State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
MEETING

Location of Meeting
Dena'ina Civic and Convention Center
Tubughnenq' Room
600 W. 7th Avenue
Anchorage, Alaska

MINUTES OF
April 28-29, 2011

Thursday, April 28, 2011

CALL TO ORDER

CHAIR GAIL SCHUBERT called the meeting of the Alaska Retirement Management Board (ARMB) to order at 9:00 a.m.

ROLL CALL

Eight ARMB trustees were present at roll call to form a quorum. Ms. Erchinger was ill and joined the meeting following lunch.

ARMB Board Members Present
Gail Schubert, *Chair*
Sam Trivette, *Vice Chair*
Gayle Harbo, *Secretary*
Kristin Erchinger
Commissioner Bryan Butcher
Commissioner Becky Hultberg
Martin Pihl
Tom Richards
Mike Williams

ARMB Board Members Absent - None

Investment Advisory Council Members Present
Dr. William Jennings
Dr. Jerrold Mitchell

George Wilson

Department of Revenue Staff Present
Jerry Burnett, Deputy Commissioner
Gary M. Bader, Chief Investment Officer
Pamela Leary, State Comptroller
Zach Hanna, State Investment Officer
Scott Jones, Assistant State Comptroller
Judy Hall, Board Liaison Officer
Jie Shao, State Investment Officer

Department of Administration Staff Present
Mike Barnhill, Deputy Commissioner
Jim Puckett, Director, Division of Retirement and Benefits
Teresa Kesey, Chief Financial Officer, DRB

Consultants, Invited Participants, and Others Present
Robert Johnson, ARMB legal counsel
Michael O'Leary, Callan Associates, Inc.
Paul Erlendson, Callan Associates, Inc.
Jonathan Roth, Abbott Capital Management
Tim Maloney, Abbott Capital Management
James Chambliss, Pathway Capital Management
Canyon Lew, Pathway Capital Management
Leslie Thompson, Gabriel Roeder Smith & Company
David Slishinsky, Buck Consultants
Aaron Jurgaitis, Buck Consultants
Kyla Kaltenbach, Buck Consultants
Doug Bratton, Crestline Investors, Inc.
Caroline Cooley, Crestline Investors, Inc.
Vince Ortega, Capital Guardian
Chris Ryder, Capital Guardian
Michael Bowman, Capital Guardian
Alex Slivka, McKinley Capital Management
Rob Gillam, McKinley Capital Management
Jim McClure, Barrow, Hanley, Mewhinney & Strauss
John Alcantra, NEA-Alaska
Jay Delany, RPEA
Andee Nusaath, Great-West Retirement Services
Jeff Pantages, Alaska Permanent Capital Management

PUBLIC MEETING NOTICE

JUDY HALL confirmed that proper public meeting notice requirements had been met.

APPROVAL OF AGENDA

MS. HARBO moved to approve the agenda. MR. WILLIAMS seconded the motion. The agenda was approved without objection.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS AND APPEARANCES

JOHN ALCANTRA, Public Relations Director for NEA-Alaska (National Education Association), informed the Board of a couple of pieces of legislation that were introduced this month. Senate Bill 121 and its companion House Bill 236 are bills to provide [PERS and TRS retirement plan members with] a choice between a defined benefit plan and a defined contribution plan. He said that since SB 141 went into effect July 1, 2006 the unfunded liability has grown about $4.5 billion, and he thought it was a failed experiment. He hoped the ARM Board would take a good look at that piece of legislation over the next couple of meetings, and that when the Legislature returns to Juneau for a regular session in January 2012 it will have a piece of legislation that will work for both the State and for Alaska's public employees.

APPROVAL OF MINUTES

MS. HARBO moved to approve the minutes of the February 10-11, 2011 meeting as presented. MR. TRIVETTE seconded the motion. There were no changes, and the motion carried unanimously.

REPORTS

1. Chair Report
CHAIR SCHUBERT said she had nothing to report other than that she was reappointed to her seat on the Board.

2. Committee Reports - None.

3. Retirement & Benefits Division Report
Department of Administration Deputy Commissioner MIKE BARNHILL stated that Jim Puckett had changed from acting status to the director of the Division of Retirement and Benefits (DRB), and Pat Shier was appointed the director of the Division of Enterprise Technology Services.

3(a). HRA Information Update

MR. PUCKETT referred to the memorandum from DRB in the packet regarding the fiscal year 2012 health reimbursement arrangement plan (HRA) contribution amounts for employers.

3(b). Buck Consultant Invoices

MR. PUCKETT also drew attention to the regular report of Buck Consultant invoices in the meeting packet.

3(c). Membership Statistics

The reports of membership statistics by quarter and cumulatively since implementation of the defined contribution plans were included in the meeting packet. MR. PUCKETT answered several questions from trustees regarding the most recent numbers. He also noted that the quarterly and cumulative reports for July 1-September 30, 2010 were revised to correct an error.

MR. BARNHILL stated that Ms. Kesey intended to revise the membership statistics reports, and trustees were encouraged to let her know what they wanted the reports to look like in the future.

3(d). Legislative Update

MR. BARNHILL reported that the legislative session was fairly quiet with respect to retirement issues. However, as the session went on, more bills related the retirement systems were introduced that may make the next session fairly interesting in terms of retirement issues. He reviewed a list of the bills by category: three bills requiring divestment of investments in companies that directly do business in Iran; bills designed to amend various elements of the Retiree Health Plan (the Department of Administration's approach is to look at all the health plan services in a more comprehensive manner, rather than pick off issues one by one through legislation); two bills to add occupational death benefits for police and firefighters; and bills to re-open the defined benefit plans to new employees (the Parnell Administration has taken a position in opposition). He said he has offered to enter into further dialogue with the sponsors of these bills over the interim, and he extended the same offer to members of the Board.

MR. PIHL thanked Ms. Hall for compiling all the schedules from the work of the Trustee Study Group Addressing Long-Range Unfunded Liability Issues into one book. He hoped that the upcoming strategic planning meeting would have something on the agenda to update everyone on the information and how to address the unfunded liability of the retirement systems.

MR. BARNHILL reported that under SB 125 the state General Fund for fiscal year

2012 is contributing approximately $477 million to the retirement systems. The actuarial valuations being presented later in the meeting call for an additional contribution next year of $610 million. That comes to over $1.0 billion in the space of two years to shore up the systems. There is increasing concern in the Legislature and in the Administration about whether that is sustainable. They believe the work of the Trustee Study Group needs to continue, and there will be additional work ongoing within the Administration to try to identify ways of restructuring this so that it can be sustainable over the long term.

4. Treasury Division Report

Department of Revenue Deputy Commissioner JERRY BURNETT stated that the Legislature had not passed a budget yet; however, the budget before them had no changes from the ARMB budget that was requested.

MICHAEL O'LEARY introduced PAUL ERLENDSON as the person at Callan Associates, Inc. who was joining the ARMB consulting team as his backup. Mr. Erlendson was replacing Janet Becker-Wold as the backup because the meeting schedule of her largest retirement fund client conflicts directly with the ARMB meeting schedule. Mr. Erlendson is familiar with Alaska and intends to attend all the ARMB meetings.

5. Chief Investment Officer Report

Chief Investment Officer GARY BADER referred to the written report in the packet and reviewed a list of transfers and rebalancings among trust funds, as well as increases and reductions to investment manager accounts, that staff completed since the last board meeting. He explained that rebalancing among the trust funds is a very complicated process. The defined contribution plans have a defined benefit component where the contributions generate cash every month, and there are little or no draws on these funds as they build up until people will be drawing upon them. As part of the rebalancing process, that excess cash is transferred to the defined benefit plans, and the defined benefit plans give the defined contribution plans shares of ownership in private equity and real estate and so on. This works to the benefit of both types of plans: defined benefit plans do not have to sell assets each month to raise the cash that is required for benefit payments.

MR. BADER also reported on several other items, as follows:

- A Board strategic planning session is scheduled for June 7 in Anchorage.
- He, Sean Howard and Ryan Bigelow made an on-site visit to McKinley Capital Management on March 16. Staff was interested in whether McKinley's momentum style of investing would continue to perform for the ARMB in the future. At that meeting, their chief investment officer Rob Gillam expressed his view that momentum in small cap equity space had recently shown emerging robustness. In

the 13 years that the ARMB has been with the domestic large cap growth fund at McKinley it has outperformed the Russell 1000 Growth Index by nearly 200 basis points. For the year ended December 31, 2010, McKinley outperformed the index by 40 basis points; hopefully, this is an indicator of the reemergence of the momentum style, which suffered greatly during 2008 and 2009. The ARM Board has invested in McKinley international for about 4-1/2 years, and in three out of five years their performance has beat the index but overall has underperformed the index. That continues to be an area of concern. Year to date, McKinley has outperformed the indexes in both the international equity space and domestic space, and staff sees no reason to recommend changes at this time. McKinley was scheduled to report on the international equity mandate later in the agenda.

- The ARMB received two communications from the International Brotherhood of Teamsters and Teamsters Local Union 705 regarding private equity investments in the firm TPG. In keeping with the practice of not responding to socially or economically targeted issues for the investments of the ARMB, staff did not respond to the letters but was informing the Board.
- Three people responded to the academic position on the Investment Advisory Council that was advertized, including Dr. Jennings who currently holds that seat. One application was found to be non-responsive and eliminated from consideration, and the other two candidates will be interviewed at the June meeting.
- Ned Notzon, the Board's contact at T. Rowe Price since the firm was hired in 1992, will be retiring in December, and his deputy, Charles Shriver, will be taking over his duties effective October 1.
- Two Treasury Division investment officers — R. Bigelow and A. Sadighi — have resigned in the past month to take positions out of state.

CHAIR SCHUBERT wished Mr. Bigelow all the best in his new position and said he had done a good job for the Alaska Retirement Management Board.

6. Fund Financial Report

State Comptroller PAMELA LEARY presented the financial report for the month and fiscal year-to-date period ended February 28, 2011. The increase in total invested assets for the first eight months of the fiscal year was 19.72%, and the total invested assets at the end of February were $19.4 billion. Assets rose close to 2% in February.

Using the Public Employees' Retirement System (PERS) as the proxy, MS. LEARY stated that all asset allocations were within the bands as of February 28 for all the retirement plans.

TERESA KESEY reviewed the Division of Retirement and Benefits supplemental financial report as of February 28, 2011.

7. IFS Report Actions

MR. BADER said that Independent Fiduciary Services (IFS) had conducted an independent review of the performance consultant and the investment policies of each fund entrusted to the Board and had presented its final report at the December board meeting, including a list of recommendations. At the February meeting staff presented several responses to the IFS recommendations, and he was continuing that systematic review of the individual recommendations at this meeting.

A.1.b#2 - Real Assets Reporting Enhancements
IFS report recommendation #2, page 18, states:

The CIO and ARMB staff should work with Callan to determine how the reporting on timberland and farmland can be enhanced.

MR. BADER said staff concurred with this recommendation and had conferred with Callan. Those enhancements were included in the December performance report from Callan. He asked that the Board ratify his decision.

<u>MS. HARBO moved that the Alaska Retirement Management Board ratify the CIO decision to implement IFS recommendation #2 in task area A.1.b related to real assets reporting enhancements</u>. <u>MR. TRIVETTE seconded</u>. The motion passed unanimously, with trustees Schubert, Trivette, Harbo, Pihl, Hultberg, Butcher, Williams and Richards present. [Trustee Erchinger was absent for this plus the following board action on IFS report recommendations.]

MR. BADER stated that the next IFS recommendations all had to do with private equity.

A.1.b#3 - Private Equity Reporting Enhancements
IFS report recommendation #3, page 20, states:

ARMB should continue to work with Callan to show an IRR for the private equity program as a whole.

MR. BADER said staff concurred with this IFS recommendation and had included in the packet the draft revised Private Equity Policies and Procedures with changes highlighted in red.

A.1.b#4 - Private Equity Reporting Enhancements
IFS report recommendation #4, page 20, states:

ARMB should ask Callan to provide performance for the private equity program by strategy (e.g., buyouts, venture capital, mezzanine, etc.) and to show the portfolio diversification by geography and industry.

MR. BADER said staff concurred with this IFS recommendation and had made that request of Callan Associates for their performance reporting.

B.3.#1-#6 - Private Equity Policy/Guidelines
IFS report recommendations #1 through #6, pages 56-57, state:

#1. Expand the discussion on risks associated with investing in private equity.

MR. BADER said staff concurred with the recommendation and had revised the Private Equity Policies and Procedures with an expanded discussion of the risk associated with investing in private equity.

#2. Consider setting a range for international private equity investments, rather than a flat maximum, to allow more flexibility.

MR. BADER said staff concurred with that recommendation and had revised the Private Equity Policies and Procedures to establish a band of 20%-45% for international private equity investments.

#3. Revise Section 1.3. Ownership Structure of the Private Equity Policy to include private equity investments made directly by ARMB staff.

MR. BADER said staff concurred with the recommendation and had revised the ownership structure and other areas of the Private Equity Policies and Procedures to clearly include ARMB staff investments.

#4. Clarify the section on private equity reporting of total portfolio performance, e.g., whether a total IRR should be calculated and reported.

MR. BADER said staff concurred with that recommendation and had revised the Private Equity Policies and Procedures to require that staff calculate and provide an IRR for the private equity program as a whole as part of the annual private equity tactical plan.

#5. Synchronize the due date for the private equity annual tactical plan with the annual ARMB meeting on private equity and clarify in the policy the various plans that should be produced.

MR. BADER said staff concurred with the recommendation and had revised the Private Equity Policies and Procedures to clarify the annual tactical plan work product and to change the due date to coincide with the ARMB meeting on private equity.

#6. Update the benchmark to reference the Thomson ONE database in the Private Equity Policy.

MR. BADER said staff concurred with the recommendation and had revised the Private Equity Policies and Procedures to reflect the updated benchmark reference. He asked the Board to approve the revised policies and procedures by resolution.

<u>MS. HARBO moved that the Alaska Retirement Management Board adopt Resolution 2011-04 approving the Private Equity Partnership Policies and Procedures that were revised to reflect the staff recommendations</u>. <u>MR. TRIVETTE seconded</u>.

MR. RICHARDS said that setting a flat maximum for international private equity investment would provide all the flexibility below that number, so he did not understand the reasoning that establishing a band of 20%-45% allowed for more flexibility. He also referred to page five of the redline version of the Private Equity Policies and Procedures where it said that staff will calculate and report a private equity portfolio IRR at least annually as part of the private equity tactical plan, saying he did not understand inclusion of the words "at least," instead of just "annually."

MR. BADER accepted those as constructive amendments to improve the policies and procedures. He asked if the Board could adopt the changes today and staff would bring back the two adjustments to the policies and procedures at a later meeting.

MR. TRIVETTE said he understood that Mr. O'Leary had agreed with staff's recommendations, and he wanted to make sure, for the record, that the IAC members had no objections either. He noted that the IAC members shook their heads.

MR. PIHL indicated that he liked the words "at least annually" because circumstances might make it advisable for staff to report the private equity portfolio IRR more often than once a year.

The Chair called for an outcry vote, and the motion carried unanimously, 8-0.

8. Private Equity Tactical Plan

State Investment Officer ZACHARY HANNA introduced the ARMB's private equity managers present from Abbott Capital Management and Pathway Capital Management. He stated that Abbott, Pathway and Callan Associates had all reviewed the Private Equity 2011 Tactical Plan and the recommendations.

