State of Alaska ALASKA RETIREMENT MANAGEMENT BOARD MEETING

Videoconference

MINUTES OF May 1, 2020

Friday, May 1, 2020

CALL TO ORDER

CHAIR ROBERT JOHNSON called the videoconference 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 Lucinda Mahoney
Commissioner Kelly Tshibaka
Norman West
Bob Williams

Board Members Absent

None

Investment Advisory Council Members Present

Dr. William Jennings Dr. Jerry Mitchell Ruth Ryerson

Department of Revenue Staff Present

Bob Mitchell, Chief Investment Officer Pamela Leary, Director, Treasury Division Kayla Wisner, State Comptroller

Zachary Hanna, Deputy Chief Investment Officer

Scott Jones, State Investment Officer

Stephanie Alexander, Board Liaison

Steve Sikes

Michelle Prebula

Grant Ficek

Sean Howard

Shane Carson

Ryan Kauzlarich

Department of Administration Staff Present

Kevin Worley, Chief Financial Officer, Division of Retirement & Benefits Ajay Desai, Director, Division of Retirement & Benefits

Consultants, Invited Participants, and Others Present

Stuart Goering, Department of Law, Assistant Attorney General

Paul Erlendson, Callan Associates, Inc.

Steve Center, Callan Associates, Inc.

Erick Shirbini, Scientific Beta

Mark Zeigler, Scientific Beta

Henry Disano, State Street

Molly Soares, State Street

Elaine Schroeder

Doug Woodby

Rick Steiner

PUBLIC MEETING NOTICE

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

APPROVAL OF AGENDA

MS. HARBO moved to approve the agenda. MR. WEST seconded the motion.

With no objections, the agenda was approved.

APPROVAL OF MINUTES

MS. HARBO moved to approve the minutes of the March 19, 2020 meeting of the ARM Board. WEST seconded the motion.

With no objections, the minutes were approved.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS AND APPEARANCES

MS. ALEXANDER stated that there were no communications the Board needed to know of, and there were three people who wanted to testify.

DOUG WOODBY said that he and his wife are beneficiaries of the TRS and PERS pension programs, and they thank the Board for their efforts to protect and grow these pension funds. He said he hoped they had seen his written comments that he submitted Wednesday, and requested that his full comments be included in the minutes, noting that he submitted comments for the March meeting, and they were not included in the minutes.

He said the gist of it is his belief that the defined benefit fund, and all funds under their purview, should be cleansed of fossil-fuel-related investments, because performance data are clear. Traditional energy investments have seriously underperformed the overall market for at least a decade, and they've been in a downward trend for four years, punctuated by the recent collapse. He said the numbers justify divestment for fiduciary reasons alone, not to be confused with environmental, social, and governance concerns. He said his submitted testimony includes graphics showing why the divestment is justified, and lists seven types of fiduciary risk that the Board now faces if the funds continue to be invested in fossil fuels. MR. WOODBY said that neglecting those risks may constitute a breach of fiduciary duty, while divestment would be an important stop to protect the long-term value of the funds. Thus, the question could be raised as to why, from a fiduciary neglect perspective, pension funds continue to have investments in fossil fuels.

ELAINE SCHROEDER from Juneau said that her husband is retired from the Alaska Department of Fish and Game, and they are beneficiaries of PERS. As a beneficiary, she is naturally concerned about the performance of the pension fund, especially in light of the many years of poor energy sector performance, not to mention the current crash of fossil fuel stocks. She said the growing awareness of climate risk to public funds has motivated a growing number of pension funds in the U.S to divest from fossil fuels. She quoted a couple of statutes, and said that as co-chair of the nonprofit 350 Juneau, they have requested information about the ARM Board's energy sector assets, about their climate risk assessment process, and about the performance of all energy sector holdings of the fund over time. They have not yet received a response, and are asking again for this information, emphasizing that this is for financial reasons and not for ESG concerns at this time.

MS. SCHROEDER noted that regarding fiduciary neglect risk, there are institutionally respected tools to assess climate risk, and backward looking fiduciary assessments may be legitimately faulted for neglect of the state of knowledge.

MS. SCHROEDER asked that the ARM Board demonstrate transparency and responsivity to the concerns of beneficiaries by responding to their request for information. She thanked the Board for their efforts to protect pensions, for the long hours they spend ensuring the financial security of Alaska retirees, and for their attention to beneficiaries' concerns.

RICK STEINER said he is a TRS retiree from the University of Alaska, and he echoed what MS. SCHROEDER and MR. WOODBY said, and encouraged the Board to take their suggestions very

seriously. He said that he too would like the funds that the ARM Board manages to divest of all fossil fuel holdings as a fiduciary obligation. He said they've been asking for this with the Permanent Fund and DOR funds for over 25 years, and they did receive a letter in 1997 from the Commissioner of Revenue laying out the fiduciary obligations of the State of Alaska in managing these funds. At that time, he said, it may have made sense to hold fossil fuel investments because they were a growing asset class, but in the last decade they have been losing value considerably, particularly in the past few months. MR. STEINER said that many funds have divested of fossil fuels because of the financial risk, and the Permanent Fund has admitted that they have been losing money in fossil fuel investments, but have not yet divested. In closing, he asked the Board to put this issue on their agenda for the next meeting, and between now and then to direct staff to analyze and report the performance of their fossil fuel holdings and analyze the future risk of them, and to have an action item on the agenda to consider divestiture.

CHAIR REPORT

CHAIR JOHNSON said his report was encapsulated in a letter drafted largely by CIO MITCHELL and MS. LEARY, included on the website for the ARM Board, which is to beneficiaries and members of the funds regarding the impact of COVID on investment and going forward.

CHAIR JOHNSON thanked MS. ALEXANDER and other DOR members who have been so helpful in creating the teleconference mechanisms, and said the Board appreciates the efforts of all the state employees, including DOR and DRB staff who are working diligently from home.

COMMITTEE AND LEGAL REPORTS

1. AUDIT COMMITTEE

CHAIR JOHNSON said the Audit Committee had a brief and informative meeting the previous day, with the primary purpose of getting a rundown on further employer audits. He said that some participants in the plan have been negligent in tendering funds back to PERS, not only employer contributions but also monies withheld from employees. CHAIR JOHNSON reported that steps are being taken to determine the best and most appropriate way of actually taking definitive action regarding some of these non-payers, and of course, notice to employees is an important part.

