



GOVERNMENT OF GUAM
RETIREMENT FUND
STABILITY · SECURITY · REWARDS

Eddie Baza Calvo
Governor

Ray Tenorio
Lieutenant Governor

Paula M. Blas
Director

Quarter Ended June 30, 2014
DC Plan Quarterly Performance Meeting
July 24, 2014
Retirement Fund Conference Room

Trustees:

Joe T. San Agustin
Chairman

Wilfred P. Leon Guerrero, Ed.D.
Vice-Chairman
Investment Committee, Chairman

Antolina S. Leon Guerrero
Secretary

Gerard A. Cruz
Treasurer
Audit & Operations Committee,
Chairman

Katherine T.E. Taitano
Trustee

Anthony C. Blaz
Trustee

David M. O'Brien
Trustee

Board of Trustees Present:

Joe T. San Agustin, Chairman, Board of Trustees
Wilfred P. Leon Guerrero, Ed.D, Chairman, Investment Committee
Gerard A. Cruz, Trustee
Antolina S. Leon Guerrero, Trustee
Anthony C. Blaz, Trustee

Staff Present:

Paula M. Blas, Director
Diana T. Bernardo, Controller

Other Present:

Doris Flores-Brooks, Office of Public Accountability
Terry Dennison, Mercer Investment Consulting Inc.

Economic & Capital Market Environment
DC Plan Performance

Pages 2-14
Pages 15-30

Economic & Capital Market Environment

Terry Dennison: Let's start with what's been going on in the World and as always it's interesting. Let's talk a little bit this time we'll go from the top down, let's talk about the World, first. The Global economic crisis was seven years ago and what we're seeing is really continued divergent in how countries and regions have recovered from it and I think its very clear any sensible person that the US has done the best job. The US has managed both, the debt issues and the low growth issues as well as any country. The Federal Reserve stimulated using various quantitative easing programs they absorbed a lot of the bad debt which they took on to their balance sheet and realistically I think stabilized not just the US but the whole world. The cost of that of course is by buying almost five trillion dollars worth of bonds is injecting five trillion dollars into the world economy. And the big threat to the world economy now is given that the Fed have said we're now going to end the quantitative easing program. Doris Flores-Brooks: We're not. Terry Dennison: We are in October and because these bonds mature as soon as they stop buying bonds the stimulus becomes negative because the bonds mature and they grow off the Feds balance sheet and that actually is withdrawing dollars from the system. And we now have a lot of economies that are very dependent on getting a lot of dollars and the emerging markets basically have thrived because of dollar liquidity now there's great fear that if the dollars liquidity dries up we're going to see a great deal more difficulty in these economies which had become dependent on this constant inflow of dollars contrasting how well the US has done the poster child for doing it badly is the Europeans. Now they're handicapped by not actually having a working government or economic government but the reality is that they have really made, I used to work in Europe and used to work in London and I use the British term they've made a dog's breakfast to the whole thing. They really haven't stimulated they've nibble at the edges even the program they've announced in June is nibbling at the edges they're going to provide a lot of money to the banks and hope the banks lend it the problem is the banks already have a lot of money they don't need it. And it's not likely to produce any increase in lending and meanwhile the inflation there is so low that's its causing the indebted countries to get into a graveyard spiral of indebtedness because their economies are growing more slowly than the debt is increasing and the debt to GDP numbers are reaching basically almost the point of no return in countries like Italy and Spain where basically there is no amount of growth anymore will allow them to get out of the trap and you could think about if that's hard concept if you are adding to debt at a rate faster than your income is growing you'll eventually go bankrupt or whatever the equivalent is for government people who go bankrupt and the problem is the debt is now growing faster than any creditable amount of growth that could be generated in these economies.

So they have a very bad mix of austerity and lack of serious attempt to engender growth now they're ham strong because the Germans in particular are unwilling to go on to a open ended bond buying program for in fact the German Constitutional Court has said this so-called overt market transaction where the European Central Bank would buy bonds are illegal and that's being debated by the European Court of Justice but the practical fact is if the Germans say it's illegal they're not going to do it. Which really means that they don't really have an answer for this and they are getting in more and more of a dangerous situation with low growth low inflation and all they need is some shock to tip them into a deflationary spiral and of course there's plenty of potential sources for shocks in the World both geo political and economic. So there's a real concern that while the European seem to have recovered the

facts in the ground are really quite different we get in to that when we get into the discussion of Europe. If we take a look at what the market is thinking right now the market basically tends to go between fear and greed and you can even see it in how certain of the managers how funds perform and because fear and greed sounds kind of cruelled the phraseology that's used in the market is risk on and risk off and everything seems to be going well enough now particularly in the US where we're definitely on a risk on environment.

The market is discounting stable conditions going as far out in the future as you want to look. There's very low market volatility there's ample liquidity there's no real issues that anybody seems to be worried about and risk premiums have raised asset prices. Asset prices are at all time highs balance sheets seem to be improving the issue that represents particularly for investors like yourself and really any investors is as prices appreciate future returns decline. So there is a paradox as you make money today and returns are good today it basically means that returns are likely to be weaker in the future so the price appreciation feels good now is going to add to the challenge of lower returns in the future and this really represents as what becomes known as a saving problems particularly for those who have to meet future obligation through return assets and that kind either be in the defined benefit pension plan or whatever variety or simply an individual saving for retirement. If you sit down and figure out how much you have to save during your working lifetime to live a reasonable existence during your retired years it is frankly impossible for the average person to save that amount of money. Doris Flores-Brooks: That's right, that's why we need that Social Security that's true that's like the poor DB members. Paula Blas: DC. Terry Dennison: The reality is the money you save really just primes the pump basically if you looked at how many cents of every dollar that you'll spend in retirement probably no more than twenty-five or thirty cents of that dollar represents money you put in and basically what you put in is just the seed corn that grows because of market returns.

Let me give you just a little common sense example suppose you got somebody I'm going to just assume that there's no inflation simply because I can do the math in my head suppose you have somebody who is making \$50,000 dollars a year and is going to work for forty years and you could just assume that their risk adjusted income just stays constant so they make \$50,000 dollars a year for forty years and they saved 10% either by contribution and employer match or by whatever means they saved 10% of that saving \$5,000 a year. So in that 40 years they're going to save 40 times \$5,000 which is \$200,000 dollars.

Now, if they're going to try to maintain the same lifestyle that \$200,000 dollars will be completely depleted in 5 years even if they cut their lifestyle in half and so basically it will last 10 years. So the reality is nobody can possibly save enough money to retire it's just you would have to save 40 or 50% of your income over your working lifetime to be able to withdraw that same amount of money even adjusted for inflation during your retired years so everybody depends on the returns on their savings that's the savings problem. Now if we are entering a period of low future returns it's going to be very difficult for any entity that is dependent on growth and assets to fund their obligations be it a pension fund or an individual it's going to be very difficult for them to grow the assets the way they expect it and there's a lot of things which we will talk about the US long term will even get in a little quickie course in economics and what we mean like tension GDP and what's the Gordon growth model little bit of technical talk give you a sense of why it's just not going to be as great as it has been for the last 20 years. If we look at it for the short term in the US we're

the best place to be by far there's no question that growth rates are probably running above what an economist calls potential GDP growth. Now if you look at the head line GDP numbers you saw that after a number of revisions first quarter revised on to almost minus 3%, generally attributed to bad weather and probably was a hundred year event in the bad weather impact on the economy and if you think about bad weather it effects everything it effects manufacturing, people can't go out and buy stuff, construction generally comes to a haul and second quarter was probably looking at GDP and the plus 3, so the reality is the first half of the year GDP is flat we haven't made any progress. But we've looked at the instantaneous level of GDP we're probably running a 3-3½% which is probably above what the US economy is capable of producing long term what's called potential GDP growth it's a term you see if you roam around an economist blog and there's a lot of question as to whether or not the potential GDP growth in the economy and we have some figures about that which has actually been declining it's not a smooth growth. Obviously commodities businesses are doing much better than service businesses manufacturing is still relatively weak. Manufacturing is dependent on the sales to end buyers and with the Global economy particularly Europe which is a big export market for the US being a quasi permanent recession.

Manufacturing still is not doing very well it's not a situation where everything is doing well across the board. If we talk about unemployment which is the number that everybody thinks about because it's one of a few economic numbers that can affect you directly things like GDP and so forth are very secondary treasury affects that's unusual because if you are not working unemployment matters a lot. Unemployment has been improving dramatically one of the issues with that statistic is done by what's called a household survey where they call about 2,000 household and ask is there's somebody in the household who's looking for a job, so if they say yes they're listed as unemployment and looking for a job, if they say no they're not, trouble with the household survey is it depends a lot on peoples attitude toward the likelihood they'll find a job this is where the issue of discouraged worker comes in. If you don't believe there are jobs out there you just basically say no I am not looking.

So a sum of the decline in unemployment is due to this discouraged worker factor some of it is due frankly to people withdrawing really permanently from the workforce. There's a statistic you've heard a lot lately called workforce participation. The percentage of the working age population has people 18-65 who are actually in work. Doris Flores-Brooks: And the baby boomers going on to social security. Terry Dennison: Absolutely and people who have lost their jobs and frankly not just their jobs but frankly their employability going on social security disability and basically that's a one way street. So we're seeing that workforce participation which used to be in the high 60's or low 70's if you go back 30 or 40 years is now getting into the low 60's. And this is important implication which will again get to when we talk again about the long term. Doris Flores-Brooks: High 60's, what do you mean? Terry Dennison: 68-69% of the people in the working age population were actually in work, the remainder are in school or other activities. So we are seeing a lot of unemployment improvement but we are not seeing a lot of improvement in working incomes and that's why you see retail doing relatively poorly, we see a lot of people with jobs who are working involuntarily part-time you hear any number of antidotal stories about people who are being forced to work for 20 hours a week and they can't participate in the affordable care act. So basically you end up having three people working part-time to produce the income impact in the economy of two people working full-time. Well we seem to have been doing very well on

the unemployment front it hasn't really had that much of a positive impact on the economy because wage growth hasn't followed along and that's one of the things that the Federal Reserve looks at and in fact that's why they're still relatively segued about inflation because while more people seemingly are working they're not making any money and its making of money that actually produces inflation because its more money chasing the same number of goods and that's what's producing inflation.