[The slides for this presentation and the detailed written private equity 2011 tactical plan are on file at the ARMB office.]

MR. HANNA reviewed private equity as an asset class, explaining the motivation, attributes and structure of private equity investing. He also talked about the three primary strategies — venture capital, buyout and special situations — and portfolio implementation, where selection of top-tier managers is critical. The goal is to build a well-diversified portfolio of high quality partnerships. Through 2010 the ARMB has invested in 218 partnerships with 94 firms.

MR. HANNA reported on the private equity market in 2010. Fundraising was very slow in the year, up just slightly from 2009, but well off the pace of prior years. Limited partners, like the ARMB, are still generally over-allocated to private equity and slow to commit to new funds. Many general partners postponed fundraising last year, and those that did not took longer to close funds and often closed below fund size targets.

MR. HANNA also spoke about investment-related trends. Deal activity increased significantly last year. There was a large amount of uninvested capital for general partners to put to work, and they were able to do so in 2010 as credit became more available and pricing reached transaction levels. Deal pricing and leverage increased moderately to roughly the level of 2004-2005. Regarding exit opportunities, corporate and private merger and acquisition activity picked up in 2010 and remain the dominant sources of liquidity for private equity. The IPO (initial public offering) market also continued its rebound. Much of this public market financing was used to pay down debt, rather than as true exits for equity sponsors.

MR. HANNA reviewed the history of the private equity program (see slide 11). Relative performance of the ARMB portfolio since 1998 has been good; in a comparison with partnerships that started investing in the same year, five out of the past nine vintages years through 2006 were top quartile, three were second quartile, and the last year was third quartile. The internal rate of return (IRR) since inception is 8.7%, up 160 basis points from 2009. Staff also calculates a public market equivalent return using the actual ARMB private equity cash flows to simulate buying and selling public market indices. The 8.7% IRR for the ARMB's private equity portfolio compares quite favorably with public market equivalent returns of 1.4% for the S&P 500 Index and 2.1% for the Russell 3000 Index —

so well in excess of the portfolio's expected 350 basis-point spread.

MR. HANNA said the increases in exit opportunities flowing through to the ARMB resulted in distributions increasing to $201 million, slightly more than 2008 and 2009 combined. With the rise in underlying investment activity, ARMB contributions also increased 65% to $218 million for the year.

Through 2010 the ARMB's portfolio had $3 billion in total commitments, with $2.1 billion paid into partnerships. The total value at year end of $2.75 billion, including distributions, is 1.3 times the amount paid in.

The ARMB private equity portfolio is well diversified by strategy, and MR. HANNA stated that staff expects diversification to remain in line with long-term targets. He also described the industry, geographic region, and investment-stage diversification of the over 2,000 portfolio company investments in the ARMB portfolio. International is now 32.8% of the overall portfolio.

MR. HANNA explained that the commitment target for 2010 was $335 million; during the year, $209.1 million was committed to 18 partnerships. Commitments were low since many high-quality firms did not raise new funds during the year.

In terms of the 2011 outlook, private equity is recovering, along with increased economic and capital market stability. Continued improvement in the exit environment is expected. Corporations have very healthy balance sheets and record cash levels, which should translate into increased acquisitions in a slower-growth environment. Improvement in the IPO market is also expected. The investment pace will likely remain moderately strong. However, the large overhang of uninvested capital, combined with readily available debt financing, is likely to result in increased pricing and leverage levels. Fundraising is also expected to rebound this year, as general partners have been returning capital to limited partners, and limited partner allocation issues have lessened.

In the 2011 tactical plan staff recommended a commitment target of $335 million — $135 million for Abbott, $125 million for Pathway, and $75 million for direct partnership investments, with a gradual increase over the next five years. MR. HANNA referred to the ARMB's private equity allocation model that estimates forward commitments and funding projections as a percentage of the total retirement fund value. With the recommended commitment pacing, private equity should move to its allocation target of 7% of the retirement fund over the 10-year planning cycle.

Action: Resolution 2011-03 - Private Equity Plan
MR. TRIVETTE moved that the Alaska Retirement Management Board adopt Resolution 2011-03 approving the 2011 Annual Tactical Plan for private equity investments. MS.

HARBO seconded.

Referring to the illiquidity of private equity, DR. MITCHELL asked if there had been any development in secondary markets to make some of the investments a little more liquid, and if staff or the gatekeepers participated in secondary market transactions.

MR. HANNA replied that both of the gatekeepers have bought limited partnership interests in the secondary market when they felt like the pricing was attractive. Staff also made an investment last year with Lexington Partners, which is a secondary fund whose business it is to buy portfolios of secondary private equity interests. In general, the secondary business is fairly cyclical in terms of it being viewed as a buyer’s market versus a seller’s market. Staff felt over the last couple of years that there were some fairly attractive buying opportunities as liquidity dried up coming out of 2008; that is now starting to turn and it is becoming more of a fairly priced market. Generally there can be a fairly wide bid-ask spread between a seller's expectation and a buyer's expectation in these transactions, so it is not a particularly efficient market.

MS. HARBO noted that $126 million of the 2010 target was not committed, and she wondered if that money was carried over to 2011. MR. HANNA said it was use-it-or-lose-it, that the commitment targets are effectively maximums. He added that staff looked at the ARMB's commitment targets over the past 12 years versus what was actually committed, and in general something like 80% of the maximums were committed. Any roll-forward would be in the sense that staff might make a recommendation that commitments increase over what they expected in the future as a result of having committed less in the past.

MR. O'LEARY mentioned that private equity as a percent of the total retirement fund is over 8%, and the strategic target is 7%, although it could be changed to 8% at this meeting. He asked for confirmation that staff would not recommend a change [in the 2011 tactical plan], whether the strategic target remains at 7% or moves to 8%.

MR. HANNA said that was correct. He added that in general staff likes to be fairly smooth with the annual commitment pacing to try to preserve some vintage-year diversification. So while there could be a commitment increase over the longer term, staff was not recommending any increase, and this year in particular.

MR. WILSON inquired about how the use-it-or-lose-it commitment target guideline puts pressure on the private equity advisors. MR. HANNA explained that the contract structures are slightly different for the two advisors. One of the advisors is paid on the market value of their portfolio (so in some sense they are incentivized, at least at the margin, to build that over time). But it is a long-term relationship, and everyone appreciates that there is more detriment to pushing out money in the long term than there is short-term gain from building up market value. The other advisor has a commitment structure whereby ARMB pays for an allocation every year irrespective of how much money the advisor puts out. It is part of staff's monitoring role to watch how the advisor spreads allocation across their client base.

COMMISSIONER HULTBERG asked how staff set $75 million as the 2011 commitment target for the direct partnership investments. MR. HANNA replied that it was a resource constraint that limited staff to two to four deals per year in order to do due diligence properly on the deals. They have done six deals in three years. There is growth over time but really it is an inflationary growth.

MR. PIHL inquired if there was a way to monitor that the ARMB gets its share of the best deals. MR. HANNA responded that both Callan and staff play a role in monitoring, and they look at how the deals perform that the gatekeepers did versus the universe of deals that had been available. Staff has been quite comfortable that the gatekeepers have put the ARMB into deals that have outperformed the average manager, and that on a revolving basis the ARMB is getting access to strong deals.

MR. TRIVETTE mentioned that the two gatekeepers have some overlapping investments in the same funds, and he asked if that was a problem. MR. HANNA stated that staff has thought quite a bit about Abbott's, Pathway's, and staff's group of investments, and their view is that the overlapping investments are high conviction names and funds where staff is very comfortable to have more money allocated. He added that regarding the direct investments staff has shied away from having three commitments to the same partnership, but they continue to think about it because the same logic applies that if those really are the highest conviction names then maybe the ARMB ought to be allocating three times to them. Maintaining three legal relationships with one entity is inefficient, but staff has not come up with a way to address that.

On an outcry vote, the motion passed unanimously, 8-0.

A scheduled break took place from 10:21 a.m. to 10:40 a.m.

9. Abbott Capital Management, LLC

Two of Abbott's managing directors, JONATHAN ROTH and TIM MALONEY, appeared before the Board to talk about private equity market conditions and developments during 2010 and the investment activity they conducted on the ARMB's behalf since their last report. *[A copy of Abbott Capital's slide presentation is on file at the ARMB office.]*

MR. ROTH said their report last year was that 2009 appeared to have been the low point for private equity and it was still a bit unclear as to how 2010 would play out. Abbott's general partners were using the term "green shoots" as they tried to be cautiously optimistic in describing the progress the underlying portfolio companies had made during the down turn of 2008-2009. There was not a material uptick in fundraising in 2010, but the capital markets in 2010 appeared to have shrugged off the uncertainty surrounding the economic recovery, the stubbornly high unemployment, the sovereign and state budget crises, the trade deficits, a weak housing market, rising commodity prices, and a fairly weak employment market. There was a dramatic uptick in merger and acquisition (M&A) activity and, as a result, new investment and divestment activity.

MR. ROTH stated that the liquidity seen in 2010 is continuing into early 2011. The IPO market recovered, and some noteworthy IPOs have taken place so far in 2011, signaling that the markets are going to be willing to consider some of the large offerings that will be in the pipeline for private equity for the near future. Abbott is beginning to see a flow of dividend recaps again but not nearly at the levels in the heyday, and the terms associated with many of these debt packages are much more reasonable. The general partners have been very patient to see the companies through, and now they see that the market is open; they do not know when the next correction might take place so they are focusing on returning capital and making distributions to the limited partners.

Venture capital had about ten years of nonperformance, for the most part. Regarding the earlier question about secondaries and liquidity, MR. ROTH said there has been a lot of discussion about a secondary market for privately held companies. This is a relatively new phenomenon, and the press is overstating how widely held this practice is; it is really limited to about a handful of companies. There are literally thousands of privately backed venture capital companies, and there really is not a secondary market for those privately held shares. The IPO market is on the rebound for technology buyouts. However, it has been a struggle for early stage health care: a tough FDA environment for the last two years, large pharmaceutical companies distracted with their own mergers and acquisitions at the highest level, and a follow-on financing market that has been very difficult. Abbott is not abandoning that space because they think it is important to be exposed to new technology, along with biotechnology and medical devices, and they are hopeful for conditions to improve.

MR. ROTH said the current conditions for the traditional buyout area appear to be that companies on the market that can show fairly resilient performance during the down turn of 2008-2010 are getting a lot of attention because general partners view them as a less risky proposal. Those companies are being bought at full fair value, similar to 2009. The trend has been to slightly larger buyout deals coming back, which helps get investment dollars into the market. For example, in the first quarter of 2011 the ARMB portfolio participated in the buyout of Del Monte, about a $5.3 billion transaction. The venture capital market has a lot of attention on social media and cloud computing.

MR. ROTH stated that fundraising was basically flat in 2010. Fewer funds were raised, funds were generally smaller, and it took longer to raise a fund. That is because there is a fair amount of healthy skepticism, and people are doing protracted due diligence. The latest statistic for 2011 shows that the average time to raise a fund shrank from 20 months down to 16 months. What gets a lot of press in terms of concerns is the word "overhang," which means the amount of money a general partner has raised in a fund and not invested. Abbott has identified one or two groups in the ARMB portfolio where a fund is maybe four years old and they have only invested 20% of the fund. Abbott monitors those situations carefully and proactively engages with the general partners to understand how they plan to address that and to discuss a fee rebate to the extent that the GP will not be deploying the full fund.

MR. ROTH briefly reviewed the promotions in the investment team at Abbott Capital and mentioned plans to hire two to three professionals across the organization.

MR. MALONEY reported that Abbott did eight deals for the ARMB portfolio in 2010: three in the special situations category, one in buyouts, and four in venture. Five of the eight funds raised less than $1 billion in total size, illustrating that Abbott committed the capital to relatively smaller funds. Abbott did four investments in the first quarter of 2011, including two energy related funds that are new to the Alaska portfolio, and in April they made two additional commitments. The total commitments year to date are about $43 million, and Abbott expects to meet its allocation number in 2011. The pipeline of potential investments in all three strategies is probably as robust as it has been in the past four or five years.

At MR. BADER's request, MR. MALONEY briefly described the life of a venture capital investment and how, because of an initial lockup period or other factors, it can be one to two years after a venture company goes public for a general partner to fully get out of the public position. MR. BADER remarked that after the IPO the fund is at risk to the market volatility of the stocks. He asked if Abbott took any actions to prevent that market volatility. MR. ROTH stated that a general partner may hold onto a publicly traded company for a long time — the GP may still be on the board of the company and be restricted from selling the shares. On the other hand, there are some benefits if a general partner believes that ultimately the now-public company will be acquired. Abbott does not like to pay general partners to make market calls like that, but sometimes there are situations where a little bit of latitude is called for.

MR. MALONEY next reviewed the ARMB portfolio performance metrics. The overall net IRR at year end was 7.8%, approximately a 50-basis-point increase from a year ago. Indicative of improving market conditions, the capital calls pace was up in 2010, and the distributions the ARMB received back from investments were up even further — $108.4 million, almost three times the level in 2009. The pace of distributions thus far in 2011 seems to be a bit ahead of the same period in 2010.

MR. MALONEY said the ARMB portfolio is diversified by time, by industry, by investment style, and geography. The portfolio is predominantly a U.S.-based portfolio, with about 32% allocated to international opportunities — the vast majority of that percentage is focused on mature economies in Western Europe and predominantly in buyout control investments.

MR. TRIVETTE asked about any general partners that Abbott was concerned about. MR. ROTH explained about the investment periods for funds, the general partner investment in their own funds, and that Abbott usually does not mind if a general partner asks for an extension to invest a fund because their clients have very long time horizons.

DR. MITCHELL requested comment on trends for negotiating terms and fees in the industry. MR. MALONEY replied that Abbott began to see a swing toward more favorable terms for limited partners at the time that the fundraising market became very challenging for general partners. Some firms, due to their very strong returns, had been able to command a premium carry of roughly 25% versus the standard of about 20%, and Abbott was able to negotiate those carries back down to the industry standards of 20%. That is a real positive coming out of the down turn in the market.

MR. ROTH concluded by saying that Abbott hopes that the Alaska retirement fund's portfolio will eclipse the $1 billion of distributions mark in 2011. He said that Abbott appreciated the ARMB's long-term support and took nothing for granted, striving each year to seek the best investments for the portfolio.

10. Pathway Capital Management, LLC

JAMES CHAMBLISS, Managing Director, and CANYON LEW, Senior Vice President, gave a presentation on the private equity portfolio that Pathway Capital manages on the ARMB's behalf. *[A copy of Pathway's presentation slides is on file at the ARMB office.]*

MR. CHAMBLISS spent a couple of minutes describing how Pathway manages the growth of assets under management and has expanded the team of investment professionals that finds and accesses the best funds, as well as the resources that work behind those people. He noted that in the 20 years since Pathway was established they have not lost one senior investment professional. They do not have any retirement or succession issues.

