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**Quarter Ended 3/31/11 Performance Meetings  
 & Annual Manager Reviews**  
 July 27, 2011  
 Retirement Fund Conference Room

**Board of Trustees Present:**

- Joe T. San Agustin, Chairman, Board of Trustees
- Wilfred P. Leon Guerrero, Ed.D, Chairman, Investment Committee
- Gerard A. Cruz, Member
- Wilfred Aflague, Member
- Antolina S. Leon Guerrero, Member
- George A. Santos, Member

**Staff Present:**

- Paula M. Blas, Director
- Diana Bernardo, Controller
- Rosalia Bordallo, General Accounting Supervisor

**Other Present:**

- Maggie Ralbovsky, Wilshire
- Howard Yata, Wilshire
- Doris Flores-Brooks, Public Auditor

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## **9:00am-9:45am Introductions**

## **9:45am-10:30am Economic & Capital Market Environment**

Howard Yata: Let me just start off by turning the tables and saying thank you for allowing Wilshire to be your investment consultant. We're very pleased to be here to work with you. I can't guarantee you that there will not be a loss of money but we're going to provide the best advice possible to give you the best return over time with a reasonable amount of risk and when risk is involved, there's always a possibility of losing money.

I'm going to show you something in a minute because people think you can't lose money on Government bonds. The reality is there was some loss on Government bonds even last quarter and Maggie (Ralbovsky) will talk about it.

You have a big book which is called "Government of Guam Retirement Fund First Quarter 2011 Performance Review," July 27<sup>th</sup> at the bottom. We have about 6 or 7 pieces of material because we're not really sure, this is our first quarter going through all of this. Maggie (Ralbovsky) is going to start out with the capital markets review and I'm going to jump in part way through that and then carry you through the first quarter performance review.

Maggie Ralbovsky: Let's talk about the debt ceiling, that's a burning desire that everybody wants to hear. Let me show you a number on page 2 of this book, it says the last portion, the fixed income portion, it says that the end of the first quarter, remember this is the first quarter review, the 10 year treasury yield was at 3.47% and that yield actually has dropped by 30 basis points from there to here which means the market is not pricing into any distress into the treasury market. The reason is that if the market thinks otherwise they would have been demanding more yield from the 10 year treasury than less, so that tells you that even though all the talks are out there to say what happens if the treasury, they don't reach a debt ceiling agreement, we will have to technically default on treasuries, the market does not for a moment believe that's going to happen, it hasn't been priced into the market at all. I actually looked at last week, there was a table compiled by Bridgewater which is a research firm, they compiled that table to show what has been priced into the capital markets on a different Government default probability. The U.S. Government is at the lowest level, it's at 1.3% for default. The next lowest was Japan at 3.5% default rate, possibility of default and the next one is South Korea at 4.2% and everybody else in the developed markets is somewhere around between 4 and 5%. Europe, if you talk about Greece, now that's a possibility of default at 92% which is almost a certainty for that default. So put everything in perspective, I think it is very hard to imagine this will happen, the default will happen. If there is a technical default that happens which means by the deadline we do not have an agreement, technically U.S. may be in default. Somebody, actually Bridgewater did a calculation, the Treasury Department actually has a way to meet the treasury interest rate payment to avoid default by 2 weeks, so technically speaking even if we don't have a debt ceiling agreement we still can avoid default by 2 weeks. I think default is really not that possible; a possible scenario is that the S&P may down grade our credit rating to double A and what's going to happen, that depends on if the market buys their rating, S&P has really lost a lot of credibility

during the crisis, so the market is really not pricing into any distress scenario for the U.S. Treasury. I don't know if that answered your question.

Wilfred Leon Guerrero: If it down grades to double A what does that mean? Maggie Ralbovsky: It actually doesn't mean much because first of all Larry Summers who was the old former Federal Reserve Governor, he said that it could be bad because of all the money market looking to sell treasury bills, that's not going to happen because even if treasury bills go to double A, they still qualify under the money market fund guidelines, so money market funds are not going to sell treasuries just because they get down graded. Even when they are in technical default they still qualify under the money market guidelines, so that's not going to happen. Insurance companies are not going to sell it because insurance companies can hold everything above investment grade. The collaterals, we have to remember treasuries are used as collaterals for securities lending purposes, for credit default swaps, all the other derivatives out there traded they use treasuries as collateral and those are not going to be impacted either because those are self governed, so the bank may say, I can take treasuries, it didn't say treasuries have to be triple A rated. I think if it does go into default the impact is really not much, however if the market loses confidence in our willingness to pay future debt, we may experience a sell off which means the treasury yield may go up. That is a bad scenario because all the debt out there are benchmarked against treasury yields, so when treasury yield goes up all the debt people have borrowed against corporations, mortgages, all the debt rate will go up which will cause a real stress to a very weak economy. The possibility of that happening is there, however it also is not very high because if people do not hold treasuries what do they hold, where do they go, you can't buy Japanese bonds, Japan is really heavily levered, you can't go to Europe, Europe has a really bad debt crisis, emerging market debt is really not up there yet in terms of quality. People buying gold, gold is a very, very volatile commodity, it is very hard to put a price on gold, it is demand supply driven, it does not pay dividend, it does not have an intrinsic value, so it's very hard for me to imagine that people are going to sell treasury bonds and all go to gold. The big buyers of treasury China for example, holds \$3 trillion dollars of treasury, Japan, South Korea and Kuwait, oil exporting countries, they hold a lot, trillions of dollars in treasury, there's nothing they can do about it, they're going to hold it, it doesn't matter what happens.

Bottom line, I think the risk in sell off of treasury markets is there but it's really not going to be the kind of devastation as in 2008. Wilfred Leon Guerrero: What I'm hearing you say that even if there is a sell off we have no place to go. Howard Yata: There is no way to predict the effect it's going to have on equities, stock markets world wide. There are only 7 triple A companies left in the United States, so we can't buy triple A bonds because there aren't very many. I think the bottom line impact is going to raise yields as Maggie (Ralbovsky) said, all over across the board. Maggie Ralbovsky: If the market decides the sell off is necessary. So far they haven't decided that, treasury yield behaved very well right now.

Wilfred Leon Guerrero: On that securities lending program the borrower is required to put up value of security and what they do is they buy the treasury and I think that's the requirement we have with our custodial bank. The bank bought U.S. securities but the value of that has gone down, would the borrower be able to take some of the money out? Maggie Ralbovsky: For a securities lending program your collateral is

market to market every day. For example if I have 100 shares of IBM, it's \$100 dollars a share and you want to borrow it, you post collateral of \$102 dollars per share in treasuries today and tomorrow let's say treasury rates go down, IBM stock went up and you have differential and you're suppose to put up more collateral to cover the differential, so you are basically at risk for one day, intra day basically because by the end of the day the person that borrowed your security is suppose to put up more collateral if that collateral value has gone down. In essence the risk is really not that high if you think it's an intra day thing. Howard Yata: Incremental piece, that one day is an incremental difference. Maggie Ralbovsky: Right and so the major risk in a securities lending program actually does not come from this particular collateral but rather how the agent invests the collateral. I have an explanation later as to how things work in a securities lending program, but the bottom line, Northern Trust who is your agent will take that collateral and in order to beat the treasury rate because they have to pay the interest to the person who posted the collateral, that's called rebate they have to post treasury interest and give back to this person, so in order to beat that they have to buy something else that can yield more than collateral yield and that is how they profit. During 2008 the problem that happened in securities lending programs was because the lending agent, in this case Northern Trust has bought into high risk securities for the collateral and those securities gone bad, so a lot of them got stuck with Lehman bonds and Lehman went from double A rated all the way to default over night which caused those programs to permanently lose value and they couldn't cover the collateral interest.

Rosalie Bordallo: Excuse me, can I ask a question? Have you reviewed our securities lending program with Northern Trust at this time? Maggie Ralbovsky: Well we are familiar with Northern Trust's securities lending program. Rosalie Bordallo: No, have you reviewed ours, the program we're existing under? Currently my understanding is we don't take cash, just collateral so they don't have this problem of re-investing to get a higher yield, we're only taking U.S. treasuries and short term. Maggie Ralbovsky: They do, they have to take that U.S. treasury and invest in their pool. Rosalie Bordallo: Right, what I'm saying is we have no cash collateral being allowed into our program, so what you're talking about is kind of not relevant to our current program. Maggie Ralbovsky: How so? Rosalie Bordallo: Because you're saying the collateral that they're going to get and I think the problem that Northern Trust had was obtaining cash as a collateral and not necessarily taking U.S. bonds as collateral. Maggie Ralbovsky: No, they take U.S. bonds as collateral but then they use those proceeds to re-invest in a higher risk program so they can pay the borrower back. Gerard Cruz: That's correct, but that was the collateral requirement of a separate program is what I think you're saying. Rosalie Bordallo: Right. Gerard Cruz: You're correct, the mechanics is you take the collateral and you re-invest is so as to be able to rebate or repay the collateral branch or the borrower the interest that they would have otherwise received had they not posted that collateral, that's correct. The point I think Maggie (Ralbovsky) is making is that's the mechanics of it. The point you're making is that instead of taking on bonds or debt, the collateral that we can accept is pure treasuries, so the risk of that happening, the risk of a Lehman fall out for example or a Lehman blow out for us is much lower because we don't allow for corporate debt or those things. Maggie Ralbovsky: I think I probably didn't explain it correctly. When you take collateral it's always treasuries, but the agent re-invests that. Rosalie Bordallo: My understanding is they can take cash, that you can have cash as collateral or a bond. Maggie Ralbovsky: Treasury is almost like cash, it's

liquid. What happened wasn't the collateral went bad, but the collateral management pool went bad so when Northern Trust took the collateral they just don't hold the collateral and wait for it to mature, they re-invest that collateral into something else so they can make money otherwise they can't make money. Gerard Cruz: Since 2008 I think we can move on because we're kind of getting stuck here, but since 2008 there's been reform in the method and the mechanics that --- a securities lending program whether it be Northern Trust or any one of the other custodians, a change in the method by which they invest and do their programs. The likelihood of something like that happening although it does exist is probably a lot less because of the collateral requirements and the need to match maturities with the collateral at the time you have to pay back. Maggie Ralbovsky: It's the collateral pool management guidelines I think tightened the law, that is correct, but I was trying to answer the question on the default treasuries, so if treasuries have a down grade this collateral poster has to post more collateral, basically that's the case.

Wilfred Leon Guerrero: I think the other thing that I want to bring up is, what is our exposure to this, the size of our exposure because by law I think we're suppose to have like 30% in bonds right? Rosalie Bordallo: What do you mean by exposure? Gerard Cruz: We have about 40 bonds, we're 40 exposed to the bonds, but they're not all treasuries, they're also in U.S. corporates, mortgage back... Wilfred Leon Guerrero: I want to zero in on that because then you have that requirement that we have to have 30% of our assets in bonds and they're not all U.S. treasuries, but then the securities lending adds on to that. Maggie Ralbovsky: Well first of all, all bonds are priced off treasury so if treasury has a problem, yield goes up, all bond yield will go up including non-treasury exposure as you mentioned, the corporate bonds, everything will go up. You do have that exposure if you think that is a bond like exposure, you do have that and that's also not going to be good for equity because yield goes up, equity is also going to be impacted probably actually more than bonds. If you want to think of worst case scenario, let's say treasury had a huge sell off, then really everything will be impacted, although that possibility is really very, very low in my view.

Howard Yata: By the way, I do want to remind everybody that this is the first quarter, as of March 31, 2011. I want to apologize because I don't think we met the whole group when we made our presentation, so I thought maybe Maggie (Ralbovsky) should tell a little about herself and I'll tell a small amount about myself and then we'll move forward. Maggie Ralbovsky: Okay, I am Maggie Ralbovsky, I have been working at Wilshire for 9 years, we are a team and we are interchangeable, we cover the same client base. Before working at Wilshire I worked at Goldman Sachs I actually was doing a lot of derivatives hedging kind of work. Before joining Goldman Sachs I went to Cornell University for my MBA, I also hold a CFA charter. Howard Yata: I've been with Wilshire for 26 and a half years, I am the most senior consultant on the team. Prior to that I was an assistant treasurer with a large corporation in Los Angeles so I had corporate finance and investments and I hold an MBA from Pepperdine University. Wilfred Leon Guerrero: You actually worked with Terry (Dennison)? Howard Yata: Yes, Terry Dennison worked at Wilshire before he left to Mercer. I think it was only maybe a year overlapping, but I do know Terry (Dennison) I've seen him periodically. By the way, hats off because the fund has actually done very nicely with Terry's (Dennison) leadership. Lastly I'm a member of the Board at Wilshire and I'm a member of the senior ---- committee with the consulting. Maggie Ralbovsky: Both of us are shareholders at Wilshire, Wilshire is a privately owned company. The owners

like Maggie (Ralbovsky) and I, there are now 50 plus owners, we have a vested interest in making sure we're providing good advice for our clients and so we're compensated both in terms of retaining clients and then ultimately getting dividends from the corporation so we think our interests are in line with your interests.