Another major aspect of what's going on in the US is the housing market and obviously the housing market was very depressed coming out of the global financial crisis because house prices particularly in Sandland that part of the US. The Sun vale where they've been a tremendous amount of growth and tremendous amount of building and a certain amount of relaxation of underwriting of mortgage standards no doc loans if you weren't dead to long you could get a 100% down mortgage. The reality is a lot of that is now has been taken up it hasn't been taken up as much by traditional buyers as it is has been taken up by investors. A lot of investors including a lot of hedge funds are buying houses not one house they buy houses by the thousands but the reality is a lot of investors are buying houses because they can buy them cheap and they can rent them out or potentially hold on to them and sell them later at a higher price. So previously we had this enormous overhang of bank owned properties or properties that were significantly under water that's largely been taken up. Now there is a positive impact in that the fact that your house you couldn't sell it and you couldn't refinance it you basically couldn't move and one of the big advantages that the US has over many other countries is labor force mobility. People couldn't go to North Dakota or Texas where the jobs are, they had to stay in Ohio or Indiana or Illinois where the jobs aren't because they couldn't sell their house but as soon as they start to unfreeze that housing market then people could migrate to where there are jobs and there are places in the country where there are a lot of jobs so that's another thing that this helped. Now, what we have been seeing is they are still structural issues in the traditional home buyer market there's not been much relaxation of underwriting standards if we really gone back to the 1970's style 10 or 20% down no fancy financing and because incomes aren't growing and ironically house prices have risen affordability has become another issue again. Where previously house prices look very cheap and affordability remains a problem because incomes haven't grown.

There's another factor I want to talk about later because I think it is good becoming a highly visible constraint on the US long term and that's the impact of student loans. Student loans are a very subtle disaster waiting to happen if you have hundreds of thousands of dollars of student loans particularly of two people married each of whom has hundreds of thousands of dollars of student loans you're not buying a house in the near future. You are living with one or the other parents you're probably not buying a new car, you're probably not buying anything all you're doing is trying to stay above water with your student loan. I got some figures I'll share with you that's ultimately going to become a significant impact on particularly housing to a lesser degree other fixed asset purchases like cars and appliances and stuff and that's becoming highly visible and people are now beginning to say this is becoming an issue for home buyers that they basically can't qualify for mortgage because of student loan payments are so high. Doris Flores-Brooks: And the rate is not cheap. Terry Dennison: No, rate isn't cheap and they're not dischargeable in bankruptcy it's something you can't get away from. And of course some of these loans were for education that has not prove economically useful and we're not just talking about the people who went for profit trade school, but even people going to legitimately liberal arts university that got degrees in

something that nobody's willing to hire them to do. Doris Flores-Brooks: Like guitar and music.

Terry Dennison: So they now have this huge debt and no creditable opportunity to get a position that's ever going to pay it off. Doris Flores-Brooks: Unless you have a parent. Terry Dennison: The problem of that it doesn't actually add to the wealth of the economy because now this is some money the parent doesn't have to spend and the net result is it's a permanent impairment of growth. The third factor or fifth factor, I lost track I'm not keeping count is what we're seeing in the corporate lending market and we talked a couple of quarters or probably about 5 years ago about Hara Minski and he was an Austrian economist and his thinking became popular has passed away after the global financial crisis he postulated three phases of an economic cycle. In the 1st phase which is very healthy people are able to put in home mortgage terms they're able to pay a self amortizing mortgage loan they can pay principal and interest. The 2nd phase which is becoming unhealthy is they can pay the interest but they can't pay the principal. The 3rd phase which is the end is nay repenting all you who entered here who they can pay neither the principal or the interest. Doris Flores-Brooks: But I thought that went away. Terry Dennison: Well it's back. Doris Flores-Brooks: You mean for the US Global. Terry Dennison: There's a parallel to this in lending to Corporations and we're now seeing that corporate lending standards are declining, things that we didn't expect to see like payment and kind debt or basically the loan can be repaid by issuing more debt instead of getting paid back for the loan the borrower can simply give you more pieces of paper. There's a lot of competition for making loans so people get paid for making loans so they make poor and poorer loans and we're now seeing really stage three where companies are becoming very levered, some companies have very strong balance sheets, other companies are levered up to the hilt and it comes very dependent on cash flow any interrupt on the cash flow and they all fall down. When we get to the long term we will get to government debt.

Wilfred Leon Guerrero: Terry before you go on I don't know whether you remember Tony Blaz, he's now Director of Bureau of Budget and returning Board member. Terry I want to ask you about this because you started talking about the student loan you know there's a perception out there that the Federal government issuing bonds and the Chinese are the ones buying it, but that's not true, right. Terry Dennison: Right. Wilfred Leon Guerrero: So you are looking at the future and with the student loan that these guys are looking at it's really going to be rough for the young people, right. Terry Dennison: Yes and you listen to stories, I've graduated both my bachelor's and master's at University of Wisconsin as an in-state student and this is the 60's my semester fee was \$225 a semester, now it's \$5,000 I mean educational inflation is higher actually than medical inflation everyone focuses on medical inflation because everybody gets sick and typically people don't go to school all the time but the reality is when I went to graduate school the business school of the University of Wisconsin the classrooms had linoleum floors, sort of rickety old chairs, fluorescent lights that weren't even as fancy as these, the food services is vending machines. Doris Flores-Brooks: I went back 2 years ago to Harvard and that time I want to say the tuition back in 1979-1981, the tuition then was \$3,000-4,000 a semester at Harvard Business school of course at that time that was still very expensive now I think it's about \$40,000. We went and re-toured the campus and I remember the Olympic size swimming pool there's a new gym it had racket ball, elevated track it was like wow. Paula Blas: But isn't the US recognizing that the student loan debt is starting to grow to a number but you also have the President putting

some forgiveness after the first 10 years. Terry Dennison: The problem with that is the Governments broke too, somebody ultimately either has to eat the loss or come up with the money so they just can't go around bailing out people, the government is a fiction there is no such thing is the Government. The Government is simply us operating as an institutional entity no politician wants to talk like that but that's the reality there's no such thing as the government all it does is it takes money from us and does things for our collective good. It is pure parasite it produces nothing even of itself so the reality is that if they're going to get rid of this it's about trillion dollars now the student loan debt yes we get all forgiven that just add a trillion dollars to the debt of the US. Well, how's that going to get paid off, where's the money going to come from? Doris Flores-Brooks: The bonds we did it for the mortgages. Wilfred Leon Guerrero: That's the thing that I'm wondering we don't owe it to anybody we owe it to ourselves. Terry Dennison: Well the problem is collectively we owe it to ourselves the problem is actually somebody owes a piece of it to that entity or that entity and there's no way to collectivize it but everyone recognizes it as a huge problem. What they're trying to do is very difficult is slow the growth of the student debt by making it more and more difficult for schools to raise tuition. What's happening is the school is basically because there's so much government financing out there they could just keep raising the prices. Doris Flores-Brooks: Not on Guam. Terry Dennison: You have the usual market. But, the reality is that the schools are competing for students by having more and more luxurious facilities. The students they're 18 year olds, 20 year olds they don't understand that they're ultimately going to have to pay for this and that the jobs out there aren't sufficient to pay off this debt in any meaningful amount of time and the government actually is taking a hard line on this they're the ones who said you just can't charge it in bankruptcy.

Doris Flores-Brooks: And of course back then when we went to college everything was cash and carry we didn't have student loans. Paula Blas: Your student loan debt includes the parent loans also as part. Terry Dennison: This is strictly debt from the student. Paula Blas: Then it's even more if parents are included. Terry Dennison: Guarantees are probably in that number to, but not direct out of the parent. Antolina Leon Guerrero: Where college students because you talked about how it has an impact on not being able to purchase homes, not being able to purchase cars and yet was there a reality that college students bought homes right out of college, it seems to me that wasn't going to happen for 10 years anyways because folks rent for 10 years until they save. I guess when I read those articles people can't buy a home, they can't get married well you can have a 20 thousand wedding so what you can't buy a home tomorrow but you can buy it in 10 years. Terry Dennison: I don't want to say something that makes you sound old but the reality is everyone in this room goes back to in age when you did not buy a home until you're 30 or 32 it took awhile to save a down payment. Doris Flores-Brooks: You had to save to buy. Terry Dennison: Even if your parents kicked in the last little bit we bought our first house we saved the down payment we didn't buy a house when we first got married. But, all of a sudden then we're in the period of instant gratification, I want it and I want it now. We are primarily children of the greatest generation our parents went through depression people here of course went to an occupation. The reality is kids today live in a different world and their expectations are the point is not there expectation is that the economy was built around the fact that 25 year olds or 28 year olds were buying houses. So it's not that we got a bunch of disappointed people who are going to have to live in their parent's basement its that the economy has built itself around 100% down mortgages or 99% down mortgages or if you hadn't been debt to long you can get a loan mortgages and the reality is that's not happening now either because of

underwriting standard or because the debt level is simply impossible they can't tolerate the payments. I mean literally we all know people younger people who are literally living with their parents because they can't even rent a place because they can't make rent payments because the student loans are consuming their entire disposal income.

So, let's talk about the US long term I'm being mindful of time. Obviously one of the huge things we're going for is the energy boom in manufacturing renaissance what's going on in the US energy market is unbelievable in terms of not just the impact on price, but the impact in supply and the amount of literally just economic activity that's being generated. I'm a railroad fan I read trains magazine like the Burlington Northern Santa Fe railroad runs 300 trains a week into North Dakota with just fracking sand and the amount of economic activity that's coming from this is just unbelievable we're going to become not just energy self sufficient but if we choose to an energy exporter and literally where other countries are seeing their electricity cost become astronomical our electricity cost are basically flat. Gerard Cruz: That's using natural gases as source of energy. Terry Dennison: We will return to small islands with electric utilities running on fuel oil, we will return. Obviously natural gas which is a primary output of the fracking process is not only cheap energy it's relatively carbon friendly energy.

Our current account deficit which previously was disastrous is now closing significantly we're not importing energy. If we get to energy neutrality basically we're probably a next net exporter of goods and services. If you think about people say look at all the foreign cars all foreign cars are made in Tennessee they're made in Alabama they're not foreign they have foreign name plates on but they're all made in the South. So the reality is we're an exporter if we weren't importing millions of barrels of oil every day but we still are facing long term the same things we talked about before but I got some statistics that's kind of interesting. Again one of the things that the Congressional budget office looks at is this potential GDP growth and basically what it is looking at is there's a statistic called NAIRO it's natural non-inflationary rate of growth it's how much the economy can grow without producing inflation, you can google it. And it depends really on two things which is growth in the labor force and growth in productivity ultimately GDP growth is really dependent on those two things because goods and services which is the definition of GDP are produced primarily by people directly or indirectly and people who work more efficiently not necessarily harder but more efficiently more productive technically in the way economist talk they produce more value of output per labor hour that's the way they talk that's beneficial. Well we struggle with that potential GDP growth which is around 3% in the 1990's our economy was on a track to grow a 3% in the 1990's. It's down to about 2.2% today in fact if you look at graph of GDP growth there's actually a notch the GDP growth that we lost in the global financial crisis we will never recover. That potential is not going back to that trend line it's now permanently retarded we've lost that growth forever and we'll talk about the factors behind that but one of the ones that's an issue is debt we are drowning in debt as governments, as individuals even though we deleverage we still have more debt and it's still growing.

