State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
MEETING

Videoconference

MINUTES OF
June 17 - 18, 2021

Thursday, June 17, 2021

CALL TO ORDER

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

ROLL CALL

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

Board Members Present
Robert Johnson, *Chair*
Bob Williams, *Vice Chair*
Gayle Harbo, *Secretary*
Lorne Bretz
Allen Hippler
Commissioner Lucinda Mahoney
Dennis Moen
Donald Krohn

Board Members Absent
Acting Commissioner Amanda Holland

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

Department of Revenue Staff Present
Zachary Hanna, Deputy Chief Investment Officer
Pamela Leary, Director, Treasury Division
Mike Barnhill, Deputy Commissioner
Kayla Wisner, State Comptroller

Scott Jones, Head of Investment Operations, Performance & Analytics
Michelle Prebula, Public Equity & DC Investment Officer
Sean Howard, Portfolio Manager Alternatives
Shane Carson, State Investment Officer
Casey Colton, State Investment Officer
Kevin Elliot, State Investment Officer
Victor Djajalie, State Investment Officer
Mark Moon, State Investment Officer
Benjamin Garrett, Assistant Investment Officer
Ryan Kauzlarich, Accountant V
Hunter Romberg, Investment Data Analyst
Grant Ficek, Business Analyst
Alysia Jones, Board Liaison

Department of Administration Staff Present
Ajay Desai, Director, Division of Retirement & Benefits
Kevin Worley, Chief Financial Officer, Division of Retirement & Benefits
James Puckett, Deputy Director, Division of Retirement & Benefits
Emily Ricci, Health Care Policy Administrator, Division of Retirement & Benefits
Paula Varna, Deputy Commissioner, Department of Administration

ARMB Legal Counsel Present
Benjamin Hofmeister, AAG, Department of Law
Rob Schmidt, AAG, Department of Law

Consultants, Invited Participants
Paul Erlendson, Callan LLC
Steve Center, Callan LLC
Jay Kloepfer, Callan LLC
David Kershner, Buck
Scott Young, Buck
Tonya Manning, Buck
Paul Wood, Gabriel Roeder Smith
Bill Detweiler, Gabriel Roeder Smith
Kristin Shofner, Fidelity
Jeffrey Moore, Fidelity
Michael Plage, Fidelity
Beau Coash, Fidelity
Stephen Rosen, Fidelity
William Maclay, Fidelity
Andrew Rubin, Fidelity
Jim Chambliss, Pathway
Canyon Lew, Pathway
Wyatt Geiger, Pathway
Jim Simon Arrowstreet

Alex Ogan, Arrowstreet

Others Present:
Heather Evoy, Public
Elaine Schroeder, Public
Michael Tobin, Public
Randall Burns, Public/RPEA
Jim Simard, Public

PUBLIC MEETING NOTICE

Board Liaison ALYSIA JONES confirmed that public meeting notice requirements had been met.

CHAIR JOHNSON announced the passing of a former Trustee Mr. Pat Wellington. He noted that MR. WELLINGTON was a dedicated protector of the systems. He had been elected several times to the PERS Board from the early 80's till 2005. He said that Mr. Wellington had a long history of law enforcement in the state and the stories he told of his experiences were legendary, as were his actions as a Board member. He said that he had been instrumental in getting the real estate, real property investments and the private equity styles for the Board and that he would be greatly missed.

APPROVAL OF AGENDA

<u>MS. HARBO moved to approve the agenda.</u> <u>MR. WILLIAMS seconded the motion.</u>

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS AND APPEARANCES

MS. HEATHER EVOY introduced herself saying that she was from the Eagle Clan. She said that President Biden referred to climate change as an existential emergency which demanded a clean energy revolution. She said that the revolution would require the extinction of fossil fuel. She said that with all the changes made by President Biden, it would be wise for the pension fund Board to look close at the investments associated with fossil fuels and how they could change during a global clean energy revolution.

MS. ELAINE SCHROEDER introduced herself by stating that she was a long-term Juneau resident and co-chair of 350 Juneau Climate Action for Alaska. She discussed a recent report commissioned by the comptroller of New York City who also acts as custodian for New York City's teacher retirement system written by BlackRock. She said the report noted that institutions with $12 trillion in assets have committed to immediately divest from fossil fuels. She noted that the institutions cited risk management and materiality as a basis of forming their decisions. She said that it had been found that dropping fossil fuel investments appeared to have helped the bottom line and prevent future underperformance. She said that BlackRock used its own carbon price sensitivity tool and low carbon transition readiness tool as part of its risk assessment. This tool discovered that 95 percent of all fossil-fuel-linked securities had either or both negative carbon price sensitivities and transition readiness which equaled bad future investments.

MS. SCHROEDER also referred to a report by International Energy Agency (IEA) titled "Net Zero by 2050" that had been recently released. She said the report outlined a pathway to limiting global heating to 1.5 degrees centigrade which would avoid more catastrophic climate changes. She said the IEA predicts the price of oil would drop to $25 a barrel in 2050 and oil and gas production would drop about 25 percent. She noted that investment in clean energy was projected to exceed $4 trillion yearly in the decades before 2050.

MR. MICHAEL TOBIN introduced himself saying he was a resident of Juneau. He explained the BlackRock report notes that in the past year, people had seen the mounting physical toll of climate change with fires, draughts, flooding, and hurricanes as well as the direct financial impact as energy companies take billions in climate-related write-offs on stranded assets. He noted that BlackRock, who owned 6.7 percent of Exxon-Mobil stock, sided with a shareholder revolt, and successfully replaced two Exxon board members with candidates that urged Exxon toward a greener future. He said that similar events had occurred at Conoco Phillips and Phillips 66 and Chevron shareholders had rebelled against its board by voting 61 percent in favor of a proposal to force the group to cut carbon emissions. He stated that the retirement fund was the last place that should invest in companies whose business plan involves progressive destruction of the climate.

APPROVAL OF MINUTES - MARCH 18 - 19, 2021

<u>MS. HARBO moved to approve the minutes of the March 18-19, 2021, meeting of the ARM Board. MR. WILLIAMS seconded the motion.</u>

With no objections, the minutes were approved.

STAFF REPORTS

A. RETIREMENT & BENEFITS DIVISION REPORT

1. Buck Consulting Invoices

MR. WORLEY presented the report for Buck Global LLC which was a summary of the quarterly invoices paid to Buck. He said the information begins on page 39 of the presentation.

MS. HARBO asked if the Senate Finance Committee presentation was done by Buck; MR. WORLEY stated that the Division of Retirement and Benefits produces the presentation but worked with Buck for follow-up questions from the Committee and noted that a copy of that presentation could be found on the website.

2. Membership Statistic

MR. WORLEY noted that the staff report for the Division showing membership statistics as of March 31, 2021, could be found on page 42 of the presentation. He said that report was started during the DB termination and the start of the DCR Plan and that the report itself was located on page 44 of the presentation.

3. Legislative Summary

MR. DESAI said that there had been two major bills to discuss. The first was HB55 which would open up a new PERS Defined Benefit tier, allowing current police and firefighters to elect the new tier. The other bill was SB55 on page 49 of the presentation which removed the 22 percent cap on the payroll contributions to the PERS for the State of Alaska as a PERS employer and that all other PERS employers' rates would remain capped at 22 percent of the payroll.

CHAIR JOHNSON asked if passage of the bill would not result in a lower level of appropriations and contributions by the state to the PERS retirement system; MR. WORLEY confirmed that based on testimony through OMB, there would be an increase in the amount of contributions to the plan by the state employer which would come in every two weeks as a pay period payment versus a lump-sum payment in July of each fiscal year. He noted that there was a projected $3.7 million decrease in investment income, but in terms of contributions, that level would increase.

MR. WILLIAMS asked if MR. WORLEY thought the decreases and increases would balance out and if the benefit was only for the defined benefit members or would it also benefit DC members: MR. WORLEY stated that the amount of money the state had projected to contribute for the next fiscal year was going to be higher than what had been projected by Buck. He said that the $3.7 million could be spread out over the amortization time frame built into the additional state contribution. He said that although they would not get $3.7 million this year, it would be captured through additional state contributions in later years at higher rates.

MR. WILLIAMS asked if there would be impacts to members of the DC Plan; MR. WORLEY stated that there would be none.

B. TREASURY DIVISION REPORT

MS. LEARY introduced herself as the Director of the Treasury division. She said the budget had passed with some details to still be worked out, but the budget that the ARM Board adopted in September was included in the budget that passed.

MS. LEARY said they were completing the contracts that they had been directed to complete and were at the stage of having them signed. The contracts included the custodial contract with State Street Bank and two contracts with GRS. The GRS contracts were renewal for actuarial review services and for the independent actuarial audit performed once every four years.

MS. LEARY reported that Treasury continues to telework with the majority of the staff teleworking full-time. There are a few people in office either part-time or full-time and they are in the process of developing a Treasury telework policy that has a hybrid approach. She said they should have the policy developed by the next meeting and would report on it at that time.

MR. BRETZ asked if telework would be 100 percent and if there were any requirements that employees ever come into the office, and will they be hiring from out of state; MS. LEARY said that they do not envision 100 percent telework and that they envision having all members of Treasury in the office for some period of time but have not settled on exactly what that would be. She stated that out-of-state work was not something that they had thought about but may do so in the future.

COMMISSIONER MAHONEY added that they were currently working on a department-wide telework policy which would allow the Division to establish telework within the umbrella of the DOR policy. This would work out to a minimum of two to three days a week of in-office work. She said that working successfully as a team involves face-to-face interaction, mentoring newer employees coming into the offices, establishing teamwork, and creating a culture of sharing information and establishing best practices.

C. LIAISON REPORT

1. Disclosures Report

MS. JONES stated that for the first quarter there had been no disclosure transactions that required additional review or discussion.

2. Communication Report

MS. JONES stated that the communications memorandum listed communications directed to the Board since the March 18-19, 2021, Board of Trustees meeting. She noted that the Division of Treasury had received an additional 21 fossil fuel divestment e-mails since the most recent report provided on June 11th that was included in the Board packet. CHAIR JOHNSON stated that MS. JONES had delivered summaries of letters received. He said the issue of fossil fuels investment or divestment were a matter of importance and suggested that at some point they provide written responses on the matter. He said that they hoped that the investment managers would take into account issues that had been presented. He said that they appreciated the testimony that has been given on the subject and look forward to taking the issues into account.

3. Meeting Calendar

MS. JONES said the September meeting was proposed for Juneau, and the December meeting for Anchorage. She said that she had also drafted the 2022 meeting calendar and there was a potential action item for Trustees to adopt the 2022 calendar.

<u>MS. HARBO moved to adopt the 2022 calendar</u>. <u>MR. HIPPLER seconded the motion</u>. The motion was approved without objection.

D. CIO REPORT

MR. HANNA gave a general update and a preview of the upcoming meeting. He said they have had four quarters in a row of positive equity performance. That including the pandemic quarter, domestic equities were up 28 percent from the start of 2020 through the first quarter of 2021. He said that stocks were priced to near perfection and continued to test new highs as the economy reopens. He said the bond market also had a strong first quarter. He said the quarterly bond returns were a negative 3.4 percent, the worst in almost 40 years. He said the Feds have had a difficult balance to strike between supporting the expansion and controlling long term inflation, but they moved closer towards controlling longer-term risks and were expected to raise rates in 2023. He added that they still expect inflation to be transitory.

