State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
MEETING

Location:
Atwood Building
550 West Seventh Avenue
Anchorage, Alaska

MINUTES OF
December 13-14, 2018

Thursday, December 13, 2018

CALL TO ORDER

CHAIR ROBERT JOHNSON called the meeting of the Alaska Retirement Management Board (ARMB) to order at 9:03 a.m.

ROLL CALL

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

Board Members Present
Robert Johnson, *Chair*
Gail Schubert, *Vice Chair*
Gayle Harbo, *Secretary*
Tom Brice
Kristin Erchinger
Commissioner John Quick
Commissioner Bruce Tangeman
Norman West
Bob Williams - Arrived Late

Board Members Absent
None

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

Investment Advisory Council Members Absent
Robert Shaw (Present December 14, 2018)

Department of Revenue Staff Present
Bob Mitchell, Chief Investment Officer

Scott Jones, State Comptroller
Pamela Leary, Director, Treasury Division
Nicholas Orr, Manager of Real Assets
Mark Moon, Manager Internal Public Equity
Shane Carson, Manager of External Equity and Defined Contribution Investments
Stephanie Alexander, Board Liaison

Department of Administration Staff Present
Ajay Desai, Director, Division of Retirement and Benefits (DRB)
Kathy Lea, Chief Pension Officer, DRB
Christina Maiquis, Acting Chief Financial Officer, DRB (phone)

Consultants, Invited Participants, and Others Present
Walt McGhee, American Century Investments
Patricia Ribeiro, American Century Investments
Niamh Fitzgerald, BMO Global Asset Management
Chris Jenks, BMO Global Asset Management
Patrick Dimick, Bridgewater Associates, LP
Joel Whidden, Bridgewater Associates, LP
Steve Center, Callan LLC
Paul Erlendson, Callan LLC
Gary Robertson, Callan LLC
Stuart Goering, Department of Law, Assistant Attorney General
Kelly Carbone, DePrince, Race, & Zollo, Inc.
Greg Ramsby, DePrince, Race, & Zollo, Inc.
Randy Renfrow, DePrince, Race, & Zollo, Inc.
Liz Davidsen, Empower
Melissa Beedle, KPMG
Beth Stuart, KPMG
Aidan Nicholson, Mondrian Investment Partners Limited
Todd Rittenhouse, Mondrian Investment Partners Limited
Ashraf Haque, Sands Capital Management
Luke Iglehart, Sands Capital Management

PUBLIC MEETING NOTICE

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

APPROVAL OF AGENDA

MS. HARBO moved to approve the agenda. MS. ERCHINGER seconded the motion.

MS. ERCHINGER, as Chair of the Actuarial Committee, moved to table Item 10, the action on Resolution 2019-19, to be discussed at a meeting to be scheduled in January.

A roll call vote was taken, and the motion to table Resolution 2019-19 passed unanimously.

The agenda, as amended tabling Item 10, was approved without objection.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS, AND APPEARANCES

None

APPROVAL OF MINUTES: September 20 - 21, 2018

MS. HARBO moved to approve the minutes of the September 20 - 21, 2018 meeting. MS. ERCHINGER seconded the motion.

The minutes were approved without objection.

ELECTION OF OFFICERS

MS. HARBO moved to nominate and approve CHAIR JOHNSON to serve another term in the position of Chair of the ARM Board. MS. ERCHINGER seconded the motion.

The motion passed unanimously.

MS. HARBO moved to nominate and approve VICE-CHAIR SCHUBERT to serve another term in the position of Vice-Chair of the ARM Board. MS. ERCHINGER seconded the motion.

The motion passed unanimously.

MS. ERCHINGER moved to nominate and approve MS. HARBO to serve another term in the position of Secretary of the ARM Board. MR. BRICE seconded the motion.

The motion passed unanimously.

STAFF REPORTS

1. RETIREMENT & BENEFITS DIVISION REPORT

CHAIR JOHNSON introduced Director AJAY DESAI and Acting Chief Financial Officer CHRISTINA MAIQUIS to present the Retirement & Benefits Division Report. MS. MAIQUIS informed the Membership Statistical Report, Buck Report, and Health Reimbursement Arrangement information are included in the Board packet. Through September 30, 2018, Public Employees' Retirement Systems (PERS) saw an increase in active members of 248, and Teachers' Retirement System (TRS) saw an increase in active members of 1,046. The retiree accounts expanded as expected, with an increase in PERS of 298 and an increase in TRS of 307.

MS. MAIQUIS presented the summarization of the Buck invoice for the first quarter, ended September 30, 2018. The work related to the actuarial evaluation, audit requests, and GASB requirements. Buck completed new work for this quarter relating to the fiscal year 2020 final PERS/TRS contribution rates.
MS. ERCHINGER inquired if the fees relating to GASB 67, 68, 74, and 75 were anticipated to be recurring expenses. MS. MAIQUIS anticipates the fees to continue going forward, unless there is a change in the GASB requirements.

MS. MAIQUIS advised the health reimbursement arrangement annual contribution amount for FY20 is calculated at $2,121.60. This is an increase of .89% over last year.

2. TREASURY DIVISION REPORT

CHAIR JOHNSON invited Treasury Division Director PAMELA LEARY to present the Treasury Division Report. MS. LEARY commented on the change in Administration. The new Commissioners were introduced at the beginning of the meeting. MS. LEARY informed a majority of Treasury Division staff had to submit resignation letters during the normal course of a change in Administration and MS. LEARY was pleased to announce the staff remains in its same construct as before the change in Administration.

COMMISSIONER TANGEMAN commented on the importance of the Treasury staff being able to continue their work. He was pleased with the success of the efforts in completing the process quickly.

MS. LEARY advised the Administration's budget is due to be released tomorrow. She will provide a report at the next full Board meeting.

CHAIR JOHNSON requested an interim report be provided by MS. LEARY during tomorrow's meeting, if at all possible.

3. CALENDAR/DISCLOSURE

MS. ALEXANDER stated the disclosure memo is included in the packet and there are no transactions requiring additional review. The 2018 calendar to-date and the 2019 calendar are also provided in the packet. MS. ALEXANDER advised she will poll the members to determine the best date for the potential January 2019 meeting.

