

CORAL GABLES RETIREMENT SYSTEM  
 RETIREMENT BOARD WORKSHOP MINUTES  
 THURSDAY, NOVEMBER 12, 2015  
 8:00 A.M.  
 YOUTH CENTER THEATER/AUDITORIUM  
 405 UNIVERSITY DRIVE

MEMBERS:	J	F	M	A	M	J-11	J-25	A	S	O	N	APPOINTED BY:
	15	15	15	15	15	15	15	15	15	15	15	
Andy Gomez	E	P	P	P	P	P	P	P	P	E	E	Mayor Jim Cason
James Gueits	P	P	P	P	P	P	P	E	P	E	P	Vice Mayor C. Quesada
Charles Rigl	-	-	-	-	-	-	-	P	P	P	P	Commissioner Jeanette Slesnick
Michael Gold	-	-	-	P	P	P	P	E	P	P	P	Commissioner Patricia Keon
Rene Alvarez	P	P	P	E	P	E	E	P	P	P	P	Commissioner Vince Lago
Joshua Nunez	P	P	P	P	P	E	P	P	P	P	E	Police Representative
Randy Hoff	P	P	P	P	P	E	P	P	P	P	P	Member at Large
Donald R. Hill	P	P	P	P	P	P	P	P	E	E	P	General Employees
Troy Easley	P	P	P	P	P	P	P	P	P	P	P	Fire Representative
Diana Gomez	P	P	P	P	P	P	P	P	P	P	P	Finance Director
Elsa	P	P	P	P	P	P	P	P	P	E	P	Human Resources Director
Jaramillo-Velez												
Manuel A.	P	P	P	P	P	E	P	P	P	P	P	City Manager Appointee
Garcia-Linares												
Jacqueline Menendez	-	-	-	-	-	-	-	P	P	P	P	City Manager Appointee

STAFF:  
 Kimberly Groome, Administrative Manager  
 Alan E. Greenfield, Board Attorney  
 Ornelisa Coffy, Retirement System Assistant  
 Dave West, The Bogdahn Group  
 Pete Strong, Gabriel Roeder Smith

P = Present  
 E = Excused  
 A = Absent

GUESTS:  
 Cathy Swanson-Rivenbark, City Manager

Chairperson Randy Hoff calls the meeting to order at 8:14 a.m.

1. Roll call.

Chairperson Hoff recognizes City Manager Cathy Swanson-Rivenbark, who is in attendance at the workshop. Mr. Hoff then calls attention that it is Mr. Alan Greenfield birthday.

2. Discussion of investment rate of return assumption.

Dave West of The Bogdahn Group informs that they will be discussing the return assumptions first. The investment consultant and actuary work together on the establishment of the investment return assumption. Typically the investment portfolio is the largest bucket and over time it usually constitutes between 60% and 70% of the cost of the plan. The other big balance of course is the plans sponsored contributions and as discussed in previous meetings and member contributions are very material. They have all these buckets making a contribution and if they change the expected contribution then the actuary has to make adjustments in one of the other buckets. Specifically, if they choose to reduce the rate of return assumption from 7.5% to 7.75% then the 25% that is expected to come from the investment bucket has to come from somewhere else. As the Board is well aware due to numerous discussions over what the return of assumptions should be and what is appropriate, there are definitely cost implications any time the rate is moved around. There are two very distinctly different focusses that need to be looked at when they are having that rate of return assumption discussion.

