State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
MEETING

Location
Alaska State Museum
Lecture Hall
395 Whittier Street
Juneau, Alaska

MINUTES OF
September 19 - 20, 2019

Thursday, September 19, 2019

CALL TO ORDER

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

ROLL CALL

Nine ARMB trustees were present at roll call to form a quorum.

Board Members Present
Robert Johnson, *Chair*
Tom Brice, *Vice-Chair*
Gayle Harbo, *Secretary*
Lorne Bretz
Allen Hippler
Commissioner Bruce Tangeman
Commissioner Kelly Tshibaka (telephonic)
Norman West
Bob Williams

Board Members Absent
None

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

Department of Revenue Staff Present
Bob Mitchell, Chief Investment Officer
Scott Jones, State Comptroller
Pamela Leary, Director, Treasury Division
Zachary Hanna, Chief Investment Officer
Shane Carson, State Investment Officer
Stephanie Alexander, Board Liaison
Steve Sikes
Michelle Prebula
Kayla Wisner
Sean Howard
Nick Orr
Casey Colton
Hunter Romberg
Victor Djajalie
Kekama Tuiofu
Emily Howard
Grant Ficek

Department of Administration Staff Present
Kevin Worley, Chief Financial Officer, DRB
Ajay Desai, Director, DRB
Kathy Lea, Chief Pension Officer

ARMB Legal Counsel
Stuart Goering, Department of Law, Assistant Attorney General

Consultants, Invited Participants, and Others Present
Paul Erlendson, Callan Associates, Inc.
Steve Center, Callan Associates, Inc.
Avery Robinson, Callan Associates, Inc.
David Kershner, Buck
Kimm Nasser-Fenn, Linea Solutions
Bryce Haws, Linea Solutions
Paul Sauer, Neuberger Berman
Doug Kramer, Neuberger Berman
Hakan Kaya, Neuberger Berman
Malcolm King, State Street Global Services
William Collins, State Street Global Services
Tracy Wright, State Street Global Services

Members of the Public
Nils Andreassen, AML Executive Director
Cindy Spanyers, APEA

PUBLIC MEETING NOTICE

Board Liaison STEPHANIE ALEXANDER confirmed that public meeting notice requirements had been met.

APPROVAL OF AGENDA

MR. BOB MITCHELL suggested changing the agenda to have Callan present before staff presents recommendations regarding international manager structure. MS. ALEXANDER distributed a revised agenda reflecting those changes.

CHAIR JOHNSON also proposed adding the adoption of the ARM Board budget under New Business.

With those changes, MR. BRICE moved to approve the agenda. MR. WEST seconded the motion.

The amended agenda was adopted.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS AND APPEARANCES

None.

APPROVAL OF MINUTES: June 20 - 21, 2019

MRS. HARBO moved to approve the minutes of the June 20 - 21, 2019 meeting of the ARM Board. MR. WEST seconded the motion.

The minutes were approved.

STAFF REPORTS

1. RETIREMENT & BENEFITS DIVISION REPORT

A. Buck Consulting Invoices

MR. WORLEY directed Board members to the summary of monthly billings for the actuarial consultant, Buck, for FY 2019.

B. Membership Statistics

MR. WORLEY reported on retirement system membership through fiscal year 2019, noting that there was a net increase in active members.

C. DRB Update/Legislation Summary

MR. WORLEY said a short legislative update would be included in the fund financial report, and that they had received the additional state contributions for PERS, TRS, and JRS.

D. Modernization Update

DIRECTOR AJAY DESAI invited representatives from Linea Solutions to assist in today's update on the IT modernization project, noting that such a huge project requires expertise from a project management firm specializing in such work. He introduced KIMM NASSER-FENN and BRYCE HAWS from Linea Solutions.

MS. NASSER-FENN, Linea's engagement manager on this project, said that they focus on mitigating risks and managing issues on projects that take years. She noted that this isn't just a system implementation; it will change the way DRB does its work to make it more efficient and effective for the members and for the employers. She said that they will do a verification along the way to make sure that they are building the right product and building the product right. They will also make sure that DRB manages and improves its processes to take advantage of the system automation, and will provide project management oversight, making sure the project uses standard techniques, stays within budget and on schedule, and meets the requirements.

MS. NASSER-FENN said they started in April, compiling a list of over 1,800 technical and functional requirements that formed the basis for the RFP. Proposals are due a week after this meeting, and Linea will assist in the evaluation and then the clarification period with the selected vendor. The implementation period, starting with design, is expected to take 36 to 42 months. Linea will help with testing the software and later with training users.

BRYCE HAWS discussed the background of Linea Solutions. Linea is a consultant, in business for 20 years, during which they have worked with 46 different pension and benefit funds in the U.S. and Canada. For statewide funds, these projects only come along once every 20 or 30 years, and they normally don't have the expertise in-house to handle it, so they hire consultants who have experience. MR. HAWS said that Linea has worked with some very small funds and others very large, and each fund has its unique set of problems.

CHAIR JOHNSON asked whether they anticipated any problems with downtime in services to beneficiaries; MS. NASSER-FENN answered no, and said they do transition management to ensure that there is no break in service.

MR. WILLIAMS asked what is the biggest value add that Linea brings to this process, or what are some challenges that would be greater without their involvement? MS. NASSER-FENN replied that those over 1,800 requirements form a requirements traceability matrix that they use for quality assurance. During testing phases, the go/no go criteria are based on those requirements, and at the end of the project, Linea has to be able to say that they met all of those requirements. She said that they consider themselves Sherpas in these projects, leading people up a mountain that the average DRB employee would probably only venture once in their career, and doing it as efficiently and effectively as possible, with the least amount of risk. MR. HAWS added a couple of examples of funds that undertook their own projects and had expensive failures; a consultant should be able to help avoid that.

COMMISSIONER TANGEMAN asked if this system is related to myAlaska; DIRECTOR DESAI answered that myAlaska is a completely different system. The system being modernized is specific to the benefit population, and is currently about 30 years old and doesn't do anything besides compute the benefits. It's simply a core system to hold the data, and it's a mainframe system, which is outdated. The new system will directly connect with other systems to get the data from the employers, and will allow people to process their retirement applications online, and the system will track activity by either the participant or DRB. MR. DESAI further commented, regarding the question of what would they do without a consultant, that in his career he has seen failure in such projects and the difference a project management team can make; also, the modernization project was one of the reasons he accepted the job he is in, and if he had not been reappointed to his position this year, DRB would have lost his knowledge base as the person who has planned this system transition. He concluded that a $30 million capital project can't be a one-man show.

COMMISSIONER TSHIBAKA proposed that the DRB reports should regularly include a full accounting of the cost of ARM Board meetings in travel, staff hours, consulting hours, and other costs. CHAIR JOHNSON said that he thought that she as commissioner could direct that from staff. COMMISSIONER TANGEMAN proposed that MR. DESAI and MS. LEARY work together to plan a format which he can review and they can present in the future. COMMISSIONER TSHIBAKA and CHAIR JOHNSON thanked him for that suggestion, and it was agreed.

2. TREASURY DIVISION REPORT

DIRECTOR PAM LEARY said that she had an updated action item, which MS. ALEXANDER distributed, to discuss before the budget action item that was added under New Business. The Operations Committee as part of its charter meets at least annually to review the accounting and budgets. The ARM Board budget has two components, the operations component and the custody and management component. The budget itself goes through the appropriation process in the legislature and is discussed with the Office of Management and Budget prior to getting into the governor's budget. MS. LEARY said that the budget which is included in the meeting packet is sufficient, and the recommendation from staff is that the ARM Board adopt the Fiscal Year 2021 proposed budget that is attached, with the understanding that the components will be subject to appropriation by OMB and the legislature.

Discussion was deferred until it comes up under New Business.

3. CALENDAR/DISCLOSURES

MS. ALEXANDER said that a disclosure memo is in the meeting packet, and there are no transactions that require additional review or discussion. Also included is the rest of the 2019 calendar and the 2020 calendar.

4. CHIEF INVESTMENT OFFICER REPORT

Chief Investment Officer BOB MITCHELL noted that his report is presented differently this time because of the much larger number of transactions, related to transitions being made in several asset classes. He said that his intention is to report significant transactions in the context of the broader portfolio position to convey what is happening in the portfolio at a higher level.

MR. BOB MITCHELL reminded the Board that the return assumption had been lowered from 8 percent to 7.38 because of the lower inflation assumption. A 20-year time horizon was identified for evaluating that return objective, which had the impact of creating a higher fixed income allocation, as well as an expectation that the target asset allocation will be more stable from year to year, because the longer-term capital market assumptions that Callan employs will be less affected by changes from year to year. He reminded Board members that at the last meeting, significant changes were made to the domestic equity portfolio and a significant allocation was made to factor-based strategies. Within fixed income, he said they have created a new strategy that is benchmarked against the Bloomberg Barclays Aggregate Index.

MR. MITCHELL showed a chart that he called one of his favorites, Callan's liability presentation, because it highlights the choices that are confronted by the Board. The more aggressive the asset allocation, the higher the expected return, but also the higher the risk. He noted that the Board had moved to an asset allocation mix with a more modest expected return for the benefit of a significant risk reduction. MR. MITCHELL noted that Steve Sikes would cover the changes in more detail under Transition Update the next day.

CIO BOB MITCHELL noted that under his authority to engage a manager in good standing as part of Resolution 2017-05 for up to 1 percent of the portfolio, he committed $225 million to Crestline in a new Class D investment, with the motivation of maintaining the existing level of assets with Crestline as a proportion of the portfolio over time, because they continue to get a return of capital from Crestline. He noted that MR. HANNA successfully negotiated a lower fee with Crestline.

