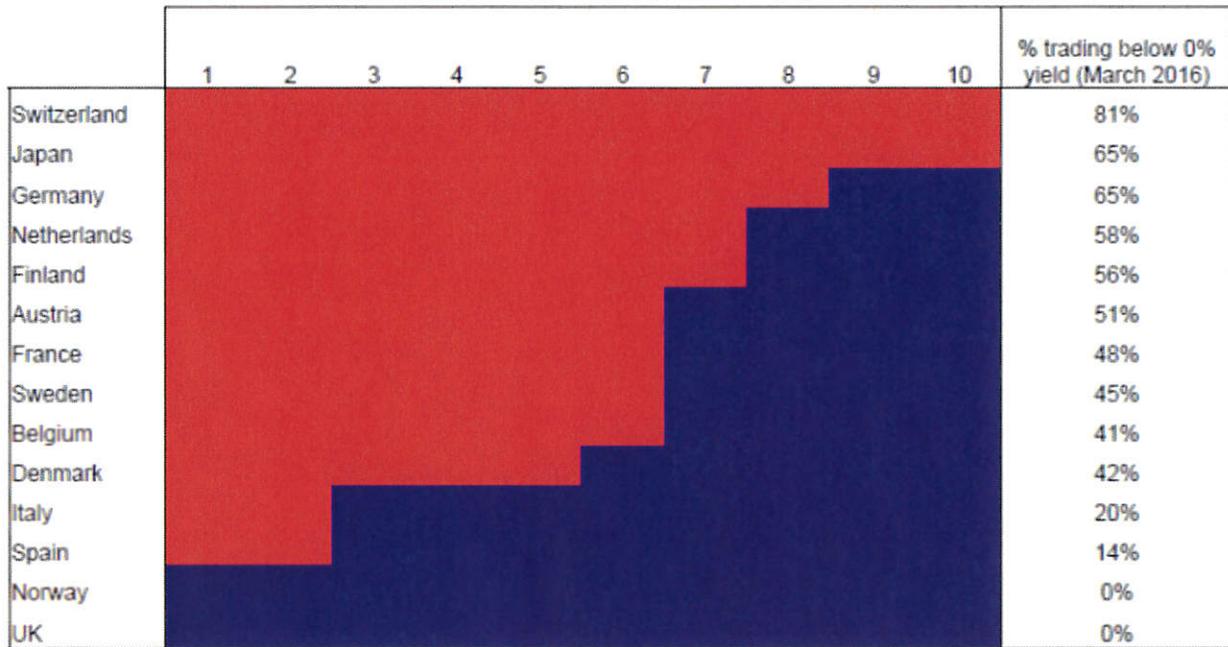
- Initial estimate of first quarter GDP came out at 0.5%, down from a fourth quarter reading of 1.4%.
- March headline inflation rose 0.9% over the trailing twelve months. Core CPI Increased 2.2%.
- March unemployment was 5.0% (up 0.1% from February) on a tick up in the labor force participation rate.
- The Fed maintained the fed funds target rate of 0.25% - 0.50 and reduced their year-end target rate from 1.4% to 0.9%.

Gordon Weightman referenced the above table, and stated what we have is a tale of two halves in the first quarter. The first half was very much risk off, the second half was risk on, and so we saw equities rebound. We also saw energy and commodity prices rebound in the first quarter, and that is continued now through to where we are now.

John O'Hare asked Mr. Weightman to explain what risk on and risk off means.

Mr. Weightman answered the next few slides will illustrate what risk on and risk off means. When looking at the numbers, GDP is at .5%, consumer spending was up 1.9%, and consumer spending makes up about two thirds of GDP. That means there were some things that really substantially brought it down to .5%, like government spending at both the local and Federal level. We also saw some uptick in housing, inventory replenishing, and we are at the bottom of a cycle. Inflation is at .9%, and Core CPI excluding food and energy is at 2.2% which is a rate of change metric. This was predominately caused by energy prices going up, and the start of an uptick in inflation. We saw oil at \$51.00 a barrel this morning, so it came up from a bottom in the middle of February of \$26.00, doubling in that time period. Unemployment was at 5%, resulting from an uptick in the labor force participation rate as more people are getting back into the work force. Real wage increases are starting to come across through payrolls since corporations have a lot of cash on their balance sheets, and they are starting to give it to their most valued assets, their employees. The Federal Reserve maintained the funds rate at .25% to .5%. There are currently no indications from the Fed that they are going to be increasing rates given where rates are around the rest of the world.

