State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
MEETING

Videoconference

MINUTES OF
June 18 - 19, 2020

Thursday, June 18, 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. Jerrold Mitchell
Ruth Ryerson

Department of Revenue Staff Present
Bob Mitchell, Chief Investment Officer
Pamela Leary, Director, Treasury Division
Mike Barnhill, Deputy Commissioner

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
Victor Djalalie
Mark Moon
Ryan Kauzlarich

Department of Administration Staff Present
Kevin Worley, Chief Financial Officer, Division of Retirement & Benefits
Ajay Desai, Director, Division of Retirement & Benefits
James Puckett, Deputy Director, Division of Retirement & Benefits

Consultants, Invited Participants, and Others Present
Stuart Goering, Department of Law, Assistant Attorney General
Paul Erlendson, Callan LLC
Steve Center, Callan LLC
Tom Shingler, Callan LLC
Jay Kloepfer, Callan LLC
Avery Robinson, Callan LLC
Jonathan Gould, Callan LLC
Jeff Shields, J.P. Morgan
Scott Young, Buck
David Kershner, Buck
Paul Wood, GRS
Brian Walker, ISS
Chris Miller, ISS
Jack Ferdon, ISS
Melissa Ruffel, Legal & General
Greg Behar, Legal & General
Elaine Schroeder
Doug Woodby
Richard Farnell

PUBLIC MEETING NOTICE

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

APPROVAL OF AGENDA

COMMISSIONER MAHONEY moved to approve the agenda. MS. HARBO seconded the motion.

MR. WEST pointed out that "Conduent" should be changed to "Buck" under No. 9.

With that correction, the agenda was approved.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS AND APPEARANCES

DOUG WOODBY said that he was representing himself as a beneficiary and also as co-chair of 350 Juneau Climate Action for Alaska, a 501(c)(3) nonprofit. He thanked the Board and the officials at the Department of Revenue for all they do to protect and grow these pension funds. He said his comments focus on the extreme risk that climate and the climate crisis pose to the future of the pension funds, and said the climate risk is really a different and dangerous beast compared to traditional investment risks. Rather than a rough patch in the road, climate risk is more like a cliff; it is fundamentally different and can't be assessed based on past volatility.

MR. WOODBY said that current scientific understanding tells us that we're in a climate crisis and the cliff is coming soon, and noted that previous testimony by members of 350 Juneau has highlighted the need to conduct a climate risk analysis, and Callan offers "an investor framework for addressing climate change." He said that Anna West, who was promoted to senior vice-president at Callan last year, lays out the top issues about climate change for investors, and Callan also says that they "identify solutions and areas of progress for those seeking to address climate-related risks as well as to benefit from emerging opportunities." MR. WOODBY suggested that perhaps the Board, as a prudent investor, could consider taking advantage of this service to explore opportunities to protect the fund from risks imposed by the climate crisis. He acknowledged that initiating a look at climate risk will open the door into the reality that the fossil fuel industry is declining, and said that he and his group feel that it is high time to divest. He quoted Warren Buffett, who said, "You only find out who is swimming naked when the tide goes out."

ELAINE SCHROEDER, a PERS beneficiary and 40-year Juneau resident, said she is co-chair of 350 Juneau. She thanked the Board for planning the upcoming sessions on ESG. She said that although she and 350 Juneau are deeply concerned about the impacts of the climate crisis and the moral implications of continuing to invest in the production of the fossil fuels that cause it, their past testimony to the ARM Board has exclusively focused on the financial performance of the pension funds, especially in light of the many years of poor energy sector performance, not to mention the current crash of fossil fuel stocks. MS. SCHROEDER said that the growing awareness of climate risk to public funds have motivated a growing number of U.S. state and city pension funds to divest from fossil fuels, and she would like to address the fiduciary issue.

MS. SCHROEDER said that the prudent investor rule applies, and she quoted it: "The fiduciary of a state fund shall apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the fund entrusted to the beneficiary." She said they ask the ARM Board to demonstrate transparency and responsivity to beneficiary concerns by responding to their past and

present requests for information. She said they sincerely hope that ESG concerns will become important considerations for pension investments, and the horrible performance of fossil fuel investments and their grim outlook provide sufficient justification to divest the funds from fossil fuel investments. She thanked the Board and staff again for their efforts to protect the pensions and for their attention to their concerns.

RICHARD FARNELL of Juneau, another member of 350 Juneau climate action group, said he also receives a pension through the state retirement system. He called to the Board's attention a recent article in the *New York Times* from June 15, 2020, "BP Prepares for a Future That Needs Less Oil." The article said that BP is preparing to write down the value of its holdings, which is a big step toward having stranded assets, which would drive share values way down. MR. FARNELL said the author of the article attributes this decline in value to the coronavirus, as well as increasing pressure, especially in Europe, for oil companies to reduce greenhouse gas emissions from their fossil fuels. The article said the BP CEO is preparing the company for the future in which it will produce less fossil fuel than previously expected, and there is speculation by analysts that BP is likely to cut its dividend, a key consideration for investors, MR. FARNELL said. He said he hopes the Board takes this information in the spirit of constructive warning, and that pensioners in 350 Juneau want to see the pension funds be successful investments. He thanked the Board for the opportunity to make a statement.

CHAIR JOHNSON thanked the speakers.

APPROVAL OF MINUTES

MS. HARBO moved to approve the minutes of the May 1, 2020 meeting of the ARM Board. MR. WEST seconded the motion.

With no objections, the minutes were approved.

STAFF REPORTS

1. RETIREMENT & BENEFITS DIVISION REPORT

A. Buck Consulting Invoices

KEVIN WORLEY, CFO, presented the Buck Consulting invoices and briefly explained the March 31st quarterly report showing items conducted and amounts paid.

B. Membership Statistics

MR. WORLEY referred to the report on retirement membership activity through March 31st, summarizing that they've seen a net increase in active membership in PERS, but that is attributed to the defined contribution membership, with the defined benefit membership decreasing. They've had a net increase of PERS members active, and a net decrease in TRS membership as a result of a decrease in the DB membership.

C. HRA FY 2021 Contribution Info

MR. WORLEY said the annual contribution limit for FY21 would be $2,159.04. The actual

contribution depends on the amount of time a DCR member works during the course of a year.

MR. WORLEY said that the division is doing in-service distributions as part of the CARES Act for participants who have funds in SBS or Deferred Compensation, limited to $25,000 or 25 percent of the account balance, whichever is lower.

D. DRB Update/Legislation Summary

MR. WORLEY said there had been no changes in legislation since the last meeting.

2. TREASURY DIVISION REPORT

Treasury Division Director PAM LEARY acknowledged the retirement of MOLLY MCCAFFERTY and BRONZE ICKES. The new cash manager replacing MR. ICKES is JESSE BLACKWELL, who has been with the division for 10 years in cash management.

MS. LEARY said they had conducted a survey of staff regarding telework, and 94 percent said they were completing 90 percent or more of their regular work, with 29 percent completing more than 100 percent. She said the majority feel that working from home has made them more productive because they don't have to commute and they are able to concentrate without distractions. About 80 percent said they are communicating with co-workers and supervisors multiple times per day, and many cited benefits of teleworking such as more flexibility to take care of family or personal matters and to exercise. People did say that they miss interacting with co-workers and the discussions that flow from informal chats. The most mentioned obstacles of telework related to technology, such as VPN issues, connectivity at home, learning new software like Teams, and the need to physically do things like processing mail and accessing hard-copy records. The survey also resulted in a range of ideas about how teleworking could be implemented in the normal course of business, and MS. LEARY said they are taking those into account as they consider the possibility.

3. CALENDAR/DISCLOSURE

MS. ALEXANDER said the disclosure memo is in the packet, along with the remainder of the 2020 calendar and the proposed 2021 calendar.

<u>MS. HARBO moved to adopt the 2021 calendar.</u> <u>MR. HIPPLER seconded the motion.</u>

CHAIR JOHNSON noted that adopting the calendar doesn't preclude revisions in the future, and he said that he intends to just ask for objections instead of taking a vote on procedural, nonmaterial motions. With no objections, the 2021 calendar was adopted.

4. CIO REPORT

CIO BOB MITCHELL directed Board members to his report, and cited the three sources of authority he has to make adjustments and transactions. He characterized the activity for this period as centering around three principal activities. At the end of March and beginning of April, they rebalanced to move the portfolios toward their strategic asset allocations, purchasing almost a billion dollars' worth

of public equity assets in both U.S. and international, using funds from the internally managed bond portfolio and cash inflows from terminated strategies in the opportunistic asset class. MR. MITCHELL said they also moved forward in investing $300 million in the tactical bond strategy, recognizing the changes in the bond market resulting from the economic and policy responses to COVID-19. Those funds came from the core bond portfolio that is managed internally. The third element was a series of divestments of the small cash position terminated mandates.

MR. MITCHELL said that on the meeting agenda are four presentations that delve into ESG considerations, and they would also review the activity that staff, Callan, and the IAC have been engaged in regarding the strategic asset allocation for the upcoming fiscal year. He said there would also be recommendations regarding the multifactor equity investment approach and a retiree income solution, and presentations on real assets and opportunistic.

MR. MITCHELL then announced that he has informed COMMISSIONER MAHONEY that he will be retiring as CIO, with his last day on the job September 11th. He said he is grateful for the 22 and a half years he has spent in the Treasury division; he said he has worked with capable and dedicated people on challenging and stimulating issues and problems, and the fact that their work impacts all Alaskans has been a powerful source of motivation and meaningfulness. MR. MITCHELL thanked the Trustees, past and present, of the ARM Board and its predecessor the ASPIB, for the earnestness with which they have taken their responsibility and for their steadfast support of staff. He said the Commissioner of Revenue would undertake a search process for his successor, and in the meantime he believes the Board is in excellent hands, and he wishes the Board well going forward.

CHAIR JOHNSON thanked MR. MITCHELL for his report, and said he thinks he expresses the opinion of the Board of Trustees when he says it’s an unhappy day to hear MR. MITCHELL is planning to leave, and he hopes it is for the happiest of reasons. CHAIR JOHNSON wished MR. MITCHELL well in all his endeavors and said he is really sorry to hear he is going.

MR. BRICE said he is terribly sorry to hear that news, and the gravity with which it could impact the fund and upcoming decisions is very profound. He said the Trustees will have to be very diligent in following MR. MITCHELL’s leadership, and this will create a major hole in the program. MR. BRICE wished MR. MITCHELL well in his future endeavors and expressed deep and sincere gratitude for his leadership; he said he hopes and trusts that administration can find somebody half of MR. MITCHELL’s caliber and quality.

COMMISSIONER MAHONEY said that when BOB MITCHELL told her he was leaving, she was really crushed. She said that in the short time she has been the Commissioner of Revenue, she has come to trust him and rely on his opinion, and his excellent performance makes her job easier. She said that in the 20 years he’s been there, he has worked tirelessly to continually examine the portfolio, reduce the cost structure, and bring a lot of the asset management in house, and still deliver an absolutely excellent return on the investments. COMMISSIONER MAHONEY said that they will be searching both internally and externally for his replacement; she said the job would be posted the next day, and she will be forming an advisory committee to help interview and select his replacement. COMMISSIONER MAHONEY said she would really miss BOB MITCHELL; she wished him the best in retirement, and told him to enjoy the next chapter in his life.

MS. HARBO said she couldn't say how sad she was to see MR. MITCHELL go. MR. WILLIAMS expressed his gratitude for working with BOB MITCHELL all these years, commenting that he is thoughtful, passionate about the mission, he cares deeply, and has done an excellent job. MR. WILLIAMS thanked MR. MITCHELL for making time for meetings, for clarifying things, and for being absolutely fantastic in his role. He said it would be a big hole to fill.

MR. MITCHELL responded with thanks for all the kind words, and emphasized that this has been a dream job, meaningful, stimulating, and working with great people. He emphasized that the Board has a very capable staff, not just him, and he fully expects that they would continue to do the excellent work that they've been doing, so asked the Board to please have confidence and faith in them.

5. FUND FINANCIAL PRESENTATION

COMPTROLLER KAYLA WISNER said that as of June 17, total nonparticipant-directed assets were $26.7 million with fiscal yearly income of $886.3 million and a net withdrawal of $872.7 million.

KEVIN WORLEY directed Board members to his report in the meeting packet, and said there was nothing else to say, but they would provide a separate report in September after the fiscal year is finished. He said there was a request at the start of this current fiscal year, last September, for information based on employer group contributions, like school districts, municipalities, and State of Alaska, so once they have the preliminary audit information, he would show a breakdown of revenues coming into the plan from the different employer groups.

MS. HARBO observed that it looks like in 10 months the DC people have pulled out about $62 million, so the plan is losing about $6.2 million a month from people who are taking full disbursements and leaving.

TRUSTEE REPORTS

6. CHAIR REPORT

CHAIR JOHNSON said that his report would repeat what MR. MITCHELL said about consideration of the ESG issues; he said there had been a specific request that he respond in writing on behalf of the Board to the people who have testified and e-mailed on this topic. He said he understands the sincerity of that request, but they need to understand that the Board makes group decisions, so it's not necessarily appropriate that he generate just one opinion. He said that is why they've set forth a number of items on this meeting agenda to consider very deeply this issue of ESG, to the extent that they can consider it, how they can consider it, and the constraints they have if they decide to consider it. CHAIR JOHNSON said he thinks the participants who have made testimony would be well served to listen to what sort of constraints they have to deal with as a Board as they consider investment issues or divestment requests, in light of their mandate to effectively provide funds sufficient for satisfying pension obligations under the law. He said the Board intends to be as transparent as they possibly can, and his understanding is that responses to requests for documents are being prepared.
CHAIR JOHNSON said he wishes MR. MITCHELL well, and it's a sad day for the ARM Board, but

things move on and he looks forward to an appropriate search for a replacement, if “replacement” is even the right word.

7. COMMITTEE AND LEGAL REPORTS

A. AUDIT COMMITTEE

CHAIR JOHNSON reported that the Audit Committee considered reports from KPMG and were advised that things appear to be going normally and clean opinions appear to be underway. He noted that there are pressures to move things along because the legislature and the executive branch need the information by a certain time. Thus, the Audit Committee will be meeting on October 12 to give a final vetting to the KPMG reports.

CHAIR JOHNSON said they heard reports regarding audits that are underway, which are going along the best they can with constraints from the COVID pandemic. He said that MELANIE HELMICK, who is the Social Security representative, said that consideration is underway at some smaller school districts regarding adoption of Social Security opportunities. Finally, he said they have been advised that there are no particular legal issues affecting audit matters, and they heard a report from COMPTROLLER WISNER that controls regarding cybersecurity and such appear clean, in the sense that they are doing what they should be doing.

B. ACTUARIAL COMMITTEE

MR. WEST commented that like everyone else, he was stunned by MR. MITCHELL’s announcement. MR. WEST said that when considering the actuarial outlook, they often spend a lot of time looking at the numbers, mainly dealing with the investments and the return on the assets. However, he said in the big picture, the biggest single asset the plan has is the amount of unfunded liability, or the receivable from the State of Alaska and the various employers. He said that MR. MITCHELL had a good understanding of how that should phase into what they do in terms of cash management with the structure and allocation of the portfolio, and that would not be easy to replace.