Addressing the private equity environment, MR. CHAMBLISS stated that the market has come back nicely. Pathway believes the quick return in the debt markets helped drive an increase in the private equity investment pace, helped prices increase, and resulted in debt levels coming back to levels they were not expecting. What has them cautiously optimistic is that a lot of the managers in the ARMB portfolio have taken advantage of the market and have returned a lot of distributions to investors in the last six months. Pathway expects the liquidity and IPO market will continue to come back for the remainder of the year, and the mergers and acquisitions market has been quite strong as well. The competition for deals and the pace of investments has Pathway slightly nervous, but the improvement in the underlying performance of the companies, and the realizations and distributions has them feeling good.

MR. LEW reviewed the commitment activity in the ARMB portfolio in 2010 compared to the tactical plan. They committed $117.4 million to nine partnerships, which worked out to an average commitment size of $13 million. The commitments were spread fairly evenly between buyout, venture capital, and special situations funds. Of the nine commitments made last year, three of them were new relationships. All the 2010 activity was within all the tactical plan target ranges, both by number of investments and by dollars. Last year was a somewhat slow fundraising year, particularly in the first half of the year. The one difference between 2009 and 2010 was that the quality of managers in the pipeline had improved.

MR. LEW stated that the 2011 tactical plan is unchanged from last year's plan. They are targeting up to $125 million in up to 14 partnerships. To date in 2011 they have committed $30.3 million to two partnerships — $15.3 million to a European buyout fund focused on the large end of the market, and $15 million to a growth-oriented special situations fund whose approach spans both venture and buyout strategies. Pathway is in the advanced stages with a U.S. middle market buyout fund that could result in a $15 million commitment. The fundamentals of their approach have not changed since the inception of their relationship with the ARMB in 2002.

MR. O'LEARY remarked that staff's presentation showed the ARMB portfolio has a nice venture capital position. He said Pathway's venture capital position is a bit lower than Abbott's and he was struck that Pathway had made no venture capital commitments thus far in 2011. He asked for comment.

MR. CHAMBLISS responded that their commitments thus far have been driven by the quality of the funds in the market. Pathway is primarily focused on investing with the best fund and is less focused on short-term, year-by-year diversification. Last year 40% of the commitments were in venture capital; so far this year they have not done a venture fund, although they expect to do a small handful of venture funds by the end of the year. He recalled that when the Board hired Pathway it was post-internet bubble, so there were virtually no venture funds raising money for the first three years of the relationship. They have been investing in venture funds, for the most part, from 2004 forward and are very comfortable with the overall allocation to the venture space.

MR. LEW reviewed the portfolio's performance since inception through September 30, 2010, noting that the $783 million in contributions have grown to approximately $1 billion in total value, generating a 12.1% IRR. He said Pathway is in the process of finalizing the year-end numbers, and it looks like a very strong fourth quarter.

MR. LEW talked about the investment strategy diversification at the partnership level: 51% of the portfolio is in buyout funds, 23% is in venture, and the remaining 26% is in special situations. The split between U.S. and non-U.S. funds is 88%/12%. He also presented diversification for the 1,233 active holdings at the underlying portfolio company level by strategy, industry, and geographic region. There are 38 countries represented in the 30% of the portfolio that is non-U.S., and Europe accounts for about two-thirds of that slice.

MR. LEW stated that after two consecutive years of declines, ARMB contributions rebounded in 2010, growing from $69 million in 2009 to $101 million last year. Contribution activity looks to be about $28 million for the first quarter of 2011. On the distribution side, the ARMB received $82 million last year, more than double 2009 levels. All the portfolio's core strategies showed increases in distribution activity in 2010. The first quarter of 2011 and the fourth quarter of 2010 represent the second and third largest quarterly distribution totals since the portfolio's inception.

The ARMB portfolio has generated $140 million in gains since March 31, 2009, which have now fully offset the peak-to-trough losses from the most recent financial down turn. Year-end data that Pathway has received so far indicates another $40 million in gains during the fourth quarter.

MR. LEW presented the vintage year performance versus the Thompson Reuters benchmarks, as well as performance by investment strategy.

In summary, MR. CHAMBLISS stated that the ARMB portfolio rebounded nicely from the market turmoil of 2008-2009 and it continues to outperform both the public and private market indices. The portfolio is well positioned to continue doing well going forward.

MR. TRIVETTE said he noticed that 56 of the 76 general partners had positive returns and he wondered if Pathway had any concerns about the others defaulting. MR. LEW replied that through September 30, 2010 there were 76 active partnerships in the portfolio and a few that have yet to draw their first capital. Sixty-two of the 76 partnerships have generated positive returns; of the 14 that have not, there were none that Pathway had any concerns about defaulting.

CHAIR SCHUBERT recessed the meeting for lunch at 11:55 a.m. She reconvened the Board at 1:15 p.m. to continue hearing reports.

11. Performance Measurement - December 31, 2010

MICHAEL O'LEARY of Callan Associates, Inc. presented the investment performance for the Alaska retirement funds for the periods ended December 31, 2010. *[A copy of Callan's presentation slides is on file at the ARMB office.]*

MR. O'LEARY said the economy saw a real recovery during calendar 2010, and it seemed to strengthen through the year and continue in the March 2011 quarter, although the March numbers have been revised downward from what was initially estimated. He referred to a chart showing the performance of major market indices over the last quarter, one year, three years, five years and ten years. The emerging markets over three of the time periods were the best performer, and, amazingly, three-month Treasury bills were the second-best performer over the three-year period (the three-year period captures the meltdown). Last year was a great year for equities and a rotten year for cash, and the bond market was surprisingly good through the whole year. In 2010 the MSCI-EAFE Index was up 7.8% in U.S. dollar terms, where the U.S. stock market as measured by the Russell 3000 Index was up almost 17%, and much of the differential between the developed international markets and the U.S. market was attributable to currency, most of which occurred later in the year.

MR. O'LEARY presented the Treasury yield curve during the December quarter, noting that rates went up in the fourth quarter but were still lower than where they had begun the year. He also showed a graph of the spread between riskier fixed income investments and Treasuries over the last 10 years. He said that after spiking in 2008 and early 2009 the spreads for investment-grade rated non-government issues have narrowed and look fairly typical in a longer-term historic context. Commercial mortgage-backed securities (CMBS) were the best place to be in 2010, followed by high yield bonds; they benefitted from the spread narrowing. Treasury bonds made 5.9% and agency bonds made only 4.4%.

The next graph compared emerging market equities, developed international markets and domestic equities, and illustrated the longer-term strength of emerging markets. But emerging markets were not immune from some of the issues during the fourth quarter, when the U.S. stock market was the best performer. That slow down was not so much currency affected, although there were some currency impacts, but it was more about concern in the latter part of the year that the rate of growth in emerging markets was too fast and unreasonable.

MR. O'LEARY spent some time explaining the six periods of interest rate hikes from 1982 to 2010 and the positive returns from bonds in many of those periods. He said that in a more normal environment short-term interest rates cannot be lower than inflation and have good things happen for a protracted period of time. The end of Quantitative Easing Two will be June 30, 2011, which has been the Federal Reserve's program of buying

Treasuries. The Federal Reserve still has a bloated balance sheet and owns a lot of bonds, and interest payments and maturities will mean a lot of money coming in, some of which will be reinvested — and undoubtedly some of which will not be reinvested, and there will be some shrinkage of the balance sheet. Nobody knows exactly what that means, but it is a big change. The bottom line is that if one believes that interest rates are going to be higher over the two- to three-year period, it is hard to get excited about the expected return for bonds being good.

MR. O'LEARY stated that fortunately a recovery is underway in commercial real estate. Unfortunately, real estate is the single largest factor detracting from the ARMB's performance over the three-year period, having done worse than stocks. That may all change over the next 12 months. It is important for people to understand how the non-public markets — real estate and private equity — affect the pattern of the retirement fund's returns.

MR. O'LEARY showed a chart depicting factors about the major bear equity markets since the end of World War II, along with the S&P 500 Index return that would be necessary over one-year through 10-year periods to get back to the 2007 market peak.

Looking at an illustration of the asset allocation for PERS (as the proxy for all the unconstrained portfolios), MR. O'LEARY remarked that the asset allocation as of year end was a bit overweighted in equities and underweighted in real assets and in fixed income. The fixed income is easy to understand because it was a great quarter for stocks and a quarter when bonds went down. Everything is within permitted ranges. Compared to other public funds, the retirement fund has a comparatively low bond allocation, a comparatively high international allocation, and a comparatively high alternative investments allocation (private equity and absolute return). Real estate is also relatively high.

MR. O'LEARY reported that the December quarter performance was fairly good at 5.91%, although slightly below the target index return of 6.15%. There was not much asset allocation impact on performance in the quarter; the biggest positives were the overweighting in private equity and the underweighting in fixed income relative to targets. For the full year, the retirement fund did well, and the difference between the actual return of 12.45% and the target return was very narrow. The actual domestic equity return exceeded the target index, as did fixed income. Real assets were close but below target for the year, and international equity was above the target. Private equity returned 15.29% in 2010, but it was less than the public market index used as a short-term proxy. Absolute return was 4.73% for the year versus the target return of 5.13% (when the one-month lag in the reporting of absolute return was accounted for, the absolute return portfolio had a return of 5.43%).

There was a short discussion about the convention in the industry for measuring private equity performance and the ARMB's policy of lagging returns until receipt of audited valuation numbers from the underlying hedge funds. Real estate returns was another example of lagged reporting in the ARMB's case. The point was made that it makes the peer group comparisons on a one-year and three-year basis very difficult because it is an apples-and-oranges issue.

MR. O'LEARY reviewed the performance of the individual asset classes and made the following observations:

- Total bond portfolio performance compared to Callan's public fund fixed income database was very competitive.
- The in-house bond portfolio was very close to but slightly behind the Barclays Intermediate Treasury Index for the half-year that the portfolio became fully effective with that mandate.
- Mondrian, the non-US fixed income manager, has done a great job. Their target index changed during the fourth quarter to include emerging market debt, and future reporting will reflect that change.
- Lazard manages an emerging market debt portfolio that is contrasted against three-month LIBOR; it has been a nice diversifier.
- MacKay Shields is a reasonably conservative high-yield bond manager. The Board added high-yield bonds to the fixed income portfolio many years ago to increase returns, and over that time period it has increased returns over the investment-grade world as measured by the Barclays Aggregate Index. However, MacKay Shields has underperformed its high-yield target.
- Domestic equity performance was above the benchmark for the year and is very time-dependent for the longer periods.
- Relational, which had experienced protracted underperformance, was actually the best performer among the large cap managers during 2010.
- McKinley Capital did well in the year, as did Barrow Hanley.
- RCM had a weak full year but strengthened in the fourth quarter. Their long-term performance has been good.
- Every quarter Callan looks for pronounced growth or value biases in the component portfolios that constitute the large cap equity pool, and the answer was no pronounced bias for the December quarter.
- Small cap equity performance was fairly good for the year (up over 24%) and better than large cap, but below the benchmark return. Two managers, Jennison and Luther King, did really well for the full year, but Lord Abbett pulled the performance of the small cap pool down.
- Advent Capital has managed the convertible bond portfolio for a year, and the performance pattern was as expected — very equity like returns but not as good as the equity market.

- International equity performance for the full year was a strong 12.70% versus the index return of 11.60%.
- International equity ex-emerging market managers beat the developed market index, which was good.
- The emerging market equity managers in aggregate outperformed the emerging market index.
- Global equity manager Lazard underperformed the world index for the year. They have done better for the three, five, and seven years or longer, so no concern about the magnitude of their underperformance for one year.
- Callan's reporting for the real assets category was expanded per a recommendation from the IFS review. Real estate had a 12.35% return for 2010; while still behind the target return, it was good news. Farmland, timber, the internally managed TIPS portfolio, and the total energy funds were reported on separate lines.

MR. O'LEARY took time to explain several "stoplight" exhibits in the performance slides, which were created with green, yellow and red boxes to call attention to asset categories and managers that are doing either well or poorly.

He stated that the stable value fund, both in the Supplemental Benefit System (SBS) and Deferred Compensation Plan, had strong results. The Alaska Balanced Trust had unattractive relative results but the long-term absolute results are marvelous; the record has been very competitive, despite it being super conservative.

MR. BADER asked if staff should revisit their recommendation, which the Board adopted, to change the internal fixed income portfolio to an intermediate treasury mandate from the aggregate index mandate. He noted that the Barclays Aggregate Index showed positive returns in almost every period.

MR. O'LEARY said it was a great question. He was very comfortable with the intermediate treasury index as the objective, and the primary driver for that is that the retirement fund has so little bonds. If bonds are held as a diversifier, and the portfolio does not have many of them, the Board wants to make sure that they are not equity in disguise. During the market meltdown, a huge segment of the bond market cratered as if it was stocks. The structured mortgage product that was so popular in bond portfolios, and certainly the investment-grade credit part of the bond market, woefully underperformed Treasuries. If the ARMB could afford to have 30% or 40% of the portfolio in bonds and they went down a little that would not be bad. But the ARMB has less than 20% of the portfolio in bonds. So it is important to get that minimum protection on some meaningful portion of the portfolio. Some people might say it was overreacting and investing by looking in the rearview mirror, and they might be right, but the point is that a target of 18%-19% in bonds is not a big target.

CHAIR SCHUBERT commented that people seem to think that the likelihood of a double-dip recession has greatly diminished. But issues like the national debt ceiling cap, a possible slowdown in China, the possibility of a European debt crisis, devaluation of the dollar, and what is happening in the stock market, do not make her feel like the country is out of the woods yet.

MR. O'LEARY replied that she had a lot of company in those feelings. He said there seems to be genuine sentiment to try to reduce the magnitude of the current and future budgetary challenges at the federal government level. He thought that if the rate of governmental spending growth was reduced, somebody's income would get reduced along the way. It may be something that has to happen to address the longer-term problem, but that will be a negative in terms of the rate of future growth for a period of time. The dollar is in absolute freefall, so there are implications from that in terms of the ability to spend. Further, one can be reasonably concerned about the band aid approach to problems with the peripheral countries in Europe. At some point there has got to be fatigue on the part of the people in Europe who are subsidizing, in essence, the people who have taken advantage of that system. There are a lot of reasons why growth will be slower. The general forecast, though, is that this recovery is, has been, and will continue to be slower than other recoveries after major sharp recessions. The justification for that is that if there has been a financial crisis the recoveries tend to be slower. The astonishing thing is that the profitability of the recovery has been almost unprecedented. So from an equity valuation perspective, stocks are reasonably priced. There is still seemingly tons of excess liquidity around the world. The conundrum is, are people going to keep buying 0.1% short-term investments or are they going to try to make some money? It is important to recognize that things have recovered 90-some percent from the market low, so that has been a nice recovery.

CHAIR SCHUBERT thanked Mr. O'Leary for his presentation.

12. Actuarial Valuation Review - Fiscal Year 2010
Certification of Draft FY10 Actuarial Valuations for:
Public Employees' Retirement System (PERS)
Teachers' Retirement System (TRS)
PERS Defined Contribution Plan
TRS Defined Contribution Plan

LESLIE THOMPSON of Gabriel Roeder Smith & Company (GRS) gave an executive summary of the audit results from her firm's work in reviewing Buck Consultant's fiscal year 2010 actuarial valuation review. *[The detailed GRS report is on file at the ARMB office.]*

She thanked Buck for freely providing all the data she requested and for answering all the questions she asked of them. This year GRS had a greater effort because of the change in assumptions; she had her staff members do different pieces than what they would normally do so there was a fresh set of eyes looking at every piece of the retirement plans.