But, I am going to talk about a small sunny Island not this one however you may see some parallels you are speaking of Puerto Rico. There is a phrase you may have heard of the Canarian coal mine the miners back before they had good safety equipment but take a canary down if the canary died they left, if the canary didn't die it was okay to breath and Puerto Rico is the Canarian of coal mine. In June the Legislature passed a law allowing it's

highly indebted in trouble state of entities to consider debt default. The biggest problem is actually their state commonwealth owned electric utility which burns fuel oil relatively inefficient because there's no coal or natural gas it's basically a very large coral atoll I mean there's nothing there geological interest so the reality is they are probably they've spend their reserve fund and are probably going to miss their next debt payment.

Doris Flores-Brooks: For the first time. Terry Dennison: Yes. Doris Flores-Brooks: Is this the joint government or the state owned? Terry Dennison: State owned utility, although their government in almost as bad as shape. Doris Flores-Brooks: I am very interested in Puerto Rico because they did a few debt comparisons because Puerto Rico is the highest and Guam is next because in the states of the debt to income is higher than even stateside California and New York. Terry Dennison: The underlined condition of the Puerto Rico economy they have a problem. Doris Flores-Brooks: But they lost the tax thing and that's what hurt them. Terry Dennison: They had a situation that's not that dissimilar from Saipan they basically had a tax advantage situation, in Saipan's case it was a minimum wage concession and they lost that and basically the economy just dump and died. They have a high level of debt and very high level of unfunded pension liabilities it's very clear that they're going to have to restructure their debt. Now they're complicated in that they're not a state so the US Constitution which talks about how basically the states can't go bankrupt but deals with that so they aren't really anything so they actually had to pass a law which is probably going to get taken to court because nobody knew exactly what would happen if they defaulted because they're not covered by Chapter 9 of the bankruptcy code which covers municipalities they're not a municipality, they're not a state so they're not covered by the provision of the US constitution they're sort of this funny thing. Doris Flores-Brooks: That's us we're in that funny thing because we're not state or country. Wilfred Leon Guerrero: Not necessarily because the Organic Act is a treasure in the Federal Government. Antolina Leon Guerrero: It's an Act of Congress. Doris Flores-Brooks: Yeah, okay. Terry Dennison: So, basically they pass a law that allows them to in effect to clamp down debt relief they can basically tell their bond holders you are only going to get 60% of what we owe you. The last is going to have a chilling effect out of a municipal bond market there's already two very large municipal bond funds Franklin Templeton and one other one who's going to sue them because they owned each about 600 million dollars worth of debt and it was yielding about 10%.

People somehow forget that the most precisely priced thing in the universe is risk and if you are getting high rate of return there's a reason if somebody has to pay 10% interest the odds of you getting your money back aren't high. Doris Flores-Brook: So there's been a lot of comparisons like Guam's refunding of various debts to Puerto Rico just recently. So what's happening now with Puerto Rico? Terry Dennison: Well they basically pass the law that says well the absence of any other guidance here's what we are going to do if we have to basically stop paying our debts which is we're just going to stop paying our debts for the benefit of the minutes I could think of a two letter phrase which I won't say that's effectively what there're saying to the bond holders just like when you saw when Detroit defaulted it had a chilling effect on similarly situated cities and counties that this is going to have a chilling effect on similarly situated entities.

We talked about student debt again the outstanding balance is a little over 1 trillion dollars it's up 11½% of it is delinquent or in default that's a very large number to be a 100 billion dollars of that is delinquent or in default. In 2005 the average student loan was \$17,000 by

2012 it was up 58% \$27,000 your anecdote of people with hundred thousand dollars if they went to medical school or law school or any professional program. Gerard Cruz: I think there limits on the amount of students loans that you can get. If you're an under grad you can only get so much. Terry Dennison: I think it's really the people getting professional degree but in some of these like the Pell Grant don't have to be repaid. Paula Blas: Depends on the income as parents because there still dependents considered dependents so they take your income when calculating how much they can get as a student loan. Antolina Leon Guerrero: The expected family contribution we're experts and fast I could do a course parent's use to come to me all the time.

Terry Dennison: Let's get back to the issues of GDP and a couple of statistics. Worker productivity in the 2000's not that long ago 10-15 years ago was growing a 2.6% a year this decade it's growing 2 tenths of 1% a year. Remember two parts of GDP work force growth and productivity. One part of that is gone from 2.6% of your growth .2% almost no productivity. Labor force growth in the 70's the labor force is growing 2.6% a year it's fallen in the 80's to 1.6 and in the 90's to 1.3 and 0.8 in the odds to 0.3% in this decade. So the labor force is barely growing and clearly the baby boomers are not staying in the labor force and they are now into the fat part of the labor people who were born in the 1949 are now 65 years old.

So the net result of this is GDP is going to be very hard to grow. If I mentioned the garden growth model, the garden growth model is a tool that a lot of people used for modeling the future returns of equities and it assumes that equities long term the return will be the result of four things. It would be the result of inflation looks like it's going to be low, growth and corporate profitability, the GDP growth being low that's not likely to happen very fast, dividends if companies aren't making a lot of money and besides companies are not paying dividends like they use to when I started in the stock market in the 60's a lot of companies paid 6-8% dividends now it's amazing if you get 1. And change in price earnings ratio if earnings are growing people are willing to pay more for the stock and there's actually a formula you add those four factors together and you get the expected return for stocks and most people expected return for stocks are 8 or 9% that's what they put in their model for forecasting with return that's going to be in their portfolio. Doris Flores-Brooks: But that has dropped now by 7, right.

Terry Dennison: Supposed it's been dropped to 7 I'm not talking about total fund return, we're talking about equity return. If inflation 1% GDP growth corporate earning stick with GDP growth maybe it's 2% that's what CBO says that potential up to 3%, dividends maybe another 1%, 4% given the fact that earnings aren't growing who's going to pay a higher PE multiple let's say it's at zero so your expected return long term for stocks is 4%. If you expected return for bonds are 2½% and your portfolio is 70, 30 stocks bonds it's going to be more complicated than that figure out how you're going to get a total portfolio return much above 3% going forward. Now that's nominal adjusted for inflation that's a 1% return not going to create a lot of wealth. One of the comment before we get to Europe this is the good part wait until we get to Europe and I will remind you there's no point of jumping out of the window you're on the ground floor of the building.

Much has been made about the improvement in unemployment it's down to little bit above 6%. In May 3.2% of listed job openings could not be filled because they couldn't find somebody with the skills necessary to do the job. Antolina Leon Guerrero: Where are all

those people with student loans why aren't they filling those jobs. Terry Dennison: They're looking for people who can do useful things not the typical liberal arts education. So just think about that if we had a workable match between the jobs on offer and the skills worker had unemployment rate would be about 3% we didn't have an unemployment rate of 3% in the middle of World War II. That's lower than any unemployment rate we ever measured it's only going to get worse education system is not producing the skills that people want to hire. People are not motivated to change their skills or they just don't have the intelligence to do what people are willing to hire to do. And I saw an article I was reading on the plane from the economist that some research organization figured out this is for Europe in the next 20 years half the jobs in Europe could be replaced by a computer so it's not going to get better, in fact the reason the economy isn't very strong is corporate capital expenditures have not been very significant, companies have not been spending money to build new plants and equipment, when they spend money they don't build plants and equipment to hire workers they build plants and equipments to get rid of workers. Workers have health care, they have drug problems, they have attendance problems, they lack the skills necessary let's just get some robot that never gives us any trouble that's the good part let's get to Europe.

Doris Flores-Brooks: Could I just diverge for one moment the migration problem that we're having the US was always built on the fact that migration the diversity and now we're seeing what's happening with Mexico and all of that. Let me just say what I think this is going to continue to happen because of the Polarization of Congress we are not going to fix it and we're going to have all these people here. So, what effect is that going to have on the economy? Because a number of them are going to stay because they're going to be able to skirt the system let's just say more than half would probably stay and this is at the low end they are the poverty level with food stamps then at the higher end if they are ambitious they get an education. Gerard Cruz: If they're illegal they're not on food stamps. Doris Flores-Brooks: But it's going to bring down because extra cost of fee but then they're going to be in the educational system and some of them are going to get educated and some will not, what's the discussion in that area? I'm just curious. Terry Dennison: It's not a hundred percent either way. I live in California or Mexifornia. Gerard Cruz: I think there's a different immigration problem but I'll let you finish. Terry Dennison: Where English is the second language. Doris Flores-Brooks: That's right you press 1 for Spanish, press 2 for English you don't press 1 for English you press 1 for Spanish. Terry Dennison: I think on ballots in the long term it's a slight positive, a lot of these people are working, a lot of these people are ambitious and a lot of them start businesses. Doris Flores-Brooks: But these are children though. Terry Dennison: The children are a funny phenomenon that's literally just happened in the last month or two. Doris Flores-Brooks: They're saying the last couple of years the tip of the ice berg had just popped up.

Terry Dennison: The other thing about it is if you look long term the US is probably the only developed country that doesn't have an enormous demographic problem the demographic problem is most severe in Japan where there won't be any workers at all in 50 years. Italy will have basically nobody working in 30 or 40 years because there's no migration well there's some illegal migration now from Africa but the reality is that we're an aging population if you look at what the Barkfurt's called the age wedge it's basically moving where the average age is getting a year older every year and the birth rates now to 1½ children per women even probably lower than that the economy doesn't help I mean not that marriage means much anymore, but the reality is without inward immigration you start to run into question of who

is going to rake the labor force? Gerard Cruz: And these guys pay social security gets paid from them and they'll never collect on it, they don't get government benefits. Who's going to pick the strawberries and do that stuff? Who's going to do that hard labor at the cost that they're willing to accept to do that work? Doris Flores-Brooks: That's why I wanted to ask because that's a new concern in the World economy. Guam is having its own share with Micronesia. Gerard Cruz: That's a different problem though, I think culturally it's unfair to compare the Mexican worker and the Micronesian worker because the Micronesian immigrant coming in is eligible for all the government benefits and they become a strain on the economy. Doris Flores-Brooks: You didn't hear my earlier comment about the earned income tax credit and the thing that's happening right now. Okay, so you think it's a net positive. Terry Dennison: I think it's a net positive and there's some disruption and clearly it's causing as if we need anything else from Congress to fight about and tends to be very.