CHAIR JOHNSON said they heard further reports from MR. WORLEY regarding GASB 68 and 75 reports concerning benefit payments and adjustments, and they heard that the audit process was going to be started earlier so as to be completed sooner than in the past. Also, MR. MCKNIGHT of the DOR provided a compliance report and update, and KAYLA WISNER, Treasury Department Comptroller, provided a further update on indirect foreign exchange services, the point of which was that the expenditures for the FX plan that is underway are comparable with other alternatives.

2. OPERATIONS COMMITTEE

MR. BRICE reported that the Operations Committee had a two-hour meeting with presentations from MS. LEARY on legislative actions and on the expenses for the ARM Board's operation. Also, he

said that SCOTT JONES gave an update on the Middle Office reorganization, and it seems like that strategy will be helpful to ongoing operations, and DOUG PETERSEN at Empower spoke on cybersecurity.

MR. BRICE said the Operations Committee also had a couple of action items, one about revising the Board policy manual to clarify some confusing language about travel, and one relating to the establishment of an Investment Committee.

3. DEFINED CONTRIBUTION PLAN COMMITTEE

MR. WILLIAMS said the DC Committee had a fantastic, exciting meeting, the longest ever at three and a half hours. He said that Chief Pension Officer KATHY LEA presented twice on her last day of work, and she also shared a lot of information on how to sign up for the State of Alaska's 457 plan. He said they also got updates from Empower on how their efforts to increase participation are going, and they had a presentation from EMILY RICCI on the DC Health Plan and from KEVIN WORLEY on the HRA plan and the associated interest, which hadn't been tallied since the plan started 14 years ago, but now has. A question was raised about how members can mitigate risk in their own accounts as they approach retirement.

MR. WILLIAMS said they also had a presentation with a possible action item for offering a Secure Foundation option, but it didn't pass. He said there is interest in some sort of guaranteed lifetime benefit, but they didn't think this was the best option.

MR. WILLIAMS said they had an overview from Callan on the stand-alone REIT, and discussion led to the idea that offering a brokerage window may be a better option to make such specialized investments available to members, and there will be an action item later.

MR. WILLIAMS said they had received public testimony about difficulty trying to withdraw money from just one investment account instead of having the withdrawal distributed equally among, for example, stocks and bonds. He hopes to have R&B address this issue, maybe by the next Board meeting.

4. ACTUARIAL COMMITTEE

MR. WEST reported that the Actuarial Committee had reviewed the current draft of all the various actuarial valuations, which incorporated the items brought up by GRS, and the final reports will be ready by the next meeting. Also, Buck went through their timeline for next year, and they reviewed some questions about the experience gains that the plans had as a result of changes in the prescription drug contract. The gains were over \$900 million, and Buck did a fairly extensive mathematical presentation on how those numbers were developed. They also answered the question of what portion of the retirement benefits were actually paid for by retirees, employers, and the state.

MR. WEST said that Buck presented a really cool actuarial dashboard that they've created, which the committee can't wait to have available to the Board and the staff and administration.

MR. WEST said the committee took up a proposal from DIRECTOR LEARY to extend the review actuarial contract pursuant to the options contained in the initial contract and to extend it for one year. That resolution was passed unanimously by the committee. MR. WEST moved on behalf of the Actuarial Committee for the approval of the GRS one-year extension.

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

5. RETIREE HEALTH PLAN ADVISORY BOARD

MS. HARBO submitted a written report, which was included in the meeting packet. She added that she wanted to thank the Division of Retirement and Benefits, and particularly the healthcare team, for the excellent town halls, which have kept retirees up to date on happenings like changes from Aetna and Medicare. She thanked EMILY RICCI and all the people on the healthcare team with DRB.

6. LEGAL REPORT

STUART GOERING noted that it was Law Day, commenting that the robust legal system supports economic activity and makes it possible for people to do business with one another in an organized and reliable way.

MR. GOERING said they have a new assistant attorney general who will be handling securities litigation matters on behalf of the ARM Board and the Alaska Permanent Fund Corporation. His name is BEN HOFMEISTER, based in Juneau, and he probably won't be interacting with the Board very much initially, but there has been a large increase in litigation involving securities fraud, including overseas, and it has become difficult for MR. GOERING and CHRIS POAG to deal with, so now they have some help. He said this position is funded in large part by APSC.

MR. GOERING said he had three cases to report on, none of which the ARM Board is a party to but which are of interest. The first is Metcalfe v. State, which was argued in February and is still pending in the Alaska Supreme Court. This involves the claim that former plan participants who cashed out of DB plans might have the ability to come back into the plans in the future.

Two trial cases are pending, one involving changing retiree dental benefits, which is in the post-judgment phase, and another in the discovery phase involving retiree health benefits that arose out of the 2014 change to Aetna as the third party administrator.

MS. HARBO asked if they know how many people could potentially be affected by the Metcalfe case; MR. GOERING replied that they don't know how many of them are still alive, or whether they would be eligible for reemployment, or whether they would seek reemployment, so it is extremely difficult to assess the potential impact. He noted that the case was decided on summary judgment, and the Supreme Court will decide whether the summary judgment will stand. If it doesn't, they will have to go back through the discovery process and a trial, so they would have a lot more information before there would be a potential judgment that would be adverse to the state. MS. HARBO asked if they knew how many people had withdrawn their money; MR. GOERING replied that he doesn't, but he would follow up on that.

MINUTES, CALENDAR/DISCLOSURES, AND STAFF REPORTS

7. APPROVAL OF MINUTES: March 19, 2020

The minutes were taken up out of order, after approval of the agenda.

8. CALENDAR UPDATE

MS. ALEXANDER stated that the 2020 meeting calendar is in the packet, but it is still uncertain whether the June meeting will be in-person or similar to this videoconference.

CHAIR JOHNSON noted that staff reports would normally include a report from DRB and from MR. JONES and others, but those were delivered at the March 19 teleconference. MS. HARBO requested a quick update on the amount of money in the funds and the amount that is managed internally; MR. MITCHELL said the balance of the plans is over \$25 billion, with approximately half managed by internal staff.