MR. MITCHELL said that a highlight of this meeting would be contribution rate setting. He also noted that there would be another presentation on risk parity, and that copies of previous presentations and meeting minutes on risk parity had been sent out before this meeting. MR. MITCHELL said that the Board had authorized staff to engage Callan to conduct a search for a risk parity strategy, and they intend to study various implementation options before engaging Callan, and would present their plan to the Board before proceeding.

5. FUND FINANCIAL PRESENTATION

COMPTROLLER SCOTT JONES pointed out the fund financials in the meeting packet for the month ended in July. Since then, assets were down slightly in August but have rebounded in September. Internally managed assets were about $13.8 billion, and nonparticipant-directed assets were up to $27.2 billion. He highlighted that by having staff go through and true-up the Medicare drug subsidy, they submitted and received an additional $26 million for calendar year 2017 which has now been posted to the trust funds for health.

MR. WORLEY stated that the retirement funds had received the additional state contribution for PERS, $159 million; TRS, $159 million; and $5 million for the JRS. He also mentioned that they will have an update on the participant-directed disbursements by plan and plan type at the December meeting, as requested by the DC Committee and the Board.

MS. HARBO noted that it looked like $69 million was taken out by DC participants in the past fiscal year; MR. WORLEY confirmed that.

6. CHAIR REPORT

CHAIR JOHNSON said he had nothing specific to report.

7. COMMITTEE REPORTS

A. Audit Committee

CHAIR JOHNSON reported that the Audit Committee had met the previous day and had a presentation from MELISSA BEEDLE from KPMG, who has worked on the auditing of funds for quite some time, and her partner, BETH STUART, who is the partner in charge. He said that at least once a year they talk to them outside the presence of staff, and he is happy to report that there are no issues of note to be mentioned, and KPMG speaks highly of DRB and all staff with respect to the auditing. He noted that the audits that are in progress had identified a few problems with certain political subdivisions not paying their withholding, which are being worked on.

B. Actuarial Committee

MR. WEST said that the Actuarial Committee has met several times, some telephonically, and they have been trying to complete the actuarial report so the numbers that are used to generate the actual amounts that need to be funded can be put out and the financial statements for the DRB can be completed, with a deadline of October 15th.

MR. WEST said that the Actuarial Committee has also been working with the actuaries, Buck and GRS, to develop new factors considering the results of the experience study, which the Board has already approved. The consulting actuary, GRS, reviews the work from Buck. The committee took actions which have been forwarded to the Board, and will present resolutions later in this meeting specifying the individual rates that need to be incorporated into the budgets of various plan sponsors for their contribution in the upcoming year.

C. DC Plan Committee

BOB WILLIAMS, chairman of the DC Plan Committee, said that they had a great meeting the previous day, with a packed agenda. There were reports from Treasury and Callan explaining and exploring the use of brokerage windows; there is an action item coming up later on S&P 500 investment options; and KATHY LEA informed them that she is planning to retire in a few months. KATHY LEA and LIZ DAVIDSON presented on Empower communication and what is being done to address issues that have been raised. Also, they are looking into automatic enrollment and auto-escalation. MR. WILLIAMS reported that they also had a lengthy discussion with KATHY LEA, SHANE CARSON, and Mary Beth about the update on the guaranteed minimum withdrawal benefit option.

D. Operations Committee

MR. BRICE said that the Operations Committee had a presentation on proxy voting by JACK FERDON with ISS, who the Board engages with to track proxy voting and make sure that proxies are voted appropriately. They also had a presentation by CIO MITCHELL on investment policies and procedures and proposed amendments which will be up for action in December. The committee also had a vigorous conversation on the budget as proposed by the administration, which will be discussed under New Business in this meeting.

E. IAC Request for Services Committee

MR. BRICE explained that the Board had created this ad hoc committee to review RFPs for applicants to be on the Investment Advisory Committee. There were about ten applicants, of which the committee did reference checks and narrowed down to three, who will be interviewed in Friday's ARM Board meeting.

F. Alaska Retiree Health Plan Advisory Board

MRS. HARBO reported that the ARHPA Board had met on August 7th, which followed a quarterly meeting with the providers for long-term care, dental, prescription drugs, and medical care. The Board meeting included updates on EGWP, the new modernization plan proposal, and the response of DRB to the April Superior Court ruling regarding dental care. Also, the actuary firm, Segal, provided an analysis showing that the EGWP program will provide additional cost savings of $48 million per calendar year, which is $30 million more than the current retiree drug subsidy program, and will help decrease the unfunded liability and the projected state contribution for FY21.

MS. HARBO explained that between the quarterly meetings, a subcommittee meets to work on the 20 proposed initiatives for modernization. At the last meeting, the DRB health team proposed an interesting concept which would offer retirees a choice of remaining in the current legacy plan or annually choosing whether they would prefer to participate in the current Alaska Care Standard Plan which is offered to active employees and offers many of the modernization features that the legacy plan is working on. MS. HARBO noted that DRB is also working through the details of the contract for the third party administrator for medical; it has been awarded and will be announced soon. She praised the DRB team as being "super" and "awesome" and said they work very hard.

MS. HARBO said that Health Committee Advisory Board had a special meeting on August 22nd to discuss the options given DRB by the Superior Court decision in April, which resolved the lawsuit regarding dental, vision, and audio. Beginning in January 2020, retirees will have a choice of the legacy plan or the standard plan that has been in place since 2014; the Division and Delta Dental have been working to implement the two plans, provide education, and schedule an open enrollment period. The next meeting of the ARHPA is November 14th.

8. LEGAL REPORT

ARM Board legal counsel STUART GOERING said that since Ms. Harbo had discussed the dental and health benefits case, he had nothing to report on.

CHAIR JOHNSON recessed the meeting from 10:17 a.m. to 10:33 a.m.

9. ACTUARIAL RESOLUTIONS – FY21 CONTRIBUTION RATE SETTING

MR. WEST, chair of the Actuarial Committee, presented a series of actuarial resolutions to set the FY21 contribution rates. He noted that a corrected copy of Resolution 2019-10 was handed out to replace the one in the meeting packet, which had a typo.

MR. WEST pointed out a memo of contribution rates, then Resolutions 7 through 13, the first three pertaining to PERS, the next three to TRS, and one to the National Guard. There is also information about the JRS, which is managed the same and goes through the same actuarial process, but which the ARM Board doesn't present to the legislature.

The Board decided to vote on Resolutions 2019-07 through 2019-13 all as a single motion, made by MR. WEST on behalf of the Actuarial Committee. A roll call vote was taken, and Resolutions 2019-07 through 2019 13 were unanimously adopted.

10. PERFORMANCE MEASUREMENT – 1st QUARTER

PAUL ERLENDSON from Callan said that he would talk about the market environment and plan performance through June 30th, and about the international program, which will relate to recommendations coming up from staff. Also, he noted that in the future, they would like to spend proportionately more time on defined contribution outcomes, as DC is now the sole vehicle for public employees in Alaska. He said that there are a lot of interesting and important discussions going on in the DC Committee. He noted that also this afternoon the Board would hear for the first time from Callan's real assets group.

MR. ERLENDSON said that the U.S. economy is still good, though slowing, which is to be expected after more than a decade of positive results; also, issues with trade policy are affecting U.S. businesses, as many depend on imported products or technology. He showed the real growth in gross domestic product, which is the growth of the economy minus the rate of inflation. He explained that since the global financial crisis over ten years ago, growth has been at a lower rate and inflation has been muted. He discussed recent events in the market and the Fed's lowering of interest rates, and noted that last December there was an inversion in the interest rate, which typically precedes a recession. MR. ERLENDSON noted that the short rate in the repurchase market went up to 10 percent earlier in the week, and the Federal Reserve had to get involved in buying and selling securities to try to make the rates more efficient.

MR. ERLENDSON reviewed a table showing that over the last 20 years, the U.S. stock market has had the highest returns, so an investor with an overweight to non-U.S. securities would have lagged, even though emerging markets is the second-best return over that period. However, the Fed's cutting interest rates is a sign that they are getting nervous, even though there is little consensus about what is the right thing to do. He said that there is no simple way to look at investments, but the shorter the time period, the less risk an investor should take; he noted that the biggest challenge in the retirement market now is how to convert a participant account into reliable, predictable income in the future.

MR. ERLENDSON stated that domestically, one of the greatest challenges has been the difference between growth and value. He showed that for seven years after the tech bubble in 2002, value did well, but since the global financial crisis, for over a decade now, growth has been doing better than value. He explained that style indices were developed in the 1980s, and the message is that it doesn't work to favor one style, because it can be very costly if the investor is wrong, thus rebalancing back to style targets is just as important as rebalancing back to asset classes. MR. ERLENDSON said that Callan's research shows that the value and growth difference is explainable by two sectors: IT, which is favored by growth managers, and financial, which value managers tend to favor. That difference in weightings between value and growth explains almost 70 percent of the difference between growth and value since the global financial crisis. The same phenomenon influences the difference between U.S. and non-U.S., though to a lesser degree, with IT being stronger in the U.S. and financials in the non-U.S. sector, particularly emerging markets.

MR. ERLENDSON reviewed interest rates, which have been continually dropping; this is an indication of investor sentiment about the future of returns. Interest rates so low, even negative in some countries, are a disincentive to save and an incentive for people to do something other with their money than put it into fixed income instruments. As of August, over 25 percent of government bonds worldwide had negative interest rates. Inflation is expected to remain low, and this environment is expected to last over the next decade, but not forever, Callan thinks. MR. ERLENDSON noted that the fees that investors pay matter even more in such a low return environment, so the steps the ARM Board has been taking to eliminate managers that aren't pulling their weight are necessary. Also, Callan does not suggest increasing risk, because in a low return environment, any loss of capital is really bad.

MR. CENTER stated that things have changed a lot since June 30th, particularly in the Defined Benefit Plan, so he will not spend as much time as usual on that part of the report; also, absolute return has been disassembled, and the real assets team is going to cover that topic, so he will skip some pages in his presentation.