MR. HANNA said that he had received questions on how the rise in lumber prices had impacted the timber investments. He said the short-term answer was that it had not benefited the timber portfolio as of yet but did expect a longer-term benefit to the portfolio with increased demand for building products.

MR. HANNA noted that the ARM Board had a large allocation to real assets which should provide diversified returns and protection to inflation and that he would recommend increasing the allocation by 100 basis points. He would also recommend a 200 basis-point increase in private equity.

MR. HANNA then move to Item 2 in the CIO report which was the watch list. He said they had no recommended additions to the list. He said that Capital Group informed them that one of the five portfolio managers investing in the international equity strategy was being replaced by another experienced investor and to have each PM manage a global portfolio versus the EM-only portfolio managed by the exiting PM. He said the Capital Group had successfully made many of those changes over time and the staff did not recommend placing them on the watch list. He also said that the corporate CIO of the Man Group had retired, and Man is not replacing the position but would rely on business unit CIOs instead. He said they were comfortable keeping Man on the watch status as a result.

MR. HANNA said that there were 10 contracts completed; they included an amendment to the BlackRock Defined Contribution contract, a $25 million private equity commitment to GenstarX, amendments to the Fidelity and PineBridge contracts, repeat commitments to two real estate partnerships with KKR and Almanac, an update to the wrap contract with Stable Value, a provider in New York Life, JP Morgan SmartSpend contract to add the spend-down option to the Defined Contribution lineup, and a $40 million private equity commitment to Insight XII.

MR. HANNA stated that rebalancing focused on risk management and bringing the portfolio back towards the ARM Board's established asset allocation and risk profile which involved selling what had done well and buying back into those assets that had not done well. That meant selling equities and buying back fixed income and other less risky assets. He said that during the period they bought $642 million in fixed income and cash, $125 million in REITS funded by sales of $202 million in international equity and $565 million in domestic equity. He said that they continued to add $100 million per quarter to the internally managed multifactor strategy which continued to do well. They also conducted four internal rebalance transactions to equalize the relative allocations across the plans.

E. FUND FINANCIAL PRESENTATION

MS. WISNER noted that the financial report ending April 2021 started on page 60 of the Board Packet. She stated that PERS invested assets were $22.3 billion, TRS assets were $10.5 billion, JRS assets were $281 million and MRS assets were $49.1 million. She said the total for nonparticipant-direct assets were $33.1 billion, year-to-date withdrawals were $888.5 Million, and $16.3 billion of invested assets were under internal management.

MR. WORLEY explained that the Board had requested information regarding the makeup – revenues and expenses of the column titled "Net Contributions (withdrawals)".. He stated that on page 87 of the Board Packet was the breakdown of that year-to-date number of net contributions and withdrawals, and the number by month and page 88 showed the breakdown of contributions as well as the expenses fund which represented benefit payments and the investment expenses incurred.

TRUSTEE & LEGAL REPORTS

A. CHAIR REPORT

CHAIR JOHNSON had nothing specific to report except that he thought that they needed to work in coordination with the Department of Revenue with respect to the number of inquiries that were received relating to the investment in fossil fuels. He said that something needed to be done in terms of responsiveness and to be as transparent as they could be considering those investments were discussed in the meetings as well as on the website.

B. COMMITTEE REPORTS

1. AUDIT COMMITTEE

MS. HARBO reported that the Audit Committee heard a presentation by KPMG where they reviewed the 2021 audit plan which included PERS, TRS, JRS, Naval and Militia, Deferred Comp, SBS, the ARM Board invested assets and the schedules of employer allocations for each of the DB Plans for GASB 68 and 75. She said they had discussed risk assessment regarding management override of controls and valuation of alternative investments. They also discussed cyber security and the involvement of KPMG experts in the audit.

MS. HARBO reported that the Audit Committee will meet by teleconference on October 11, 2021, to discuss the draft financial statement. She said they also were made aware of the renaming of the annual financial report, which is now the Annual Comprehensive Financial Report.

MS. HARBO said that MS. HELMICK reported they had hired a new lead Accountant V to work on compliance and to share the work with the other two auditors to audit 165 PERS employers and 58 TRS employers. She said that in 2020 mostly desk audits had been performed but there was a need to travel to perform the audits for the large employers. She said that MS. HELMICK had identified noncompliance areas and had a summary of the FY2019 audits as well. She said there had been 39 audits completed with three still in progress. For FY2020 there had been 15 audits completed and 29 still in progress.

MS. HARBO reported that MS. WISNER had given a presentation on the SOC 1, reporting that State Street Bank submits to an annual independent audit regarding its internal controls.

MS. HARBO reported that MS. RYERSON had raised concern about internal controls in DRB and DOR where more auditors were needed as to not overburden those that were currently doing the job. She also noted that MR. BRETZ had expressed concern about cyber security and potential for improper benefits to be issued and said that would be a topic for future discussion.

COMMISSIONER MAHONEY asked what the role of the KPMG actuary in the audit was. MR. WORLEY stated that the actuary reviews the assumption and reviews the reports for the calculations done within the required supplementary information of the financial statements.

2. DC PLAN COMMITTEE

MR. WILLIAMS reported that MR. PUCKETT gave an update on the brokerage window which had high interest from members and was supposed to go live in January 2021 but had not yet and no date had been set. He said Empower had offered a bundle of funds that contained restrictions of no load and no transaction fee. He said it was important to get the best value for the members and the best choices. He said that MR. PUCKETT also noted that the death rate was up and that it usually happened during the holidays and then would go back down, but it has stayed up. He said there had been public testimony about the delays in processing paperwork regarding the deaths by as much as two months and they would follow-up on those cases.

MR. WILLIAMS reported that they had a presentation by Empower regarding the registration process when members have a general delivery address; they were unable to register online when they have a general delivery address, instead, they would have to call a number and speak with a representative who would then be able to register them.

MR. WILLIAMS reported about the discussion with Empower about the annuity option and how many members choose an annuity. He said that the number of members between 2011 and 2021that had either taken a full distribution or a partial distribution was over 60,000 and under 300 people had chosen an annuity as an option. He said they did not understand what the fee structure for the annuity was.

MR. WILLIAMS reported that MR. HANNA had shared that the SmartSpend implementation would be running by July 1st.

MR. WILLIAMS reported that most of the members that were DC were going into target date funds. He said that MR. HANNA was in conversations with T. Rowe Price about ways to obtain a better price for those offerings or improve the quality of those offerings.

MR. WILLIAMS reported that for future agenda items they would look at member fees and structures, how those were done and how to reduce them.

MR. WILLIAMS also reported that MR. MOEN and MR. KROHN joined the committee.

3. ACTUARIAL COMMITTEE

MR. HIPPLER reported that they had discussed GRS's review of Buck's actuarial valuation reports and that the summation of that discussion would be presented after the legal report, due to action items forwarded by the Actuarial Committee. He said they had also discussed the charter which the Actuarial Committee had recently adopted, specifically the mandate to self-assess on a periodic basis. He said the self-assessment mandate does apply to certain other committees that serve at the pleasure of the ARM Board. He said they informally requested the Operations Committee or another body to assist with simple guidelines so they could perform a proper self-assessment.

4. ALASKA RETIREE HEALTH PLAN ADVISORY BOARD

MR. BRETZ reported that in the packet was a written report regarding the May 14th meeting. He said Teladoc for Retirees had been in place temporarily in response to the COVID outbreak and would not be available after July 30th. He said the plan would continue to cover telemedicine services delivered by regular providers. He said that COVID-19 testing and vaccines were permanently available to all

AlaskaCare members and that they were looking to expand preventive coverage for the retirees. He said the Division had proposed adding two different member cost-sharing options for a preventive services plan that were provided in most employee plans per the Affordable Care Act. He said the AlaskaCare Defined Benefit retiree health plan was going to increase the use of preventive services to support members. He said it would impact the annual cost by .45 percent from $3 million to $3.35 million. He said there would be a subcommittee meeting to continue discussion on the expansion of preventive care coverage.

MR. HIPPLER commented that he was disappointed that Teladoc would no longer be available as it seemed to be an efficient way to provide quick services to the members.

MR. BRETZ said that it came with considerable expense to the plan. He said Telemedicine was still covered but not through Teledoc.

C. LEGAL REPORT

MR. BENJAMIN HOFMEISTER introduced himself and explained that he worked for the public corporations and government services section which was a new section in the Attorney General's office that was formed to consolidate the resources and experiences of attorneys in other sections who were representing agencies that handled the finances and assets of the state. He noted that he would be the primary attorney for the ARM Board.

MR. HOFMEISTER reported on the Metcalfe case. He said Mr. Metcalfe worked for the state in the 70's and was Tier I and left service prior to 1981, cashed out his contributions to the PERS program and did not return to state service. In 2005 Division of Retirement and Benefits sent out a notice and a lot of people were reinstated to get to the five-year mark if they had been in Tier 1 or Tier 2. He said in 2012 Mr. Metcalfe had requested information about his right to return to service and if he could come back as a Tier 1 employee. He had been told that it had been phased out in 2010. Mr. Metcalfe filed the lawsuit in 2013 which became a class action and involved all prior DB members. He said the case had been to the Supreme Court twice, the first in 2018 with a Constitutional question as to whether or not the statutory right could be impacted by the diminishment clause that affected retirement plans. The court did not issue a decision on the Constitutional question but did issue a decision stating that contractual damages in the form of a lump sum which Mr. Metcalfe was seeking was not something that he could do. The case was then sent back to the Superior Court and a decision was issued by the District Court judge, Judge Miller, saying that the statutory right to reinstatement and restoration was not protected by the diminishment clause. The Supreme Court reversed that decision in April. The Superior Court must now implement the decision consistent with what they wrote in their opinion.

MR. HOFMEISTER said that there would probably be a lot of people that were in Tier 2 that returned after 2010 and put into the Defined Contribution program and had additional service under Tier 4 and there may be people from Tier 3 as well, but the vesting period was not 10 years for Tier 3. He said MR. PUCKETT mentioned that the DRB identified a little over 1,000 employees currently working that came back into the Defined Contribution Plan that would be able to take advantage of Metcalfe and be returned to the Defined Benefit Plan.

MS. HARBO asked if those people would have to pay back what they cashed out as well as have to pay 7 or 8 percent interest for each year they had money out of the plan; MR. HOFMEISTER said that yes, there would be interest and there is a provision that speaks directly to what the percentage and interest would be to pay back in..

D. ACTUARIAL REVIEW/ACCEPTANCE - CERTIFICATION OF FY2020 REVIEW REPORTS & VALUATIONS

Action: Board Acceptance of GRS Certification for FY2020 PERS, TRS, NGNMRS, JRS, and DC Plan Valuations

MR. HIPPLER motioned that the Alaska Retirement Management Board accept the review and certification of FY2020 actuarial reports by Gabriel Roeder Smith & Company.

CHAIR JOHNSON noted that since the motion came from the committee, there was no need for a second and requested MS. JONES perform a roll call vote.