EXISTING BUSINESS

9. PORTFOLIO UPDATE

CIO BOB MITCHELL started by saying that the intent of this meeting is to get some of the business done that was scheduled for the original March meeting, and because of how quickly things are changing, he has taken on the task of providing updates on the portfolio. He said he would review what's been happening with the fundamentals of the economy and policy reactions, review the impact on the markets, discuss challenges with managing portfolios primarily with illiquid assets in them during periods like this, review the asset allocation, and finish with a list of current projects that staff is working on.

MR. MITCHELL showed some charts, acknowledging that information is quickly becoming outdated these days, and stated that in six weeks, 10 million more jobs have been lost than were generated in the economy in the past decade. Estimates of impact on GDP growth vary, but have dropped from pre-COVID estimates of over 3 percent growth to projections of negative 4 to 5 percent. Estimates for the second quarter vary from down 30 to down 40 percent, which is a significant and unprecedented drop for one quarter. However, he said, generally speaking, forecasts are calling for an improvement in the economy in the second half of 2020 and into 2021, though not a full recovery. He reviewed fiscal support measures taken in a variety of countries, with very swift and strong responses, and went over what the Fed has done in the U.S. He reviewed market impacts and interest rate declines, noting that at one point for the first time ever, Treasury yields were below 1 percent, though they have since normalized a bit to 1.2 percent for long bonds.

MR. MITCHELL went over all yields, showing how they have varied over time with high yield being more volatile than investment-grade bonds. He said that roughly 11 percent of the high-yield market is comprised of energy-related bonds, which are very likely to experience impairment in the current environment. He reviewed the performance of equities, and showed charts demonstrating the

volatility of late, which though significant is not unprecedented in history. He said that liquidity had diminished significantly, but has come back in part because of the Fed's actions to purchase a variety of bonds. He noted that there were points when Treasuries were trading by appointment, which is unthinkable from a liquidity perspective, since those are the most liquid instruments in the marketplace. He emphasized that the performance for the market value of illiquid assets will likely be slower to reflect the recent changes. He said that managing a portfolio with illiquid assets makes it more difficult to assess asset allocation relative to target, and it's important to communicate how staff is approaching the portfolio allocation. He said they are being mindful of liquidity, and if they want to make changes, they are spreading them over several days, and they are managing from a risk perspective, striving to maintain a risk posture that is similar to that of the strategic asset allocation.

MR. MITCHELL then discussed current staff initiatives. IAC, Callan, and staff have been talking about the annual asset allocation exercise, which will be brought to the Board in June. They've been going through manager structure with the implementation of investments in various asset classes, and real assets is the next to do, but they are going to wait for liquidity to improve before they come to the Board with recommendations on that. He also said he's asked the head of Opportunistic, STEVE SIKES, to do a review, which may be presented in June, and said that staff has concluded their evaluation of active currency overlay managers and are not recommending engaging such a strategy now because the return would be relatively low and doesn't justify the increase in complexity. Regarding risk parity, the first quarter is presenting a good lab experiment to see how those strategies did, and he expects staff to complete their review in the next week or two, then depending on their conclusions, may recommend hiring one or more managers or not pursuing that strategy at this time.

MR. MITCHELL said that the Board would get a rather detailed explanation at this meeting of equity factor implementation, which is a significant part of their manager structure in public equities, so it's important to periodically review it, and in June staff may recommend some adjustments to the implementation. He also noted that in December, Acting Commissioner Mike Barnhill asked staff to evaluate ARM Board's foreign currency execution against peers, and they are also working on the question of how ESG considerations should be incorporated into the investment decision-making process. Finally, he added that each June he asks STUART GOERING to provide a brief overview of Trustees' fiduciary responsibilities, which will also be at the next meeting.

CHAIR JOHNSON recessed the meeting from 10:30 a.m. until 10:45 a.m.

10. SECURITIES LENDING UPDATE

MICHELLE PREBULA said that the ARM Board has been in and out of securities lending since 1991, in from '91 to '95, in from 2001 to 2008, and they restarted the program in 2017. She introduced HENRY DISANO, manager of the relationship management team at State Street, to explain what they are currently doing in the program.

MR. DISANO said that one of the main reasons their clients participate in securities lending is to gain additional alpha. The revenue helps offset custody costs and outperform peers. He said the vast majority of state pension plans are involved in securities lending, which adds liquidity to the various markets.

MR. DISANO explained that securities lending entails transferring ownership to one of the borrowers in State Street's program, while still retaining the rights of ownership. The borrower is always contractually obligated to return securities at any point that the lender needs them back, and the securities that State Street lends are always collateralized with cash.

CHAIR JOHNSON asked about the risks to the lender if the borrower were to go into bankruptcy; MR. DISANO said that the industry has evolved to the point that he believes every single provider of securities lending offers counterparty default indemnification, plus they have the cash collateral. However, if the borrower were to go bankrupt and the security was worth more than the collateral, State Street would make up the difference.

MR. DISANO then described how the transaction is carried out, and how the collateral would be invested in the lender's cash collateral vehicle, which in this case is the Navigator government money market fund. If the price of the security appreciated, the lender would receive additional collateral, which is now done automatically. At the end of the transaction, the securities lender returns the cash collateral but keeps the income they've made by investing it, which is split 80/20 with State Street.

MR. DISANO said that State Street is the most experienced securities lending agent in the business, with 45 years of experience, and currently about \$4.5 trillion in lendable assets. He said they currently have 251 active clients, with 157 borrowers, and they are lending in 34 markets in a global program.

MOLLY SOARES then discussed the Alaska securities lending program, started in February of 2017, and accepting only cash collateral. MS. SOARES said Alaska is currently only lending to non-GMSLA, or Global Master Securities Lending Agreement, borrowers. Since inception, Alaska has generated a little over \$6.5 million in revenue, with \$1.3 million in 2019. She said that as of March 31, 2020, they had \$10.8 billion in lendable assets and \$22.8 million on loan, and currently they are returning about 220 basis points. She said the ARM Board currently has 50 funds that are authorized to lend, and nine of those have active balances as of March 2020.

MS. SOARES showed a performance summary, with a dip in lendable assets when the program was restructured in late 2019, which in conjunction with muted borrower demand resulted in lower Q1 numbers, which she said would probably be what could be expected going forward.

MR. DISANO then talked about risks to consider, including the reinvestment risk, which is the main one, though Alaska is invested in their most conservative investment vehicle. Other risks are credit risk, operational risk, and legal risk. MR. DISANO described resources State Street has dedicated to risk management, and said the program has certainly been tested over the years, including with the current crisis, and they have not seen any impacts to their overall securities lending program.