MR. WEST reported that the Actuarial Committee met the previous day and finally approved a final report from the actuaries and the review report from the review actuaries, and those two items are presented with full approval of the committee to the Board for action. <u>MR. WEST moved on behalf of the Actuarial Committee that the Board accept these reports.</u>

CHAIR JOHNSON noted that a motion from a committee doesn’t need a second. He directed Board members to two items in the agenda packet under Item No. 9, Board acceptance of GRS certification for FY 2019 PERS, TRS, National Guard, JRS, and DCR Plan Valuations, and Board acceptance of the FY 2019 Buck valuations for PERS, TRS, National Guard, JRS, and DC plan valuations.

A roll call vote was taken, and <u>the two action items passed unanimously.</u>

C. DEFINED CONTRIBUTION PLAN COMMITTEE

MR. WILLIAMS said the DC Committee had a fun-filled, riveting meeting the previous day, and there would be two action items from Treasury that the committee approved and would like to bring before the Board.

MR. WILLIAMS said the first item is the U.S. Equities Trust Investment Guidelines. He explained that the ARM Board has investments that aren't passive and trying to track an index, but that use an index as a base to work from and apply tilts and strategies to. The guidelines say there can't be more than 5 percent of one company in a certain strategy, but recently some companies, notably Microsoft, have exceeded that limit, which makes it hard to implement that strategy. They want to make an adjustment so that strategy can be implemented without those guidelines of not being over 5 percent.

MR. WILLIAMS said the second action item is something the DC Committee has been interested in for a long time, offering options to members that allow them to have a more guaranteed retirement. He thanked CPO JIM PUCKETT for coming up to speed very quickly, and thanked BOB MITCHELL for allowing this topic to be covered in the June meeting instead of September. MR. WILLIAMS explained that an option considered at the previous meeting wasn't the right one, but the committee likes this SmartSpending option and they want to bring it to the Board for approval today.

MR. WILLIAMS said they also heard from KEVIN WORLEY about the interest on the HRA accounts and a way to mitigate the risk of people losing some of their funds when they are near retirement. He said it doesn't have to be solved immediately, but it will be an agenda item for their next meeting.

MR. WILLIAMS said they have been considering a brokerage window for members who direct their contributions in Deferred Compensation, and they plan to discuss that at their September meeting, which will give MR. PUCKETT time to look at the issue and give his input.

MR. WILLAIMS said the DC Committee heard a report from MR. PUCKETT about the response to COVID-19 that allows members to take 25 percent or $25,000, whichever is less, from their Deferred Compensation or SBS accounts without the usual penalty for early withdrawal. He said almost 150 members had taken advantage of that program and withdrawn almost $2 million.

MR. WILLIAMS reported that they also got an update from Empower about their COVID-19 operations and about helping people who want to withdraw money from one particular fund instead of evenly distributed from all their funds. He said Empower had done some work on that, but it is still a slow process. He said Empower also talked about the State of Alaska 457 plan, where they haven't seen the strong response they expected; it was suggested that maybe the chairs of the DC Committee and the ARM Board could put out a letter about the merits of the 457 plan. MR. WILLIAMS said that he had a meeting planned with JIM PUCKETT and Empower to discuss that further.

MR. WILLIAMS expressed his gratitude to MR. MITCHELL, MR. PUCKETT, and MR. WORLEY for being available, answering clarification questions, and scheduling meetings to dig into things

further.
CHAIR JOHNSON asked to be included in the meeting about 457 that MR. WILLIAMS mentioned, and MR. WILLIAMS said he would be invited.

D. OPERATIONS COMMITTEE

MR. BRICE reported that the Operations Committee had a quick meeting the previous day, and they received a briefing by MR. JONES, the manager of the investment operations and analytics part of the Treasury division, better known as the Middle Office. He said there was also a broad conversation about the committee structure of the Board, the size and participation and the expectations on the Trustees to participate in the various committees. MR. BRICE said that the Board needs to establish their committees based upon what the Board views as the needs of the fund, to make sure they are doing their due diligence and covering all their bases through the audit processes, the actuarial processes, and operations. He noted that the Audit Committee is a best practice, and the Actuarial Committee has been invaluable in creating a public record on the decisions and processes that go into the actuarial assumptions that the Board uses to make its projections. He pointed out that each of the Trustees have different areas of interest and perspectives, and they need to see where they can participate to ensure beneficiaries are getting the best bang for their buck. MR. BRICE said there were no action items, but good conversations in their meeting. CHAIR JOHNSON asked if it was fair to say that the committee's sense was that the status quo regarding committees is fine; MR. BRICE said yes, at this stage, but Trustees should be willing and able to form new committees as needed.

E. RETIREE HEALTH PLAN ADVISORY BOARD

MS. HARBO said she had submitted a written report and hoped people had time to read it. She said one of the main things from the "Rehab" Board was an hour-long presentation by Richard Ward, the actuary from Segal, about Medicare Advantage. She said it would be a wonderful opportunity for medical savings similar to EGWP, and she looks forward to a presentation on that at their August meeting.

8. LEGAL REPORT

STUART GOERING said there had been no new developments on the three cases he's been following. He did have a follow-up to a question from TRUSTEE HARBO regarding the Metcalfe case about how many former employees had taken distributions, which he said was about 74,000. He noted that that is not the universe of people who might possibly be able to be reemployed and reenter the pension plans at some point in the future, but that is the literal answer. He said the real answer wouldn't be known unless they lost at the Supreme Court, went back to trial, and then had to identify the people who had been reemployed and elected to repay their contributions and then were able to vest. He said the Metcalfe case was argued in February and the court is supposed to make a decision within six months, so there may be news in August.

CHAIR JOHNSON suggested taking up the two action items under Item No. 20 on the agenda from the DC Plan Committee before taking a break.

20. F. U.S. Equity Guidelines Modification

MR. WILLIAMS read the recommendation: The Defined Contribution Committee recommends the Alaska Retirement Management Board direct staff to direct T. Rowe Price to modify the investment guidelines for the U.S. Equity Trust as indicated in the attached red-line document.

CIO BOB MITCHELL mentioned that there are a number of constraints currently in the investment guidelines, including the 5 percent issuer constraint and a constraint relating to the weights in the benchmark. He said this action would remove the 5 percent constraint, but constraints at the issuer level would remain in place.

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

20. C. Adopt SmartSpending

MR. WILLIAMS read the recommendation: The Defined Contribution Committee recommends the Alaska Retirement Management Board direct staff to contract with J.P. Morgan to offer one or more SmartSpending funds in the Alaska Supplemental Annuity Plan, the Defined Contribution Retirement Plans, and the Deferred Compensation Plan, subject to successful contract negotiations.

MR. BRICE commented that at his first Board meeting in 2012, people were saying they would never get there from here on this issue, and he expressed his gratitude to the staff and other people who have worked to bring this about.

MR. BOB MITCHELL explained that as they considered spending options in retirement, two types surfaced, one which he characterized as guaranteed options, and the other as retiree income options. He said the guaranteed options tend to be annuities of various stripes or investment plans that contain annuities, and the DC Committee has been discussing these. He emphasized that if the Board considers guaranteed options that contain an annuity in the future, they should spend some time making sure that the ARM Board has the authority to take those actions. He said the option being considered now doesn't have an annuity but is an integrated solution that provides sample spending amount guidance to participants, and in which the asset allocation and sample income amounts are established in conjunction with each other.

CHAIR JOHNSON asked about the Board's ongoing obligations and their role going forward in reviewing some of these options in which guarantees are included. MR. MITCHELL said there have been internal conversations about that, and he thinks the Board's charge with respect to participant directed plans is to offer a broad range of investments at a reasonable price and to communicate that information to participants. He said there probably isn't a duty or requirement by statute that they provide options that offer spend-down, decumulation, retiring-like solutions; however, he doesn't think anything prohibits doing so. MR. MITCHELL said that to the extent that it is not part of the prescribed responsibilities, one could argue that the ARM Board may be accepting a level of fiduciary liability that may be unnecessary according to the minimum requirements, but what they are contemplating here is a voluntary option for participants, which is important, and he thinks that to the

extent the Board wants to provide more significant retiree income solutions, it should consider them.

CHAIR JOHNSON commented that it sounds like the Board can't simply walk away from this; they have to keep an eye on it to maintain appropriate engagement with it. He asked MR. MITCHELL if the Department of Administration and the Department of Revenue were okay with this, in the sense of a recommendation and a willingness to participate; MR. MITCHELL replied that the DOR supports it, and he believed the DOA does as well. MR. MITCHELL said they'd had a significant consultation with MR. PUCKETT and believes he is also supportive, as he affirmed in the committee meeting. MR. PUCKETT confirmed that they support including SmartSpending among the options available to retirees.

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

CHAIR JOHNSON recessed the meeting from 10:31 a.m. until 10:57 a.m.

9. ACTUARIAL REVIEW/ACCEPTANCE – CERTIFICATION OF FY2019 REVIEW REPORTS AND VALUATIONS

The acceptance of the actuarial review was handled under the Actuarial Committee, Item 7B.

10. OVERVIEW OF ENVIRONMENTAL, SOCIAL, & GOVERNANCE (ESG)

CHAIR JOHNSON noted that this would be the first of four presentations on ESG issues. MR. BOB MITCHELL introduced TOM SHINGLER from Callan LLC to provide a primer on ESG investing and describe the general considerations that investors take into account when incorporating ESG into the investment decision-making process.

MR. SHINGLER said he is the chair of the ESG Committee at Callan, and said he would define ESG and talk about its origins and some of the catalysts for its growth. He said the terms "sustainable investing" or "socially responsible investing" (SRI) are sometimes used instead of ESG, and he's referring to those as well. MR. SHINGLER said that ESG means Environmental, Social, and Governance factors in investing. Environmental factors include considering a company's interaction with the physical world, like their use of energy or disposal of waste, which may be affected by issues like climate change or litigation about pollution. Social factors relate to how a company interfaces with its stakeholders, like how it treats its employees and how it relates to the broader community. Governance, he said, is probably the factor that is best known from an investment perspective, with the idea that a company that has better governance will probably perform better over time.

MR. SHINGLER said it's important to understand that the issues faced vary a lot according to the sector the company is in; for example, energy companies have more environmental considerations, and there are concerns about governance in some tech companies. Thus, an ESG ratings provider will customize their assessment of a company to the sector in which it operates.

MR. SHINGLER went on to discuss how this can be applied to investing, and he said they at Callan use a spectrum of targeted ESG integration, from exclusionary screens to impact investing, which can

be applied to a portfolio by an asset owner's investment managers. MR. SHINGLER showed the exclusionary screen that would traditionally fall under the hat of socially responsible investing. It allows an asset owner to avoid or limit exposure to certain types of companies that don't align with their values, such as religious organizations that object to certain activities like gambling or drinking. Another level of ESG is partial integration, which means the owners want the asset managers to consider material ESG factors as part of their investment processes and a way to mitigate risk. MR. SHINGLER said that third-party ESG data sources can be used, like MSCI and Sustainalytics, to rate the ESG risks of companies across the capital markets universe. Then the asset manager could tilt their exposure if it's a passive strategy, or active strategies could incorporate that ESG data as part of their analysis.

MR. SHINGLER said that partial integration does not drive the decisions. He showed another strategy called incorporation or full integration of ESG risks and opportunities. In this case, a manager incorporates ESG risks that are material and could have an impact on performance, thinking of it from the perspective of risk mitigation and as a potential alpha opportunity. He said MSCI has leaders, the companies with the highest ESG score, and an investor could have a passive strategy that implements buying those companies. Active strategies would look at risks from ESG factors and either not own securities with higher risk or own them at reduced rates; or they may invest in companies because of ESG practices that they currently have or plan to implement, because they think it's an alpha opportunity. MR. SHINGLER said this is where ESG is a major driver of the buy and sell decisions in the portfolio, and he said in public markets there are active managers in bonds and equities that embed ESG in what they do.

MR. SHINGLER said that the higher profile ESG implementations are sustainable/thematic investing and impact investing, in which the asset manager is targeting a specific type of exposure based on ESG criteria. For example, with the current focus on climate change, there are thematic active strategies that focus on companies that are investing to address climate change risks, like battery makers for electric cars or companies that deal in water desalination or purification. The intent is to thematically invest in companies that are helping the world transition to a sustainable economy. Impact investing is when an investor is willing to accept some lower performance in return for social benefits. An example of this is when a public fund invests with the goal in mind of addressing the issue of affordable housing in their community. They try to achieve a positive return, but that isn't as important as addressing their social goals.

MR. SHINGLER then discussed why different plan types are considering incorporation of ESG or investing in ESG-oriented strategies. He said that some corporations want to have options in their plan that align with their social responsibility initiatives, and there is also demand from DC participants to have such options, especially among younger people. He said that on the defined benefit side, ESG is related to reputational risks, and others just think considering ESG is consistent with their goals as long-term investors for a multigenerational pension trust. Also, there may be regulatory pressure, such as in Illinois, which has sustainable investing regulations that apply to its public pension.

CHAIR JOHNSON asked if in the public world, with funds like those of the ARM Board which are directed to follow the prudent investor rule to act and invest in the best interest of the plan, it takes

some kind of statutory or regulatory instruction to get ESG responsiveness; MR. SHINGLER said he thinks it plays a major role, and he noted that Europe, with its different regulatory environment, has much higher rates of ESG adoption and managers having to address ESG consideration on behalf of asset owners. He pointed out that there are a lot of different currents in the U.S., with different states having different statutes, and a lack of regulatory clarity that makes it more difficult for individual systems to navigate and increases reliance on legal guidance.

MR. SHINGLER displayed information from the U.S. SIF Foundation showing that there has been increasing engagement in ESG investing from institutional investors. He noted that this doesn't mean that all of an investor's assets would be called ESG assets, but the survey counted investors as incorporating ESG if it is in their investment policy statement and they are starting to consider it in their plans. He said it doesn't mean that all of their implementations reflect th0at, and he emphasized that this level of growth doesn't necessarily reflect underlying implementation. At Callan they use the term "greenwashing" when someone says they are incorporating ESG but it is not reflected in underlying implementation.

MR. SHINGLER said that they have seen some trends in favor of ESG, like higher rates of interest among Gen X, millennials, and Gen Z, and catalysts for growth like the UN sustainable development goals and the desire to invest to help achieve those goals. He reviewed a survey from bfinance of global asset owners showing that ESG is a high priority for 51 percent of institutions in Europe and 27 percent in North America, but 46 percent in North America said they planned to implement a new or different ESG policy in the next 12 months. He said at Callan, they do believe that ESG criteria can have a material impact on investments, so it can be a useful lens to look at potential financial outcomes. He said they work with a wide range of clients, each in a customized way, understanding their mission, values, and regulatory framework. They start with education from an ESG perspective, which is what is happening at this meeting with several discussions. He said they sometimes recommend bringing in third parties like UN PRI, and often there is engagement with stakeholders and there may be a subcommittee set up to define the objectives of pursuing ESG initiatives. After that, the Board may incorporate ESG into their investment policy, or have a portfolio-level implementation, which would involve a whole process of selecting ways to implement, and then Callan would be involved in the monitoring.