Doris Flores-Brooks: What I am concerned about who's going to raise them and to create the values of hard work, education and ethic that's where I was coming from because children who are left to defend for themselves may or may not have the values of work, ethic, religion, family and culture and that's where I am coming from. Terry Dennison: I think it's one of the strengths because demographically when countries like Japan who has very little birth rate and very little inward immigration are going to suffer because they're simply going to run out of workers if you look at GDP work force growth and productivity growth they can have all the robots in the world but eventually they're going to run out of people. Doris Flores-Brooks: This is the good part, this is US. Terry Dennison: Be mindful of time we talked about Europe a little bit in the world discussion even Germany now is flat, France is a complete mess, Spain, Portugal despite the fact that now they got a banking crisis which seems to be always something this has to do with the corporate structure of the bank it was one of these complicated family-owned holding companies I don't think it's really that representative of the State of the Portuguese Banking system as much as something kind of unique to that particular bank but it showed just how one little tiny problem and we're immediately back in that same the worlds coming to an end phenomenon. Doris Flores-Brook: What about South America because that's where we are getting all this migration from. Terry Dennison: We're only getting it from Central America a lot of this migration is not as much economic migrants as migrants fleeing enormous disorder in their home countries at least that's what's been represented to be. I mean these countries basically have a low level indigenous war going on between narcotics gang and drug cartels and everything it doesn't seem to be much from South America it's basically from Panama North not even much Panama it's mostly Nicaragua, Guatemala, Southern Provinces of Mexico it's not as much from South America because South America has its own problems I would see the two biggest countries, Argentina has its problems with paying its debts and Brazil has a list of problems but the reality is some of the other countries there are actually doing quite well they have stable governments and economically running themselves quite well, Chile stands out as one of the countries that's doing very well. Europe obviously because it has wars on just about every border and it has an enormous in flow again of people fleeing their countries not just for economic reason but because of political unrest and social unrest you just see these endless pictures of these boats they're just covered with people, the boats sinking and all of that going on. I can't imagine given how heated the discussion is in Congress over relatively few people crossing the border in Texas, what would it be like if we had a land border or a easily accessible border like Africa or the Middle East or Eastern Europe it would just be chaos, but

now you got Syrian refugees, you got Iraq refugees the world is getting to be a pretty unhappy place right now.

We talked a little bit about the situation in Europe, in fact the European Central Bank it appears not just that many ideas as to what they can do either that or the ideas are stymied by the fact that they really can't buy bonds of governments because that would be considered funding deficit which is contrary to the basic law and as I said the German Constitutional Courts said that it's that simply illegal. And it just seems now to be slipping into a deflationary spiral with growth slowing and of course as growth slows everywhere but Germany, Germany will ultimately slow itself because their biggest export market are in the countries they touch just across the border. So I think that the situation in Europe is basically is a slow torture because the currency structure they built basically can't work I mean we talked six quarters ago about the fact that the Euro is impossible I showed you that very interesting analysis that JP Morgan did about the likelihood of a currency union and various models of currency union that will work that the least likely currency union to work is the countries in the Euro zone because they're so different. You are more likely to have a successful currency union with all the countries starting with the letter M, all the countries of the former Habsburg Empire or all the countries South of the twentieth parallel of latitude. I mean almost any random assortment of countries you could put together had a more likely prospect of a currency when you're working than the 17 countries in the Euro zone.

So, I think the next crisis and of course this could be kicked off with obviously this issues around what's going on with Russia and the Ukraine because it looks like at least the US and some of the European countries are going to get very tough on sanctions and the Senate Foreign Relations Armed Services and Intelligence committees chairmen, they're three different individuals have called on the White House to invoke the international emergency economic powers act and considered designating Ukrainian rebels as terrorist and that would trigger specific clauses in US anti terror legislation against anybody helping them and it has been characterized as declaring financial war against Russia and the problem is that one of the reasons why countries like Italy and Germany have been very soft and prudent on France because France is selling a lot of stuff to them there's a lot economic ties there. The problem is that the reality is if the US says you can't do something, the US basically sets the rules in the economic world if the US says you can't do business with this country even some little Italian Bank that has some correspondent relationship in somebody in New York some bank in New York can't do it. We can shut down the whole financial world against Russia. I saw an interesting statistics the Russian Banking system is about 2 trillion dollars the rest of the world is about 41 trillion dollars this is really a one sided battle and the thing about this is that obviously there are countries in Europe that see this as the event that could just sink the ship because the waters lapping over the gunnels now and if they lose all the Russian business or have their Russian assets frozen which can very well happen you could see Europe used to function effectively.

Let's talk about a little bit about Japan because I realize its importance with the economy here on Guam. Doris Flores-Brooks: Tourism from Japan continues to die and what is helping us is Korea. Terry Dennison: I don't see much on Korea. Doris Flores-Brooks: South Korea. Terry Dennison: I don't imagine seeing a lot of people from North Korea and if they do they're not going home but because they're not a big player in the actual global financial

markets I just don't see a lot of stuff on Korea. But, Japan clearly Abenomics had a spectacular affect, the Bank of Japan stimulating the economy and basically trying to stimulate inflation saw a significant increase in asset values and did see a momentary spur in growth which has been the first momentary spur of anything over there in two decades. The problem is that obviously they have to balance their books too they're one of the indebted countries in the world fortunately only to themselves. Doris Flores-Brooks: And it still is. Terry Dennison: It still is and they had to raise their consumption tax because they couldn't afford all the stimulative measure they couldn't afford to continue to spend money like that and in a sense now is that this has a physical tightening affect and it's slow in growth which may start to become even negative and the physical tightening may fade but we think that the momentum of the economy improving is probably slowing and there's probably a 50-50 chance that they have to have another round of easing or the economy would slip back into recession. It does show a highly sophisticated technological society with very smart people running it when you get in to one of these deflationary cycles how difficult it is to get out of it because that's 20 years of deflation and deflationary environment why spend any money today and the prices will be cheaper tomorrow. It's enormously difficult to get out of this thing and I mean basically they injected an enormous amount of money in to the economy discovered they couldn't afford that had to pull some of it back by increasing the consumption tax and now the stimulus is running off.

So it just shows and it ought to be an object lesson for the Europeans they're going to have to do something to get out of this almost zero inflation situation, zero inflation, zero growth because I didn't pull out the statistics but in two years the debt to GDP statistics for Italy was up more than 5% that's about 135% debt to GDP and they have a primary budget surplus they're not in deficit they have a budget surplus and they're falling behind because their growth is so slow that even though the government is operating in a surplus the debts growing because the growth is less than the amount of the interest on the debt so they're in this grave yard spiral. I think this is enough bad news.

Doris Flores-Brooks: But then the market is contrary to all of this. Terry Dennison: Like I said before the one thing about the market is in the short term the market doesn't seem to pay much attention to what's going on in the real world. I mentioned that China had a very poor stock market performance for a number of years while the economy has been booming. The thing that would make you worrisome about the market is the S&P 500 has gone up more than a 100% in 5 years corporate profits have grown 15% in five years. What are the four factors that drive the stock returns? Profitability. How can the stock prices go up 100% when corporate profits are up 15% that's not going to stick it's like throwing the ball up in the air and come back down again. Literally now some of this is simply recovering the market was over sold at the bottom of the recession when everybody thought the world was going to end and there was probably a weekend where it could have. I have said the financial economist write the history of the Lehman weekend I think we'll discover like the Cuban missile crisis how close we came to the end of the world. But the reality is that I think the market over reacted markets do that, markets are always up more than they should and down more than they should and I think that the reality is that the market has over shot the economic reality. They have what's called momentum, people see they're up so they put in money what makes the market go up people putting money in, that's what drives the markets.

DC Plan Performance

Let's talk about the performance of the funds turn to your book we have 2 books this time one is the Search and the other is the performance book go to page 11, some of this benefits of the minutes that's to show that we're doing our due diligence, Gerry we're on page 11 on the book. If you turn to page 11, this again is something we talked about every time for the benefit of the minutes. The point here is important that we want to provide the participants with the range of investment options along this continue with risk and return to allow them to create portfolios to meet their own individual risk and return requirements and I don't see any significant holes here that we want to fill. At some point we might want to come back one thing that we are seeing some people look at now are what are called diversified inflation funds, they're funds that are consistent they're multi asset funds they have things like tips and commodities and real assets in the like we have an inflation protected fund but it's primarily buying treasury inflation protected securities it doesn't buy commodities or real assets. At this point our forecast which is remember my crystal ball is not working very well it's a little fuzzy and it's a little black and white model anyway, it doesn't really indicate an outbreak of inflation between now and the next time I'm here. So, I don't think we're not being silly I don't think we really need to worry a lot about inflation going forward inflation is not our enemy; lack of growth is our enemy.

So if we continue on to some of the summary data obviously the market continue to do well for the quarter the fund grew from investment performance as well as some contributions. On page 12 is looking at the two plans the 401A Plan is up it's starting to tickle 400 million dollars it's starting to get a pretty sizable chunk of change and the 457 is getting close to 40 million so the impact of contributions and market affect is certainly beneficial as assets continue to flow in to the plan. In terms of the funds again partly because of the way we reset and asked everybody to redesignate the default fund and put everybody in the age appropriate life cycle fund and inertia caused them to stay there relative to other plans and having done that you get very high proportion on the target date funds which we think is very healthy.

Some key highlights starting on page 13, there's nothing really different here some comments I would suggest you take a look at. Looking at Dreyfus Standish Global Fixed Income Fund which their performance is doing real well but still haven't heard anything about this fascinating proxy result. Antolina Leon Guerrero: Still no word. Terry Dennison: Are you hearing anything? Paula Blas: No. Terry Dennison: Did they tell you anything, you're actually the owner of the shares so presumably they're going to tell you. Paula Blas: The Fund. Terry Dennison: The Fund but you are sort of the administrator and they will communicate with the Funds through you and have they told you anything. Alice Tajeron: We've not heard anything, we've asked our people and not heard anything. Terry Dennison: Again, until we see them actually do something nasty the Fund performance has been fine and at some point here maybe they just did this for the heck of it.