Mr. West will focus on the first part which is the investment implications of that assumption. The second portion is the actuarial experience which will be discussed by Pete Strong. They are two very different things that come together to make a program work for the plan. He will be presenting the following standard industry practice as far as an asset allocation goes. A couple of things to consider is this is modeling and asset allocation modeling is all assumption based. It is making assumptions on each of the inputs that are put into the model. The model itself is a projection of one big assumption. This is one tool and because it is assumption based they are expecting that the result will indeed happen. The second thing is they are forcing hard math on a set of variables. They are doing statistical analysis which is very scientific and precision based that is something that is not. It is not a flip of a coin. They are looking at the likelihood of investment outcomes where there are a number of added variables that come into play. There are flaws in the model but industry practice says there should be some way to reasonable substantiate expectations moving forward. The first analysis is using Historical Asset Allocation results. This is done using historical data going back as far as they can. The second approach is using their model forecast. This is using predictive assumptions, using the JP Morgan Capital Market Assumptions that are provided every year. In their opinion they are the most qualified to be presenting that. The last one is the GASB Return Building Blocks. It is another method, common industry practice, to use. They are trying to be reasonable in the approach looking at using past predicted and alternative predicted data to see what the possible outcomes might be.

They look at the historical allocation analysis. They are focusing on looking at the policy index, the actual historic policy and the actual returns net of fees. The policy index is basically the asset allocation that they pull out of their Investment Policy Statement of their primary targets. The actual historical policy captures all the changes made to the Investment Policy Statement and a historical return is calculated based on the Policy. The actual return net of fees which is the number the actuary uses in their valuation reports. Chairperson Hoff asks if the historical policy is based upon the current policy or the policy that was in affect at the time. Mr. West responds that it is all

inclusive. They are trying to track progress in an ongoing basis without losing any of the history. They are incorporating the history in the numbers.

Mr. West continues. He reviews the annualized returns of the plan. The actual return net of fees for three years is 7.96%, for five years is 8.63% and for ten years is 5.08%. If you look at the individual years, during the years they were off they were off the mark by such a huge degree. On normal periods they are in the expected range parameters. The 30 year average for the policy was 10.12% retroactively and going back 15 years they are short at 5.99%. Two different ten year periods were calculated both 1996-2005 which was a return of 9.72% and 1986-1996 which was a return of 14.12% just to break out different periods to see the market impact for those periods. They looked at the smoothing method. The purpose of the smoothing method is to take out the year to year variability relative to the target of 7.75%. One of the main points to make is of all the observations there were 79 periods out of 121 where they exceeded the 7.75% requirement and there were 82 periods that exceeded 7.5%. The point is there is very little change in the observations or the success. From an investment only standpoint it really didn't matter what the target rate of return was within a 7% to 8 % range. When things are normal they are making their return but because the outlying experiences were so extreme that it did not matter.

Mr. Gold thinks that it is important that over this 30 year time period that probably 40% of the assets were invested in fixed income and the 30-Year U.S. Treasury probably went from 12% to 3%. So when interest rates go down, bond prices go up. For those 30 years which is a very specific time-period that may not be like the next 30 years, interest rates went down 75% so the 40% of the portfolio that was working well for them during the last 30 years may not work the same way in the future. Mr. West agrees. It is a huge observation that will need to be looped into the projected returns.

Mr. Gueits arrives to the meeting at this time.

Pete Strong of Gabriel Roeder Smith, adds that mathematically it would only make sense to add one or two observations with each quarter point move due to the standard deviation rate of returns is 12% to 13%. One standard deviation makes up about 55% of your observation on either side. This means approximately 55% to 70% percent of your observations will be between negative 5% to plus 20%. It would make up about 65% to 70% of observations so mathematically you expected 65% in that big of a range expanding to 25% and only 2% or 3% of observations would be in that 7% to 8% range. It makes sense that you only add for over a 30-year period one or two additional observations by reducing it by a quarter of a point. The key is what the average compound return will be over a long period of time and not how many times you beat or fall short of a number but how the compound average looks over a long period of time once its multiplied all together. Mr. West adds that they could make the number but have two different experiences one that accumulated more assets than the other based on the order of events as far as the volatility goes.