Maggie Ralbovsky: Even though this is first quarter you can see the trend continue into second quarter. I circled certain bubbles on this page which are the things I want to focus on. I want to first bring your attention to the manufacturing, you can see that April was 61.4 and March was 61.2, it doesn't seem to be a huge differential, but that trend continued to weaken. In the 2<sup>nd</sup> quarter I can just --- a number for you, maybe you can take a mental note, in both June and May those numbers went to the 55 and 53 range which feed into the markets fear of a double dip recession because we know that if that number goes below 50 it's usually considered as a contraction which is the leading indicator for recession. Part of the reason was the QE2 program was ending June 30<sup>th</sup>, QE2 is a short form for quantitative easing number 2, that is the number 2 round for the Fed's to print money and in the second round of printing they printed \$600 billion dollars which equates to every day \$7 billion dollars purchase of treasury bonds and Government bonds in the market, it's a huge support to the economy because supplies liquidity also depresses the interest rate so people can borrow cheaply. That program was coming to an end June 30<sup>th</sup> and the market was having a debate as to what's going to happen to the yield because on the one hand you're losing the purchase power, the demand which logically should push the yield higher, on the other hand because you are losing a driver of economic growth which means economic growth will be depressed which is a forced push down the yield, so those 2 forces are being attacked, sort of war, during the first quarter people were debating that, but the 2<sup>nd</sup> quarter has shown us that the weakness took over which was indicated by the ISM index which is this number, the manufacturing index went very close to 50, so there was debate in the market, double dipping that's why one of the reasons treasuries sold off, the treasury actually gaining strength, equity market sold off during the 2<sup>nd</sup> quarter.

That's one bubble I wanted to point out. The 2<sup>nd</sup> bubble, the CPI on the top and the reason that number is a number we look very carefully is because that is the indication of inflation. Inflation is the big enemy for all long term investors because all financial assets today have priced into an expectation of 1.6% inflation for the next 20 years and if inflation rates actually go higher than that, all the financial assets will have to be re-priced which means the price has to go down across the board to reflect the expectation, that's because investors are demanding a spread over inflation. Inflation is a measure as to how much money can buy in real goods, so if inflation goes up investors demand return for all asset classes will go up because when you invest you are expected to be compensated at a rate above inflation, so that is the reason inflation is a key number of people watch and inflation has been quite elevated in emerging markets, like in China, India, in those countries where food is a huge component of people spending. In India the spending for food is something like 72% of family's budget and in the U.S. it's in single digits, so when food prices go up it doesn't hit the U.S. CPI immediately as high as in India because food is such a small component in the basket of goods people buy. If you just take a look at break even for inflation for 10 years, it's 2.5% so that's for the past 10 years inflation was running 2.5% per year and if you look at the monthly rates if you just mentally annualize those monthly rates it's pretty much running at 5-6% per year so it's significantly above

trend and that is why it has been a thing people watch and this main reason for this upward tick in the U.S. was because of commodity price inflation, gas prices, corn, you see coffee, sugar, cotton, every day there was something that was in short demand. There is this fundamental fear that inflation may become uglier because this whole generation of investing community has not experienced inflation because the last time we saw inflation was in the 1970's. Most of this generation of money managers grew up after 1982 where there was no inflation. A lot of the portfolios were designed based on our own experience which was very tamed inflation, just well behaved, the Fed can control everything, the theory is inflation is a thing of the past because the Fed can always raise interest rates, don't worry about it. If that turned out not to be true, a lot of the portfolios are just very susceptible to a scenario that we haven't experienced in our working life.

There are 2 other bubbles on this page, the first bubble is for the GDP and you can see there is a decidedly improvement from the negative region, now it's positive even though the recent stats have been very negative, I think in June we registered a flat or zero percent.

The last bubble is unemployment rate, again you can see the numbers are positive so the improvement is definitely there in the economy, however this rate of employment growth, job growth is so slow at this rate it will take another 46 before we reach the previous employment level before the crisis. That's why jobs, jobs, jobs is in the slogans for the politicians because it is a real issue for recovery.

I'm going to move to the next page, the next page is something that is also bothering the investing community as well as the political community and that is the fact that the real unemployment rate is probably higher than the headline. The reason being based on the headline unemployment rate people can come to the conclusion that the labor force is shrinking because I think 9.3% unemployment rate people can calculate what is the labor force size. You can see the blue line on this chart is the labor force and you can see that labor force is shrinking based on this headline unemployment rate number, however logics have told us historically labor force rarely shrinks and if you just do a very reasonable projection labor force has actually grown. The reason it wasn't registered in this number was because there were so many discouraged people who stopped looking for jobs and when people calculate unemployment rate we basically do surveys, you call up someone and say are you looking for a job and they'll say no, I'm not looking for a job and then they're not even counted as the base for them to calculate unemployment rate. So if it's not logical to think the labor force has shrunk, if it hasn't shrunk, what is the unemployment rate and I circled the bubble, the calculation is 12.3%, so that might be the real unemployment rate which is very troublesome.

Doris Flores-Brooks: What about unemployment insurance because I've read different scenarios or articles that said the extent of unemployment insurance benefits have discouraged people from looking because the incremental gain in going to work is at a much lower level from where they were previously is not worth it and why should I bother because at least it's sustaining them. How does that play into the equation?  
Maggie Ralbovsky: I think that may play a part in this for people to be not looking for jobs because they can collect 99 weeks and there's evidence that they're better off to collect than to get a minimum wage job. So definitely that probably plays a part in it.

Doris Flores-Brooks: And that's a Government funded program. Maggie Ralbovsky: At the same time there are people who really can find a job and if you don't support that people are going to go on the street and that's not good either. Howard Yata: I think a lot of that extended benefit has run out or is starting to run out for people who got this extra extension.

Maggie Ralbovsky: I'm going to move to page 5, page 5 has another equation that feeds into the weakness of GDP and that is the savings rate going up. I know we have been talking about people who have too much debt which is true and that debt level has been erased by about 5% of GDP, however that erased debt was mainly coming from people walking away from their mortgage, defaulting on their loans, at the same time consumers are losing the power of borrowing. People have the misperception that banks are not lending because they're not willing to lend, it is not exactly true, 30% of the homes, mortgages are under water so if these people hold a mortgage that's under water they basically do not have the capacity to borrow more, they don't have the assets to support their debt. You are also facing unemployment rate at a very elevated level so you are lacking credit worthy borrowers that banks want to give money to so it's hard to lend, it wasn't entirely willingness to lend but rather you don't have the demand and on the supply side we're implementing new banking rules. The new banking rules require the capital base be raised which also constrains the banks ability to lend. All that works into the lost GDP, when people are not borrowing, they're saving, all counted into savings rate and the savings rate has cost us 2% GDP by going a little bit higher.

I have commented on inflation earlier, here's another indication, you can see that for a the U.S. basket of goods the main inflation contribution is transportation which is gasoline basically, however also you can see the market has not priced into much of the inflation for the next 10 years. On the bottom chart it has not priced into more than 2.5%, however it been higher, the market is getting worried, still it wasn't priced into a very high inflation level. That inflation number headline did go down for the 2<sup>nd</sup> quarter because of the weakness in oil prices and all that.

Joe T. San Agustin: Can you go back to the savings rate, how do you compare the U.S. savings rate with Singapore... Maggie Ralbovsky: You can't compare, we're in single digits, they're in double digits, China is 60% savings rate. So there are people who are thinking that's not apples to apples because the U.S. savings rate does not count 401k, this is just personal savings rate, how much you are taking after you pay bills. It doesn't count retirement, in China people have to save those things themselves, they have a different calculation, but bottom line still the U.S. is a heavily indebted, has heavily indebted consumers.

In China on the Government side they are very, very clear as to where they want to invest, that's infrastructure, they have been buying up the coal mines, the oil field in Middle Asia even in the Middle East portion they have been just silently accumulating the resources because they realize for China to move from this point on, they need a huge input of resources and the resource needs will be more than the planet can supply basically. They're investing in renewable energy actually more aggressively than we do, they want to reduce their dependence on fossil fuel, at the same time also accumulating fossil fuel just to support their base, a lot of that investment is going up in China.



On the Singapore side, that country has very influential sovereign wealth funds, they actually buy businesses, they actually do huge financial investments, rather than the actual business investments. So that is quite a different direction.

Page 7 is reinforcement why on the underlying conditions for inflation because capacity utilization that is to say the capacity of all the factories in the country, how much is being used and if more is being used that means production capacity is being at a high demand which has a pressure for price to go up. If less is being used then you have more supply than demand then price will go down. So, capacity utilization is something we watch and you can see it's been quite tamed, it's below 80%. Ever since 2007 it's had a huge drop, it's recovered quite a bit but still below 80%. This is something the Fed watches when they decide on interest rate action and now it looks pretty well behaved, that's another reason they're not raising interest rates yet.

Howard Yata: I'm going to cover the end of the first quarter for the financial investment markets and then also the Plan. Please interrupt me if you have any questions, this is perhaps Wilshire's way of showing you the information, it may be different from what you're use to seeing so just ask questions if you wish.

On page 8 is a snapshot of what happened at the end of the quarter for the U.S. stock market. In that top panel you'll see we break the market down into several pieces. The Wilshire 5000 in case anyone doesn't know is an index of every listed stock in the United States, so it's large cap, small cap, value, growth, everything. It's a mis-number because there are 3900 stocks now, at one time there were 7,000 stocks, when we created the index there were 5,000 and so rather than changing the name every day it stays at Wilshire 5000, but just know that it's every listed stock in the United States. We break down the market into some different categories, one way is to look at large cap versus small cap, so that splits the market into about the 750 largest stocks and the rest after that and I think you can see that's it's been a smaller cap market place over the last 10 years, pretty big margins for instance in the one year column where you have 27.5 versus 16.2 for large and for 3 years 11% versus 2.6, it's been a very small cap oriented market. You can see that on the left hand chart we chart that but this is really the 3 year column, up above you see 11 versus 2.6 that's what that last point is, the orange line that goes from left to right, so it plots every 3 years looking back historically the difference in large cap and small cap. You can see the last 10 years it's pretty much been every time you look back 3 years, it's been favored to small caps except a period there which ended in December 2008 which we know was the market crash. So small caps over the last 10 years have really out performed large caps. We look at value versus growth in the middle section of the table and you can see over the last 3 years growth has out performed value, but if you look at the 10 years it reverses itself. I know that you have both value and growth in the portfolio, both large and small in the portfolio and the reason is we never really know which one is going to out perform so you have a diversified portfolio mix.

Just a quick snapshot on the upper right hand box, this is just again the end of the quarter, the sector returns, you can see energy at 16.88% for the quarter, just a crazy return versus the other categories. The Wilshire 5000 is right in the middle at 6.18 which rounds to 6.2 which is the quarterly return and you can see each of the different components. When I look at a chart like this it tells me that active

management is a very difficult process because you never know when these sectors are going to out perform so you have to have a diversified portfolio.

Over on page 9 this is the fixed income market, I was eluding to this when I talked earlier about actually losing value in treasuries, so for the quarter treasuries actually lost .2%, not a lot but they did lose .2%, many people think you can't lose money on treasuries, well you can when principle values goes down and rates go up. We think of the broad bond market as the Barclays Aggregate bond index which was up .4% for the quarter, up 5.1% for the year, so bonds had a very decent returns for the one year time period, not compared to stocks as we saw earlier. If you scan down on that upper table at the high yield index you'll see it was up 3.9% for the quarter and 14.3% for the year. So what we saw in this last 12 month period was a return of risk takers to the market place and especially apparent when you look at high yield versus the aggregate bond index, 14.3 versus 5.1 for the year.

I'm going to skip down to page 10 because it's kind of an interesting look that also proves my point about quality or high yield versus the Barclays Aggregate. This page just breaks down the high yield index, I know you don't have much invested in high yield but what it shows in that bottom part in the top panel Ba high yield bonds return for the one year is 13.4% and the Ca to D just second from the bottom line, 25.3% for the year, so it just shows you the junkier bonds were in the last year, the better your return was and again risk takers were in the market place. Gerard Cruz: Why would that be? Howard Yata: Well we had a reversal from prior years because when we had the market crash people fled to treasuries, people wanted safety, they didn't want to take risk, they came back to take risk again and you can see that actually on page 10 on the bottom chart. Gerard Cruz: So these C to D, these would be new issues coming in? Howard Yata: No, these are issues that are at that rating. Gerard Cruz: At the time? Howard Yata: At the time of purchases traded for the last year. Gerard Cruz: So they could be seasoned bonds that because for whatever reason re-graded down to C, D. Howard Yata: It could have been Chrysler, I don't know if Chrysler was a C or D, but it could have been a bond by Chrysler price that got graded way down. Gerard Cruz: But started as investment grade? Maggie Ralbovsky: It could falling be --- into the junk category during 2008 people were pricing into sure default and it didn't default it went into the market... Gerard Cruz: So they're seasoned, they have a history of payments, coupons... Howard Yata: Yes, these are not new issues, these are bonds that were rated C to D at March 31<sup>st</sup>.

I'll skip page 11 because I don't think it's all that relevant. Let's look at page 12 because that's non-U.S. capital markets, kind of an interesting area. We break the market down again into pieces, are you familiar with MSCI, Morgan Stanley Capital International? ACWI is All Country World Index and so that first line is that all world country index excluding the United States, it's everything but the U.S., it's Canada and the emerging markets, developed markets and that was 3.5% for the quarter and 13.6 for the year. EAFE is Europe, Australia, Far East so that's the developed world, that was up 3.4 and 10.9 for the year. Emerging markets up 2.1% but 18.8 for the one year time period, so emerging markets were really leading the world for much of the time period, in the one year time period and the slightly staggered in the quarter. The Frontier markets you may not even heard of those, that's even below the emerging markets. Maggie Ralbovsky: Iraq, Nepal... Gerard Cruz: What do they (Nepal) export? Maggie Ralbovsky: I think it's mostly agriculture, I don't know, I just know if

you're trading in that country it takes 2 weeks to settle. Howard Yata: So Frontier markets are countries that are hoping to someday be an emerging market and they are very, very small, I kind of looked at Frontier managers not long ago and there's maybe a dozen of them and they have \$20 million each so there's just not a lot of money in Frontier markets. Gerard Cruz: Is it liquid, is the market liquid? Howard Yata: No, most of it takes a while to settle. Joe T. San Agustin: That's something you want to avoid. Howard Yata: There have been times when Frontier markets have been up over 100% and times where they're down 100%, so there's a lot of political risk in those investments, but if you just thin about it, China was probably a Frontier market 10 years ago. Doris Flores-Brooks: Is Frontier like Somalia also? Howard Yata: Yes.