Starting with the PERS and TRS pension plans, MS. THOMPSON said the report included the actual audit itself and then some items that caught her attention while conducting the actuarial work. She started with her "ear-perking" observations first, saying she would be listening to Buck's presentation later in the afternoon to hear their explanations:

- Termination rates were creating consistent losses. Always being on one side, particularly the loss side, will cause upward pressure on contribution rates.
- Mortality rates were creating consistent losses. Buck reduced the mortality rates which should help alleviate the problem in future valuations.
- An issue raised in other audits was that a consistent component of the losses was under the "other" column. GRS recommended that Buck consider examining the gain/loss methodology used to determine the major sources of the "other" gain/loss.
- PERS had a bit of a gain in salary increases, meaning increases were not as high as assumed. TRS had a loss in salary increases.

MS. THOMPSON reviewed the test life observations part of GRS's audit work. She mentioned that the tiny tweaks in the report were little things that would have no material impact on the valuations but just needed to be fixed. GRS spoke with Buck on these, and Buck concurred with everything and will fix them in the 2011 valuation. She said the GRS matches were very close on the test life observations.

MS. THOMPSON stated that it was another good audit on the big PERS and TRS valuations. The valuation process incorporated all the assumption changes, and the little tweaks will be fixed in 2011.

Turning to the defined contribution plans (DCR), MS. THOMPSON said the DCR plans are very new and extremely well funded. Regarding items to watch out for, she had a similar comment on the health care because the total losses were mostly made up of "other." She urged the Board to spend time talking to Buck about that so the plan does not end up 200% funded and then experience a high velocity drop with no identified cause. It is important to find out if it is an assumption or a method that needs to be changed so the gain/loss experience is more in line. Lastly, the test life review was extremely clean.

CHAIR SCHUBERT thanked Ms. Thompson for her report, and called a scheduled break from 2:47 p.m. to 3:00 p.m.

13. Fiscal Year 2010 Draft Actuarial Valuation Reports for:
Public Employees' Retirement System (PERS)
Teachers' Retirement System (TRS)
PERS Defined Contribution Plan
TRS Defined Contribution Plan

DAVID SLISHINSKY, AARON JURGAITIS, and KYLA KALTENBACH of Buck Consultants, Inc. attended the meeting to present the fiscal year 2010 draft actuarial valuation results for the PERS and TRS defined benefit plans, as well as the benefits that are defined benefit-like that cover the defined contribution plan members of PERS and TRS. MR. SLISHINSKY informed the Board that Michelle DeLange left Buck in mid-March to join the family business.

MR. SLISHINSKY and MR. JURGAITIS reviewed the changes since last year's valuation:

- No change in benefit provisions.
- Buck implemented the changes in the actuarial valuations that the Board approved since the last valuation date. Some of those changes were fairly significant, including a reduction in the valuation interest rate (the expected long-term rate of return on the investments) from 8.25% to 8.0%. As part of that, the inflation assumption was changed from 3.5% to 3.12%. The reduction in the inflation assumption impacted the salaries in the projected amounts of benefits, as well as the liabilities.
- There were mortality table changes that were significant for both plans but more so for the TRS.
- Two main changes on the medical plan assumptions were: (1) a decrease in the assumed Medicare Part B-only proportion of all current Medicare retirees from 3.5% to 0.6%; and (2) a decrease in the proportion assumed to be enrolled in Medicare Part B only from 3.5% to 0.6% for future Medicare retirees. With the new third party administrator, Buck was able to get an actual census of people who have Medicare Part B only coverage and no longer has to use an estimate. Buck will continue to use the 0.6% assumption for the future retirees as well.
- The payment lag for medical claims was changed from 2.6 months to 2.4 months, and for prescription claims from 0.5 months to 0.15 months.

MR. SLISHINSKY reviewed the valuation data that was used for PERS:

- Active member counts were down slightly, as expected for a closed plan, however, there were some people with prior service who were rehired this year.
- Inactive counts were down slightly.
- Vested terminations were down as well.

- There was an increase on retirees, disabled and beneficiaries.
- Overall, still a fairly level yet slightly declining total membership. The decline was about 0.4% from last year.
- Annual compensation was relatively flat, even though there are pay increases being granted to the actives. Salary is expected to decline as the active member counts decline as people retire and terminate.
- The market value of assets was up from $8.5 billion to almost $9.6 billion, based on contributions as well as investment return of about 10.2%.
- The actuarial value of assets was up from $10.2 billion to almost $11.2 billion, representing about an 8.9% increase and a rate of return of 7.2%. Buck smoothes in gains and losses over a five-year period to determine the actuarial value of assets, and there is still a significant amount of investment losses being smoothed in from the 2008-2009 markets.

MR. SLISHINSKY mentioned that when the ratio of actuarial value of assets to the market value of assets gets outside the corridor of 20% of market value then every amount of additional difference between the actuarial value and the market value is recognized, whether it is a loss or a gain. Last year there were extra losses that were recognized in the valuation, adding to increasing unfunded liabilities. This year the market value of assets had gains in excess of the assumed rate of return, and as a result there are some gains coming in; since the amount of gains is outside the corridor those gains are being immediately recognized. That means a bit of an increase in the actuarial value rate of return (7.2%), which is higher than it otherwise would have been because of that corridor.

- Annual benefit payments were up from $735 million to $821 million, an 11.7% increase from last year. With the increase in market value, the benefit payments are running about 8.6% of the market value for the last two fiscal years.
- Accumulated member contributions were up 3.6%.

MR. SLISHINSKY spent a few minutes explaining the asset smoothing history for PERS since 1996. He then described the calculations used to develop the PERS actuarial contribution for FY12 as a percentage of total pay. This year the total contribution rate was 38.30%, and last year it was 36.53%. Subtracting out the expected member contributions of $116 million resulted in the employer/State contribution rate of 32.83%.

MR. BADER inquired about why the member contributions are all allocated to pension and none to health care. MR. SLISHINSKY replied that all the active members in the defined benefit plan are contributing, and their contributions go to pension benefits. There are a few retirees who must pay some amount to health care, but it is very small. MR. BADER said he pointed it out because he did not know how the accountants accredited it to the account, but the investment people are always trying to keep the pension and health care funds in balance with the asset allocation.

MR. BARNHILL mentioned that almost all of the Mercer settlement contribution in 2010 went to the health care account, and he did not know if that was why Buck's calculation showed zero member contribution to health care, but there was no need for additional funding in health.

MR. SLISHINSKY presented the actuarial gains and losses on the total accrued liability of the PERS system. Retirement experience had a very small gain of $3.7 million. There was a $3 million loss on termination experience, meaning fewer people terminated than Buck expected, based upon their assumption. Buck has been noticing, for Alaska and other plans they work on, that people are delaying retirement, and Buck typically sees gains with that delayed retirement experience. Also, people are not terminating to the extent that they have been in the past. If there are fewer opportunities to move from their current job to a new job, that keeps people in their current job. Buck changed the assumption for retirement rates and also decreased termination rates as of June 30, 2010, so those changes will affect the gain/loss on total accrued liability next year.

Mortality experience was a $17 million loss for PERS. MR. SLISHINSKY said he guessed that the number would be positive next year because when they changed those assumptions they built in a margin based upon the experience. He said the other demographic experience that Ms. Thompson talked about was primarily rehires (almost 1,200 for PERS). Rehires were not included in the valuation last year, or were included as terminated vested people. And when people are rehired there is a re-establishment of their accrued liability that is greater than the accrued liability that was shown last year. Salary increases was a slight gain. The PRPA (post-retirement pension adjustment) and Alaska COLA (cost-of-living adjustment) were gains — generally speaking, the CPI was less than Buck's assumption, so those increases were not as great this year.

MR. JURGAITIS explained that the large medical experience gain of $130 million was mostly claims experience. Two main things were going on. Two years ago the Board adopted the Society of Actuaries long-term trend model, which meant continuing the current trend at the time out so that the ultimate period is not reached until 2070 or so. Buck had expected medical costs to go up about 7.5%; costs actually went up around 10%-14%. Buck does not look at just one year of claims costs; instead, they do what is called trending and blending. For example, they would trend 2007, 2008 and 2009 forward to a common date, then blend all those years together, giving the older years less weight and the newer years more weight. In the past, the experience on the retiree health plan had a couple of years where claims were abnormally high, and those years are still included in the trend-and-blend of experience. That is what is driving the health care claims costs higher right now. Buck gave those years less weight because steps had been taken to mitigate some of those claims trends, so the last year or two the claims have been in the realm of reasonable or not abnormally large. Moving forward, if the

claims continue as they are, the poor years will drop out, and the retirement system should have health care claims trends that are more in the high single digits instead of the low double digits, where they are right now.
MR. SLISHINSKY reported that the total pension and health care experience for PERS resulted in a loss of about $117 million. Health care was a loss of $131 million, which meant that pension had about a $13 million gain. That $13 million was 1/10th of 1% of the expected accrued liability for pension, and the health care was a loss of 1.7% of the expected accrued liability. Buck typically looks at around 3% as the point when those gains and losses become significant. Total experience was less than that threshold so they would not view it as significant. However, with the change in assumptions, and the fact that those changes are more conservative, Buck hopes that the experience next year will show some gains.

MR. SLISHINSKY reviewed the change in the total employer/State contribution rate that took into account new assumptions, the two-year delay, investment experience, salary increases, and demographic and medical experience. He mentioned that one change that impacted the contributions from last year was the effect of the two-year delay on the contributions. This happens because the actual contributions paid for FY10 were based on the actuarial valuation that was performed in 2007.

MR. TRIVETTE suggested that Buck include on the summary sheets the pages in the actuarial report where the assumptions are laid out so it would be easier to find them.

Referring to the $116 million in PERS employee contributions, MR. PIHL asked what they were paying for. MR. SLISHINSKY replied that those are the member contributions of all the members that were hired prior to 2006, and the contributions are being allocated to the pension assets.

MR. TRIVETTE said he recalled that the number was set in statute, which he did not think was 5.47% of total pay. MR. SLISHINSKY said the percentage was determined on total payroll that includes the defined benefit plan member payroll and the defined contribution plan payroll. He added that peace officers and firefighters contribute at a higher rate than others, so there is a blend that he thought was between 7.5% and 8.0%.

MR. SLISHINSKY showed a graph of the PERS contribution rate history. Another graph showed the increase of the PERS actuarial accrued liability over the last 15 years; from 2009 to 2010 the liability grew by $735 million, most of that due to the change in the actuarial assumptions. On the third graph illustrating the funding ratio history he said that at one time the PERS plan was 100% funded, but the last ten years have not been favorable to any retirement plan or any investment portfolio.

COMMISSIONER BUTCHER asked how Alaska ranked nationally. MR. SLISHINSKY responded that it is hard to compare Alaska to other state retirement plans because Alaska prefunds health care and has done so with the vigilance that it is as important as pension. Other states are putting money into pension and not putting money into retiree medical. MR. TRIVETTE added that only four other states prefund medical. He said the PERS system dropped from 101% funded to 75% in one year largely due to actuary stuff. He referenced the Milliman report, which is when the State hired a second actuary to review the work of the primary actuary.

CHAIR SCHUBERT questioned if Buck's chart on the PERS funding ratio history was correct, based on Mr. Trivette's explanation. MR. SLISHINSKY explained that for the funded ratios from 1995 through 2002 the prior actuary's (Mercer) methodology was to take the claims costs rates and roll them forward with medical costs trends, so they were falling further and further behind in the measure of the accrued liability on health care. That means the funded ratios during that period are probably inflated.

MR. BARNHILL observed that plainly the Buck chart on the PERS funding ratio was incorrect because the estimated liabilities in the year 1998 were $6 billion; fast forward to today and it is $18 billion. The benefits have not really changed, but people had no idea what the accrued liability was ten years ago.

Regarding comparing Alaska to other states, MR. JOHNSON said he thought there were GASB or FASB rules that required disclosure of the liability from medical as well as pensions, so he thought that information would be more available. MR. SLISHINSKY replied that the GASB calculations are based on GASB parameters that include lower interest rates, depending upon how well those plans are funded. It results in some different measurements when looking at the GASB numbers on OPEB (Other Post-Employment Benefits) versus funding numbers. One place to look is the Pew Report, but even today that is old information.

MR. SLISHINSKY next reviewed the 2010 draft actuarial valuation results for the Teachers' Retirement System using the same type of exhibits and graphs he used for PERS. He noted that the number of members was down 0.6%, annual compensation was fairly flat, salaries were up 6.5% from the prior year, the rate of return on assets was about 10.6%, the market value of assets was up to over $4 billion, and the actuarial value of assets was up about 8.1% rate of return. Annual benefit payments were up from $412 million to $446 million, an increase of 8.3%.

MR. SLISHINSKY presented the calculation for the total actuarial contribution for TRS as a percentage of total pay (DB and DCR salaries) to reach 56.72%, up from 50.11% last year. Most of the increase was a result of the change in the actuarial assumptions. The member contribution was 7.16% of total pay, resulting in an employer/state contribution of 49.56% for FY12.

MR. SLISHINSKY highlighted the gains and losses on total accrued liability for TRS that were different than what happened in PERS. TRS experienced salary losses due to higher pay increases. The loss on medical experience for TRS was due to claims costs, the same as for PERS. The total loss of $90 million for TRS was less than 3% when compared to the expected actuarial accrued liability.

MR. SLISHINSKY said the good news was the asset gains on market value during the fiscal year ended June 30, 2010, which were about 2% greater than the rate of return assumption. Those gains are being recognized first this year and then over the next four years. The delayed gains prior to 2008 and the investment loss from 2008-2009 resulted in an actuarial value return of 7.2% for PERS and 8.1% for TRS, both slightly less than the 8.25% assumed rate of return. There were losses on the liabilities due to medical experience, primarily due to claims costs that were more than expected. There were losses on the liabilities for the demographic experience with fewer deaths than expected causing mortality losses, fewer terminations than expected causing termination losses, and there was a salary increase more than expected for TRS. There were also gains on retirement and on the PRPA and Alaska COLA. The unfunded liability increased from 2009 for both PERS and TRS, and the major impact was the new assumptions. The contribution rates increased, again, primarily due to the change in the assumptions.

MR. JURGAITIS addressed the health care reform that became law in March 2010 and the main items affecting the State of Alaska. The State's application for funds for the early retiree reinsurance program was approved, but there have been no disbursements as of yet. [Mr. Puckett said the State was expecting $15-$29 million on the first disbursement.] The removal of lifetime and annual limits is optional as long as AlaskaCare continues to be managed separately from the active plans [the current lifetime maximum is about $2 million; Buck calculated that going from $2 million to unlimited would have a very small impact]. The Cadillac tax was put into place to derive revenue from plans that are considered to be unduly rich. The Alaska retiree medical plan likely qualifies under that definition. However, under the guidelines for determining that tax Alaska is able to blend pre-Medicare and post-Medicare costs, which pushes the date for when the State would actually have to start paying on that tax quite a bit past 2018.

MR. SLISHINSKY presented the results of the valuations on occupational death and disability benefits and retiree medical benefits for the PERS defined contribution plan (DCR). The number of members grew 27% up to 9,200. There have been no benefit payments, and assets have been accumulating. Funding in the first three years of the plan was conservative because Buck wanted to build up assets to cover any adverse experience that could develop because of just a couple of occupational deaths or disabilities. None occurred so the plan is well funded. The assets are about $13.6 million, and the total accrued liability is about $8 million.