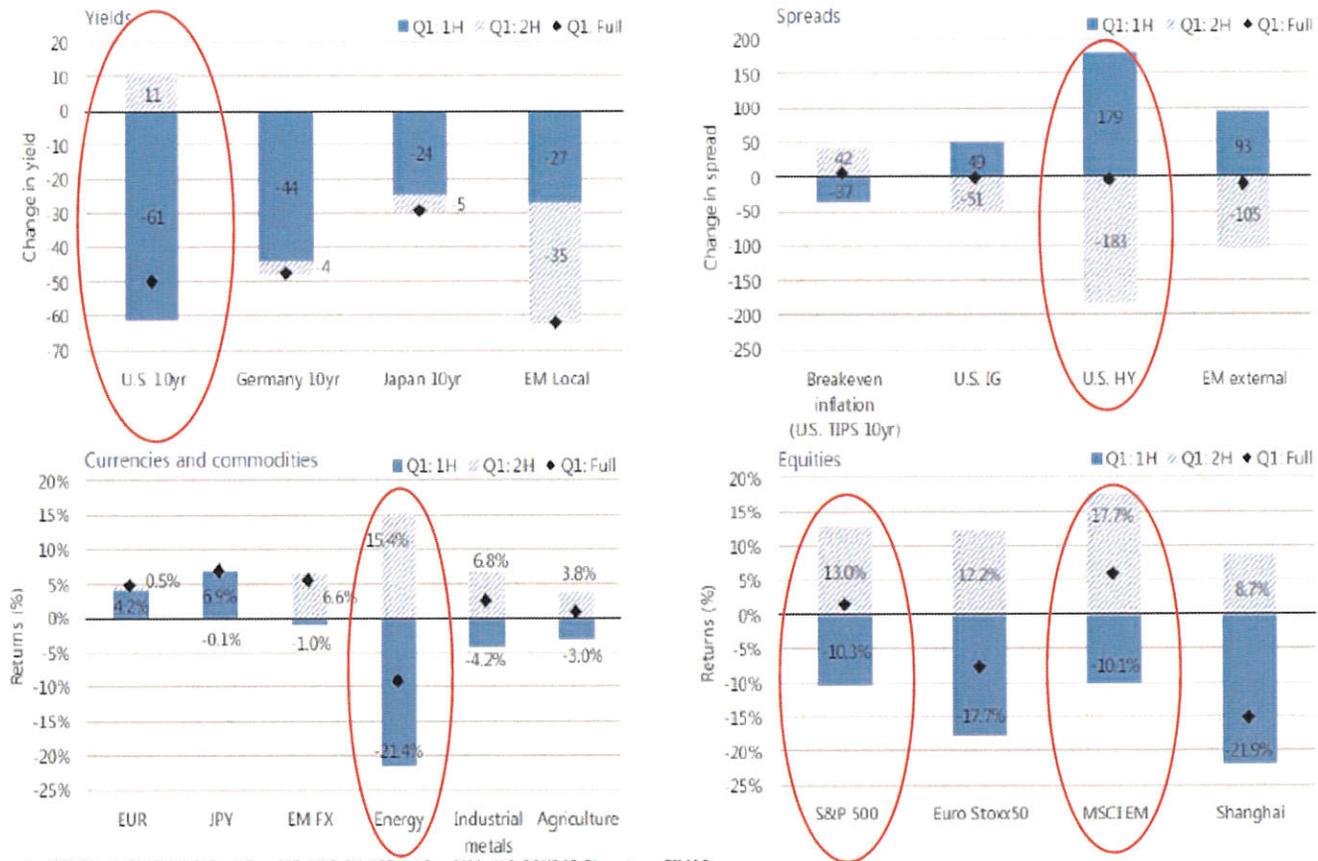
Government bond yields



■ Negative yield
■ Positive yield

Source: Bloomberg Finance LP, DB Global Markets Research

Mr. Weightman stated the above graph shows the percentage of government bonds, and the various countries, and the percentage of their debts trading at negative interest rates. You can see that in Switzerland, 81% of their bonds are at negative interest rates and in Japan 65%. By having negative interest rates these countries are trying to encourage people to spend money rather than saving it. If investors think rates are going to go more negative or if investors were worried about disinflation, they may find these investments attractive. If one had a \$50 coupon from a bond, and if you go into a disinflationary type environment, all of a sudden the purchasing power of that bond is \$50 is greater. Those are some of the reasons why investors are actually putting money into these bonds and paying the government to keep their money safe. This is in stark contrast to the US, which is in the process of raising interest rates.



Mr. Weightman stated the above chart from PIMCO shows the amount of volatility in the first quarter. Looking at the US ten year, for example in the top left, the blue shaded bar is what happened in the first half of the first quarter, and the striped area is what happened in the second half. The first half of the quarter, saw yields fall as investors bought into treasuries, or a flight to quality corresponding to a risk off environment. This means investors had pulled money out of equities, high yield investments, and investments with a lot of credit risk and gone to a safe haven investment. Then in the second part of the quarter, investors started to sell some of those treasuries. As a result, we saw yields increase and overall the ten year treasury went from 2.25% to 1.75% during the quarter. In contrast to that looking at the top right of the chart, first half of the quarter saw high yield spreads widen. Investors were selling out of those risky assets, and buying treasuries. Then in the second part, they were buying back into high yield bonds, and the spreads tightened up. This is similar with energy which was down 21% in the first half of the quarter, and then up 15% towards the end. The S&P 500 was down 10.3% through the middle of February, and then it rebounded 13% in the second half of the quarter. Same thing with emerging markets, they were down 10.1% as investors sold the risky assets, and then up almost 18%. Emerging markets had a return of over 5%. There was a lot of volatility, it was a difficult environment because of all that movement for active managers to pick stocks.

**Periodic Table of Investment Returns
for Periods Ended March 31, 2016**



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
	MSCI:EM Gross 5.8%	Barclays:Aggregate Index 2.0%	S&P:500 11.8%	S&P:500 11.6%	S&P:500 7.0%
	Barclays:Aggregate Index 3.0%	S&P:500 1.8%	Russell:2000 Index 6.8%	Russell:2000 Index 7.2%	Russell:2000 Index 5.3%
	S&P:500 1.3%	3 Month T-Bill 0.1%	Barclays:Aggregate Index 2.5%	Barclays:Aggregate Index 3.8%	Barclays:Aggregate Index 4.9%
	BLMBRG:Commdty Idx 0.3%	MSCI:EAFE (8.3%)	MSCI:EAFE 2.2%	MSCI:EAFE 2.3%	MSCI:EM Gross 3.3%
	3 Month T-Bill 0.1%	Russell:2000 Index (9.8%)	3 Month T-Bill 0.1%	3 Month T-Bill 0.1%	MSCI:EAFE 1.8%
	Russell:2000 Index (1.5%)	MSCI:EM Gross (11.7%)	MSCI:EM Gross (4.2%)	MSCI:EM Gross (3.8%)	3 Month T-Bill 1.1%
	MSCI:EAFE (3.0%)	BLMBRG:Commdty Idx (19.7%)	BLMBRG:Commdty Idx (16.9%)	BLMBRG:Commdty Idx (14.2%)	BLMBRG:Commdty Idx (7.1%)