MR. CENTER showed the asset allocation as of June 30th, which is pretty much on target. He showed the asset allocation for the PERS plan compared to other public funds, noting that it has always had a lower allocation to fixed income versus peers, but this changes with the new target of 24 percent. The total fund returned 6 percent over the last year, slightly below median, but above median over past three-, five-, and ten-year periods. The Sharpe Ratio, a measure of risk-adjusted return, has been positive and above median for the PERS plan over the past five and ten years. MR. CENTER explained a chart of standard deviation, an overall measure of risk, showing that the PERS plan has had lower overall volatility compared to other public pension plans.

MR. CENTER said that the PERS plan returned 2.4 percent for the second quarter of 2019, trailing its benchmark by about 50 basis points, key detractors being relative performance of the real assets portfolio and the private equity portfolio. He noted that the private equity portfolio has a bit of a mismatch with its benchmark, so underperformance is not a big concern, but it did have a positive performance for the quarter. He attributed the PERS fund's outperformance of its benchmark by 34 basis points over the past year to the private equity portfolio and absolute return, as well as being underweight to global equities outside the U.S. The main detractor to performance was the opportunistic portfolio relative to its benchmark.

MR. CENTER reviewed the long-term and near-term performance of PERS versus its target benchmark and peers, noting that both PERS and TRS have outperformed their target over the last one-year, two-year, and three-year periods, despite underperformance in the most recent quarter. He pointed out that a new benchmark has been added labeled “public market proxy,” which is a blended benchmark of publicly traded indices with risk equal to the asset allocation target, and was developed along with the new asset allocation target. The mix is 45 percent Russell 3000, 30 percent MSCI ACWI ex-U.S., and 25 percent Barclays Aggregate, intended to create an easily investable benchmark that has a similar risk profile to what the PERS plan should have. MR. CENTER showed that both plans are above both the target and the median over the past five, seven, and ten years, and they rank above the median in six of ten calendar year comparisons. Volatility has been low and the distribution of outcomes between the best and the worst performers is tight.

MR. CENTER said that domestic equity has performed in line with its benchmark, noting that large cap equity has detracted, but most of the large cap and small cap equity programs have been eliminated and replaced with passive programs. He reviewed risk characteristics of the equity portfolio, noted that small cap equity outperformed its benchmark over the past quarter and year, then reviewed the international equity performance, which has been close to its benchmark over time. MR. WILLIAMS noted that with fees, returns are below the benchmark; MR. CENTER replied that later in this meeting, a change to the international equity program to make it more passive will be up for discussion. He went on to review the performance of developed market non-U.S. equity, international equity, emerging market equity, fixed income, and opportunistic, and reminded the Board that the portfolio is undergoing some changes, which will be discussed later in the meeting. MR. CENTER noted that AVERY ROBINSON would discuss real assets, and he briefly reviewed absolute return performance, which is being terminated as an asset class.

MR. HIPPLER asked whether the inverted yield curve was a factor in the strong performance of taxable municipal bonds; MR. CENTER replied that investors were rushing to buy anything with a yield, and the U.S. market is one of the only remaining developed, stable fixed income markets where yield is actually available, so high-quality municipal bonds typically rally when there is a flight to quality among investors.

CHAIR JOHNSON asked whether student loan debts are packaged up and sold; MR. CENTER said that securitized student loan debt does exist, but is typically not purchased by investment-grade fixed income managers, partly because the credit rating is low.

MR. CENTER explained that CIO MITCHELL and SHANE CARSON had recently discovered that the benchmark specified in the total fund target and the global ex-U.S. equity target differed between a gross version of the MSCI benchmark for some periods and a net version for other periods. The difference has to do with how taxation of the dividends are treated, and the net version is a more accurate representation of the actual return that a U.S.-based institutional investor should expect from investing in non-U.S. equity securities, and is what most U.S. institutional investors use. He showed when the different benchmarks were used in the past, and said that Callan recommends retroactively changing gross to net as needed, going back about 12 years. He explained that this is not because they have underperformed and want to lower the benchmark, because they actually have been beating the benchmark; this change would be a housekeeping item, but they wanted to be sure to notify the Board. He said that internally they are checking with all of their clients to make sure they are using the net.

MR. CENTER then discussed the Defined Contribution plans. The PERS DC Plan ended June 30 with about $1.2 billion in assets, 60 percent of which were in the asset allocation funds, with the remainder split between the active and passive investments. He showed cash flows over the past five quarters, with both PERS and TRS having net cash inflows.

The Deferred Compensation Plan ended the quarter with about $980 million in assets, with about 25 percent in target date funds and 75 percent in the active and passive core options. The Deferred Compensation Plan is cash flow negative. The SBS fund ended the quarter at $4.1 billion in assets, with an allocation similar to that of PERS and TRS; cash flow is slightly negative but close to neutral.

MR. CENTER reviewed the individual performance of the various investment options, and showed that the target-date funds are very conservative relative to peers, as designed for people who have retired, and they are performing better than peers. He showed that the passive investment options within the DC Plan have had strong performance; the newer active investment options have good prospects, and small cap, stable value, and the money market funds have been strong. He said that a proposal is coming up later from the DC Committee to combine the BlackRock S&P 500 Index Fund into the State Street S&P 500 Index Fund to achieve some fee savings, and noted that he skipped international equity because CIO Mitchell will address it in depth later.

CHAIR JOHNSON recessed the meeting from 11:54 a.m. to 1:16 p.m.

11. CONSULTANT EVALUATION OF REAL ASSETS PLAN

CIO BOB MITCHELL explained that during the spring and early summer, an RFP was conducted for a new real assets consultant, and Callan prevailed. Staff have been working closely with Callan since then to facilitate their review of the ARM Board's real assets program, and this first presentation will provide initial assessments and recommendations.

AVERY ROBINSON, co-manager of Callan's real assets program, recapped that they had been asked several months ago to look at the real assets as currently structured and consider how it should evolve. This collaborative process is grounded in quantitative analysis, based on Callan's asset modeling projections and other factors such as implementation, fees, and expertise. Also to be considered are the reasons for having real assets, the role they are meant to play, and what is happening in the broader real estate market.

MR. ROBINSON said that the main reason investors use real assets is for the return diversification they can provide. They tend to perform differently than stocks and bonds, and can be used in various ways at various levels of risk. The point is not to have too much correlation to other exposures. Real assets tend to be cyclical, driven by supply and demand. Another factor to consider is that real assets are illiquid for the most part, he said, and fees tend to be higher than those in the public market.

MR. ROBINSON showed a risk/return spectrum and introduced some terminology for various strategies such as core and opportunistic. He went on to describe the behavior of different types and the motivations for holding them. He showed a comparison of returns for the various substrategies of real assets, and said that basically real estate has performed as expected, less than stocks but higher than bonds on a long-term basis.

JONATHAN GOULD then discussed the current market conditions for real estate, reiterating that real estate is cyclical, though the cycles are long. The last decade has had a long stretch of strong returns, and the cycle is now in a mature phase, which means that the fundamentals are pretty much in balance across the board, with continuing strong demand, and economic growth supporting job growth, which supports the demand for space in the real estate markets. Supply, or the creation of new real estate through development, has been muted, partly by lending constraints, leading to low vacancy rates and rental growth. This has made it possible to generate a lot more income yield from real estate properties, but the pace of growth has slowed in recent periods. Returns from appreciation are much more modest than those from income. MR. GOULD said that two things that would bring a real estate cycle to an end are oversupply or too much leverage, and they don't see those now.

MR. GOULD discussed variations in performance among the four main property sectors that are typically held by institutional real estate investors: office; multifamily; industrial; and retail. He showed charts of actual investor capital flows, and pointed out that sometimes there are entry and exit queues where capital is waiting to be deployed or investors are trying to get out of a fund. Then he showed the Callan Real Estate Indicators chart, which shows how the market has reacted at different times based on different macroeconomic indicators and real-estate-specific indicators.

MR. HIPPLER asked if markets are now favoring heavily leveraged properties because current low interest rates are being used to fund things; MR. ROBINSON replied that although the cost of leverage has come down, it hasn't led to an adjustment in behavior by investment managers. He said that average leverage for core real estate is currently 23 percent and hasn't changed much in response to lower interest rates.

DR. MITCHELL asked if there is a hierarchy of real assets that gives the most differentiated return stream; MR. ROBINSON replied that there is a correlation matrix included in their presentation that helps illustrate that, but basically, core real estate is one of the better providers of diversification because it has a lower relative correlation to the broader equity market, whereas non-core has a relatively high correlation to the equities markets.

MR. ROBINSON went on to discuss the strategic plan, starting with a review of the ARM Board's policy statement on why they have real assets: to provide diversification. The long-term target is actually lower for real estate than for the overall plan; it is not intended as a return enhancer, but as a diversifier. He then reviewed the reasoning that went into the current recommendations, noting that they aren't recommending any dramatic changes to target allocations, except for possibly phasing out non-core real estate and reallocating those funds.

CHAIR JOHNSON asked, if real estate is for diversification, and within diversification core gives the best results, why invest in anything besides core, noting that it had just been stated that non-core did not provide diversification. MR. ROBINSON answered that that is correct, and that's why phasing out non-core is one of their recommendations. Also, non-core is costly from a fee perspective. However, MR. ROBINSON said that they still think infrastructure, agriculture, and timber can play a role. He went on to review the asset allocation adopted in June, which decreased the real assets target from 17 percent to 13 percent; he showed how they tried to solve for the optimal solution to achieve the long-term expectation of 6.8 percent and also have a standard deviation of around 14.25 percent. He admitted that with a lot of private assets, some subjectivity comes into play, and they have to consider implementation, expertise, and other factors beyond what the model shows. Next he showed the correlation matrix referred to in response to DR. MITCHELL above, pointing out that core shows a .736 correlation to broad U.S. equities, the lowest of all the sub-real asset classes, and the highest correlation is in non-core, because of how it relies on economic growth, which coincides a lot with the equity market.