11. EXECUTIVE SESSION

The executive session was off record from 11:16 a.m. until 12:00 p.m.

After the Executive Session, roll call was taken again. All Trustees except COMMISSIONER

TSHIBAKA were present.

In response to a realization by CHAIR JOHNSON, MR. GOERING explained that the Board had not voted to go into Executive Session; what should have happened is the Board should have entertained a motion to go into Executive Session, and the reasons for the Executive Session should have been stated, probably in this case for consideration of matters the immediate knowledge of which would clearly have an adverse effect on the finances of the public entity. The effect of that defect is that any action taken is voidable; however, the same section of statute provides that if the governmental body has violated or is alleged to have violated the Open Meetings Act, the entity can cure the violation by holding another meeting that is in compliance with the notice. MR. GOERING said that in this case, the Board could vote now to go into Executive Session and to ratify the decision effective to the beginning of the Executive Session.

MS. HARBO moved to go into Executive Session concerning matters the immediate knowledge of which would clearly have an adverse effect upon the finances of the public entity. MR. WILLIAMS seconded the motion. A roll call vote was taken, and the motion was unanimously approved.

CHAIR JOHNSON stated for the record that no directions or decisions were made in the Executive Session. MR. GOERING added for the record that his advice on the subject was based on the fact that the ARM Board has very consistently followed the Open Meetings Act with respect to Executive Sessions in the past. CHAIR JOHNSON said the lack of a vote to go into Executive Session prior to the session was an error of the Chair, and it wouldn't be done routinely.

CHAIR JOHNSON recessed the meeting from 12:08 p.m. to 1:00 p.m.

12. **REFLECTIONS**

DR. JENNINGS shared some historical reflections. He explained that he started on the IAC for ASPIB in 2003 in the academic slot, and he is also on four investment committees, and he advises a CFO who has sole responsibility as the trustee of a \$2 million pension, so he sees both the pension side and the nonprofit investing side. He said he appreciated the recent renewal of his relationship with the Board.

DR. JENNINGS said that "issue zero" for financial matters is that owners think differently than agents, and the principal/agent conflict colors pretty much all financial decision-making. The solution to the agency problem is to only take on relationships where the incentives are well-aligned. He said he realizes that he is an agent of the Board, and he thinks all members of the IAC understand their duty of loyalty to the Board. He said he thinks the IAC has gotten better during the second half of his time on it in understanding that they could and should spend time with Callan and with staff learning some details of the investment program and their ways of thinking. He noted that he wants to be involved with organizations that work to improve their investment operation, and he thinks the ARM Board is doing good things. He said there are times when it feels like the IAC isn't contributing, but then there will suddenly be an occasion where they are heavily engaged. He noted that investment committee expertise is different than investment expertise, and the thing to aspire to is good governance.

DR. JENNINGS reviewed the Board's history, noting that GAYLE HARBO and ROB JOHNSON, as well as JERRY MITCHELL and some staff, have been involved with ASPIB and the ARM Board over the whole timeline; also, the strategic asset allocation has not changed dramatically, and he said he is struck by that stability, and thinks it's good. However, he added that there has been change as in adding more international and alternatives and considering a lot of possibilities. The private programs have been built out, and real assets is now larger and more nuanced.

DR. JENNINGS commented that he attended the Defined Contribution Committee meeting the previous day, and he was struck by how much progress there has been on that front, with better, cheaper, and more understandable investment programs which he thinks participants will highly appreciate. He referred to an article by Jonathan Clements characterizing defined contribution as if a passenger were on an airplane, and suddenly were sent to the cockpit to fly the plane. Most people would be terrified.

Offering a bit of perspective, DR. JENNINGS said he thinks they've solved the first problem of fewer and bigger manager allocations, and they've made progress on the governance questions. He thinks it is appropriate to dig into particular topics in great depth, and he said he will continue to be an advocate for indexing and for more and more staff expertise. He noted that one of RUTH RYERSON's predecessors in that slot on the IAC, TIM O'BRIEN, had a list of questions to ask for new investments, which DR. JENNINGS expanded upon in his presentation.

Under thoughts for the future, DR. JENNINGS said it's important to focus on costs and oversight of internal management. He concluded by saying that he is optimistic and encouraged; he said he believes public funds, and particularly the ARM Board, can compete, and they are fortunate that the state makes its contributions, that they have a harmonious and functional board and good staff, and the size of the investment pool is large enough to be able to do some interesting value-added things, but not so big that they can't move the needle with significant allocations.

MR. BRICE thanked DR. JENNINGS for the analogy of flying a plane, saying that he's glad to hear that the IAC and others recognize that a major part of what the ARM Board needs to be doing or encouraging is educating people about their options. DR. JENNINGS noted that the target date funds are a good default option, but the menu can be a bit intimidating.

MR. WEST said he gets asked all the time, what is in those target date funds, who is managing it, and why should somebody trust them? But he noted that people have different comfort levels, and some people want different things, and some aren't afraid to fly the plane.

MS. HARBO thanked DR. JENNINGS and JERRY MITCHELL, both of whom she has known since 2003. She said she has always valued DR. JENNINGS' counsel and advice, and especially his willingness to serve on this board for so long, and she hopes he stays another 10 or 15 years.

MR. WILLIAMS said he really appreciated the presentation, and he's excited that DR. JENNINGS thinks he sees progress in the offerings for defined contribution members. He asked what is best practice for pension boards for oversight of internal managers and how would they know if they were doing it well; DR. JENNINGS said he doesn't have lots of experience with organizations large enough

to have internal management to the degree that the ARM Board does, but he thinks MR. MITCHELL is good about bringing staff to present on various components, and their sessions with Callan's separate analyses are also important. He noted that internal managers aren't subject to the various other scrutinies that external managers are, so it seems right to spend more Board time on that.

CHAIR JOHNSON commented that this is an important question, but nothing about the question of internal management is meant to, in the slightest, suggest that they don't have the highest degree of faith in BOB MITCHELL and his staff.

DR. MITCHELL said there will always be some asset classes where very specialized management is desirable, but he thinks for the most part that staff can do a really good job with the broader asset classes, and he thinks the oversight is sufficient and the results are great.