Mr. Weightman referenced the above table and stated emerging markets performed well last quarter. They had a difficult last year being down 11.7%, and looking at them over 5 years they are down 3.8%. Latin America was up 18%, Brazil was up 28% as there was a strong rebound in those markets. The Board made a policy decision to move the mandate for value non-us equity portfolio managers to ACWI EX-US which has about 20% exposure in emerging markets increasing TSRS's exposure there. The Barkley's aggregate went up to 3% with investment grade corporate bonds being the best performers within that segment. The S&P 500 was up 1.3%, small cap stocks were negative, down 1.5%, and EFA was down 3%. The dollar weakened for the first time in a long while which is good for US based investors investing internationally. In the US equity markets, dividend payers did very well, and utilities and telecom were up over 15% because of very low bond yields. In a risk off environment investors go to those dividend paying stocks, and they are getting income through those securities. Now when looking at those sectors, their valuations are extremely high. Therefore, they have fallen off during the quarter. The other trend is that for a long while now in non US and US markets, growth stocks that outperformed value have switched, and value actually out performed growth during the quarter. A lot of that has to do with energy, which is a big component of value indices.

Michael Coffey asked if the Board made a wise decision to move to a 60-40 allocation.

Mr. Weightman stated from a broad policy standpoint, it is consistent with the long term goals of the plan. Forty percent of revenue for S&P 500 companies now comes from abroad. The Board already has a global portfolio. If we track revenues, the bias would be more towards the rest of the world than towards the US. So, this move to go 60-40 is basically an acknowledgment that we believe in globalization. For example take a company like Nestle, based in Switzerland, who does a great amount of business in the emerging markets, yet has a big presence in the US. So one should not say well we are going to invest in Nestle just because we have X

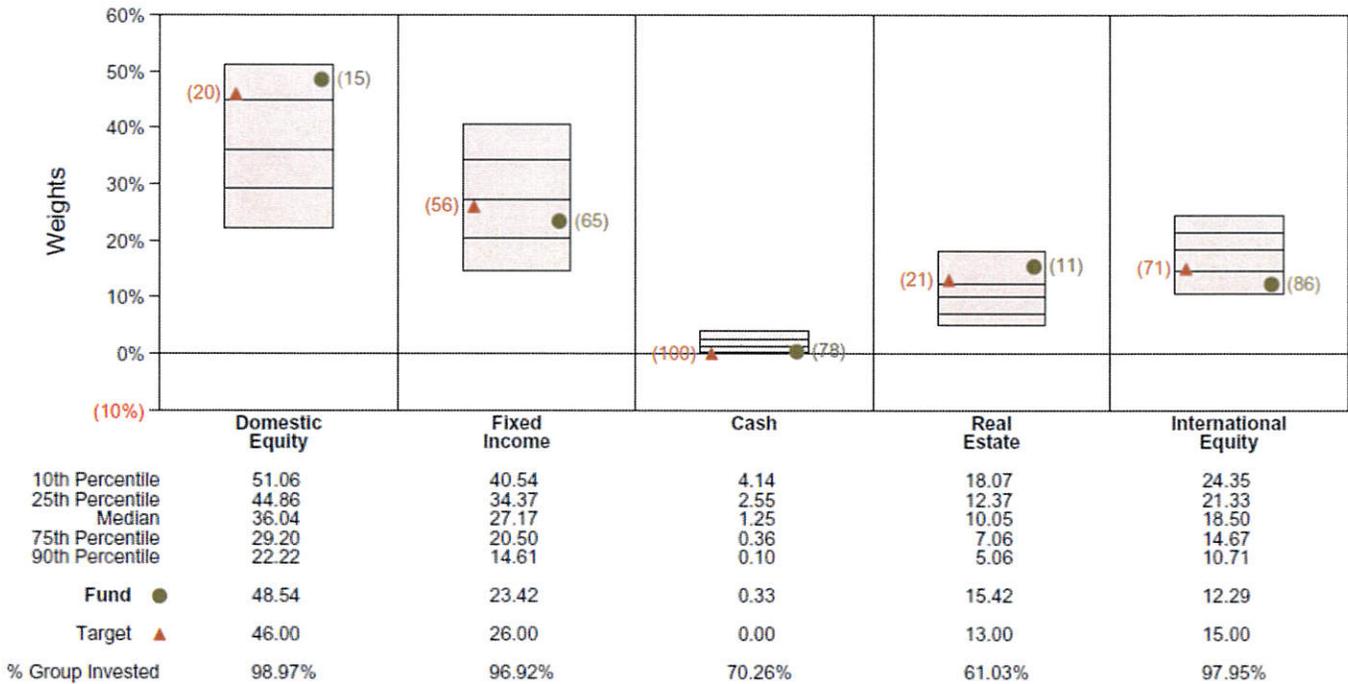
percentage in non US assets, and we have X percentage in US assets. Now one is basically saying we have a broader opportunity set, and there is more leeway. With the allocation to 60-40, the Board has embraced the total global equity picture. The Board still has a little bit of a bias towards US equities, if we look at the global market cap of the index, it is 50-50. The non US equity markets have lagged the US market for ten years. We just heard valuations in the non US equity market versus the US are cheaper. Therefore, the Board essentially sold stocks that had higher valuations, and bought stocks that had lower valuations, that is typically a good way to do it. However, there could also be a correction in the US. Equities as they have been rallying since 2008. If the Board looked at past cycles, a 7 year bull equity market is a long time.