DR. JENNINGS asked about other real assets like TIPS, energy stocks, and commodities, and whether those were considered as part of the review; he commented that commodities is classically considered one of the most diversifying asset classes with the real assets space. MR. ROBINSON answered that that is true, but commodities has some unfavorable return characteristics as well, and they did not include those in their review.

MR. WILLIAMS asked how real estate, with a projected return of 6.8 percent and which is difficult enough that it seems it ought to have a higher premium, adds value to the ARM Board assets better than would an REIT fund. MR. ROBINSON answered that Callan had conducted a broader asset allocation review which determined that real assets should play this role, and their job was to come up with the best solution to achieve that. As for why not just a passive REIT, it is an option, he said; it would be more liquid, but the volatility would be higher, a tradeoff. However, they recommend, given the size of the ARM Board's portfolio and their access to various underlying managers and strategies, diversifying with real assets instead of just a passive option. MR. ROBINSON pointed out that their recommendations include public REITs and other separate accounts which can be bought and sold easily, as well as open-end real estate infrastructure funds, which also provide some liquidity.

MR. WILLIAMS asked, since this type of investment is kind of clunky, and the money might do better in an S&P 500 fund over 20 years, how much value is it just to have something with a different correlation and which is something other than stocks and bonds. CIO BOB MITCHELL replied that this is a diversified portfolio including some REITs and a variety of other private assets, which although it has a relatively low return expectation versus the target, provides a significant amount of diversification, which reduces the volatility of the performance of the broader portfolio and lowers drawdowns. Also, some elements, like private infrastructure, are less sensitive to economic growth, so during downturns, when equities tend to underperform, the diversification benefits of private infrastructure and core real estate will come into play, he said. MR. MITCHELL added that the ARM Board's separate accounts currently have no leverage, and commingled real estate has modest leverage compared to that in public markets and REITs.

MR. ROBINSON explained that several considerations went into coming up with a recommendation, including fees. He showed a table highlighting the various vehicle types that the ARM Board could feasibly invest in, some of which they already have exposure to and some they don't. The second column showed fees, and he said that because they manage their REITs internally, the fee is zero, and noted that there is a large variance in fees among these sub-asset classes. Everything they considered led to the various recommended mixes that MR. ROBINSON summed up as 35 percent core real estate; 15 percent REITs; 25 percent farmland; 10 percent timber; 15 percent infrastructure. He said that these percentages are close to what the current weightings are, but one material change would be exiting energy and non-core real estate and increasing the REIT exposure.

DR. MITCHELL asked whether these numbers were based on domestic or international real asset programs, recalling that infrastructure is mostly non-U.S., and the ARM Board has been exposed to Ukrainian farmland and South American timber; MR. ROBINSON replied that there is a higher international element with infrastructure, but all of the numbers shown consider the universe of what the exposure can be and include that in the return assumptions.

MR. ROBINSON then went into more detail on the different sub-asset classes and their characteristics, Callan's rationale for recommending them, and the ARM Board's current exposures. He concluded by showing things to consider and a timeline for implementation of these recommendations if the Board approves them.

12. REAL ASSETS FY20 ANNUAL PLAN

NICK ORR from the Department of Revenue stated that real assets represent about 14.8 percent of the overall plan, with real estate comprising just under half of it, followed by farmland, infrastructure, timberland, and energy. He reiterated that the role of real assets is to diversify the portfolio, while providing attractive returns, inflation sensitivity, and income. Net-of-fee performance of this asset class is expected to be between public equities and fixed income over rolling six-year periods.

MR. ORR reviewed the proposed target allocation changes and broke down the composition of the real estate portfolio, noting that the separate accounts at 46 percent are comprised of 16 different properties. He showed the returns for real estate over a variety of time periods, emphasizing that they have been consistent; he discussed the performance of various specific funds, and answered questions from Trustees. Next he discussed the specific recommendations and rationale. He summarized that they are looking to reposition and increase the real estate allocation, which would include eliminating the non-core allocation and increasing REITs; opportunistically looking to reduce the timber portfolio; and changing the infrastructure benchmark. The real assets policy benchmark would have to be changed to accurately reflect what the fund is invested in because of all the changes to the target allocation.

Action Items:
Resolution 2019-14

MR. ORR introduced an action memo recommending approving Resolution 2019-14, which adopts the Real Assets Annual Investment Plan for Fiscal Year 2020, and Resolution 2019-15, which changes the Infrastructure guidelines.

<u>MS. HARBO moved to approve Resolution 2019-14.</u> <u>MR. WEST seconded the motion.</u>
A roll call vote was taken, and <u>Resolution 2019-14 was approved unanimously.</u>

Resolution 2019-15

MR. WEST moved to adopt Resolution 2019-15, which changes the infrastructure investment guidelines. MS. HARBO seconded the motion.

After brief discussion of the reasons for the changes and the difficulty of finding a good infrastructure benchmark, a roll call vote was taken, and Resolution 2019-15 was adopted unanimously.

Resolution 2019-16

MS. HARBO moved to approve Resolution 2019-16, which adopts the Real Assets Policy Benchmarks for Fiscal Year 2020. MR. WEST seconded the motion.

MR. ORR stated that the proposed policy benchmark will be more reflective of the portfolio over the coming year.

A roll call vote was taken, and Resolution 2019-16 was adopted unanimously.

CHAIR JOHNSON recessed the meeting from 2:35 p.m. to 2:55 p.m.

13. REVIEW OF INTERNATIONAL EQUITY MANAGER STRUCTURE

CIO BOB MITCHELL said that the international equity portfolio comprises about 18 percent of the overall portfolio. It is about $5.1 billion, with 14 mandates, including 11 active strategies, one of which is currently unfunded, and three passive strategies. Of the 11 active strategies, five are broad market, spanning the entire international equity space; one is focused on EAFE, or developed markets only; three are emerging markets strategies and two are small cap strategies. He explained that his purpose was to describe staff's process for evaluating the manager structure within the asset class and to make recommendations.

MR. MITCHELL said that the objectives of the study were to attempt to improve expected outcomes, to look at fees and how to lower them while preserving net-of-fee outcomes, and to simplify the manager structure. He said their approach when deciding between active and passive is influenced by the chances of success; to that end, they have reviewed information from Callan studies on how well the median manager does relative to the benchmark over time and the median fees charged within each of the asset classes. He said that the percentage of managers within international equities that outperform the passive benchmark is high, relative to those in domestic equities and high yield. Core bonds is another promising area to be active. As to the question of whether the fund is getting enough of the return premia to justify taking the risks of deviating from the benchmark, he said international equities have performed well, core bonds relatively well, and domestic equities and high yield have not performed well.

Drawing from a 2011 presentation by DR. JENNINGS on active versus passive, MR. MITCHELL discussed some things to consider after a promising area for active investment has been identified. The Board has to decide how to implement, and consider their ability to make appropriate decisions like identifying good managers and evaluating factors that may affect their performance. He said that implementation can be and has been challenging, and the burdens of implementation should reduce the Board's willingness to be active, because so many decisions have to be made right in order to achieve the desired outcomes.

MR. MITCHELL pointed out that active managers must be able to deliver something that can't already be gotten at a lower cost. Factor-based strategies now being implemented outperform passive markets and actually do a lot of what active managers do, which is an additional hurdle that must be overcome by active managers; he said that the scope of active management has been shrinking over time as these risk premia have been identified.

MR. CARSON described how he and CIO MITCHELL developed the criteria for evaluating existing managers as well as the environment of investment managers to see how they perform. Staff can run regressions and do analyses of data from large databases, trying to find characteristics of successful managers, and develop that into selection criteria used to evaluate investment managers. MR. CARSON described qualitative evaluation of managers as a two-step process, starting with looking at their historical and statistical performance, with the understanding that past performance is not always indicative of future performance. Then to figure out what to expect in the future requires, in staff's opinion, making sure the firm is well established, looking at key personnel, the way they invest, how they build the portfolio, as well as factors like headline risk, client service, and fees. These two steps are what they've used in the selection of managers that will be recommended later in the meeting.

The first big recommendation is to increase the passive allocation within the non-U.S. portfolio to 50 percent from the current 32 percent. Also, they recommend increasing the factor indices allocation to 20 percent from 4 percent, and decreasing the active manager allocation from about 64 percent to 30 percent. These moves will lower fees, capture the market beta, and capture performance from factor exposures that they think are transparent and should outperform over the long term.

MR. CARSON said that there will also be fewer assets invested in active managers, so the number of managers will be reduced. They recommend eliminating the focused strategies, including the international small cap and the focused emerging markets strategies, and investing with managers that have a broader mandate, what is called the ACWI ex-U.S. mandate, and let the investment manager make the decisions on how to allocate to the individual markets. That consolidation of managers will help control the aggregate fee load, but will increase the manager-specific risk.

MR. HIPPLER asked how much the past returns of a manager correlate to future performance; MR. CARSON answered that there is really very little correlation, and that's where the qualitative component comes in. DR. JENNINGS commented that he thinks there is evidence that bad managers stay bad, but it's hard to characterize any performance persistence.

MR. BRICE asked how the polarization of international markets between China and the U.S. may play into this scenario; MR. CARSON replied that the selection of managers doesn't consider that, but they would rely on managers to withdraw from markets where they felt there was risk from tension between nations. MR. MITCHELL added that because of the increase in passive from 30 to 50 percent, if the active strategies were unexpectedly hit by some world event and underperformed, the impact of that on the portfolio would be less.