MR. SHINGLER went over a Callan survey of investment funds in the U.S., which got over a hundred responses, but he cautioned that they were probably more likely to respond if they were interested in this topic, so the percentages may be artificially high. He showed that there has been increased interest in ESG, and historically endowments and foundations have had higher rates of adoption of ESG factors because of their missions or values and because they operate in a different regulatory framework than public and ERISA funds. He pointed out that further on in the slide deck there is more information on what types of implementations asset owners are carrying out and specific areas they are targeting and avoiding.

MR. WILLIAMS commented that when the Board considered ESG a few years ago, it seemed rather nascent, and it was hard to reach a consensus on questions like what to include or exclude, how Alaskans would approach it, and actually doing it, and there was the difficulty of what benchmark to use. He asked whether that has progressed, if there has been more consensus and if there is a good

benchmark to compare to. He also asked what impact the Larry Fink letter about making ESG a focal point of his BlackRock group has had on this environment. MR. SHINGLER explained that there has been broad recognition from asset managers that the reference benchmark should be a broad market cap-weighted benchmark. He said there has been a lot of product proliferation in, for example, climate change-related investing, and the general acceptance is that the benchmark is going to be the MSCI ACWI Index, developed and emerging markets, U.S./non U.S. He said there may be high tracking errors because they tend to invest in certain sectors and avoid others, but their objective would be to beat that over time and that is how the client will measure their performance. He said there are a slew of ESG benchmarks that could be used, but the asset owner would to want the fund to beat the broad benchmark.

Regarding the second question, MR. SHINGLER said it's too early to say how that turns out at BlackRock. He said it's a very significant initiative that the company is putting a lot of resources into, and though there is a lot of skepticism about it, it has gotten a lot of attention because they are the largest asset manager in the world. He said it's early to see the impact, but it seems healthy, with increased recognition from asset owners that the largest holders of many stocks are the large passive providers, so whether or not they engage with companies matters a lot. He said the major passive providers, notably State Street and BlackRock, have increasingly recognized that and built out better stewardship practices, with professionals who focus on engaging with the companies that they own.

MR. WILLIAMS asked about the ESG screens that were shown earlier and how they have performed. He also asked if there is a simple way to adopt some of these things without making it labor-intensive and complicated. MR. SHINGLER replied that there are ways to incorporate it by having an index provider provide the data and work with the asset manager to implement what is screened in and out. He said there have been some high-profile cases where it hasn't worked and funds have had securities in them that should have been screened out, and there are more complicated implementations that can be done, depending on the client's objectives. He said Callan's perspective is that engagement is a tool that can be used, and divestment should be viewed as a last resort.

MR. WEST observed that it looks like quite a low percentage of Callan's survey respondents had not yet incorporated ESG, but the bfinance survey makes it look like everybody is interested. MR. WEST asked if that was because Callan works with more government funds and fewer endowments and foundations; MR. SHINGLER replied yes, that some client types are so worried about litigation in the ERISA DC space, and there is so much focus on fees and a huge shift to passive overall, so ESG is not a big priority for them. MR. WEST asked if he's saying that the U.S. clients that aren't interested in ESG have that perspective because of the regulatory environment or because they consider movement into ESG as possibly conflicting with their fiduciary duty; MR. SHINGLER replied that the ERISA is its own space, but their survey reflects a cross-section of types of funds, and adoption rates do differ by type.

11. FIDUCIARY/LEGAL EDUCATION

MR. GOERING said the objectives for his presentation are to satisfy the statutory requirements that the ARM Board receive annual fiduciary training, as well as other additional training that may be necessary for them to carry out their duties. He said that later, DEPUTY CIO ZACH HANNA would

address considerations specific to the Alaska pension funds, and this presentation was designed to help support the context of that discussion.

MR. GOERING stated that the Board primarily has a statutory fiduciary duty, and to the extent that the statutes are not specific on a particular point, there is also common law. He noted that the ARM Board funds are not subject to ERISA or to the Uniform Prudent Investor Act. However, he said that to the extent that the ARM Board's specific statutes do not govern their fiduciary duty and the outlines of the prudent investor rule, it's likely that those would be used by analogy. He said that happily, there's not a lot of judicial precedent in Alaska on the subject of breach of fiduciary duty, so if it came up, the courts would likely look Outside, but they would start with the statutory. He said the important thing to note is that they are to apply the prudent investor rule subject to the limitation that they are to consider the sole financial best interest of the fund entrusted to the beneficiary. MR. GOERING explained that the ARM Board is the trustee of the assets of the pension funds and trusts, but unlike many pension management boards, the responsibility is shared: the ARM Board has the investment responsibility and the DRB has plan administration responsibility. They share some of that through the actuarial process, he said. He noted that the ARM Board has no fiduciary responsibility before funds come into the trust and after funds leave the trust, and they are to treat beneficiaries with impartiality.

MR. GOERING showed that statute that applies specifically to the ARM Board and their management of the pension funds and trusts, highlighting the language that says they are to manage and invest the assets in a way that is "sufficient to meet the liabilities and pension obligations." He noted that the liabilities and pension obligations in this case have both a magnitude and a timing aspect, so it's important that they take into account that their fiduciary duty includes not just making sure there are sufficient assets available, but that there are sufficient assets available at the times that the obligations will become due.

MR. GOERING said that obviously, there is no ideal prudent behavior that will always be applicable in every situation and every time, and this is particularly important as to the DB plans because they are evolving. It is also becoming an issue with DC because it is starting to grow in proportion, and some participants are starting to retire. The economic background against which they are operating is changing, too, so their behavior needs to be responsive to those changes. There are both objective and subjective components, and probably an infinity of ways of managing assets that would satisfy the prudent investor rule. He said the Board has to apply judgment, and in doing so they can rely on expert advisors and consultants and delegate to Treasury staff.

MR. GOERING said that the prudent investor rule and other constraints apply to all the funds that the ARM Board manages, even self-directed ones; the Board has the obligation to exercise prudence in selecting the range of investment options that are made available, and they have an obligation to continue to monitor the appropriateness, not only of the existence of those options, but also the cost of those options.

MR. GOERING noted that "sole financial best interest" isn't defined in the statute, and that specific phrase is not used anywhere else by any other statute in the United States. He said the statute dates to 1988, and in the 1980s too, socially responsible investment was a hot topic; he said there is an

Alaska Attorney General opinion that addresses the meaning of that phrase in the context of the Children's Trust, which wanted to implement a tobacco-free investment policy. The AAG at that time indicated that the sole financial best interest did not permit an absolute prohibition on investments in tobacco. MR. GOERING said that he didn't think the conclusion would change if that decision came up today. He said he passed along a link in case Trustees want to look at that opinion. He said that essentially answers the question of what "sole financial best interest" means in the context of socially responsible investing, or ESG as it's now called. He urged the Board to rely on its various resources, especially the IAC, in evaluating the prudence of decisions that are brought to them by staff or managers. He pointed out that the Board has the ability to engage a wide variety of professionals in the decision process, and they have taken advantage of that. He said governance of this Board is extremely important, and he would encourage continuing the discussion of committee structure because it's important to have robust processes that define the decisions the Board needs to make and define the policies and procedures, and to have a robust compliance program in place to make sure those policies and procedures are being followed. He said they have excellent reporting, and it has been refined, and over time Trustees have provided valuable input to Treasury and DRB staff about the kind of reporting they want to see. He said he encouraged the Board to continue to make sure they get the kinds of reports that they need and continue to obtain and use resources. He said they should think of their process as a living organism that changes, grows, and adapts to its environment.

MR. GOERING said that as he encourages the Board to delegate to staff and managers, it's important to understand that the decision to delegate is itself an exercise of fiduciary duty, so they are expected to exercise the prudence that an ordinary investor would use when delegating. However, if they do exercise prudence in delegating, and they follow the monitoring and reporting policies they have, they are protected from any breach of duty that those delegees might commit, provided the Board did not participate in any way. He said it's also important to recognize that every delegation has to have a scope, which should be fairly specific and tailored to the amount of decision-making that they as a part-time Board can reasonably do. He examined the parameters of fiduciary duty, and said the Board's statutes permit them to indemnify fiduciaries for claims that may be made against them for breach of fiduciary duty as long as they were behaving prudently. He said the statute applies the concept of fiduciary duty to some functions that don't appear to be discretionary, such as custody and depository responsibilities. They are subject to the prudent investor rule, and the primary effect of that is that the Board can enter into indemnity agreements with their custodians and depository institutions. That changes the level of responsibility that those institutions have to take on, and that has to be addressed when contracting for those services. MR. GOERING noted that the Board's consultants and attorneys are not fiduciaries, and consultants are not eligible for indemnification.

MR. GOERING explained that the Board is made up of nine people representing various constituencies, but they don't represent the interests of those constituencies because the Uniform Prudent Investor Act indicates they have a duty of loyalty as a Trustee to the funds they are managing, and they must act in the sole financial best interest of the beneficiaries as a whole, impartially.

MR. GOERING concluded by acknowledging the fact that Trustees have taken on a really, really huge responsibility and it's a lot of work, and he thanked them for doing that. He reiterated that the Board has lots of tools available, and if they have any doubts about their responsibilities or how to

interpret information, they should ask.

CHAIR JOHNSON recessed the meeting from 12:13 p.m. to 1:17 p.m.

12. To what extent should ESG be incorporated into the investment decision-making process?

DEPUTY CIO ZACH HANNA said staff has been asked to provide recommendations on how ESG should be incorporated into the ARM Board portfolio. He said that in preparing this information, staff reviewed academic papers, a sampling of ESG policies, and discussed the issues of investment managers, ESG data providers, and consultants. He said he would cover ESG in investments, the applicable legal framework, and the ARM Board's investment rationale in ESG, then would give summary recommendations.

MR. HANNA said ESG investing has a long history, and it originated with organizations pursing social and environmental goals along with financial goals. He said early participants and current impact investors would largely pursue divestment of unfavored industries or sectors like sin stocks and fossil fuels. He said ESG investing has grown quickly with the relatively widespread adoption of the UN PRI, and now there is a large ESG industry of investment managers, data suppliers, and service providers working to support and grow this space. MR. GOERING said there are now ESG-focused investment products and services for every asset class and investment style.

MR. HANNA said there are over 2,000 academic papers studying some combination of ESG, and he worked through a sample of them and reviewed a well-respected survey of this body of work. He said the studies and surveys found there is a generally positive linkage between ESG and corporate financial performance, which isn't surprising since ESG does encompass some risk mitigation and governance concepts that are generally considered good business management, and this increased financial performance hasn't translated into stronger investment performance. MR. HANNA said that over 70 percent of the studies that focus on portfolio investment performance did not find a link between strong ESG and outperformance. He said there are likely many reasons for that, but the result seems rational from an investment perspective. He said if companies with strong ESG are less risky, and if the market prices risk efficiently, those companies may well result in lower returns. Academic analysis of sin stocks supports this view, showing that they generally provided additional compensation to investors who hold them. He said research also shows that most ESG returns can be explained by exposure to more traditional equity risk factors like those the ARM Board invests in.

MR. HANNA said ESG evaluation can be highly subjective, with highly resourced firms trying to measure similar ESG concepts reaching quite different conclusions from one another. He showed a company-specific example, with a wide divergence of ESG ratings from various services because the level and importance of ESG factors are difficult to quantify and can be subjective. He pointed out the wide range of environmental scores for Tesla, including a near-zero score from FTSE and Black, versus the high scores from other service providers, and the very high environmental score FTSE gave General Motors.

MR. HANNA said that ERISA guidance from 2015 was fairly permissive of ESG concepts, but the

most recent 2018 Department of Labor guidance is more restrictive and says that ERISA fiduciaries must not too readily treat ESG factors as economically relevant and must always put first the economic interests of the plan. As Callan noted, MR. HANNA said ultimately every plan needs to evaluate issues like ESG through the lens of their specific fiduciary duties, and Alaska statutes can help provide focus for the ARM Board. He noted that MR. GOERING just provided guidance on ARM Board fiduciary duties, and he would repeat some aspects of the guidance that bear most directly on staff evaluation of ESG.

First, MR. HANNA said the ARM Board has the responsibility to invest the assets of the trust to meet future benefit payments to participants. The adopted rate of return of 7.38 percent is necessary to meet future obligations as estimated by the plans' actuaries. Meeting this return is challenging, and every basis point counts, he said. Toward this end, the ARM Board runs a relatively lean organization with a high focus on fees and expenditures. He repeated that the ARM Board has a statutory duty to act in the sole financial best interest of the fund, and said staff investigated that and they believe that Alaska's fiduciary duty is narrower in scope than the typical prudent investor rule and more restrictive than that of most public fund investors.

MR. HANNA referred to the 1988 opinion that MR. GOERING mentioned about tobacco divestiture, and said that staff and counsel believe the thinking in that opinion is directly applicable to the ARM Board as a fiduciary charged with the same standard. The opinion ultimately concludes that the fiduciary obligation is more restrictive and that the fiduciary cannot consider the social implications of investment. The opinion also indicates that the more restrictive language was intended in part to shield decision-makers from being pressured to consider non-financial interests.

MR. HANNA went on to say that Alaska's more general statutes on trusts also provide some additional guidance and state that a trustee shall diversify investments unless the purposes of the trust are better served by not diversifying. He said that combining the relevant portions of all of these statutes resulted in the following staff summary of the ARM Board's fiduciary obligations that is useful in evaluating ESG: To meet the obligations of the systems, the ARM Board fiduciary shall apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the fund and shall diversify investments consistent with this duty. MR. HANNA said that when viewed with this more restrictive scope, all sources of investment returns and risks, including ESG scores, should be viewed directly in the context of improving net-of-fee risk-adjusted returns, which is the primary focus of staff and the ARM Board.

MR. HANNA said that since the ARM Board portfolio is deeply rooted in core investment concepts, staff evaluated ESG with those in mind. He said that at the heart of many of the ARM Board's investment decisions are well-accepted financial theories, like the efficient markets hypothesis, modern portfolio theory, and others, and none of those theories is perfect, but they do contain key observations that drive ARM Board decisions. He said he would go into the specific thinking that drives the passive, the factor, and the active portions of the ARM Board portfolio and make a recommendation for each.

MR. HANNA said that passive investments in equity markets form the core of the ARM Board's equity portfolios, and staff only recommends more active equity investments in areas where

investment managers are expected to have a reasonable chance of beating passive indices. He said that with respect to ESG and the ARM Board's passive investments, staff recommends no divestment of specific sectors or industries. Divestments are likely to decrease diversification, which likely increases risk with no expected compensation that staff can quantify. He said that industry expansion and contraction has always occurred, but despite that, market-cap indices have been very difficult to beat since the timing and specific catalysts for structural change are highly uncertain. He said that ultimately, they expect that public market indices price risk efficiently. MR. HANNA said that staff recommends an annual valuation of proxy voting to ensure that all issues, including ESG, are voted in a manner that provides the best expectation of sole financial best interest.