Aberdeen EAFE Plus – Callan's Global Manager Research group maintains a positive view on Aberdeen's Non-U.S. and Global equity strategies despite recent underperformance. Much of the recent slide has come from over exposures to Energy and Materials. We've questioned them on the "quality" of these exposures where they feel they're holding companies with the highest quality managements and reserves. Given the across-the-board selloffs in these sectors throughout 2015 their quality bias has not protected them. This trend reversed in the most recent quarter with Aberdeen outperforming the benchmark (+2.8% versus -0.4%). Assets under management in the strategy were \$4.1 billion as of 3/31/16, which is down from the peak level of \$9.2 billion in 2013.

Mr. Weightman stated the Board asked Callan to write up a memo on Aberdeen which is presented above. Callan still has conviction in Aberdeen and their underling process.

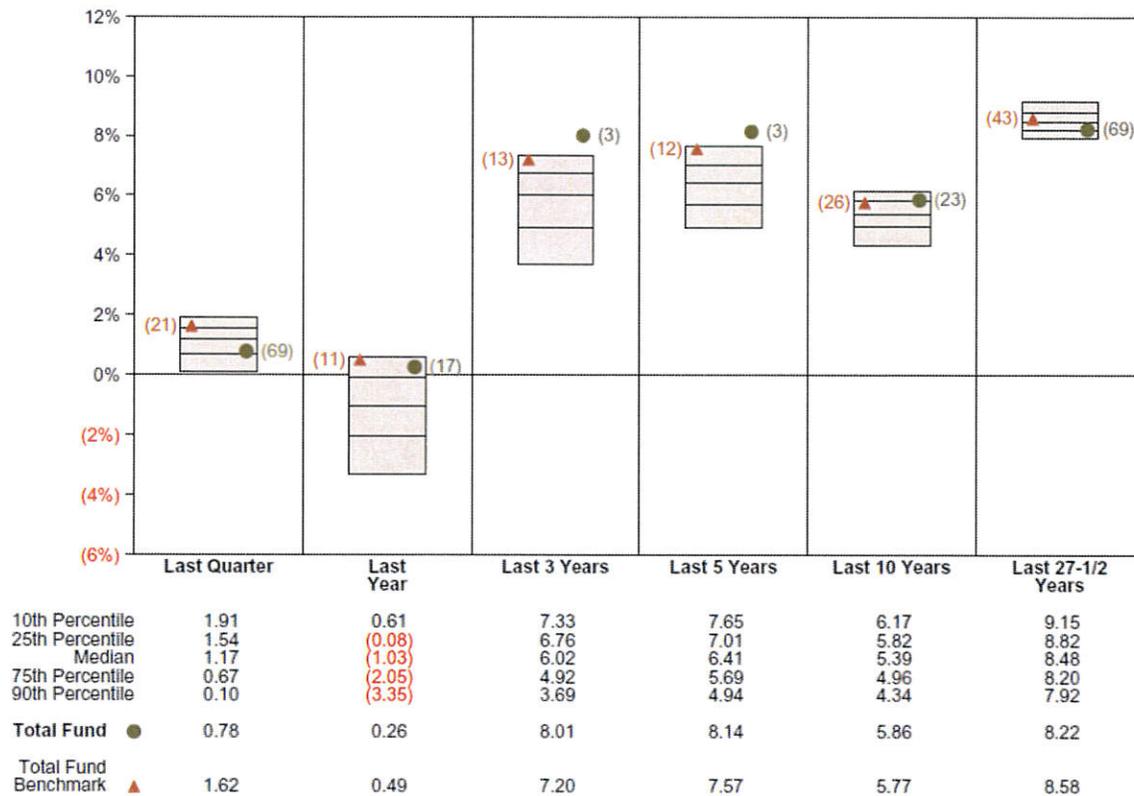
Mr. Weightman stated with Macquarie the Board has an infrastructure fund that has three holdings, with two being airports that make up the majority of the portfolio; one in Brussels, and one in Copenhagen. The airport in Brussels was bombed. Callan has had lengthy conversations with the Macquarie to determine how this may adversely affect the long term return stream and cash flow stream of the investment. They do not believe so with the reason being is it was not a widespread explosion. It was very centralized, and the actual damage is not going to take much to replace. The bigger concern is the flow of passengers in and out of the airport as they were operating at 60% capacity after the attacks. However, to their credit they have insurance that will pay for all the repairs. They are not expecting to have any long-term effects on performance, the only negative is that insurance premiums will go up.

Asset Class Weights vs Public Fund Sponsor Database



Mr. Weightman referenced the above table and stated the Board has a home country bias in equities that has helped the portfolio over the last 7 years. Fixed income is pretty close to median, and portfolio fixed income exposure is at 26%. The portfolio real estate target is 13%, and that is in the 21st percentile. Private real estate has been one of the best places to be which has also helped the portfolio. Typically one expects returns to be about two thirds income, and one third appreciation. Given what is being happening in the real estate markets in a lot of the major cities around the US, that has been reversed. Capital preservation has been two thirds of the return, and income has been a third, so private real estate has done very well. International equity, at 15% of the portfolio, was in the 71st percentile which is relatively low but closer to peers.