The non-U.S. bond markets are the JP Morgan bond markets and you can see they actually did very well in the one year time period, not so well for the quarter, but for the one year it actually did better than U.S. bonds. You can see the exchange rate changes so we've had some major differences in exchange rates.

The bottom part of page 12 shows the different countries within EAFE and emerging markets on the right hand side. We're not going to go through those, but again you can see major differences for the quarter, market to market and some major differences particularly in emerging markets among the one year return, South Korea in particular, 31.5%, we know that's kind of stability there in the market place.

On page 13 these are European Government bond spreads and just so you know it's against the German bond market so it's not against the U.S. bond market. Just as you might expect the spread of Greece bonds... Gerard Cruz: So what happens there, they have the Euro right, did they get bumped off the European unit and have to start issuing their own currency at some point? Maggie Ralbovsky: No, they just got a guarantee just 2 days ago, this new guarantee allowed them to default on certain loans as long as it doesn't hit the system risk, so actually I think that makes it more manageable because otherwise the bail out money will run out. They're second bail out package is \$700 billion and they have earmarked probably up to \$500 billion at this point just for Greece and Ireland and we haven't talked about Spain and Portugal yet let alone Italy, so it's like long drama and once in a while we have one piece of it shown to you so the most recent episode was an agreement by Germany and France to basically to come up with more money to restructure Greece debt and let certain debt default and --- up the rest. The problem with all these packages is that it requires significant austerity and it's a country already at 20% unemployment rate. Gerard Cruz: They don't want to be austere. Maggie Ralbovsky: That's right, you want stimulus, so it's totally anti-growth and the social pang is such that in my view, there's no chance all these plans are going to work because you can't require people to have such social sacrifice, it's a society that's not going to be sustainable with that kind of a cut.

Howard Yata: On page 15, real assets you only have one allocation on this page and that's global public real estate at 6.1% for the quarter and 26% for the year, that's just one way of looking at global real estate, that's our real estate securities index. Maggie Ralbovsky: I think what you have is U.S. only. Howard Yata: Yes, U.S. only, this is global, but globally real estate securities did pretty well. The rest of it is other forms of real assets, in fact on the lower right hand side is, we'll call it actual ownership of

equity properties, that got hit in 2008/2009. Gerard Cruz: It came back though. Howard Yata: Yes, it came back.

Look at page 18, this is important for discussions we're going to have later on in our 2 days here. This is asset class performance from best to worst each year and each asset class is represented by a different color. For instance REITs you can see where the best performing asset class was in 2006, the worst performing in 2007, close to the worst in 2008 and the best performer in 2010. Look at emerging markets in 2006 close to the top, best performer in 2007, worst in 2008, best in 2009 and back down here year to date close to the bottom. So I think the message here is you can't expect one asset class to continue to out perform all the time, a diversified portfolio is a proven strategy.

That's just a recap of what happened in the major markets, major classes for the last quarter and last year and just information for you. As we look at what happened with your portfolio just keep all of that in mind.

### **10:45-11:45am DB Plan Performance (Qtr Ended 3/31/11)**

Tab 1 is the executive performance for your fund and we always like to have a page upfront to tell you what we think went well and what didn't go well and page 25 has that information. We're showing you the returns for the first quarter in each of your major asset classes and the benchmark return that we use to compare each of those composites and you can see it in that 4<sup>th</sup> column over out or under performance, every one of the asset classes out performed with the exception of real estate and the difference was so modest I would say it's matched the market return, so each of the classes did very well relevant to the benchmarks and you'll see when we show you information the ranked in the 20<sup>th</sup> percentile of our peer groups.

Page 26 has those returns, major asset class returns visually as opposed to in a table form and so I think it's a little easier to see here the total fund did well and the reason it did well is because of international equity. Everything else did better than its benchmark but just slightly better, international equity is where you got the top.

Page 27 has longer term historical time periods for you, 3 years, 5 years, 10 years and you can see in each of those time periods the total fund has beaten the policy index.

On page 28 is our universe of public funds sponsors, I'll explain this page because there is a lot of information on it and I'll take the one quarter column as an explanation. You can see your return is 4.51% and the policy index had you been invested completely in the policy index and not in the portfolio as it is would have ranked in the 41<sup>st</sup> percentile so your strategy would have been above median, but your implementation is actually in the 20<sup>th</sup> percentile, being in the 1<sup>st</sup> percentile would be the best, being in the 100<sup>th</sup> percentile would be the worst. Antolina Leon Guerrero: So relative to 1 to 20 with 1 being the best, we're 20 down. Maggie Ralbovsky: You're up from 80% of the bond. Howard Yata: In fact go to the bottom of that column, there are 152 funds in this comparison, so the median fund number 76 had a return of 3.9%. If you just scan back above that you can see the policy was 4.03 so it did better than the median fund, 41<sup>st</sup> percentile and then your return of 4.51% in the 20<sup>th</sup> percentile. So as Maggie (Ralbovsky) said, that would be 80% of other funds. Gerard

Cruz: So we have a good allocation and great managers? Howard Yata: Well a couple of things actually impacted, the strategy for this time period paid off because equities did well. Gerard Cruz: But if you run the list... Howard Yata: If you go to the one year the policy index is actually the 60<sup>th</sup> percentile, you were actually in the 12<sup>th</sup> percentile which means you beat 88% of all other funds for the one year. Gerard Cruz: So let's look at the one year period, our out performance is attributable to good managers over a one year period? Howard Yata: It's 2 things, its asset allocation, I should say the difference in asset allocation versus your policy. Gerard Cruz: But the policy states the asset allocation. Maggie Ralbovsky: He's correct, the difference between the actual versus the policy is good management. Howard Yata: Not necessarily. If you had 90% in equity instead of your 70... Maggie Ralbovsky: No, he's talking about the difference between their actual versus the policy return. Howard Yata: I understand that, but the policy has the actual allocation of your policy so it's your 40, 30, 20, 10. Wilfred Leon Guerrero: Can you explain to me what is this policy? Howard Yata: That's the bottom of page 29. Maggie Ralbovsky: It's your strategic asset allocation. Gerard Cruz: So you're saying in certain instances we could have been tilting. Howard Yata: That's right, I don't know that, but you could have been 90% in stocks... Gerard Cruz: Or we could have not had in the case of the REITs, that's a strategic allocation it may not have been funded and so therefore we had some practical allocations. Howard Yata: We call that policy drift, it could be tactical, but it's usually drift. Gerard Cruz: Some of it was tactical, we've decided not to fund REITs, but it was in the strategic allocation. Paula Blas: REITs was actually in the strategic asset allocation in 2007, but we didn't fund it until 2009. Howard Yata: That might have had an impact here.

Joe T. San Agustin: I'm a little bit confused quite frankly, policy, is that our policy, is that the level of shooting at 4.03 and we're only able to outdo our policy, if our target is 4.03 we exceed our target. I'm just trying to find out what the definition of policy is. Howard Yata: If you go to page 86. Joe T. San Agustin: That's what you mean by target. Howard Yata: That's your target. We take that target each quarter times the return of the benchmark and that's called your passive return. Joe T. San Agustin: So we're shooting for 4.03, we out did ourselves with 4.5. Gerard Cruz: No, in that instance what it's saying is if we were completely aligned with our policy, the best we could expect is 4.03. Joe T. San Agustin: But we out did it. Basically when you set up a policy level you must make at least 4.03. Gerard Cruz: That's correct, that's the benchmark, that's the target. Howard Yata: I guess you can call that the target. Gerard Cruz: We just don't know the target until the end of the quarter. Maggie Ralbovsky: Would you like to change this to target index? Joe T. San Agustin: No, I'm just trying to know the definition. Doris Flores-Brooks: Let me just ask this question, if this is our own policy index because when you're comparing you said there's 152 funds, all of these funds are going to have a different policy index. Howard Yata: That's actually very true. Doris Flores-Brooks: When you say of the 152 different funds the 20<sup>th</sup> percentile, you said we out performed 80% of them, but each one of them are not going to be like this. Howard Yata: That's correct, that's a very good observation because this is just one score card of looking at how you performed versus every other public fund that we have information on, 152 of them. Some of them may have only 20% in equity. Doris Flores-Brooks: Okay and they could have done much differently. Howard Yata: They would have done very differently. Every fund has their own asset allocation because every liability stream is different and you

invest, we believe you invest in order to meet your liabilities and some liability streams are very front loaded, some are very back loaded.

Doris Flores-Brooks: So let me rephrase my question, 4.51 you said was the actual return, so 80% of the funds did less than 4.51%? Howard Yata: That's correct. Doris Flores-Brooks: I understand, good enough. Based on whatever asset allocation they had... Howard Yata: The actual return they had for the quarter. Doris Flores-Brooks: Right and we out performed 80% of them and 20% out performed us. Howard Yata: That's correct. You're on target. Joe T. San Agustin: We exceeded our target. Howard Yata: That's correct, you exceeded your target both for the quarter and for the year, but the other thing I was mentioning was that for the year the target was actually in the 60<sup>th</sup> percentile, so that means that some other asset classes did better during that one year time period, again policy.

The philosophy is not to put too much stock in this. It's information that you should have because you can't run your portfolio, you can't run your investment program based on what everyone else is doing because we don't know what their liabilities are, but you should know what other people are doing. Joe T. San Agustin: This is not a moving target. Howard Yata: It's not a moving target. It's not a moving target in the sense that your allocations are the same, we use the same allocations that... but if the return for that asset class is different from quarter to quarter your return will be different from quarter to quarter.

Gerard Cruz: On the 3 year we're on the top 5%. Doris Flores-Brooks: In the 5 year, we're in the top 2%. Gerard Cruz: That's because our allocation to bonds saved us.

Howard Yata: Page 29 is the allocation of the plan, the actual allocation at March 31<sup>st</sup> by manager, the percentage of the assets that are allocated to these managers. You can see that we, in accounting terms foot each column and the cross foot if in fact there's a differential, but there isn't, so each one of these actually cross foots, footing is the same as cross footing. Doris Flores-Brooks: So if I read this correctly under equity the policy target was to have had 547,000 but we actually had 576,000 and with bonds we should have had 410,000 but we were under (365,000). Howard Yata: That's correct. So what we do is we take the lower right hand number so at the end of the quarter you had \$1,368,890 and we apply those percentages in each of the columns to that number and that's how we arrive at the total fund policy. So that's theoretically where you should be at any point in time. So we footed each of the columns and we said this is where you are.

If you actually go to the next page, page 30 so you don't have to do the mental math, we've done it for you at the bottom of page 30 to show you how different you are from the policy targets. Doris Flores-Brooks: But isn't there always suppose to be kind of a range, because it's hard to always be on target, you can never really be on target. Howard Yata: Exactly, but you want to know for example if you're 6% off because then you're going to want to rebalance. Doris Flores-Brooks: So this is where it shows where you are from your target. We were under in fixed income. Howard Yata: Exactly. At the end of the quarter you were under allocated to fixed income which again if you think about it equities did better so that was an okay policy drift.

So again page 30 just shows you the differential in percentage terms versus the target, actual versus policy. Wilfred Leon Guerrero: Why do we have large cash? Howard Yata: Let's look on page 31 and 32 and I think you'll understand, I hope you'll understand, I don't know the true answer to that but you had some re-balancing occurring in the first quarter. I'll explain the way this works, it goes from left to right beginning value so that was the value at 12/31, any changes in contributions to the managers and any distributions going out, that's a negative column, investment fees that's also basically a negative column and investment gains and losses will show whether it's positive or negative and then the ending value. If you look in the body of domestic equity for instance, there was quite a bit of activity, you took quite a bit of money away from each of the active managers and you put money into BlackRock iShares \$61 million, you did not touch any of the fixed income managers, you allocated \$21 million to the short term account and 14 of that went out to pay benefits roughly. You also had some money coming out of the BlackRock iShares EAFE, you funded Earnest and you took money from each of the other active international managers. Wilfred Leon Guerrero: That still doesn't explain why we have large cash. Diana Bernardo: That was because of the liquidations in January due to Government of Guam's cash flow situation, we were concerned as to whether contributions will be coming in. Gerard Cruz: So you just parked it there. Antolina Leon Guerrero: Remember you drew down \$7 million. Howard Yata: \$7 million is 6%. Diana Bernardo: This draw down took place in January and since then we have been using it up as we needed it because of GMH and... Doris Flores-Brooks: Is GMH back on target now? Diana Bernardo: Technically they are. Wilfred Leon Guerrero: We need to look at it in terms of the impact that it's made on the Fund. When you drew that cash... Howard Yata: It would have had a drag in the quarter because asset returns were positive. Wilfred Leon Guerrero: So by drawing that money we lost opportunities? Rosalie Bordallo: Yes, but also at the same time you can also say since we took it from equity at its best point we captured the gains versus trying to do it now where we would have lost. Howard Yata: Well you can never time that. We never try to time the market. Rosalie Bordallo: Right, but the decision is we need to liquidate to pay pension payroll, there is no other way we can get money. Joe T. San Agustin: How do you explain, every quarter we have at least \$60 million overall cash, every quarter and that is spread out over all the managers. Rosalie Bordallo: Right, that's spread out over all the managers. Howard Yata: There are 2 differences here. Rosalie Bordallo: This is a totally different thing. Howard Yata: This is not that portion of it, this is only your short term cash account from which you pay benefits. There's another element of cash which we actually haven't captured, we're going to figure out how to show that where each of your active managers has both investments and some amount of cash. In order to run their portfolio there's always going to be some kind of cash in an actively managed portfolio because they're buying and selling, there's always some sort of transition cash in the portfolio, but that's captured in each individual managers return so to the extent that they are beating their index it's because they're actively managing their portfolio and there's always going to be some residual transactional cash. Rosalie Bordallo: And because you're doing it at that moment in time, at this moment I might have \$10 million, tomorrow I might have only \$1 million, it's just a timing issue. Doris Flores-Brooks: If I hear you saying the cash that the managers are holding, let's say if it's in domestic, really it's not counted but counted as overall domestic, you don't count it as whatever residual cash, what I call interim cash, is really not counted as cash but counted as domestic equity. It's only when you set aside strategically your cash. Howard Yata: That's correct. Rosalie

Bordallo: It bothers him (Joe T. San Agustin) that the total is \$60 million, but you have 10, 12 managers. If a manager holds too much cash it will affect his performance. Doris Flores-Brooks: And that's why you count it as performance and not because he held cash, it's because he didn't invest his cash quick enough. Maggie Ralbovsky: You need the cash for something called dry powder, jumping to the opportunity.