Page 14, third one down the Vanguard Fund if you remember Alice this was supposed to move to lower share class, has it moved? Alice Tajeron: Vanguard in August the mapping will take place in August. Terry Dennison: Okay, this is just a repeat because we still see it on the old one. Doris Flores-Brooks: So what's going to happen on this one? Alice Tajeron:

Vanguard is a name change and the other one is Thornburg, so what's going to happen is a lower share class. Paula Blas: Just lower share class. Doris Flores-Brooks: The name change will be what? Because I have money in there and I'm just curious. Paula Blas: I think its signal. Terry Dennison: It's going to the signal class share it's just reducing its expense ratio. Doris Flores-Brooks: Okay, you'll just automatically do it. Terry Dennison: Yeah, under the sharp buys you'll notice the difference it's just reducing the expense ratio on base. There's a discussion here about Baron we do have a search to look at Baron and it continues to be a weak performer and continues to have the issues of a very high average market cap for a small cap fund as well as the absolute value of the fund has become unmanageably large so this afternoon after our lunch we'll go through it and look at options for that.

The Thornburg fund I did say that's also going to be gone in August so that is now gone. Some may wonder why we have two Small Cap fund we've got Baron and Champlain and we'll talk about this when we get to the search there is actually a reason for this because the funds are really quite different and this is maybe one asset class or one mandate we're having two different styles as valuable. This is the most volatile asset class you have Small Caps and the Champlain fund is very defensive it does very well in down markets, will lag in up markets. So when we look at and the Baron was intended to be the reverse of that and unfortunately it seems to do badly in just about any market so it appears. So the reason for this is to give the participants the flexibility if they wanted to go in the small cap to not have the full volatility or the full risk of getting into an aggressive Small Cap fund, Champlain is more of a conservative we'll take a look at this when we get in the search itself.

Starting on page 17, there's some notes from our manager research people none of this is particularly significant there's one production fault on this on page 18 the paragraph at the bottom where it says Mercer View: We hold O'Reilly if you notice that actually belongs up above to Dimensional Fund Advisors so that the bottom paragraph has nothing to do with ClearBridge I will beat up the appropriate people they will be punished but there is a good discussion here about ClearBridge in an affirmation of the rating we think quite highly of it.

Turn to page 19 the Asset Allocation typically very little changes so let's move on down to page 25 the Expense Analysis this again is something that's important for the minutes from a governance perspective. Wilfred Leon Guerrero: Before we get into that on this increase, how much is that by market or is this only by return? Terry Dennison: If you look at page 24 I just picked one there's one for each fund we're actually breaking this down if you look at 22 is the 401A and 24 is the 457. There are two columns in the center, contributions and disbursements that's initiated by participant's ins and outs. And then the gains and losses the next column over what this is doing is decomposing the change in market values into that which is the result of participant action.

Wilfred Leon Guerrero: Which column? Terry Dennison: Net contributions and disbursement either page 22 or 24 that's participant directed activity, the Gains and Losses that's the market going up and down. So we have decomposed that so you can see it in fact what we're reconciling is the current balance back to the prior balance it's really just reconciliation. It's nothing magical about this. Doris Flores-Brooks: Beginning balance plus contribution, plus or minus and gains and losses. Wilfred Leon Guerrero: Can you just tell me how much? 401A plan, how much? Terry Dennison: Almost 16 million dollars in gains. Wilfred Leon

Guerrero: What percentage? Antolina Leon Guerrero: 15 million over 1.5 million about 90% of the growth. Diana Bernardo: About 91% is gains. Wilfred Leon Guerrero: 91. Antolina Leon Guerrero: I guess its 15 million over 385 million that's what he's asking. What's that percentage? Diana Bernardo: Oh you mean on this. Wilfred Leon Guerrero: Yeah for the quarter, 401A plan went up because of the market by what percent? Alice Tajeron: Sorry, Mr. Chair I don't have for the quarter, I do have an annual it's about 22% just market from June 2013 to June 2014. Terry Dennison: Let me figure that out here. Wilfred Leon Guerrero: Okay, we know you increased by 4.7% but some of it is from contributions. Terry Dennison: Right, I'm working on it. Wilfred Leon Guerrero: Okay. Alice Tajeron: Annual is 22 so total. Terry Dennison: About a little over 4% due to market. Wilfred Leon Guerrero: And the 457? Terry Dennison: Roughly about the same order of magnitude. Wilfred Leon Guerrero: Okay, thank you.

Terry Dennison: If we go to page 25, again this is for the benefit of the minutes show the governance. Again we've done an excellent job in getting low fee funds for the benefits of the participants. The red numbers other than the three near the bottom which is relatively expensive asset classes and some of the funds we're looking at to replace Baron will improve these numbers a lot all of these are either small red numbers or green numbers so it done a good job with respect to fees. Antolina Leon Guerrero: What are they compared to Terry? Terry Dennison: This is the median expense ratio in the universe of similar funds. So the median varies a lot by the kind of fund it is Small Cap funds are more expensive than Large Cap funds that's why the median is a different number for each one of the different types of fund.

Let's turn to page 26 looking at the Compliance Table which is the simplified version of the performance the front page is a little bit unchanged. The BlackRock still is digging out of its hole the performance is improving but again if you dig a hole for 3 or 5 years it takes a little time to get out of that hole but the performance has been improving. Couple of things I want to point out on page 27. We do have a couple of new X's the Vanguard and ClearBridge funds you can see them, the number of consecutive quarters of under performance for 3 years rather, 1 quarter.

Let me take you quickly to page 30 and put a little color behind that. Page 30 is a lot of numbers if you look at the Vanguard Windsor II block its just a little below the blue line in the middle and go over to 3 years and 5 years the red X is the result of the 3 and 5 year number the Fund was up for 3 years 16.4%, the Index was up 16.9%, so yes it under performed but it didn't under perform that much. For 5 years it is 100 basis points that's a little bit bigger. The ClearBridge for 3 years, Fund was up 16.0 the bench mark was up 16.1 yes the two numbers it missed. Again the 5 year the numbers is a little bit bigger miss so I don't attribute a great deal of import to those 2 new X's.

The Thornburg down at the bottom that is again already going to be replaced in the 19th of August and we're going to do a search for the Baron Fund. The Champlain which got the red X's across again that's a fund that out performs the down markets. Well we will have a down market haven't had one lately so in a sense it's been doing what it's supposed to do and in fact if you look at its performance on the bottom of page 30 in the same way for 3 years its up 13.1, the market was up 14.6 its not a big miss, similar for 5 years the fund was up 18.2, the market was up 20.2, so we're not talking about returning half the market. You know we

missed the market by a couple of tens of basis points or 1 case, 200 basis points of the market up 2,000 basis points. So this is a defensive fund and I'll show you what I mean about defensive fund when we do the search. So I am not going all these number in here because the summary treats it pretty well so I think the funds are doing really what we expected of them and doing quite well. I will be glad to see the back of Thornburg and the back of Baron.

Antolina Leon Guerrero: Terry are you going to talk about that question of the retirement insurance. Terry Dennison: Sure, you want to do it now? Antolina Leon Guerrero: I was just wondering if we're going to do it during the Board meeting. Paula Blas: No or this afternoon. Terry Dennison: Whenever you want. Paula Blas: You can do it during lunch. Terry Dennison: I'll do it during lunch, it's not scary. Paula Blas: Is it short? Terry Dennison: Yeah, here are my notes, a page and quarter of notes.

Terry Dennison: Obviously one of the big concerns with any Defined Contribution plan is longevity risk spending your money before you pass away and obviously things like Great West Program is helpful with that, one of the concerns obviously is people particularly those who are relatively less financially sophisticated retire and basically try to maintain their former lifestyle and most people don't have balances in their defined contribution account sufficient to do that they deplete their balances very quickly. Another concern even for people who are very thoughtful about the use of their balances and there's kind of a rule of thumb that financial planner suggest that you should spend about 4% of your balance every year that's a number which will assuming you retire at normal retirement age generally allow you with reasonable growth of the remaining balance because of course what ever you take out and spend it's no longer earning allow you to basically not out live your money extraordinary long lived. But there is this concern about what if I do turn out to be statistical long life what happens if I out live my money and the idea behind longevity insurance are also called advance life deferred annuity, why does everything have to be so complicated? It provides a kind of back up insurance for people who really live extraordinarily long past any reasonable amount of time that the average person will be able to sustain themselves with a typical account balance and the target it's almost written at the legislation is age 85 typically have this kick in there is no requirement that you have it kick in at 85 it does effect obviously pricing of it because if you have an annuity that starts earlier you get less money for the same amount of deposit. But let's use age 85 as a starting point assuming you retire at 65 that means you live on consuming your account balance for 20 years and if you are one of the lucky ones you have good genes and you're careful and take care of yourself and you do live 85 this insurance policy and that's effectively what it is, it's an annuity by insurance company would then kick in and pay you an income for the rest of your life. These have always been available relatively always but not very well known and there hasn't been a way to buy them with assets in a qualified plan and since buying an annuity involves making a big upfront payment most people don't have a big pot of cash so the thing that matters now is the ability for you to take up to 25% up to a limit of a qualified plan balance and use it to buy this longevity insurance. Now, like any annuity the insurance company and anytime anybody starts talking about a financial deal you should always ask yourself who's on the other side of the transaction the insurance company is basically going to take the money you give them and invest it they have an expectation being able to earn a return and they expect to be able to earn a return sufficient to pay the obligation of undertaken to pay you on an actuarial basis and maintain a reserve and make a profit. So they price this such that you

pay in this amount of money at the age of 65 we'll say and you wait 20 years and if you are still alive you start to recover this these are sold typically on a use it or lose it basis if you die before age 85 whatever you put in is gone that's part of the pricing deal. I mean the reason that they actually pay a reasonable return is you are in effect being subsidized by the people who die early if somebody has bought it and lives to age 72 whatever it is they kicked in basically becomes part of what the insurance company uses to pay you. So it's a bit of a gamble so if you think you have good genes and take care of yourself and are concerned of running out of money this does give you some peace of mind at age 85 at which point most people are getting a little bit frail their health needs are growing and it does give you the I won't out live my money if I can make it until age of 85. Obviously again the draw back is the use it or lose it aspect of it the treasury department issue regulations on July 1 that permits participant to use up to 25% of their balance or up to a maximum \$125,000 dollars to buy one of these policies without running a foul of the minimum distribution rules started at the age of 70½.

And this basically then opens the door for people who want to do this because now they accumulated this money and in their lifetime they can buy one of these. I don't know obviously Great West might say what's involved in terms of cost or effort of adding this as a plan option. It's hard to make a judgment about whether or not it's a good idea I see a lot of people on the island that seem to be very old so it looks like genes are pretty good around here. Maybe it is worth while I also see account balances that's pretty small which means if you take 25% on that account balance to buy insurance that kicks in 20 years from now, you know you're taking 25% of that money that you are going to live on and then intervening 20 years.