Performance vs Public Fund Sponsor Database (Gross)



Mr. Weightman referenced the above table and stated an uptake in market value came from \$5.4M in investment returns, and some outflows of less than \$1M during the quarter. The actual return of the portfolio versus the benchmark and peers for the quarter was .78%. The portfolio underperformed the benchmark, and ranked in the 69th percentile. Over the last year the portfolio had a positive return. Looking at the distribution of returns, pension plans had negative returns in general. Therefore, the Board ranked very well versus peers, 17th percentile. Looking back 3, 5, 10 years, investments in US equity have helped the portfolio, with a 5 year return of 8.14% that is above expected rate of return of 7.25%, and in the 3rd percentile. The 10 year return is 5.9% which is below the expected rate of return of 7.25% primarily due to the events of 2008. The portfolio asset allocation policy and active managers gave the Board very good performance versus other public pension plans.

Mr. O'Hare asked if these are gross or net numbers.

Mr. Weightman answered they are all gross numbers.

Mr. O'Hare stated the Board should then take off 600 – 750 basis points in their analysis.

Mr. Weightman answered not that much. Looking at fiscal year 2015, the return gross fees for the total fund was 4.63%, Compare that to the net return over fiscal year 2015, and it is 4.17%. Therefore, the Board is looking at 46 basis points as the investment management fee. If the Board takes a long-term view, adopts a strategic asset allocation policy, and employs active managers in certain areas of the portfolio, the Board can have success. This has been evident as over the last 27 and a half years, the Board got to the 7.25% with a cushion. In the next 10 years Callan's median estimate would be closer to 6.5% for your portfolio with some volatility. Without any active management assumed, the probability of meeting the 7.25 % goes down to 40%. If we stretch that out over 30 years the return expectation would go up.

Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Gross of Fees					
Domestic Equity	(0.57%)	(0.56%)	11.87%	11.46%	6.63%
Total Domestic Equity Target (1)	1.14%	(0.26%)	11.04%	10.95%	6.93%
Large Cap Equity	(0.83%)	(0.36%)	12.06%	11.41%	6.24%
S&P 500 Index	1.35%	1.78%	11.82%	11.58%	7.01%
Alliance S&P Index	1.32%	1.85%	11.82%	11.57%	7.07%
PIMCO StocksPLUS S&P 500 Index	0.91%	(0.25%)	11.76%	12.62%	8.83%
	1.35%	1.78%	11.82%	11.58%	7.01%
BlackRock Russell 1000 Value Index	1.65%	(1.36%)	9.51%	10.36%	5.88%
Russell 1000 Value Index	1.64%	(1.54%)	9.38%	10.25%	5.72%
T. Rowe Price Large Cap Growth	(6.34%)	(1.85%)	14.92%	12.68%	9.09%
Russell 1000 Growth Index	0.74%	2.52%	13.61%	12.38%	8.28%
Small/Mid Cap Equity U.S. Equity	0.30%	(1.26%)	11.19%	11.47%	8.02%
Russell 2500 Index	0.39%	(7.31%)	8.16%	8.58%	6.47%
Champlain Mid Cap	2.75%	1.21%	11.77%	11.42%	10.22%
Russell MidCap Index	2.24%	(4.04%)	10.45%	10.30%	7.45%
Pyramis Small Cap	(2.24%)	(3.86%)	10.47%	11.37%	8.61%
Russell 2000 Index	(1.52%)	(9.76%)	6.84%	7.20%	5.26%
International Equity	(1.62%)	(11.02%)	0.53%	0.52%	1.89%
MSCI ACWI x US (Net)	(0.38%)	(9.19%)	0.32%	0.31%	1.94%
Causeway International Value Equity	(4.59%)	(10.17%)	3.41%	3.57%	3.91%
MSCI EAFE Index	(3.01%)	(8.27%)	2.23%	2.29%	1.80%
Aberdeen EAFE Plus	2.83%	(12.17%)	(3.00%)	0.83%	3.72%
MSCI ACWI x US (Net)	(0.38%)	(9.19%)	0.32%	0.31%	1.94%
Fixed Income	3.23%	0.79%	2.49%	4.65%	5.68%
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
BlackRock U.S. Debt Fund	3.07%	2.06%	2.62%	3.90%	5.03%
Barclays Aggregate Index	3.03%	1.96%	2.50%	3.78%	4.90%
PIMCO Fixed Income	3.34%	0.01%	2.41%	5.26%	6.24%
Custom Index (2)	3.94%	2.33%	3.04%	4.97%	5.98%

Mr. Weightman referenced the above table showing gross returns. He stated some of the managers that have underperformed. T Row Price is one of them, they utilize a large cap growth strategy. The stocks that normally help them, hurt them in the first quarter. Their long-term numbers over 3, 5, and 10 years are above the benchmark. They are more growth oriented than the benchmark. They have invested in a lot of healthcare, pharmaceuticals, and biotech companies that have historically helped their performance. However, the first quarter where those industries have struggled, T Rowe Price has underperformed. Subsequent to first quarter's reporting they have outperformed the benchmark. They are heading in the right direction again, but their performance pattern tends to currently be choppy when looking at their relative results. The lead portfolio manager over the T-Rowe Price fund Robert Sharps is being promoted and will no longer be managing the fund at the end of the calendar year. However, T-Rowe Price has a succession plan in place and the infrastructure to manage such personnel transitions. Within the mid cap equities, Champlain, for a while has been underperforming. When looking at their numbers versus the Russell 2000 Mid Cap Index which was down 4%, Champlain was up 1.2%. Pyramis small cap saw some under performance in the quarter but their long term results were great. Though the returns are negative this quarter, they are a lot less negative than the index.

Mr. O'Hare stated there still seems to be a reporting bias here, we are just asking our active managers to beat the benchmark and that is not good enough.

Chairman Fleming stated that is not what we are asking, that is just what the chart is showing.