4. CIO REPORT

BOB MITCHELL, Chief Investment Officer (CIO), reviewed the report for September and October 2018, entitled Summary of Portfolio Moves. The portfolio has remained within its bands during this time period. A new column has been added called Authority, which references the Board resolutions that give authority for the CIO to make the corresponding changes. There were a total of five rebalancing transactions. Three related to liquidating assets to satisfy outflows for the Military Fund on September 25, October 25, and October 30. The October 30 transaction was accidentally truncated while converting the data files for the presentation from Excel to PDF. The remaining two transactions were internal rebalancing to equalize the relative asset allocation of the plans.

MR. MITCHELL discussed the next section; Futures, Rolls and Adjustments. The new addition in the report is the request by MR. WILLIAMS to include the dollar amount of the transactions. Any positive number shown represents money flowing into the strategy. Any negative number shown represents money flowing out of the strategy. The current transactions reflect the normal quarterly activity of the derivative instruments, rolling the existing positions from the September expiry to December expiry. Item 10 shows the cash flows related to margins for the derivatives employed in the program.

MR. MITCHELL continued the presentation describing the activities listed under Investment Actions. Items 11, 12, 34, and 35 were highlighted because they correspond to the ARM Board's concurrence and direction for staff to liquidate the TIPS portfolio. MR. MITCHELL gave a general characterization of the remaining transactions. The run rate of the portfolio is the difference between contributions and benefit payments. The portfolio experienced cash outflows of approximately $200 million. During this period, staff funded two tactical asset allocation mandates approved by the ARM Board in March, one to Fidelity for $200 million and one to Pine Bridge for $200 million. Funding for this allocation came from liquidations in MLPs, domestic and international equities, treasuries, and opportunistic fixed income.

MR. MITCHELL explained the portfolio has experienced challenges to-date during the fiscal year. The equity market has been down about 8% overall, with small cap allocations lagging large cap allocations. The broad portfolio was approximately $26.5 billion at the beginning of the fiscal year and is now closer to $25 billion. The portfolio asset allocation is well within its bands, but as a result of the relative movement, fixed income is slightly overweight. Staff continues to monitor the situation.

MR. MITCHELL continued the presentation describing the Watch List section. At the request of MR. WEST, a listing of all of the managers currently on the watch list has been added to the report. MR. MITCHELL informed he will fulfill the request for staff to conduct a presentation regarding the watch list at the April Board meeting. He noted the manager Tortoise Capital Advisors was placed on the watch list about a year ago due to the qualitative reasons of the sale of the company by its founders to the firm Lovell Minnick. Staff has been in contact with Tortoise on multiple occasions, including an onsite visit in June. Staff has spent a considerable amount of time reviewing the firm and has come to the conclusion the portfolio managers are now more incented to perform for ARM Board's account than previously. Because of this degree of comfort, staff recommends removing Tortoise from the watch list at this time.

<u>VICE-CHAIR SCHUBERT moved to remove Tortoise Capital Advisors from the watch list based on staff's recommendations. MS. HARBO seconded the motion.</u>

<u>The motion passed unanimously.</u>

MR. MITCHELL continued the presentation informing members that as part of the private equity investment guidelines, he has discretion as CIO to commit up to $100 million in a private equity limited partnership investment. MR. MITCHELL advised he made a commitment during this time period of $40 million to the Warburg Pincus Global Growth fund. There were no questions from members regarding the transaction. MR. MITCHELL announced the founder of Almanac, MR. MCGURK, retired from Almanac a number of years ago and recently passed away. Staff does not believe his passing has a direct impact on the portfolio.

5. FUND FINANCIAL PRESENTATION AND CASH FLOW UPDATE

CHAIR JOHNSON introduced State Comptroller SCOTT JONES and MS. MAIQUIS to present the Fund Financial Report. MR. JONES advised the Fund Financial Report, as of October 31, 2018, was included in the packet. He noted the plans were up in November, with the PERS Plan at $18.3 billion, TRS at $8.9 billion, Judicial Retirement System (JRS) at $210 million, National Guard and Naval Militia Retirement System (NGNMRS) at $39 million, SBS at $3.9 billion, and Deferred Comp at $932 million. The total nonparticipant-directed plans were at $25.9 billion and the participant-directed plans were at $6.3 billion, for a total of $32.3 billion. Internal investments totaled $8.8 billion. Since then, through December 10th, the plans were down and the fiscal-year-to-date income was at a loss of $490 million. The nonparticipant-directed plans totaled $25.4 billion.

MS. MAIQUIS reported total contributions, as of the end of October 2018, were $633 million and expenditures were $778 million, for a net withdrawal of $145 million. The Division received $16.4 million in Medicaid drug reimbursement subsidies within this period for PERS, TRS, and JRS Plans combined. There were no questions.

REPORTS

6. CHAIR REPORT

CHAIR JOHNSON offered a warm welcome to the new Trustees, COMMISSIONER QUICK and COMMISSIONER TANGEMAN. CHAIR JOHNSON reminded the Board about discussions at the previous meeting regarding the need to select a panel for general consultant evaluation contract review. CHAIR JOHNSON proposed the panel consist of MR. MITCHELL, MR. BRICE, MS. HARBO, Chief Pension Officer KATHY LEA, and himself. There was no objection.

CHAIR JOHNSON noted the same review process has to be formed for the Real Assets Consultant Evaluation Committee. He proposed the panel consist of MS. ERCHINGER, STEVE SIKES, and MR. MITCHELL. There was no objection.

CHAIR JOHNSON discussed the five resolutions, 2018-14 through 2018-18, that were presented and tabled the first day of the September Board meeting. The content of 2018-15 through 2018-18 focused on revised investment guidelines. The second day of the September Board meeting, Resolutions 2018-14 through 2018-16 were voted upon and passed. There was no indication in the minutes of the disposition of Resolutions 2018-17 and 2018-18. CHAIR JOHNSON conferred with MS. ALEXANDER and MR. MITCHELL, and the best recollection is there was discussion before the Board to pull Resolutions 2018-17 and 2018-18 from consideration due to drafting issues. CHAIR JOHNSON noted, for the record, Resolutions 2018-17 and 2018-18 were never presented and never passed. The proposed Resolution 2018-20 being brought before the Board today embraces some of the same subject matters. There were no comments, nor objections from Trustees. CHAIR JOHNSON expressed appreciation to STUART GOERING, Assistant Attorney General, for bringing attention to this matter, and to MS. ALEXANDER for her assistance in addressing the issue.