MR. SLISHINSKY presented the results of the valuations on occupational death and disability benefit and retiree medical benefits for the TRS defined contribution plan. The number of members rose to 2,246, up 25% from last year. There have been no benefit payments, and the market value and actuarial value of assets have grown.

MR. SLISHINSKY stated that Buck develops the State assistance rate, taking into consideration both the cost for the defined benefit plans and the defined contribution plans on total pay. The capped contribution rate for employers in PERS is 22% (includes both DB and DCR contributions). In TRS the capped contribution rate for employers is 12.56% of total pay. He described the calculation of the State assistance amount for FY13 when applied to the projected payroll for FY13: 13.84% or $307.3 million for PERS, and 40.11% or $302.8 million for TRS. The total State assistance of $601.1 million is an increase of $133 million over the prior year.

MR. SLISHINSKY reviewed the 30-year projections of the contribution rates, contribution amounts, and funding ratios, first for PERS and then for TRS.

MR. TRIVETTE and MS. HARBO suggested that Buck include some reference to the employee contributions on the charts so people are clear that the data depicted is only employer contributions. MR. SLISHINSKY indicated that they would find a way to represent the total contribution number.

COMMISSIONER BUTCHER asked how it was determined what year to get the unfunded liability paid off. MR. PIHL said it was clear in the legislative intent that a 25-year amortization period was to be used to address the unfunded liability of the defined benefit plans.

Prompted by MR. TRIVETTE, MR. SLISHINSKY explained that current GASB requirements are to amortize the unfunded liability over a period of no longer than 30 years. He added that there was something brewing in GASB to change everything; no longer are they going to link the disclosure to actuarial funding calculations. There will be a lot more volatility in those calculations for GASB disclosure. The proposal is to put what is called the net pension liability (otherwise called an unfunded liability) on the employer's balance sheet as a liability, which would include the State for the State's portion and all participating employers showing their portion. Then there would be a pension expense calculated each year, which is basically the change in that net pension liability, and any of the recognition amounts would run through the income statement.

MR. BADER reported that GASB made an announcement today that they were going to change the required discount rate to something lower than what the ARMB currently has. MR. SLISHINSKY said GASB, in a very close vote, approved using the discount rate that is the expected rate of return on assets to the extent those future benefit payments are expected to be funded. After that point in time, all future benefit payments are to be discounted at some lower-risk investment return, the kind of rate of return one would expect on general fund assets. By doing that, it increases the total value of the net pension liability for purposes of putting it on the balance sheet.

Responding to MR. O'LEARY's question about whose balance sheet the associated liabilities would be on, MR. SLISHINSKY said the PERS system was an agent multiple-employer system where the rates were calculated and determined for each employer separately. Under a cost sharing, all the employers agreed to share the cost, and as a result there is no longer any accounting or calculations individually for each employer. That is going to change back to calculating each employer's share of the net pension liability and a pension expense that all employers would run through their financial statements. Buck is thinking that as long as the system has a record of paying the actuarial rate and paying the contributions necessary to fund all the benefits, then there is a commitment on the part of the employers to pay for those benefits. And as a result there is expected to be assets to pay all those benefits, therefore, you can use the long-term rate of return expected on the assets for valuing all of those future benefit payments. It is what Buck is hoping will be the final interpretation for Alaska of the new proposals. If the proposed change does become the GASB standard, then Buck and the accountants will have a lot of work to do trying to figure out how to divvy up the net pension liability, which will be based on market value, not actuarial value. For Alaska, market value is still lagging actuarial value, so recognition of unfunded liabilities on the balance sheet would be higher using the market value than using the actuarial value. He said Buck could make a presentation on the topic, if the Board wished.

RECESS FOR THE DAY

CHAIR SCHUBERT thanked the Buck Consultant representatives for their presentation, and recessed the meeting for the day at 4:49 p.m.

Friday, April 29, 2011

CALL BACK TO ORDER

The Chair called the meeting back to order at 9:00 a.m.

REPORTS (Continued)

14. Adopt Asset Allocation

14(a). Resolution 2011-05
Defined Benefit PERS/TRS/JRS
PERS/TRS/JRS Retiree Health Trust Funds
Retiree Major Health Insurance Fund
PERS Peace Officer/Firefighters Occupational Death & Disability Fund
PERS, TRS, All Other Death & Disability Fund

MR. BADER reviewed the staff memorandum in the packet *[on file at the ARMB office]*. He reminded the trustees that the capital market projections that Callan presented at the February meeting were generally lower than those of the previous year. There are also other considerations to be mindful of: the defined benefit plans are closed to new participants, the assets at some point will peak out and start diminishing, and only the hybrid plans will be growing an asset base. This means that as the defined benefit plans decline the beneficiary pool dwindles and eventually disappears somewhere around 2080 or 2090. The annual benefit payments for PERS and TRS are greater than the contributions coming into the plans. This speaks to being mindful of liquidity interest when planning the asset allocation for the coming year. There is also a lump-sum State contribution that arrives each year, and it should not go into illiquid asset classes if it has to be accessed later on to make benefit payments. The recent PERS and TRS actuarial valuation reports show the accrued liability of PERS and TRS peaking somewhere around 2030. Although that is still well into the future, the Board needs to be cautious about undertaking investments that have 10-year lockups or commingled funds that have 10-year lives.

MR. BADER stated that with the foregoing observations in mind he held a teleconference on March 15 with Mr. O'Leary and the three Investment Advisory Council members. They discussed the capital market projections, the needs of the retirement plans, and had further email exchanges after the initial conversation. The group settled on the recommendations being made to the Board.

MR. BADER said there is an efficient frontier (getting the maximum expected return for a particular level of risk), and the Board can increase the risk appetite or decrease it, depending upon its will. When one undertakes an asset allocation that has a higher standard deviation, the more likely the variance in the geometric returns. The recommendations for PERS and TRS are different from the current year's targets. For example, the allocation for domestic equity is reduced by 2% (from 29% to 27%); fixed income is reduced by 1% (from 19% to 18%); private equity is increased 1% and it is already at that target; absolute return is increased by 1%; and cash is increased by 1%. Cash is not a big earner, but the asset allocation ought to acknowledge holding a good portion of the annual contribution from the State in cash because the money will soon be expended for benefits.

MR. BADER stated that the five-year geometric return of the recommended asset allocation is 7.45% with a standard deviation of 13.82%. This expected return is lower than the actuarial assumption of 8.0%. Looking at the efficient frontier, to get to an 8.0% geometric return would mean being almost entirely without bonds except for perhaps some high-yield bonds. It is the view of the group making the recommendation that it is the best for the ARMB.

MR. O'LEARY reminded everyone that when he reviewed the capital market projections in February he had talked about the 2.5% inflation forecast that Callan used in developing the asset projections. The actuary, in projecting the liabilities, is using the now-reduced rate of just over 3% inflation. If over the long run inflation is in fact 3%, he would expect the nominal return from the financial markets to generally be higher than what Callan is projecting. But today 2.5% is their best expectation, and it is closer to what the market is saying in the pricing of financial assets.

DR. JENNINGS related that the group talked about other dimensions of the cash decision, to increase it beyond the lumpy cash flows that the retirement trust funds receive. Other organizations he is involved with have ended up increasing their cash allocation, and the Board can take comfort that it is not atypical, as organizations have more illiquid investments, to recognize the need to have a bigger cash cushion. One organization has built in wider ranges to handle the exact kind of issues the ARMB faces with the lumpy cash flows.

MR. BADER mentioned that the Alaska Permanent Fund Corporation has increased its cash allocation to 2% in order to fund the annual dividend payment.

MR. WILSON stated that the most important decision the Board makes is its asset allocation: simplistically, about 80% of the asset classes is equity type risks, and fixed income and cash make up the other 20%. The most important decision after that is the portfolio's U.S. exposure compared to the international exposure. It is not an easy decision and a continual conversation when the group meets on a regular basis. The Boston Foundation with which he is affiliated is probably at the edge in that they look at the world indices and give the U.S. an equal weight, whereas most U.S. institutions overweight the U.S. People are beginning to move to where the Boston Foundation is, and the Foundation actually underweights developed Europe and overweights emerging markets. The ARMB has been continually edging in that direction, but it still has an overweight to the U.S. It is important to keep that in mind when considering the asset allocation.

MR. BADER asked the Board to consider Resolution 2011-05, which laid out the asset allocation for the PERS, TRS and Judicial retirement systems' pension and health trusts, as well as the defined benefit components of the defined contribution plans. Staff was recommending that they all have the same asset allocation because, as he mentioned in the CIO Report, staff is able to transfer ownership between all these funds and manage the cash inflows. At this time the PERS and TRS funds are not sufficiently different in their cash flows that they require different asset allocations.

MS. HARBO moved that the Alaska Retirement Management Board adopt Resolution 2011-2005. MR. TRIVETTE seconded.

MR. TRIVETTE informed the newest trustees that in previous years the Board has spent considerable time over a series of meetings discussing the asset allocation, so the fact that the Board was not spending a lot of time on it today did not mean it was not a critical decision. He thanked the IAC members, Mr. O'Leary, and Mr. Bader and his staff for all the time they spent on developing the asset allocation recommendations.

CHAIR SCHUBERT asked Mr. O'Leary if all Callan's public fund clients amended their asset allocation annually.

MR. O'LEARY said it was unusual for there to be a substantial change on an annual basis because it is creating a strategic framework. But the markets are changing so much that Callan and its clients think it is important to have updated projections that are still long term in nature but that reflect the different starting points. The change in the level of interest rates over the last two years has been remarkable, and that is a pivotal assumption that affects all the capital market expectations. The conclusions drawn from an asset-liability study done two or three years ago would be very similar to the conclusions one would draw today, and that type of detailed analysis is less frequent than the annual updating of projections which everyone recognizes will be wrong.

A vote was taken and the motion passed unanimously, with all nine trustees present.

14(b). Resolution 2011-06
Defined Benefit Alaska National Guard and Naval Militia Retirement Systems

MR. BADER explained that the military retirement system is based upon a set dollar amount per year of service, and the members have different ways they can take their distribution. It is more of a cash-as-you-go plan, as the Legislature makes an appropriation to the plan each year. The asset allocation does not move very much from year to year. He asked the Board to take action on Resolution 2011-06.

MR. WILLIAMS moved that the Alaska Retirement Management Board adopt Resolution 2011-06. MS. HARBO seconded. The motion carried unanimously, 9-0.

14(c). Resolution 2011-07
PERS/TRS Defined Contribution Holding Accounts

MR. BADER asked the Board to take action on Resolution 2011-07 adopting an asset allocation of 100% cash for the monies that are generally in transit from the State to the defined contribution accounts so the money is invested before it is transferred.

MS. HARBO moved that the Alaska Retirement Management Board adopt Resolution 2011-07. Seconded by MR. PIHL. The motion passed unanimously.

15. Crestline Investors, Inc. - Absolute Return

DOUG BRATTON, Crestline's founder, President and CIO, and CAROLINE COOLEY, Senior Partner and CIO of Diversified Funds, appeared before the Board to report on the absolute return portfolio the firm has managed since November 2004. *[A copy of Crestline's slides for this presentation is on file at the ARMB office.]*

MR. BRATTON spent a few minutes giving an overview of Crestline's active management of hedge funds, the organization's stability, the assets under management, and their largely institutional client base.

MR. BRATTON next presented the ARMB Blue Glacier Fund performance for the last year and a half and inception-to-date. Last year the portfolio returned 6.89%, which was about 183 basis points ahead of the benchmark (the HFRI Fund of Funds Conservative Index), and 175 basis points above the internal Treasury bill-based mandate for the fund of one called the Blue Glacier Fund. The first quarter of 2011 has been a very good quarter, up 2.16% versus 1.40% for the conservative index and 1.27% for the 3-month T-bill + 5% mandate. Over the life of the account, annualized returns are 4% versus 2.78% for the hedge fund conservative index. Returns since inception are behind the 3-month T-bill +5% benchmark, which made 7.43% over that period, but they have made ground over the past year and a half since the market crisis. The volatility of the ARMB's returns is in line with the 5% level. Crestline produced those returns with very low betas and reliance on the betas of other asset classes in the ARMB's portfolio.

Looking at a pie chart of the basic makeup of the portfolio, MR. BRATTON said it is very diversified among 14 strategies and 52 different funds, of which 34 represent about 80%

of the portfolio. Sixty-six percent of the portfolio is in North America, 20% is in Europe, and the remainder is in Asia and global mandates. Fund sizes are varied, and Crestline is agnostic about the size of a fund and only looks for the managers that can create the best returns.

At the request of MR. RICHARDS, MR. BRATTON elaborated on the 14 hedge fund strategies in the ARMB portfolio. He clarified that Crestline does not change the number of strategies too much because they are always looking at the same playing field. They will add new strategies as they are developed around the world, but they try to move within the basic strategies as the attractiveness of strategies ebbs and flows. Crestline looks at the attractiveness of strategies first, then at the manager level, and then the quality of a manager to deliver the return they expect from that strategy.

DR. MITCHELL remarked that in plain ordinary equities there is a theory that maybe 20-25 stocks is enough to provide a diversified equity portfolio. He asked if there was such a number in the hedge fund business and when it gets to over-diversification.

MS. COOLEY replied that it is an active debate and a discussion that Crestline has been having with the ARMB staff in terms of the number of funds to have in the portfolio. The reason for diversification in a hedge fund portfolio is that every hedge fund they enter has business risk; Crestline is attempting to diversify not just the strategy allocation but also the business risk with any particular manager and to get a broad view of that strategy by having more than one manager in that space. Of the 52 funds in the ARMB portfolio, about 34 of them make up what Crestline considers the core. At any point in time, because they are active allocators to strategies, they are increasing some number and decreasing another and ending up with about 34 funds.

MR. WILSON asked Mr. Bratton to expand on the nature of Crestline's underlying strategies. MR. BRATTON said they divide the hedge fund world into six boxes and think about the amount of beta that is resident in each of those boxes: absolute return, relative value, event-driven, long-short equity, global macro, and trend-following strategies (CTAs).

Addressing the Board's consultant, CHAIR SCHUBERT said she was trying to figure out if Crestline has met its performance objective of 3-month T-bills + 5%. MR. O'LEARY said that was the long-term target return because there was not a real market index that was consistent. At inception of the portfolio the objective was to achieve better-than-bond returns at bond-like volatility. In the hierarchy of hedge fund approaches, what the Board hired was clearly the most conservative choice. That translated into a risk-free rate plus 5%. Given the market meltdown, any return target that never goes down was an exceedingly difficult target to achieve. It has not been achievable over this specific period (since November 2004) but it is nonetheless a reasonable long-term goal. The asset allocation just adopted for the total retirement fund has a 7.45% five-year expected return with a 2.5% inflation component to it, so essentially that is comparable to T-bills + 5%. Five percent real return would be additive relative to what Callan would expect bonds to produce over the intermediate to long term.

CHAIR SCHUBERT remarked that managers when hired say they will outperform by 5%, for example, but in a meltdown situation XYZ will happen. She asked if that happened in Crestline's case when the meltdown occurred.

MR. O'LEARY responded that the absolute return managers suffered more than he would have anticipated. They clearly went down less than the rest of the retirement fund, but it was more than anticipated.