Mr. O'Hare stated the Board should be asking active investment managers to beat the benchmark by 1.0% or 2%, but active managers are happy just to beat the benchmark and that is not good enough.

Mr. Weightman stated the difficulty is that the Board has two options, one is to invest in an index fund. An index fund that does not lend securities, by nature has no way to beat the benchmark. If the Board takes out their fees, the portfolio will always underperform the benchmark by the fees. There are some asset categories like large cap growth, US equity, where that tends to make sense, because it is very hard to beat the benchmark. T-Rowe Price has been an exception to that. The other option is active management. Every active manager will say they are going to beat the benchmark after fees plus something. Without that plus something it does not make sense to invest in active management. If the Board is paying them, and they are giving the Board benchmark performance, the Board might as well be in the index fund. When Board members say active managers should perform 2% or 3% over the benchmark, there are very few managers that can actually do that in reality in his experience over market cycles.

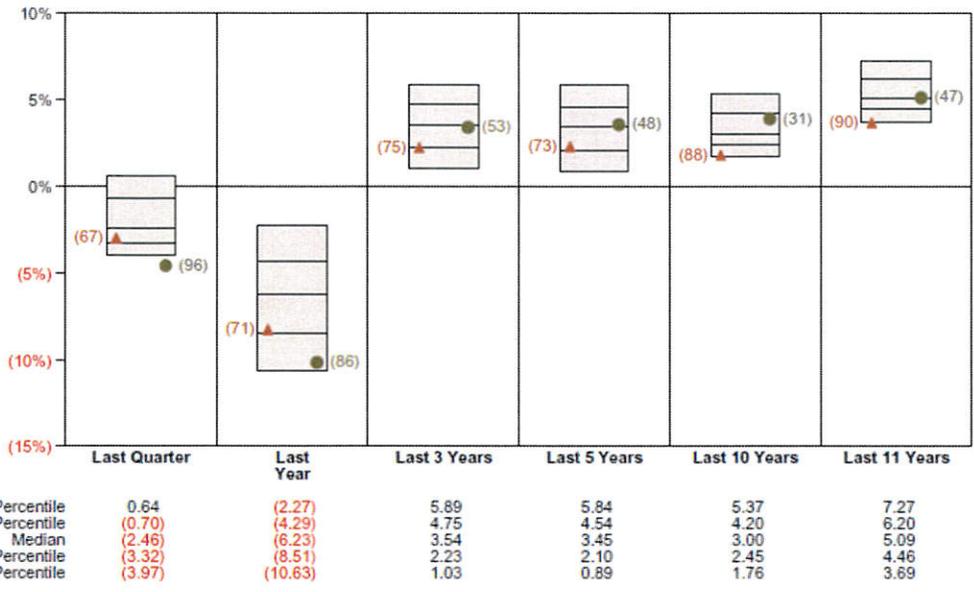
Mr. O'Hare asked if Mr. Weightman was making an argument for indexing the fund.

Mr. Weightman answered negative. He is making the argument that the premium the manager says they will earn the Board over the benchmark after fees is less than what they initially say. Just providing the Board with relevant information, so the Board members are able to make an informed decision.

Mr. O'Hare stated 1.5% over benchmark is a fair goal for active investment managers.

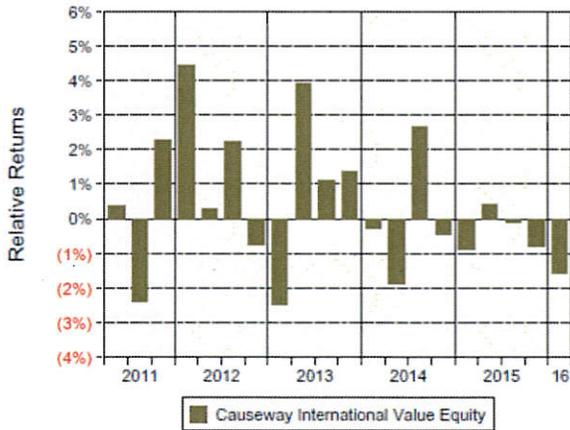
Mr. Weightman stated by looking at Causeway for example, their gross of fee returns for the last three years were up 2.7% when the index was up 2.2%. That is 50 basis points of outperformance after fees. Looking further out, over 5 years, it is 60 basis points.

Performance vs CAI Non-U.S. Equity Style (Gross)

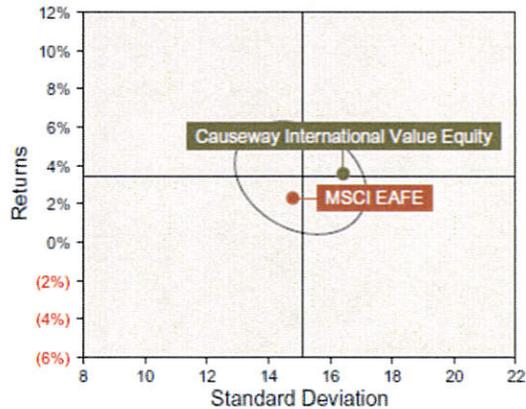


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 11 Years
Causeway International Value Equity ●	(4.59)	(10.17)	3.41	3.57	3.91	5.12
MSCI EAFE ▲	(3.01)	(8.27)	2.23	2.29	1.80	3.67

Relative Return vs MSCI EAFE



CAI Non-U.S. Equity Style (Gross) Annualized Five Year Risk vs Return



Mr. Weightman referenced the above table regarding Causeway showing returns gross of fees. If the Board looks at the last 5 years, the Board has an above median manager that has outperformed after fees by 60 basis points.