MR. HANNA then covered factor investments, which make up 24 percent of the ARM Board's equity portfolios. Factor investments focus on compensated risk factors beyond market beta, which have significant academic support and a reasonable expectation for continued long-term compensation for bearing those risks. He noted that factors can have cyclical performance, and a common rationale for their compensation is related to the length of those cycles and the timing of potential drawdowns; long-term investors like the ARM Board are well suited to bear those risks. MR. HANNA said that the burden of proof for factors is high, and staff has recommended factors based on rigorous, empirical analysis over long time periods. These factors were once the sole domain of active investment managers, but have now been found to explain the majority of past active investment alpha, and they can now be invested in systematically with low fees.

MR. HANNA said that staff does not recommend including ESG factors in the ARM Board's portfolio. Most of the empirical studies on ESG portfolios do not find a linkage between strong ESG and investment outperformance, and to be included, ESG factors would need to be additive and provide unique risk and return contributions.

MR. WILLIAMS clarified that this recommendation was to not apply an ESG tilt to all of the ARM Board funds, but was not a recommendation to do away with the fund option that has an ESG focus; MR. HANNA said that's right. He said they believe the fiduciary obligations with regard to DC funds are more in line with establishing a broad selection of investments, and they think that an ESG focused portfolio is consistent with that.

MR. WILLIAMS asked about the slide that showed that the same company could score high on ESG with one ratings agency and low with another, and asked if the field was fairly consistent or sort of like the Wild West; MR. HANNA said he thinks the Wild West analogy is reasonable, because a lot of this is still being sorted out. MR. HIPPLER asked how old was the oldest historical data on ESG that he used in doing this research; MR. HANNA answered that the adoption curve probably parallels the amount of academic research, so most of it is fairly recent, but the question was how far back the data goes. In answer to that, MR. HANNA said that the ESG ratings research doesn't go back very far, less than 10 years for most of them. He said some of the academic research goes quite a bit further back, though he couldn't say specifically, but he said it's fair to say that most of this data is relatively recent, and the subject will undoubtedly continue to be studied and more data will become available.

CHAIR JOHNSON commented that the indicators are that increasing numbers of public pension funds are engaging in ESG investment considerations, and asked if that is a consequence of changing

their statutory mandates, or the adoption of formal rules allowing them to, or if it was a consequence of people just more broadly interpreting what prudent investing is about. MR. HANNA offered a couple of answers, saying that it is staff's view that Alaska's fiduciary standard is narrower and more strict than most public fund investor standards, and some of those other funds may just have more traditional prudent investor standards, and some of them may have reached the conclusion that ESG factors have a role to play in that. However, he reiterated that it is staff's conclusion that only to the degree that ESG factors play a quantifiable role in risk and return should they be considered in the ARM Board portfolio.

MR. HANNA said that ESG investment factors should be considered in the ARM Board's active investment portfolio, and are already important considerations for some ARM Board investments. He said the inclusion of ESG concepts in the ARM Board's active investments varies widely; for some investments like infrastructure, ESG can be fundamental to the stewardship of publicly important assets. In other investments like real estate and private equity, improving ESG is a core part of the investment thesis. MR. HANNA said that for the majority of active investments, ESG factors are considered with varying levels of importance alongside other sources of risk and return, and there were some investments where ESG wasn't a significant contributor.

MR. HANNA made the point that the ARM Board's active investment managers, both external and internal, are largely fiduciaries of the funds charged with the same restrictive fiduciary obligations. He said that active managers are highly incentivized to use all sources of information on risk and return to outperform, as the success and survival of their business depends on it. Consequently, many of the ARM Board's active managers do incorporate ESG concepts into their investment analysis, but the time frame and relative impact of ESG is specific to each investment. MR. HANNA said that with respect to active investment, staff recommends continuing evaluation of investment managers to ensure that all relevant factors, including ESG, are being considered in the financial best interest of the funds. Staff does not recommend broad ESG guidelines or ESG-specific policies for managers since the degree to which ESG considerations impact an investment are highly variable. He said staff also recommends annual evaluation of proxy voting.

Summing up, MR. HANNA said that staff has concluded that the ARM Board has a narrow fiduciary standard that only allows the consideration of financial factors, and that the ARM Board is a highly structured portfolio dedicated to this with the right structure in place for continued focus on all factors that drive risk and return, including ESG.

MR. HANNA said that consistent with this, staff is recommending no divestment of sectors or industries, no ESG-specific changes to systematic risk factor investments, no broad ESG guidelines or ESG-specific policies, and ongoing evaluation of investment managers to ensure that relevant factors, including ESG and proxy voting, are being considered according to fiduciary standards.

CHAIR JOHNSON asked if MR. HANNA would think a policy saying "Thou shalt consider ESG, all other things being equal" would be in violation of the mandate under which the ARM Board operates; MR. HANNA said it would not be staff's recommendation, and he thinks the fiduciary standard is already relatively clear that all factors should be considered, and he thinks elevating any specific set of factors above another is unnecessary.

MR. WILLIAMS clarified that it sounded like the recommendation on passive was that there is not an ESG component to it; but within the active community, without saying to divest of this or that, ESG should be one of the components that is considered within active management. MR. HANNA agreed that that was an accurate depiction. MR. HIPPLER asked MR. HANNA to explain why ESG is superfluous for passive but sometimes integral for active investments; MR. HANNA said it comes down to staff's view that ESG risk and return factors need to be considered specific to each individual investment. He said he doesn't think there is any way to have a one-size-fits-all standard to markets broadly, and any standard will certainly have to change over time.

DR. MITCHELL commented that he thinks the staff recommendation is well-reasoned and solid. RUTH RYERSON said she thinks it sounds exactly like the evaluation her previous staffs came up with, and the Trustees have to look out for the financial interest of the fund first and foremost. DR. JENNINGS concurred.

CHAIR JOHNSON thanked ZACH HANNA for a terrific presentation.

13. ISS PRESENTATION

MR. BOB MITCHELL explained that Institutional Shareholders Services is a leading provider of proxy voting services, and they would cover their benchmark plan and a few other things that they provide to investors, and would specifically cover how they address ESG issues. He introduced JACK FERDON of ISS.

MR. FERDON said that he is the ARM Board's client service manager at ISS, so he is the day-to-day contact for staff. He introduced PATRICK MCGURN, ISS special counsel and head of strategic research and analysis, and CHRIS MILLER, an associate vice-president who focuses on their specialty research policies.

PAT MCGURN said he would go over the benchmark policy that the ARM Board subscribes to and also provide a comparison with some of their other policies that take ESG factors into consideration. MR. MCGURN said that ISS has been in the proxy voting business for more than 30 years, with a team now of over 400 research and data professionals around the globe; he said they cover around 45,000 meetings in 115 different markets, and they are leading providers of both governance and environmental and social data. He said they are a fiduciary, not an activist or watchdog group dedicated to solving the problems of the world. They want to help solve problems relative to the ARM Board's meeting its fiduciary responsibilities related to proxy voting.

MR. MCGURN said that ISS is a for-profit service, and they started with the idea of providing independent research to institutional investors to help them vote their proxies, and after that they listened to clients and went from providing domestic to providing full global voting recommendations and research, to providing agency or back-office operations. Later, in response to clients, they developed both custom and specialty proxy voting policies. He said they have been in this business since 1997, and they've done faith-based policies, SRI, public fund policies, sustainability, and most recently climate. He said that all of their policies are driven by an annual research formulation and

review process, and explained how they start with a policy survey each year and a search of the background information, then they hold roundtables with their institutional investor clients and other constituencies to make sure there won't be any unintended consequences if they put a certain policy change in place. He said they actually put potential policy changes out for a comment period and consider the feedback received before they come back with their final policy updates.

MR. MCGURN showed a comparison of the ISS benchmark and specialty voting policies, noting that the benchmark policy is oriented to the single bottom line. MR. MCGURN said that one of their earliest specialized policies was their SRI policy, aimed at religious groups, charitable foundations, universities, endowments, and other that use the typical triple bottom line value proposition: people, planet, and profit, otherwise known as social, environmental, and financial. He said that is probably incompatible with the fiduciary standard of Alaska, given the bottom line focus there. He said he would de-emphasize that policy in this discussion, but it leads to the discussion of the newer policies, first the sustainability policy. He said this was driven largely by talking to a large cross-section of their clients that have adopted the UN PRI, or principles for responsible investment. He said it focuses on the three initial principles of the PRI: one, to incorporate ESG into investment analysis and decision-making; two, to be an active owner, that is, to incorporate ESG into ownership policies and practices; and to seek appropriate disclosure to allow them to implement principles one and two.

MR. MCGURN said the latest policy and the one they don't have a track record established for other than 2020 so far is the climate-based policy, which takes the sustainability policy one step beyond to look at climate-change-related risk.

MR. MCGURN said ESG really stands for having a focus on risk, first and foremost, not pushing for societal change or moral or ethical goals, but looking at risk raised by environmental and social concerns. He said that most of the shareholder proposals that they see now aren't overly prescriptive or unduly burdensome on the board and management of public companies, and he thinks that is due to a shift in the proponents and their focus. Many of the proponents today aren't the religious organizations and other issue-based activists of the past, but rather are institutional investors, including SRI funds themselves as well as asset owners, including a number of public pension funds.

MR. MCGURN said the most popular model today is what he calls RQ, which is a recommendation for report on risk. He said environmental issues include risks like climate change risk, water use risk, pollution, and renewables; he also noted that there are opportunities in renewables.

He said social has probably had the most explosive change in meaning over the past decade. He said social used to be about asking people to get out of certain lines of business, but today it focuses more on risk, asking companies to put out sustainability reports, and to address supply chain risks such as slave labor, child labor, and other issues related to human rights. He said there have been proposals focused on the risks for health companies of the opioid crisis, proposals on gun safety, and tech companies have their own set of issues with data privacy and cyber security.

MR. MCGURN said governance covers broad elements like board refreshment, diversity, and having the right skill sets in place, as well as risk management oversight. He said that each year for the last several years, boards and public companies have negotiated for the withdrawal of roughly half of all

of the E&S proposals that were offered to public companies in the U.S., and he thinks the numbers of ballots that institutional investors cast as "abstain" on E&S issues is approaching zero. He said that is important because for a long time a lot of institutions saw no economic issue whatsoever, and felt free to abstain. However, today investors rarely abstain from voting because they view these issues as things that will either raise or hurt the value of their investments.

MR. MCGURN said support for ESG is up, with rising numbers of majority votes on E&S resolutions, notably Johnson and Johnson being asked to report on governance measures that they have implemented to deal with the opioid crisis. He said there are a number of proposals dealing with reports on sustainability and climate change and risk, and human capital management is also coming up in proposals, issues like equal employment opportunity and board diversity. He said that ISS is already supporting a substantial number of those proposals because they believe in providing material information to investors to help them make voting decisions. He showed that the SRI policy has a higher rate of support and doesn't necessarily focus on a cost/benefit analysis because it aims at the triple bottom line. The sustainability policy numbers fall somewhere in between. He said he thinks sustainability takes a harder position by adding transparency so as to mitigate investors' concerns about the associated costs. He said sustainability tends to be more supportive than the benchmark policy would be for various E&S proposals, but it doesn't throw cost/benefit out the window.

MR. MCGURN said there was a request to discuss the general principles that drive the benchmark voting policy approach to E&S proposals, and he culled it out of one of their specific policies, which is an overriding set of principles that guide vote recommendations that aim to enhance or protect shareholder value. He said they considered elements like proper forum, or whether the issue is properly dealt with by a corporation or more effectively by legislation or government regulation; whether the company has effectively already substantially implemented what the proposal is asking for; and the most longstanding and intensively applied test, whether it is unduly burdensome or overly prescriptive, amounting to micromanagement. He said that SEC changes have allowed companies to ask for leave to omit resolutions from their ballots that would count as micromanagement, which winnows down the number of highly prescriptive proposals in the U.S.

MR. MCGURN said that peer comparisons have become a much bigger part of analyzing the proposals in recent years. A lot of old peer comparisons looked at whether providing the additional information would put a company at a potential competitive disadvantage or would require it to put proprietary of confidential information into the marketplace. He said that today, the peer comparison may focus on whether the company is lagging in disclosures and hurting itself in the marketplace by having less transparency. He said they also look at norms-based evidence like whether there have been significant controversies, fines, penalties or litigation associated with the company's practices.

MR. MCGURN pointed out that many of the factors in their approach to sustainability are close to the standards they use under the benchmark policy, but the major difference is that in sustainability there is a premium on transparency and on adherence to recognized international standards and principles. MR. MCGURN said staff had asked him to discuss some specific examples; he reviewed Union Pacific and J.P. Morgan Chase in the U.S., and Equinor, a Norwegian oil company, and discussed conclusions reached by ISS teams on various recent proposals, explaining how they differed between the benchmark and the sustainability policy teams.

CHAIR JOHNSON asked if the ISS policy that is being used for proxy voting on behalf of the ARM Board is the benchmark process he described; MR. MCGURN said that is correct.

CHAIR JOHNSON asked MR. GOERING if there was anything in the presentations that followed his that he would differ with or offer a different direction on. MR. GOERING said that he would return to the staff recommendations, which he said were consistent with the advice he had given, particularly as to the variation between passive, factor tilt, and active investments. He said a couple of things have come up that may be questions in Trustees' minds, starting with the ESG option in the DC plans. He said that when the Board decided to offer that option, they did exercise their fiduciary responsibility and had a rigorous discussion of whether it was appropriate, and the Board judged that it was. MR GOERING suggested that it would be a good idea to continue to revisit such decisions regularly based on the performance of the specific option. He said that while it may be appropriate to offer some ESG options, it would probably not be appropriate to have it as a default option.

MR. GOERING noted that he had received an inquiry from a Trustee about the specific Attorney General opinion he referred to earlier, and he had sent out a link to all participants in the meeting.

14. PERFORMANCE MEASUREMENT - Q1

MR. ERLENDSON from Callan remarked that it was a surprise when BOB MITCHELL announced his retirement, and he said Callan wishes him all the happiness in the world, since he has given them so much happiness at Callan by being a very thoughtful, open-minded, yet opinionated person who is solely focused on doing what is best for the beneficial owner of the assets. He said there are a lot of egos in the world, and they run into a lot of them in this business, but Bob is the exception in being both well-done and rare at the same time.

MR. ERLENDSON showed a list of some observations that are relevant as of the end of March 31st, saying that the advent of COVID-19 has demonstrated how precarious the inner connections across the global economy are, how tightly related, and how subject to unanticipated adverse events they are. He said one of the key underpinnings of any investment is making educated allocations of capital based on time horizon, risk tolerance, and potential upside, but always with a mind towards what could possibly go wrong, and he remarked that usually the thing that happens is not anticipated.