MR. BRICE asked if there is stability or a cycle in the global markets or some other factor with which the passive strategy helps; MR. CARSON commented that his opinion may differ from others, but he would argue that if there is some global event, passive would not be the best because active managers would have the ability to pull out and manage that risk, whereas a passive index would not. MR. BOB MITCHELL commented that things will work out one way or the other, and we can never know what will happen.

MS. HARBO asked if staff has talked to each of the managers that are up for termination about renegotiating fees, and also how many of the managers on the termination list have been on the watch list in the past six years. MR. CARSON answered that two of them are on the watch list now, but he didn't know off hand about the past six years; also, he said there are two that would be recommended to the watch list if they aren't terminated in this restructuring. MR. MITCHELL added that staff is continually negotiating fees with managers, and they have touched on that topic within the past six months with each one that is on the termination list.

CHAIR JOHNSON commented that he had always heard that there is an element of diversification simply in having multiple managers in the various investment areas, and asked whether consideration has been given to the value of keeping some of these managers just to have alternatives. MR. MITCHELL replied that they are keeping a number of mandates, but simplifying the roster of managers, using as criteria how they perform versus passive and versus the factor-based strategies and what their exposures looked like. Consideration was also given to managers' styles and how they build portfolios, and they were selected to complement one another for diversity. Also in terms of weighting, they wanted to make a significant shift to factor and a significant shift to passive, which happens to also lower the tracking error to the benchmark and improve the return profile of the portfolio overall.

Discussion ensued about the specific recommended manager changes that staff is asking the Board to ratify. It was decided to vote on the action items at this time instead of the next day.

CHAIR JOHNSON asked IAC members to state their views on the recommended changes. DR. MITCHELL said he thinks it is a good idea and will make the focus on the existing active managers more intense, and he thinks the move to passive is wise. It is very hard to outperform the index over time, and the new allocation recognizes that. DR. JENNINGS said he has been advancing the cause of fewer, bigger allocations for some time, and this is consistent with that.

CHAIR JOHNSON asked for comments from Callan; MR. CENTER said they have worked with staff on this concept and they think it is sound. MR. ERLENDSON added that this has been a solid, thoughtful analysis, considered for quite a while, and staff has determined that in this lower return environment, ways to incrementally improve outcomes include reducing fees and making allocations to those mandates where they have greater confidence of success, and they've come up with a plan that does that. He said Callan is highly supportive of these changes.

14. INVESTMENT ACTIONS

CIO BOB MITCHELL recommended that the Alaska Retirement Management Board adopt the proposed changes to the global ex-U.S. asset class as identified in the table included with the action memo. In addition, the Alaska Retirement Management Board direct staff to modify the mandate with Capital Group to include emerging markets and change the performance benchmark from the MSCI EAFE index to the MSCI ACWI ex-U.S. index.

MR. WEST so moved. MR. WILLIAMS seconded the motion.

CHAIR JOHNSON said that he feels there is some merit to maintaining at least Lazard's emerging markets as kind of a hedge to the decision-making, and asked MR. MITCHELL to talk him out of that. MR. MITCHELL said that there are two Lazard mandates being contemplated for termination, a broad mandate and an emerging markets mandate. The emerging markets mandate has relatively high fees, and the performance has been relatively poor, though MR. MITCHELL said that they could probably negotiate a lower fee. The broader mandate has a lower fee and has had relatively better performance.

CHAIR JOHNSON proposed amending the resolution to maintain Lazard Asset Management Emerging Markets. MS. HARBO seconded the motion.

COMMISSIONER TSHIBAKA asked why they want to keep Lazard; CHAIR JOHNSON replied that he feels there is reason to maintain at least one active manager in emerging markets as a hedge in the diversification and selection process. MR. WEST asked whether this was one of the funds on the watch list; MR. CARSON said yes, it has been on the watch list for at least a year, if not longer.

After some discussion, a roll call vote was taken on amending the resolution to retain Lazard; all Trustees except CHAIR JOHNSON voted no.

The proposed amendment failed.

A roll call vote was taken on the department's recommendations regarding proposed changes to the global ex-U.S. asset class as identified in the table and changing the performance benchmark. The resolution was unanimously approved.

MR. MITCHELL introduced a second action memo related to consolidation of S&P 500 index mandates that are held within the participant-directed plans. He explained that staff felt it made sense to consolidate two separate mandates into one passive strategy to reduce confusion among participants caused by having two different offerings of the same product with different elements of the participant-directed plan managed by different managers at different prices. He said that they identified a set of ten managers that provide index or passive S&P 500 investment products for the participant-directed space, then requested information from them regarding costs and assessed the level of service that they provide. He said that MICHELLE PREBULA, a state investment officer, provided this analysis to the DC Committee yesterday, and the DC Committee recommended that the ARM Board consolidate the two mandates under SSgA. They were also able to negotiate a slightly lower rate of .8 basis points.

MR. MITCHELL read, "Staff recommends the Alaska Retirement Management Board direct staff to terminate the S&P 500 fund mandate for the Deferred Compensation Plan managed by BlackRock and contract with SSgA to provide an S&P 500 Index Fund for the Deferred Compensation Plan, the Supplemental Annuity Plan, and the PERS/TRS Defined Contribution Retirement Plans subject to successful contract negotiations."

MR. WILLIAMS so moved on behalf of the DC Committee.

A roll call vote was taken, and the motion was unanimously approved.

Since these investment actions had been scheduled for Friday morning, it was decided to take up the Executive Session as the first item at 9:00 the next morning, subject to the availability of the participants.

RECESS FOR THE DAY

CHAIR JOHNSON recessed the meeting for the day at 4:00 p.m.

Friday, September 20, 2019

CALL BACK TO ORDER

CHAIR JOHNSON reconvened the meeting at 9:00 a.m. on Friday, September 20.
All Board members were present.

MR. BRICE moved to go into Executive Session with respect to matters the immediate knowledge of which would have an effect on the finances of the Board. MS. HARBO seconded the motion.

A roll call vote was taken, and the motion was approved.

17. EXECUTIVE SESSION

Trustees, Department of Revenue staff, and legal counsel met off record from 9:03 a.m. to 9:57 a.m., then CHAIR JOHNSON called the meeting back to order.

15. TRANSITION UPDATE

STEVE SIKES, manager of opportunistic strategies, and fixed income managers VICTOR DJAJALIE and CASEY COLTON presented to the Board an update of the portfolio transition that resulted from the decisions of the June Board meeting which adopted the FY20 asset allocation and made changes to manager structure.

MR. SIKES reviewed the changes: an increase to fixed income and cash from 11 to 24 percent; the elimination of the absolute return asset class and portable alpha; also, 27 accounts were eliminated across asset classes; and the broad domestic equity asset class is now all passive or factor-based. Global equity, real assets, and opportunistic were decreased, and broad domestic equity and private equity were increased. MR. SIKES showed the current portfolio position compared to the targets, and the changes in dollar amounts resulting from the changes in percentages; he explained that some changes were internal, just transferring positions without going into the market. He said that designing a series of program trades to achieve the new targets required a high level of coordination across the investment teams, and explained some of the techniques they used to avoid gaps in market exposure. He then went through the individual asset classes and the changes that were made.

MR. SIKES concluded that they were happy with how the transition went, noting that July, when most of it happened, was relatively tame in terms of volatility and liquidity, so they were fortunate to have calm waters in which to execute those trades. He said that the plan's performance now is in line with the new policy benchmark. MR. SIKES complimented the coordination between the investment and accounting staff, specifically recognizing SCOTT JONES and EMILY HOWARD for handling everything that was thrown at them. In addition, MR. SIKES noted that State Street Bank and NRS handled an unprecedented amount of transactions, with no significant issues, and did a terrific job, he said.

CIO BOB MITCHELL added that he also applauded the investment and accounting teams for their high level of coordination, and said he is proud to be working with these people. Also, he noted that while it appears that the performance of the portfolio wasn't adversely impacted, there were some asset classes that were, fixed income in particular; he said he doesn't want Trustees to be surprised to see that at the December meeting.

MR. DJAJALIE stated that at the June meeting, the Board approved broadening the fixed income mandate from mainly a Treasury mandate to a much broader fixed income mandate, which are quite different from one another; he showed a comparison of the characteristics of the two portfolios and the index. He explained the steps involved in making the transition, and said that he has been able to buy the new corporate bonds at no transaction cost.

CASEY COLTON explained that when making transfers between mandates that don't share the same interest rate exposure, they want to manage risk by controlling that exposure to cover it quickly at the lowest possible cost. They try to do it using cash and U.S. Treasury securities, which lowers transaction cost and helps position them for hedging for corporate bond purchases. They have an analytical tool called Yield Book that runs the calculations and optimizes to come up with a small number of U.S. Treasury trades to attain the desired interest rate and curve exposure and accomplish each transition quickly. He clarified that relative risk is risk relative to the benchmark, and absolute risk is being uninvested, so they always transition as quickly as possible, first into Treasury securities so they don't risk missing a bond rally.

CHAIR JOHNSON recessed the meeting from 10:22 a.m. until 10:32 a.m.

16. OVERVIEW OF RISK PARITY

CIO BOB MITCHELL mentioned that at the last Board meeting, it was the will of the Board to receive more education on risk parity. He introduced PAUL SAUER from Neuberger Berman.

MR. SAUER thanked the ARM Board for the current partnership in several of their private market strategies and for the opportunity to talk about risk parity. He introduced DOUG KRAMER, the co-head of Neuberger Berman's quantitative and multi-asset class group, and HAKAN KAYA, the portfolio manager for their risk parity strategy.

MR. KRAMER stated that the objective of a pension fund is to earn a rate of return, and usually portfolios end up with large allocations to equities. Equities generate a lot of return, but they also have a lot of risk. MR. KRAMER showed that in a common portfolio of 60 percent stocks and 40 percent bonds, in the worst times for stocks, 98 percent of returns are driven by equities. Thus, investors look for ways to allocate assets to achieve rates of return without the equity-centric risks.