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

Action: Board Acceptance of FY2020 Buck Valuations for PERS, TRS, NGNMRS, JRS, and DC Plan Valuations

MR. HIPPLER motioned that the Alaska Retirement Management Board accept the actuarial valuation reports prepared by Buck for the Public Employees' Teachers', Public Employees' Defined Contribution (for Occupational Death and Disability and Retiree Medical Benefits), Teachers' Defined Contribution (for Occupational Death and Disability and Retiree Medical Benefits). Judicial, and National Guard and Naval Militia Retirement Systems as of June 30, 2020.

CHAIR JOHNSON noted that since the motion came from the committee, there was no need for a second and requested MS. JONES perform a roll call vote.

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

CHAIR JOHNSON recessed the meeting from 10:35 a.m. until 10:51 a.m.

PRESENTATIONS

A. PERFORMANCE MEASUREMENT - Q1

MR. ERLENDSON noted that page 2 of the slides showed a range of 80 percentage points, from plus 40 to minus 40 due to the second quarter of 2020 when the GDP was down over 31 percent then bounced back up to 33 percent in the third quarter. He stated that the numbers were unprecedented. He said the GDP for the first quarter of 2020 was up 6.4 percent which followed an increase of 4.3 percent from the fourth quarter of last year. He noted that the U.S. Treasury yields were down close to zero, where a year ago the 30-year Treasuries were yielding 1.3 percent and the 10-year Treasuries were yielding 1.74 percent at the end of March but had come down to 1.57 percent. He said the rates would be good on the liability side and that new money going into fixed income would be getting higher yields and long-term higher interest rates would show an expectation the economy was going to be growing.

MR. ERLENDSON said that on the inflation side, the CPI-U which measures the cost of goods for urban wage-earners, was up 5 percent as of the end of May. He said that basically these items in the graph show that the economy is growing, which was good for stock prices, but the interest rates are rising as well which was harmful to the bond market for a short term, on top of inflation concerns which means that liabilities would grow as well.

MR. ERLENDSON stated that the U.S. inflation rate of 5 percent is on par with Brazil, India, and Russia where Japan had an inflation rate of 1 percent, and Western Europe was at 3.5 percent. He said the high inflation rate of the U.S. was due to the economy growing much faster than the other regions.

MR. ERLENDSON mentioned that one of the stressors of the economy was the employment landscape with leisure and hospitality taking the hardest hit in payroll. He further explained that geographic areas that depend on tourism were the hardest hit and were also driving inflation. He explained that these areas whose economy was heavy with leisure and hospitality lost the most jobs and population with people leaving to find work elsewhere. He also noted that according to the Bureau of Labor Statistics, the number of job openings the end of March was 8.1 million, then at the end of April it jumped to 9.3 million. He said that caused wage inflation because in order to fill the jobs, employers have to offer more money. He also noted that there were a lot of people that were of working age that were not working or even looking for jobs. He said many governors had turned off the federal payroll subsidy payments in an attempt to get people to go back to work.

MR. ERLENDSON noted that the IHS shows excess savings that was above historical averages due to the three major acts passed last year that put $1.8 trillion into the bank accounts of Americans to support the economy.

MR. ERLENDSON explained that they had seen a significant drawdown in GDP during the second quarter of last year. He said that the GDP was at $21.7 trillion in the fourth quarter of 2019 then came down to 19.5 trillion at the end of the second quarter of 2020, however as of the end of the first quarter for 2021 the GDP was up to $22 trillion but it took five quarters to reach that point.

MR. ERLENDSON noted that the energy portion of the stock market was up 31 percent in the first quarter, whereas a year ago, it was down over 50. He said the rates of growth were not sustainable and would start to taper off and they would be seeing more normal returns. He also noted that growth stocks were up less than 1 percent in the first quarter, whereas the same types of value stocks were up over 11 percent.

MR. ERLENDSON pointed out through Slide 23 that over time, public pension funds had been investing in the private markets which cost more in management fees and tie up liquidity to see higher returns.

MR. WILLIAMS commented on slide 24 saying that it showed the shifting in domestic stocks from 43 percent down to 27 percent and non-U.S. fixed income was at 2 percent then climbed to 6 percent then went back down to 2 percent. He then asked if there was a factor or change that caused that to happen; MR. ERLENDSON said that he thought it had to do with currency and adjusting for the stronger dollar. MR. WILLIAMS then asked why stay in if they were going to be in at such a low allocation; MR. ERLENDSON said that most of their clients do not use them; that when the averages are figured and many of them are zero, the average number comes down.

CHAIR JOHNSON mentioned the criticisms received by the public participants about investments in fossil fuels which are part of the energy sector and asked how to square the tremendous performance in the energy sector with the reports from the public participants of that morning; MR. ERLENDSON said that an argument in support of fossil fuels would be that until the energy production and utilization is converted away from carbon to alternative energy and the limitations for distance driving with electric cars due to lack of charging stations, change will come slowly.

MR. CENTER further explained that equity investments for the ARM Board were invested passively, so they were not making an active decision to overweight or under-weight the energy sector; they were investing along with how the index was structured and energy had become a sliver of the S&P 500.

MR. CENTER started on page 26 of the presentation referencing charts in the Performance Dashboard. He noted that the trends for PERS, TRS and Judicial over longer time periods and the near term were looking good, as was the healthcare plans shown on page 27.

MS. HARBO asked when they discuss the peer groups and member count, were they peers with respect to total assets invested and not systems like CalSTRS and CalPERS; MR. CENTER stated that the peer group they looked at was the broad public fund sponsored database which included large, midsize, and small public retirement plans.

MR. CENTER then referenced page 28 which showed the military plan with a different asset allocation that was at a lower risk structure than peers and also PERS, TRS, and Judicial, which resulted in a lower return but similar to its target benchmark.

MR. CENTER stated that as of the end of March, the PERS plan was very close to targets across various asset classes. He noted that where the equity market rallied, the fixed income market dipped a bit. He said that there had been a higher need to rebalance during the last year. He also noted that the PERS plan was slightly underweight to fixed income and slightly overweight to domestic equities but overall close to target, as shown on page 30. He noted that the next four pages showed the performance of the PERS plan and that it was above median over all time periods.

MR. CENTER noted that the top performing public fund last year was up 41 percent and the worst performing public fund was up 27 percent which created a 15 percent dispersion of performance over 12 months. Spread out over 10 years the dispersion comes down to 2.5 percent, but because asset allocation can drive performance, it gets magnified in periods when the equity market is up over 50 percent, and the bond market is negative.

MR. CENTER explained that page 32 showed the Sharpe Ratio which was a risk-adjusted measure of excess return and the PERS fund had done very well relative to the peer group, in the top quartile over the three, five, and 10-year periods. He explained page 33 showed the maximum drawdown, noting that the first quarter of 2020 had the largest peak-to-trough loss and the drawdown experienced by the PERS fund was the largest over the last 10 years. He said the standard deviation on page 35 showed that the PERS fund was below median from a realized standard deviation standpoint over all time periods. He then pointed out that pages 36, 37, and 38 discussed the annualized total fund returns, longer-term total fund returns, and the calendar period for the total fund performance stating that the overall performance was very strong for PERS and TRS.

MR. WILLIAMS asked what would they see that showed underperformance; MR. CENTER stated that the peer group performance was the key they used for the total plan's attribution calculation; MR. WILLIAMS asked if there was a way to show that in the slides as well; MR. CENTER stated that they could add a slide to the quarterly performance presentation that would cover private equity.

MR. HANNA commented that page 21 of the Callan presentation does show a public market equivalent version of how investments in private equity would compare to indices and that they do the same analysis annually for the ARM Board.

MR. CENTER stated that the domestic equity portfolio had a strong quarter, particularly the investments in Scientific Beta. The performance of value stocks versus growth and small cap relative to large cap showed both had done well. The domestic equity portfolio outperformed the S&P 500 and the Russell 3000 during the most recent quarter and the longer-term domestic equity performance had trailed the benchmark. MR. CENTER then skipped ahead to page 46 which showed the global equity portfolio. He said that had done very well and was ahead of the target over all time periods - up by almost 50 basis points ahead of the international equity target benchmark. He noted that all managers were ahead of the EAFE benchmark as well as the ACWI. He said the emerging market pool was up 3.2 percent versus the benchmark return of 2.3 percent for a strong performance. He noted that the total fixed income portfolio had outperformed its target over all time periods. The aggregate portfolio was up 1.37 percent over last year and the Bloomberg Aggregate was up .07 percent, ahead of the benchmark by 60 basis points. The opportunistic fixed income portfolio which contains two investments with Fidelity were up a combined 13.6 percent and the alternative fixed income portfolio was up 2 percent over last year.

MR. CENTER said the opportunistic allocation which included an alternative equity allocation managed by McKinley was up 26 percent last year, the tactical portfolios managed by PineBridge, and Fidelity were up a combined 37 percent as well. The alternative beta strategy managed by Man Group was down 13.5 percent. The real assets were up 6.75 percent, the real assets target up 20 percent, the real estate portfolio was up 12.3 percent. He noted that private real estate was up 6.3 percent relative to the NCREIF ODCE benchmark. Farmland was up 7 percent, but timber and energy were a drag on the performance, timber was up 4 percent and energy was up 1.5 percent. However, the infrastructure portfolios were up 10 percent.

MR. HIPPLER asked if the Man Group performance was in accordance with how they would have modeled it to fit the portfolio - was it supposed to reduce the risk by having diverse returns from the rest of the portfolio - was that what they should have expected; MR. CENTER stated that he expected a return somewhere between stocks and bonds, he stated, stocks were up 50 percent and bonds were down, so they would not have modeled a negative 8 percent return for the portfolio.

COMMISSIONER MAHONEY noted that, in regard to the Man Group, the returns were up significantly and that by the next meeting they would see the quarter end results and see that it would be up.

MR. CENTER stated that the PERS DC Plan ended the quarter at $1.8 billion with 60 percent allocated to the target date funds and the remainder split between active and passive. He said more participants were contributing than withdrawing. The TRS DC Plan ended the quarter at $750 million in assets with 60 percent allocated to the target date funds. The Deferred Comp Plan was under $1.2 billion in assets as of the end of the first quarter with 25 percent of the portfolio allocated to the target date funds and the remainder split between the active and passive options. The SBS fund ended the quarter at $4.8 billion in assets with 60 percent allocated to the target date funds. He said the target date trusts used by the participant-directed plan continued to perform very well relative to both their benchmarks and relative to peers. The longer dated target retirement funds had fallen into the third quartile but had outperformed their target benchmarks. The passive options had performed in line with their benchmarks.

MR. CENTER noted the BlackRock Completion Fund - designed to invest in a basket of inflation-sensitive investments, was up 23.7 percent, in line with its benchmark but ranked in the bottom quartile. The International Equity Fund, a blend of two active equity managers that were also in the DB Plan, Brandes and Baillie Gifford, were up 60.5 percent last year. The T. Rowe Price Small Cap Fund fell below median over the last year with a return of 83.7 percent where the Russell 2000 was up 95 percent last year.

MR. ERLENDSON mentioned their conference would be July 19th through the 21st and noted that some of the Board would be joining either in person in Salt Lake or virtually. He said there would be presentations from Niall Ferguson, an economic historian and Scott Gottlieb who will discuss healthcare initiatives and implications of the pandemic.

CHAIR JOHNSON recessed the meeting from 12:12 p.m. to 1:35 p.m.