So I guess the question is in the same sense if you don't want to give investment advice, I don't think you want to give insurance advice, either. The question is, is it economically feasible to offer this then I suspect at some point and I don't know what your compliance department says somebody is going to come in and ask you, Alice is this a good idea for me? It's an insurance product, it's not a securities product so I'm sure somebody is thinking about that. I mean my sense is that the balances that I see are generally pretty low my guess is they're depleted pretty early.

Joe San Agustin: What you're saying is 25% going to take it off and reinvested so hopefully they get better yield than what the current asset would be. Terry Dennison: No, basically what they do is give 25% of their balance and buy this annuity. Joe San Agustin: And the annuity hopefully will double up whether you stay behind. Gerard Cruz: They have to be 85 to get it. Paula Blas: You can't draw on it until you reach 85 you have to exceed 75% of what your balance is.

Alice Tajeron: I think that the concern that was brought up was the longevity issue and the amounts and we went over it we've reviewed this product and Secure Foundation actually addresses and the other issue is the requirement minimum distribution at age 70½, but Secure Foundation addresses the longevity issue and the difference between and we referred to it as qualified longevity annuity contract is a participant isn't locked in to that annuity contract with Secure Foundation and they still have down side protection they still have a fort that thing was a concern by Trustee O'Brien, they have market protection and they also

have access to the funds as opposed to this annuity contract where it's locked in that is something that they would have to consider as well.

Terry Dennison: They have income for their life the income doesn't shut off at any particular point. Alice Tajjeron: That Secure Foundation balance and of course many of these individuals have smaller balances it's been a short term they have that fort for the rest of their life with the potential to access cash and potential for growth so it addresses potential inflation longevity. It's also available for participants to leave behind to their heirs. Wilfred Leon Guerrero: Is this a standalone pension? Alice Tajjeron: It's an annuity contract. Wilfred Leon Guerrero: But you have it with something else or you rely strictly on this one. Gerard Cruz: It is supplemental to your regular 401 Plan. Wilfred Leon Guerrero: So it's not a stand alone. Alice Tajjeron: You would use part of your 401 balance to purchase the annuity so you would be drawing down from what you have left in your 401 and then your annuity would pay you whatever it is that you purchased and the other concern there would be that annuity, that amount stays flat. So, somebody receiving \$2,000 when they're age 80 or 85 if they live longer that may not be enough so you have your 401 and then you have this annuity contract. Wilfred Leon Guerrero: You have a 401 and at some point you take some of that money and you buy this annuity and it's 65. Gerard Cruz: 85 it kicks in. Alice Tajjeron: We start paying at 85 is when you start to draw down. Antolina Leon Guerrero: If our account balances now is \$40,000. Paula Blas: Even if somebody had a \$100,000 in their account right now they have to take \$25,000 of that to purchase this annuity but during the 20 years that they're going to be retired supposedly they can't touch that until they reach the life expectancy so you live on this 75 for that 20 years. Gerard Cruz: It's not a good deal. Alice Tajjeron: And this is not to be confused with the regular annuities that are offered. Paula Blas: This is basically rolling the dice you're going to live longer and you're paying for it and if you die before you reach 85 it's lost, no one gets it. Joe San Agustin: No, it's not lost. Paula Blas: Yes it is. Joe San Agustin: The survivor gets it. Paula Blas: No, it's gone. Use it or lose it. Joe San Agustin: The whole idea is always to be able to provide survivor's benefit, but you're not. So what the heck why bother.

Terry Dennison: I think the difference here from an ordinary plan is the Secure Horizons if this was an ordinary 401K Plan that didn't have Secure Horizons you would have a more serious longevity issue because you would have people in the early years consume more than they should get smart and then start to become cautious but still run out of money in their later years and this might be a better option for those people but I think it's really redundant as well as extremely difficult to explain. Paula Blas: Can you purchase that at anytime or is it something you have to elect. Terry Dennison: You can purchase it at anytime. Paula Blas: But it becomes more expensive as you get older, I would think. Terry Dennison: Well there's an interplay between when you buy and when the pay starts and your age because the actuaries figure out how long, remember always put yourself on who's on the other side of the transaction. I got some numbers here we got from New York Life there is a difference between males and females because females live longer so they're going to get paid longer. I would use the female given if you buy it at age 50 and start payments at age 70 you would get 19.6% per year. So, if you put in \$100,000 dollars at age 50 you get 19,600 dollars a year starting at age 70 for the rest of your life, if you buy it at age 60 start payment at age 70 you get \$11,600 per year so you can see its partly based on your age because obviously the actuaries are looking at the table the closer you are being dead the less likely they're going to have to pay. If you buy it at 70 and started at 80 you get 18,200 these are just numbers from

New York Life. So it's the interplay between starting age and ending age or buying age and payment age and the age that you'll attain when you start to get the payments. Joe San Agustin: With our DC members basically the younger group that could be a factor to that in lieu of the Hybrid. Gerard Cruz: No this is not in lieu this is just an addition but what Alice is saying is that the Secure Foundation has a similar feature that doesn't have the lock out period that this does. Terry Dennison: It doesn't have the gambling aspect you're not betting on your dreams. Joe San Agustin: Is that sellable product to the average group of our DC component? Gerard Cruz: No.

Terry Dennison: Well there's always some demographic somebody with very large balance. Paula Blas: Very small percentage of the population. Gerard Cruz: But there's an alternative that works better. Joe San Agustin: The average balance of DC will not be attracted to it. Terry Dennison: For you I think it's redundant you have something that works almost as well with out some of the disadvantages. The use it or lose is going to scare people off. It's necessary to get the payment this big to get \$21,000 a year on a deposit of \$100,000 dollars that's not chicken feed. If you live 5 more years neglecting time value of money if you live 5 more years you're getting your money back. You live from 85-90 you get your money back and anything beyond that again discounting inflation and time value of money.

Joe San Agustin: If you include survivor benefit on that you can't lose it at least the survivor can take advantage of it. Gerard Cruz: If there were survivor benefit. Joe San Agustin: That will be the attraction if you have survivor benefit. Terry Dennison: The problem you can't make it. Gerard Cruz: It won't be affordable. Terry Dennison: Then you can't make the numbers work. The Insurance companies they didn't get those big buildings by being dumb. Joe San Agustin: To attract that we need to throw in the survivor benefit then this will be very attractive. Terry Dennison: One of the things they're looking at if they understand that the disincentive of the use it or lose it and they're looking at strategies to mitigate that, the problem is then you won't get as big a payoff. Because then they have to figure out what's the likelihood that the survivors survives, if the survivor can then pass it on and in fact they're going to pay somebody. Joe San Agustin: The insurance also will develop what's called the probability of those people ever collecting. Terry Dennison: Yeah, that's the whole point of insurance.

Now if the survivor is your spouse then they can calculate statistically but if the survivor is somebody you name in your will they have no idea how to price it so you would have to designate the survivor at the time of the writing of the contract because otherwise they have no way of pricing it. Joe San Agustin: By the law you have a legitimate spouse you can't write in a will for retirement spouse, I can't dictate somebody other than my wife. Paula Blas: Oh no, because that's statutory. Antolina Leon Guerrero: This would be different. Paula Blas: We're not talking about retirement law. Joe San Agustin: You're talking about offering this to a member of the plan. Paula Blas: We're just talking about it. Joe San Agustin: I know, I know this an alternative. Antolina Leon Guerrero: Well really we were just to try find out what is it because Dave raise the question and we didn't know anything about it. Joe San Agustin: That's good. Antolina Leon Guerrero: Okay, at least I understand it better. Gerard Cruz: Okay.

Terry Dennison: Okay, the search here is to look at a potential replacement for Baron Asset. Baron Asset is one of your two Small Cap managers it's performance has been in and out of

the dog house, on and off for five years it performs well and then it performs poorly in this case it's not only just a case performance but it's also a case that the fund has been allowed become very large it's nearly 5 billion in assets. And for Small Cap funds that rings a lot of alarm bells because there is two things that are happening either they're buying a lot of different securities to invest that money or they're holding or buying securities that are no longer small cap. Small cap generally is defined as companies between 200 million and 1 billion in asset size some people get it up to 2 billion or billion and a half it's kind of arbitrary it's not a hard fast rule.

So we've identified four candidates all of them are A rated and when we did the performance include both Baron and Champlain because we want you to see and there's one particular chart I want to show you because how this performs relative to Champlain is important because again we got two products in this particular space and the point is to have diversity we don't want two products that are tempting to do the same thing and performing about the same because that's confusing but there's two products tempting to do two different things in the same space provides the participant a lot of choice.

If we turn to page 7, the four strategies are DFA which should sound familiar because they're the emerging market fund. Dimensional Fund Advisor is a highly regarded strictly quantitative manager it's a very unusual strategy and then unlike most or almost all other strategies they do not have any analyst, they do not analyze the company if they buy other than applying some rules they avoid companies and a few industries, they avoid companies that are in financial difficulty but basically they own the market. If you turn to I believe it's the next page you could see if you look across to number securities typically held where the others are in the hundreds and in some cases even below a hundred they hold nearly 3000 securities they could effectively hold the entire market with the exception of some sectors that they don't feel comfortable with their modeling. And they actually do identify attractive situations there is a lot of research in the securities markets that suggest that companies with a value orientation long term out perform companies with a growth orientation. Companies that are smaller out perform companies that are larger. There is logic to both of these let me explain the logic value stocks or value orientated companies are those where the market generally is unwilling to pay a premium price in terms of price earnings ratios. They typically are companies in industries that the market feels are uninteresting, unattractive, the company maybe have a little bit dent on it it's not terribly damaged goods but it's not something that the market sees it hot it's not the hot stock that everybody's buying. Growth stocks on the other hand are ones that are on everybody's lips the next big thing, the next apple, the next google, what's the big hot stock and when they looked at this had found that it's nothing to do with the company it is entirely to do with the market's reaction to the pricing of the stock, the growth stocks are typically over valued that people pay too much for growth stocks.