MR. KRAMER described risk parity as a long-term asset allocation approach that focuses on diversification. Instead of having 98 percent of the risk generated by equities, the risks are balanced across various asset classes. He said that to have equal contribution to risk from the bond portfolio and the stock portfolio, it actually has to be more like 75 percent bonds and 25 percent equities. However, that probably wouldn't get the rate of return needed to meet pension fund liabilities, so leverage is used to generate a more efficient portfolio. MR. KRAMER showed some diagrams demonstrating how it works. He concluded that using leverage to balance risks in a risk parity strategy is prudent and can achieve the target rate of return with a smoother path and minimal drawdowns.

MR. KAYA explained how a risk parity strategy is implemented. He said that first, they pick a universe of assets that play off different environments and that naturally hedge each other. Then, they deal with things they can forecast. Returns are almost impossible to forecast, but the only assumption needed in risk parity is that stocks, bonds, and real assets will grow over time and provide risk premia that can be harvested. They also try to understand the risks, and they claim that the best way to allocate that risk budget is to avoid concentrating the risk allocation in any one piece. Then once they know the risk allocation, they take some controlled leverage to get to the target return profile.

MR. KAYA explained that to create the diversifying universe of assets, they consider three risks that will affect returns, but can't be predicted: growth risk, interest rate risk, and inflation. Stocks, bonds, and commodities are the most important asset classes, and each year a different one of the three performs best. Risk is more certain than returns, and there are two types of risk: the absolute level of risk of each individual asset or asset class, and the relative risk of each asset with respect to the others. Instead of trying to forecast and making errors which may be costly, anchoring the process around the stability of risks allows a more robust, less error-prone portfolio. To allocate risk across assets and asset classes within the selected universe, they try to say which asset class is likely to produce the highest risk-adjusted return, or the highest Sharpe Ratio. MR. KAYA showed that asset classes have similar risk-adjusted returns, so there is no need to overconcentrate risk in any one of them, and said they also don't try to time the risk. Instead they try to balance the risk. A sample portfolio that balances the risks between assets is 30 percent stocks, 55 percent bonds, and 15 percent commodities. This balances the influence of each asset class on the outcome, so that no one asset class is driving the outcome of the portfolio. Then they use leverage in a controlled manner to enhance efficiency.

MR. WILLIAMS expressed his natural aversion to borrowing money, and questioned the cost and safety of leverage. MR. KAYA said the dilemma is that they have to make a certain amount of return. A heavy concentration in equities may do that, but there is implicit leverage built into them. Instead, the leverage risk can be modeled explicitly, then a more diversified base that is less sensitive to the economy can be used to get to the same leverage that an allegedly unleveraged portfolio would. By accessing leverage so explicitly, they can control risk and adjust risk tolerance.

MR. KRAMER explained that if 10 percent volatility is accepted, the question is how to express it, and if it is expressed all with equities, that exposes a fund to economic growth. In case of deflation, inflation, or slowing growth, bonds can offset the risk. By allocating equally, a robust ecosystem of stocks, bonds, and commodities is created where each part of the portfolio will do its job, depending on the macro environment.

MR. BRICE asked what kind of vehicles are used for leverage; MR. KRAMER explained that they just borrow bonds using the collateral and the margin release within the portfolio, so there is no explicit borrowing.

MR. HIPPLER asked whether in this model, if leverage is increased or decreased, the Sharpe Ratio would change; MR. KRAMER said no.

MR. KAYA showed a comparison of a typical 60/40 portfolio's performance to that of a risk parity portfolio over six decades, spanning all sorts of different economic environments, and in five of the six decades, a risk-balanced allocation that is targeted at the risk of a 60/40 portfolio beats the 60/40 portfolio and ends up having a higher Sharpe Ratio.

MR. ERLENDSON asked how complex it is to manage this portfolio; MR. KAYA answered that it is simple. The risk allocations and the volatility level are decided, and the active management comes into play in modeling the risk. The complexity is minor and predictable, he said.

MR. HIPPLER asked if they have an actual portfolio that has performed this way over time, as opposed to a model of what it would have done; MR. KAYA replied, "Absolutely." MR. KRAMER added that there is an art and a science to implementation, but he thinks they are in the top quartile of the universe of managers that do it, and they are a little less on the leverage side. MR. HIPPLER said that he assumes the leverage issued is not tax exempt, and asked whether a pension fund can issue tax exempt debt to further enhance returns and reduce risk. MR. KRAMER said he didn't know; MR. BOB MITCHELL said he would assume that the leverage would be achieved through the use of derivatives, so it would get short-term interest rates like one-month LIBOR. MR. KRAMER said that's right.

MR. WILLIAMS said that he appreciated their presentation, and it warmed his heart when they said they don't use as much leverage as some others. He said that he believes that risk is hard to see, and the Sharpe Ratio will get at some things but not everything, and asked whether that was accurate. MR. KRAMER replied that it was accurate, and the process and the product that they use actually has a direct component of unknown unknowns, because there are things that just can't be forecast.

MR. KRAMER addressed the question of where to fund risk parity from by showing a variety of ways, and went through one example to show how being risk-efficient and using diversification gains a risk budget that can be spent elsewhere to generate more return. He concluded that risk parity is all done in liquid portfolios; it is accessible in size, not very expensive, and can be implemented in a way that can generate more return smoothly and with lower drawdowns.

NEW BUSINESS: ARMB FY2021 BUDGET PROPOSAL

DIRECTOR LEARY noted that she introduced the action memo yesterday, and MS. ALEXANDER passed out a new version with a corrected date. MS. LEARY pointed out that on the working budget document they have added authorization for the Fiscal Year 21 travel line item. She said that based on her discussions with OMB, she had listed the authorized management fees for the external public investments at $45 million, rather than the $50 million of the prior year, and that is sufficient compared to the FY19 actuals.

MR. BRICE moved that the ARM Board adopt the FY2021 proposed budget as attached, with the understanding the components will be subject to appropriation by OMB and the legislature. MS. HARBO seconded the motion. Director Leary clarified that it is the ARM Board working budget for Fiscal Year '20 and the proposed budget for Fiscal Year '21.

A roll call vote was taken, and the motion to adopt the budgets passed unanimously.

CHAIR JOHNSON recessed the meeting from 11:30 a.m. until 1:00 p.m.

18. CYBER SECURITY OVERVIEW

State Comptroller SCOTT JONES introduced BILL COLLINS, the relationship manager for ARMB's relationship with State Street Bank, the custodial bank for all of the nonparticipant-directed assets, as well as some of the participant-directed options through T. Rowe Price.

MR. COLLINS thanked the Board for their 28 years of business, saying that they appreciate the ARM Board's business and trust. He explained that he was just going to turn the slides, and MALCOLM KING, from State Street's corporate information security division, would be giving the presentation on cyber security over the phone.

MR. KING introduced himself, and said that specifically within his scope is the security engineering space, which includes engineering security infrastructure products and working on portability management, access management, and testing and assessments.

MR. KING described the organizational structure of his division as comprised of four towers. The first is the security operations and threat intelligence tower, which contains the Security Operation Center, or SOC. That is the team that responds to alerts and investigates indicators of compromise and attack and remediates those as necessary. A second tower is a threat intelligence function that supports other functions and teams outside the SOC. The third tower is the program management and governance tower, which is responsible for policy, overseeing major security programs, governance, identifying risks, working through possible risk exception requests, and tracking major risks to remediation. The fourth tower is the chief technology office, which focuses on evaluating and testing emerging technologies in both specialized security technology and general technology.

MR. KING explained the five levels of reporting in the organization, leading up to the CIO who reports to the technology and operations committee quarterly and to the full board at least annually. CHAIR JOHNSON questioned with such a pyramid of responsibility, how quickly they are able to respond to problems on the ground; MR. KING answered that if there are critical incidents, they don't need direction from a higher level to make day-to-day decisions, but they would inform the others and be supported by them.

MR. KING clarified that they don't have any functions that are fully outsourced, but some are augmented by managed services. He showed an overview of the major functions and programs that compose the security function, explaining that he highlights it because they have been transitioning over the past couple of years from organizing their program and reporting based on an ISO 27001 model to a NIST cyber security framework model. The NIST documentation and framework has more detail and is a bit more prescriptive, he said.

MR. KING emphasized a heavy focus on detection, because if a compromise to the system can be detected and contained, then an intrusion has no impact. He said that it usually takes some time for an intruder to achieve a level of access that they can use to their advantage.

MR. BOB WILLIAMS asked for a couple of examples of problems with something like what this pension fund is working with; MR. KING answered that he was going to talk about the State Street threat landscape as compared to their peers, but the types of things an attacker may try with them would be a compromise of the interbank funds transfer system to transfer money that would, as seen in the past, be unrecoverable. He cited the example of the Bank of Bangladesh that was attacked through the SWIFT system, and said those are the types of things they are guarding against: advanced cyber criminals who have the skills to navigate a network and hide for a long time. Also, he said business e-mail compromises are almost impossible to prevent, and it's incumbent on the customer or user to avoid such scams.

MR. KING discussed how their threat intelligence function shares information to help prevent further damage from threats they have identified. Threat intelligence vendors are one of the managed services they use, which can filter data and format it for a specific organization, and enable quick searches.

MR. KING detailed their assessment and penetration testing functions. The Red Team Assessments is the team that periodically scans through all of their applications and attempts to break in and then generates reports that are sent to those stakeholders or owners, indicating what they need to remediate, and there is a governing function that ensures things are remediated to closure. State Street does their own penetration tests and has third parties do them as well, from one to three times a year. He said there are always lessons learned and they try to raise the bar the next time. The Blue Team Assessments advise people who are building new applications or infrastructure as to what security controls should be in place and what type of security architecture it should fit within.