B. PRIVATE EQUITY, WITH EDUCATIONAL DISCUSSION OF SPACS

MR. HANNA introduced MR. CHAMBLISS, MR. LEW, and MR. GEIGER of Pathway, explaining that Pathway was a longstanding private equity investment manager for the ARM Board.

MR. CHAMBLISS noted that Pathway was celebrating their 30th anniversary and next year would mark 20 years of partnering with the ARM Board. He stated that Pathway is a global private markets firm with over $75 billion in assets under management and they invest in equity, credit, and infrastructure. They make private investments through primary fund investments, secondary investments, and co-investments.

MR. LEW presented page 8 as the plan for three years and their progress to that plan. He noted that they were on track to the targeted $200 million fully put to work, they were at $127 million in commitments to date which was across 12 primaries, 3 secondary investments, and 10 co-investments. He said since inception the portfolio had grown to include over $3 billion in commitments across 302 investments and 78 different managers and included nearly 3,500 active portfolios. He said the IRR of 15.4 percent was 160 basis points higher than the 13.8 percent showed at the last Board update in September of 2018.

MR. LEW said that $2.5 billion of the $2.9 billion that had been committed had been invested and grown to over $4.5 billion in total value and generated the 15.4 percent IRR. He said the portfolio's current diversification was split at 53 percent acquisitions, 24 percent ventures capital and 23 percent in special situations which was in line with what they were targeting. He noted that the pie charts on page 12 of the presentation showed that the portfolio remained well diversified by strategy, industry, and geographic region with no significant changes since their last Board update.

MR. LEW referred to page 13 that showed the contribution and distribution activity since inception and stated that distribution activity had achieved an all-time high of $300 million and that annual distributions had exceeded annual contributions for the year which shows the portfolio had been cash flow positive for the last decade, except for 2018. He said for 2021 activity to date was running at record pace with $179 million distributed in the first five months of the year which was 60 percent of last year's full total.

MR. LEW noted that page 14 showed highlights of the 2020 performance, even with the sizeable loss of approximately $100 million in the first quarter, it was the strongest year since the program's inception with a one-year return of 38 percent and $530 million in gains. He said 2021 was looking to be another strong year.

MR. LEW noted that page 16 showed the individual portfolio companies. He said CCC information Services in the IPO box was a software provider to the auto collision and insurance industries, that it was currently valued at 4.3 times its cost and was ranked the No. 5 holding by market value in the portfolio. In the M&A side, EllieMae provided software to the mortgage finance industry.

MR. LEW said that as far as the co-investment activity within the portfolio, it was up to $168 million in commitments across 60 co-investments from 22 different managers, which made it nicely diversified by both vintage year and by industry. He said that the ability to add co-investments to the portfolio on a no-fee, no-carry basis had benefited the private equity program. He said the table on page 18 showed co-investment performance by vintage year, showing how strong across the board the performance had been and generating a 33 percent net return and $111 million of gains. He said they estimated that the decision to add co-investments had saved the Board over $28 million in management fees and carried interest.

MR. CHAMBLISS compared the ARM Board vintage year performance against the private market index. He said they use the Burgiss Private IQ index for their performance comparison noting that the years 2018 or later were too immature to make a meaningful assessment so he only compared 2001 through 2017. He said the performance was really strong above the index median IRR for all

17 years with 12 of those years outperforming that median by a significant margin.

MR. WILLIAMS asked regarding the geographical diversification, if they were designed for an asset allocation or just to make sure they were diversified, or were they sorting for quality and ensuring they were as diversified as possible; MR. CHAMBLISS said that with that asset class, they focused on getting access to investing with the best managers and search for high-quality partnerships. He said they consider U.S. non-U.S., industry, etc., and time diversification, but with a portfolio of over 300 investments over a 20-year period, it would naturally be hyper-diversified. He said they were willing to sacrifice short-term diversification to get access to the best managers, but the portfolio would diversify itself over the long term.

DR. MITCHELL asked how many of the GP's invested with were new and how many were re-ups from firms already invested in; MR. LEW said that in recent years it leaned heavier to existing managers and that they had not been able to do as many new managers as they would have liked but on average they have added two new managers per year. He said that through the co-investment portfolio which invests both in opportunities from managers in the portfolio as well as opportunities from Pathway's broader portfolio, they could introduce exposures to additional managers.

MR. GEIGER provided an overview of Special Purpose Acquisition Companies (SPACs). He explained that SPACs were not tied to private equity but had become increasingly relevant to both private equity and the financial markets. He said in the past SPACs had a less favorable reputation, that they were seen as a potential solution for companies that were not fit for a traditional IPO process. He said that issuance began picking up in 2015 and by 2020 had an explosion of activity and continues to grow.

MR. GEIGER explained how a SPAC works. He said a SPAC was a form of a blank check or shell company that raises capital in an IPO with the intent of merging with one or more privately held companies. He described it as an alternative path for private companies to access public markets without going through the IPO process. He explained that SPACs do not invest in a company but bank on the SPAC sponsor's reputation, experience, and ability to find a company and complete a merger. He said sponsors could be private equity mangers, corporations, industry executives, and investment banks. He said when a SPAC raises an IPO, investors in the IPO receive an offering of units. The shares typically get listed on an exchange and trade and sponsors have two years to find and complete a transaction or the cash is returned to the initial investors and the SPAC would be drawn down. He said once a company is found and the deal negotiated, the shareholders would be allowed to vote to continue with the transaction or redeem their shares. Once the deal closes, the SPAC begins trading on the public markets as a public company.

MR. GEIGER stated that SPACs are becoming more popular due to the increase in the quality of sponsors and target companies which related to the involvement of high-quality equity firms raising SPACs and high-quality private-equity-backed companies choosing to exit through that route. He said they had found over 100 private equity managers that had raised a SPAC for the first time since the start of 2020. He said the most notable impact of SPACs was that they had offered private equity firms another method of exit beyond the traditional M&A or IPO process. He noted that the speed of a SPAC transaction, the certainty of the price that could be set, and the ability to negotiate the structure and take cash proceeds, were the primary benefits of pursuing an exit through that route as opposed to a traditional IPO.

C. THE FED'S NOT CONCERNED ABOUT INFLATION. SHOULD YOU BE?

MR. HANNA introduced MR. KLOEPFER from Callan.

MR. KLOEPFER said that the Fed was considering moving up their interest rate as a response to inflation and commented that they had raised their inflation assumption for this year. He said they believe they can control and/or restrain inflation, that they feel more comfortable trying to control inflation rather than controlling deflation and are still targeting 2 percent.

MR. KLOEPFER said the impact of inflation on the ARMB would be the increase in cost directly tied to a CPI and would have an impact on salary. He said the important thing with inflation was the timing: very short time period, a longer time period and a transitional time period in between those. He then referenced slides that discussed the mechanics of inflation. He then discussed fiscal stimulus, stating that the stimulus was a short-term jolt to personal income which provided an offset to the decline in employment. He said when the lockdown happened, it limited the ability to buy, so savings increased.

MR. KLOEPFER explained that velocity is a term used to describe how many times a dollar turns over, the greater the velocity, the more it's turning over in the economy. So, the product of money stock and the velocity of money should equal the price of goods, services, and quantities. He said that if the supply of money is increased and velocity stayed the same, there would be greater demand. He said what happened was money stock increased dramatically, but velocity took an unexpected drop to historic lows because people put money into their savings and not into the economy.

MR. KLOEPFER turned to slide 18 and noted that real assets were deemed to be inflation-sensitive because they had cash flows, replacement costs or both that would adjust for inflation. He said that they were a hedge against losses in rising or high inflation. He said the biggest concern was unexpected inflation. He said if there was sharply rising inflation, which would trigger a short-run and intermediate-run underperformance in all asset classes, bonds particularly.

MR. KLOEPFER said that portfolios should provide diversification relative to traditional public equity and fixed income asset classes, seek sensitivity to near-term movements in price levels and positive returns over longer periods.

MR. ERLENDSON asked if there was a cautionary note or was what happened back then just something completely different: MR. KLOEPFER said the cautionary note was that as portfolios are put together, past relationships should be carefully looked at. He said for example commodities look to be a fantastic diversifier, but the return was not there and there was a possibility that they were going to break a long cycle of extreme underperformance, maybe that is not the avenue to a real asset portfolio that would be desired.

D. USING FUTURES FOR REBALANCING AND LIQUIDITY

MR. HANNA introduced MR. MARK MOON stating that he headed up the internal equity research team.

MR. MOON said there were two main uses of futures, the first was speculating use of futures where an investor would use contracts in a particular commodity or index future as a way of adding economic exposure. The second was a hedging use which denotes putting on contracts in a way that would reduce overall economic exposure. He explained that investors maintain a small margin account that would be used to have collateral and using the collateral, investors could execute and maintain short or long positions in futures contracts subject to specific contract margin requirements. He noted that contracts expire on a quarterly basis and at the time of expiration the contract would settle, and if the investor wanted to maintain a futures past the date of expiration, the investor would roll the contract into the next expiration date.

MR. MOON explained that the ARM Board staff had a fair amount of experience with futures within past ARM Board programs as well as previous experience using S&P 500 futures contracts, Eurodollar futures, currency futures, and gold futures in the context of institutional investor hedging activities.

MR. MOON said the current state of the ARM Board staff authorizations was split into different areas including. the ARMB Domestic and International Equity Guidelines and ARMB Fixed Income Guidelines and 2016 Board Action.

MR. MOON noted to mitigate managing plan level tracking errors, the staff maintains portfolio weights consistent with the approved targets and within bounds by rebalancing in the underlying asset mix at the end of each quarter, which can take up to two weeks and a lag between rebalancing the assets and where the benchmark targets are. He said what they were proposing was to utilize futures as a tool to aid in the rebalancing efforts.

MR. MOON explained that to do so, the staff would identify desired asset class weight changes that would need to be made by the end of the quarter, then would identify significant weight changes difficult to make quickly, they would then consider proxy weight changes by utilizing futures with the idea of making all the changes in the underlying cash asset portfolios and execute the trades in the underlying assets as well as some futures in order to efficiently move plan asset weights closer to a rebalanced target. He said that broad economic exposure could be changed with small numbers of trades in futures giving time for underlying positions involving several trades to be done and shortening the timeframe for rebalancing economic exposures would reduce plan tracking errors.

MR. MOON referred to pages 11-13 of his slide presentation showing an example of tactical rebalancing, noting the types of trades suggested as well as the steps needed for the rebalancing process. He said as far as cost, they would have to pay commission at approximately $1.50 per contract plus the cost of futures positions, that using the types of futures contracts they were anticipating, they did not see them as a significant factor in thinking about the costs of using futures. He also noted that futures are a way to add leverage to plan assets.

MR. MOON stated that the benefits of rebalancing in such a manner would de-link trades across asset classes from cash settlements, allowing for economic exposures to be changed quickly.

MR. MOON explained that tracking futures would involve monitoring notional value of futures contracts held and margin requirements, they would need to integrate the economic risk and tracking error effects of futures positions with cash asset positions, monitor potential leverage induced on futures positions, monitor daily mark-to-market on futures positions, and augment plan performance. He said operationally they see having sub-accounts at the individual asset pool level for the different asset classes. They would also be submitting quarterly rebalancing plans to MR. HANNA for his approval.

MR. MOON mentioned other potential uses of futures that the Board may want to consider down the road, including strategic use of futures and as a way to add leverage.
CHAIR JOHNSON asked the IAC members to offer their observations.