MS. RYERSON, asked for comment, said that in Wyoming they had started an incentive compensation program, so staff would be aligned to do the absolute best they could within the risk parameters set by the board, and so far it has seemed to work well. She said it's hard to do in a public fund, and it took a couple of years to get the legislature to approve it.

CHAIR JOHNSON thanked DR. JENNINGS for his presentation.

13. PERFORMANCE AUDIT RECOMMENDATIONS

CIO MITCHELL explained that the ARM Board has a statutory requirement to engage with an external or independent performance auditor every four years, and the Board recently contracted with Anodos Advisors to do that. Anodos presented their findings at the December Board meeting, and there were five recommendations. MR. MITCHELL said that after receiving Anodos's recommendations, he engaged with PAUL ERLENDSON at Callan to get their position regarding the recommendations, then staff deliberated and developed the following recommendations.

The first recommendation from Anodos was to create an easy performance dashboard to report to the Board the return and risk elements of the performance of the fund and asset class levels. Callan and staff agree, and MR. MITCHELL said staff's recommendation is to implement a performance dashboard in the performance reports and performance presentations Callan makes to the Board starting with the period ending no later than March 31 of 2020.

The second recommendation was for Callan annually to produce a fee dashboard which noted what the manager's agreed-upon fee is and how the agreed-upon fee compares to other managers within a peer group. Callan and staff agree with that recommendation, so their recommendation is to do this starting with the period ending June 30th, 2020. CHAIR JOHNSON asked if there were any contractual confidentiality issues with that; MR. MITCHELL said he wasn't aware of any, but if there were, they would redact that information.

MR. MITCHELL explained that the third recommendation was a repeat from Anodos's previous recommendations, that for the fixed income managers, Callan include each manager's credit quality, duration, issuer type, and geographic allocation. MR. MITCHELL explained that this would require

the managers to provide this data to Callan quarterly, and Crestline, a private credit manager, can't do that because it is private information, but the internally managed fixed income portfolio can provide that information, as well as the Fidelity tactical bond and real estate income strategies, so they intend to do it. He noted that the reason this was a repeat is that in the past there wouldn't have been much benefit for the trouble of putting all that information into the database because the implementation was against the intermediate Treasury index, but with the restructuring that has been done over the past year, it is now more appropriate to include this information.

MR. MITCHELL said that fourth, Anodos recommended that the ARM Board and Callan reconsider the frequency of valuations, going to daily versus monthly for public assets. MR. MITCHELL explained their current method, which is acceptable industry practice and is compliant. Both Callan and Anodos noted that the performance differences are modest, so Callan questioned the need to incorporate daily data, and they don't think it's worth the additional operational cost to do it, but they offered to lower the threshold from 10 percent to 5 percent.

MR. MITCHELL said that staff's recommendation is to not employ daily chain-link performance for public assets and to lower the cash flow threshold to 5 percent for chain-linking intra-period returns.

MR. WILLIAMS asked if this is best practice, because it seems like a lot of extra work with very little benefit; he questioned whether other pension funds are looking at daily valuations. MR. MITCHELL replied that certainly Anodos's view is that it is best practice, and that's why they recommend it, but he would let Callan speak. MR. ERLENDSON said Callan would agree that blank sheet of paper daily time-weighted rates of return would be the preferred way to do things; however, he said the challenge is that even Anodos's report points out that Callan's calculations are within 5 basis points, where there are exceptions, and where they are not the same, so the incremental advantage is hard to say. But considering the complexity of the program itself, and the additional time, effort, and opportunity for error, they don't see that the benefit outweighs the cost.

MR. CENTER added that currently Callan's performance measurement system doesn't easily take in daily valuations for anything other than publicly traded domestic equities, and it would be a very labor-intensive process, and the benefit from it would only be apparent when there are significant cash flows in and out of the portfolio. He said their current methodology would result in a return figure that is statistically the same as using a daily valuation. He noted that the reason Anodos is recommending this now is because the new global investment performance standards for asset owners recommends the use of daily valuation where available.

MR. MITCHELL said that fifth, Anodos recommended the ARM Board and Callan reconsider the return intervals, monthly versus quarterly, used to calculate standard deviation, because that allows for a more precise risk measurement. MR. MITCHELL said he would argue that using monthly performance periods results in a higher standard deviation as an artifact of the process itself. Another issue is that illiquid asset classes are only valued on a quarterly basis, so enforcing a monthly cycle would not be possible for those, and that Callan currently uses a quarterly process when they calculate the risk profiles of peers, so to the extent the risk statistics from the blended process differed from those, they would be less meaningful.

MR. MITCHELL said that because the ARM Board has illiquid assets that are valued on a quarterly basis, it makes this impractical in practice, and for that reason staff recommends to maintain the existing frequency employed by Callan, which is quarterly.

MR. WEST commented that he totally agrees, that the entire purpose of these valuations is for comparison, and the actual asset managers are watching the underlying returns on a daily basis. He noted that the valuation reports they receive are already out of date, but the comparisons to their indexes, their peers, and their regular risk calculations are what it's all about.

MR. WILLIAMS echoed that, saying that the values compared to peers is more than half the value of what they are doing; he also pointed out that they would have to go backwards in time and recalculate for prior years to be able to see how the ARM Board program itself has changed in risk. He said he is very comfortable with staff's recommendation.

MR. MITCHELL said staff recommends the Alaska Retirement Management Board approve staff's recommendations from its presentation entitled "Review of Performance Audit Recommendations" at its May 2020 meeting.

MS. HARBO so moved. MR. WEST seconded the motion.

CHAIR JOHNSON brought up MR. BRETZ's question about what it means when there is not a specific response to an Anodos recommendation; MR. BRETZ went on to say that he thinks there should be a follow-up on each of the recommendations as to whether or not they are being implemented and why not, or why they are. He said he also thinks they need a recommendation as to whether or not they need to keep this in statute to have a mandatory audit every four years for something that obviously they are getting better at.

MR. MITCHELL said he would agree that the number of recommendations has been declining over time, and he thinks that is in large part because they've been implementing many of the recommendations that have been presented. He said that since they've had continuity in the firm doing the analysis, the most recent analysis would by inference incorporate all of the past recommendations. Thus, if the Board is amenable, he said he would consider amending the recommendation to acknowledge that, by saying something like past performance audit recommendations do not require action or are incorporated by inference. He said he would agree that it shouldn't be a statutory requirement.