MR. BRATTON said he agreed with that. In the 25-plus years he has been in the hedge fund business he never saw anything like 2008. If there was an epicenter of the storm, it was in the hedge fund universe, and Crestline's part of the hedge fund universe was hit worse than the others because of three things. In 2008 anyone who provided liquidity was penalized, and by and large the portfolio provides liquidity. Anyone who used leverage was penalized, and Wall Street took away all leverage. Those are the structural things that happened. There are always existing relative value relationships, say, between a convertible bond and its underlying stock, or municipal bonds and treasuries, but all those relationships went to unbelievable extremes — 500% of where they had ever gone, in some cases. Those extremes affected that part of the hedge fund world the most. No one can say it will never happen again, because it happened once, but it is not something that is anticipated, and it is something that everyone has now dialed into their risk of things that can happen and restructured their portfolios to take that into consideration and hopefully learn from that experience. He said that Crestline did not meet its overall performance objective of T-bills + 5% for the period. However, they did outperform, on a relative basis, their comparator index.

MR. BADER stated that what Chair Schubert brought to light had not escaped staff's notice. The standard deviation of 5.02% is a very low standard deviation and is very similar to what the standard deviation has been for the Barclays Aggregate Index during the period of time the ARMB has engaged Crestline. The standard deviation imposed upon Crestline and the other absolute return managers has been in the area of 4%-6%. As part of looking for ways to ramp up ARMB returns, staff asked Crestline if the ARMB's return objective could be easier met if the standard deviation constraint on them was relaxed. He and Mr. Hanna visited Crestline about a month and a half ago and looked at some of the strategies they think are worthwhile recommending to the Board.

MS. COOLEY next presented Crestline's outlook in the current market environment and one of the frameworks they use to say whether they should be increasing or decreasing a strategy. It is a generally positive environment for their hedge fund strategies, in particular the relative value and event-driven strategies they focus on. One reason for that is reduced competition from proprietary trading desks that are subject to the Voelker Rule (meaning they cannot use proprietary capital for trading on Wall Street as much as they used to). Also capital constraints being imposed on banks through Basel III, especially in Europe.

She said Crestline is starting to see in their world and in the markets generally that volatility is still high but has been coming down and has normalized. The environment has also been fairly liquid, and both of these are generally positive for Crestline's strategies. They are also seeing good dynamics in the event-driven space — high cash on corporate balance sheets, and increased corporate actions expected because of some of those dynamics. The headwinds are in some of the more beta-driven strategies, in particular in the distressed debt strategy, which can be a portion of the portfolio. Crestline is neutral to a large portion of their universe because they believe it will meet or exceed the return benchmarks within the portfolio. They have a modest overweight to equity market neutral, fixed income arbitrage and credit arbitrage. They have been decreasing the distressed structured products, which was their top-performing strategy over the past two years, because they see risks within that strategy.

MS. COOLEY said they are seeing smaller peaks in the S&P Volatility Index and a more normalized environment. That means that if Crestline is going to use options for hedging, less volatility lowers the hedging costs, which is good for portfolio management. Equity correlations have normalized after everybody was doing the same thing at the same time, and Crestline sees a very good environment for stock picking and they do not expect macro factors to be the driver of all stocks. There is a very high level of corporate cash, so what companies are going to do with that cash creates an interesting environment for event-driven strategies. High yield spreads have come in considerably to pre-crisis levels, so it is a less favorable environment for directional strategies. They expect the return earned in these strategies to be driven more by yield now rather than capital appreciation.

MS. COOLEY reviewed the risks that Crestline sees in the market: macro risks from sovereign credit concerns (contagion because of the crisis in Europe); inflation risk (the market is expecting inflation to pick up and is starting to price that in); the housing market is not very good (although they have had very strong performance from some of the distressed mortgage securities their managers owned, they have started to reduce that allocation because they believe there is still risk out there); and commercial mortgage-backed securities have all rallied quite strongly.

MS. COOLEY stated that more hedge funds are being launched than closed now, although not at the levels that occurred in 2005-2006. The flows into hedge funds have gotten hedge funds back to their peak. There is now over $2 trillion of assets being managed in hedge funds, and the money has been coming from institutional investors.

MR. BRATTON explained that Crestline has been working with ARMB staff on options for increasing hedge fund flexibility in the absolute return program and in Crestline's mandate specifically. They manage the ARMB's portfolio within volatility bands and other constraints, which is not inconsistent with what they do for other clients. ARMB staff has asked Crestline what they would change in the way they manage the portfolio if the Board wanted to increase absolute return program returns. Crestline has outperformed its benchmark since inception, so the degrees of freedom they are looking for are to absolutely increase the return level, not relatively increase the return level.

MR. BRATTON said that one of the levers they could pull to increase returns is concentration: they currently run a diversified portfolio with very tight risk/return guidelines. When viewed at the level of the ARMB's overall absolute return program, or even at the entire retirement fund level, the diversification in the Crestline portfolio is a very fine-grained level of diversification. By concentrating the portfolio, they could achieve a higher return target, if that was the goal. They looked historically at sizing up their higher conviction funds from a 5% position maximum to a 10% position maximum, and did the same thing for their strategies, to see what the results would have been for the ARMB portfolio. They saw that historically the return would have been improved by 220 basis points a year with similar volatility.

MR. BRATTON said the second way they looked at increasing returns is by incorporating more directionality or higher-volatility strategies into the portfolio. Crestline has an overall volatility target and they also have an overall beta target or market factors that they try to minimize in the portfolio. One may be equity. In this case, they have a separate track record of an equity-only allocation that includes a lot of those market neutral equity managers, as well as some long/short equity. Had they just looked at that part of the portfolio, it would have annualized at about a 450-basis-point increase above Crestline's standard portfolio. They could potentially size up that substrategy to a larger portion of the portfolio, which would be in the context of relaxed portfolio guidelines.

MR. BRATTON stated that those were two of the most logical ways to increase portfolio return, and they would require some modification of the program guidelines.

MR. WILSON inquired if Crestline's fees would change from one strategy to another. MR. BRATTON said no, that the ARMB is at the fund-of-one fee level.

MR. BADER asked if long/short equity was embedded in one of the two approaches that Mr. Bratton described. MR. BRATTON said it was in the second example he gave. MR. BADER said staff believes the availability to use the strategies the Mr. Bratton described by relaxing the ARMB's volatility constraints and guidelines for Crestline, and at least one other manager in this space, will result in improved returns.

Referring to the slide on Crestline's concentration strategy, DR. JENNINGS commented that increasing the concentration to 10% [on their highest conviction funds] would be on the order of $10-$20 million and was not unreasonable. However, because of larger positions in single stocks, there is significant headline risk from more press inquiries if one of those funds blows up. As good as the staff is, as good as the resources are, and as good as the manager is, a blowup will happen and it will be in the headlines, and people will want to know how it happened. He said he supported the idea of concentration, but he wanted to Board to go into it with its eyes open.

Regarding concentration, MR. WILSON stated that Crestline running 52 hedge funds is fairly substantial, compared to the peer group. In the three strategies that the Boston Foundation runs, they have more like 30 managers and get the biggest positions in the 5%-7% range. He supported lowering the number of funds from 52 to 30. He said that if one is thinking the next ten years will be like the last ten years, these kinds of strategies did really well. On the other hand, if one is thinking the next ten years will be more like the 1990s — the 1990s had an upward equity market — using equity-like will trail because one will not want to be short. He looked at it fundamentally as what kind of market will we experience over the next ten years, and it is impossible to predict. When the stock market is up sharply, like the last couple of years, the returns will look sort of mediocre, and he gathered that was what Mr. Bader and staff were grappling with. It is hard because there are so many different strategies, and it comes down to the focus and concentration in the different positions.

CHAIR SCHUBERT thanked the people from Crestline for the presentation. She called a scheduled break from 10:00 a.m. to 10:15 a.m.

16. Capital Guardian - International Equity

Three representatives from Capital Guardian joined the meeting to review the non-U.S. equity mandate: CHRIS RYDER, investment specialist, MICHAEL BOWMAN, relationship manager, and VINCE ORTEGA, client relationship associate. *[A copy of Capital Guardian's slide presentation is on file at the ARMB office.]*

MR. ORTEGA reported on the changes to the non-U.S. equity team over the last year. Philip Winston recently transitioned into a full manager role on the team as a result of Nilly Sikorski and Arthur Grumanski retiring in December 2010. He said the benefit of Capital's multiple portfolio manager system is that it allows the transitions to happen in a very seamless manner and with very little impact. He said nothing has changed in terms of their investment process, and the focus they created in the last couple of years is starting to pay dividends.

MR. RYDER stated that international equity markets have had a strong one-year period, with the MSCI EAFE Index returning 10.4%, much better than the three-year number that is still negative because of the market weakness in 2008. The ARMB portfolio was up over 14.5% for one year, and that outperformance has continued year to date in 2011 despite all the volatility in the markets, the uncertainty on the geopolitical level, and the natural disaster in Japan. Capital Guardian has been able to achieve positive relative returns for the portfolio over the longer-term as well.

Addressing the world outlook, MR. RYDER said the first quarter of this year was dominated by two big events: the earthquake and tsunami tragedy in Japan, with the subsequent uncertainty regarding the nuclear power plant; and the geopolitical risk that resurfaced in the Middle East and the impact to the ARMB portfolio related to energy prices. What is encouraging for the portfolio is that being underweight Japan was additive to the relative returns for the year-to-date period. On top of that, the stock selection in Japan, particularly owning some of the companies that are classically seen as more defensive in the Japanese market, was also additive, as was not owning Tokyo Electric Power (the company in charge of the nuclear plants). The other big story was that being overweight relative to the opportunity set in energy was also positive.

However, they were not quite as fortunate in avoiding all of the mine traps out there because one of the larger holdings in the portfolio is Cameco, the Canadian uranium producer. With the uncertainty that the nuclear situation in Japan created around the long-term growth prospects for nuclear, uranium prices were weaker during the quarter, and Cameco, as the world's largest producer of uranium, suffered as a consequence. One of the key tenets to how Capital invests is they have a three- to five-year investment horizon when looking at companies, and while there is still a lot of uncertainty around the short-term impact on nuclear build-out, the analysts remain constructive on Cameco because over the medium to long term there is still great pent-up demand for nuclear power. That is particularly true in some of the emerging markets, notably China, where over the next several years China is billed to manufacture around 27 new nuclear facilities. Capital believes that is still very much in the cards because of the great need in China for new sources of electricity as their economy grows very rapidly.

MR. RYDER said the other important feature is emerging markets. The ARMB gave Capital Guardian the ability to invest up to 10% of the portfolio in emerging markets. However, the importance of emerging markets to companies that are domiciled in the developed world is increasingly obvious. Capital has been very constructive for several years on the situation in emerging markets. Undoubtedly, the short term is clouded by concerns about inflation in emerging markets, India and China being two of the more obvious ones, but looking through that shorter-term uncertainty they can see that the long-term secular story for emerging markets is still a positive one. Every company in their portfolio has to have a strategy as to how they approach emerging markets.

MR. RYDER spent a few minutes talking about individual companies in the portfolio. He stressed that identifying companies that they think have superior growth prospects and that are attractively valued is how Capital builds the portfolio. They are aware of the country weightings and sector weightings, but that is not how they build the portfolio. The portfolio is currently focused on companies at the quality end of the spectrum, and these tend to be in market dominant positions or market leadership positions. These companies tend to have strong balance sheets and are not over-leveraged, and they tend to be companies that Capital thinks will be able to grow their market share over the coming three to five years. This is the overriding view of the portfolio managers as far as the global growth outlook goes.

It has been encouraging to see the rate of recovery in global markets and global economies. However, there is still a concern out there that many of the problems that caused the dislocation in 2008 have not yet been addressed, and in particular the issue of the level of indebtedness, be it at the state or federal government level in Europe or at the individual consumer level. The concern is that the environment that Capital envisions going forward may be one where global economic growth is not going to be as strong as historically it might have been. Within that slower-growth environment they believe the type of companies that are still going to do very well are those that can steal someone else's market share. Capital is focused on those sorts of companies to continue to add the type of returns that they have enjoyed over the past 18 months.

MR. RYDER described the sector positions in the non-U.S. developed markets portfolio. They are underweight financials, where they are focused on individual companies that they think have better than average growth prospects and are more attractively valued than others, because they have concerns that the financial sector is not going to earn the sort of returns in this coming decade that it has enjoyed in the past decade. HSBC avoided much of the worst of the situation in 2008; they addressed the issues that they had within their various operations very quickly, and for them the growth prospects are in Asia and in emerging markets. Over 10% of the portfolio is in the energy sector, but the companies tend to be in second-line energy related plays. There is a lot of uncertainty as to why crude oil prices are as high as they are, and the supply/demand equation would suggest a lower oil price. But the uncertainty in the Middle East has reintroduced a risk premium into the price of crude. That is tougher to analyze, and so Capital has tended to focus on energy plays that have a better secular growth story than just relying on the movement of crude prices.

The focus within the material sector is within infrastructure and the need, particularly in emerging markets, to build out infrastructure for all the new cities, and also in the developed world to build out the road system that has been under-invested in. Gold has been seen by some managers as a bit of a hedge against inflation, and Capital has some exposure to some of the major gold producers. They have been taking some money off the table in consumer staples, which is classically seen as more defensive parts of the market, and have been repositioning the portfolio toward a more pro-cyclical focus, in line with the idea that they are optimistically encouraged by the recovery over the last 18 months. Information technology is the largest single relative overweight within the portfolio, at just shy of 15%. They own a variety of companies in information technology and are not slanted toward one segment.

MR. RYDER reviewed diversification of the portfolio by country. It is still early days on Japan, and the big uncertainty is not the actual physical damage but the lack of understanding about the availability of power supply and if there will continue to be rolling blackouts. It might not impact a company in the Capital portfolio, but it could impact somebody along the supply chain that supplies into, or is a customer of, one of the companies that Capital owns. In addition, there are the long-term demographic headwinds that Japan faces. Emerging markets are 8.7% of the portfolio and that tends to be focused on globally competitive companies that happen to be domiciled in emerging markets, companies like Samsung. Capital recognizes that there are some headwinds nearer term with regards to inflation, and also concerns about valuations, so they are being quite selective about the opportunities they are seizing within the emerging markets space.

MR. RYDER said Capital took a trip to India recently. At the beginning of the year India was down 20%-plus because inflation is running just sub-10% and the country is on its eighth rate increase. The trip was to see if there were opportunities emerging from the Indian economy, because Capital is very constructive on the potential growth in India on the medium to long term. Just as important is understanding the inflationary pressures on Indian companies that are competing with companies in the developed world.

MR. BADER asked what Capital thought was causing 10% inflation in a country and if they saw any parallels in India with the United States or European countries. MR. RYDER said a key factor in the research trip was to try to understand what was behind the pickup in inflation in India. It is basically two things: certain government policies desired to enhance the rural voter, so they implemented a quasi-minimum wage; and the systemic inflation because India has under-invested in their roads and transportation systems (compared to China that has invested much more on building its infrastructure), so the Indian economy is constantly reaching bottlenecks and inflation is created as a result of that. There are some encouraging signs that the government is beginning to address those bottlenecks in the economy and that there might be some easing of those bottlenecks. On its trip, Capital spoke to a bank that reported a turnover of 70% of their teller staff per annum because tellers are getting job offers from other banks. That sort of uncertainty and wage pressure inflation will be very hard for Indian companies to cope with.