Mr. West continues. From a historical basis it really didn't matter if there was a 7% or an 8% rate of return from an investment standpoint. It really has a minimal effect on the results. Mr. Strong disagrees. He thinks it does make a difference between a 7% and an 8% on a compound average basis overtime. It definitely makes a large difference on where the ultimate funded ratio would end up. Mr. West points out that Mr. Strong is touching on the actuarial implication and he strictly focusing on investments. Mr. Strong states that Mr. West is looking at the number of times the plan exceeds or falls short of a given return assumption in a single year or a five year period. His argument is that what really matters over the compound average period of time where your average ends up, whether you are above or below 7% or 8%. Mr. West comments that he is trying to stay on point regarding the investments. Chairperson Hoff points out that Mr. West is trying to focus on one aspect and then Mr. Strong is looking at his point of view so eventually they will push forward. Mr. West agrees. He is trying to put the blinders on from a portfolio construction standpoint how they will achieve the target rate of return. They would not expect any change from their portfolio construction because it would not make any difference unless they started to go down to 6.5% or something in the 6% range. Then they would have to take less risk and shoot for a lower rate of return assumption. His point is there really wouldn't be any changes in the portfolio until the rate of return assumption target changed materially and that would be something lower than a 7.5% or higher than an 8.5%.

Mr. West discusses the GASB Return Building Blocks method. The projections here are very long term and are integrating some element of history. They are trying to blend multiple factions together. The table contains the projection of long-term real returns for the plans target allocation as required by GASB 67 and 68. These expectations are not expected to change on a year to year basis. The total real return is projected at 6.33%.

Mr. West sums that there are three ways of looking at the projections. All are assumption based. The first way is historically, the second is projected and the third way is using long term assumptions. Within this whole this discussion, it would not be likely that they would change the portfolio allocation.

Mr. Strong continues the discussion. He informs that for that since 2004 the investment assumption return has been 7.75%. In the past four years they have seen numerous plans reduce their investment assumption returns mainly by looking at what has happened in the last 10 or 15 years and in response to that doing forward looking assumption based projections trying to come up with what the most realistic returns would be going forward. Right now, their clients' averages have come down from 7.75% to 7.4% since 2011. That is about a 35 to 40 basis point reduction and that is about across 100 clients throughout Florida. Mr. Garcia-Linares asks if they have been doing it gradually. Mr. Strong responds that some clients have made this change gradually and some have instantly made the change.

Mr. Strong continues. Since 2010 to 2011 when the topic of forward looking assumptions came into focus more after the 2008-2009 down turn, they have been collecting forward looking market assumptions from eight different investment

consultants. The eight different forecasters they have collected assumptions for are BNY/Mellon, Aon Hewitt Ennis Knupp, J.P. Morgan, Mercer, NEPC, Pension Consulting Alliance, Towers Watson and R.V. Kuhns & Associates. These are all National investment consultants. They used the same asset allocation targets that the plan uses. The average of all eight consultants for the rate of return of this plan is a one year nominal return of 7.18% using the target asset allocation from The Bogdahn Group. The inflation assumption on average is 2.27% forward looking. Over the last seven years inflation has averaged less than that at about 2%. This results in an expected real return of 4.91% with a standard deviation of expected return at 13.2%. That is for one year where about 70% of observations would be 13.2% below that number or 13.2% above that number. This number is a one year nominal arithmetic average expected return gross of fees.

They did a 20 year stochastic simulation 2000 trials using all of these inputs and they take a distribution of the compound average of each of those trials. Fifty percent of them came out above at 6.39% and 50% came out below of 6.39%. So the 50<sup>th</sup> percentile of these compound average returns for 20 years came out at 6.39%. The probability of exceeding 7.75% out of those was 32.3% and the probability of exceeding 7% was 41.8%. Again this is assumption based but they are looking at eight different firms and averaging them all together. It is not going to be accurate and it will never be replicated in practice because there is a range around that. They want to use the best estimate they can for projecting what the plan is expected to earn. If they fall short of projecting what investment earnings are expected to be then over time they will accumulate losses and that will have to be made up by the City and other contributions.