CHAIR JOHNSON reported on the continued discussions regarding the creation of what he calls an Operations Committee, which would combine the preexisting Salary and Budget Committees, and add the subject of policies and procedures. CHAIR JOHNSON believes Callans' findings and recommendations from their recent review of policies and procedures provide an impetus for the creation of this committee. He informed no actions are prepared for today. CHAIR JOHNSON suggested the Salary and Budget Committees have a joint meeting prior to the April Board meeting to consider the recommendation to the full Board to create the Operations Committee. CHAIR JOHNSON noted this item may fall within the category of other matters to come before the Board or new matters to be considered. There were no questions.

7. COMMITTEE REPORTS

A. Audit Committee

CHAIR JOHNSON, as Chair of the Audit Committee, reported the Audit Committee met yesterday and auditor KPMG delivered clean opinions regarding all the plans. Discussion occurred focused on internal controls relating to audits and data produced from both DOR and DRB. CHAIR JOHNSON informed KPMG does not opine on the sufficiency of internal controls, but will comment if they observe any issues. No issues were observed. KPMG made note the ARM Board and the Committee share a fiduciary obligation for oversight of the establishment and maintenance by management of programs and controls designed to prevent, deter and detect fraud. The Committee requested input from DOR and Administration during the next Committee meeting responding to the cost/benefits of an internal audit program.

CHAIR JOHNSON conveyed the recent turnover in critical operations within DRB and noted the decrease in the number of audits undertaken with respect to subdivision. CHAIR JOHNSON reiterated the funding for these efforts, whether it be internal auditing in the future or ensuring key staff be retained, comes from the Trust. It is not a general fund issue. CHAIR JOHNSON noted the Board has expressed repeatedly their support of Trust funds being expended to accomplish appropriate oversight to conduct audits and to undertake efforts on behalf of beneficiaries.

B. Actuarial Committee

MS. ERCHINGER, Chair of the Actuarial Committee, informed the Committee met yesterday and covered three primary presentations. The presentation given by MR. GOERING regarding liability layering and the possibility of amortizing each year's unfunded liability over a new 25-year closed period will be discussed under a separate agenda item later in today's meeting.

The presentations by Buck, the primary actuary, and by GRS, the review actuary, focused on the 2017 Experience Study and review of the proposed assumption changes. MS. ERCHINGER described the proposed assumption changes. She explained the overall investment return assumption has been 8% for a period of time. The 8% is comprised of a real return assumption of 4.88% and an inflation assumption of 3.12%. After much consideration and support from the Committee, Buck, and GRS, the Committee recommends a reduction to the inflation assumption from 3.12% to 2.50%. This produces an investment return assumption of 7.38%. The recommendation falls within the acceptable assumption ranges of both the actuary and review actuary.

The change in the inflation rate will result in a change to the payroll growth rates. The previous payroll growth rate assumption was inflation plus 50 basis points or 3.62%. The Committee recommends reducing the payroll growth rate to inflation plus 25 basis points or 2.75%. MS. ERCHINGER discussed the change in the inflation assumption and payroll growth rates will have a fairly large impact on future payroll base assumptions. These are a significant consideration in setting the contribution rate. Lower payroll growth over time will necessitate higher contribution rates.

MS. ERCHINGER commented the Committee postponed the recommendation to the Board today with respect to Resolution 2018-19 in order to provide the two new Trustees a sufficient amount of time to review the changes prior to the vote. MS. ERCHINGER commented Buck did a great job developing the summary of documents given to the Committee regarding the proposed changes. These are available for review.

C. Defined Contribution Plan Committee

MR. WILLIAMS reported the Defined Contribution Committee met yesterday and heard a presentation by SHANE CARSON, which focused on the real assets investment options and the process underway to replace the $148 million currently invested in the U.S. Real Estate Trust Index and the U.S. TIPS Index. MR. WILLIAMS noted the Committee also heard a presentation from MS. LEA and representatives from Empower regarding efforts to prepare for the over 11,000 eligible DC retirements that could occur in the near future. Discussions ensued regarding development of effective outreach to ensure members are receiving and reviewing important information.

MR. WILLIAMS noted ongoing marketing in support of the open DC option for municipalities and school districts. Currently, only nine school districts, out of 54, are participating. Efforts will continue with the Department of Education to collaborate on ways to communicate the availability of this very competitive option.

MS. HARBO believes some of the challenges have been with employers not providing the information to employees and not setting aside time to educate employees on the importance of investing for their future. She feels it is critical for employers to assist in the process. Other challenges include individuals who choose not to participate in investments plans and individuals who do not seem interested in learning about the options available.

MR. WILLIAMS hopes the ongoing targeted focus will address some of these specific issues identified. He noted there was public testimony at the end of the Committee meeting yesterday concerning the website. The comments were timely because the website is in the process being updated.

MS. HARBO inquired as to status of the wait time for receiving an appointment with an Empower counselor. MR. WILLIAMS noted the issue was addressed in the report because there were times it took up to two months to get an appointment with a counselor. MS. LEA indicated there have been issues with DRB and Empower regarding scheduling counseling appointments. She informed DRB has added non-permanent staff to relieve some of the duties of the counselors in order to provide more time for individual counseling. LIZ DAVIDSEN, State Director for Empower, stated there are currently three retirement plan advisors available for one-on-one counseling and two more advisors will be added in January to help with the demand. Assessments will be ongoing to determine adequate staffing needs.

CHAIR JOHNSON announced all the committees are open for any Trustee to join. There are no quorum restrictions. He urged the Commissioners to participate in the Audit and Actuarial Committees because of the lengthy discussions that occur regarding decisional processes.

8. LEGAL REPORT

MR. GOERING reported on the employment status, during the change of Administration, of the Department of Law attorneys who advise the ARM Board and DRB. Essentially, all of the Department of Law attorneys were retained after the standard resignations had been tendered. MR. GOERING informed there have been some changes at the Department of Law, but the changes do not affect the ARM Board's legal team at this time. A vacancy exists for one position representing DRB and Department of Law is working to fill that position.

MR. GOERING commented he had the opportunity to personally interact with DRB on several occasions during the interim period when his resignation was submitted and when it was rejected. He found DRB was extremely responsive. The responses were both timely and accurate. He complimented and expressed appreciation to DRB for the way they handled the State employees' recent requests.