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Howard Yata: Cash is different for equity managers than it is for the fixed income managers because the fixed income managers barbell the portfolio and you don't want to necessarily limit their use of cash because that may be part of their long term strategy. Maggie Ralbovsky: Say it's a more concentrated manager, every position of theirs is 5% lets say versus a very diversified manager, the manager whose more concentrated will prefer more cash opportunity because if they have to buy a security for 5%, it's the whole cash. There are different styles out there and we need to take them into consideration, we can't say everybody is 5%, sometimes people's style require a little more or less. Joe T. San Agustin: I agree it shouldn't be a strict rule with different managers, different philosophies, but if you track it you can pinpoint who actually is holding cash for swap purposes. Howard Yata: Don't forget if they trade too much that trading is reflected in their performance, it's deducted from their return, so if they trade so much that it impacts their return, ultimately you're going to fire them anyway. Again that's why we put a limitation on them so they don't exceed that limitation. Joe T. San Agustin: At the same time they come back and say there's too much limitation that prohibits them, they do that all the time, they use the fact that our legal statute is so prohibited that they can't expand. We have in the last 5 years we've actually expanded our investment statute, but at the same time we still have to hold back.

Howard Yata: Go to the bottom of page 32, this is the summary activity during the quarter. Again you started off with \$1,323,932, you had distributions payments out of \$14 million, you paid out investment fees of about \$1 million and you have investment gains of \$60 million. So I think sometimes or sometimes I get caught up in the return, the percentage return for any time period but this is the actual dollar gain during the quarter, \$60 million which is tangible money. So the net of all of this activity end of the quarter \$1,368,890. Rosalie Bordallo: Your interest and dividends is that in which category, the net contributions or investment gains and loss? Howard Yata: That's in investment gains and loss. Doris Flores-Brooks: It's part of it, so both value as well as distribution. Howard Yata: That's correct. Doris Flores Brooks: So it's not all hard cash. Maggie Ralbovsky: No it's not, it's unrealized, it's not hard cash.

Howard Yata: What's going to happen is that every quarter this bottom line of that page feeds into the next quarter, because the ending value becomes the beginning value for next quarter. What you're going to see on page 34, 35 and 36 we've just loaded in your historical values and returns just so you can have that information. Beginning with the bottom of page 36 you'll see those numbers are the same numbers that were on page 32. Doris Flores-Brooks: So if I understand you correctly from 2003 \$1.1 billion and the Fund now has \$1.37 billion. Howard Yata: That's correct. Anything affecting that is any contributions, distributions, investment gains, expenses, everything. You can actually see if you look on page 36 what happened in 2008 and obviously in 2009 your fund was impacted negatively as almost every other fund was. As a matter of fact I look back 9/07 on page 35 you had the peak of asset



value, \$1.395 billion and you have almost recovered, you're almost back to that \$1.395 billion.

Joe T. San Agustin: Let me ask something. It's obvious that statistics show that we're not growing as fast as our expenditures, our expenditures seem to be growing faster than our rate of growth, so is there a spread that the market or industry allocates what your assets should be, what your expenditures should be? Maggie Ralbovsky: Well obviously there are 2 sides of the equation, one side is a liability side... Joe T. San Agustin: Our rate of expenditures are increasing, but our growth, our assets are not increasing. Maggie Ralbovsky: Right, so that's when your liability has probably been set a long time ago when the projection was much different from today Doris Flores-Brooks: The contribution rate that the Government of Guam pays is significantly higher than what most states are paying. States like Georgia are still 8, 10%, we're approaching 30, we are out in the stratosphere and for the Government of Guam to continue... Joe T. San Agustin: But the benefits are not the same... Doris Flores-Brooks: No, they haven't experienced yet, most of them are still in the DB Plan, they haven't yet made that hard decision to cut it off, but to expect the Government of Guam to continue incrementally go up and approach 30%, something's got to have to give. Joe T. San Agustin: Either that or increasing the employee's share. Maggie Ralbovsky: Every public fund has a problem. Doris Flores-Brooks: A good thing would be to get at least what is the contribution rate that the Government employee earns and to see where... Antolina Leon Guerrero: But the Government's rate as I understand, a larger portion, a majority of that comes from the unfunded liability. Doris Flores-Brooks: But still it's coming into the Fund for investments. Maggie Ralbovsky: One reason that it is high is because it's a closed plan, because when it's closed no more new contributions, no more new employees. Doris Flores-Brooks: There are contributions coming in, that's incorrect because there are the DC members. Antolina Leon Guerrero: What she's saying are no new members. Maggie Ralbovsky: No new members are coming in so if you think of an open plan, new members are coming... Rosalie Bordallo: Although it's a closed plan, the contributions are spread even over the new employees coming in, it's not just the old plan. Maggie Ralbovsky: But the new employees do not put their employee money in. Rosalie Bordallo: The Government's portion comes into here based on the new employees. Paula Blas: Only the unfunded portion goes to the old plan. Maggie Ralbovsky: So what I'm saying is why this plan has such a high contribution rate, one of the reasons is because it's a closed plan because you do not get money from the employee contribution for the people who are not in the plan. Rosalie Bordallo: But you're talking 9% versus the Government's side of 17% total payroll. Maggie Ralbovsky: What I'm saying is it's one of the reasons, I didn't say it's the only reason. Rosalie Bordallo: Well the main reason is really because the benefits that have been provided were never funded at the time it was provided. Maggie Ralbovsky: That's true for all the other public plans, I'm trying to contrast why this plan is more than the other plans. Say Calpers for example, they also have a problem on the liability side, it's out of control, it's under funded, but on the other hand it is an open plan so the proceeds are still coming in from the next generation who are not getting paid yet and in this plan you probably have more than half of the people who already starting to receive benefits and those people are not paying into the fund anymore, so you don't have that generation transfer thing. Rosalie Bordallo: No, I disagree with that, because every new Government employee is contributing to the old plan. Maggie Ralbovsky: To the DB Plan? Rosalie Bordallo: Yes, based on their payroll. Doris Flores-Brooks: When you

consider 27% and you take away 5%, the Government is still 22%. Maggie Ralbovsky: I'm saying it's part of the reason, not the whole reason. Antolina Leon Guerrero: And if the plan weren't closed it wouldn't be 27%. Doris Flores-Brooks: It would be even higher, it would be significantly higher. The other way around it, the Government is paying 27% for the unfunded portion, if you're fully funded, you don't have to pay 27%. Gerard Cruz: 21 out of 27. Howard Yata: You're paying for contributions that were made before. Antolina Leon Guerrero: And for withdrawals, loans.

Howard Yata: Page 37, we're on the equity composite here, domestic equity composite and here we're showing the total, everything together. As we saw earlier year to date, one year just a little bit better than the benchmark, 3 years and 5 years actually much better than the benchmark and we saw that information that was what made the total fund better than the policy.

On page 38 and 39, drilling down a little bit into individual managers, you've had some managers who have done extremely well over the quarter and the one year time period in particular INTECH and by the way we show the return for the manager. Below that the return for its relative benchmark and the difference is value added or subtracted. If you look at the one year, INTECH, Winslow, MetWest all exceeded their benchmarks by significant margins. The lagged for the year, Atalanta Sosnoff. Gerard Cruz: They're consistently lagging. Howard Yata: They've been consistently lagging over the last year. Joe T. San Agustin: What do you do with those kind of people? Howard Yata: That's something we need to talk about and there's some more information that you're going to see tomorrow that Maggie's (Ralbovsky) prepared analyzing each of the individual managers, but we'll see something here in just a minute that gives me a clue as to what's going on.

Wilfred Leon Guerrero: I don't know that you know we took away some money from MetWest because of the change in management and it's in an ETF and we need to keep track of that. Howard Yata: Yes, we saw that in the cash flow here, \$61 million came out of MetWest. Wilfred Leon Guerrero: How did they do for the quarter? Howard Yata: They did well, they beat their benchmark by 97 basis points. I want to make a statement, you can't expect every manager to out perform over every one of the time periods, there's always going to be one or 2 managers that lag. If you have 5 or 6 equity managers, but Atalanta Sosnoff has lagged pretty significantly for the year. Maggie Ralbovsky: One year is short, 3 years they're still ahead. Joe T. San Agustin: Look at Atalanta Sosnoff, negative for the last few quarters. Howard Yata: But prior to that they were doing very well looking at the numbers. If you look at the 3 year return that includes what's happened recently so that means they were doing very, very well until the last year. I think one of the challenges we have is understanding why they suddenly had a reversal in performance. As we spend more time with you and learn the managers, we're going to be able to come back and tell you. Rosalie Bordallo: They're mainly sector rotators, so they take huge bets. Howard Yata: I showed you that chart earlier, energy was up 20 some odd percent and other categories were just up a few percentage points. Antolina Leon Guerrero: Plus I think they invested in a couple of those big headline companies, they were in the oil company that lost, the spill and they held onto a lot of cash, there were a few things that they had done that didn't pan out. Howard Yata: So right now I think the only problem manager we need to take a close look at is Atalanta Sosnoff.

Gerard Cruz: Could you talk a little bit more about MetWest? Maggie Ralbovsky: Our management research group did an update on that for the full manager turnover and there is a score change, we did down grade the score, however they're still ranked a little bit above average, so we did think a full management change is a significant event, but it is not counted as permanently damaging their ability to generate value. There was not a recommendation of change, but they did get put on watch. Gerard Cruz: They've been stellar since we've been on. Maggie Ralbovsky: Their long term track record is still very strong. Antolina Leon Guerrero: What about Atalanta Sosnoff? Maggie Ralbovsky: That manager has always had a very high tracking error that's why we said as Rosalie (Bordallo) pointed out they're taking huge sector bets.

Howard Yata: I want to show you something in our equity style analysis which is on page 40 and it's just another piece of information, another way of looking at managers and we have a special way that we calculate whether a manager is small cap or large cap and whether they're value or growth and it's our way of doing it so some others might have slightly different calculations. Each of your managers is represented by a capital letter on this chart and the vertical axis measures large versus small and this would be average market cap and the horizontal axis measures value on the left side to growth on the right side, the further to the left, the more deep value to the right the more high growth. If you look at this chart you'll see Robeco is the capital R, MetWest is the capital M, the Russell 1000 is right on top of the Wilshire 5000 actually, I'm sorry the S&P, the capital A is Atalanta Sosnoff, capital W is Winslow on the right hand side and the capital I is INTECH. So in your large cap world most of your managers are plodding where I would have expected them to plod if you just come on and say where would they plod, except Atalanta Sosnoff. Maggie Ralbovsky: No, I think are too core. They're too core but they're still in the correct quadrant. Atalanta Sosnoff is really you're, maybe you can tell me differently, but I would think of them as kind of a core manager. Gerard Cruz: They are a core manager. Howard Yata: That shouldn't be too far one way or the other, they may be over to the right a bit or over to the left a bit, but I don't expect them to plod way over on the right side, they're past INTECH in terms of the growthiness of their portfolio. Gerard Cruz: That's interesting. Howard Yata: That kind of feeds into my concern about them. Gerard Cruz: The other thing is that growth has been in favor. Howard Yata: That's what has confused me here. Growth and value didn't have much of a difference for the year to date in large cap, it did for the 3 years. So if what you tell me is correct, they're sector rotators, they probably were not in energy, they probably were not in industrials, they were probably in financials and consumer staples or they were in BP. Antolina Leon Guerrero: They were in BP.

Howard Yata: Down at the bottom of page 40 you see Eaton Vance, the capital E and Numeric is the capital N. Eaton Vance we measure them against the small core benchmark, they're a little bit on the growth side as well, but Numeric is right on the mark, they're a quantitative manager.

So right now when we put everything together you get the capital X, so the equity composite is showing slightly smaller cap orientation for the total in a growth orientation. The way the portfolio is structured right now we might expect it to do better if small cap and growth does better. So that's why we're going to take a look at this and see if we maybe need to rebalance back to be more towards the center line, but part of it is where Atalanta Sosnoff is.