MR. HANNA suggested feedback from Callan as well.

DR. MITCHELL commented that it was a reasonable proposal. He then asked if the time element had been so long that they were out of the ranges, were the expenses too high, or was it something they were working on to make a good thing better; MR. MOON stated that the rebalancing process had been more complicated than they would like it to be. He said they were looking at it as a way to shorten the timeframe and utilizing futures would do so, as well as make the process more efficient.

DR. JENNINGS noted that futures are very low cost and a quick and efficient way to get asset allocation implemented and that it was a sound idea. He in turn asked what the risk controls were: MR. HANNA stated that segregation of duties, that only the CIO or designees can move margin into accounts. He said they would not have people trade futures and there would not be crossover between the ability to move large amounts of money into that account versus trading. He said they also had a Middle Office compliance group that sets trading constraints that were built into the Bloomberg trading system. He said anything that was added to the portfolio was viewed by the compliance group; MR. MOON noted that all trading they would contemplate in futures would be done through the Bloomberg system which allows for the compliance department to place filters and controls on the trading that is performed. He said the Bloomberg system allows them to integrate the risk measurements so they could provide the potential for daily risk reporting as well as view, on a daily basis, any future trading that was performed.

MS. RYERSON noted that the Wyoming Retirement System did the same thing before she left, and it worked very well for both rebalancing and keeping transitionary cash invested as well as adding several basis points.

COMMISSIONER MAHONEY asked MS. RYERSON if the controls that were in place were the same as what was communicated in the presentation; MS. RYERSON said that she thought the controls were more extensive, which she would be comfortable with due to the number of staff compared to Wyoming.

MR. HIPPLER asked if the balancing could be performed more frequently than quarterly to reduce the need for liquidity; MR. HANNA said that they could do marginal rebalancing; they use cash flows to rebalance quite frequently to a drifted target which was how Callan tracks the performance and ultimately the tracking error. He also commented that even though they target a quarterly rebalancing cycle, they are still governed by the bands set in the asset allocation and that if any asset class was potentially going to breach those bands, they would take action to rebalance them.

MR. ERLENDSON said that they had received the draft policy from staff and had circulated it within. He said they had identified a couple of categories of issues. The first being contract liquidity where some contracts have greater liquidity and others do not trade much. The other issue they found was aggregate limits in terms of how much exposure there would be. Both of these concerns were answered satisfactorily, and they were supportive of the proposed policy.

CHAIR HIPPLER asked MR. HANNA if the issue of over-frequent rebalancing was the loss of momentum and hence have some yield; MR. HANNA said that there was a cost to rebalance, that the less frequently it is performed, the lower the cost would be. He also noted that as the plan was a mature one, they needed to be particularly careful as the risk goes beyond the targets for the strategic asset allocation. He said they think that rebalancing with a reasonable frequency would be the right thing to do, and that quarterly made the best sense for them.

MR. HIPPLER asked MR. MOON to walk through the disadvantages of using classic leverage for two weeks once a quarter, to deal with the short-term problem of trying to match cash from sales with cash from purchases; MR. MOON said that if they needed to add to equity exposures and liquidate fixed income and cash, and add enough leverage to be able to immediately make equity purchases, that might mitigate the expense of having too much in fixed income for such a short period of time. He said that utilizing leverage was not something he'd been asked to look at as far as a potential quarterly rebalancing tool, but noted that it may be helpful, but not as much as the futures.

MR. ERLENDSON said futures eliminates the risk of having to realize losses in one asset class to rebalance into another asset class that was performing badly.
MR. HIPPLER asked MR. MOON and MS. RYERSON how much of a tracking error would there be; MR. MOON said it would depend on the quarter, but temporary tracking error relative to plan benchmarks could be 10 to 30 basis points. He said the key to all of it would be that the staff would be able to measure the economic risk impacts and report on them daily; MS. RYERSON stated that it would be dependent on the volatility of the market and how impacted the tracking error would be if it could not be rebalanced quickly.

MR. WILLIAMS asked MR. HANNA if he was confident of what was being used, what they were doing, and that his team fully understood the risk with derivatives; MR. HANNA said that the issues that were involved with derivatives had to do with either counterparty risk or putting on a sizeable leverage with respect to derivatives, neither of which were being explored. He said they were looking to do all of the work within the confines of the Board's preexisting guidelines and that it was a useful incremental tool for making the rebalancing process more efficient; MR. WILLIAMS asked if it would solve everything for the foreseeable future; MR. HANNA said that they were not looking to do away with cash rebalancing but to augment it to allow them to rebalance in a way that was comfortable for the cash managers so they would not be in a position where they would have to liquidate or buy assets quickly and incur excessive transaction costs.

MR. BRETZ asked how many years would the tool be useful; MR. HANNA said that it would be perpetual with a caveat of the degree to which they would use it and depended upon market volatility and length of time lag. He said it does have operational and reporting complexities, but it is a strong tool to have in the rebalancing tool set; MR. BRETZ asked about the latter years of the plan when withdrawals exceed the income; MR. HANNA said that with high cash flow comes natural rebalancing.

CHAIR JOHNSON commented that his concern was the sense of letting too much of the unknown occur with respect to going forward with the process. He said that he was perplexed with the Derivative Guidelines attached to the proposed resolution order. He asked why they were addressing derivatives guidelines generally in the context and not attaching the language related specifically to futures contracts to the resolution; MR. HANNA explained that it was ultimately approved in 2016 and there had been a number of Board actions that collectively added up to that approval and that it was best practice to codify in the guideline itself; CHAIR JOHNSON said that a statement was made in the addendum that "There are no specific performance objectives for derivatives." and noted that was vague giving no cap on the amount; MR. HANNA said ultimately there was no way to have a specific performance objective and that he thought that was just a nod to that.

CHAIR JOHNSON said that he would prefer that the resolution presented would have guidelines attached limited to just the futures contract and they would not have to mess with the existing resolutions and languages related to derivatives. He said if there was a way it could be extracted and re-written he would be satisfied, but at that time, he was not certain how to vote on it.

COMMISSIONER MAHONEY agreed with CHAIR JOHNSON as to lack of controls being incorporated in the policy. She then asked MS. RYERSON if controls were embedded in the policy when it was implemented: MS. RYERSON said not the specific ones and commented that she was looking up the policy.

MR. HIPPLER asked MS. RYERSON her opinion on the appropriateness of the size of the exposures and the swap exposure, $500 million was the aggregate limit overall or could it be multiple $500 million transaction limits: MR. MOON said the intent was to be notional limits applying to the underlying referenced assets that they were using as futures; MR. HIPPLER asked if the swap offsets the future; MR. MOON said that was correct, that if they had a swap and the futures contracts both reference to the S&P 500, the overall exposure, notional exposure would not be allowed to be more than $500 million.

COMMISSIONER MAHONEY asked if it was accurate to say that because there were six contracts that were referenced in the policy at $500 million notional, there could be potential exposure of $500 million; MR. MOON said that was potentially accurate and was not something that was being contemplated.

MR. HANNA said that swaps were not something they thought of using and that he was not uncomfortable removing swaps entirely from the guideline and suggested that it could be retitled

"Futures Guidelines." He said what they were looking for was to be able to use specific futures contracts with notional values.

CHAIR JOHNSON suggested that they hold off voting on the resolution until a more appropriate time so that the guideline language could be revised to specifically focus on futures contracts.

COMMISSIONER MAHONEY agreed and said that she would like the key controls MR. HANNA referenced built into the policy and would also like to see in writing the CIO was the one that approves the moving in and out of the margin accounts, as well as the Middle Office and the controls they anticipate through the Bloomberg system - not necessarily saying "Bloomberg system" but identifying the control itself.

MR. HANNA said that they would be happy to revise the guidelines and bring it back to the Board after they discuss asset allocation action items; CHAIR JOHNSON said that it would be fine if it was necessary to bring it up at the next Board meeting.

MR. WILLIAMS asked if they were at zero leverage because they have not authorized it, or just have not used it; MR. HANNA said he did not think it was necessary in terms of what they were envisioning doing with it in terms of rebalancing; MR. WILLIAMS asked if they have authorization to use leverage if they wanted; MR. HANNA said they do have the authorization in pieces of the portfolio; MR. WILLIAMS asked if there was a reason they did not have general authorization for leverage and futures in one guiding document: MR. HANNA said that he did not believe they needed to use leverage and would not come to the Board asking for authorization on that unless they really felt it would be beneficial.

CHAIR JOHNSON asked if there were any objections to defer the action until MR. HANNA elects to present it back to the Board. As no motion had been made the action was deferred.

CHAIR JOHNSON recessed the meeting from 4:00 p.m. until 4:13 p.m.

E. EXECUTIVE SESSION

CHAIR JOHNSON introduced MR. JONES from the Department of Revenue.

MR. JONES explained that Buck Consultants were going to discuss the measures they take to ensure data about Alaska Retirement System members was secure.

CHAIR JOHNSON asked MR. JONES to verify that the presentation proposed was necessary to go into Executive Session; MR. JONES confirmed that was correct.

CHAIR JOHNSON requested a motion to go into Executive Session to consider two matters. The first matter was related to security issues, the immediate knowledge of which would clearly have an adverse effect on the finances of the public entity. And the second issue relates to the ongoing litigation in the Metcalfe case, which involves a matter that is confidential by virtue of the attorney-client privilege.

MS. HARBO so moved. MR. MOEN seconded the motion. The motion was approved without objection.

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

CHAIR JOHNSON noted that in addition to the Trustees, the three IAC members, Treasury staff members: MR. HANNA, MS. LEARY, MR. JONES, and the liaison MS. JONES; from the Division of Retirement and Benefits, MR. WORLEY; from the AG's office, MR. HOFMEISTER and MR. SCHMIDT; and from Buck, MR. MAT GROUSE, MR. MARK SCONYERS, MR. KERSHNER, MS. MANNING, and MR. YOUNG; and Deputy Commissioner of the Department of Administration, MR. DAVE DONLEY as well.

CHAIR JOHNSON recessed the public session of the meeting at 4:16 p.m.

Buck attendees were excused at 4:50 p.m.

Friday, June 18, 2021
CALL BACK TO ORDER

CHAIR JOHNSON announced the ARM Board came out of Executive Session yesterday at 5:05 p.m. No actions or decisions were taken by the Board.

CHAIR JOHNSON reconvened the meeting at 9:00 a.m.

F. INTERNATIONAL EQUITY, WITH EDUCATION DISCUSSION OF BIG DATA

MR. HANNA introduced MR. ALEX OGAN and MR. JON SIMON of Arrowstreet, explaining Arrowstreet was hired in 2014 and manages approximately $700 million in assets for the ARM Board.

MR. SIMON explained who Arrowstreet was and that at the end of the first quarter they were at $143 billion in assets for 228 clients. He said the firm was growing and had 350 people most of which all based in their headquarters in Boston. He noted that the strategy that the Board chose was ACWI (All County World Index) and as of May 31st they had 23.1 billion invested in that strategy. He said that all the mandates they manage were managed by the same team with the same investment process.