MR. GOERING discussed the two items of litigation that involve the ARM Board. There have been no changes in status since the previous report. The Metcalfe case involves a claim by a class of former State employees who voluntarily cashed out of their defined benefit plans and became former employees. They now claim the right under the Alaska Constitution's diminishment clause to have the opportunity to be reemployed and to pay back into the retirement systems in order to reinstate retirement pension and healthcare benefits. The period has been closed by statute for about 10 years. The case is pending briefing in front of the Supreme Court. This is the second time to the Supreme Court. The State won on summary judgment in the Superior Court the second time. MR. GOERING believes that decision will be upheld.

MR. GOERING described the second case is pending summary judgment in Superior Court. It involves a claim that the retiree-paid dental benefit plan cannot be changed post-retirement. The case is complex. The decision would not affect the State's direct financial obligations, but it would dictate whether or not the potential for a multiplicity of plans may exist. The Superior Court tentatively decided the dental plans were subject to the same protections under the Constitution as other plans for purposes of taking evidence on the diminution issues.

MR. GOERING commented MS. ERCHINGER referenced a couple of issues that were discussed at the Actuarial Committee meeting. He noted there is no agenda item referencing the issues. MR. GOERING informed his advice memo was provided to the members of the Actuarial Committee and MS. ALEXANDER has copies for the remaining Trustees. He suggested Trustees take the opportunity to read his advice memo and any further consultation could occur under the agenda item Unfinished Business. CHAIR JOHNSON agreed it makes sense to afford Trustees the opportunity to read the advice memo. Addressing the subject under Unfinished Business was accepted without objection. CHAIR JOHNSON believes MR. GOERING has the opening to give a presentation because MS. ERCHINGER, as Chair of the Actuarial Committee, made reference to the subject.

9. KPMG - AUDIT REPORT

CHAIR JOHNSON invited BETH STUART and MELISSA BEEDLE of KPMG to present a high-level overview of the Audit Report. MS. STUART advised all five of the Retirement and Benefit Reports of the audited financial statements received an unmodified, clean opinion. The explanatory information included under other matter language is contained on page three. For FY18, there were no required changes under the Governmental Accounting Standards Board (GASB) and no changes to the accounting policies. The significant estimates within the financial statements relating to the net pension liability and the net OPEB were evaluated by KPMG's accounting specialists. The conclusion was the assumptions were reasonable and the accounting was appropriate in the financial statements.

MS. STUART explained the KPMG audit is not designed to issue an opinion on internal control issues or to seek out issues that may exist. During the audit, KPMG obtains an understanding of internal control and processes used by DRB and any matters identified would be communicated within the report. No significant internal control matters were identified. MS. STUART reiterated the required communications by KPMG to the Audit Committee and the ARM Board. KPMG works closely with management throughout the audit process, but KPMG is directly responsible to the ARM Board.

MS. STUART discussed the roles and responsibilities of the various members involved in the financial reporting audit process. Management is responsible for the financial statements and for internal controls. Board members set the tone for the overall organization and oversee the financial reporting processes. Auditors have the responsibility to perform the audit, follow professional standards and to make the required communications to the Board. MS. STUART reviewed the summary of audit fees provided.

CHAIR JOHNSON requested KPMG provide comments and observations to DRB or Administration on the current state of internal controls and whether or not a formal internal audit should occur. The Audit Committee has a sense the built-in controls and dynamics suggest a great deal of oversight already exists. MS. STUART agreed to provide comments.

MR. WILLIAMS inquired as to the reason for the significant change in fees from 2017 to 2018. MS. STUART explained implementation of new required accounting standards in the first year is challenging. There were new accounting standards in 2017, and none this year.

MS. STUART expressed appreciation to the staff and especially MS. MAIQUIS during the audit process. MS. STUART is aware the Department is short-staffed at the moment. She was impressed with the professionalism, responsiveness, leadership, and diligence of MS. MAIQUIS under the difficult set of circumstances. MS. STUART informed KPMG was able to issue the audit reports over three weeks earlier this year compared to last year.

MS. ERCHINGER added to the compliment to Department of Administration staff over the last few years, especially with the implementation of new accounting pronouncements and the audit of employer's underlying data. MS. ERCHINGER expressed concern for the Department's ability to continue to maintain the tremendous amount of additional work with what seems to be fewer resources over time. MS. ERCHINGER reiterated the Committee recognized much of work being completed by both Department of Revenue and Administration are the direct costs of the Retirement System and not the State of Alaska's general fund. She hopes conversations regarding cuts to balance the State budget will take consider the staffing needed in order to adequately account for and report on the assets and the Retirement System resources.

MS. ERCHINGER specifically thanked MR. DESAI for his critical work, and MS. MAIQUIS for her valuable and additional efforts in stepping up to fulfill her role. She expressed concern regarding staff burnout, given the workload related to the pronouncements. MS. ERCHINGER highlighted the importance of consistent staffing and the benefit of institutional knowledge.

CHAIR JOHNSON recessed the meeting from 10:28 a.m. to 10:46 a.m.

10. 2014 - 2018 EXPERIENCE STUDY

Action: Relating to Acceptance of Experience Study Actuarial Assumptions Resolution 2018-19

CHAIR JOHNSON noted Item 10 was tabled earlier. He encouraged those interested to listen to the recording of the robust discussions of yesterday's Actuarial Committee meeting and to review the minutes once they are prepared. CHAIR JOHNSON noted the meeting will continue with Item 11, Item 13, and then the break for lunch.

11. THOUGHTS ON STRATEGIC ASSET ALLOCATION

MR. MITCHELL provided context for his presentation and noted his expressed desire at the June and September meetings to evaluate the allocation to alternative asset investments. Alternatives represent about a third of the portfolio, but comprise well over half of the fees paid. It is important to consider what value has been gained from the alternative investments compared to traditional asset classes. Over the last 10 years, performance has been robust in domestic equities, with annualized returns of over 10%. The alternative portfolios have been stodgy and challenged compared to a blend of stocks and bonds.

MR. MITCHELL intends to continue to study the alternative investments between now and the June 2019 meeting, when the issue of strategic asset allocation is addressed again. The primary purpose of this presentation is to review the decisions made by the ARM Board and ASPIB over a long period of time and compare the results with a proxy of public market alternatives. The exercise requires making assumptions, which are not perfect, and the members should be mindful of this throughout the presentation. MR. MITCHELL believes the analysis contains worthwhile information.