We saw this obviously in the extreme in the late 1990's when you had the growth stock rally where people were paying but the market value of companies were billion dollars where the company had no earnings and in some cases no sales, they didn't even have a business model our typo example of this is Petz.com that basically only had a really cute little sock puppet and the theory was that they could somehow monetize selling things to pet owners with this very cute sock puppet they did an IPO and the company is valued at a billion dollars they had no business. Value stocks are sort of Warren Buffet, unexotic, clunky old

companies that just make a lot of money and the argument behind small is almost a mathematical one it's much easier for 200 million dollar company to double in size and therefore to double in price, than it is for a 50 billion dollar company to double in size. Then it becomes more and more difficult for companies to grow as they become larger it's just logical. I mean your first 100 million dollars is the hardest 100 million dollars, once you are up to 10 billion dollars its tough to get to 20 billion dollars but the next little increment isn't that difficult. Joe San Agustin: Same overhead. Terry Dennison: Same overhead, it's just mathematics and it's easier for a small company to double than a large so their portfolio of 2 to 3 thousand stocks tends to favor value and it tends to favor small. The other thing that they do is they make a lot of money doing trading, ordinarily trading is an expense if you do a lot of buying and selling you pay a lot of not as much brokerage commissions because institutional traders don't pay brokerage tuition typically but you produce a lot of market effect if you bid a stock up you pay more for it, if you want to sell a stock you cost the market goes down in front of you and don't get as much on proceeds. They're playing the reverse game they have all these stocks and they don't care if they hold them or not, they really don't care.

So if you are an active manager who loves this stock and absolutely wants to buy it and doesn't care how much you have to pay to get it they're a seller, if you hate the stock you own and want to sell it you just think its crap you want to get rid of it you don't care what you get for it they're a buyer. So if they actually make a lot of their returns because they don't fall in love with their companies in fact they don't care about their companies, they avoid all the problems that active managers have of falling in love with their stocks refusing to acknowledge they made a mistake all of the things that behavioral finance people talk about that get in the way of people making good investment decisions they don't care. As long as the company meets their test which are really quite simple they own it, they're a seller if you want to buy it and willing to pay a premium, they're a buyer if you are a seller and willing to accept a lower price.

The other 3 are active managers these are not exactly household names. Gerard Cruz: DFA is on our list now. Terry Dennison: DFA is one of your managers and clearly they are one that is well known institutional to be honest with you I know about RBC Small Cap fund, the other two to be honest with you Eagle I don't know Eagle Small Cap, but I know the Eagle family of managers but these are smallish managers. The thing about that I want you to look at on page 7 is the expense ratio one of the nice things about DFA is cheap. Now we're replacing Baron which if I remember had an expense ratio about 130 basis points. So, we would see improvement in performance of DFA we're also considerably cutting the expense that red number we've always have been looking at is going to become very, very green they don't provide any revenue sharing so we are going to have to do something similar to what we did when we swapped out Thornburg with Trans America remember we had to invent our own expense ratio which will take up a little bit of this about 37 basis points we got some expense ratio to play with we can add 20 basis points here easily for revenue sharing and still be a bargain compared to what they're paying now. The others have expense ratio that are not dissimilar from what we have now.

Turn to page 8, we've already been here looking at number of stocks held you can see the minimum market cap for DFA and remember I said they tend to look at more Small Cap stocks well you get down to 10 million you are looking at Micro Cap stocks but there's not a

lot of Micro Cap stocks but they don't have is relatively high lower limit that the other managers have. The Luther King the maximum there is getting close to the maximum that we're seeing with Baron so it's not a SMID fund combination of small and mid but it probably is a little bit less like what we're looking for than the others, the RBC and the Eagle Boston are pretty much right exactly in our sweet spot in terms of what we're looking for.

If we go page to 9, looking at the portfolio characteristics all of these have beta substantially above the Russell 2000 they're more volatile than the Russell 2000 Index itself. The key numbers really to look at here are price earnings ratio and price to book the higher the price earnings ratio or the higher price to book the more growthy they are and you can see for example Luther King is definitely on the growth side of the equation with a PE of 28 price to book over 3 times, where RBC and Eagle are more toward the value and DFA is still on the value side of things if you look at the Russell Index you can see that its got very much value type characteristics. One thing that I did see in the RBC is there getting if you look across the RBC line you got the price earnings ratio under 20 but look at the earnings growth they're getting tremendous earnings growth because that's what you want to buy you want to buy earnings increase, they're getting earnings increase of 30% a year and only paying a 20 times price earnings ratio that's a pretty attractive strategy and also is very profitable return on equity is a measure of profitability. So as I look at this, this is a kind of an interesting strategy because it's got a value like price earnings ratio but very much growth like earnings growth and return on equity. Again, we try to make the search hard we don't play games with you by just finding who we want to win and then putting 3 dumbbells in there that are pretty easily dismissable.

If we look at page 10, all of these portfolios are diversified by sector there's not huge over weights in anything there's a couple of noticeable ones Eagle Boston has 20% in financials a lot of small banks look like small value stocks. The financials here are probably not Citicorp and JP Morgan Chase they're probably a lot of small regional banks and other financial institutions. The other thing that struck me is a little interesting is RBC weight and materials that's not typically something you see a lot in small cap portfolios. Another interesting is on page 11, where do they think they get their value added? The thing that's interesting here is about 3 of the 4 managers the 3 you would expect get most of their value added from picking stocks and very little from picking industries. You could see that DFA gets almost nothing from picking industries because they don't really pick industries, the industries are simply whatever it is they buy even stock selections is low this is simply the operation of the rules they don't buy certain kind of stocks that their models don't understand. The other here is this trading strategy that they make money from people like the other ones who absolutely positively want to buy something and don't care what it cost or sale something they don't care what they get, so it's got an interesting diversity of sources of value added. The manager profiles we're familiar with DFA let's skip that one. We do very highly regard it, it has diversified a lot in 20 years they've gone from basically being a 1 or 2 strategy shop to using this model in a lot of places that has grown dramatically. Actually when I worked for Wilshire 30 years ago they were actually just two floors down in the same building we're in. We'd see David Booth and several of the other people in the elevators because they were in the same building in Santa Monica.

If you look at the additional observations on page 15 it does have a bias to value and a tilt to the lower end of the size spectrum. It would do well if smaller caps does well and when value

out performs growth and value frequently outperforms growth because most people who are following growth strategy simply pay more than the stock is worth because they get caught up in the excitement of the stock. If we go to Eagle there's a discussion where it came from it started actually as a subsidiary of Raymond James which is one of the big mid market personal financial planning outfits and they acquired a small company that two guys started and has since been bought by Eagle Asset Management which is a very large firm that we use a number of their products with. It's a very traditional kind of strategy 3 main tenets fundamentals determine asset values seems logical, profitably and growth are mean reverting what that means is that if a company is doing extraordinarily well in the short term in the intermediate term its growth is going to slow down that's what mean reverting means. The converse is true and it's the converse that you are taking advantage of that if the company is well managed and hits tough spot that they think that it would recover and these are the kind of opportunities they're looking for. And finally and this is one from behavioral finance that stock prices overshoot when the news is good too many people buy and the price goes up above what it ought to and when the news is bad too many people sell become discouraged and the price falls too much. If we look at Eagle again I'm looking at the additional observations, it really falls in the core universe but it has probably a value tilt because it's a bit contrarian. Contrarian means that they tend to like stuff that people don't like and tend to dislike what people like, again the kind of Warren Buffet strategy the way to make money is to not do what the crowds doing.

Luther King Capital Management on page 18. This is a small organization Steve Purvis is the ultimate decision maker. This is interesting because most investment managers have a screening process you can describe in very simple terms their way of picking stocks is they have a computer screen there's somewhere between 4 and 5 thousand Small Cap stocks and nobody can analyze 4 or 5 thousand Small Cap stocks. You have to have a filter so you have to have a believe we like value so we're going to screen out growth companies, we like companies that have a lot of free cash flow, so you might put it in a parameter looking at free cash flow. So you build a series of parameters that basically identify quantitative companies that you like and you run the 5000 stocks through the screen and reduces it from 4 or 5 thousand to 2 or 3 hundred and then your analyst looks at those 2 or 3 hundred. This is a little unusual in that it doesn't have a formal screening process that they basically look at the whole universe holistically and they have a lot of different methodology they have a lot of analysts and each one has a different methodology for identifying what they want to look at.

Joe San Agustin: Each analyst would determine the selection and then they have a committee. Terry Dennison: They basically have a committee that puts their ideas together. The thing that's interesting about this and we're always looking for niche managers that have a different approach because so many managers do things exactly the same. They come in to my office they want to talk to me for half an hour and well we have a proprietary screen of course you thought of it and then we do fundamental research and I will joke with them particularly if they know me and I will say, why don't you just tell me about the proprietary screen and you could just hum the rest and I'll fill in the blanks. Because I've heard this story so many times yes we have this proprietary screen and here are the factors then we do fundamental research and we build models everybody does that I mean there is no differentiation so my model is better than yours sometimes or should I give my clients money to you because you have a model that's sometimes works better than the other guys model. So we are always looking for people not crazy people. We once had a manager who came to

us and they explain they're very complicated process for picking stocks and when you actually sat through and tried to understand what they were saying the best thing they came up with is their Chief Investment Officer heard voices in his head and that's what told him what to buy, needless to say we weren't interested. But we are interested in approaches that are little different than the standard approach. And I mean the thing that's interesting about this it's not group think, it's not everybody thinking the same way just applying a different model it's a different way of picking stocks. And there's a few interesting aspect of this if you read through this there's a column on the right talks about a exception report they have a formal process for identifying stocks that they bought that aren't behaving the way they expected them to behave. Now, a lot of people have filters that say this stock has lost 10% of its value you need to look at it, or this stock has lost 20% of its value you need to look at it right away or it's lost 30% of its value you need to sell it. This is basically saying this isn't behaving the way you thought it would.

So, again it's not some mechanical implemental by robot kind of process it's just an interesting approach and you'll see the performance is intriguing. Then again A rated it depends a lot on Steve Purvis' tenure and experiences this is definitely a bid of a star system the analysts work loosely but Steve makes all the decisions this is the one that has a little bit more growthy characteristics. We characterize on page 20 as growth at a reasonable price but if you look at its characteristics it's certainly towards the growthy end.

The last one is Real Bank of Canada the RBC fund this is one that's again a little bit contrarian looking more at value, stocks that are neglected, pricing inefficiency you can see they both qualitative and quantitative screens if you look at the process. It's a very traditional kind of process it's evolved over many years but if there's nothing really unique about it there is in the initial observation an interesting discussion that is a bias for companies with cyclical growth potential remember it's looking for ones that are overlooked. So it's going to try to find ones that the market hasn't identified as having growth potential in the future. So it's going to have a bit of cyclicality to it and it would struggle during highly speculative momentum theme driven markets. A theme driven market is where there's one style investing that seems to be in favor and nothing else seems to be working. It's going to struggle in that kind of environment.