MR. OGAN discussed their investment philosophy noting that they rely on data and quantitative tools. He said that at the heart of what they do is return forecasting, or the alpha generation which builds explicit expected return forecasts for a broad universe of equity securities which in turn were the main ingredients of how they managed the portfolios. He said in addition to expected return, they also watch both risk control and transaction costs. He said they relied heavily on data and signal construction when building forecasting models, but the data was not the starting point, human-generated investment ideas were the actual starting point. He explained that they use the data and quantitative tools to evaluate whether the idea had been successful in forecasting returns and if they expected the idea to continue to be useful.

MR. OGAN explained that the quantitative approach was effective because it allowed them to leverage their investment ideas across a broad investment universe. He said this allowed them to find mispricing across equity markets at any point in time which meant they could be flexible to the countries, regions, or sectors in which they invested by directing the alpha-seeking behavior to different segments of the market. He said they continued to get information about companies that was relevant to valuation and future price movements.

MR. OGAN stated that in their models, they employed a concept called signal groups and explained it as economic themes that they organized the individual signals into, which were listed on page 25 of their slide presentation. He explained that the catalyst signals were a higher-frequency signal group and were event-based signals. He said they looked for events in the equity markets that they thought would trigger investor attention and a price response. He noted that the high-frequency signals they identified would play out over a multi-week period and would be effective in forecasting alongside more stable, longer-term signals such as quality and value signals. He described extreme sentiment signals as a balance group against the momentum signals. He said extreme sentiment signal group would recognize what they see in the historical data. He said extreme sentiment signal group became very useful during the late first quarter and early second quarter of 2020 with the extreme market response to the pandemic.

MR. OGAN said another tool they used was direct effect signals versus indirect effect signals. He explained direct effect signals as signals that were based upon information of single companies in isolation, helping form a forecast of a company.

MR. WILLIAMS asked what their proxy was that they were using for quality and as they make decisions, do some of the signal groups have a stronger impact in the decision-making than others; MR. OGAN explained that he could not share details about the individual signals because they are intellectual property. He then explained that they look at similar measures to ones seen in commoditized smart beta version of quality strategies, that they always think about the leverage and profitability, stability of earnings growth, as well as the companies' balance sheets and how their debt obligations relate to ongoing cash flows. He noted that the higher quality characteristics a company had, the higher the valuation of the company would be. He further explained that there were different environments where different signal groups were more promising or less promising, such as the value signals which they viewed as likely to be more effective when value spreads are wider. He noted that it was important to look at the underlying ratios and identify whether the difference in the multiples was larger or smaller between the expensive companies and the cheap companies.

MR. OGAN said indirect effect signals are signals that are based on groups of related companies. He explained that they discover relevant information about the companies by looking at the related companies to each individual security that they try to forecast. He noted that the slide on page 26 showed an example of identifying related companies.

MR. OGAN said they also have a process called expanded linkages which allows them to better identify relationships between companies than just thinking about the country-sector classification. They use a large number of individual signals in the linkage model; they look for each piece of information that could be indicative of a relationship between pairs of companies. He said they look at geographic breakdowns, business operations, subindustry breakdowns of where companies were active within the sectors, the headquarters' location, individuals on the company boards, the trailing stock price return correlation. He said these are all combined to produce a unified measure of how closely related each pair of companies are. Then they identify forecasting signals based upon the related company information, which improves their forecasts.

MR. OGAN then explained portfolio construction. He said they were very conscious not only of expected return but also of risk. He said they think about risk control on a benchmark-related basis and their primary risk measure was benchmark-relative tracking error which is at the heart of the portfolio construction. They try to maximize expected return while trying to minimize the benchmark-relative tracking error.

MR. OGAN said they believed that big data and machine learning were relatively limited utilities in their core forecasting model. He said big data referred to cars learning to drive, natural language recognition, and credit card data, and that they are all data sets with trillions of observations that were available to employ big data tools and machine-learning-type tools. He said there was not enough data out there for machine learning to be an attractive alternative for them. He said the other reason big data was less helpful for them was because forecasting monthly frequency stock returns was difficult, and they know the degree of predictability their models need to achieve in order to meet their investment targets were low.

MR. OGAN noted that there were some areas of their process where they do think big data would have useful applications. He said the expanded linkage model was about forecasting pairs of companies and the relationships between pairs of companies and adding that dimension meant that they could have 50 million observations per month to look at which would make them a good candidate for big data approaches. He also noted that big data approaches would be useful in the higher-frequency return forecasting.

MR. OGAN then turned to the portfolio results for the last 12 months and noted that they had been a strong run with value added at 19.2 percent. He said the second quarter of 2021 had been successful with valued added at 1.1 percent, which puts the portfolio ahead of the full year target of 3 percent. He explained that the forecasts generated by the alpha model were the most important determiner of the positions that they take in portfolios. He noted that the portfolio results were driven by how successful they were in forecasting stock returns.

MR. OGAN said that page 19 of their presentation showed expected forecasts generated by their alpha models. He said the basket model was an indirect effect model, based on country sector basket groups. The stock model, shown below, was a combination of direct effect signals and indirect effect signals that were based upon the expanded linkage model which identifies the stock-specific successful sectors. He said the models had been very consistent and successful over the period shown in slide 20, particularly over the trailing five months. He said the most successful signal group in the trailing single-quarter was the value signal in the basket model. He said for the stock model on slide 21 the best and the worst performing groups were the two signal groups that rely most heavily on the expanded linkage model.

DR. MITCHELL asked if their approach worked better in international than in domestic, or in small cap rather than large cap or if they had noticed differences in success across different investment strategies; MR. OGAN said yes, they employed a single forecasting model across geography and market capitalization ranges and expect the model to be more effective in some areas. He noted that the value-added target and information ratio target was higher for the dedicated small cap portfolios compared to their all-cap portfolios.

MR. WILLIAMS asked why weren't they comparing net of fees to net of fees or gross of fees to gross of fees and were the times shown on the timeline meant to show performance only in the most favorable light possible, or was there a reason that it was being shown in such a short time period; MR. OGAN said that as far as gross versus net, he said what it was showing was that in terms of the net benchmark, was net of dividend withholding, so he was talking about gross of fees across the board, there was no distinction of what they would get in a net-of-fees index product, it was about the dividend treatment in the benchmark. He said in terms of the trailing performance, they always have month, quarter, year and have shared with the staff a calendar-year basis performance that they would be happy to share with anyone on the Board that would like to see it.

MR. HIPPLER asked how the over and under-allocation to certain segments impact the beta; MR. OGAN asked MR. SIMON to switch to slide 18 to show the active beta exposures of the portfolio. He said they were allowing tactical variation in the beta exposures - that the portfolio construction process was able to have tilts and sometimes the tilts could be meaningful, however they only take tilts when the expected return forecast suggested it would be worth it.

G. FIDELITY TACTICAL BOND

MR. HANNA reminded the board that Fidelity has managed the tactical bond strategy since 2014 and currently managed close to $1 million for the ARM Board. He then introduced MS. KRISTIN SHOFNER from Fidelity.

MS. SHOFNER introduced herself and her team. She explained that she had worked with Alaska since 2014. She then introduced MR. MICHAEL PLAGE, who was the co-PM with MR. JEFF MOORE on the strategy and he had been with Fidelity since 2005. She also introduced MR. BEAU COASH, the institutional PM. She then handed the presentation over to MR. COASH.

MR. COASH explained Fidelity's approach was a team-based process which was different from a star system that relied on one person. He said they had four portfolio managers in the core team and preferred the team-based process. He said the other thing that makes them unique was their unparalleled C-Suite access to corporate America. He said in 2019 they averaged 2,700 meetings per quarter with corporates across the globe, in 2020 they had 3,300 meetings per quarter.

MR. COASH referenced page 12 of the slide presentation which was the performance review showing year-to-date numbers. He explained that the 1.24 percent negative was now a small positive and that it is up by 6 basis points which was 200 basis points better than the Aggregate. He said that looking at the longer-term numbers, the one year was up 1,100 basis points, the three year was up 200 basis points, the five year was up 300 basis points, and since inception, up 230 basis points and hitting the alpha targets. He said the alpha targets over market cycles were 125 to 250 basis points and the calendar year was up 9.4 percent.

MR. COASH referred to page 11 and explained that they had a five-step investment process as shown in the chart. He said that they had taken the risk down significantly heading into 2020 because the valuations in the market were getting lean. He said their macro assessment was that the economies were being shut down and the Fed and Treasury were going to respond and bring in cheap capital, so they held off until the high yield issuance started in earnest in March of 2020.

MR. PLAGE referred to page 13 of the presentation saying that tactical bonds were their most flexible bond offering as it had a similar level of volatility in most market environments as the Bloomberg's Aggregate Bond index, with more yield and alpha through active management. He said they take a bit more duration risk in terms of deviating from the benchmark, it was not an absolute return strategy, rather it was a bond strategy which typically had between three and six years of duration. He said tactical bond volatility was similar to that of the investment grade bond market which was the Aggregate.

MR. PLAGE said they like the Aggregate as a benchmark because it had only three negative-return calendar years in the last 35 years and had a nice proportion of income to volatility. He explained it was a bond production with positive duration but not an absolute return and there was value to owning duration in the market, even at low yields that currently exist.

MR. PLAGE also referenced the five-step investment process on page 11 of the slide presentation. He said the Macro Assessment was where they evaluate the fixed income markets around the world. He said they have a team in Merrimack focused on the central banks around the world and other analysts focused on other sovereign developed market and emerging market risks. He said they do that in several different venues, with one being a sovereign meeting that occurs every Monday. They also have ad hoc meetings with all the analysts on a regular basis to determine how much return would be available in the fixed income markets which drives how much risk is being taken in the portfolio at any given time.

MR. PLAGE explained Sector Analysis which was where he and MR. MOORE speak with portfolio managers at Fidelity and asked them if they love their sector, was there a great beta opportunity in loans, international credit, high yield bonds, or government securities. They also ask if there was a lot of spread dispersion and if so, was it ripe for alpha generation through security selection. He said that allows them to form their views on how they want to start allocating resources.

MR. PLAGE explained Asset Allocation, the third step, where they perform scenario analysis looking for correlations amongst all asset classes that they consider. They decide how much risk they want to take in emerging markets or investment grade credit, and they consider simulated duration which tells them the amount of sensitivity the portfolios have to lose in Treasury rates. He said one way to hide from a rising Treasury rate environment was to buy loans or European credit-hedged dollars that were benchmarked off the Euro curve, the Boone's curve, denominated in Euros. They consider scenario analysis - where rates were rising 100 basis points or falling 100 basis points, the performance of the stock market and how the portfolio would perform.

MR. PLAGE explained Security Selection was their fourth step. He said this was where the equity managers look for ideas and find the issuers that would perform regardless of the market environment.

MR. PLAGE explained Portfolio Construction as the fifth step in the process as being where they have risk oversight. He said they meet with their CIOs on a monthly basis to have market reviews with the entire quantitative team on compliance and technology in terms of markets surveillance and management tools.

MR. PLAGE referred to page 4 of the slide presentation which showed the Treasury Curve Evolution pre-pandemic, mid-pandemic and current. He said that the market activity could be chalked up to some position squaring ahead of what many expected to be a quiet summer, the curve had flattened, and the focus had shifted from 30 years to a seven-year part of the curve. He said the Aggregate was still down 2 percent and it could get its fourth negative draw this year in the last 35 years. He said they had reduced the credit risk in the portfolio and what was left was idiosyncratic risk.