Mr. Weightman asked does the Board think that employing Causeway as an active manager has earned the Board money. In Callan's opinion they have, but is it worth the hassle of monitoring and evaluating them to pay them that money. Callan believes the earnings are worth the hassle.

Mr. O'Hare stated that is something the Board members need to decide.

Mr. Coffey asked is there a better alternative. If the Board was to look at Causeway versus comparative firms and their performance over time the Board can be unhappy with Causeway's performance. However, if we cannot find a better performing active manager then the result would be the same.

Mr. O'Hare asked could a small public pension fund find superior talent.

Mr. Weightman stated ultimately the goal for the Board should be to try to find a manager that performs consistently, over a period of 3, 5, 7, and 10 years median or better versus peers. If the Board can find median or better that is a success. Then the Board needs to look at how the median manager has performed versus the benchmark. If the Board could find that median manager or better, and feel confident in selecting them, does their premium outweigh the benchmark performance. If the Board looks at the Russell 1000 growth index, the benchmark is in the top 20th percentile of the peer group. The Board would have to find the top quintile manager to beat that benchmark. Within the non US equity space, looking over 10 years, the benchmark is in 88th percentile. The Board's odds are pretty good of finding a manager that is going to outperform in the non US Equity Space. If active managers were consistently performing at 3% over the benchmark, their product would be closed, the Board would not be able to get in, and they would be so flooded with money it makes it harder to manage the portfolio. Callan has seen large portfolios tend to actually see their performance decline because they are managing so much money. The true test of active management is can the Board pick the median manager or better, and has the median manager consistently beat the benchmark.

Chairman Fleming stated the Board has to do that often enough so that the collective effect of our active managers beat the benchmark.

Mr. Weightman Stated one of the things the Board has done is balanced growth and value. If the Board looks at the 5 year rolling returns for growth and value they are mirror opposites of each other. What the Board is trying to do with Causeway and Aberdeen is in situations when value out performs, Causeway will beat the benchmark and Aberdeen should trail, and vice versa. What the Board is trying to do within the composite of international equity is capture that median outcome which has been better than the benchmark. For example looking at an investment manager like Aberdeen who has been doing this for a long time, has a process, the same people, and are sticking to the same philosophy, which has worked historically, just not recently, the Board must ask itself that although that is not ideal, do we have conviction in Aberdeen to better the benchmark.

Mr. O'Hare stated at the same time the Board cannot hold on to an underperforming active manager for a long time because they may not be able to make up for their underperformance.

Mr. Weightman stated if Aberdeen had changed their philosophy during a period of underperformance, Callan would have recommended to the Board that the Board terminate them and find a replacement.

Mr. O'Hare stated this shows how difficult and complex active management is. It takes a lot of time, experience, and education for decision makers to be effective.

Mr. Weightman agreed and stated investing often times is not common sense. Common sense would tell the Board we have a manager that is underperforming, let us find a different one. However, Callan cannot tell the Board how many times they have seen clients fire a manager because of performance at the bottom of their cycle, and then look for a manager at the top of their cycle, which then under performs for the next three to five years.

Mr. O'Hare stated that is a risk.

Mr. Weightman stated part of the decision to stay with Aberdeen is to keep the Board out of that situation.

Mr. O'Hare stated but there is a risk in doing that.

Mr. Weightman agreed there is a risk Aberdeen could continue to underperform.

Mr. O'Hare stated the Board cares if we are losing money.

Mr. Weightman stated Aberdeen has not lost the Board money since the Board invested with them. Rather, the Board would have been better off in an index fund. The Board has been investing with Aberdeen for almost four years, and they are up 1.5% in that time Overall, we have spent a lot of time talking about active managers, and how they performed. When looking at how that actually affects the long-term results of the portfolio, it is about 10% of your actual performance, 90% is your asset allocation. The actual managers that the Board hires, account for about 10% of relative performance.

Chairman Fleming stated the Board spends more time on active management evaluation than on asset allocation.

Mr. O'Hare asked should we get into inflation and how that impacts returns.

Mr. Weightman stated the portfolios 7.25% includes an inflation expectation.

Mr. O'Hare asked if the inflation expectation was 3.5% or 4%.

Mr. Weightman stated per the actuary, they reduced it to 3%, that 7.25% is a nominal number.

>Returns for Periods Ended March 31, 2016

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Gross of Fees					
Real Estate	2.02%	13.32%	13.82%	13.82%	5.92%
NFI-ODCE Value Weight Gr	2.18%	13.67%	13.63%	13.26%	6.36%
JP Morgan Strategic Property Fund	1.88%	12.93%	13.51%	13.64%	7.08%
NFI-ODCE Value Weight Gr	2.18%	13.67%	13.63%	13.26%	6.36%
JP Morgan Income and Growth Fund	2.37%	14.36%	15.40%	17.60%	4.44%
NFI-ODCE Value Weight Gr	2.18%	13.67%	13.63%	13.26%	6.36%
Infrastructure	5.43%	14.82%	8.02%	6.55%	-
CPI + 4%	1.58%	4.50%	4.42%	5.09%	5.75%
Macquarie European Infrastructure	4.90%	11.35%	3.78%	5.04%	-
SteelRiver Infrastructure	5.89%	17.49%	12.66%	8.19%	-
CPI + 4%	1.58%	4.50%	4.42%	5.09%	5.75%
Cash Composite	0.05%	0.06%	0.02%	0.03%	1.28%
Total Fund	0.78%	0.26%	8.01%	8.14%	5.86%
Total Fund Benchmark*	1.62%	0.49%	7.20%	7.57%	5.77%

Mr. Weightman referenced the above table showing real estate returns. The Board has two portfolios, both with JP Morgan. One is a core fund, meaning it is invested in developed properties. They use about 25% debt to buy them, the rest is their investor's money. They are very well diversified across the country, and by property type. It is the largest core private real estate fund in the world, and the returns over 5 years have been great. Looking at the composite, a 13.8% return is not typical, and the Board should not expect to get that from

real estate going forward. What Callan expects is the return to eventually be somewhere between stocks and bonds with similar levels of volatility.