MR. KING said that their security operation center gets about 30 to 50 alerts per day, or 5,000 per quarter. About 80 percent are nonmalicious events, and some are malware threats, but about 5 to 10 percent are hacking attempts, and then they block the IP address or the source. MR. BRICE asked whether they are able to identify who is doing it, and MR. KING replied that they don't pursue it to that level, because it is difficult, though they do sometimes have insight from the threat intelligence data. CHAIR JOHNSON asked if there are types of hacking or malware threats that they are obligated to disclose to some regulatory agency or the government; MR. KING replied that they are not obligated to disclose every attack, but if it was a persistent or significant intrusion, they would be required to report it to the government. He said nothing like that has happened in at least three years.

MR. KING said that since people have to do their jobs, systems and software are an inevitable source of vulnerability, so they have a robust training program in general security and privacy which is mandatory for everyone who has access to State Street systems, including contractors, but not clients or users. They also have a firm that does phishing simulations, in which it sends phishing e-mail to employees, and if they click on the bait, they are instantly redirected to training.

MR. KING discussed third-party risk management, which is used any time a third party relationship causes the third party to have access to State Street data. They do a due diligence review of the vendor, note any findings, and have those findings registered with State Street's governance team to ensure that they are followed up on and remediated. He discussed their evolving data loss prevention technologies, and a network segmentation redesign to protect their critical server technology from the general network, which should take another year and a half to complete. He explained that their last line of defense is next-generation malware prevention by a product called SILENCE, and that is backed up by EDR, end point detection and response technology.

MR. WILLIAMS asked if someone specially wrote malware, as was done in Bangladesh, to crack State Street's systems, and it was lurking for a while, do they have a way to detect that? MR. KING answered that he could not say that they certainly would, but that's the major point of next-gen malware prevention; it is not dependent on having seen the same thing before or having access to a database that has. If malware tries certain activities, it gets flagged. MR. KING said they would be resistant to such an attack, but he would not say immune.

MR. COLLINS thanked the Board for listening to them, and said this is an ongoing dialogue, and every year they know new things and update staff.

CHAIR JOHNSON thanked them all, and the meeting went off record from 1:49 p.m. until 1:52 p.m. while preparations were made for the next item.

19. INVESTMENT ADVISORY COUNCIL FINALISTS

MR. BRICE explained that earlier this summer a committee was formed including him, MS. HARBO, and MR. BRICE to review a list of candidates for the open IAC seat. They narrowed down the list to the top three, whom the Board will interview today. The committee prepared six questions to ask of each candidate, after which the Board may ask further questions. Each candidate will have a few minutes to introduce themselves, and the time allotted is 30 minutes per interview.

A. David Kushner

MR. BRICE introduced himself to MR. KUSHNER and explained how the interview would be structured.

MR. KUSHNER said that he had spent the bulk of his career either working for or managing assets for public pension funds after starting out in the corporate investment world and finding that often the companies' objectives were not the same as the clients'. He became CIO of the San Francisco

Retirement System in 2001, and after a little over ten years moved to the Los Angeles County fund, with a personal mandate of trying to help them move forward and be more professional and more innovative. He said he has experience in setting up training operations and running asset management organizations as their public funds CIO, and has been all over the business, background which would lend itself to this type of position.

MS. HARBO asked: Is there anything that has occurred since you submitted your very complete application that would change your responses? MR. KUSHNER said absolutely not.

MS. HARBO asked: How do you view your relationship with the Board as compared to the staff?
MR. KUSHNER replied that he thinks it's similar both ways. He mentioned that the purpose of the IAC is to support, counsel, and advise, making sure staff understands the Board's intentions and assisting the Board in understanding staff recommendations. He said that when esoteric and complicated investment strategies come up, people who are not investment professionals may need help to understand, and he views this role as a facilitator in that process.

MR. BRICE asked: What are some of the key challenges in defined contribution plans, and how should a fiduciary address them?
MR. KUSHNER answered that the key problem in DC plans right now is lack of participation, so organizations need to educate people to convince them that it's in their best interest to put their money in. Also, he said he's seen plans that have too few options, or so many options that it's confusing. The third issue he noted is the small percentage of people who make frequent changes in their portfolio, and he said there are a number of ways of addressing each of those.

MR. BRICE asked: What investment skill or knowledge do you expect the ARM Board to find most valuable if you are selected to serve on the IAC?
MR. KUSHNER replied that he is intimately familiar with every asset class out there, and has had to do due diligence himself on opportunities in virtually every asset class that exists. He said that his breadth and depth of knowledge across the spectrum helps with understanding issues and with brainstorming new ideas. He noted that some of the awards that he won in San Francisco were for creating new strategies to access markets that public funds historically couldn't access, and that ability to generate ideas and figure out how to implement them is one of his key skills.

MR. WILLIAMS asked: What asset class do you find most interesting and why?
MR. KUSHNER answered that in private equity, a number of new strategies are being created, many of which are very exotic and complicated and don't need to be, and there are ways to strip them down. The other most interesting asset class is real assets, he said, and mentioned that he has been advising the World Gold Council for the last two years, though his contract has expired, and it opened his eyes to what gold can do to a portfolio. He said gold is a very interesting diversifying asset in that it has negative correlation to everything in the world and positive correlation to rising markets.

MR. WILLIAMS asked: Please provide a story or example where you've worked with a team or board, and you were personally instrumental in helping to achieve a positive outcome or avoid a failure.
MR. KUSHNER replied that going back to his experience in San Francisco, in the mid-2000s, none of the top-tier venture capital or private equity firms wanted to do business with public funds because

they were afraid of the disclosure issues and their information becoming public. MR. KUSHNER said that he worked with the board and the city attorney and the executive staff to create a structure that would allow them to invest in those through a third-party intermediary at a very low fee. Some still objected to the fact that the information would become public after five years, but he said he convinced them that there was no good reason not to disclose to the public how their investments were doing, and all but two ultimately agreed to do business with them.

CHAIR JOHNSON asked: Do you perceive any problems attending the meetings of the Board up here in Alaska when and if called?
MR. KUSHNER replied not at all, he is on the West Coast and it's not a long flight.

MR. KUSHNER concluded that he is very interested in continuing to participate and use his background and skill set to help beneficiaries and plan-sponsoring taxpayers make sure that funds are properly managed and maximize return at an appropriate level of risk. This would be an opportunity for him to continue to give back to the public as he has for most of his career, and he appreciates the opportunity.

MR. BRICE thanked MR. KUSHNER for his time.

CHAIR JOHNSON recessed the meeting from 2:09 p.m. until 2:26 p.m.

B. Ron Barin

MR. BRICE introduced himself and explained how the interview would be structured, then invited MR. BARIN to introduce himself.

MR. BARIN explained that he is the former chief investment officer for two large corporate clients, most recently for the Alcoa Corporation Pension Plan, which covered DB, DC, and foundation. He was responsible for managing investment strategy and having that strategy fit into a larger framework. Before Alcoa he was the chief investment officer for five years of another DB, DC, and foundation plan, and was deputy CIO for three years. He also worked in financial management of REITs for various corporations, managing foreign exchange risk, interest rate risk, and out-of-party credit risk, and he was a risk management consultant for a couple of years.

MR. BARIN said that he helped move Alcoa from an old to a new paradigm by using the breadth of his investment knowledge and critical thinking skills and his ability to think about risk in many different dimensions. The new investment strategy was fully integrated to the plan's liabilities and to the plan's sponsor. He said his ultimate goal was to make sure that the investment risks and the plan's sponsor risk wasn't highly correlated, so the investment risk wouldn't bankrupt the plan's sponsor, which was a unique approach.

MS. HARBO asked: Is there anything that has occurred since you submitted your application that would change your responses?
MR. BARIN said no.

MS. HARBO asked: How do you view your relationship with the Board as compared to the staff?

MR. BARIN answered that he views the board's role as setting the overall mission, and he discussed how in the past he had a good relationship with the board and they had good boundaries so the board didn't get too involved in the CIO's job. He said that his job was to make sure that staff was able to achieve the objectives and the mission, making sure that they were accountable and achieved what they intended to do, and that they learned from their mistakes and had an adaptive culture.

MR. BRICE asked: What are some of the key challenges in defined contribution plans, and how should a fiduciary address them?
MR. BARIN replied that the DC world is pretty complex, since the investment risk has been thrown to the participants, and participants generally don't have the skill set needed to manage that risk successfully over the long term, so they need help and tools to achieve a successful outcome. He said that his job as CIO was to select the investment options they had to choose from, and his philosophy was to give them the ability to diversify their investments across asset classes and between active and passive strategies, and to give them efficient options. MR. BARIN said that fiduciaries should find the best options with the lowest fees, and work with HR to make sure the proper educational tools are in place and that the plan is designed to enable participants to have the highest level of success. Also, DC plans are good at accumulating assets, but there is still the question of how to handle those assets in retirement, and at Alcoa they were considering providing different solutions, but didn't actually reach closure on it.

MR. BRICE asked: What investment skill or knowledge do you expect the ARM Board to find most valuable if you are selected to serve on the IAC?
MR. BARIN said that one is the fact that he takes an integrated approach, not only looking at returns but also at risk-deducted returns, relative risks, and risk per se or investment risk relative to liabilities. He said he also brings a lot of strength in scenario analysis and stress testing, and looking at investment problems holistically. Also, he views investment policy as the most important factor given a long time horizon, though there are often challenges that tend to lead to more short-term thinking.

MR. WILLIAMS asked: What asset class do you find most interesting and why?
MR. BARIN answered that he finds equities the most interesting, because they are very challenging and everybody is still trying to figure out what the long-term equity risk premia is relative to the risk-free rate, which has some big impacts on the strategic asset allocation. He added that another interesting area is the question of active versus passive, expressing his view that if managers with long-term outperformance can't be found, investors need to go passive.