He pointed out a surge in unemployment to almost 15 percent during April, and said that things had started to pick back up in the economy, but then had been significantly reversed. He said there's been a lot of speculation about whether the recovery will be V-shaped, U-shaped, or L-shaped, which would mean no recovery, and nobody really knows. He said unless there is superior information, given the long-term time horizon for this fund, he would encourage the Board to stick with their asset allocation policy.

MR. ERLENDSON showed economic factors, and noted that although the downturn in GDP in the first quarter is fairly dramatic, it was worse in the global financial crisis. He said he had seen reports from the Atlanta Federal Reserve that have indicated that the updated GDP decline in the first quarter was 5 percent, and they are projecting the second quarter will decline by over 45 percent. He said

there is a huge range of projections, but it is likely that the second quarter decline will be greater than in the GFC. As for inflation, the long-term 50-year average is about 3.9 percent, but it was 1.50 year over year as of March 31, and has been way below historical averages for a long time. MR. ERLENDSON said Callan doesn't see any forces that would drive inflation higher going forward, and the implication is that nominal returns will be lower because interest rates and inflation, the two economic forces on which capital market expectations are built, both remain low.

MR. ERLENDSON reviewed Treasury yield curves, and pointed out that interest rates had dropped by over 1 percent since the end of March 2019, and in fact there was a time when all interest rates were zero, or less than 1 percent. Even 30-year Treasuries were below 1 percent, and that yield curve is a baseline for building capital market expectations going forward. He said interest rates had risen marginally by June 17th, but not by much.

MR. ERLENDSON then showed unemployment statistics, and said there have been more than a million unemployment claims for over 13 weeks in a row. The largest single weekly claim before the current time was in 1982 with 695,000 claims. MR. ERLENDSON noted that people with a college degree or higher have an unemployment rate around 7.4 percent, but it's almost 20 percent for those with less than a high school diploma, and one big issue is whether there will be job creation in the service sector of the economy or a continued bifurcation between professionals and service industry workers. He said one lesson from the global financial crisis over a decade ago was that in responding to an economic crisis, the Fed learned to get in early and get in big. He said Congress did the same with the paycheck protection program, mitigating how bad the problem could have been, but there is still a long way to go.

MR. ERLENDSON showed a comparison of the drawdown on the S&P in this crisis versus the two previous ones. When the tech bubble blew up, the drawdown was a very long period, and during the global financial crisis it took 191 days to reach the bottom, but the decline then in the S&P was relatively gradual compared to this time. From February 19th, at the top of the market, it was down over 34 percent, then it popped up relatively strongly, even though year-to-date as of June 17th the return is still below zero. Showing a history of corrections in the S&P, he pointed out that seven were greater than 10 percent, but none were as big as the most recent one. He also said that the VIX, a measure of volatility within the market, has been up dramatically, dwarfing any other periods of volatility.

MR. ERLENDSON reviewed annual rates of return in various asset classes, pointing out large variations, and said that's why they believe a strategic asset allocation is vitally important. He noted that in the decline, equity-oriented asset classes tend to suffer the most, and fixed income will rise to the top. He said fixed income will not achieve a return, it will only get to the actuarial rate, but it is there to mitigate the losses when the asset classes that are hoped to exceed the actuarial rate suffer a decline instead. MR. ERLENDSON said that all of the economic sectors had positive returns that were near or above 10 percent, so if nothing horrible happens in the remainder of June, they expect that the second quarter won't look too bad from an investment perspective.

MR. ERLENDSON showed the returns for the first quarter and those same indexes for the trailing one-year return as of March 31st. He noted that the bar that sticks out the most is the Bloomberg

Barclays Long Government Credit, and observed that when a market environment penalizes equities, being invested in these other assets is beneficial.

MR. ERLENDSON said there was a lot of distress in the real estate markets, with the retail sector down about 3 percent and a number of major retailers filing for bankruptcy. Owners of retail properties only collected 36 percent of the rent that was due, and he asked what is going to happen to the value of those properties and the ability to collect rents if people don't go back to stores. He said as long as a building isn't sold, the markdown is unrealized, but the lack of income is a realized foregone investment return, so the issue of operating income from real estate is going to be a big deal.

MR. ERLENDSON said that almost every indicator suggests a 100 percent probability of a recession. He said things have gotten a little better as of mid-June, but they are still pretty dark, and the outlook is bleak, and more importantly, uncertain. Thus, Callan suggest the Board carefully follow their asset allocation policy, and said there would be an update about that later in the meeting.

MR. CENTER discussed the performance of funds under the ARM Board's purview. He started with three pages that they added in response to one of the suggestions from Anodos in their performance audit, for Callan to develop a performance dashboard for review of the various plans that the ARM Board oversees. He explained that they did three separate slides, one for the healthcare portfolios, one for the military plan, and one for the PERS, TRS, and JRS, because these three pools have the same benchmarks, and it makes sense to do these dashboards based on stand-alone benchmarks. He went through and explained each slide, and said that overall the performance was very strong for all three plans.

BOB MITCHELL commented that the quarter's performance being viewed is fairly extreme, and these numbers are preliminary and he doesn't believe they fully reflect the performance that will be coming out of private equity and real assets. He said he expects that when the final numbers come out, the performance will adjust fairly significantly. MR. CENTER thanked MR. MITCHELL for pointing that out.

Discussing the asset allocation as of March 31st, using the PERS plan for illustrative purposes, MR. CENTER said there had been some overweights and underweights that were within the guideline bands, and have probably corrected themselves, so he would expect the allocations to be very close to targets.

MR. CENTER showed how the plan has performed relative to both its target return and the actuarial expected return. He said it was a difficult quarter to make the line chart because there was a negative 11 percent dip. However, the plan did outperform its benchmark, being down 11.25 percent compared to the benchmark's negative 12.8 percent. This resulted in the plan losing ground relative to its long-term actuarial expected return. He said longer term, both PERS and TRS outperformed their target for the last quarter and one-, two-, and three-year periods. He said over the past five, seven, and ten years, both PERS and TRS have been above the target and above the median. Over the full historical period of 28.5 years, PERS is ahead of its target benchmark by approximately 19 basis points. MR. CENTER reviewed the performance of various asset classes including domestic equity, small cap, global equity, emerging markets, fixed income, opportunistic, tactical asset allocation strategies, and

the real assets portfolio.

Then MR. CENTER discussed the Defined Contribution plans. He said the key takeaway was how much of the plan is invested in the target date funds. For the PERS DC plan, about 60 percent is invested in target date funds as of quarter end. He showed the quarterly net inflows and outflows and investment gains and losses for the plan. He said in TRS also about 60 percent is invested in the target date funds, and both PERS and TRS are cash flow positive. The Deferred Compensation plan has about 20 percent allocated to the target date funds, and that plan is cash flow negative with about $5 million in outflows. SBS also has about 60 percent allocated to target date funds, and was cash flow negative, with about $10 million in outflows in the first quarter.

MR. CENTER reviewed the underlying investment options in the target date funds, saying that the target date funds that Alaska uses have a slightly higher allocation to publicly traded equities than some peers, which can result in below-median performance when the equity markets have a correction like in Q1. He said that the passive options within the DC plan have all performed in line with their respective benchmarks. The Northern Trust ESG fund has performed pretty much in line with its benchmark, the international equity fund did okay, and the T. Rowe Price small cap fund had a very strong quarter during a very difficult period for small cap.

CHAIR JOHNSON recessed the meeting from 3:06 p.m. until 3:15 p.m.

15. ASSET ALLOCATION DISCUSSION

MR. MITCHELL explained that each year the Board considers a strategic asset allocation for the following fiscal year, and to provide framework for that, JAY KLOEPFER from Callan will be going through how the recommendations were arrived at. He highlighted that this effort has taken place over the past couple of months and has involved staff, Callan, and the IAC.

PAUL ERLENDSON followed up on a question about an ESG survey by bfinance. It was done as of year-end 2018, with 485 respondents. He said about 257 were in North America, the U.S., and Canada, 165 were in Europe, and 63 were in the Australia-Asia area. MR. BRETZ asked how many were requested to respond; MR. ERLENDSON said he would try to dig up that answer.

MR. KLOEPFER said that MR. ERLENDSON had done a great job of laying out the environment investors are now in, and he added that they get asked all the time whether they would change their capital market assumptions after this cataclysmic event. He said the answer is perhaps, but they've been through this before, and they didn't change their assumptions in the middle of the global financial crisis, or in the middle of the 2000 – 2002 meltdown because they remind themselves that their long-term goal is setting investment policy, not predicting the market. He said there is no doubt that things have changed, but a handful of participants in their world did make changes in March, and he thinks they sorely regret it already. MR. KLOEPFER said another issue is that the equity market is not the economy. There is a big dislocation, and they aren't quite sure where it will all fall out. But they are looking out 10 and 20 years, and the recent months should not be the tail wagging the dog.

MR. KLOEPFER said they have an inflation expectation of 2.25 percent; he said that though it has

fallen close to zero right now, all of the monetary and fiscal stimulus around the globe raises the chances of inflation. He said that clearly the Fed has not been successful in stimulating inflation in the last 10 years, so they may not be successful in the future, but inflation could come back, and that would have an impact on the expectations. He reviewed the standard set of assumptions, then discussed the asset classes specific to the ARMB and the funds that it oversees. He showed the weights of the various asset classes and said that using the assumptions that they released at the start of this year, the 10-year expectation for compound return would be 6.64 percent and a projected risk of 12.88 percent. He said 6.64 percent is below the target for discounting the liabilities when they do the valuation report, and is really the longer-term target. He reminded Trustees that they had this discussion last year about the right time horizon for setting a return expectation, and these funds, although they are closed, have a very long time horizon and a very long payout, so 20 years might be a better way to look at the expectations.

MR. KLOEPFER noted that they do a separate allocation for the militia plan with different weighting, and it doesn't include some of the alternatives that the PERS and TRS plans have. With its current allocation, the militia has an expected return over 10 years of 5.56 percent, with lower volatility because it has less equity and more fixed income.

MR. KLOEPFER said that when they do 10-year expectations, they are trying to get to a very long-term expectation, and they have a projection that they think of as long-term equilibrium, which has mean reversion as one of its key elements, plus a lot of judgment. He said the 10-year expectations are about 7 percent for stocks, less than 3 percent for bonds, and 2.25 percent for cash with no real return. The actuaries are looking out even farther than 20 years, and how to get there from here is the problem.

MR. HIPPLER asked, if the long-term inflation prediction is a positive number, 2.25 percent, and the long-term projection for bonds is that they have a real rate of return that is also in excess of zero percent, and if long-term Treasuries are currently yielding less than the projection for inflation, should they be buying any of those bonds? MR. KLOEPFER replied that over the shorter term it may look pretty unattractive to hold bonds, but it is a tactic around the long-term expectation that the market will be clear and efficient, and they will get a real return for bonds. He said in the short term, they may not, but they are trying to think over a much longer period, and they have a bond model that helps meet long-term goals. He acknowledged that that was set at the end of the year before the coronavirus hit, so the information would likely be revised. But he said it is a slippery slope to move a long-term expectation around based on what happened over a very short time period, and although the current negative yields on fixed income aren't attractive and may result in lower expectations, who's to say that anything they come up with now would be better than what they came up with a few months ago. MR. HIPPLER thanked him, and followed up by asked with the long government bonds' 10-year geometric yield at 2.55 percent, if that is even mathematically achievable, whether there is room enough for interest rates to fall to make that possible; MR. KLOEPFER said it is possible, though perhaps he wouldn't call it expected anymore.

MR. WILLIAMS asked how far ahead the projected standard deviation was for, and if they did a Monte Carlo simulation to get those, mentioning that often long-term forecasts end up wildly off, but he asked if they usually fall within the range of the standard deviation. MR. KLOEPFER explained

that standard deviation is an annual expectation, not a compound number. He said this is a mean variance framework, so they have a mean, which is an average; the standard deviation, which is the square root of the variance; and they compound to get the geometric number. So the bigger the risk, the lower the compounded number becomes, and if it is compounded over longer and longer periods with the same volatility, the result will be lower. He said they believe that over the long term, they may get more of a mean reversion figure. MR. KLOEPFER said that they have forecasts that date back to 1989, and they are trying to pick a midpoint of range and then use standard deviation to describe how wide that range might be. He said that on any given year they can be pretty far off, but for a total portfolio and over a five- and 10-year period, he's been impressed with how close to the actual midpoint of the range they end up.

MR. KLOEPFER told an example of someone asking him, "Oh, you and your forecasts, how good are they anyway?" So they compared them in equity, fixed income, international equity back 10 years to the start of the global financial crisis, and Callan was within half a percent for each of those asset classes compounded for 10 years; he said they were off by a couple of percent in international equity, though. He said they do have a track record that they look at every year, and over the range of potential outcomes they are in the middle of the distribution even at minus 2 for the year.

MR. WILLIAMS asked if the standard deviation came from simulations or estimates; MR. KLOEPFER answered that the standard deviation is a projection of how volatile each asset class will be each year. MR. WILLIAMS said he understands how they could have varied accuracy annually, but as they go further out they are more precise. He said recent events were unpredictable, but he's upbeat about it getting better in five or ten years out, so he asked if that was why they think they are more accurate over a five- or 10-year period; MR. KLOEPFER said yes, good years will cancel out bad years, and when they build something like a 7 percent return, they are trying to capture the underlying pieces and how much will come from each. Beneath it all they believe investors will get paid for being owners over being lenders, because they're taking equity risk, and that premium is built in to the projections. How much the premium is will be informed by current conditions and valuations, but they still believe these longer-term relationships are going to hold, he said.

MR. KLOEPFER went on to show them an idea of the path to this idealized long-term expectation, and what a 10- and 20- and 25- and 30-year expectation might need to be as they move across the different time horizons. He explained that one of the challenges, if you have forecasts that are more reflective of what is going on right now in the market versus how you think the market will move over time, is that investors with a specific need might be forced to take on more risk than they would like when interest rates and inflation and all are low. He said that acknowledging the longer time horizon means maybe they don't have to take quite as much risk, and that was part of the discussion as to using 20-year expectations.

MR. KLOEPFER explained that the 7.13 percent return target is the 4.88 percent real return target that's embedded in the valuation plus their expectation for inflation, which is 2.25 percent. He showed the current PERS and TRS target that was adopted a year ago, and said Callan considered what changes might be made to retain that 7.13 percent target over 20 years, and he showed five possible mixes, which he briefly reviewed. MR. KLOEPFER explained the adjustments that they are suggesting this year, with a little less in fixed income because they had a lower expectation for that,

1 percent more in private equity, and 2 percent more in public equity. He went through the same exercise for the militia plan, which is much smaller and has much greater fixed income exposure. He said the militia plan doesn't have embedded in its valuation process an implied discount rate like the PERS and TRS plans do, and it is closed and substantially overfunded, but there is a very long benefit tail to the distributions, so it still has some time horizon for taking on risk. MR. KLOEPFER showed projections for what might happen under the various mixes Callan is suggesting.

MR. MITCHELL added that staff would be recommending that the National Guard and Naval Militia Plan adopt an asset allocation that includes private equity and real assets. He said that if approved, staff's intention would be to phase it in in quarterly increments over the course of the next fiscal year.