CHAIR JOHNSON said he would consider action on the five recommendations, and would suggest that at a forthcoming meeting MR. MITCHELL could run through some sort of a checklist with either global or generalized recommendations or statements; MR. MITCHELL replied that he is concerned about the amount of time that would take, but if it's the will of the Board, staff will do it.

MR. BRETZ pointed out that the report cost \$70,000 and a lot of staff time, so if the mandate could be taken away, it could still be a tool for the Board or management. MS. HARBO commented that she agrees; she noted that this vendor was the only one that bid on it, and they say the ARM Board is getting better, so why spend that money?

A roll call vote was taken, and the motion to adopt staff's recommendations on this subject was adopted unanimously.

14a. PART 1: AN INTRODUCTION TO FACTOR-BASED INVESTING

MR. MITCHELL explained that Scientific Beta is a firm that produces factor-based indices that could be invested in. He said the ARM Board subscribes to multiple factor-based indices, with internal staff managing a domestic equity multifactor strategy, and Legal & General who invest in similar strategies for developed and emerging market equities. He introduced ERIC SHIRBINI to provide a refresher on factor-based investing from Scientific Beta.

MR. SHIRBINI said that Scientific Beta provides indices from a very scientific background; they have been around for about seven years, and \$60 billion are now using their indices to invest in factor strategies. He said he would discuss the case for factor-based investing, what factors are, and how to create a factor-based strategy, then he would discuss the investment philosophy and the implicit risk of factor strategies, and explain how Scientific Beta invests.

He explained the case for factor-based investing, with numerous academic studies showing that the most reliable element of active management comes from exposure to a very small set of systematic risk factors. He suggested that instead of trying to find good managers, investors should try to capture the risk factors, and it could be done through an index. These indexes have been called smart beta portfolios, and the advantages of doing it through an index are transparency and low cost.

MR. SHIRBINI said it's important to understand why the return comes from those factors, and what else an investor exposes themselves to by trying to get exposure to these factors, so implementation is very important. He said the reason factors provide additional risk premia is that they expose investors to some risks that are actually priced in the market. He said that the risk that investors are exposed to by investing in factors tends to materialize during a bad state of the market, so when things are going wrong, factors can hurt. Thus, people expect a higher return for taking on this additional risk. Complementary factors can hurt at different times, so investors shouldn't hold just one factor, and they should hold for long periods to collect the additional premia. He said that by investing in factors in a low-cost way, instead of through active management, Scientific Beta can offer lower costs and be very transparent.

MR. SHIRBINI went over what the factors are and why they exist, and whether they will continue to exist. He said there are six factors by consensus: value, momentum, low risk, size, profitability, and investment. The studies establishing these factors go back over at least 40 or 50 and sometimes 80 years of data. He went over the economic rationale and behavioral explanation for risk factors, and emphasized that risk factors are uncorrelated to each other, so they are different sources of risk.

Next he discussed how to get exposure to these factors, and Scientific Beta's overriding investment philosophy. He said it's important to be very careful in getting exposure to factors, because the more concentrated an investor is in one factor, the more it can hurt. He noted that even cap-weighted indexes are very concentrated, with most of the weights in 130 out of the 500 companies in the S&P

500, for example. If an investor actually made more use of the companies in the cap-weighted index, studies have shown that the more diversified portfolio leads to a higher risk-adjusted return.

MR. SHIRBINI said that in building factor portfolios, they don't want them to be too concentrated; they don't want additional risks that they don't need to hold. There are two sources of outperformance in a factor index: diversification and the factors themselves. Then he demonstrated how they build a single-factor portfolio, because they use the same methodology to build all risk-factor portfolios. He said they want a consistent approach, which will lead to more robust performance over time, so they build six factor portfolios, one for each of the factors they want exposure to. They want to be well-diversified, so they don't want all the value exposure, for example, coming from a few companies, so they rank the companies within the S&P 500 for book-to-market, then keep the 250 with the highest book-to market value; and so on for momentum and other factors.

Once the six factor portfolios are built, they put them together to combine the different factors, so when value isn't working, momentum or some other factor would be. Then they make sure they aren't accidentally exposing themselves to any other risks. MR. SHIRBINI explained that this is done on a regional basis, because stocks in the same region are exposed to the same risks. To avoid negative correlations, they have developed a filtering approach called high factor intensity that takes out about 40 percent of the stocks based on scores in other factors than those they were selected for. By eliminating the bottom 40 percent, they get rid of all the negative exposure, and they get a slight positive exposure to the factors, which adds return.

MR. SHIRBINI gave a quick demonstration of the added value of their approach compared to how others do factor investing, saying that by investing in a factor in a fairly concentrated way, they get an improvement of 15 to 20 percent, but by using their filter, returns go up by another 30 to 35 percent on top of the factor, for an overall improvement of risk-adjusted returns of 60 to 70 percent.

CHAIR JOHNSON recessed the meeting from 2:51 p.m. until 3:05 p.m.

14b. PART 2: AN INTRODUCTION TO FACTOR-BASED INVESTING

MR. SHIRBINI continued by reiterating that single factors can be risky, so they combine them into a multifactor portfolio, explaining that in multifactor approaches, they concentrate on the factor intensity line, which is essentially the beta to the factors, and Scientific Beta has an additional beta of .73, whereas their competitors end up with lower factor exposure.

He said the other important thing is how well spread out the portfolio is across the six different factors; he said that others have a much more concentrated approach, where they try to give five or six factors, but they only end up actually giving you two or three factors. So two important statistics are how much additional factor exposure can they give over and above the market factor intensity, and how well spread out is that factor intensity across the various factors. He showed a comparison of their product with competitors, and said they stand out well.

MR. SHIRBINI said the next part is to identify the important other risks that an investor is exposed to, and how to deal with them. These include geographical risks, sector risks, and market beta bias.

He explained that factor strategies work best when they are applied to companies in an economically integrated region, though in emerging markets that are not highly integrated, and it might be worth going a step further and looking at country neutrality. They want to make sure they don't overweight or underweight any region relative to the cap weight. He said that sector risk is unrewarded, so it should be taken out, but the problem is that sector risks and factor exposures are quite highly aligned, so they also offer a sector-neutral version of their strategies. That is a choice for the investor, he said.