MR. MITCHELL showed the current strategic asset allocation for 13 of the 14 plans that will be the focus of today's presentation. There is approximately 54% allocated to public equities, approximately14% allocated to fixed income, including the dedication to fixed income within all asset classes, and approximately a third of the portfolio is allocated to alternatives, including private equity, real assets, and absolute return. The expected 30-year return for this portfolio using Callan's capital market assumptions is 7.4%.

MR. MITCHELL noted some of the slides in the presentation are sourced from Callan's annual conference last year. Callan's next annual conference is scheduled for the end of January. MR. MITCHELL reviewed a slide showing the 10-year expected return of various asset classes beginning in 1989 through 2018. Over this period of time, the return expectations for domestic equities and fixed income have declined about six percentage points, the inflation expectation has declined about three percentage points, and the risk expectation has remained flat. The result is less return for more risk taken.

MR. MITCHELL explained the slides illustrating the exercise of reviewing different portfolio asset allocations to achieve a return target of 7.5% over the10-year periods from 1995 to 2015, and into 2017. The risk profiles of those portfolios have increased from about 6% to 24% during that same time period. MR. MITCHELL discussed the slides showing the ARMB actual asset allocation during the years from 1991 to 2017, which reflect the trends shown in the previous charts. The PERS portfolio is used as a proxy. The domestic equity allocation has declined. The international equity allocation has increased. The fixed income allocation has decreased. The private equity and alternative equity allocations have increased.

In order to compare the ARMB portfolio with portfolios that are comprised of only publically traded equities and fixed income, MR. MITCHELL placed the private equity, alternative equity, and other assets into the equities portion, and placed the real assets, absolute return, and cash into the fixed income portion. The ARMB portfolio has increased to about a 60/40 split between equity and fixed income, and has remained roughly there for a number of years. MR. MITCHELL showed the annualized return from 1991 to 2018 for a portfolio with a 60/40 split of S&P 500 and Bloomberg Aggregate bond index of 8.39%, compared to the PERS actual 60/40 split of 8.07%. The PERS benchmark was 7.65%. There was a period in the ‘90s where over half of the PERS portfolio was in fixed income.

MR. MITCHELL discussed the equity allocation composition split between domestic equities and international equities over the same time periods. The investments into international equities have increased over time and this decision has cost the portfolio returns over the long-term. MR. MITCHELL highlighted the impact of fees on returns. The PERS portfolio has outperformed its benchmark gross of fees, but has underperformed its benchmark net of fees by about 29 basis points over the long-term. The current run rate of fees is in the low 40-basis-point range.

MR. MITCHELL moved onto the portfolio’s risk profile and characteristics. Over the 27-year period, the PERS portfolio has had a slightly greater risk profile than the public equivalent and a slightly lower risk profile than the benchmark. He noted the benchmark contains publically traded elements; whereas the portfolio also contains privately traded aspects. The publically traded elements display higher volatility, by virtue of their instantaneous pricing, compared to quarterly or annual pricing of private equity. This makes the PERS’ risk profile appear less risky than the benchmark, even though it is not less risky.

MR. MITCHELL explained a key observation in reviewing the data. The conclusions are very sensitive to the start and end points of the analysis. Almost any picture could be represented with careful selection of the start and end points. The full set of data shown in this presentation is the 27 years that corresponds with the Plan’s engagement with Callan. MR. MITCHELL reviewed the slides showing the comparison of PERS gross portfolio, PERS net portfolio, PERS benchmark, and the public equivalent for different time periods; nine years, 10 years, and 15 years. MR. MITCHELL showed a chart of rolling six-year periods and characterized the net-of-fee portfolio as struggling to keep up with the benchmark. The notable period with issues is FY09. The takeaway is a case could be made for either a 60/40 allocation or an alternative allocation, depending on what trough or peak is chosen.

MR. MITCHELL shared an anecdote from the October National Education Conference where he attended with 49 other public pension CIOs. He was discussing portfolio asset allocation with two state pension CIOs that had what he characterized as polar opposite portfolios. One was predominantly indexed public markets with approximately 10% in private equities, and the other contained over 50% in alternatives. The question was asked if their portfolios were first quartile, and they both responded affirmatively. Both styles have worked over time. MR. MITCHELL believes the key is to be comfortable with the style chosen for the portfolio and have conviction to maintain it.

MR. MITCHELL discussed the slide entitled Asset Class Level Performance - FY09 and After. It represents each asset class in the portfolio and illustrates the performance of FY09, the nine years directly after, and the 10-year performance, including FY09. MR. MITCHELL noted all the asset classes were negative except for fixed income. He explained the real assets contained about 70% invested in non-core, riskier strategies, which experienced permanent impairments and were not available for a robust recovery. Over the 10-year period, the allocation to real estate decreased from about 70% to about 35%, with the addition of infrastructure, timberland, and MLPs into the portfolio. MR. MITCHELL emphasized draw-downs have significant impacts, even to subsequent years of large portfolio return increases. One example given was the 27% drawdown in domestic equities in FY09. It improved 250% over the next nine years, but the 10-year return was 160%.

MR. MITCHELL believes it is important to mitigate these types of draw-downs, and one consideration is to broadly diversify the portfolio with the use of alternatives. MR. MITCHELL commented absolute return yielded a negative 12% during ’09. He explained hedge funds rely heavily on leverage for many of the strategies. They had extreme difficulty navigating through the crisis and suffered because of illiquidity. MR. MITCHELL expressed disappointment in absolute return’s performance over the past 10 years in its similarity to fixed income’s performance. He advised additional analysis of the role of absolute return is warranted and will be given more attention.

MR. WILLIAMS referenced the graph that showed the benchmark containing increased international equities. He noted the effect adjusted the return significantly downward. He asked for the initial reasoning for the decision and if the reasoning remains valid today. MR. MITCHELL believes the decision was driven, in part, by the need to seek more risk and to more broadly reflect the market capitalization of equities. MR. MITCHELL stated DR. MITCHELL will conduct a discussion on international equities later in the meeting. He believes it is a key question going forward and will review historical performance of international equities later in his presentation.