Speaking of China and India, MR. RYDER said that China is a centrally controlled economy and has been able to implement policies that have largely avoided inflationary bottlenecks like in India. However, the big concern with China is if they get that policy wrong then they do not have the totally free market economy to sort it out. It is a higher-risk, higher-reward situation for China. But one of the underlying tenets that Capital feels is that the Indian government has come to grips with the fact that they have a very large neighbor that they are going to be competing with over the next ten to twenty years in terms of resources, growth and regional strength — and they have to get their act together.

DR. MITCHELL observed that Capital Guardian has managed this portfolio for about ten years and has beaten the benchmark by 16 basis points. He asked if that was what the ARM Board could expect over the next ten years. Further, one of the challenges of the multiple manager portfolio system that Capital employs is that the client does not really know which investment manager is doing well and which is doing poorly. He asked which investment manager or researcher added value and which detracted value.

MR. RYDER replied that Capital had hoped to add more value over the lifetime of the ARMB portfolio than it has, given that it was a substantial period. But to be fair, markets over the last ten years have been somewhat unique in the volatility that has been created. He recalled that when he talked to the Board in 2009 Capital Guardian had been through a period of pretty tough performance; that tough performance stays with them through the lifetime of the account. They have managed to work through that and make some changes internally to sharpen the focus within the research and portfolio management teams. They are encouraged by the results that have transpired subsequently, and the changes fed through to the positive lifetime returns. They are always looking to do things better. Hopefully, when they report in ten years time the absolute return numbers will be better than 6% for international equity markets. Other accounts that have been with Capital since the inception of the fund in the late 1970s have enjoyed 150-odd basis points of outperformance. While they do not give targets as to what they expect, it certainly is something that they think is still achievable within international markets.

Regarding the individual portfolio managers, MR. RYDER said he recognized the client's frustration in that Capital does not disclose the individual performance of managers. Internally, it is a very open system, and everybody knows what everybody else is doing, both in terms of how they position their portfolio and their relative returns. Capital wants to make sure that the reasons why portfolio managers are doing what they are doing is because they want to make the best choice of the top ideas that they have as investors. Capital does not want the investment managers to succumb to feeling pressured to explain a bad year to the clients and becoming a quasi-indexer. That would destroy more value for the client than it would necessarily add in terms of the ability to see the individual manager results. He said the people would not be on the investment team if they had not gotten excellent long-term results. Capital is very much aware of each manager's investment style and how they are going to do in different types of markets, and they calibrate that to the benefit of the team as a whole. Part of Capital's process of refocusing for the portfolio management team is that some people are no longer with the firm.

MR. WILSON asked if the roughly 9% in emerging markets has been consistent over the 10-year period and how that has impacted the portfolio's relative performance, because emerging markets have done a lot better over the last ten years and that is not in the benchmark. MR. RYDER agreed that investing in emerging markets has been additive to the returns. He said the long-term average in emerging markets has been around 7%; the current 8.7% is toward the upper end, and they got close to 10% in the middle of last year. He said it comes back to individual companies rather than necessarily looking at an emerging market exposure. And, increasingly, the lines between emerging markets and developed markets are blurring. For example, Samsung is really more dependent on how handset sales in the U.S. are doing than it is with what is going on with the Korean market.

MR. WILSON asked if the ARMB should be using a different benchmark for Capital's non-U.S. equity portfolio, perhaps the All Country World ex-U.S Index. MR. RYDER said the All Country ex-U.S. benchmark has a greater degree of flexibility in emerging markets, which is currently around 24% of the index. Using that index relative to this portfolio would be asking Capital to fight with one hand tied behind their back. He reminded everyone that the ARMB has a separate emerging markets account with Capital, so it gets a greater degree of emerging market exposure there.

MR. PIHL inquired how much of the recent return has been currency driven and where Capital sees the dollar going. MR. RYDER said Capital has a team of currency experts that bring things to the attention of individual portfolio managers and analysts. Capital's approach is to look at the currency impact on one company versus another company, because a company may have facilities in different countries and wages to pay there or have debt denominated in other currencies. While Capital has people who forecast currencies on a more macro-economic perspective, that is not something that is necessarily reflected in the portfolio, other than at the individual company level. On Mr. Pihl's second question, MR. RYDER said it is difficult to say what will happen short term, but given the weakness in the dollar lately, and the U.S. not having fully addressed the debt situation, there is a feeling that the dollar could continue to be a weaker currency.

CHAIR SCHUBERT thanked the gentlemen from Capital for the presentation.

17. McKinley Capital Management - International Equity

MR. BADER introduced ALEX SLIVKA, director of institutional marketing, and ROB

GILLAM, senior vice president and chief investment officer. *[A copy of McKinley's presentation booklet is on file at the ARMB office.]*

MR. SLIVKA informed the Board that in the two-year period since they last appeared at a meeting they met with ARMB staff five times to keep them up to speed with what was going on in what were turbulent times. McKinley has maintained the organization and added to staff and resources. They have introduced a specific emerging market only growth portfolio for clients that are looking for that type of growth exposure.

MR. GILLAM thanked the Board for its patience when McKinley's factors were out of favor and said their clients were being rewarded with some mean reversion coming back to the market. He said they had not changed anything about what they believe or their investment style of being dominantly quantitative and focused on the price momentum and the earnings acceleration components. They spent a lot of time, particularly with their staff in New York, on analyzing the analyst community and trying to ensure earnings surprise.

MR. GILLAM presented a graph of non-U.S. market phase performance for the period October 1995 to October 2010 to explain the history of the McKinley non-U.S. growth fund, why they had a difficult period, and why they believe in a long period of positive mean reversion that started last year. He stated that the growth phase we are in now is both the longest and the best for McKinley. The reason is that economic growth is relatively hard to come by; it is positive but not great. Companies have already done all the downsizing and streamlining that they can do, and now they have lots of cash, but they actually have to grow their revenues. That is difficult to do. The market as a whole in the non-U.S. space, and even in the U.S. space, has not-so-good earnings-related characteristics. Earnings surprise levels come down, earnings acceleration and growth come down, and earnings revisions get lowered. McKinley's portfolios have a high degree of all those things, so they own a scarce commodity in this phase of the market cycle. Part of the reason they do so well in this phase is because of that earnings driver; people recognize they are underweight growth and they relocate toward those companies that are growing, resulting in a price-chasing effect. That is the momentum component of what McKinley does. McKinley tends to do the best when both of the dominant risk exposures that they have — price momentum and earnings acceleration — are in favor. Returns tend to be lumpy with a few weeks of activity centered around earnings announcement season and then a couple of months of quiet.

MR. GILLAM stated that if this were a baseball game it would be in about the second or third inning of the mean reversion, with still a lot of upside to come. What has been comforting in the last three not-so-comforting years is that the momentum and growth risk exposures that McKinley has in all its portfolios have followed their historical patterns.

MR. GILLAM reported that toward the end of last year the portfolio had a lot of good stock selection on the emerging markets side of the equation, and that was dominantly in Asia (Taiwan and Korea). Even more exciting is that even in an environment where earnings growth is somewhat hard to come by as a company, the ARMB portfolio has a whole lot more of it than the average index-level stock. That relative spread has been growing, and that is another indication of McKinley being rewarded for owning something that is scarce.

MR. GILLAM said that typical at this phase, which is not that dissimilar to the latter stages of 1998, they tend to see companies in the later stage cyclical area exhibiting the characteristics that McKinley is looking for. That means less consumer discretionary, less emerging markets, less smaller cap companies — and the antithesis — more materials, more energy, more developed stocks, and more larger stocks. The portfolio has more of things that people need or stuff that is productivity enhancing, for example, technology and gadgets.

MR. BADER mentioned that the ARMB has individual mandates with McKinley for international equity and domestic large cap growth, totaling about $400 million. He said that would be more than half of McKinley's large cap equity. He asked if the domestic part of the global portfolio is a mirror of what is in the large cap growth.

MR. GILLAM explained that the process is exactly the same, so the characteristics of the large cap holdings in global are the same as the characteristics in the ARMB portfolio. For example, McKinley is dominantly U.S. technology on the U.S. side of global and has almost no non-U.S. technology. It is exactly the opposite in consumer staples and in materials. So there is not a perfect crossover between the U.S. holdings of large cap and the U.S. holdings on the global side. He added that because the products have the same characteristics McKinley has lost a lot of assets in U.S. large cap over the last four or five years as many clients that had large cap and international mandates migrated to the global equity product.

MR. TRIVETTE inquired about what the people in McKinley's New York office are doing. MR. GILLAM said they opened the office in 2007 to underscore the qualitative component of their process that analyzes the analyst community. Another benefit has been meeting with clients that are not traveling to Alaska for budgetary reasons.

MR. PIHL recalled that McKinley had very good performance for the ARMB to start with, then they had a tough period, and more recently the performance has been better. MR. GILLAM stated that their three-year and five-year return numbers encompass 2009, which was a horrendous year to be both growth and momentum-oriented. In the 90-year period that McKinley has studied, every 12 years or so there has been a five or six standard deviation event in momentum — that was off the bottom in March 2009. The good news is that those same studies also indicated that the very best risk exposure, despite those moves, is momentum. It has always more than made up for those losses, however painful. McKinley believes that mean reversion has started and will continue over the life of the growth phase of the market cycle, which is a fairly long period.

CHAIR SCHUBERT thanked the gentlemen from McKinley for the presentation.

18. Barrow Hanley Mewhinney & Strauss LLC - Small Cap Equity

MR. BADER said Barrow Hanley has been a large cap value equity manager for the ARMB for about four years and has been in the top 17% of investment managers in that mandate during that period. He said there was an action item later in the agenda related to considering Barrow Hanley's small cap value strategy, which had been closed and opened up again. He introduced portfolio manager JIM McCLURE.

[A copy of the Barrow Hanley Mewhinney & Strauss presentation slides is on file at the ARMB office.]

MR. McCLURE began with an overview of the Dallas-based organization, saying all their clients are institutions, and they are subadvisors of substantial assets in other funds. Barrow Hanley does value-oriented investment management in large cap equity, mid cap, small cap, and fixed income, and it is all done exactly the same way with a compact group of people sitting around the table sharing information. The firm has four generations of professionals, and it is well positioned to do whatever is necessary over whatever time period to make a transition. He explained that Barrow Hanley opened briefly to new accounts a few months ago because one of their largest accounts reduced its heavy overweighting.

MR. McCLURE stated that over the course of the most recent market cycle the fixed income people started to make an active contribution to the equity business. With the growth of credit derivatives, Barrow Hanley noticed the evidence of that beginning to show up earlier in credit spreads than it did in the stock market, particularly in small cap stocks where there might be a perceived threat or a strain. Any kind of information they can get like that is certainly useful to them.

MR. McCLURE said that he and his partner, John Harloe, do all their own numbers on every stock they own. They both learned the business from the same man at the same time and have worked together for the better part of 40 years.

MR. McCLURE listed the characteristics they look for in the small cap value equity strategy:

- Easily 95% of their effort is expended on fundamental research first hand. They are finding companies that meet criteria, and they are learning in the process. It often takes them years from the point they began the research process on an individual company to the point where they own it. More typical than not, they begin the process and never own the stock.

- They are looking for companies that have a specific business model, that has a repeatable and sustainable level of normalized profitability and cash generation, and that the free cash flow generation is relatively assured under normal conditions. They use those two criteria to set up the whole process.
- They are only looking for companies in what they call a low-expectations universe, deflated companies that have a great business model at the core.
- If they are still satisfied that what they thought fundamentally is still the case, then they take a large position in the stock and more forward for a normalization process. The heart of the whole thing is a stock that has a large gap between the market price on a current basis and what it is probably worth over the long run if it can return to normal levels of profitability and normal levels of valuation. They are not asking the company to do anything that it has not done before. They really appreciate companies that can go beyond resolving the difficulties and returning to normal to produce something extraordinary for shareholders in the process. That usually means a recapitalization or a restructuring that makes the company even more profitable than it has been in the past.
- When they do it properly, they have a simultaneous expansion of fundamentals and valuation. But because the difficulties that created the opportunity are not trivial, the process of normalization takes years. This permits a very compact portfolio with low turnover, and they only have to find five, six or seven new ideas a year to take care of a 35 to 40-stock portfolio that turns over 20%-25% a year.
- The discriminator is cash earnings and free cash flow, and that is securities analysis one stock at a time. It is good old-fashioned shoe leather, getting to know the people who run the company and making investment decisions based upon what they learn.

MR. McCLURE described the steps in the construction process for the small cap value portfolio. While the portfolio has 35-40 stocks, there is a universe of about 150 stocks that they rank every day on what they believe they can make on the stock on a forward three-year basis in terms of relative performance. If money comes in or the stock market goes down and they have to make some decisions, going to that list that ranks how much money they can make on each stock compared to other stocks on the list is what helps them optimize the portfolio over the long run. He and Mr. Harloe have cannibalized the portfolio many times in the past, selling stocks they really liked and buying companies they liked even more.

MR. McCLURE said the process really comes down to experience, doing something that works and doing it for a long time. He said the sector exposure of the small cap value portfolio is probably more different now than it has been in years, and he anticipated that it would move to a more normal structure. Barrow Hanley does not do any top-down work. They did not decide they did not want any financials going into the market drop; they just could not find any that had depressed valuations and depressed fundamentals, and so they did not own financials. There are a lot of financial companies around with depressed valuations and depressed fundamentals now, and they are starting to build that section of the portfolio, although not as fast as they thought they would.

Turning to the small cap performance, MR. McCLURE reported that Barrow Hanley has to continue to do what they have done over many years and perhaps even improve on the numbers. He said it would be naive to not expect to have some bumpy periods in the future, but it will not make the slightest bit of difference to producing superior returns over the very long run. In fact, periods of disfavor are rife with opportunity to take advantage of that and to buy stocks they might not otherwise have a chance to buy.

DR. MITCHELL asked how much of the small cap value record was Barrow Hanley and how much of it was McClure and Harloe, and what happens to the product if McClure and/or Harloe should decide to do something else.

MR. McCLURE acknowledged that it was in large part McClure and Harloe because they are the ones who produce the record. They receive some support from the Barrow Hanley analyst staff, but those people do not produce most of the value-added. McClure and Harloe want the small cap value product, which has a good reputation and a good long-term record, to live on beyond them. They have promised the people around them that they will hire a young person this year who has no experience but has the right personality, with the idea that it will take at least ten years to set the stage. Probably three or four years after they hire someone, they will let that person help them hire a junior person to work with. McClure and Harloe will leave the process the way they created it: a combination of a couple of guys, with some help from a larger organization, that goes on and hopefully does what they have done.

CHAIR SCHUBERT thanked Mr. McClure for his presentation. She called a break for lunch at 11:37 a.m. The meeting reconvened at 1:15 p.m.

19. Overview of Tru-View

MR. BADER stated that the Board had previously approved the acquisition of a risk management tool. Staff subscribed to Tru-View, a tool offered by State Street, the ARMB's custodian, and that other notable institutional funds subscribe to. The Tru-View will provide staff with more information about risk in the retirement fund portfolio. At this meeting staff intended to acquaint the Board with some of the basic features of the software. He introduced state investment officer JIE SHAO, whom he had designated for the implementation of Tru-View.