Let me go to fixed income on page 41, fixed income has done well for the year, but has actually underperformed in periods before that, but I know you've made changes though.

So over on page 42 the individual fixed income managers and actually each one of them has been out performing their benchmark for almost every one of these historical time periods except Franklin Templeton for the one year, they're very, very close at 31 basis points that's not far off, we've had some very volatile income markets. Historically at 3 years and 5 years they've all beaten the benchmark. Gerard Cruz: What's your opinion on Garcia Hamilton because they're kind of a small boutique shop? Maggie Ralbovsky: Well we actually haven't had any other clients use this manager. Gerard Cruz: But they're really good. Maggie Ralbovsky: They're really good for the period because they're focusing on really high quality, the only thing they buy are high quality stuff that's not asset backed, no asset backed, but when somebody focuses on one sector, there's always a sector rotation issue, so when that sector rotated out of favor they may under perform you just have to expect that. It's a manager that takes a stance and says this is all we do and the only thing and if that thing is out of favor they will under perform. Joanne Grimes: Do you have other pension plans that also have a manager that no one else uses? Maggie Ralbovsky: Yes, there's nothing wrong with that, but usually a 4 person shop doesn't get \$100 million mandate. They have 2 \$100 million dollar accounts, Guam is one of them so usually you have concern when that... Doris Flores-Brooks: The magnitude of, I mean if we go, they're gone. Howard Yata: Well you're a big portion of their revenue. Maggie Ralbovsky: This manager basically remade themselves, they use to be an equity manager. Gerard Cruz: We had them as growth equity. Maggie Ralbovsky: Oh you did, so that equity strategy basically fell off the cliff and they remade themselves. Howard Yata: This company originated as a minority management. Maggie Ralbovsky: It still is. Gerard Cruz: It's still minority, it evolved into a minority because it was Davis Hamilton, Bob Davis retired, Hamilton retired.

Howard Yata: Basically fixed income is in pretty good shape right now, your managers have done well. Doris Flores-Brooks: What about Income Research Management? Howard Yata: They've beaten their benchmark by 82 basis points over the last year. Maggie Ralbovsky: I think part of the historical under performance was because they inherited Aberdeen. Rosalie Bordallo: They inherited the worst of their assets, when we split up Aberdeen they inherited the really bad part of the portfolio and Davis got the better portion. Howard Yata: They're still trying to work that out, they're still trying to sell off some of those bonds. Gerard Cruz: They're not that much though. Howard Yata: It's something like \$7 million dollars left. Now they're at a point where that's not going to impact them too much. Gerard Cruz: Are they also a boutique shop? Maggie Ralbovsky: No they have like \$30 billion dollars, well they are boutique in the sense that they are a fixed income manager, but they're not a 4 person shop, no. They have \$30 billion dollars under management, pretty well built out teams and coverage, it's a well used manager, we have other funds using them too. Franklin (Templeton) we do have a very high opinion of Franklin, it's a very big manager in all kinds of different asset classes, they're global fixed income and very well positioned. In this particular case you can see they're actually in the least performing manager among your 3, the other 2 or more core managers and Franklin has a little bit more sort of a diversifier and as I said some of the sectors CNBS and some of the secured

highest sectors they just haven't done well, if you focus on just Government's you have done well in this period, but that is the manager that has the most resources to cover the different sectors so I think they're doing fine.

Howard Yata: International as we said earlier is one of the main bright spots in the portfolio and if you go over go page 44 it's been primarily 2 managers, Fisher and DFA. Fisher and DFA have had stellar performance, Capital International has been lagging for the last year. Gerard Cruz: Why is that, is Capital just too large, why is Capital lagging? Maggie Ralbovsky: Large is one reason and the manager is also in general transition. Howard Yata: You know what Capital International does, they take a portfolio and they split it up to how many different managers they have, they give each manager that money to manage, they manage however they see fit and what you get is the combination of all those manager's portfolios. Although one manager is designated as the senior manager, they don't actually dictate what everyone else is going to do. It's good and it's bad in a way, what you end up getting is kind of a consensus portfolio. So actually in emerging markets it seems like you want someone who is more focused individually on... Maggie Ralbovsky: In a way you can get over diversifying, they hold like 300 securities at some point there's no conviction basically, somebody has a great idea it's so diluted to a small portion of the portfolio. You've received much of the asset class return but you haven't gotten any added value from them. That will be one place we'll also take a look at.

In real estate you have a manager that has done okay over the year, Cornerstone has done okay, not great, Security Capital well for the year but they've lagged recently, there's not really that much room for excess return, there's only about 150 securities to pick from so in order to beat the benchmark if you want to beat it in a big way you have to make big bets and neither of these managers are going to take big bets. So if you get 65 basis points or 100 basis points in a year that's a pretty good excess return in real estate. Maggie Ralbovsky: My question here is why we decided to just go with U.S. REITs and not global REITs, since U.S. REITs is only 5% of the total market. Gerard Cruz: I don't know that we can go global REITs, can we? Joanne Grimes: It isn't a prohibition against the investment, but isn't it a percentage limitation? Gerard Cruz: There is a limitation, I forget what it is though. Howard Yata: We had a discussion about what changes in the law we might recommend so we should discuss that either this time or next time, what we think might be reasonable changing.

That's the main part of the discussion. We have behind here each individual manager but we've actually pretty much done that. (end of tape 1)  
(End of discussion for Economic & Capital Market Environment)

## **1:00-4:00pm Securities Lending – Overview/Draft Policy & Asset Allocation by Risk Factors**

### **Securities Lending – Overview/Draft Policy**

Wilfred Leon Guerrero: Go back to the agenda and we have securities lending. We asked you to help us develop a policy for securities lending and I see you have something here. Maggie Ralbovsky: Yes, so if I start with too basic information just stop me and have me go forward because I wasn't sure, it sounds like the Board has

already visited the securities lending issue. I'm going to start from this book and if it's too basic just let me know. I'm going to start from the really basic level as to how things work with securities lending.

So in the introduction page 3 this is basically schematic as to how securities lending work. You are a lender at the same time you use an agent so you don't just directly lend to Goldman Sachs for example, you actually use Northern Trust as your agent so what happens is that Northern Trust will pull your securities together with other people's securities and they act as the agent, they lend it to a broker/dealer and the broker/dealer let's use Goldman Sachs as an example, is actually a middle man as well by themselves, they will actually later on then lend the securities lending to a hedge fund or somebody who is going to fight a proxy. When somebody fights a proxy for you the need to accumulate the voting power and actually proxy fighting is the biggest source of securities lending demand, the second biggest source is shorting, so shorting is actually not the biggest one. After the financial crisis, proxy fighting almost is a new source of demand because the hedge fund side hasn't come back yet so the securities lending activity these days are at probably 40% than pre-crisis so that also impacts the profitability meaning the program isn't as profitable as before. So those are the players in securities lending transactions. Usually what happens is that the borrower would post collateral to the dealer and then the dealer would negotiate with Northern Trust, so the dealer Goldman Sachs will go to Northern Trust and say I need to borrow this X, Y, Z stock what is the rebate rate. The rebate rate is a deal by deal thing that Goldman Sachs and Northern Trust negotiate. Sometimes the securities are in high demand, you can actually demand a very low rebate, the person who is borrowing almost doesn't get paid at all for their collateral, on the other hand, if it's a security that everybody holds in huge, huge supply, the dealer Goldman Sachs may ask for a pretty high rebate. So, really the agent does a lot for you in a sense because the agent is the person there trying to negotiate a good deal with the broker/dealer. When the agent takes the money, you can see that one side of the profitability comes from the rebate rate, meaning if they can negotiate down the rebate rate they can actually keep more of the profit, however on the other hand, if they can't negotiate down the rebate rate, they need to make the collateral investment work harder so they can make a spread. So spread is defined as what the agent can make on the collateral money minus the rebate they have to give back the broker/dealer for, so they have to give a percentage because the collateral they're holding should be paying interest so in theory they should give some money back, but that's not necessarily all the time true.

So now we have defined the different terms here, there is a term called rebate, there's a term called spread and that spread is the total profit the agent makes in this whole transaction and the agent is going to split with the client, in this case GGRF and I understand your contract it's a 70/30 split, so you get 70% of the profit and Northern Trust gets 30% of the profit and the reason this is a win-win situation here, everything works out great is because Northern Trust gets revenue therefore in turn give you a good deal on custody cost. Howard Yata: So there's economic interest for Northern Trust to negotiate as good as possible spread because they're going to benefit from that as well. They're intentions are in the same line as yours. Wilfred Leon Guerrero: This looks good 70/30, but the bank also charges fees right? Maggie Ralbovsky: That's the 30% they're charging, that is the 30%, they keep 30% of the cost proceeds and that is between the agent and the client they negotiate how much they keep and I

read your contract and I think you guys pay 30% and you keep 70%. I used 60/40 as an example in this book because I didn't see your contract, I didn't have your contract, so 60/40 was like the average of what people were getting, I have seen 85/15, that's the best I've seen so there's different things it depends on how sizeable you are, what kind of securities you hold so there's different economics involved. So that is the fee, 30% is the fee they charge.

You can see the players here and now if you sit back and think about it, how does the spread come along. Northern Trust has to be able to generate that spread over the rebate and if you think of the rebate as a neutral position as being a treasury rebate, you have to pay this person in treasury T Bill rate, nowadays it's close to zero, then to generate a spread over treasury bill you have 2 things you can do, you can either take more risk, you can get a security that has a lower credit rating, therefore it pays more interest to you or you can lend on the duration meaning instead of you investing in short term bonds you invest in longer term bonds which pays more interest. So there are 2 things the agent can do to generate the spread by one is to take the credit risk, one is to take interest rate risk and pretty much these are the 2 things that the agent does.

The reason things got bad in 2008 was because credit risk got bad when people bought into securities that eventually went bankrupt, however during other times things could also go bad if you go too long on the duration because that mismatch in duration when interest rate goes up it will hurt you because you already held something that's at a lower rate when interest rate goes up. These are the 2 risks we are trying to manage when we manage your securities lending program on the investment side and if you think of all the different players, there's also risks in the broker/dealer you deal with, in this case I used the example of Goldman Sachs.

So this chart has the players here and how the money changes hands, so you have the managers holding, you have the managers who manage your money, but your money is actually with the custodian Northern Trust and Northern Trust deals with the broker/dealer, there's a change of hand of securities versus collateral. The next page tells you how the money gets worked out, you can see there's a collateral pool so your security goes into the collateral pool and somebody else's security goes into that same collateral pool and Northern Trust tries to manage that collateral pool and tries to generate a spread and then they split with the different clients. So that is how money is made in the transaction.

Joe T. San Agustin: What difference is the rebate on this spread? Maggie Ralbovsky: The rebate is the money the agent agreed to pay the broker, so in your case, it's a negotiated interest Northern Trust is paying Goldman Sachs, so that is the cost to the program. Howard Yata: It's like an interest rate you're charging. Maggie Ralbovsky: For giving you the collateral so Goldman Sachs gives you treasury as collateral and they want interest back. Joe T. San Agustin: Who pays out the rebate? Maggie Ralbovsky: Northern Trust gives you the rebate. Joe T. San Agustin: That's a discount then. Maggie Ralbovsky: No. Let's talk about the rebate first. So you're Goldman Sachs, I'm Northern Trust, you wanted IBM from me, I said I can't give you IBM for free, so you give me \$102 in treasury bills and you tell me my treasury is a collateral and if I keep my collateral in a bank account it's going to pay me 1% interest, since I gave it to you, you can give me 1%, I say no, I can say ok, number

one, I'll give you 1% and that is the rebate, I could also say I'm the only person who can lend you IBM okay so I'm not going to give you 1% back, I'm going to give you a half a percent back because my security is in such high demand and you look around and you cannot borrow IBM anywhere else then you agree to it. The rebate is what I pay you for the collateral, but that rebate is negotiable. You give me \$102 worth of treasury bills. Antolina Leon Guerrero: For every \$100 that Northern Trust gives you in securities, you have to give them \$102. Maggie Ralbovsky: Of your own treasury bill.

Joe T. San Agustin: Why would I choose a security versus...? Maggie Ralbovsky: Okay let's talk about that. There are 2 major reasons. One major reason you want IBM is because you want to get your directors elected on the proxy saying that you want to borrow that. Joe T. San Agustin: So I can use that proxy. Maggie Ralbovsky: That's right, you use that to accumulate...That's one way of using it, another way of using it is you think IBM stock is going to go down in value so you can borrow from me when it's trading at \$100 dollars, when you return to me it becomes \$90, you make \$10 dollars, but that's independent of the collateral....