MR. MITCHELL discussed the public markets provide a low-cost, liquid and transparent option. Alternatives have higher fees, less liquidity, less transparency, and should only be invested in with good reason. The public markets have a passive option with index funds that broadly represents the asset class. Alternatives do not have a passive option and have to be invested actively. The onus of picking the right managers is a significant consideration in alternatives because of the dispersion of returns within the quartiles. MR. MITCHELL believes the private equity program is strong and the managers are skillful. This will be reviewed by GARY ROBERTSON of Callan later in the meeting. Staff will also present on the weighting of public assets and alternative assets at the April meeting.

MR. MITCHELL reviewed a chart showing the returns of the S&P 500 and EAFE from January 1970 through November 2018. The S&P 500 has clearly outperformed over the long period of time. MR. MITCHELL showed that period of time split into two pieces. From January 1970 until March 2008, the two indices achieved very similar performance. The separation occurred in the period between March 2008 and current, effectively post-crisis. The last 10 years has been a period of very strong domestic equity performance. MR.

MITCHELL discussed the 10-year forecasts from Callan, J.P. Morgan, and Horizon. These are an average compiled from over 30 estimates of forward-looking projections. Callan's 10-year return assumption for domestic equities is 4.6%, for developed international markets is 4.5%, and for emerging markets is 4.8%.

MS. ERCHINGER commented on MR. WILLIAMS' previous question and recalled when she initially became a member of the Board, the portfolio was lagging peers in international equity allocation, which may have created a drag on performance. The decision was made to move in the direction of international equity, but the timing was not advantageous. MS. ERCHINGER cautioned about leaving asset classes that are performing poorly, but may eventually recover. She recognized the importance of the 10-year performance period and noted the recent conditions are not within historical norms. MS. ERCHINGER expressed concern the "new normal" is very unusual and may not continue the way people assume.

MR. MITCHELL believes MS. ERCHINGER's comments are important observations. He agrees looking in the recent past at what has performed well can be dangerous and can result in buying high and selling low. MR. MITCHELL described ways to navigate these elements includes having a principle-based approach to strategic asset allocation, maintaining consistency, and being able to evolve. He noted the 30-year expected return for the strategic asset allocation using Callan's assumptions is 7.4%. If the ARMB were to allocate a 60/40 portfolio, the expected return would drop to 6.40%. MR. MITCHELL noted staff is not advocating a position in this presentation. Staff will endeavor to provide recommendations, along with the basis for the recommendations going forward.

MS. HARBO expressed appreciation to MR. MITCHELL for his presentation. She noted he spoke of the portfolio's net-of-fee performance and in looking over the presentations provided in the member packet, the managers primarily report gross-of-fee numbers. MS. HARBO requested the managers give net-of-fee performance numbers. MR. MITCHELL said he would inform the managers.

MR. WILLIAMS commented he expects fixed income not to perform as well as equities, but to provide more stability. He expressed concern with the dips in international equities. MR. WILLIAMS noted he did not expect the loss of premium that occurred in private equity, with returns nearing the S&P 500 at some points. He asked if the assumption of a higher premium was unrealistic. MR. MITCHELL noted the expectation for private equity is 350 basis points above public market equivalents over time. It is important to evaluate if that spread is reasonable. MR. MITCHELL informed the numbers presented reflect the median expectation for private equity. There are significant benefits that can be achieved in selecting managers that outperform the median.

13. PERFORMANCE REVIEW - 3RD QUARTER

CHAIR JOHNSON introduced MR. ERLENDSON and MR. CENTER of Callan, LLC to present the 3rd Quarter Performance Measurement for the quarter ending September 30, 2018. MR. CENTER welcomed the two new Trustees to the Board. MR. ERLENDSON outlined the presentation will discuss the general economy, individual asset classes, and the performance of the fund, using PERS as a proxy. If domestic equity markets are positive at the end of the year, it will reflect a 10-year run of positive returns in the domestic stock market, the occurrence of which has never happened. Historically, during a 10-year period, markets should have been negative two of the calendar years. The current market disturbance is normal.

MR. ERLENDSON noted a historical precedent will occur in the first part of next year, marking 10 years of growth in gross domestic product (GDP). One of the reasons the growth has been able to continue is the rate has been consistently low, averaging about 2.3% per year. Employment growth has been fairly strong, with an average of 126,000 new job creations a month since the beginning of 2009, and more recently, over 200,000 jobs a month since 2011. MR. ERLENDSON noted industry experts like BEN BERNANKE do not believe this is sustainable because only approximately 100,000 people are entering the workforce each month. Wage growth is increasing and has begun to apply pressure on the previous muted inflation. In 2018, inflation averaged higher than the previous four years at 2.3%. The Federal Open Market Committee of the Federal Reserve met on November 8th and did not change interest rates. The rates are expected to be raised in December, which may slow down job creation.

MR. ERLENDSON reviewed the expectations of economic growth from global purchasing managers. The U.S. remains positive, but Europe, Japan, and emerging markets have dampened their expectations. Stress in the markets recently has stemmed from talk of trade tariffs and trade practices. China, Korea, and Taiwan comprise about 58% of the emerging markets index and a large portion of their GDP is dependent on exports. The average annual growth in world trade over the last 20 years has been about 5% and has decreased more recently to about 3.7%. Their economies have been hurt by the slowdown. Approximately 8% of the U.S. GDP is dependent on exports. The U.S. is in a better position as trade volumes begin to decrease.

MR. ERLENDSON reviewed the 3rd quarter performance of various asset classes within the U.S. stock market. The S&P was up 7.7%. The bond market was flat. Emerging markets were negative. Commodities were negative. MR. ERLENDSON gave an update on performance year-to-date since September. The S&P is up only about 50 basis points. All other indexes are negative.

MR. ERLENDSON reviewed a chart showing the dispersion between the returns of growth equities and value equities. This difference over the last six years is the largest it has ever been. Any tilt toward valuation as a premise for choosing stocks has been a headwind for managers. MR. ERLENDSON explained earnings per share is measured by the total earnings of a company divided by the number of shares. The steep incline in the earnings per share growth is due to low interest rates and the artificial increase driven by companies buying back significant amounts of outstanding shares. When there are fewer shares by which the same amount of earnings are distributed, the earnings per share will increase. There are roughly half as many shares today as there were 10 years ago. For the second quarter of 2018, the earnings per share growth rate was about 27%. The long-term average is less than 7%. The higher the earnings per share growth, the lower the stock market returns, because of unsustainability. The slowdown in the growth of the stock market has begun.