Mr. Strong points out that active management fees typically run about 50 to 100 basis points for certain funds and passive management fees usually run about 15 to 25 basis points. The new Actuarial Standards of Practice basically requires them to demonstrate a best estimate assumption for the investment return assumption. In doing that they need to reflect investment fees and you are allowed as actuaries now to assume that alpha from active management will at least cover the difference between active and passive management fees. You can assume an active management strategy will generate the same net return as a passive management strategy would. So that is saying that active management will generate enough alpha to justify the increase in fees otherwise everyone would be investing in passive management and there would be no active management. That difference in fees is the 50 to 100 minus the 15 to 20 which means they still need to assume passive management fees coming off expected returns. The 7.18% gross is what is considered to be the mean expected return. The median expected return over a 20 year period was 6.39%. If you take the average of the ending balances and compute what the average compound return was to get the average mean balance that would be the mean expected return of 7.18% minus investment expenses which would be about 7.0%. The median return assumption should be set at the 50<sup>th</sup> percentile of the projected average compound return which is 6.39% or about 6.25% net of passive investment expenses. The median is lower because of the volatility drift. He is comfortable with the arithmetic mean return being used but that still means 7.18% minus passive fees gets you to 7.0%.

Mr. Strong recommends that the return assumption be lowered to at least 7.25% or 7.0% net of investment fees. They could phase it in using quarter point increments. According to last year's valuation results a 7.50% assumption would increase the City's contributions by \$907,000 a year and would lead to a decrease of the funded ratio by 1.2%. An assumption of 7.25% would lead to a \$1,839,000 increase in City contributions and a 2.4% decrease in the funded ratio. An assumption of 7.0% would decrease the funded ratio by 3.6% and would be a \$279,700 increase in City Contributions. He is okay with phasing it in but their recommendation is to target 7.0% investment return assumption. They are reflecting what is going to happen in the future and 7% is more likely average return than 7.75%. If you don't go to 7% now then they will have to make it up later when experienced loses compound and add up and the plan ends up still at a 50% funded ratio 20 years down the road. Over a 30 year period, it would lead to a 20% lower funded ratio than where you would have been and instead of being fully funded you would still be having a large contribution 20 years from now and still be funded at the 60% or 70% level in terms of the funded ratio. Leaving the return assumption at 7.75% and actually earn 7.0% a year on the assets you will trickle downward and never get back to 100% funded ratio. Mr. Gueits asks if the Board decides to gradually make the change over what time period what would Mr. Strong suggest they do. Mr. Strong proposes 25 basis points a year which will get to 7.0% in three years.

Mr. West informs that his firm has several clients that have implemented a tenth a year with the end game objective being the same but choose to take a more financially palpable approach from a plans sponsor stand point. They would still expect no changes to the portfolio. Mr. Easley asks if all the numbers Mr. West used were net of fees. Mr. West acknowledges that everything used was gross of fees. Mr. Easley adds his question was just for a clarification but mainly Mr. West's presentation was that the Board should stay on the same course of action as far as investments because if you lower the assumption rate usually it changes the investment policy going forward to some extent or not. Mr. West advises his purpose was to show strictly from what the portfolio composition would look like. The portfolio would not be changing because it did not make a whole lot of difference in the outcome. However from a cost implication standpoint it does if they are missing due to the long term compounding factor.

Mr. Garcia-Linares asks if the Board moves to 7.5% this year would they be close to what other GRS clients are at for their investment assumption return. Mr. Strong answers affirmatively. They have more clients coming down in their assumption rate after 10/1/2015. Mr. Garcia-Linares asks that if they went to 7.5% this year and over the next five years they were to reduce it to 0.1% to try to get to the 7% would that be reasonable. Mr. Strong believes that would be a reasonable course of action and he would be okay with it.