The final risk is the market beta bias. MR. SHIRBINI said that if you build a factor strategy and don't control for the market beta, typically the market beta will be below 1. But the question is, what if you want a factor strategy that gives you the full market exposure percent of the equity market risk premium plus the other factors; in that case, an adjustment must be made, and to bring that up to 1 an overlay could be added through a futures contract. But it's a choice for the investor, he said. An investor may want to take less risk and just collect the additional factor premia.

MR. SHIRBINI said there are three important risks to consider: geographical, sector, and market beta. Then he went over how their multifactor strategy has evolved over time. When they first launched their strategies in 2012, the two factors hadn't been accepted yet academically as being rewarded risk factors. They launched their original index with four factors, and since then have created a six-factor index, and they introduced the filter a couple of years ago. He went over the innovations that are available as options, and said the default option is the six-factor equally weighted index; then he went over returns from the factor index.

MR. SHIRBINI concluded by saying that because of their academic origin, Scientific Beta pays a lot of attention to all the latest research, and robustness is very important for them too, therefore there are five key elements in their construction where they pay attention to robustness: how they define the factors; parsimony and simplicity; consistent construction methodology; getting rid of risks that aren't going to pay; and documenting and offering ways to control risk in these strategies.

MR. WILLIAMS asked whether they hold for a long time or are always evaluating their factor strategies, and how much turnover they have as they analyze. He also asked where it falls in terms of fees, more toward active or passive. MR. SHIRBINI said they don't change very often, they stick to the definitions that have explanations, and the only one they are currently appraising is the value factor. He said they don't charge anything like active management fees, maybe one basis point more than existing factor managers, but they justify that by the research they do.

15. RISK REPORTING (truView+)

ZACHARY HANNA, Deputy CIO, said he and SHANE CARSON would go through an update on risk management with most of the information from through the end of 2019. He said that risk to a retirement system is anything that could impact the objective of paying benefits when they are due, and staff has selected a set of risks for discussion that are some of the more impactful. He noted that setting and managing investment risks drives many ARM Board and staff actions. Three important aspects of risk for the pension system are asset allocation, liquidity, and rebalancing.

MR. HANNA stated that over the past year, the ARM Board changed its actuarial assumptions and the system's asset allocation. Both are consistent with the ARM Board's real return target of 4.88 percent and the weighted average life of the pension systems. The most significant asset allocation change was adopting a higher fixed income target of 24 percent, which lowered the level of risk and raised the level of liquidity for the systems. Even with this change, the systems are still equity risk and return dominant.

Refreshing from previous presentations, MR. HANNA showed nominal earnings, inflation, and resulting real return assumptions across public plans and the ARM Board. He said that liquidity is a larger issue for the ARM Board than most plans since the system is closed and more mature. He credited the Board Trustees with focusing attention on the dynamic role liquidity plays over time for a mature plan since it has led to more refined staff thinking and will result in further future evolution. He said that as it stands, ARM Board liquidity should be sufficient, both from the perspective of meeting benefit payments and maintaining the system's risk posture in a downturn like the current one.

MR. HANNA said that staff uses the risk platform truView to assist in the monitoring, which helps staff address questions like: Is the portfolio's risk aligned with the Board's strategic asset allocation? Are there significant contributors of risk that are outside of expectations? What is the probability in magnitude of potential losses? And how would the current portfolio have performed during other periods of market stress? He said that risk systems like truView make heavy use of value-at-risk, or VaR, as a risk metric. He explained VaR as the loss that occurs a certain number of standard deviations below the mean. The approach that truView takes to estimate VaR is historic market conditions, and he showed a histogram of the ARM Board's truView returns. MR. HANNA explained that another important concept is the expected shortfall, which is a measure of how much one could expect to lose during the 5 percent of the time that losses are in excess of the VaR. He explained how to interpret the VaR numbers from truView. He said that applying these concepts to the ARM Board results in an estimated shortfall of 29 percent.

MR. CARSON then reviewed relative asset allocation and volatility. He said there were no unexpected deviations from target allocations, and total portfolio volatility continues to be dominated by growth assets, such as public and private equity. He said that through December it was a relatively low volatility environment, but that changed abruptly in the first quarter of 2020. Focusing on fixed income, he noted that between the June and December reporting dates there had been a structural transition in the aggregate portfolio, as well as the addition of alternative fixed income mandates. This resulted in increasing the fixed income asset class's specific contribution to VaR. But he said he thinks that altogether, since generally fixed income is a diversifier, the total portfolio diversification benefit increased, and that subsequently resulted in a reduction in the total portfolio value at risk.

MR. CARSON said that total equity value at risk had decreased since the June analysis as a result of some structural changes, and he discussed the results of stress-testing the portfolio against significant market events. He said that changes the Board made to the asset allocation and intra-asset class structural changes didn't have a meaningful negative impact on relative performance for any of the scenarios they contemplated, recognizing that the current scenario wasn't on the list.

MR. CARSON concluded by saying that no unexpected risk exposures were identified, and the current asset allocation and the intra-asset class structural changes did lower the absolute and relative portfolio risk, as well as increased the ability of the portfolio to rebalance.

DR. JENNINGS commented that he finds when teaching his students that translating the VaR from percentages to dollar amounts is useful, because the headline is going to read, "Lost X billions of dollars", not "Lost X percent".

16. INVESTMENT ACTIONS Brokerage Window

CHAIR JOHNSON introduced action items, not all of which are investment actions. The first one about the brokerage window option was from the Defined Contribution Committee.

MR. WILLIAMS said that the Defined Contribution Committee recommends the ARM Board approve staff to come up with a brokerage window option for all participant-directed plans by the June meeting. He explained that this came up in 2017, but the committee didn't bring it forward because there was some evidence that a lot of participants would put money into it but not use it, then it would collect fees. However, they've also heard testimony that about 70 percent of pension plans offer something like a brokerage window. Then the discussion of the REIT option brought up the idea that if there were a brokerage window, those that want to could buy a REIT ETF that meets their needs. They would have to sign off that they acknowledge the responsibility they are taking on.

CHAIR JOHNSON noted that this type of recommendation to the DOR would still require a discussion with the DOA to move forward. MR. MITCHELL said yes, as the plan administrator, they would be in a principal position in evaluating those options, and he would envision the DOR would be involved to the extent that the DRB would like them to be.