MR. ERLENDSON reviewed the returns of non-U.S. companies since the 1990s, and noted the sine wave pattern of leading returns and lagging returns as compared to the U.S. market. The question remains if this pattern will continue in the future. MR. ERLENDSON discussed the fixed income market and noted the yields for taking additional risk are approaching long-term lows. The bond market may be getting overpriced versus long-term averages. MR. ERLENDSON informed the portfolio has performed very well. He believes the upcoming asset allocation study will provide a good time to reassess the risk profile of the fund and to review the best long-term policy for the Board going forward.

MS. ERCHINGER inquired to what degree the stock market returns are an artificial construct based on the inflow of cash from companies bringing funds from overseas and international markets, as opposed to pure economic performance. MR. CENTER noted that debate is currently popular among economists. He believes much of the money companies held overseas was actually invested in U.S. Treasuries because the yields were good. He does not think the inflow of those funds will have a significant impact. MR. CENTER discussed the belief the last two quarters of GDP growth have been a transitory period, based on changes in the taxes and concerns over trade and tariff wars. Many U.S. producers front-loaded supplies. The expectation is Q4 will not see that same sort of growth. He believes a slowdown is coming, but the likelihood of a recession within the next 18 to 24 months is low.

MR. CENTER began the PERS performance review and noted some of the alternative data numbers are preliminary, and may differ slightly from the finalized numbers. The plan has remained close to the target asset allocation over time and is within the allotted ranges. Relative to peers, the plan has a lower allocation to fixed income, a lower allocation to domestic equities, a higher allocation to non-U.S. equities, and a higher allocation to alternatives, particularly real assets. Knowing the allocation differences helps to explain some of the return differences shown for the PERS plan relative to peers, specifically over the last decade when the domestic equity market drove performance.

The PERS' performance was in the top quartile the last one-year, three years, and five years. PERS was slightly below median over the last 10 years. MR. CENTER explained the Sharpe ratio is a measure of risk adjusted performance. The risk-free return of investing in cash is subtracted from the plan's return and then divided by standard deviation. The plan has done very well over the last three years. The Sharpe ratio is a bit distorted because volatility has been so low in the near-term. The Sharpe ratio is expected to be closer to the 10-year number. Private markets are not valued as often, which contributes to smoothing volatility. The projected standard deviation for the portfolio is about 12, and has been low at 2.5 during the last three years.

MR. CENTER reviewed the plan's attribution for the last year and noted most of the performance has been driven by the manager effect. The PERS plan is ahead of its benchmark by 1.55%. Key drivers to performance came from the real assets portfolio and private equity. The key detractor was the opportunistic asset class. MR. CENTER discussed the chart comparing the PERS long-term performance versus the actuarial return and the target return. The plan continues to struggle to catch up to the actuarial return post-2008. The plan has outperformed the target return over the last one, two, three, five, and seven-year periods. Over 10 years, the plan has fallen below median and has trailed the target return by approximately 30 basis points. The plan has beaten the target by about eight basis points over the full 27-year tracking period.

CHAIR JOHNSON inquired as to the performance since September 30th, in relation to other public funds. MR. CENTER noted the return information is provided quarterly and he does not trace the performance mid-quarter. He asked MR. MITCHELL to respond. MR. MITCHELL reported staff tracks public market performance for benchmark purposes and then it has to be revised as the private data becomes available. The rough estimate, without the private data revisions, is the plan is 10 to 20 basis points ahead of the index quarter-to-date, returning approximately negative 2%. MR. ERLENDSON commented on the importance of looking at trends over longer periods of time to determine if the status is remaining the same, improving, or deteriorating. The relative results shown seem to be improving.

MR. CENTER showed another example of the recent low volatility environment. Over the last four years, the difference between the top peer performer and the bottom peer performer was about 3.5%, as opposed to the wide volatility in 2009, where the spread was about 13%. MR. CENTER reviewed the portfolio's asset class performance. Domestic equity slightly trailed its benchmark over most time periods. This was due to small cap lagging and active large cap managers underperforming. The large cap portfolio is now 70% passive, with the remaining split between the quasi-passive internally managed scientific beta and portable alpha portfolios, active managers Lazard, and equity yield. One of the passive large cap allocations is an equally-weighted S&P Index that has lagged the S&P. During this period, it has been detrimental to have an equal-weighted index, opposed to a market capitalization weighted index, because the performance has been driven by the top-10 performing stocks. The scientific beta portfolio also experienced a period of underperformance. The strategy provides diversification and is expected to have periods of outperformance over time.

The small cap portfolio is about 20% passive and has outperformed the index across all time periods shown. It is above median for all periods three years and longer. Exposure to the micro-cap managers was mixed recently. Staff continues to monitor BMO Discipline Small Cap Core strategy because of their varying performance over the last two years. The international equity portfolio has outperformed the benchmark over all time periods one-year and longer, and continues to perform well relative to peers.

MR. CENTER informed Callan has been working with staff to identify additional emerging market growth equity managers to complement the existing structure. Interviews with potential managers will occur at tomorrow's meeting. The current two emerging market managers have experienced performance issues and have struggled compared to both the benchmark and to peers.

MR. CENTER directed the Board's attention to the internally managed, high quality fixed income portfolio. It is outperforming the benchmark. The portfolio contains no credit risk, and is not expected to rank high among the peer group, which is heavily invested in credit. The opportunistic equity portfolio has done fairly well, returning over 13% last year. There have been some changes with the taxable municipal composite with the Guggenheim portfolio closing. The Western Asset portfolio has performed well relative to the indices. International fixed income has struggled during this period where the U.S. market has driven performance. It remains a good diversifier to the other fixed income exposures. The high yield portfolio continues to perform well relative to benchmarks.

MR. CENTER advised Callan is not the consultant for real assets, but did show the chart listing the strong performance from real assets, particularly timber, energy, and infrastructure. The absolute return portfolio performed favorably compared to its benchmark, returning 6.8% over the last year. He believes the program is structured fairly well. MR. CENTER reviewed the few changes made to the Defined Contribution plan this quarter that included the combination of some stable value funds, and the combination of some passive fixed income portfolios.

The PERS plans' asset allocation as of September 30th was about 60% invested in the target date funds and the remaining split between the passive options and the active options. He explained the chart showing the inflows and outflows of the plan. The inflows exceed the outflows at this time. The TRS structure is very similar. The SBS structure is very similar, and the inflows and outflows are close to equal. The Deferred Comp plan is about 20% invested in target date funds and the remaining split between the passive and active options. The outflows exceed the inflows, making the plan cash-flow negative every quarter.