Ms. Gomez states that the City has made a commitment to make additional payments for the unfunded liability to the tune of \$26 million or higher each year. This will obviously help and affect the funding status and with time make the annual required contribution lower each year. Have the actuaries taken that into effect? Isn't it better to apply more to the unfunded liability like a typical mortgage principal hit versus making a required

payment higher just because they are lowering the investment return? Mr. Strong responds that they need to recognize what the true unfunded liability is and if they are expected to earn 7% over the next 30 years instead of 7.75% then their true unfunded liability should be calculated with a 7% discount rate instead of the 7.75%. If you calculate your unfunded liability with 7.75% then you are baking in an assumption that for the next 30 years you will be getting 7.75% on the asset as your investment return. Mr. Gold thinks it is not apples to apples to compare to a mortgage because it is also not a fixed liability. The money is owed regardless and whether these funds are paid to unfunded liabilities today or as an expected payment the funds must come from somewhere at some point or it will be a greater obligation in the future. Ms. Gomez agrees but it is a bigger hit on the City and if they are making additional payments the required hit will be less. Mr. Gold states that fifteen years from now and it is still the same amount of dollars. Mr. Garcia-Linares comments that this would be putting off the inevitable like they have done before. Ms. Gomez thinks they could take it in increments that are more palatable to the City as opposed too all at once. If they go down to 25 basis points that cost is close to \$1 million on top of that early implementation that they did which was another \$1 million. It is very difficult for the City to pay these monies all in one shot. Mr. Garcia-Linares states that at some point they are going to have to pay. So they should start gradually paying it now as opposed to waiting for years.

Chairperson Hoff recognizes the City Manager. Ms. Swanson-Rivenbark points out that the reality is that the City can't do it all. They can't pay more than what is owed and they can't reach 7% unless it is so gradual overtime that they are able to absorb it. That is the reality. It is something they have grappled with trying to make improvements in the unfunded liability. The Commission is very committed to paying more to the plan every year to lower the unfunded liability. For the plan to go from 7.75% to 7.5% in one year is not gradual for the City. They need to look at what the recommendations are because she is looking at all the implications for everyone on this issue.

Mr. Strong points out that he has two clients that have been at 7% or lower for as long as they have been actuaries to their plan and one of the plan's funded ratios is 101% and one is 90%. When a plan has a more conservative assumption they usually has led to more proper funding over the long term and having experience that comes closer to what that assumption was and leading to a healthier plan.

Chairperson Hoff comments that the entire discussion today seems to be about the assumption rate and he thought they were doing the workshop on a funding policy discussion much same as they had during the FPPTA school. That is what the purpose of this workshop was supposed to be. This discussion is very important but that is not what he came to the workshop expecting to hear. Mr. Strong explains that it was supposed to be half of the discussion. They kind of ran long on the investment return discussion. Chairperson adds that there are many parts to this discussion on investment return and this would be an implementation for 2016. Mr. Strong explains that the State of Florida Division of Retirement is starting to reject valuations that have a 7.75% or higher return assumption. The letters have said that the State did not approve their valuation report based upon the return assumption. They have recommended for the last two to three

years that assumption rates be lowered and they believe 7% to 7.25% is a more reasonable return assumption.

Mr. West informs that one of the key reasons why this discussion was included was because in looking at the Plan's funding policy the philosophy for approach towards what the rate of return is going to be is a key element that goes into funding policy considerations. Chairperson Hoff understands. One of the key points he received during the Funding Policy presentation at the FPPTA needs to be a team concept between the City and the Retirement Board. Mr. Strong informs that he can go through his discussion of the funding policy quickly. Chairperson Hoff responds that he would rather have more thorough discussion. He points out that Mr. Garcia-Linares is the most tenured Board member but they are all going to be gone as this progresses. He would like to think that this Board will be the Board that sets the policy for the future that is going to take these discussions out of it because they will have an analytical way of changing their investment return assumption rate. By having a Funding Policy it sets the future and takes the decision making disagreements out of it because they will have an analytical approach as to why they are doing what they are doing.

Mr. Garcia-Linares asks for Ms. Gomez to come up with a plan for reducing the investment assumption rate. Mr. Strong points out that he has only seen rejection letters from the Division of Retirement for closed plans. The most he has seen a plan phase in lowering the investment assumption return was for five years and reducing the investment assumption by 15 basis points per year.

3. Discussion of creating a funding policy.
4. Adjournment

The workshop adjourned at 9:30 a.m.