The rebate is what I give you, you borrow IBM from me, you give me \$102 dollars of treasury and I give you interest for holding your collateral. That is the rebate. The spread is when Northern Trust takes the \$102 dollars of treasury and I post that, I can sell it and buy something else, so what I need to do is to make that \$102 dollars generate more income than the rebate I pay you, so that difference is called spread. The difference between the rebate and what I make. Let's say the rebate is 1%, I can make 1.2%, my spread is 20 basis points. Okay you're the money manager, Atalanta Sosnoff bought from you IBM, that's in my custody because I'm Northern Trust, I'm Northern Trust, you're the pension fund, then she bought IBM, it's in my account and Goldman Sachs wants to borrow 10 shares of IBM and I acting as your agent I say ok I will lend it to you but you have to post \$102 dollars per share in treasury bills. In treasury bills and you say okay I'll post that but my treasury bill is paying interest, you have to give me something back for my collateral, I say okay I will give you back 1%, I'm just using that number, 1% as the rebate, you say okay or you say not okay and we negotiate a rebate. So now I have the \$102 dollars in collateral and I need to make that \$102 dollars make more than 1% so I can generate a spread and once I get that spread I split with you, 70/30, you get 70 and I get 30. In the meantime you are not out of IBM, let me tell you why you are not out of IBM, you're not the only person in the securities lending pool and a lot of other people also have IBM, I'm Northern Trust, I collected everybody, all these are pension funds and you're one of them and she's the manager and everybody else is the pension, I collect IBM from all of them, it's all in my account and Goldman Sachs wants 100 shares of IBM and I hold 1,000 shares and today I have this rotation program, I have a program I rotate where I say okay today I allocate this 100 shares to GGRF and the spread I'm making I'm splitting with you and tomorrow she says no I'm going to sell IBM, so he doesn't want to return IBM to me so I say okay instead of the 100 shares is yours, now it's hers so you get your 100 shares back, I just rotate it, I just give it to somebody else. You're not out of IBM, you still have it you're just lending it out, you're not taking a risk. Howard Yata: Because I have you \$102 of the value of IBM.

Maggie Ralbovsky: The worst case scenario if I can't allocate to anyone else, I'm going to go to the market to buy 100 shares of IBM back and put it in your account. So



because I have over collateralized that account, you're not out of the money. The only change you are at risk is during that one day IBM share prices went up significantly and the collateral is under collateralized because I only net my thing with him at the end of the day, it's not the end of the day yet and she wants to sell it, IBM went up 20% and I cannot allocate it to anybody else, I have to go back to the market to buy it back, that's the only chance you can lose money. Howard Yata: That's if I fail to return it.

Joanne Grimes: In our current agreement we got rid of rebates, we eliminated the rebate fees, that's negotiated out of the contract, that was one of the risks. Maggie Ralbovsky: That means they indemnify you. I have a section on indemnification, but now I'm telling you how it works. Wilfred Leon Guerrero: And the underlying reason for this lending is because he wants to elect members to the Board. Maggie Ralbovsky: Or he wants to short it. Wilfred Leon Guerrero: Those are the 2 reasons why they do that. Maggie Ralbovsky: Those are the 2 major reasons, there might be other reasons, the biggest reason is the proxy invite. Northern Trust is indemnifying you for that risk. So that's how it works, but Northern Trust by itself is going to try to generate that spread so they can split with you. Just because you don't see the rebate anymore, the rebate is still there, I still need to generate that spread. So that's what these 2 pages are saying, basically we already talked about it. So you split it. Rosalie Bordallo: So you're saying the average split is 60/40? Maggie Ralbovsky: I wouldn't say that's average I'm just using it as an example. Rosalie Bordallo: But do you know what the average is? Maggie Ralbovsky: I really don't, I've seen 85/15 as the best, I've seen 80/20, the custodian gets paid one way or the other. You can ask for a better split then you pay somewhere else. They make revenue, they have a target for revenue for every plan, just because you don't pay here, you pay there so eventually they get their revenue. I'm just using this as an example on how it's split.

Okay what's the logical next thing to talk about, I know there are so many things here. Howard Yata: The investment part of it. Maggie Ralbovsky: So let's talk about the investment risk. Wilfred Leon Guerrero: The reason why we're into this thing is because I think we were treating this program strictly as an administrative account with the custodian bank and we want to recognize this as an investment activity and that is why we were asking for an investment policy. Maggie Ralbovsky: It is, that is a great observation and I did offer a draft policy there. It is in essence, Northern Trust is your investment manager to manage that collateral pool. They indemnify you of other risks so basically they indemnify you of the broker default risk, they still cannot indemnify you of the investment risk. Here's the risk you still have, I still have to earn a spread over my rebate rate even though you don't see the rebate rate, so if I earn nothing you get a spread of nothing, if I earn negative you will be locked up in that collateral pool. So this is what happened in 2008 and that is when I earned a negative spread because I bought a wrong security that defaulted and my collateral pool today is now below the \$1 dollar mark so the collateral pool is marked at \$1 dollar so anything above \$1 dollar I pay out but if it's below \$1 dollar I have to amortize that loss just like a money market fund.

So it is okay if one person, I have all these participants, one person wants to take their money out it is okay but if 5 of them, all of you want to take the money out I'm going to have to mark down there is some money market funds management rule by certain amount if you have so much redemption and you're below the \$1 dollar mark I have to

mark the whole pool down to market which is something I do not want to do therefore I'm going to lock everybody up, I'm going to say okay you cannot withdraw more than 2% of your security and that's what Northern Trust did. So they're going to amortize the loss over the period, those 3 years and eventually they're going to make up the loss and eventually everybody will be made whole, but in the interim you're locked up.

So that is the risk in the investment program, therefore you have to treat it as an investment management... Joe T. San Agustin: Isn't there an investment that is minimized by the fact that we require treasury securities for collateral? Maggie Ralbovsky: By requiring treasury as collateral you have minimized some risks, but you did not eliminate your investment management risk in the collateral pool. First of all you don't have your own collateral manager you're in a pool, so Northern Trust has like 3 or 4 different pools, you probably selected the very conservative pool which is fine, people can select different pools, but within that pool if there is a loss, I'm just saying if there is, I'm not saying right now there is, but if there is a loss people in that pool will be locked up. You can still lose money in treasuries, you can take duration risk, what I'm trying to say is you still have that investment management risk, just because you take doesn't mean you, because if Northern Trust just takes the collateral and holds it, he can not make the spread, what is the point of this whole thing right. There's no point in having a securities lending program if you cannot make a spread, to make a spread there's no free lunch, you have to take a risk somewhere. So you either take credit risk and in your collateral pool you're telling me there's no credit risk, that is fine then you have to take interest rate risk, you have to take some risk so therefore to managing this exposure you have to manage it as if this is a money manager, treat them as a money manager, give them a policy, review their performance and make sure the whole procedures are followed.

Joanne Grimes: I think Terry (Dennison) wanted them to limit the duration and they said that practically speaking it's already there. Maggie Ralbovsky: OECD includes Greece so there is credit risk. Joanne Grimes: No they wanted to, but we said no. Maggie Ralbovsky: So you only have U.S. treasuries, so you have duration risk. Joanne Grimes: We asked for limit of duration, but they said it's already there. Maggie Ralbovsky: 270 days. For qualification into those pools you have to have a limit of duration, if you take no risk, there's no return, it's as simple as that, there has to be some risk. Joanne Grimes: I think our risk was outside the program, our risk was a real risk of a custodial fee without securities lending. Maggie Ralbovsky: Pros and cons, so it's just a method for you to reduce custody fee, you're not really expecting... Howard Yata: If the fee is X you either have to pay X or X minus the securities lending revenue, it either comes out of your pocket or you get it from securities lending. Joanne Grimes: I think it was we would pay \$300,000 on a custody fee, custody only whereas under this we would receive \$550,000 under the assumptions. Gerard Cruz: That's right. Joanne Grimes: It was roughly 70% of about \$860,000 gross revenue annual. Wilfred Leon Guerrero: So are we saying now that the only risk we have is that if the U.S. Government defaults on us... Maggie Ralbovsky: Duration, the duration risk is when Northern Trust in order to generate spread they go longer on maturity so instead of buying 3 months treasury they buy one year treasury and if you look at the treasury yield curve at 3 months it's almost zero because the Fed controls the short end, but the market controls the longer end so the treasury yield curve is very steep. During very steep yield curve environment it is actually easier for the custodian just to go longer because they have a larger spread.

This strategy can really be very hard to implement if interest rates on the short end go up and long end doesn't go up, you have a flat yield curve therefore there's no duration benefit to be taken so in that scenario then you have no spread. Duration risk happens is that he gives me 3 months treasury as collateral and I bought a one year treasury interest rates went up my one year treasury lost money and his 3 year treasury bill still hasn't lost money so I don't have enough money to pay him back so that is the duration risk. The pool takes the loss on that so in the event that there is still more than 100% of the collateral you still don't see it you just get a lower spread right so it's not like every security loses money at the same time. If you think you have 100 securities, 5 lost money, 95 made money, eventually the clients wouldn't see it, you only see a smaller spread than otherwise, but if in a stress scenario like in 2008 all of a sudden all of your Government bonds all lost money then you all of a sudden ended up with 90 cents on the dollar for the collateral pool, the only thing the custodian can do is to tell everybody you cannot withdraw because I'm going to amortize the loss from future returns, so in the future you don't get any spread but I'm going to amortize from the future earnings to make up the difference, as soon as I reach 100 cents on the dollar, it's business as usual. So that's what happened and I think eventually their collateral pool all recovered, it took them a couple of years to recover. Historically the lending programs had been quite low risk with the exception of 2008.

Joanne Grimes: I think when we talked about it previously in that situation, the 2008 situation if that ever happened again we're going to feel it outside the securities lending program. Maggie Ralbovsky: I think what was the shock was people were investing in index funds and all these index funds have securities lending program embedded in it, that's how they pay, because index funds are natural lenders, these securities are not treated, they're basically buying the hold. When people think of index funds they don't think of that they can lose money in securities lending and all of a sudden their index funds were locked up or their index funds had huge spreads in return because people mark the market so that's a shock because it's something people didn't expect, they expected their portfolio in large cap equities to lose money, they don't expect the money market to lose money so that is what happened.

I agree to your logic it's totally I think the right choice to pick a securities lending plus the custodian program. Joanne Grimes: In fact I think they probably backed into it, I think they looked at what they had quoted for their fee and then just backed into sort of maybe a money losing securities lending program just to be able to justify what they had quoted. Joe T. San Agustin: When we stop securities lending for a while it threatened to jack up the price. Paula Blas: The maximum they can lend... Antolina Leon Guerrero: We limited them, \$300,000. Rosalie Bordallo: \$300 million per day. At any one time, so if it's \$300 million a day, it's only going to be \$300 million a day, the total lendable is \$300 million per day.

Wilfred Leon Guerrero: We already have an agreement with Northern Trust and normally with something like this you have a policy first and then you sign an agreement, but we're doing this the other way around. In the agreement I think you selected a lending pool and that lending pool has a policy so what we can do is get the lending pool's policy and compare with this and maybe give the Board a report and say here is our opinion whether it's a sound policy for the pool or something needs to be

proofed, we will help you in that way because if you're in a pool, that pool already has a policy. Howard Yata: Plus you should have a policy anyway because if for some reason you fired Northern Trust somewhere down the road you still have to have a policy in place.

Joe T. San Agustin: We never looked at the securities lending as an investment product, we looked at it as an auxiliary to the custodial fee because of the interest of reducing the fee itself. Antolina Leon Guerrero: Because that's what they proposed to us. That's why we make sure it's collateralized by U.S. treasuries and in an indemnification program and limited exposure in terms of dollars. Maggie Ralbovsky: So in other words you don't care if it makes money or not all you care about is reduced custodian fees. Joe T. San Agustin: It was making money to begin with. It reduces our custodian fees, this is how we got involved in it. Antolina Leon Guerrero: So it not only was going to reduce fees it was going to generate income. Joanne Grimes: And then technically the way that we understood the program, the Fund's investments if it's investment in IBM, it doesn't change the character of the investment of IBM. Although the shares are loaned out part of the program is that you get the dividend, the lender still gets the dividends. So from an investment perspective and how you think about tracking it, it's really seamless from an investment perspective. Maggie Ralbovsky: What he's talking about is the lending program policy, but I agree with you it doesn't change your investment, you still own the security you just loan it out. Howard Yata: And you can still sell it if you want to, but you do give up the voting right.

Rosalie Bordallo: Does the securities lending program have to always be tied to the custodial bank or can we go out on a RFP? Maggie Ralbovsky: You can go find an agent. Rosalie Bordallo: But right now we're kind of tied to Northern Trust because of the fee that we're paying. Antolina Leon Guerrero: Because that was the proposal they made, that was the contract we signed with them. Rosalie Bordallo: But what I'm asking is do I have to use them, I can go out on a new RFP... Maggie Ralbovsky: You don't have to use them, you can get new agents out there. Howard Yata: One for custodial and one for securities lending. Joe T. San Agustin: That would take a policy, that would demand a policy. Rosalie Bordallo: Yes, right. Maggie Ralbovsky: But usually people use their custodians because it's so easy because the custodian already has the assets. If you use an independent agent they will have to work with the custodian to find out exactly what... and usually the custodian have better rebate negotiation power because they own more, they have more volume so goes through them so they actually have a better position than an agent. If you try to go out with someone else, if you say I have to have my own collateral pool, I want my own, I want a separate account and Northern Trust will probably say I can't do it for you, \$300 million is not my ---, you might find another independent agent to do it for you. Howard Yata: In fact MetWest started their business as a securities lending agent.

Maggie Ralbovsky: Here's what I propose, I get a copy of the lending pools policy and compare that with our proposed policy the give the Board a report to show if there's any differences and if we think the current policy is actually adequate and then we can have a discussion on what to do.

Wilfred Leon Guerrero: The way we've been treating this securities lending program is just another administrative account with the custodian bank, but this is really an

investment activity and should be treated like an investment activity. Antolina Leon Guerrero: You just want to make sure we have a policy that makes sure it governs this policy whether it's part of our custodial or independent securities lending agent. Maggie Ralbovsky: You just want to make sure the governance structure-wise is in place. (end of tape 2)

I'm going to start with page 2, this is the 4 things we do with our clients, it's a rotational 4 things so it means it can be repeated at any stage at any time. So what are the 4 things, asset allocation which is to talk about how to allocate the total risk budget for the plan and the second stage is investment structure and this is to talk about how to allocate the active risk budget which I will talk about tomorrow, the third step is something the Board has been involved with very closely which are manager selection evaluation and performance evaluation, those are the stages, we just went through the performance earlier today and tomorrow we will talk about managers.