MS. SHAO had a series of slides to supplement her presentation, and these are on file at the ARMB office.

MS. SHAO stated that at the total fund level staff wants to understand the forces that drive performance. There can be positive forces that increase the returns, and there can also be negative forces that will increase the risk of the total fund and cause a significant amount of loss. Return, standard deviation, funding status and the liquidity needs are four considerations that staff has been measuring and monitoring. In addition to these, staff would also like to understand the impact on the retirement fund if the U.S. inflation goes up to 3%, 5% or even higher. Would the fund experience significant loss of value, what would be the value at risk, and where would these losses come from? Tru-View was acquired to help staff learn more about the total fund.

MS. SHAO explained the two characteristics of Tru-View: it is a position-based risk management tool, and it is a value-at-risk based system. Value at risk, also called VaR, is used to estimate the probability of portfolio loss based on historical price trends and volatilities.

MS. SHAO presented some graphics examples of outputs provided by Tru-View. She explained how to interpret the output from an analysis of the capital versus risk allocations for the Board's investment policy asset classes. She pointed out that international equity and U.S. equity combined account for about 55% of the total capital allocation, but their risk contributes 71% of the retirement fund's total risk. Tru-View can also be used to further look at risk allocations within one asset class, such as the 11 portfolios within international equity. Staff can also drill down to the sector level or even position level within each one of those 11 portfolios.

MS. SHAO described how Tru-View provides analysis of fund risk under different market regimes by performing stress tests under historical events, such as the 9/11 attack. Staff can also perform scenario tests under hypothetical market conditions, such as if the S&P 500 drops 20%. Tru-View provides prepackaged stress tests to run the retirement fund against, and staff can also define their own stress tests. She showed a summary of stress and scenario test results on the total retirement fund, and highlighted that if the S&P 500 were to drop 20% the total fund has a 5% probability of losing about $2 billion out of a $15.8 billion total fund value. Staff is able to drill down further and find out where those losses might come from. Once they understand the sources of fund risk, then they can try to optimize the fund by changing fund allocations from either one asset class to another or from one portfolio to another, and then run the simulation of the reallocated fund to check whether such a reallocation makes sense.

In summary, MS. SHAO said the goal is to monitor and measure the fund dynamics, to test the fund under market regimes, and to optimize asset allocation at the implementation level in order to achieve more robust investment decisions.

MR. BADER stated that what comes out of the tool depends on assumptions that are put into the system. Investments that are priced daily have good data, but proxies have to be put in for investments that are priced less frequently, like private equity and real estate. He said Ms. Shao has been working with other staff on what are suitable proxies. As they go forward, staff hopes to be able to answer certain questions that the Board may want to know.

MR. O'LEARY said the investment world has really changed, and while the Board might not use a tool like Tru-View to do things day to day, it is terrific to have a tool that enables the Board and staff to better understand the risks associated with all the important policy decisions that the Board makes. The "what if" questions will now be easier to address.

MS. SHAO and MR. BADER answered several questions from trustees about the specific capabilities of Tru-View.

Responding to MR. PIHL, MR. BADER stressed that he intended to follow the strategic asset allocation provided by the Board and not use Tru-View to tactically move investments between the bands. He added that when cash comes into the retirement fund and investment staff has a choice of where to place it, Tru-View might prove helpful in that regard. But initially staff wants to look at the structure of the portfolio. It has been mentioned at previous meetings that the investment managers should be equal-weighted; staff can now look historically to see what would have happened over time if the managers had been equally weighted. Staff's intent is to give the Board a different prism through which to look at risk in the portfolio; today, risk is looked at only through standard deviation. The question of value at risk is, what are we willing to accept as a dollar loss in a year?

MR. JOHNSON asked if staff contemplated presenting some Tru-View outputs when they make future recommendations to the Board. MR. BADER said it was entirely possible.

20. Investment Actions

20(a). Small Cap Mandate - Hire Decision

MR. BADER reviewed the action memorandum in the meeting packet *[on file at the ARMB office]*. He said the ARMB's domestic small cap equity managers tend to be growthier than the Russell 2000 Index as a whole. For the past five years the median small cap manager has exceeded the Russell 2000 Value Index by 2.13% on an annualized basis. Over the same period the Barrow Hanley Mewhinney & Strauss small cap value fund has outperformed the Russell 2000 Value Index by 7.36%. This is one of the reasons to go with active management in the small cap equity space. Barrow Hanley also has a proven record of success with their large cap value strategy, and staff believes they will be able to continue that success with their small cap fund, if the Board elected to hire them.

MR. BADER reported that he and Ryan Bigelow visited Barrow Hanley and met with the investment team, talked to their compliance people, the back office people, the trading desk, and so on. They are convinced that Barrow Hanley will continue to do as good a job for the ARMB in the small cap space as they have in the domestic large cap equity space. The small cap product is only open for a short time, as Mr. McClure indicated in his presentation, and they would not be willing to accept more than $100 million at this time.

MR. TRIVETTE moved that the Alaska Retirement Management Board select Barrow Hanley Mewhinney & Strauss to invest up to $100 million in a domestic small cap value portfolio, and direct staff to enter into an investment contract with Barrow Hanley Mewhinney & Strauss, subject to successful contract and fee negotiations. Seconded by MR. PIHL.

MR. WILLIAMS inquired if staff envisioned the allocation to this manager coming from other active managers or drawing down on the passive index side. MR. BADER said his intent was to take the funding primarily from the small cap value index fund, which has about $200 million in it at this time. Staff may draw down from the other active managers as well.

MR. O'LEARY stated that the active component of the domestic small cap equity has done better than the index, and the passive component, given some of the delays in getting it implemented, has been used to balance the growth bias among the active managers and actually has detracted from returns as opposed to being neutral from a return perspective.

The motion passed unanimously, with all nine trustees present.

20(b). Small Cap Value Search

MR. BADER reviewed the action memorandum in the meeting packet *[on file at the ARMB office]*. He requested authority from the Board to engage Callan Associates to do a small cap value manager search. Barrow Hanley would be one new manager — and staff wanted the Board to hear from them and take action while their product was open for a brief period — but staff believes the portfolio needs additional small cap value managers to round out the portfolio. He said staff had previously informed the Board that this request would be coming once the micro cap managers had been hired; those managers are now in place and successfully contributing to the portfolio.

MR. TRIVETTE moved that the ARMB direct Callan Associates and staff to conduct a search for one or more domestic small cap value managers. MS. HARBO seconded.

The motion carried unanimously, 9-0.

21. Are Alternatives Like Stocks or Like Bonds?

[A copy of the research paper entitled "A Simple Stock-Bond Categorization of Alternative Investments" by Jennings and the slides used in this presentation are on file at the ARMB office.]

DR. JENNINGS said he looked into whether alternative investments were a stock or a bond because the question had come up at meetings of several organizations with which he is involved. There seemed to be some rules of thumb, such as real estate is seen as a hybrid of stocks and bonds, or high yield bonds have an equity like component, and he wanted to provide a science-based explanation that was a good answer to that question. People in board rooms hear that everything boils down to the two categories of stocks and bonds, and it is a reasonable heuristic for people to have. There is a tendency for people to use categories when thinking about investments; for example, the "value to growth" style categories are a useful way to reduce a lot of complex things into two buckets. That kind of hierarchical thinking helps everyone approach portfolios.

DR. JENNINGS said there was another paper in sort of the same camp where people from Morgan Stanley looked at how a portfolio as a whole was exposed to the broad U.S. equity market. Their contention was that a lot of the more exotic investments that institutional investors have been adding to portfolios really have not moved the needle that much on the broad exposure, that most investors have a 0.6 to 0.7 exposure to the broad equity market.

DR. JENNINGS stated that the idea of his paper was to develop a tool by saying that if investors are going to fund a new allocation, where does the money come from. There are probably better ways of categorizing a new allocation as a stock or a bond, but at the first level, where the efficient portfolio math says to take the funds from is a good heuristic for whether to categorize the new allocation as a stock or a bond.

DR. JENNINGS said that what ends up mattering is the risk of the new asset and how it is related to stocks and bonds. The surprises in the mathematics of the research are the amount of money invested and the returns of the asset, and those things end up kind of cancelling out. A portfolio's own risk profile does not matter: two people could have very different views of the riskiness of what they want the ultimate portfolio to be, but they would come to the same conclusion that they ought to categorize a new asset as a stock or a bond.

The major results of the research were as follows:

- Stocks as a broad category mapped on stocks.
- Bonds mapped on bonds.
- Private equity, as expected, ends up as a stock.
- Hedge funds and core real estate are generally bond-like. Core real estate is just barely into the bond region. The inputs he used for hedge funds could be subject to some debate, so maybe not one of the stronger results.

Some of the surprises were:

- Farmland ended up categorized as a bond (92% bonds and 8% stocks).
- People think of hedge funds as a hybrid, hoping for something approaching stock-like returns with bond-like risk. Yet, on the whole, hedge funds came out as more bond-like.
- Micro caps, which the Board recently made an allocation to, are "200% stocks," meaning to put a dollar into micro caps take two dollars out of stocks because micro caps are so risky. Also have a dollar in bonds. The calibration of the different stocks is interesting; the hope is for a return premium from that and that active management will add value in the micro cap space.
- Frontier markets, countries that are beyond the mainline emerging markets, have some interesting diversification characteristics and are hybrids of stocks and bonds. The same is true of international small cap stocks (also hybrids).

DR. JENNINGS said he used the January data that staff provided for the asset allocation weights in the ARMB portfolio. In the bond portfolio, domestic fixed income, emerging market debt, high-yield debt, international fixed income, TIPS, and cash all act like debt. Of interest is that many people would characterize high-yield debt as something in the middle between stocks and bonds, and they came out surprisingly bond-like.

There were no surprises on the stock side of the ARMB portfolio, other than the international small cap equity being a 50/50 stock/bond hybrid, so some interesting diversification aspects there. In the alternatives portfolio, private equity is 130% stock-like, so it makes sense to see that as a riskier version of equities. Based on the inputs he used, hedge funds were 78% bond-like. Energy, which the ARMB has two commitments to, was a bit difficult to categorize because there were multiple flavors of energy in the paper. The ARMB approach is closest to the one he ended up categorizing as 89% bond-like. Timber is something of a hybrid (62% bond-like).

DR. JENNINGS said that real estate can be thought of as a spectrum from the most conservative core real estate (68% bond-like and could be thought of as a hybrid), up through value-added (hybrid, more equity like) to opportunistic (hybrid, 62% like a stock). REITs were 62% like a stock, which makes sense because they are collecting rents, etc. but also are priced each day in the equity market.

DR. JENNINGS explained that he took the ARMB's portfolio allocation at the end of January 2011 and applied it to the percentages he just described. The result was that the portfolio is perhaps more conservative than it would be if viewed at the high level asset allocation. For example, the asset allocation that was discussed earlier and that the Board approved would suggest an 80% stocks/20% bonds mix. However, counted his way based on his assumptions, the ARMB portfolio is 70% stock-like and 30% bond-like. It may make some sense to end up at the 70%/30%, if that were the fundamental underlying portfolio, and the Board gradually added new asset classes and was trying to maintain the same risk profile. But it is not necessarily something that is apparent when just looking at the asset mix the Board reviewed earlier.

DR. JENNINGS stressed that his whole approach was obviously a simplification, and there are extremely valid reasons to put a bond substitute or stock substitute in, and have hybrids in the middle. There are diversification elements that are brought to the table with the new asset classes that are useful. But it is nice to distill the portfolio down to the underlying fundamentals. The most useful and surprising information to him was that returns end up not mattering, that it is really more about the relationship of the new asset to the existing simple stocks and bonds portfolio.

CHAIR SCHUBERT thanked Dr. Jennings for his presentation.

UNFINISHED BUSINESS

1. Disclosure Reports

MS. HALL stated that the disclosure memo listing financial disclosures submitted since the last meeting was included in the packet, and there was nothing unusual to report to the Board.

2. Meeting Schedule

MS. HALL said the meeting schedule in the packet was updated for everything except the committee meetings this summer, which have yet to be scheduled.

3. Legal Report

MR. JOHNSON reported that as of yesterday there had been no definitive regulation announced on the proposal that board members be classified as municipal advisors. However, the group that is considering those regulations is meeting in Nashville, and two days ago they adopted as definitive some regulations relating to pay-for-play, so it is possible that regulations on the subject of municipal advisors will come out. Hopefully, the regulations will fit with what the statute says and not apply to the ARM Board.

MR. JOHNSON stated that he has been working with ARMB staff on a couple of matters, but there have not been a great number of new deals that involve legal lately. He also informed the Board that he had separately amicably from his former firm and had created a new law firm of Robert M. Johnson.

NEW BUSINESS - None.

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD - None.

PUBLIC/MEMBER COMMENTS - None.

INVESTMENT ADVISORY COUNCIL COMMENTS

DR. MITCHELL said that many people probably agreed with Jim McClure when he said it was almost like torture to sit for two days and hear a lot of presentations. That got him thinking about the quality of presentations at the ARMB meetings. To him, a good investment presentation has to have three characteristics: clarity, believability, and something new. Clarity means that if you find a presentation to be incomprehensible or murky, it is very easy for a non-professional to think that it must be them. It is not; it is the presenter. So look for clarity in presentations. Regarding believability, no one is going to come before the Board and say their firm or fund is a fourth quartile fund and will always be a fourth quartile fund. So when presenters say they are in the first quartile and always will be in the first quartile, trustees have to consider if they believe them and if they would give their own money to them. Lastly, all the presentation material was distributed in the meeting packet beforehand so people could read it. So if the presentation does not add anything to what people already have in written form, what is the purpose of the presentation? — unless the presenter is humorous, in which case there is some added value there. He looks to a presenter to add either further explanation or something new to the written presentation.

DR. MITCHELL stated that with the characteristics of clarity, believability and something new in mind, he graded the eight outside presenters who came before the Board in the past two days. It came to one A, one A-, two Bs, one B-, two C+, and one C-, which is more or less something between a B- and a B.

TRUSTEE COMMENTS

MR. TRIVETTE said that Mr. Hanna has done an excellent job of reporting on private equity to the Board for years. Mr. Hanna's slides and answers to questions are at the top of where it needs to be. He said he would give Barrow Hanley an A and also give Mr. Bader an A for making sure the ARMB had a chance to get in the door with Barrow Hanley. He gave Mr. Puckett an A because it was his working with Buck Consultants that got the information out on the early retiree reinsurance program to capture some federal money for the retirement funds.

MS. ERCHINGER gave Jie Shao an A for an excellent report that was not only believable but easy to understand and something new. She added Mr. Bader under that umbrella as well.

FUTURE AGENDA ITEMS - None.

ADJOURNMENT

There being no objection and no further business to come before the board, the meeting adjourned at 2:17 p.m. on April 29, 2011, on a motion made by MS. HARBO and seconded by MR. RICHARDS.

Chair of the Board of Trustees
Alaska Retirement Management Board

ATTEST:

Gayle Harbo

Corporate Secretary

Note: An outside contractor tape-recorded the meeting and prepared the summary minutes. For in-depth discussion and more presentation details, please refer to the recording of the meeting and presentation materials on file at the ARMB office.

Confidential Office Services
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