MR. WILLIAMS asked if they hedge currency, or do they let that ride and not worry about it; MR. PLAGE said they do hedge currency risk. He said that the Board has a bond portfolio that generally delivers between 3 and 5 or 3 and 6 percent volatility on an annual basis and that cross-currency basis was north of 10 percent and some emerging market currencies were north of 10 percent. He said any currency position unhinged in the portfolio could blow up the volatility, so they hedge all of the currency exposure except for some idiosyncratic risks.

MS. SHOFNER said that it was their most flexible bond strategy in the investment grade space and the last year and a half it had shined and proven its place in the bond lineup as they were able to move quickly into areas where there were opportunities for yield, returns, and hit the idiosyncratic opportunities.

H. FIDELITY REAL ESTATE HIGH INCOME

MR. HANNA said Fidelity manages roughly $200 million in a real estate high income strategy for the ARM Board and introduced MS. SHOFNER to discuss the real estate high income portion of the presentation.

MS. SHOFNER introduced MR. ANDY RUBIN who was the institutional PM, MR. STEVE ROSEN, and MR. BILL MACLAY, also PMs. She said the team had been together for over 25 years and described the team as boutique-like within Fidelity as they manage a smaller group of assets that has been extremely successful. She then turned the presentation over to MR. RUBIN.

MR. RUBIN he said although there was an initial downdraft in the fund last March and April driven by price mark declines, the strategy weathered the storm very well and emerged in a position of strength. He said the key factor of that was during the heart of the pandemic and being in the position that they were in, it allowed them to invest opportunistically and lean in during the second and third quarter of 2020, which allowed them to invest at historically attractive yields and low prices. He said that even though 2020 was only a one fourth negative return year in over 26 years of history managing the strategy, he described the negative 5 percent total return on a net of fee basis as a relative win during the pandemic. He said that commercial real estate was the epicenter of a lot of pressure and negative sentiment during that time when indoor gatherings were prohibited. He said they were currently up 6 percent year-to-date on a net fee basis.

MR. RUBIN explained that they had learned firsthand that the key to delivering successful outcomes for clients was to rely on trusting their teams credit research expertise, building in a margin of safety and cushion into the investments they make. He said that most relevant was investing with conviction during the most opportune points in the cycle when emerging from a recession or crises. When other market participants were fearful, they tried to remain calm and disciplined and last year was a good example of their work ethic. He stated that the portfolio was optimally positioned for the future and thanked the Trustees as well as the investment staff for their ongoing stewardship for entrusting Fidelity with a portion of the fund's assets.

MR. ROSEN explained the history of Fidelity's real estate debt team. He said it was formed in 1994-95 to invest via the securities market and today managed nearly $11 billion.

MR. ROSEN referred to page 5 of the presentation which showed investments and discussed the strategy points and benefits. He said that in 1995 they launched their flagship institutional offering called Real Estate High Income and it was the vehicle through which they invest on behalf of the ARM Board. He said the objective was to complement portfolios by offering niche strategy investing in high yielding commercial mortgage-backed securities (CMBS) that would generate, over the long run, a competitive return in high yield corporates. He said it was dependent on their research and trading abilities to exploit inefficient factors relative to others.

MR. ROSEN explained that their analysts were real estate professionals with prior experience and skills valuing commercial property and discerning the risks. He explained that commercial mortgage-backed securities were structured bonds that were backed by commercial mortgage loans and the loans could be backed by virtually any property type and be located anywhere in the United States. He explained that after a bank has originated a critical mass of loans, the loans were brought to a rating agency and assessed, then dropped into a trust and then the bank, on behalf of the trust, sells the bond packages through investors. As the property owners make their monthly payments to the services, those payments are then passed to the bond holders. As a risk factor, if one of the underlying mortgage loans defaults then the bond holders that are last in line have first risk to a loss. He said to help them decide which bonds to purchase, they conduct a credit analysis on the loans that back the bonds. He said they visit the site, asses the quality of the location and building, the tenancy, and the competitive set, in order to come up with the value and compare that to the loan balance.

MR. MACLAY referred to page 8 of their presentation that showed the capital structure of a transaction. He explained the way a capital structure works was when loans mature and pay off, it starts to pay down the top of the structure. He said to date approximately 20 loans had paid off and the top 4 classes listed on page 8 had been paid off. He said if a loan defaults, the underlying property would be sold and the sales proceeds, if there was not enough to cover the mortgage, the loss would be incurred at the bottom of the structure, class H. He said that they believe there would be a handful of loans at risk of default and expect if those defaults did happen it would be less than the $34 million cushion in Class H. He said they own Classes D through G which were protected from a principal loss.

MR. MACLAY referenced page 9 of the presentation stating that rent collections were challenged at the beginning of the pandemic, but the renters were currently paying, and hotels have been consistently recovering. He said page 10 showed the initial drop in housing prices and that they have been steadily increasing. He said page 11 showed that loan delinquency had spiked and the amount of new loans that were becoming delinquent was low and with loans curing, the delinquency rates had gone down further.

MR. ROSEN discussed page 12 of the presentation, explaining how the fund stacked up against other fixed income measures and why it did so well in the past and would continue to do well in the future. He said those were the conditions that the pandemic put into play a year ago that resulted in the big return in the ensuing period. He said although there had been recovery, a lot of the dollar price decline the market took into the high 70s was back to 93, but there was still a long way to go. He said relative to the alternative fixed income investments, the dollar price was substantially lower than the 105-dollar price they would see in other benchmarks or indexes. He said that they did not think they were taking undue risk with the high-income fund and the average credit quality was at the top at Double B plus. He said he thought they were being conservative in their presentation and that they were well positioned with true credits, a low dollar price, high yield, and a low interest rate sensitivity.

MR. ROSEN said that page 13 of the presentation showed more characteristics of the fund with two pie charts, one showing that they cut CMBS into three different types that added up to more than 80 percent of the fund which was their principal mandate. He said they do offer other types of high yield and real estate securities but in smaller amounts. He said the pie chart on the right showed distribution by ratings and that they had more Triple B's than any other type of rating category.

MR. ROSEN stated that page 14 showed a pie chart of different types of properties that were in the portfolio with a representation of virtually every property type available.

CHAIR JOHNSON asked how exposed they were to changes by the rating agencies, the rates that they were assigning to the various investments; MR. ROSEN said they were showing ratings to be transparent about the portfolio and construct the weighted average for points of comparison. He said they were not constrained at all by ratings, and it was not a large component of what they do or think about. He said if they were caught by surprise by a downgrade, it would have negative implications for the price of a holding, but the goal was to be ahead of the agencies.

MR. WILLIAMS asked if they thought money invested now, three years from now and then five years from now, that the passive benchmark would still be beating them or do they feel like they have outperformed it; MR. ROSEN said that they thought their numbers looked really strong across the board and over the course of about six weeks their sector got pummeled and that was what drew down their three- and five- year numbers.

MS. SHOFNER explained that the thing about the strategy was that it was in mutual fund form and was not something they could address and so they addressed it as a whole, as Fidelity as a partner with the Board by discounting other strategies and giving a price break in tactical bonds as well as the signaling strategy. She said that she thought the Board was in a great position with the opportunities and the loans that were in the portfolio.

MR. MACLAY said that the performance over the past year had been very strong but still has a way to go before reaching the goal of gaining back the pre-pandemic points. He said with the economy continuing to reopen they expected to gain the lost appreciation back.

CHAIR JOHNSON recessed the meeting from 11:09 a.m. until 11:18 a.m.

I. ARMB 2021 ASSET ALLOCATION STRATEGY CALLAN LLC

MR. HANNA introduced MR. KLOEPFER explaining that he would be discussing Callan's approach to asset allocation.

MR. KLOEPFER started with page 4 of his slide presentation explaining that it was a summary of important changes they had made. He explained they had to do a reset of last year for the capital market expectations with fixed income, resetting back to a zero-interest rate policy. He said they lowered the fixed income expectations by a full percentage point from 2.75 to 1.75 for broad market fixed income and lowered public equity returns by between 45 to 55 points, which widened the equity risk premium. They also lowered their inflation from 2.25 to 2.

MR. KLOEPFER stated the next slide showed the specific expectations for ARMB for the PERS and TRS for the next 10 years, with the following slide showing the 29-year expectation with the target rate shown in the left column. He said there was a long-term equilibrium set of assumptions and a 10-year set of assumptions and a path to get between the two. He said the 10-year assumptions for equity were 6.5, the long term was 8.5, and bonds were 5 percent nominal bond return over a long-term time horizon.

MR. KLOEPFER said the next slide showed the 10-year assumptions, the 20-year forecast, a 30-year, and a very long-term equilibrium. He noted that the 20-year has to include the first 10-years, the 30-year has to include the 10 and the 20-year. He said they lowered the 10-year expectations which had little impact on the 20-year because there were still the out years particularly in fixed income where there would be a higher yield.

MR. KLOEPFER said the next slide focused on the PERS and TRS 20-year horizon, the duration, cash flow and demographic all suggested that there was a long-time horizon for both plans. He explained the current 10-year capital market forecast was modest due to the reset in fixed income and the high value for equities suggested the need to take on risk to get to the target of 4.88 percent real return. He also stated portfolios had some optimization. He said opportunistic was modeled as 60/40 (60 percent public market stocks and 40 percent public market bonds) because they believed it was a representation of what they could expect from those investments. He said fixed income was modeled as 95 percent aggregate and broad market at 5 percent in cash. He said on a 10-year basis in comparing last year versus this year, the returns were down from 6.80 to 6.15, a 65-basis point drop. He said they didn't lower the 20-year numbers as much and since they lowered the inflation number by 25 basis points, the real return expectation was 10 basis points lower from the projection a year ago.

MR. KLOEPFER explained that they discussed some modest changes to the current target with MR. HANNA and staff to help move the portfolio toward the 4.88 percent real return. He said Mix 1 through 3 looked at portfolios that move in 5 percent increments of fixed income. Mix 2, represented a mix with 19.6 percent fixed income and was expected to meet the 4.88 percent real return goal. He explained that the final column displayed what could happen if diversification of the private markets was not pursued - there would be no allocation to real assets and no allocation to private equity. He said a better return would be achieved by adding diversifying private investments. He discussed the current target along with two potential alternatives that would be a modest increase in risk, for a meaningful increase in return.

MR. HIPPLER asked why they should lower the inflation profile when all the professional forecasters were saying they should raise it; MR. KLOEPFER said 2 percent was still reasonable for many reasons, one of which was they had not been anywhere near 2 percent realized inflation until the previous three months. He noted the Fed had struggled for a decade or more to get inflation back up to at least 2 so they had changed their language to say that they were going to try to overshoot on purpose so they could at least average 2 percent over the next 10 years. He said that over the last 20 years, anytime the Fed got near 2 percent, they would get nervous, and the rate would drop back down.

MS. HARBO stated that they were still using 2.5 precent for actuarial rate of return.

CHAIR JOHNSON asked if they had any concerns that the realities in the last two or three weeks might make some of their projections a bit out of date; MR. KLOEPFER stated that he was not worried about that, that he was expecting that to happen.

MR. HIPPLER asked if the Board disagrees on the nominal inflation that Callan was projecting, if it impacts the recommended allocations of asset classes, or was it that they were looking at the real rate of return and inflation did not impact it much; MR. KLOEPFER said they get the real rate of return employing the inflation assumption, so there is an impact, but it would not change their recommended policy.