For this particular book I want to focus on asset allocation. Now what is the goal of asset allocation, we know that asset allocation is to create some sort of optimization, so you optimize your risk budget to say I have this much risk budget. We know risk budget is not created equal, because you have this much risk you could put in different things. What is the best way to allocate that risk, that is the goal of asset allocation which is to allocate this risk budget efficiently. Now that's easy to say, the hard part is how to define this risk. The reason I say this is the traditional asset allocation defined risk as one thing and that is the standard deviation of return. If you think of a standard efficient frontier it has the return on the Y axis, it has the risk on the X axis, if you ask somebody what is this risk they will tell you that's volatility of this return. So it's a statistical measurement of the return volatility, that is the standard definition. Does that mean anything to anybody? Let me give you an example, if I'm going to buy a car at the end of this year which I have 6 months to go, what is my least risky asset class, cash. In the 6 months before I buy this car I don't want to lose that money so my risk definition is to lose that money in 6 months. For a pension plan I have a liability to pay for 10 years, what is the least risky asset class, is it cash, it is not because if you do the calculation cash has a 97 or 96% chance of under performing inflation during this 10 year period and if I think I know how much I'm going to pay in 10 years from now measured by purchasing power parity, purchasing power based on the inflation adjustment, I have a 97% chance my cash is not going to meet the objective, therefore cash is very risky, cash is not the safest for this particular goal. In this example you can see that by defining risk differently, my optimization changed. Just because some portfolio is optimized in one risk definition doesn't mean it's optimized in another. So we're trying to think hard what is the true risk to our fund, what is the standard deviation risk we should be focusing on, that's what I'm trying to explain in this presentation.

Now we know there's different definitions in risk and we know you can come up with different optimal portfolios based on the different definitions. We also know that in the past decades things have gotten a lot more complicated, 50 years ago you have stocks, you have bonds, you have cash, now you have other things. Do people get better diversification by adding these asset classes? They may, they may not it depends on where they add it into the mix. So we're trying to explain that just by adding asset classes to the mix doesn't mean you're getting better about diversifying and how do we think about diversification. Sometimes when people add a lot of

different things into the pie they have a false sense of diversification because they think they have all these different things in their pie chart, well that doesn't mean you're diversified.

The key to diversification is something called correlation, I'm sure everyone has heard this and here is just a mathematical demonstration as to how much correlation can mean to diversification. The total risk on the left hand side is being reduced when it falls down, when the colored line falls down and we start with correlation one so if you have 2 asset classes that have the same correlation you're adding how many, you do not reduce the risk, it's the same risk. By adding more and more non-correlated asset classes you get more and more diversification because your risk gets reduced. You can see that the most reduction comes from the first 5 asset classes. Eventually by adding more and more you're losing the efficiency of diversification, so at some point when you add more and more it actually doesn't matter anymore, you're over diversified. This is the concept behind all the different arguments we're going to make later and that is diversification.

### **Asset Allocations by Risk Factors**

Now I'm going to talk about risk. I said earlier there are different definitions of risk. We know that for a real person, a real fund that lives in real life, standard deviation return is a very nebulous thing, you really can't grasp it so why don't we think in real terms, let's think in the real world what are the 2 forces behind investing, behind the result of investing. The 2 forces are growth and inflation and economy could have positive growth or negative growth, inflation could be above zero or below zero. These are the 2 major forces behind everything and if you combine these forces you have 4 scenarios, you have high growth/high inflation, high growth/low inflation, low growth/low inflation, low growth/high inflation and different asset classes perform differently in these 4 quadrants. If you think in a real sense, if you define risk as growth and inflation you actually have 4 buckets, you have assets that perform well in high growth/high inflation, low growth/low inflation, high growth/low inflation, low growth/high inflation. We actually have a chart and I want to show you what those asset classes are on page 22, these are the 4 quadrants. In a rising growth scenario, public equity does well, emerging market debt does well, commodities does well and credit does well. You can see in a falling growth scenario nominal bonds does well, TIPS does well, TIPS are inflation link bonds, both of these do well because people fall in growth, people want stability, we also call this bucket, stability bucket. In a rising inflation scenario TIPS, commodities, emerging market debt does well and in falling inflation public equity and nominal bonds do well.

So if you think in a real sense of risk you can actually not think of asset classes in terms of what asset class it's in, but rather in the sense of what bucket it is in because if they're in this bucket they're highly correlated when this thing happens. If they're in this bucket they're highly correlated with each other when this thing happens, but they do not correlate with each other when things do not happen in this fashion, so in a way you can think of them as 4 different buckets.

Instead of defining risk you can say, what if my risk is to take care of those 4 quadrants equally. Let's say I have a risk budget, I want to be equally allocated to these 4 risk buckets and whatever happens I'm fine, I have a quarter risk here, a

quarter risk here so then you can come up with an optimization that can come up with a portfolio that is very from your definition being standard deviation return. So that is the whole concept of risk based, factor based asset allocation. Antolina Leon Guerrero: Is this a new approach? Maggie Ralbovsky: It is a new approach. Gerard Cruz: Under this approach do you need to have the ability to invest in all parts of the market? Maggie Ralbovsky: Let me go back to defining buckets on page 8. We know that there are different ways of defining the buckets, I have showed you an example on page 22 and that's one way of defining it, it doesn't mean that's the only way of defining it. We have identified on page 9 maybe 5 different things people may care about, it depends on who you are, there's the risk of permanent loss which means you buy a treasury and you have a loss but it's not a permanent loss because if you hold that treasury to maturity you get paid back, however if you hold low rate bonds you get permanent loss, you hold it to maturity and nothing happens, that's what permanent loss means. So there is risk of that to the people who care about that like in my case of buying a care, I care about that. Then you also have the inflation/deflation impact, that's another big risk, liquidity cash needs, interest rate and credit risk, funding requirement, these are the different buckets you can put together, it depends on what you care about. Now let me get back to your question, do we have to use all asset classes, we may or we may not, it depends on what you care about. As a pension fund what do we care about?

Let me start with page 12 this time. To put together buckets we first define a theme, we say, our theme is growth, we really want to participate in growth, what should be in that bucket. You run all the available asset classes in the world, you calculate their correlation with growth, you will come up with a group. They are actually very much interchangeable if you want to participate in growth, therefore they're in the growth bucket. You can do the same thing for stability, say I really want stability, no permanent loss of capital, then you run all that, then you run that for inflation, you run that for credit, you come up with different buckets. Let's assume we came up with a bucket then you can run optimization based on that. Let me show you how different the result can be. Page 18 on the left hand side you can see it is a capital allocated portfolio so this is the straightforward pie chart that says, I have this much in U.S. equity, this much in international equity, private equity, commodity, I have all these different pie charts and it looks very diversified. So this is capital weighted and if I want to translate this to the traditional definition of risk which is the standard deviation return, I get this chart. This chart says I'm actually very diversified, I have about half in U.S. equities even though I have a third in U.S. equities my standard deviation return mostly comes from U.S. equities. If you translate it into a volatility allocation to see where the total volatility of the fund comes from, that's the traditional definition of risk.

Now let me change the definition of risk, what if I change my definition of risk to my buckets and the 4 buckets I care about are growth, safety, real assets which are inflation risk, credit and liquidity. If I translate into these and you can see this portfolio is very much undiversified if you just focus on the right hand side, forget about the left hand side, focus on the right hand side chart and you can see the majority of this portfolio is in growth and it does well when growth does well, it does not do well when growth does not do well and it does very poorly when inflation is high because the real asset category is very, very low.

Joe T. San Agustin: How do you identify...? Maggie Ralbovsky: I run correlation tests, I list all my securities, I run regression, I run correlation to see what correlates strongly with growth. Let's say I identify 5 asset classes that's growth oriented, how do I put together that bucket, there are different ways you can do that, you can actually optimize within those 5 asset classes to see how you can put together efficient frontier with them or you can say, I want to equal weight risk, I want contribution risk from each of these 5 to be equal, so that's another way to weight it, so you can have different weighting schemes within the bucket and then you can have different allocation schemes among the 4 buckets, If I have 4 buckets I can say I want equally weighted 4 buckets or I can run optimization to say, I want to constraint my total growth exposure to 70% because I don't want predominantly to be growth, what if growth doesn't materialize, I also want maybe at least 20% to be inflation sensitive because I expect inflation to be higher. So you can actually run an optimization using the buckets based on the different customized constraints.

Why does that matter? Let me show you your current portfolio, maybe we can start from page 22 again, you can see what asset classes you're missing right now. Right now GGRF has public equity, you have actually may public equity, you have large growth, large core, large value, small growth, small core, small value, you have international growth, small cap, you have emerging markets. You have 7 or 8 different asset classes but they're all very highly correlated, they're basically in one bucket. Then you have nominal bonds, nominal bonds are bonds that pay you a stated interest but does not adjust with inflation and you have 3 managers in that category. You have 2 real estate managers and real estate are actually in the public equity because they're equity so they're also in the growth category. If you just do a quick scanning you know you have public equity which are doing well in rising growth environments and you have nominal bonds which do well in falling growth environments and then you have public equity and nominal bonds which do well in falling inflation environments and in a rising inflation environment you really have no participation in that.

If you think back of what I said earlier, this generation of investors basically haven't experienced a high inflation environment. The last time we experienced it, I want to show you a chart on page 27, this is the last period this country experienced inflation, from 1970 -1981 so it's a 10 year period and the inflation is that blue line. Any asset classes that for the 10 year period performed below inflation basically lost money in real terms, people invested in that and at the end of the 10 year period couldn't buy as much as before. You can see the only thing that beat that blue line is commodities and nothing else, stocks, bonds, cash, nothing beat inflation. So that is the scenario and if it repeats, we have no hedge against it.

I said this on this page and I'm going to say this again, we're designing a portfolio for the future not for the past. If the past repeats, we will do fine, we have done fine for the past 10 years, but what if the past repeat, what will we be doing? So let's take a look at this page, page 26, this is to look at GGRF's portfolio based on the risk buckets, you can see the colorful chart very diversified in different asset classes on the top and if you translate that into the buckets you can see it's 95% in the growth bucket, it is 1% in inflation hedge and has 4% in stability. It has almost a singular bet on growth, it may be okay, it may be a conscious bet, but I want to make this known in case it's not a conscious bet.



Wilfred Leon Guerrero: You're enthusiasm for your technique is admirable, but here's the thing, you take a look at that chart up there, during bad times the Fund lost money but not as much as our peers and during good times, we were on the upper edge of making money. Maggie Ralbovsky: Good times, bad times we had no inflationary times in the past. Antolina Leon Guerrero: You're saying, what you want to point out is because we've never taken inflation into account and that's what you're showing us, in the likelihood there is inflation we're going to be impacted. The question I have is, if we diversify based on these new buckets, what if history did repeat itself? Maggie Ralbovsky: That's right, that is a great question. Gerard Cruz: Why not just parcel off a part of our portfolio to address the high inflation... Antolina Leon Guerrero: Which is where we have no presence. Maggie Ralbovsky: That's right, that's what the asset allocation will do. What I'm trying to propose is why can't we do both, why can't we not sacrifice return if history does repeat and have protection when history does not repeat which is something we need to address. I take it, your fund has done very well, but we're not designing it for the past. We need to take into consideration that risk is there, that risk is not that far, it's happening in different countries, it's happened in India and China. Antolina Leon Guerrero: And it's really looking at protecting us against losses as opposed to just maximizing return, that's what everyone's always talked about. Howard Yata: Real value, loss of real value. Inflation adjusted value. Gerard Cruz: Because of rising inflation. So why don't we, maybe a small allocation to TIPS, but I don't know that we have the authority to invest in some other commodities.

Maggie Ralbovsky: Okay, here's one thing I want to comment on, I heard that and I read your law, I actually have a page here, page 29 and I want to point you to the last bullet point, there are other bullets point I should probably cover, I'm probably preaching to the choir, probably you're all have feelings about the current law, the current law was designed 50, 60 years ago when the capital markets was many, many generations...Also during those days there's something called the prudent man law... Gerard Cruz: We had that for about a week. Rosalie Bordallo: 2 weeks. Gerard Cruz: We passed for 2 weeks. Maggie Ralbovsky: You mean prudent investor? Gerard Cruz: Yes. He (Joe T. San Agustin) had it repealed. We're a lot further along than we were 8 years ago. Maggie Ralbovsky: But what you have done is patchwork, let's do this, without a scheme you're focusing on the trees not the forest, the whole forest is still screwed up and you have added different trees in that, that's what you have done; however if I read your law correctly... Paula Blas: You have to understand with the dynamics down at the Legislature we had to do baby steps, it was get your foot in and once you... Gerard Cruz: There's more danger in doing it piece... Maggie Ralbovsky: Okay listen to what I have to say, I read your law and I read this paragraph which I believe you can do anything. This paragraph says you can invest in commingled funds, it doesn't say what commingled funds has to invest in. Rosalie Bordallo: But there's a percentage allocation to that. Maggie Ralbovsky: To commingled funds, no. That category, isn't it 30% of the total portfolio? Maggie Ralbovsky: Okay 30% is plenty. Rosalie Bordallo: But that bucket holds a lot, that's the ETF, the money market accounts all go in there... Maggie Ralbovsky: I have something to comment on your ETF tomorrow. ETF is a passive investment, you could get into a fund, into a passive investment for much cheaper, you could go into a mutual fund for that. Rosalie Bordallo: But it still goes into the commingled area. Maggie Ralbovsky: Mutual fund is not commingled, mutual fund is a U.S. security. There is a place for

mutual funds but there's also a cap on it. Maggie Ralbovsky: That's fine, you can remove ETF out of that 30% bucket, the 30% can allow you a lot of flexibility, I do think your current law has a lot of flexibility. Joanne Grimes: But when you ask your managers to do that despite what the statute says, I'll bet you run into the legal compliance problems at the manager level they'll balk. Maggie Ralbovsky: What do you mean? Joanne Grimes: They think that investing in a certain asset class doesn't, they'll get nervous. Maggie Ralbovsky: Aren't you the person to interpret it? Joanne Grimes: Not for them, it won't matter what I say.