1. Portfolio Transition Update – Callan Associates, Inc.

Gordon Weightman stated three months ago the portfolio transition to the new Board approved target allocations was postponed because there was staff turnover. The Board did a search for a transition manager to oversee the portfolio transition. Three firms were pre-approved by the Board to be the transition managers. TSRS staff requested a pre-trade analysis from the three pre-approved firms: Macquarie, Penserra, and Black Rock. Black Rock had the best pre-trade analysis, it was the lowest cost, and they also expected to be able to cross trade the most securities, and essentially what that leads to is lower trading costs for the fund. The final proposed transition cost was \$155,000. As of May 26, 2016 the portfolio is fully transitioned, and resulted in a \$1.3M profit for the Trust due to the timing of the event.

2. TSRS Portfolio Composition, Transactions and Performance Review for 04/30/2016
3. Approval of New Portfolio Composition, Transaction, and Performance Monthly Reports

Neil Galassi stated the Board has been provided with the traditional reports and the Callan reports with the staff generated executive summary. He asked if the Board had any questions about the reports for the month of April.

Chairman Fleming stated the Board did not have any questions.

Mr. Galassi asked the Board which report format does the Board prefer for future meetings.

Chairman Fleming clarified for the Board, if the new report format is approved the Board will receive the Callan reports and the staff generated executive summary for future meetings.

Michael Coffey asked staff to provide the pros and cons of both reports for the Board to consider.

Gordon Weightman stated with permission from the Board, he is able to provide them with the pros and cons of both reports.

Mr. Coffey answered in the affirmative.

Mr. Weightman stated Callan is receiving information from the book of record, the Trust custodian BNY Melon. Callan gets the market values at the beginning and end of the month. Callan receives cash flow information on a daily basis. For example, if there is \$10B with an investment manager, and there is a rebalancing activity causing a loss of \$1M, the \$1M is taken into account when calculating performance during the period. Callan will make sure the \$1M does not affect performance reporting. Callan is going to do a compounded return from the beginning of the period to the date of that cash flow, and then from the date of that cash flow to the end of the period, and then Callan is going to compound them.

Mr. Coffey clarified the comparability will remain valid.

Mr. Weightman answered in the affirmative. Callan is only looking at the investment manager's skill, not the cash flows that they do not have any control over. Staff does not have access to those daily flows, or the tools to calculate and handle the daily flows. Staff has been historically putting together a dollar weighted rate of return, which is saying if a manager lost a \$1M due to rebalancing, that showed as a penalty in their performance even though they had nothing to do with it.

Mr. Coffey stated the Callan report is a superior product for the purposes of analyzing performance.

Mr. Weightman stated the Callan report is more of an industry standard.

Chairman Fleming stated the Callan report is more understandable and takes less time for staff to produce.

Mr. Galassi answered in the affirmative.

The Board directed staff to provide the Callan Report with a staff prepared Executive Summary as the materials for the TSRS Portfolio Composition, Transactions and Performance Review agenda item for future meetings moving forward.

C. Administrative Discussions

1. Priority of Future Agenda Items

Neil Galassi asked how the Board wanted to prioritize the future agenda items.

John O'Hare suggested staff provide more information about the future agenda items prior to the meetings.

Michael Coffey suggested staff include a summary for each of the future agenda items.

Chairman Fleming stated he will consider all of the suggestions and he will work with staff to compile a schedule for future Agenda Items.

2. IAPC Pension Sub-committee Formation

Neil Galassi notified the Board that the Independent Audit and Performance Commission (IAPC) Pension Sub-committee has been re-formed. Specific details about the sub-committee are still being discussed.

James Hannley, who was present in the audience, introduced himself as the vice chairman of the IAPC Pension Sub-Committee.

John O'Hare stated Mr. Hannley is also a member of the local CFA.

Michael Coffey asked if there are any of the Trust members on the IAPC Pension Sub-Committee board.

Dave Deibel stated Mayor and Council select the members of the IAPC Pension Sub-Committee.

Silvia Amparano stated the duties of the IAPC have not yet been defined. The staff will work to provide the IAPC with support and information needed.

Chairman Fleming stated during the formation of the IAPC, if a Trust member was asked to participate they would be allowed to.

Mr. O'Hare asked if staff could provide the agendas and minutes from the IAPC.

Mr. Deibel stated he does not believe the IAPC will be writing minutes for their meetings.

Mr. Galassi stated staff will provide the Board with updates from the IAPC as they move forward.

D. Articles for Board Member Education / Discussion

1. Callan Paper – Review of Past Capital Market Projections

E. Call to Audience – None heard.

F. Future Agenda Items

1. Disability Audit Results
2. Education Plan for New Staff and Trustees
3. Duties and Selection of Advisory Board
4. Hiring an Intern to Free Staff for Education
5. TSRS Board Annual Evaluation of Staff and Consultants
6. Formal Evaluation of Active Managers – 1.5% over benchmark over a given period
7. RFQ for Actuarial Services
8. Action Plan for Black Swan Events
9. Would It Be Better to Index the Whole Fund

G. Adjournment – 10:10 AM

Approved:

for 

Robert Fleming
Chairman of the Board

6/30/16

Date



Neil S. Galassi
Pension Administrator

6/30/16

Date