CHAIR JOHNSON recessed the meeting at 3:48 p.m.

Friday, June 19, 2020

CALL BACK TO ORDER

CHAIR JOHNSON reconvened the meeting at 9:00 a.m. All Board members were present.

16. PORTFOLIO UPDATE

CIO BOB MITCHELL said happy summer solstice eve, and welcomed everyone. He said this portfolio update was influenced by the fact that the Board was about to talk about the strategic asset allocation. He said the Board has been pretty busy shaping the portfolio in the past several years, and there would be presentations later on the last two asset classes that staff has yet to review and bring before the Board, wrapping up that activity. He said that at a certain level, it's always an ongoing exercise, but he thinks now it's largely been reshaped, and now they need to talk about where they are and a framework for thinking about portfolio positioning. MR. MITCHELL said that most of his comments would be focusing on the nonparticipant-directed plans, of which there are 14 that the ARM Board oversees. Of those, seven are what he would characterize as legacy plans from the DB program and seven are nonparticipant-directed elements of the defined contribution retirement system.

Showing a pie chart, MR. MITCHELL said that the legacy PERS defined benefit pension health trust component dominates the assets of these plans, followed by the TRS legacy pension and health trust. Combined, those two are over 96 percent of the assets which, earlier that same week weighed in at about $26.7 billion, which is almost $2 billion more than at the May meeting, to give a sense of how quickly the markets have moved, he said. He noted that of these 14 plans, there are effectively two asset allocations, one representing 13 of the plans and one representing the military plan. He reminded the Board that for the 13 plans, the actuary, Buck, has an expected rate of return objective of 7.38 percent, which is based on a different inflation assumption from Callan's, and they have to account for that.

MR. MITCHELL said the military plan is a bit different, and he believes Buck is in the process of reevaluating that return objective, and he anticipates that they will recommend a range between 6.0

and 6.75 percent. He also mentioned that the military plan is overfunded significantly, and as a result the normal cost has not been funded for FY21, and his understanding from MR. WORLEY is that it is unlikely to be funded in FY22. He said that warrants additional analysis by the actuary.

MR. MITCHELL reiterated that return expectations have been falling, and it is staff's view that it is likely to remain an environment of relatively low returns. He cited a study that forecasts about 40 percent lower growth of global GDP over the next 50 years relative to the last 50 years, based on slowing growth in the workforce due to the aging of the population. He also showed how global debt levels have been increasing as a percent of GDP over the past several years, and said that high levels of debt tend to be associated with slower GDP growth going forward. He said the outlook suggests modest fixed income growth, and the portfolio has had to become more risk-seeking and more recently has had to invest more in alternatives in order to generate that same return.

MR. MITCHELL went over how conditions are changing how they shape the portfolio. First, they make sure they have enough liquidity to fund net outflows for pension payments, which they estimate will be about $100 million a month in FY21 based on actuarial projections. He said they have capital commitment in the private equity program, and the cash flows are roughly in balance, but in stressed times, one should expect a deterioration in that with less money coming in from existing investments and potentially more money going out for capital commitments. He said they are estimating that from being roughly in balance, that could deteriorate to minus $300 to $500 million a year. He said they want to have the ability to rebalance to their targets, and along those lines, they have doubled the fixed income allocation, which may sound big, but they were starting from a relatively small level of 11 percent. He said that at about 24 percent now, it's reassuring that the fixed income exposure is now close to median relative to peers.

MR. MITCHELL said once they checked the liquidity box, they quickly focused on cost. He said for the past several years they've made a number of moves to try to preserve or improve investment outcomes while reducing the cost footprint. He said cost is dominated by investment manager fees, though there is also the ARM Board's allocated cost of running Treasury. He said it's important to note that they aren't trying to minimize costs, but to shift the focus to net-of-fee outcomes and to be confident in what they are spending. He pointed out that there are hidden costs to overdiversification, because when the portfolio is splintered into smaller pieces, each individual investment is smaller, and many manager fee structures are set up so as more is invested, the marginal cost of investment goes down.

MR. MITCHELL said they have taken steps to reduce alternative investments, eliminating the absolute return asset class, lowering real assets, and exiting investments in public infrastructure and master limited partnerships and pipelines. He said they have confidence in the remaining assets in alternative, but they are applying a higher bar because they think there are sacrifices to being in alternatives, like relinquishing the rebalancing benefits of more liquid assets. Also, some of the alternative investments have less return history and are more opaque, so manager and strategy selection becomes more important.

MR. MITCHELL showed the asset allocation of the portfolios from the early '90s forward, and the manager dispersion chart, and then went on to the proposed asset allocation, which he said would

result in a modest increase in equities of a few percentage points and a decrease of roughly 3 percent in fixed income.

MR. MITCHELL went on to the military plan, saying that they recommend targeting the same risk level they have currently, and refining that as they get more information from Buck. They are also recommending more broadly diversifying the military plan by investing in real assets and private equity. They believe this will increase risk-adjusted returns, and will operationally simplify things. As to why they weren't investing in those all along, MR. MITCHELL said that his predecessor, MR. BADER, indicated to him at the time when the alt investments were ramping up that there were concerns about the liquidity needs of this portfolio. He said they have analyzed that and now believe there is no legal basis for excluding them.

MR. MITCHELL then went through the current manager structure, meaning how they are investing in each of these asset classes and how they are selecting managers. He said that in public equities they've increased passive and factor based, and de-emphasized active, and they've evaluated private equity and decided not to make any changes. MR. MITCHELL said that in real assets and opportunistic there would be presentations later from STEVE SIKES. He showed the eye chart from about a year ago, and said that he anticipated that the proposed changes would reduce the number of strategies to 34, down from 75 previously, which will dramatically simplify the implementation at the portfolio level. He said fees are coming down as well, and they estimate further savings in FY21.

Addressing performance, MR. MITCHELL said the first quarter of private equity would be revised significantly lower, but on domestic equity they believe that the current structure makes sense, that it will outperform over time, though it will experience periods of underperformance like this. He said one big takeaway is that if beta or the broad markets are going to be less attractive, they would attempt to diversify those risks and seek skill to increase the active risk in the portfolio. He said they've been doing this at the asset class level, and the next step is to look at the whole portfolio and view the interaction of those various active strategies together. Doing that requires that they build some infrastructure on the risk side, which is on the research agenda.

CHAIR JOHNSON asked for input from the IAC. DR. MITCHELL said that he would support this direction, which is consistent with what's been happening over the past years, and the future emphasis is good too. DR. MITCHELL commented that the idea that good private equity managers have persistently good returns is contrary to what happens in the active public sector, where there doesn't seem to be any consistency. He said both practitioners and academics have tried to figure out why that is, and he thinks it's because the better private equity managers are offered the better deals without having to compete for them.

MR. WILLIAMS said that private equity looked really strong, and he asked if they think it is strong now, or if it kind of lags and there is a downside that just hasn't shown up yet. He also said he's been going through withdrawals in being able to have conversations with the IAC members during breaks or lunch at meetings, and maybe they should figure out having some office hours for the IAC. He said that in one conversation, DR. JENNINGS talked about the importance of when the Board makes really strong strategic decisions that might take 10 years to play out, that they memorialize that to make sure that four or five years into it they don't change it, when the intention was for it to be a 10-

year strategy. MR. WILLIAMS asked if, as they approach a change in CIO, MR. MITCHELL feels that the Board is memorializing some of the major decisions and how long they are in play, his major concerns, things he's proud of and so on, so that as someone new comes into that position, there is enough of a landscape background and the new person will know the environment and the thinking behind decisions that were made.

MR. MITCHELL replied that he does expect the preliminary private equity returns to be revised dramatically downward for the first quarter. He said that in terms of consistency, he found it interesting that as he moved from being a fixed income portfolio manager to deputy CIO to CIO, his time horizon consistently increased, and as that happened, he grew to appreciate the risk that stems from governance, from changing the way things are invested frequently, and he thinks it is a risk, when there is turnover and change, if they try to change horses midstream. However, he said that has to be balanced with the need to be engaged in the markets and make adjustments as necessary as markets evolve and try to improve how things are done over time. He said never changing is not a good idea, but neither is always changing; some balance is necessary. MR. MITCHELL concluded that it is incumbent on staff and on Callan, the IAC, and the Board to keep that perspective and try to put guardrails on the grid change but be open to it.

MR. MITCHELL said he thinks they've done good work in simplifying the portfolio, and he believes that the portfolio will generate higher returns at a lower price point, so he thinks it's set up pretty well. However, he said the next CIO may have different views, and they should consider those views, but be mindful of the degree of change.

DR. JENNINGS commented that the move to internal management to lower costs, and to more factor-based investing has been the legacy of MR. MITCHELL's short tenure as CIO, and in the most important decision of selecting a replacement, he would encourage them to focus on someone with a similar world view. He said there is risk in switching back and forth, so they should support the moves that have been done and that are being forecast, and not reverse them.

17. CHANGE SCIENTIFIC BETA INDICES

MR. MITCHELL said that at the last meeting, they had a rather lengthy presentation from Scientific Beta where they walked the Board through the evolution of implementation options for factor-based investing, and at this meeting MELISSA RUFFEL and GREG BEHAR from Legal & General would continue that conversation. MR. MITCHELL said that they would provide more focus on evolution in the markets and potential consideration for changing the indices that are currently in use for the ARM Board, and an action item would follow the presentation.

GREG BEHAR introduced himself as head of Index Strategy at Legal & General Investment Management, who manage the Scientific Beta developed ex-U.S. and emerging market assets, and he thanked the Board for the privilege of managing their assets. He said Scientific Beta is an academic institution that developed indexes in 2013, and as one of the largest index vendors in the world, they can manage to the risk/return characteristics of any index. He said they believe indexing is an active decision, so they pay very close attention to the construction and methodology of indexes.

MR. BEHAR said he would discuss the evolution of Scientific Beta's methodology from the ARM Board's first investment several years ago in the four-factor methodology, and the Board should see that moving from the four-factor methodology to the six-factor, high factor intensity, sector-neutral should produce more meaningful, more diversified factor exposures while mitigating some of the tracking error risk, and helping them stay the course for the long term. He said there are two main reasons why they see institutions moving in this direction: one is to complement their active exposures, and the other is to complement market cap-weighted passive and to diversify their exposure relative to market cap.

MR. BEHAR discussed the evolution of factor-based investing and how actual skill or luck has become a smaller portion of the opportunity set.

MR. BEHAR said that the ARM Board has been a big beneficiary of the market-cap weighted returns with their low cost and transparent nature over the years, and from their analysis, dating back to the tech bubble, this is the highest point seen historically in concentration in the index. He showed a chart showing that in 2016, 30 percent of the S&P 500 dictated its returns, and now only 15 percent of the stocks in the index are driving the performance.

MR. BEHAR explained that the two main evolutions since the Scientific Beta index came out in 2013 have been the addition of two more factors and the use of high factor intensity, which uses a filter to create more diverse factors and more potent or intense factors. He showed the ARM Board's current four factors and methodology, and said these are all consensus, academic factors that have a risk-based and behavioral-based rationale for their existence. He said the academic evidence shows that the other two factors, profitability and low investment, are unique and additive, not just more value and momentum. Then he discussed the high factor intensity filter that Scientific Beta developed after years of research and explained how it works. MR. BEHAR talked about the risk constraints, and ways of decreasing tracking error risk; he said Scientific Beta offers two methodology choices, sector or country, that can be constrained.

MR. BEHAR discussed how to bring this all together, and how to evaluate these changes from a quantitative perspective to make sure it's aligned with the investor's unique goals and objectives. He said that from talking to the staff at Alaska, they know that having very diversified and very intense factor exposures is desirable, but they also want to reduce the tracking error. He discussed some ways to measure the effects of changes in the real world.

MR. BEHAR discussed factor deconcentration, which he said is essentially factor diversification, and explained that with six factors, the highest the ratio could be is six, so the greater the number, the better. He explained, saying that if there is equal exposure to each one of the six factors, the ratio is six, but if most of the factor exposures come from value and a little bit from others, the ratio will show exposure to essentially 1.86 factor deconcentration. He explained that a factor intensity of .90 times the factor deconcentration of 6 gives a factor exposure of 5.37, and the higher the number the better. He said this factor exposure quality number is an important variable in talking to the investment staff. However, he said one could have very good factor exposure quality but too much tracking error, and there is a tradeoff.

MR. BEHAR showed the ARM Board's current global four-factor index, and the deviations versus the policy benchmark. He said they realize that factor-based investing is a significant portion of their allocation, and it complements the market cap-weighted passive exposures as well as their active exposures. He said that compared to the four-factor, they think the six-factor MBMS HFI Sector Neutral will result in more intense, more diversified factors, while constraining the tracking error and mitigating some of the relative downside versus the policy benchmark.

MR. HIPPLER commented that it appears that the real strength of this is, for whatever reason, that this theory works better in bear markets than bull markets, and asked theoretically, why; MR. BEHAR said that is correct, and he explained that an improved bull market return relative to others comes from sector neutralization, because the sector biases have been tightened relative to the policy benchmark, and the tracking error has been tightened, so they are participating more in the upside of the market. He went on to say that there are always tradeoffs; when sectors are neutralized, the information ratio is improved, so relative drawdown is better, but the max drawdown could in fact be worse compared to the six-factor non-sector neutralized. He said that in talking to investment staff, it became apparent that focusing on factor exposure quality and reducing the tracking error was the key component to have better bull/bear returns, more consistency versus the policy benchmark, and to be able to stay the course.

MR. MITCHELL directed Board members to the action item in the meeting packet, and said that staff recommends that the ARM Board authorize staff to migrate the existing Scientific Beta mandates to the six-factor high-factor intensity, sector-neutral implementation for the United States, the international developed markets, and the international emerging market mandates, subject to successful contract negotiations.

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

MR. CENTER commented that Callan is comfortable with this change and believe the recommendation makes sense.

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

CHAIR JOHNSON recessed the meeting from 10:30 a.m. until 10:42 a.m.

18. REVIEW OF OPPORTUNISTIC INVESTMENTS

STEVE SIKES, the manager of Opportunistic Strategies and Real Assets, gave an overview and update on the opportunistic asset class, including its history, current investment strategies, performance, FY 2020 events, and said he would conclude with recommendations.

MR. SIKES stated that the assets as of March 31st represented about 6 percent of ARMB's assets, approximately \$1.5 billion. He said the role of the opportunistic asset class is to provide an allocation of the portfolio to house strategies that provide a unique source of return that is not available in the traditional asset classes, or that may not be a good fit in the traditional asset classes, including tactical asset allocation, alternative beta, alternative equity, and other opportunities.

Return expectations are to exceed a 60/40 benchmark over rolling six-year periods. He said currently this is a domestic benchmark, and the fiscal year target allocation is 8 percent.