MR. WILLIAMS explained that the landscape has changed since 2017, so the fees have come down and the product has improved. MR. BOB MITCHELL noted that part of the discussion centered around the degree of freedom that participants would have if a brokerage window were adopted. He said staff would provide both options for review, with restricted versus an unrestricted version in terms of access to outside investments.

A roll call vote was taken, and with six yes votes and one no, the motion passed.

A. Repeal Investment Guidelines

MR. MITCHELL explained that from time to time the ARM Board approves investment guidelines for various strategies or asset classes. Over the course of the past 12 to 18 months, the portfolio has undergone changes that make some of the existing investment guidelines no longer applicable because there are no longer any assets that are invested in adherence to them. So the purpose of this action item is to clean up the set of investment guidelines by deleting those no longer applicable.

MR. MITCHELL said that staff recommends the Alaska Retirement Management Board repeal the

investment guideline resolutions referenced in this document.

MS. HARBO so moved. MR. WEST seconded the motion.

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

B. Clarifying Language for Policy and Procedures Manual

CIO BOB MITCHELL explained that the next action item was the first of two that were addressed in the Operations Committee. He said that the Arm Board Policy and Procedures Manual contain language that describes the conditions under which honoraria are paid to Trustees. The payment of honoraria to Trustees is established in statute, and there has been additional language in the section in the Policy and Procedures Manual that suggests a degree of discretion regarding the payment of honoraria. He said the purpose of this action memo is to remove language to clarify how the law regarding the payment of honoraria will be applied and reduce any misunderstanding of this portion of the Policy and Procedures Manual.

MR. BRICE said that the motion is made by the committee to do this. A roll call vote was taken, and the motion passed unanimously.

C. Create Investment Committee

MR. BRICE said that the Operations Committee moved that the Alaska Retirement Management Board create a standing Investment Committee to assist the Board with monitoring and due diligence on investment-related matters. CHAIR JOHNSON noted that at least a couple of the votes were described as being for the purpose of bringing it to the Board for further discussion. MS. HARBO commented that she doesn't think it's necessary, and it would incur extra costs, and she enjoys the presentations from money managers, so she intends to vote no.

MR. BRICE said he gathered that people were saying that the purpose of an Investment Committee would be duplicative of what the entire Board is supposed to do, so it would be redundant and unnecessary. But on the other hand, he said he thinks that committees may be able to go a little deeper into strategies.

COMMISSIONER TSHIBAKA commented that since this was put forward under time constraints for discussion purposes, it seems they might have further discussion in the committee six weeks from now. She added that she thought it might be a more efficient and effective use of time it the committees were divided up so there were fewer members on them; for example, with almost everyone on the Actuarial Committee, that's not so much a committee as the whole Board listening to the actuarial report. Then the committees could overlap their meetings at the same time to thoroughly vet ideas to bring to the Board.

MR. WEST commented that voting no doesn't mean it's a dead issue, and the Operations Committee can take it up again. He said he sees the value of the proposal, but everyone would probably end up attending anyway, because they would want to hear what was going on. There was some discussion

of when this additional committee meeting would be fit into the schedule; CHAIR JOHNSON said he agreed that a fifth committee would be problematic, but he thinks it is worth further conversation. He said the genesis of the idea was to potentially free up the Board's time, but of course they have to remember that they have an obligation to do the work, and investment decisions and contribution rate setting are two of the paramount things they do, so it's important to be careful not to short-circuit discussions at the Board level. He said he would vote against the investment committee in order to foment more and further constructive discussion about it.

MR. WILLIAMS commented that they might see a difference in the quality of presentations if it was just to a committee as opposed to the entire ARM Board. He said he thinks more time is needed to digest the idea, so he would vote no.

A roll call vote was taken, and with 5 no and 2 yes votes, the motion regarding creation of an investment committee failed.

D. Consent Agenda Policy

This was not forwarded from the Operations Committee.

E. SecureFoundation Option

This was not forwarded from the Defined Contribution Committee.

F. Review Actuary – First Annual Renewal Option

This was taken up under No. 4, Actuarial Committee Report.

UNFINISHED BUSINESS

None.

NEW BUSINESS

None.

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD

MR. BRETZ said he would like to request that when changes are made to the Policy and Procedures Manual, it could be noted at what meeting the change was made. CHAIR JOHNSON commented that he thought that was a great idea, and he asked MS. ALEXANDER if she could find a way to do that; she said she could. MR. WEST concurred that that is a great idea.

PUBLIC/MEMBER COMMENTS

None.

INVESTMENT ADVISORY COUNCIL COMMENTS

DR. MITCHELL thanked MS. ALEXANDER for arranging the audio and visual part of these meetings. He also said he liked DR. JENNINGS' presentation, which he thought was very thoughtful. He commented that he thinks factor investing is a good idea with solid academic backing, but he doesn't think one should go whole hog thinking it's the best way to invest, no matter how compelling the academic studies are.

DR. MITCHELL said that he saw something from Grantham Mayo Van Otterloo with a seven-year return projection, and their latest one so far from the consensus of the consultants is that with large cap U.S. stocks and with U.S. bonds and international bonds, investors are going to lose money for seven years. He said the only refuge seems to be in emerging markets, and that may be way outside the box, but it made him think hard about what if the return environment in the future is very different from the return environment they've had in the past.

MS. RYERSON said she appreciated the technology at this meeting, and she will try to have musings at the next meeting, which she hopes will be in person so she can meet everybody.

TRUSTEE COMMENTS

MS. HARBO thanked GRANT FICEK and STEPHANIE ALEXANDER for all their time and patience working with Trustees to make this meeting smooth. She added that she looks forward to meeting RUTH RYERSON in person, and she's happy that she is joining Bill and Jerry on the IAC.

FUTURE AGENDA ITEMS

CHAIR JOHNSON noted that MR. MITCHELL had presented some future agenda items in Section 9; also, he said he hopes the Board will commence some in-depth discussions on the ESG components that they've been hearing about from beneficiaries. MR. WILLIAMS added that even though the Secure Foundation option didn't pass out of the DC Committee, there is strong interest in further options that have the spirit of what that was trying to do.

ADJOURNMENT

There being no objection and no further business to come before the board, the meeting was adjourned at 4:42 p.m. on May 1, 2020, on a motion made by MS. HARBO and seconded by MR. WEST.

Chair of the Board of Trustees Alaska Retirement Management Board

ATTEST:

Dayle Harbe

Corporate Secretary

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