MR. KLOEPFER said that for the military plan, the target had been historically conservative. He noted the plan was overfunded and that had to do with refining the benefits and how they were calculated. He explained that last year they were projecting to be at 4.13 percent rate of return and this year it was at 3.68 rate of return. He said it was more of a qualitative assessment as to what the right exposure was and in the past, the Board had been comfortable with the current target of 46 percent in fixed income. He noted that there was consideration of costs, complexity, and illiquidity and that they did not believe there were liquidity issues with the fund.

MR. HIPPLER said that he was concerned that Callan was the only major advisor that was suggesting people lower their inflation expectations and then asked the IAC members what their comments were about lowering the inflation expectations.

DR. MITCHELL said that his concerns were that the Fed thinks it could do something that it may not be able to do, that a lot of faith was put into the Fed's ability to increase and decrease inflation. He said that he thought 2 percent was a reasonable number.

DR. JENNINGS added that he would look at multiple sources such as consulting firms and a survey that comes out in August that involves 30 different investment consultants. He also noted that break-even inflation that is embedded in the Treasury versus TIPS rate was another source. He said inflation indicators might give pause, but it was not about the forecast, it was about the asset allocation.

MS. RYERSON noted that she thought a lot of it was going to depend on how the actuaries were lowering their rate and that timing would make a big difference in liabilities; MR. HIPPLER asked if they changed their inflation to 2 percent and the liabilities on the actuary side were calculated with a 2.5 percent inflation rate, would that artificially make the liabilities look smaller than they are - if the actuaries follow and reduce the inflation rate; MS. RYERSON said then the liabilities would follow.

COMMISSIONER MAHONEY said that in her opinion, the 2 percent was consistent with what the Fed was saying.

J. ASSET ALLOCATION DISCUSSION AND ACTION ITEMS

Action: Resolution 2021-01 Asset Allocation for the PERS DB and DC Plans, TRS DB and DC Plans, and JRS Defined Benefit Plans

Action: Resolution 2021-02 Asset Allocation for the Alaska NGNM Retirement Systems

MR. HANNA noted that asset allocation started with understanding the liabilities and the goal was to pay all benefits when due. He said one of the charts showed the PERS and TRS benefit payments and showed the projected benefits for the next 97 years and in excess of a billion dollars a year for over three decades.

MR. HANNA said they currently had in excess of $30 billion in assets which was a combination of forward investment returns and forward contributions for both unfunded liability and future benefits that are still in the system that would bridge the gap between $32 billion in assets and $75 billion in payments.

CHAIR JOHNSON asked if the proposed changes fall within the bands of what currently exists in terms of what the investments would be, that the changes were more to develop a projection number than to compel significant changes in the investments; MR. HANNA said that he mostly agreed with that, but it would move the midpoint of the band so the variance would be potentially higher. He said from an asset allocation perspective it would give the Board credit for higher levels of exposure.

COMMISSIONER MAHONEY commented that on an earlier slide he had indicated that the standard deviation was around 14 percent for the portfolio, then asked with the additional risk through alternative investments where it would land; MR. HANNA said last year's standard deviation was 13.56 percent and the recommendation for this year was 13.89 percent, which is a modest, worthwhile uptick. He said the staff had done a lot of modeling on the issue and would continue to do so.

DR. JENNINGS commented that it was a big enough allocation to move the needle and important in order to get the required returns. He said some non-profits he worked with target a 15 percent.

MR. HANNA explained that there was one action memo with two resolutions and that his recommendation was that the Alaska Retirement Management Board adopt both resolutions, moving asset allocations for fiscal year 2022 as per the recommended asset allocations attached to the resolutions.

<u>MS. HARBO so moved to approve Resolution 2021-01.</u> <u>MR. HIPPLER seconded the motion.</u>

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

<u>MS. HARBO so moved to approve Resolution 2021-02.</u> <u>MR. WILLIAMS seconded the motion.</u>

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

Action: Resolution 2021-03 Derivatives Guidelines

MR. HANNA said that using futures for rebalancing should allow the system to better target risk and reduce costs, cash drag, and tracking errors. He presented several slides with brief comments for each slide.

MR. HANNA explained that he had handed out the revisions to the guidelines to the Board earlier in the day and that they had changed the title to Futures Guidelines and removed the references to swaps and other derivatives. He said they deleted the Russell 1000 contract and the $500 million notional value that went along with that. He said they also reduced the notional value of the Russell 2000 and the EM contract to $250 million each, which brought down the potential notional value to $2 billion or 6 percent of assets.

MR. HANNA stated rebalancing was a tool they use to rebalance 2 to 4 percent of the asset allocation using futures, which staff believed to be a reasonable sizing.

MR. HANNA said they had added Section 6 which were risk controls discussed previously. He noted that the controls in the guideline reflected the minimum and that additional controls were used in everything they do. He said they also recommended setting broker limits consistent with the guidelines. He stated that the ARM Board compliance team that monitors compliance daily on all of the trading that is performed in the portfolio reports to one of the deputy commissioners.

MR. WILLIAMS asked how big the pool of delegates was and were there minimum qualifications those people must have in order for the Board to have total confidence in them; MR. HANNA said that it worked the same way the Board currently delegates authority to the CIO for certain responsibilities. He said when he is out of the office, the authority was delegated to Shane Carson to sign things of a certain nature on his behalf. He said it was all senior staff and the Board has that list and when the list changes the Board would then have a new list so they would all be aware of who the CIO had delegated to act with CIO authority. He said the tweak to the guidelines would be the same list but with the exception of anyone that would be able to trade futures.

MR. BRETZ said that he had received a copy of the red-lined changes to the resolutions and asked that he articulate what the difference was between the resolution and the original authorization from 2016; MR. HANNA said that there had been a series of authorizations in 2016 that established the initial limits. He said they had added the other contracts that they thought were necessary to rebalance the ARM Board's asset allocation which were Treasury futures, the EAFE, and the EM contracts. He said initially the contracts that had been approved all had a notional value of $500 million, and that there was a prior discussion that notional exposure was constricted to $750 million, meaning there was still the ability to use each contract up to $500 million but the impact of all of the contracts together could not exceed $750 million. He said that as these contracts are added up, they totaled $2 billion in notional value and that they were looking to increase the notional amount from $750 million to $2 billion because they thought that to be a useful rebalance; MR. BRETZ asked if the resolution would replace the previous policy; MR. HANNA stated that the original authorization was not a policy, that this would be the policy.

CHAIR JOHNSON asked if there was an intent behind the resolution that this would replace it and be the guidelines that it would operate under; MR. HANNA confirmed it would be.

COMMISSIONER MAHONEY asked MR. HANNA to explain it to the Board as he had explained it to her. MR. HANNA did so; MR. WILLIAMS then clarified MR. HANNA's explanation by saying that to get to the target, he would have to rebalance and if he wanted to move a billion dollars he would need to rebalance. If it dropped 20 percent, he would still be down 20 percent or $200 million, but if he did it with futures, he would put up less money up front, but there would still be a 20 percent loss. He said the difference was that there would be a margin call, he would still have to put up more money, but he would not materially be losing more or less than if he had just rebalanced. MR. HANNA confirmed that was correct. He said if you don't manage the collateral well, you may not have the money to make that margin call and would be forced to sell something you do not want to sell.

CHAIR JOHNSON asked if the Permanent Fund Corporation utilized futures; MR. HANNA said they did but was not sure if they did it from a rebalancing perspective; MR. CENTER confirmed that the Permanent Fund does utilize futures for rebalance.

CHAIR JOHNSON recessed the meeting from 12:54 p.m. until 12:58 p.m.

UNFINISHED BUSINESS - None.

NEW BUSINESS
CHAIR JOHNSON noted that there had been matters of discussion that had come up and that they would be presented to the Operations Committee at the next meeting of how to deal with self-assessment with the various committees.

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD - None.

PUBLIC/MEMBER COMMENTS

MR. SIMARD introduced himself as a member of 350 Juneau's board, a librarian, retired from the State of Alaska, and a grandfather. He said that in previous meetings he had spoken about the climate-related litigation against the major oil companies based on damages caused by the use of the companies' products, that the companies were aware of the dangers and hid the information from the public.

MR. SIMARD gave an update as to the ruling in May for Royal Dutch Shell from the Supreme Court of the Netherlands. He said six environmental groups and more than 17,000 citizens enjoined in a complaint that alleged that Shell's business practices violated human rights laws in the Netherlands and the EU. The court ordered Royal Dutch Shell, by means of its corporate policy, to reduce its co2 emissions by 45 percent by 2030 with respect to the level of 2019 for the Shell group and the suppliers and the customers of the group.

MR. SIMARD said that in the United States, 26 cities and states had brought public nuisance suits against major oil companies seeking damages in the billions for climate-related destruction related to fossil fuel emissions. He said the state courts had shown willingness to side with the municipalities, while the federal courts were reluctant to rule on what they saw as issues so large they required legislative or executive action. He said the oil producers were trying to force the cases into federal courts. He said that on June 14^{th} the U.S. Supreme Court had issued a ruling in the case of San Francisco versus Chevron, Exxon Mobil, Shell, BP, and ConocoPhillips upholding a 2020 ruling by the Ninth Circuit rejecting the oil companies claims that the San Francisco and Oakland cases belonged in federal court. He said it was clear that financial investments in fossil fuel companies were increasingly threatened by well-founded legal action worldwide.

CHAIR JOHNSON thanked MR. SIMARD for his input. He then turned the focus back to consideration of Resolution 2021-03 and asked MR. HANNA if he could introduce the motion.

MR. HANNA said the staff recommendation is that the ARM Board approve Resolution 2021-03 which would adopt the Futures Guidelines.

MS. HARBO so moved to approve Resolution 2021-03. MR. WILLIAMS seconded the motion.

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

INVESTMENT ADVISORY COUNCIL COMMENTS -.

DR. JENNINGS gave a shout-out to the Board and staff for the robust information sharing and said that anything they can do to enhance that will lead to robust investment decisions and was part of a good investment program.

MS. RYERSON expressed her appreciation for being able to meet in-person. She also commented that the experience study will be interesting to see with respect to the disconnect between 10-year forward looking consultants and the actuaries looking 30 years forward. She said other large state pension funds are continuing to decrease assumptions and that Buck and GRS may have some interesting discussions with Callan when that review comes up. She also congratulated the investment and asset allocation staff for being consistently being above average over the long term.

TRUSTEE COMMENTS

MR. WILLIAMS welcomed MS. RYERSON to their first in-person meeting and commented on how good it was to see people in person again. He said he appreciated MR. KROHN and MR. MOEN's for being on the Defined Contribution Committee. He also commented on how nice it was to see the IAC members and be able to have conversations with them.

MR. WILLIAMS noted that the benchmark with private equity was a bit messy, that it did not line up and they may want to take a look at the long run. He said he thought the presentations were thoughtful and was impressed by all the conversations.

FUTURE AGENDA ITEMS - None.

ADJOURNMENT

There being no objection and no further business to come before the board, the meeting was adjourned at 1:10 p.m. on June 18, 2021, on a motion made by MS. HARBO and seconded by MR. KROHN.

Chair of the Board of Trustees
Alaska Retirement Management Board

ATTEST:

Gayle Harbo

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.