MR. SIKES said the history of the opportunistic asset class has evolved significantly since it was first created in 2017. Initially the asset class was made up of unique equity and fixed income strategies or hybrid approaches that were expected to produce distinctive characteristics as compared to more generic approaches. He said examples include a Buy-Write strategy, managed volatility, convertible bonds, municipal bonds, and high yield. He explained that over time many of these strategies were terminated in an effort to simplify the portfolio, reduce fees, and improve performance. Multi-asset strategies were added in 2018 in pursuit of alpha from asset allocation decisions. McKinley Healthcare was added in 2019 as a thematic strategy. Alternative risk premia strategies were transferred from absolute return last year, and investment and risk parity was also contemplated as this fiscal year began.

MR. SIKES explained that in tactical asset allocation, ARM currently invests in two strategies, Fidelity Signaling and PineBridge. Both of these were funded in 2018, so their track record is short. MR. SIKES reviewed the managers in various asset classes and their strategies.

MR. SIKES reminded the Board that they have received a number of presentations on risk parity strategies, which are an alternative portfolio construction process to traditional mean variance optimization approaches. Risk parity is based on the view that risk forecasts are more reliable than return forecasts, and are therefore a superior way to determine allocations. He explained that by applying a risk parity framework, a more diversified portfolio can be produced by applying leverage and targeting an overall volatility level. Each asset class is sized to make an equal contribution to expected risk, which is different from traditional mean variance portfolios where equities have a much higher risk contribution to portfolio risk. MR. SIKES said that leverage is a key part of risk parity, because an unlevered risk parity portfolio produces insufficient returns. Leverage is necessary to scale the solution and achieve a risk/return that meets earnings objectives, and it is created using futures contracts and implementation.

MR. SIKES said that staff spent a significant amount of time with the leading risk parity managers in the industry to better understand the risk and rewards of the approach. He said that coincidentally, the coronavirus market shock produced an interesting time period to observe the various approaches to risk parity and consider whether the risk/reward tradeoff is worthwhile. MR. SIKES said that while risk parity appears to have weathered the market shock with only some bruising, they believe the resulting market location of fixed income rates is cause for pause since the leveraged fixed income is a primary tenet of the strategy. He said the diversification benefits appear to be muted at this point as rates approach zero, and higher rates, no matter how unlikely at this time, could create meaningful losses given the skewed nature of the duration risk.

MR. SIKES said they continue to believe the risk parity concept has many favorable characteristics, and they will continue to monitor market conditions for a more favorable risk/reward balance; however, at this time they do not recommend that the ARMB pursue risk parity further.

MR. HIPPLER asked how risk parity did over the past six months; MR. SIKES said he couldn't say

over the past six months, but in March, which was the big drawdown month, most risk parity managers underperformed a 60/40 portfolio; the 60/40 portfolio was down about 9 percent, and of the managers they talked with, the worst was down 13 percent. He noted that one of the points promoted on risk parity is to protect the portfolio in market downturns, and generally speaking, the ones they looked at didn't do that. He explained that in a situation like with the coronavirus, where the volatility index hit a record level, the risk parity managers are in a position where they've actually got way more risk in the portfolio than they want to try to target that. Generally, they are trying to target a 10 percent volatility level, consistent with the 60/40 portfolio. He said also, in these big drawdown events, correlations go to one on a lot of the assets, so some of the benefits of correlations that are engineered into the portfolio don't work as well as hoped.

MR. WILLIAMS asked when MR. SIKES said "staff believes," how many people is that, and is there a consensus, noting that it looks like they still find the risk parity approach appealing. MR. WILLIAMS observed that there was a drawdown where it underperformed and missed, and it makes him think they were pretty gung-ho in jumping into risk parity. He asked if it is now the environment where they still think it's a risky thing and they want to go through it, or they want more time to pass, or if there is a certain condition they are waiting for to change before they would want to look at risk parity more seriously. MR. SIKES replied that he and MR. CARSON were the leads on the project, and they worked with six investment managers discussing their portfolios, expectations, and track records. He said each manager had a different approach and implementation, and one of the things that is unique is how they manage tail risk and the potential for that coronavirus drawdown. He said they all had different ways of identifying when correlations increase and when volatility is about to increase so they can quickly take off risk and not get blown up. He said he and MR. CARSON worked closely with the managers to evaluate that and then advanced a recommendation to MR. MITCHELL.

MR. SIKES said that personally, he thinks some aspects of risk parity are really cool, and he likes the idea of leading with risk, which is more predictable, and letting return follow instead of trying to forecast return. He said the challenge they came to is where the ARMB is in the fixed income market. The reality is that leveraged fixed income is a big part of the correlation story and getting this strategy to work. He said when they look at the fixed income markets right now, it seems unnatural, and they just couldn't get to the comfort level of advancing it to the Board at this point. He said it's not a wait and see, it's a no, but he personally plans to monitor it.

MR. SIKES went on to a performance summary of the primary strategies as of March 31st, since the asset class was created in July 2017. He said that given the changes that have occurred in the asset class, the overall inception-to-date return has limited value at this point in time. Over the past quarter and the year, he said the portfolio had underperformed it benchmark by over 569 basis points.

MR. SIKES said two structural issues have contributed to this underperformance: the overall asset class benchmark is a domestic focus, which contrast with the global mandates that occupy the portfolio; and the McKinley Healthcare strategy is all-equity, so it creates a high equity risk exposure compared to the 60/40 asset class benchmark. He said these two issues explain approximately 400 basis points of the one-year asset class underperformance, so this is not a good

measure of the efficacy of the portfolios. He said the track record here is still relatively short, and they are still confident in the strategies that make up the portfolio.

MR. SIKES said that for Fiscal Year 2021, staff plans to review other multi-asset strategies to consider as a complement to the ARMB's existing opportunistic portfolios. If they identify possible candidates, they will bring them to the Board. He said they also plan to continue to work with the internal research group to improve optimization of the portfolio weights.

MR. SIKES said that to improve the measurement process they believe a benchmark change is in order, and they have an action item for the Board that reflects this change.

CHAIR JOHNSON asked whether the benchmarks had been changed with respect to any of these in the opportunistic area before the current request; MR. SIKES said they have not, but what has changed is the makeup of the portfolio. He said when this asset class was first created in 2017, it was a collection of all domestic strategies, but substantial changes made by the Board last year brought some fairly dramatic shifts, and he said that looking back, they probably should have made this benchmark change then. He said the proposed benchmark is more consistent with the current constituents, all of which have global mandates.

MR. WILLIAMS said he would be interested in seeing some of those benchmarks going further back, because he thinks the seeming underperformance may just be because of what has happened in the past year. MR. SIKES said that the benchmark they propose moving to is the Board's benchmark for international equity, so effectively they are applying what the Board has adopted at the global equity asset class level into the opportunistic class level, which tunes the opportunistic benchmark to be reflective of the overall asset class structure.

MR. MITCHELL remarked that staff's position is that they are content with the existing equity benchmark, and if it is the Board's choice to keep the existing equity benchmark, he doesn't foresee a structural issue with that. He said the motivation for recommending this change from a domestic-only equity benchmark to a global benchmark is they believe it will reduce the tracking error because it would be more consistent with the implementations in Fidelity and PineBridge's portfolios, which they think will make it easier for staff and the Board to evaluate the relative performance in the asset class.

19. REAL ASSETS MANAGER STRUCTURE CHANGES

MR. SIKES started with some background, saying that as of March 31st, real assets made up 14.6 percent of ARMB's portfolio with investments in real estate, farmland, timberland, infrastructure, and energy. He said the presentation would culminate in an effort by staff to continue the vision of CIO MITCHELL to simplify the portfolio and lower fees in a way that maintains expected risk-adjusted returns with adequate diversification. He said similar efforts have been made and implemented in the public assets classes, and also he would address recommendations made by Callan at its last review in September 2019. He said they would recommend changes in the real assets portfolio that would refine the strategic focus, simplify account structure, calibrate portfolio weights toward long-term strategic weights, reduce fees, and reduce operational administrative costs.

MR. SIKES said that Callan recommended staff review the role of the real estate separate accounts and evaluate whether they should remain in place. He said staff believes that real estate separate accounts should remain a key component of the real asset portfolio due to a number of superior attributes compared to alternatives, most notably superior historical returns, low fees, and control of strategy and capital structure of investments. He said additionally, staff recommends ARMB redeem from the J.P. Morgan Strategic Property Fund and the UBS Trumbull Property Fund and use proceeds to increase the Sentinel separate account by $125 million and the BlackRock open-end fund by $100 million. The Board has already made the decision to redeem from the UBS Trumbull Property Fund, but MR. SIKES said it was repeated here since the position is still held by the ARMB and to provide a holistic perspective on the portfolio changes.

MR. SIKES said that while both J.P. Morgan and UBS have been good long-term investments for ARMB, lower fee options are available that are expected to produce good returns and provide a sufficient diversification benefit. He said the Sentinel separate account is an apartment-based portfolio, while the BlackRock Core Property Fund is a diversified commingled vehicle that invests in all property types. He said that collectively, the changes would improve strategic focus on multifamily assets, eliminate two accounts which will simplify account management, and lower management fees. He said the estimated savings is $1.8 million in fees per year. He said the portfolio would then be underweight office and retail and overweight multifamily and industrial, and explained that they think industrial properties and well-positioned apartments will continue to perform well.

COMMISSIONER MAHONEY asked when this forecast was prepared; MR. SIKES answered that it was prepared prior to the market drawdown with the pandemic, but he said that since then, he had asked BlackRock to update the numbers, and all the forecasts came down a bit. He said the difference between industrial and apartment versus office and retail widened. COMMISSIONER MAHONEY asked him to send out those updated numbers, and he said he would.

MR. WEST commented that the commercial mortgage-backed securities delinquencies were just released earlier this week through the month of May, and more than a quarter of all the retail commercial mortgage-backed securities are delinquent, meaning the lessees aren't paying their mortgages.

MR. SIKES said that Sentinel and BlackRock would increase at a combined 14 percent of the real estate portfolio from their current level, and considering some of the primary risk factors, such as concentration risk, primary market exposure, and tracking error, they believe the portfolio will continue to be sufficiently diversified through the combined exposure of the separate accounts, the BlackRock commingled fund, and REITs. They believe these risks are sufficiently mitigated and a good tradeoff for the reduced cost and portfolio simplification.

Regarding the farmland portfolio, MR. SIKES said Callan recommended they evaluate the existing separate account managers, Hancock and UBS, with regard to their role and fit with the program objective and goals and with regard to the ability to pursue permanent crop investments. He said staff had done this and they believe the plan would benefit by consolidating accounts under UBS Agrivest. This would help optimize portfolio structure and strategy, reduce fees and expenses, and reduce

administrative costs through economies of scale. He said this recommendation was not being made because Hancock has done a poor job, but rather because they believe the UBS philosophy is more aligned with ARMB's portfolio objectives, which are focused on lease space investing in row and permanent crops. He said they estimate cost savings of $1.4 million per year by consolidating the accounts, and that cost savings and investment philosophy are the primary drivers of the recommendation.

MR. SIKES said that a similar proposal is being made in timberland. He said staff is recommending consolidation of accounts from Hancock to TIR, with the purpose of optimizing strategy, reducing fees and expenses, and reducing administrative costs. He said after identifying the potential to improve economics by consolidating accounts, careful thought was given to which manager was best aligned with ARMB's portfolio objectives and cost-savings potential. He said in this case, TIR is being recommended, and they estimate the fee and cost savings at about $700,000 per year. He said they reviewed strategies with the timberland managers and they are optimistic about returns, and the asset class also provides diversification.

CHAIR JOHNSON commented that the diversification issue is always being considered, and they could probably save costs on a lot of things by aggregating to just one manager in an investment type, but they keep a number of them for diversification. He asked if it is absolutely staff's considered opinion that they are not losing the significant valuable element of diversification by this consolidation proposal. MR. SIKES replied that there are always tradeoffs, and to be clear, this proposal will transfer assets to different managers but will keep them in the portfolio. So from a property level, the diversification will not be changed, but what is potentially lost is the different ideas and management practices of two different teams. MR. SIKES went on to say that he had reflected on how this was initially set up and why it is okay now to change, and when they first started investing, particularly in farmland, that was on the cutting edge of institutional investors investing in the asset class, so it made sense at the time to have more than one manager, but now, more than 15 years later, there is much more transparency in those asset classes, and he thinks if there are other areas of the portfolio where there are potentially duplications of manager coverage, they should probably also consider collapsing those mandates to achieve some cost savings. He said the cost savings come from the fee structures, the operating costs, and renegotiation of fees with managers.

MR. SIKES went on to say that in timberland, they believe Hancock has done a good job for the ARM Board in acquiring properties in the Pacific Northwest, but they think TIR's focus on the South and their search for value-added enhancements to the core of the portfolio of assets is a differentiating factor. He said that like in farmland, they lose manager diversification and increase operational risk by not having a backup manager, but they think these risks are manageable and acceptable given the expected benefits of consolidation.

Regarding infrastructure, MR. SIKES said that Callan recommended activating the dividend option for both funds to help rebalance the real assets portfolio into other areas. He said they had activated the option for the IFM fund but are waiting to do so for J.P. Morgan, since that fund position is much smaller. He said they intend to look for opportunities to achieve a more diversified and balanced exposure between the funds over time.

MR. SIKES said they elected to transition the J.P. Morgan fund to a currency hedge vehicle. He said currency volatility had had a big negative impact on returns and volatility, and hedging this risk factor would create a more stable return stream, more consistent with the objectives of the asset class. This will also establish consistency between the two funds, as the IFM fund has been hedged for some time, he said.

He gave a summary of the manager structure changes presented in this proposal, and commented that they would target the farmland and timberland separate account changes to be implemented by September 30. He said the redemptions from the UBS and J.P. Morgan funds were expected to take longer as both have queues. He said the reinvestment into the BlackRock open-end fund and Sentinel separate accounts also may take up to one year to fully effect. Also, he said the timing of the redemption and reinvestment will probably not be simultaneous, which may cause some volatility in real assets allocation levels. He said these changes led to three action items for the Board to consider.

COMMISSIONER MAHONEY asked if MR. SIKES thought the queues would be changed or reduced as a result of the negative outlook with some of the real estate; he answered that it was different for the two funds. He said that with UBS, the exit queue was fairly significant, impacted by their retail investments, and UBS has developed a strategy to deal with it, but it won't be fast. He said that J.P. Morgan also has an exit queue, for different reasons, and the weights in these asset classes appear to be higher than they want in the target asset allocations. He said that the performance in the March 31st quarter was either flat or positive, but there are headwinds in what's going on underneath currently and these issues are likely to delay the managers in addressing their redemption queues.

ACTION: Real Assets Manager Structure Changes

MR. SIKES said the first action item proposes to effect the manager changes he presented, with the broad goals of simplifying the portfolio, achieving $4 million in fee and cost savings, while maintaining the return profile and sufficient diversification.

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

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

ACTION: Farmland Guidelines, Resolution 2020-02

MR. SIKES explained that the guidelines currently require a minimum of two managers. He said the recommendation was that the ARMB approve Resolution 2020-02, which adopts the revised Farmland Investment Guidelines.