Let's look at past performance. There is just an ocean of numbers here if you turn to page 26 these are looking at cumulative returns and here we have included Baron and Champlain. Baron is the downward pointing triangle and Champlain is the upward pointing triangle. One of the things that you can see is there isn't a lot of dispersion of returns. The floating bar chart here and we're looking at the middle 90%, so that the bottom is the 95th percentile the top is the 5th percentile. These are fairly narrow and the other you can see is the index tends to be around medium the index is pretty much right in the middle of the universe. You can see that Baron basically has been below medium for the last 5 years it has exhibit a lot of volatility. The one that leaps out at you is DFA basically is the real star performance had a bad quarter but quarters don't mean anything. But for 3 years it's 24th percentile, 5 years 12th percentile and substantially above the index about 200 basis points above the index for both periods. RBC which is the other one I talked about is more index like in fact it's tracked the index very closely.

The next page 27 is looking at one year performance these are 12 month periods ending June 30th. Their one year and what you'll see is some of these have substantial volatility they go up and down a lot and in fact if you look at DFA during the financial crisis they were among the poor performers for the one year ending June 2007 they were in the 68th percentile, one year June 2008 in the 69th percentile and since then it has done very well. You can see that even Baron has had its periods of excellence performance there was a one year period ending 2011 they were up 41% and putting them in the 19th percentile so they had their moments of good performance too.

The next page is looking at 3 year rolling periods this is a little bit more useful because 3 years is a number that's built into the investment policy for evaluating managers we don't hire and fire managers based on one year performance but we do base on three year performance. One of the things that's interesting is RBC which we talked about has got a pretty good run there of performance on rolling 3 year periods 15th percentile for 3 years through 2011, 9th through 2012, 12th through 2013 but if you look for consistency again DFA has provided consistency pretty much 1st quartile performance and solid increments 200 or so basis points ahead of the bench mark.

Page 29 is the risk return chart. Again there's a relationship between risk and return that in order to get high returns you are almost always accepting more volatility and what you would like is to be paid for that volatility. The ideal place in this graph would be in the upper left hand corner well there is nobody in the upper left hand corner or you are not going to get high returns of low risk not in this asset class. What you want to be is you can almost draw a line through this cloud just do a best fit by eye a line through and actually most of the people line and unlined. What's interesting is most of the manager's line and unlined so basically you can almost pick what risk you want to have and what return you can get for that risk and there's your manager. Now we would like a good trade off between risk and return. DFA which is the purplish square is on the line and is more toward the high end of risk or volatility and the high end of return.

Champlain remember I said is the safe manager it's the low volatility manager look at where they are, they're actually above the line they're more toward the upper left hand corner than anybody else not very much but they're above the line and to the left. So, they're basically are your more conservative manager they're not producing huge returns but they're also not taking very much in a way of risk so we are trying to find somebody who is a good counter point to them you can see that they look a little bit too much like Baron because Baron was at the same side of the cloud that they are.

Page 30, the first two bars are pretty straight forward return and standard deviation one of the things that's striking is the standard deviation which is the measure of volatility. Champlain's out the bottom of the bar they have very, very little volatility they're a very safe strategy for this place I mean literally they're in the 97th percentile of volatility. Now their returns aren't terrific but the risk return trade off look at the third bar over from the left to right their green triangle is near the top this is return divided by standard deviation. So one way to think about buying a manager is the bargain between return and risk. Champlain has got a really good deal in terms of return per unit of risk. Now if we look at DFA they're up there but not near the top but it's a pretty decent trade of between risk and return. The far bar to the right is what's called Information Ratio basically what you're looking at here is

simplified formula the value divided by risk, tracking error divided by risk is what you see is that generally information ratios above about .4 are considered to be good deals, 1.3 is a huge information ratio what that means is we're really certain they're adding value in fact will show statistically looking at a T-Test that they clearly are adding the most value of any manager on this list. Joe San Agustin: But if you look at the very beginning they actually cutting in the market. Terry Dennison: They're in the market but what they're doing is that they have a little bit of return for very little risk, that's a good deal. Joe San Agustin: If they have the bargain for that market and then when they close at that bargain they'll have good information. Terry Dennison: But take a look at the left bar and where they fall on the return space they own about 2000-3000 stocks they got the highest return, for 5 years they're returning 22½% per year they have the highest return owning virtually the market. So whatever little trick they're playing pays off and they're doing it. Joe San Agustin: They're actually the ones determining what the market is going to be. Terry Dennison: Not exactly but what they're doing is they're very carefully stratifying the market into those which are priced sensibly for the ones that are priced stupidly and avoiding the ones that are priced stupidly that's what they're doing actually.

If we look at page 31 and following the squiggly line chart the vertical bars are excess returns, zero is the bench mark these are not zero returns. Zero means they match the bench mark above the zero means they added value versus the index below the line they detracted value relative to the index. The green bars are for months when the market was up. The red bars are full when the market is down. The dotted lines the middle dotted line is the rolling median return. The upper dotted line is the 25th percentile the bottom dotted line is the 75th percentile. Couple of observations this strategy does pretty well in all markets in fact its pretty much 25th percentile or better all the time.

Certainly once you get past the 2010 it's in the first quartile pretty much all the time and it has its ups and downs some of the downs are down market and some of the downs are up markets. So there is no favoritism to it. If we look at Eagle, look at the difference in the pattern now the red line basically says the performance which historically had been pretty good has been trending downward but they really do terribly in up markets. Almost all the green bars they lag and almost all the red bars they do great too much like Champlain.

Luther King the problem with this one is the strategy stopped working. RBC frankly still had a couple of bad quarters but is still being pretty much a 1st quartile performer. Again these are X the relatively high expense ratio so this is still in the running, I think this is the second one that's still in the running. Baron you can see has been all over the place and Champlain as you would expect again struggles in up markets well count the bars how many more green bars are there than red bars why is Champlain not looking really good because we haven't had a market environment where Champlain's going to look really good but we will the market's going to turn down at some point. So we want to find somebody who looks different as different as we can for Champlain.

Going to skip page 37 and 38. Look at page 39, remember when I talked about confidence of value added this is taking that information ratio and applying a T test to it now you all of course were wide awake during the statistics class remember T test value of two or better statistically significant. So, take a look at the likelihood of value added for DFA they're adding value, Baron not really and Champlain longer term definitely. RBC longer term they're doing

well. So really it's in my mind it's between RBC and DFA and then the up and down markets. This is up and down market performance and one thing I want to point out if you go across the Champlain line and look at down markets they out perform in down markets 86% of the time and add value 120 basis points in down markets that is a really healthy statistics. If you look at RBC not that good in down markets and frankly kind of weak in up markets too, but look at DFA 68% of the time out performing in up markets small value added 20 basis points but outperforming in up markets if you look across to all markets they're out performing in 65% of all markets and frankly DFA doesn't do badly in down markets they don't give it up in down markets the problem with people who do well in up markets typically they hand it over in down market. So, DFA does well in up markets and they don't give it up in down markets.

Page 43, I've always said that consistency is the way to win that if you are consistently reasonably good you will eventually come out on top and if you look at DFA well across the top. Couple of things that stand up more than 60% of the time above the median and a little more than 5% certainly less than 10% in the 4th quartile so very rarely do they stink this is rolling 5 years. So if you go down to RBC they look pretty good except on a consistency basis they've had some problems with being in the 4th quartile. And then the last thing this correlation chart on page 44, now you remember of course correlations are triangles there's really two triangles here, there's one that's to the right end top which is your standard correlation triangle and there's one to the bottom in the left that is what happens in terms of reduction of risk if you built a portfolio of 50% of one and 50% of the other. So let's take our hypothetical of course we don't give investment advice to participants but suppose somehow our participant hypothetically thought why don't I put 50% in each one of our two Small Cap strategies.


So first of all in terms of Champlain versus DFA they actually have a negative correlation they're invested in roughly the same kind of stocks but they're almost I'm not going to say this is negatively correlated it's basically zero there's no relationship between the return stream of DFA and the return stream of Champlain it's very desirable this is the definition of what drives diversification. RBC is not bad I mean it's .13 that's pretty near zero. You can see that Champlain and Baron look a lot alike 58% of the return of Baron is explainable by the return of Champlain and vice versa. So, trading DFA for Baron would substantially improve the diversification of opportunities for participants in the Small Cap space. Now if we go to the lower left triangle if you put 50% of your Small Cap money in DFA and 50% of your money in Champlain statistically you would reduce the volatility of your small cap holdings by 70 basis points because of this diversification effect actually you get a little bit more if you did Champlain and RBC, but RBC doesn't look that good on some of the other characteristics. So, I mean RBC is the second choice but I think it's a weak second choice in terms of fees, in terms of consistency, in terms of performance. Frankly they're not subject to just getting it all wrong some morning, DFA looks like the choice. Joe San Agustin: DFA there's no competition. Terry Dennison: There's nobody else that does exactly what they do and they're now so big it would be very hard. There's a couple of managers that basically have found a niche and are now so big, there's one that's called Intech that is an active strategy it's very interesting that we've used in some cases that they even published in the journal of finance the formula they used to pick stocks and nobody has been able to be successful copying them because it's not the formula for picking stocks it how they do the trading. Gerard Cruz: Yeah, they got it down to so cheap. Terry Dennison: That it's one of

those things that the theory is hard to understand but replicable the process they do to do it nobody has been able to figure out how to copy same thing with DFA. Gerard Cruz: Okay, enhanced index really because they just own the market. Terry Dennison: Now, we also again have to make the decision, do we want to levy? Alice, do you know just off hand what revenue share that Baron has? Alice Tajeron: Revenue share for Baron? Gerard Cruz: No, I don't remember but anyway you have to come up with an implicit one. Terry Dennison: We need to impose one just to make the economics work for you. Gerard Cruz: The same way we did the last one and there's a lot of room as Terry mentioned. Terry Dennison: Yeah, a lot of room.

Gerard Cruz: Okay, Mr. Chair we're ready to make a decision. Paula Blas: Wait, motion? Gerard Cruz: Move to adjourn. We need to call the Investment meeting, now. We're going to recommend DFA as a replacement. Okay, let's go to the meeting whenever you're ready. Wilfred Leon Guerrero: Chairman, Tony and I decided he's going to be in this committee. Joe San Agustin: Whatever you decide. Gerard Cruz: You already appointed him.

Respectfully Submitted:

Affirmed:


Rena Cruz/Marilyn Aguon
Recording Secretary


WILFRED P. LEON GUERRERO, Ed.D.
Investment Committee Chairman