Gerard: It's dangerous to do patchwork. Maggie Ralbovsky: Yes, you're doing the patchwork and really sometimes... Gerard Cruz: I agree it's just our guidelines are such it's so restrictive as to what we do, in certain instances we could inadvertently become or invest in something that's impermissible and I think our concern, certainly it's a concern of our managers because they're compliance department has come back to us and said, we just can't do this and they'll ask for waivers after the fact. Joanne Grimes: Even Fannie and Freddie. Gerard Cruz: Yes, Fannie and Freddie is a perfect case, we had to have special Legislation passed in order to distinguish between direct debt and mortgage backed. Joe T. San Agustin: What you're suggesting on a risk management level here which is different bucket in standard deviation correlation, we can still do that. Maggie Ralbovsky: You can still do that. Joe T. San Agustin: So it's just a matter of applying that concept into the current rule. Maggie Ralbovsky: I believe so, if you can use certain instruments in commingled funds. Gerard Cruz: But also remember we had that issue with commingled funds. Joe T. San Agustin: Commingled funds different buckets are 2 different things. Identifying the growth and inflation into different buckets, applying the standard deviation and correlation... Maggie Ralbovsky: However if you're strictly interpreting law says specifically no commodities, no derivatives, did it say that? No it didn't, it was silent but if it is silent then it's a prohibited item so the law is such that if it's silent... Paula Blas: Our laws are permissive so it stays exactly where it is.

Joanne Grimes: On the DC side, you'll notice the difference between the DB statute and the DC statute and one of the thoughts was when the DB Plan got closed and the new plan came about the statute is very, very skinny, it's hardly anything it's just really --- policy goes with what the defined contribution plan should be and all of the details are in a plan document and that was very strategically designed so that you could have flexibility and use so when do planner statements and such and benefit changes you don't have to go down to the Legislature you could just do it here. So one of the thoughts is you could have by statute a generalized prudent investor type of statute but then on the regulation side you do all the detail and you do it as an agency and you have public hearings as an agency would do it but you have more flexibility because you don't have to run up to the Legislature you just do it as a regular agency with proposed rules and regulations. Antolina Leon Guerrero: Like a Triple A? Joanne Grimes: Yes, right and you say what you're thinking of and so you're essentially maybe collapsing and you take some of the details of the statute and you bring some of the details to your investment policy statement and you have your regulatory document, so you have a little bit of both, but you're really collapsing now and you get flexibility but you get control, it's your control as opposed to Senators. They are in charge of benefits that's what they get to do as the Legislature, but investments that's really your responsibility and you have the knowledge base so one of the thoughts is to maybe think about introducing a statute that has a little bit

broader policy level like prudent investor or if you like the other one UMPERSA uniform management of public employees retirement systems act which has similar prudent investor provisions and then doing all of this detail level on the regulation side.

Maggie Ralbovsky: If you think of the spirit of the old law which is still in the books is to control risk, but when time goes on it actually becomes a risk factor, it contributes to risk because the limit of diversification, actually it's against intention. Joe T. San Agustin: Joanne (Grimes) is right, the DB was basically set up with the risk on the Government, on the DC the risk is on the investors that's why it becomes so flexible on the DC side, but DB is basically the Trustees, really it is the Legislature, not us. Paula Blas: But then again too at the time all the Trustees were appointed by the Governor at the time so you had a lot of political agendas going on so Legislature wasn't so easy to give up that control. Maggie Ralbovsky: So the argument we're having here is we want to manage the risk in the spirit of the law. Rosalie Bordallo: One of the problems I perceive is historically and yes you're trying to build a portfolio for the future not based on the past, but the problem is the past so far has helped and only strengthens the Legislature in not wanting to change things because we've been able to side step certain major blow ups in the financial markets because... Gerard Cruz: We haven't had this spiraling inflation, we haven't experienced that. Rosalie Bordallo: Right, I understand that. Joanne Grimes: It's picking your scenarios because it was a while back where you couldn't invest in Microsoft because it hadn't paid a dividend in 5 out of the 7 years, so you didn't participate in the growth of Microsoft and other like companies so you can choose your own scenario and look back and say, why it was okay but it actually wasn't okay. Gerard Cruz: At the end of the day what we're asking for is just the ability to determine what is an optimal portfolio at the time and creating the diversification based on situations today. Maggie Ralbovsky: So do you want to talk about this in August? Gerard Cruz: I do think it's necessary we talk about that one quadrant that we're.... Maggie Ralbovsky: Missing and how do we address it. Joanne Grimes: And point out the inhibitions and even ask your managers too if they're not able to do something because of our statute.

Maggie Ralbovsky: TIPS you have no problem with TIPS but TIPS is not a perfect hedge because... Gerard Cruz: It was trading negative a few months ago. Maggie Ralbovsky: That's right. TIPS is one part of the puzzle, it's not the whole thing because if you think of how TIPS pay you, you buy \$100 dollars TIPS if inflation goes up 2% next year your principle gets adjusted to \$102 dollars so you get \$1 dollar for \$1 dollar adjustment for inflation but it's after the fact. Inflation impacts asset pricing before it happens when people expect inflation, everything goes down, pricing goes down, you don't wait until 10 years later, so it is part of the hedge but it is really a very lagging hedge, you need something that's forward looking hedge and that is basically commodities. The reason emerging market debt is a good hedge as well is because emerging markets many of which are commodity producers, they produce commodities therefore their debt actually gets strengthen because their capital condition is good, they have very, very low debt these days because their commodity prices have gone up so they're a good hedge for inflation as well, but the bottom line is commodities is part of the puzzle it's not the only thing. It's part of the puzzle because when you think about how inflation happens it's the input inflation, it starts with input and you buy gas, everybody has to...the producers buy stuff when the prices goes up eventually it flows through so it's a forward looking indicator which

compliments were TIPS. Gerard Cruz: What's the inflation outlook for the future today? Maggie Ralbovsky: Right now it's pricing into the market at 2.5% for the next 10 years and nobody can say its condition, inflation is just going to happen very soon. The reason is because banks are not lending so there's no velocity of money, what is velocity? When the Fed printed money people said, how come there's no inflation, how could there be no inflation when the Fed printed so much money. The reason there is no inflation is because there is no velocity, the money is not being lended out and being used, it's basically parked on banks books and the corporations are hoarding cash and there's no velocity of money, velocity is at a historically low levels. Once that velocity picks up people say then the Fed can just increase interest rate to prevent lending, so that's entirely put in everybody's faith on the Fed and we know commodity driven inflation has happened in the 1970's and it could easily happen again. Here's the reason, 75% of the world population lives in emerging markets, India and China being the biggest and the Middle East and think about all that population, China for example, China has 5 times more people than the U.S., maybe 4 times, 4 times as many people as the U.S., their consumption level is 20% of the U.S. With 4 times more people, total consumption is 20%, they just have to move up a little bit, the earth is not producing enough resources to support that, we need 4 earths to support the lifestyle for the Chinese to be as Americans. The supply and demand just don't add up, so the reason commodity prices have to go up, there was a survey of 500 scientists in the world where food prices are going to be in 10 years and the majority of them say it's going to double in 10 years, food prices.

Joe T. San Agustin: On page 17 is it possible to develop a bucket on our current assets of the fund. Maggie Ralbovsky: I already did. Joe T. San Agustin: So we can develop an allocation policy on how to allocate... Maggie Ralbovsky: Your current bucket is on page... Joe T. San Agustin: We're going to have to talk to managers to try and shift... Paula Blas: He wants to see what it would look like if you took the current asset allocation so that we have the coverage... Maggie Ralbovsky: I can do that. Here's the problem, the problem is you're going to have to sacrifice return because without adding new asset classes into this and you want to constrain the growth category, you expect return to be... Joe T. San Agustin: Yes I can see that but what is the --- rate of return, you can... Maggie Ralbovsky: I can bring something to the Board... Joe T. San Agustin: We're talking about application of risk management here... Maggie Ralbovsky: This is exactly risk management exercise here. I can show you some scenarios with the current available asset classes. Joe T. San Agustin: I think you'll be able to show that we're not really getting as good of returns as we should be. Maggie Ralbovsky: I think you're getting good returns under certain scenarios. Joe T. San Agustin: Yes but we could expand by having different allocations. Maggie Ralbovsky: If scenarios change you could easily be killed. Joanne Grimes: But isn't that where we need to run it to see where we would be to hit the actuarial assumed rate and as a threshold risk analysis. If we don't do that now, what you told us... Maggie Ralbovsky: You can do that but you can make numbers say a lot of different things. To hit the actuarial return target you can do a lot of things to make it work and this whole thing really removes the risk definition from those translated into real life what is the real risk. That's the reason I didn't mention actuarial rate of return, however with your current available asset classes if we want to constrain growth to say 70% we will have to sacrifice return because to supplement that you have to add asset classes.

Gerard Cruz: By growth you mean investment equities? Maggie Ralbovsky: In growth sense asset classes are pretty much equities and right now you have a 95% allocation so if we constrain that to 70... Gerard Cruz: I'm just trying to in my own mind reconcile, so if we start to peel back on our growth and those growth buckets and then we start to move into other buckets like TIPS and other areas where falling economies and high inflation type securities will do well, fundamentally I know in the past equities have always out performed, would we be taking money off the table? Maggie Ralbovsky: Yes, so that's what I'm trying to say, if you don't add asset classes, you definitely are going to lose return. The way to solve that is to add asset classes that can actually supplement that portion you lose. The reason commodities are good is commodities do well in growth environments as well. Gerard Cruz: Commodities, are you talking physical assets taking on physical assets like buying gold? Maggie Ralbovsky: You could, usually people buy in futures because you don't have to get storage, gold is easy because it's a rock but if you talk about oil, you have barrels of oil, corn, bushels of corn. Gerard Cruz: So you're talking about futures, buying futures? Maggie Ralbovsky: That's right, commodity futures.

Howard Yata: You invest in a manager that does that, there are commingled funds that have strategic programs that invest so much in commodities, so much in natural resource stocks, so much in real estate perhaps, so much in TIPS and you get a combined return because you give up nominal return investing in TIPS and you hope to supplement that with some other asset categories and they're all sensitive to inflation. Wilfred Leon Guerrero: Can we invest in commingled funds? Joanne Grimes: Subject to caps, subject to percentage limits. We drafted the commingled section an interpretory language that the --- to the qualitative limitations that are elsewhere in the statute do not pertain to the underlying holdings of the commingled fund, just looking at the quantitative limitations. Maggie Ralbovsky: So you actually can invest in commingled funds. Howard Yata: There's a limitation on commingled funds. Joanne Grimes: So for example in Microsoft, if there were a stock that didn't pay dividends in 5 of the last 7 years, a fund held it, you wouldn't peak through to figure out that it was an impermissible investment. Howard Yata: So maybe we need to look right now how much is in commingled funds. Maggie Ralbovsky: She (Joanne Grimes) was saying the ETFs are in commingled funds and I was saying you can move it out which there's no reason to put ETFs in that category. Joanne Grimes: The ETF was to avoid the cap on the mutual fund.

Maggie Ralbovsky: I want to take a look at your law again and maybe next time we can discuss the buckets and what can be done under the current law and if it becomes too restrictive we can collectively talk about then next step. Rosalie Bordallo: It's how much you would think you would want to allocate to that investment. Maggie Ralbovsky: On a risk basis you need 10-20%, not on an asset basis because they're more volatile it actually takes a smaller asset base to reach there.

Paula Blas: Can you actually do back testing on this type of application? Maggie Ralbovsky: Yes I can but we have to include that period where inflation was high which you can see it will be good because... Joanne Grimes: But not so much to see how good it would be, but when you say you have to take a hit on return, what kind of hit are we talking about? Howard Yata: The problem is there weren't TIPS back then. Maggie Ralbovsky: TIPS started in 1997 and a lot of the strategies that you started in

maybe 2002 so you have a limited history on that but we'll see what we can get, I know there's some proxies we may be able to use, there's data for TIPS.

What my clients and Trustees don't want to hear, I represent a lot of the Trustees and it's really nice for brag rights to say how well the assets somebody managed performed, but you really don't get accolades for going really above and beyond in terms of performance but people look when you do lose and the caution is we should heed what Maggie (Ralbovsky) is talking about because in real terms that's where it will shine.

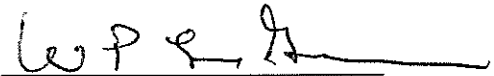
Howard Yata: Again, we're not trying to propose something that's outlandish, we're just trying to help protect the portfolio. Wilfred Leon Guerrero: This has been a very good discussion, this is something we need to do. Howard Yata: We're just trying to look forward rather than going backward. (end of tape 4)

**Respectfully submitted,**



**Stephanie A. Herrera**  
**Recording Secretary**

**Affirmed:**



**Wilfred P. Leon Guerrero**  
**Chairman**