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

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

ACTION: Timberland Guidelines, Resolution 2020-03

MR. SIKES explained that the current guidelines require a minimum of two managers, and given the consolidation recommendation, they are revising the guidelines to eliminate that requirement. Also, he said they are doing a cleanup item regarding a change the Board made in the past, changing the investment objective from a minimum of 5 percent net real rate of return over rolling five-year periods, to a net-of-fee total return between public equities and fixed income over rolling six-year periods. He said that wasn't caught in the guidelines at the time, so he's catching up. MR. SIKES said the recommendation was the ARMB approve Resolution 2020-03, which adopts the revised Timberland Investment Guidelines.

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

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

20. INVESTMENT ACTIONS/INFORMATION ITEMS

CHAIR JOHNSON noted that Item C and Item F under this heading had already been taken care of, and asked MR. MITCHELL to lead the Board through the others.

E. Opportunistic Benchmark Change

MR. MITCHELL started with Item E because the decision on it would impact the benchmarking that would be incorporated into the asset allocation resolution. He read the recommendation: "The Alaska Retirement Management Board revise the benchmark for the opportunistic asset class to 60 percent MSCI ACWI IMI and 40 percent Bloomberg Barclays Aggregate Index effective July 1, 2020."

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

MR. WILLIAMS pointed out that DR. JENNINGS had submitted a comment on this, which was read by MS. ALEXANDER: "We have always known that there was a weak fit between the opportunistic asset class and its benchmark. I generally favor simple and consistent benchmarks, but globalizing the equity 60 percent seems reasonable." CHAIR JOHNSON thanked DR. JENNINGS for that helpful comment, and said he's glad somebody pointed that out.

MR. WILLIAMS said that by nature he is always really leery on benchmark changes, but this makes sense to him, so he will vote yes.

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

A. Asset Allocation Adoption

CIO BOB MITCHELL noted that the asset allocation had been discussed in his presentation as well as by JAY KLOEPFER from Callan. He read the recommendation: "Staff recommends the Alaska Retirement Management Board adopt Resolutions 2020-04 and 2020-05 approving the asset allocations for Fiscal Year 2021."

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

MR. MITCHELL emphasized that they would be investing in private equity and real assets for the military plan. MR. CENTER said that Callan has been very involved in these developments and they are supportive of these changes.

COMMISSIONER MAHONEY asked MR. MITCHELL to provide some perspective on the real estate component in regard to the recent forecast of negative returns in retail and office. MR. MITCHELL answered that clearly the recent events have had negative impacts on significant components of real estate, and he would expect returns to decline. However, he said that over the intermediate to long term they believe there is a benefit to increased diversification, and they believe the real estate component of the real assets portfolio is well positioned. He pointed out that real estate comprises about half of the asset class, and the other half is comprised of other diversifying elements, so he thinks that while they are trying to mitigate certain issues with phasing in the illiquid strategies, it is staff's view that moving into real assets and private equity would improve the risk adjusted return of that portfolio over time. CHAIR JOHNSON added that DR. JENNINGS gave a double thumbs-up on this action.

A roll call vote was taken, and Resolution 2020-04 and 2020-05 were adopted in a single unanimous vote.

B. Comparison of FX Conversion Costs

MR. MITCHELL said that 20B was an information item in response to a question that Acting Commissioner of Revenue MIKE BARNHILL asked in the December 2019 meeting relating to how the ARMB's foreign exchange conversion costs compare to their peers. He said staff contacted Callan and was put in touch with two firms that provide this measurement analysis, and initially they were told that there is no resource that could directly compare that at the plan level. However, at the manager level, that information exists and is more appropriate and more comparable for different types of strategies, so he said they did an analysis and concluded that the ARM Board's costs are roughly average.

C. Adopt SmartSpending

SmartSpending was taken up after the Legal Report, before the morning break on Thursday, June 18.

D. Convert to Lendable SSGA Indices

MR. MITCHELL said this was a request to convert the share classes of two passive investments that the ARM Board has with SSGA in international equity passive investments, one of which is benchmarked against the MSCI World Ex-U.S. IMI Index, and the other benchmarked against the MSCI Emerging Markets Index. He explained that they currently are investing in commingled vehicles designed to match the return objective and as a result those assets are no longer available to participate in the securities lending program. However, SSGA has a securities lending program, and they reflect that in a different share class of the existing investments.

MR. MITCHELL said staff is recommending converting the share class that they are now investing in to the share class that allows for securities lending. He said staff has evaluated the securities lending program, explaining that in the past they had discontinued securities lending just prior to the Great

Financial Crisis in the spring of '08, and then later reinstituted it. He said the current securities lending program has key differences from what they had before, centered around the quality of the investment vehicle into which the cash collateral was invested, and they also put a high bar before a security would be considered for lending. It would have to call a "special" rate 50 basis points above the market, which drastically lowers the participation in the program. He said that SSGA's implementation has a 25-basis-point bar, which in their view is sufficient to weed out lending securities for a modest gain. He added that the investment vehicle into which the cash collateral is invested is identical to the cash vehicle into which the cash is currently invested for the ARM Board's program.

MR. MITCHELL said there was one other difference worth noting, which is that unlike the ARM Board program, the SSGA program accepts collateral in the form of Treasuries and U.S. agencies, and staff is comfortable with that. He said it has the effect of reducing the investment risk, bringing it down to the underlying collateral. He added that their indemnifications are very similar to those that the ARM Board has in their existing program. He said for those reasons, staff is comfortable with this recommendation, and he said SSGA has offered to slightly reduce the management fees in those two programs if the ARM Board were to move to the other share class of each investment. He said that would amount to about $60,000 in annualized fee savings based on current market values, but the key motivation is to regain access to securities lending revenue, which they estimate will be $1.15 million per year.

MR. MITCHELL read the recommendation: "Staff recommends the Alaska Retirement Management Board direct staff to contract with SSGA to transition its investments in the MSCI World Ex-U.S. IMI Index and the MSCI Emerging Markets Index for the defined benefit plans to the securities lending options offered for those mandates, subject to successful contract negotiations."

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

MR. WEST commented, acknowledging that he had been a former securities lending agent, that he thinks this is a no-brainer. The 25-basis-point spread is still a good thing, and taking Treasuries as collateral is really sound. He said the utilization rate wouldn't be high, but they should take advantage of every free dollar they could get.

DR. JENNINGS' comment was read by MS. ALEXANDER: "I'm generally more skeptical of securities lending than your other advisors, but it is hard to turn your back on $1 million a year in securities lending revenue."

MS. RYERSON said she would agree with staff's recommendation and with what DR. JENNINGS said.

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

E. U.S. Equity Guidelines Modification

This was taken up after the Legal Report, before the morning break on Thursday, June 18.

F. Domestic Fixed Income Guidelines Update

MR. MITCHELL said the domestic fixed income guidelines apply to the internally managed core fixed income portfolio, and the benchmark is the Bloomberg Barclays Aggregate Index, the investment-grade U.S.-dollar-only benchmark. He said that the guidelines include a constraint on the proportion of the portfolio that is managed internally that can be rated Triple B, which is the lowest credit rating that is still investment grade. He said there's been a migration of the index from about 8 percent Triple B to 14 percent Triple B over the last 10 years, and there is the potential to see an increase in the proportion of Triple B securities that is comprised in the index.

MR. MITCHELL explained that as the proportion of Triple B Securities has increased, the 15 percent constraint has become more binding on internal staff. He said the packet contained a red-lined version of the fixed income guidelines and a black-lined version that they are submitting for approval. The revised guidelines change the constraint to 5 percent relative to the weight in the aggregate. He said that for example, the proportion of Triple B securities is 14 percent of the index. By adopting this change, the constraint would move from 15 percent to 19 percent of the index, and going forward would flow with the proportion of Triple B securities that are in the aggregate index. MR. MITCHELL said that the changes also encompass some cleanup in the language; for example, there is also the ability for staff to invest in high yield securities up to 5 percent, but that is not in the section of the investment guidelines called "Portfolio Constraints," so they have made some changes that they believe makes the application of the investment guidelines with respect to the credit ratings more clear.

MR. MITCHELL said staff recommends the ARM Board approve Resolution 2020-06 which adopts the revised Domestic Fixed Income Investment Guidelines.

MS. HARBO so moved. COMMISSIONER MAHONEY seconded the motion.

A roll call vote was taken, and the resolution was adopted unanimously.

UNFINISHED BUSINESS

MR. WEST said he's been to several fiduciary presentations as an ERISA plan person in his former life, and those presentations were usually given by or sponsored by companies that sold fiduciary insurance coverage. He said they always went over not only the responsibilities of fiduciaries, but also the consequences of failing to execute those responsibilities faithfully, and of course there are civil and criminal penalties on the ERISA side. He said he asked MR. GOERING what are the similar things here, and since he isn't aware that they have fiduciary insurance coverage, does the state protect them if they make a stupid mistake? MR. GOERING suggested he bring that up so that others could hear his answer and it could be put on the record.

CHAIR JOHNSON said he thought that was a very good question, and he suggested that it be brought up as an agenda item at a future Operations Committee or Audit Committee meeting; MR. BRICE agreed that a conversation in Operations would be good. MR. GOERING agreed to prepare a presentation on the subject for the Operations Committee meeting in September.

NEW BUSINESS

None.

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD

CHAIR JOHNSON said to MR. MITCHELL that he understood that it was his intention to retire before the next Board meeting in September, and asked if he had any closing remarks.

MR. MITCHELL said his plan was to work through the close on September 11th, so he would not be in this position at the next Board meeting. He said he was very grateful and humbled by having had this position, and it has been a true honor. He said he has worked with exceptional people, among both staff and Trustees, and he will treasure these experiences.

PUBLIC/MEMBER COMMENTS

DOUG WOODBY said that he listened with interest to the two presentations on ESG, as well as the presentations by MR. GOERING and by ISS staff, and while he would like to support explicit incorporation of ESG considerations if statutes allowed it, he wanted to make clear that his testimony and that of other members of his group were directed explicitly at fiduciary concerns. He said they are aware of their focus on statutes addressing prudent investing.

MR. WOODBY said that regarding the presentation by MR. HANNA, on passive investments where he recommends no divestment of specific sectors or industries, his three arguments may have merit in general, but are not persuasive in the context of fossil fuel investments. He said regarding the first argument, that divestment would decrease diversification, that pension funds generally have somewhere around 6 percent of assets in fossil fuel investments, so divesting and moving funds to alternatives wouldn't impact diversification. MR. WOODBY said in response to the second argument, that industries go up and down unpredictably, fossil fuels are on a downward slide toward stranded assets, and BP's recent admission is likely to be the industry norm. MR WOODBY addressed MR. HANNA'S third argument, that the broad markets are efficient at putting a price on risk, saying that for fossil fuels, there is increasing risk and diminishing rewards, and he wondered if this might have more to do with the challenge of moving away from standard suites of indexed funds.

MR. WOODBY said that his three counterarguments apply to active investments as well and are independent of ESG concerns. He said that remaining invested in fossil fuels is a fiduciary mistake and a disservice to beneficiaries; those investments are high risk and low return, and the data he presented at the May meeting supports their claim that divestments from fossil fuel assets meets fiduciary responsibilities. MR. WOODBY stated that there are financial analysis of returns for other major public pension funds in New York, Colorado, and California demonstrating that those funds have foregone billions of returns over the past decade because they remain in fossil fuel industries, and there is no reason to believe that Alaska's funds have performed differently.

CHAIR JOHNSON thanked MR. WOODBY for his carefully considered commentary.

INVESTMENT ADVISORY COUNCIL COMMENTS

DR. JERRY MITCHELL said that those who read the financial press would have noticed that the CIO of CalPERS, the California public fund, said that he was going to dramatically increase their commitment to private equity and increase leverage on the portfolio. He said those are two pretty big statements, and to the extent that CalPERS is considered a thought leader in the field, he thinks it is incumbent on other public funds to consider both of those issues.

DR. MITCHELL commented on factor investing that he is pleased that it has become a significant part of the ARM Board portfolio, but he sometimes bristles at the word "scientific" in Scientific Beta because it implies that there is something mathematical or axiomatic about that form of investing, which isn't really so. He said it is just another form of highly disciplined active management, and he would indicate to Trustees that it's not a sure thing.

DR. MITCHELL said that BOB MITCHELL brought to the job intelligence, professionalism, dedication, and high ethics, but for him, one of Bob's greatest contributions has been his mentoring and encouragement to the staff and his willingness to give the staff greater responsibilities and greater visibility to the Board. He said if he were to start his investment career all over again, he didn't think he could look for a better job than to work for BOB MITCHELL, and he thanked him.

MS. RYERSON said that one Trustee had mentioned how much they missed the informal interaction between Trustees and the IAC and staff, and she seconded that. She said she thinks that is one of the best ways people can learn from each other and share ideas, and she hopes by September they won't be meeting on the computer anymore.

MS. RYERSON also complimented BOB MITCHELL, saying that even though she has only worked with him for less than six months, he's been one of the best CIOs she has worked with. She said that the ARM Board was very lucky to have had him for as long as they did, and filling his shoes will be very difficult.

TRUSTEE COMMENTS

MS. HARBO said that DR. MITCHELL said some of the things she was going to say, but she would say them again because they can't be said too many times. She thanked BOB MITCHELL for his leadership of a great staff and for the building of a very strong team. She said he had given his team members the opportunity to present different asset classes and to interact with the Trustees, which is very important, and he had simplified the portfolio, reducing both the number of managers and the cost to the system, and given the most thoughtful presentations to Trustees. She said MR. MITCHELL was always prepared, professional, and patient. She wished him the best and said she hopes he will come see her sometime in Fairbanks.

MR. WEST echoed what DR. MITCHELL said in that BOB MITCHELL is almost unique in not having the ego that would be expected of one in his position. MR. WEST said MR. MITCHELL is very approachable and willing to discuss and take a different look at things, which is a rare, unique quality. He said he doesn't think they would ever be able to replace MR. MITCHELL, and he has

greatly enjoyed working with him and will really miss him.

MR. BRICE offered a quick thank-you to BOB MITCHELL for all his dedication, not only to the beneficiaries of the fund but to the State of Alaska.

CHAIR JOHNSON said that he had the pleasure of working with MR. MITCHELL as the counsel for the ARM Board, and before that the ASPIB, and during that time, and subsequently as a Trustee, he had grown to highly respect everything about his efforts. CHAIR JOHNSON said he would really miss MR. MITCHELL.

MR. BOB MITCHELL thanked everyone for their sentiments and kind words. He said the Board has a very talented staff; he said the CIO sometimes takes credit for the work that his staff does, and a lot of his success had been due to the strong team that is now in place. He said he has confidence in that team, and he knows the Board does too, and he thinks they are well positioned going forward from a staff perspective.

FUTURE AGENDA ITEMS

CHAIR JOHNSON noted that the point about fiduciary insurance coverage raised by MR. WEST would be handled in a future Operations Committee meeting, and there were no other future agenda items to note.

ADJOURNMENT

There being no objection and no further business to come before the board, the meeting was adjourned at 12:34 p.m. on June 19, 2020, on a motion made by MR. BRICE and seconded by MS. HARBO.

Chair of the Board of Trustees
Alaska Retirement Management Board

ATTEST:

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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.