MR. WILLIAMS asked: Please provide a story or example where you've worked with a team or board, and you were personally instrumental in helping to achieve a positive outcome or avoid a failure.
MR. BARIN told about an LGI strategy at Alcoa when their funded status was 75 percent, and he came up with a solution that was not used by any of his peers, but which was approved by the CFO and the investment committee and board of directors after he educated them. The action freed up around 35 percent of the plan assets which he was able to reallocate to the growth portfolio, enhancing the ability to generate a higher return. He went on to say that it was a complex program to run and to report on, but he was able to overcome those challenges with a lot of hard work from staff and their outside advisor, and a lot of education with management.

CHAIR JOHNSON asked: Do you perceive any problems attending the ARM Board meetings as they're scheduled, particularly since you're coming all the way from the East Coast?
MR. BARIN said he didn't see any problems at all; it fits into his schedule, and is a great opportunity for him.

MR. BRICE offered MR. BARIN a few minutes to wrap up or to ask the board questions.

MR. BARIN asked: Would you say the Board has the proper boundaries, vis-à-vis delegation and monitoring, versus managing? CHAIR JOHNSON answered yes.

MR. BARIN asked: What does the Board, the IAC, and the CIO team do well, and what can they do better? CHAIR JOHNSON answered that they are always working with the issues that have been discussed and looking for better solutions, and that's why they have an Investment Advisory Council to give advice on those things. MR. BRICE added that there seems to be a great deal of conversation and engagement from all three groups, and that it's a very cooperative and collegial relationship. He added that he thinks the Board places a tremendous amount of trust in the staff and the IAC.

MR. BARIN asked: Is there a well-defined set of investment beliefs that the Board and management buy into, or is that something you're looking to put into place at some point? CHAIR JOHNSON answered that they do have guidelines, and they certainly discuss their general philosophies and so on. Working with CIO Mitchell, they set guidelines, objectives, and goals, and while the success of those is in the eye of the beholder, he thinks they work toward all that. MR. BRICE added that the Board, in conjunction with the IAC, their consultants, and the leadership of the CIO is undertaking a pretty dramatic transformation at this stage, and he thinks it has potential to lead to great things for the beneficiaries. MR. BARIN then asked if the Board tries to limit the typical behaviors of these groups. MR. BRICE replied that they needed to wrap up, and offered him three minutes for closing remarks.

MR. BARIN said that he is looking to become a member of the IAC for a number of different reasons: to enhance his investment knowledge and skills, to grow intellectually, and to get back to working with the community. He thinks he can translate the experience and deep knowledge he has as a former CIO to the IAC and add a lot of value. He pointed out that he comes in with a different perspective than most CIOs, having been willing to challenge the status quo to come up with better solutions. He said he has a continuous improvement mindset, always questioning things and whether there is a way to do something better. He said he comes with the ability to be a sounding board for manager selection, and with a lot of skills in risk management.

MR. BRICE thanked MR. BARIN for his application and for the time he's shared in giving insights and participating here.

The meeting went off record from 2:56 p.m. until 3:00 p.m.

C. Ruth Ryerson

MR. BRICE introduced himself and explained how the interview would be structured, then invited MS. RYERSON to introduce herself.

MS. RYERSON said that she just retired in July after six years as the executive director of the Wyoming retirement system, before which she was with the Fort Worth employees retirement fund for seven years and with Colorado Fire and Police for twenty years. She said that effectively she has been running pension funds for 32 years. In Wyoming, they had full delegation from the board to the staff on the investment function, other than asset allocation, and she worked closely with the investment team that did hiring, firing, and reallocations. She emphasized that she is not a CFA, but has been involved in oversight of the investment function from a governance perspective.

MS. HARBO asked: Is there anything that has occurred since you submitted your application that would change your responses?
MS. RYERSON said no, nothing is any different.

MS. HARBO asked: How do you view your relationship with the Board as compared to the staff?
MS. RYERSON said she always felt like she was the go-between between board and staff, making sure actions were implemented as directed and making sure that staff communicated well with the board. She was also the primary liaison with the legislature to explain any of their investments of benefit issues. She said she had a great relationship with the board, and would have retired a year earlier, but they talked her into staying.

MR. BRICE asked: What are some of the key challenges in defined contribution plans, and how should a fiduciary address them?
MS. RYERSON said with defined contribution, she assumes participation is mandatory, which is good, but the challenge is accumulating sufficient assets to be able to retire in the same manner that the defined benefit participants can. She said they had found it very successful when employees are put into an option; they had a 98 percent stick rate with auto-enrollment. Then they had to make sure employees understood the drawdown on their assets once they retired.

MR. BRICE asked: What investment skill or knowledge do you expect the ARM Board to find most valuable if you are selected to serve on the IAC?
MS. RYERSON replied probably from the administration and governance perspective, understanding how the actuarial rate works with the investment function and how that impacts the long-term viability of the fund. Also, the need for liquidity with the closed defined benefit plans is key, she said. She added that she thinks her experience with the deferred compensation plan would help with the DC, and said she thinks education is important because many members get confused by the options.

MR. WILLIAMS asked: What asset class do you find most interesting and why?
MS. RYERSON answered that she thinks alternative investments are most interesting, because they are so varied and so different. It takes a lot more time to look at the due diligence, the liquidity terms, and the legal issues, making it more of a challenge to ensure good investments in that area. She mentioned a challenge she had when she got to Fort Worth and spent her first three years trying to get them out of some pretty awful hedge funds, so she is more cautious in looking at alternatives now.

MR. WILLIAMS asked: Please provide a story or example where you've worked with a team or board, and you were personally instrumental in helping to achieve a positive outcome or avoid a failure.

MS. RYERSON said that she thinks their biggest success was the past legislative session. In Wyoming, it is hard to recruit and retain top investment professionals, so they worked with the University of Wyoming to create an intern program. Then their biggest success was working with the legislature getting incentive compensation put in, which would be 2 percent of the additional value added to the portfolio over the benchmark. This is the first year that the team will be eligible for the incentive compensation, and MS. RYERSON said it was a good way to end her career there.

CHAIR JOHNSON asked: Do you see any problems with attending the ARM Board meetings up here in Alaska as scheduled in terms of your ability to be available and such?
MS. RYERSON said she does not, and that she is very available. She said the big appeal of this position to her is to be able to continue in public service, because after a whole career in public service, it doesn't feel right to just walk away from it.

MR. BRICE asked about a ship's compass that he could see in the background; MS. RYERSON said it was from Admiral Byrd's ship, and her grandfather had collected it. MR. BRICE offered her a few minutes for closing remarks.

MS. RYERSON said she thought she should tell the Board that she had worked for many years with their consulting actuary, Leslie Thompson, and with Paul Erlendson. She said she had looked at the Board's agenda, and she knows they have talked to a couple of CFAs for this position, and her skill set is very different from theirs. She has always been the oversight body and the communicator with the Board and the legislature. She said she thinks if they have a good investment staff, what the staff needs from the Board is support and encouragement, and collaboration is extremely important. Everyone needs to be working toward the same goal, which is to look out for the plan members.

MR. BRICE thanked MS. RYERSON for her time.

CHAIR JOHNSON said that he would entertain a motion to go into Executive Session for the purpose of comparing issues concerning individuals where privacy is appropriate.

<u>MR. WEST so moved.</u> <u>MR. WILLIAMS seconded the motion.</u>

A roll call vote was taken, and the Board went into Executive Session from 3:15 p.m. until 3:44 p.m., including DOR staff, IAC staff, legal counsel, and representatives from Callan.

D. Board Discussion and Appointment

After the Executive Session, <u>MR. BRICE moved that the Board appoint Ruth Ryerson to a three-year term on the IAC commencing after the acceptance of the position by contract and based on the terms and conditions set forth in RFS 19-009.</u> <u>MS. HARBO seconded the motion.</u>

A roll call vote was taken, and all Trustees voted yes except MR. HIPPLER. <u>The motion carried,</u> and CHAIR JOHNSON declared that Ruth Ryerson was appointed to the IAC, subject to the satisfaction of the various terms in terms of engaging in that contractual relationship.

UNFINISHED BUSINESS

None.

NEW BUSINESS

New Business was covered between Items No. 17 and 18.

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD

None.

PUBLIC/MEMBER COMMENTS

None.

INVESTMENT ADVISORY COUNCIL COMMENTS

DR. JENNINGS commented that after the presentation they just saw, he is going to update his antivirus and worry more about cyber security. He complimented staff and the Board for bringing that forward, and said he hadn't seen a presentation like that at any of the other investment committees he's been involved with.

DR. JENNINGS also said that substantial progress has been made on rationalizing the investment program and manager structure, but now the burden of oversight has changed, and everyone needs to work toward exercising good oversight of internal programs. He said that at yesterday's IAC Manager Review meeting, he had encouraged staff to think about what they would consider as ideal oversight of internal management, and now he would encourage the Board to think about that too.

He also said that he'd been thinking about how part of the oversight done by Callan and staff of external managers is going through their facilities, and he noticed that he hadn't been over to the DOR since Judy was on the staff, and he thinks physically seeing the environment is important. He added that he realized while watching Victor and Casey how little he knows of the other people on the fixed income team. Thus he encouraged everyone to walk the 500 feet to the east to visit the office where they all work and have some familiarity with it.

TRUSTEE COMMENTS

None.

FUTURE AGENDA ITEMS

None noted.

ADJOURNMENT

There being no objection and no further business to come before the board, the meeting was adjourned at 3:55 p.m. on September 20, 2019, on a motion made by MS. HARBO and seconded by MR. WEST.

Chair of the Board of Trustees
Alaska Retirement Management Board

ATTEST:

Corporate Secretary