MR. CENTER reviewed the target date funds have performed in the top decile versus the peer group over most time periods. MR. ERLENDSON noted the ARMB was an early adopter of target date funds and staff designed its own glide path, which is the distribution of equities and fixed income. The performance is a testament to the funds doing well relative to the objectives and compared to others in the marketplace. MR. CENTER discussed a chart of the active options. The two laggards were the international equity fund and the Stable Value fund. The passive strategies are tracking the benchmarks as expected. A few of the passive fixed income portfolios were ultimately combined with a new Blackrock Bond Index fund and will appear on the chart next quarter.

MR. CENTER invited the Board to attend Callan's annual conference on January 28th through 30th in San Francisco.

CHAIR JOHNSON recessed the meeting from 12:14 p.m. to 1:35 p.m.

12. PRIVATE EQUITY REVIEW

MR. ERLENDSON introduced GARY ROBERTSON of Callan, who presented the overview of the private equity program via speaker-phone. The portfolio is performing above the expected average. The pace of liquidity in the private market is very high and generates abundant distributions. This has been the fourth year prices have been high. The investment pace into companies has slowed slightly. The gross cash flow back to the portfolio has been a record dollar amount this year. The net cash flow has increased. Net asset value (NAV) is the value of the companies in the portfolio. The NAV was larger this year. The portfolio is fully diversified and invested in all the major private equity strategy types; venture capital, buyouts and special situations, subordinated debt, and distressed debt.

MR. ROBERTSON explained the structure of the private equity portfolio. There are two external managers, Abbott and Pathway, and an in-house portfolio. Each manages a portfolio of limited partnerships. The limited partnerships each manage a portfolio of private companies. ARMB provides funds to the managers that flow all the way down to the private companies. The return cash flow goes back through the limited partnership and external oversight manager to the ARMB portfolio. Partnerships typically have a 10-year legal life. Extensions can be sought. It is normal that some partnerships will take up to 15 years to fully liquidate. A key element in the private equity program that is different from funding a public equity manager is this constant liquidation and continual replenishment of capital over time.

MR. ROBERTSON discussed the private equity target increased 4%, $98 million, last year because the total ARMB assets increased 4%, $1.1 billion, last year. The total NAV of the private equity portfolio increased 16%, $350 million, last year. The private equity portfolio's target is 9%, and the current assets are slightly above, at 9.7%. This is due to outperformance. The two external managers comprise approximately 40% each of the portfolio and the in-house portfolio is approaching 20%. MR. ROBERTSON explained the uncalled capital fell to 51% this year versus 60% last year. This capital powers the portfolio forward and there will always be some degree of uncalled capital in the portfolio. MR. ROBERTSON believes it is getting close to the right amount going forward.

CHAIR JOHNSON inquired if the monies that are committed, but not yet called, are kept in a liquid position or liquidated at the time called. MR. ROBERTSON noted most plan sponsors keep the uncalled funds invested in their total asset allocation, with a small liquidity reserve for near-term calls. MR. MITCHELL agreed, and explained staff is cognizant of the magnitude of the uncalled commitments and its bearing on the liquidity profile of the portfolio. However, the portfolio remains fully invested in the strategic asset allocation. The contingent obligation is outstanding and funds are made available when capital calls occur.

MR. WILLIAMS requested additional information on the investment allocation of the different private equity strategies. MR. ROBERTSON explained the opportunity sets in the market consist of 12% venture capital, 60% to 70% buyouts and special situations, and 5% to 10% subordinated debt and distressed debt. Most plan sponsors have a preponderance of buyouts. MR. ROBERTSON noted the portfolio is well-diversified with 25% venture capital, 38% buyouts, 27% special situations, 4% distressed, and about 6% secondary and mezzanine. The geographical diversification is standard and appropriate with approximately 26% international and the remainder in U.S. The portfolio is well-diversified by industry. The largest grouping is 42% in tech/software and includes various arrays of businesses.

MR. ROBERTSON continued the presentation showing a timeline of commitments to partnerships. He noted it matches the economic cycle closely. There are few commitments during recessions and many commitments during economic booms. The ARMB's portfolio started committing in 1998, at the tail end of the tech boom. It was a 3% allocation and then dropped. The market fell apart and it was a tough time that has dampened the IRR returns, especially for Abbott's portfolio. In 2002, the ARMB increased its allocation from 3% to 6% by hiring Pathway. This timing worked out tremendously well because the buyout boom immediately followed. In 2006, the allocation increased to 7%. In 2007, the in-house portfolio began and experienced some tough market conditions, but has been recovering nicely. The allocation increased to 8% in 2011, and to 9% in 2013.

MR. ROBERTSON reviewed the markets are currently in a quandary period. Valuations are high at 10-times earnings before interest, tax, depreciation and amortization (EBITDA). Public markets have started zig-zagging. The economic fundamentals still look strong. Leading indicators are not signaling a recession. Distributions remain robust for the sixth year in a row. Private equity is a very popular asset class. Fundraising is booming, with record funds being raised. The use of leverage is increasing. The new Administration lifted particular Dodd-Frank era reforms, particularly the guideline that banks should not lend more than six times cash flow.

MR. ROBERTSON discussed private equity industry returns overall have beaten private equity returns in the 1-year, 3-year, 5-year, 15-year, and 20-year. The 10-year private equity return trailed public equity by 10 basis points. The private equity return premium is expected to compress in the future and investors are beginning to reassess their benchmark toward a 2%-plus premium over the Russell or S&P. The ARMB is currently using a 3.5% premium.

MR. ROBERTSON described the private equity portfolio's cumulative flows since inception, current valuation, and the partnership's ratios. The committed amount increased 10% off the base, compared to 9% last year, and is on track for a good portfolio replacement over time. The paid-in capital increased 12% off the base, compared to 14% last year. The general partners take their time to ensure the investments have good valuations. The current volatility could lead to more capital being invested next year. The uncalled decreased by 1% off the base, compared to a 5% decline last year. The portfolio distributed $597 million, compared to $575 million last year. This is over a quarter of its starting value. The net yield was 3%, up from 2% last year. The NAV increased 16%, and the NAV increase amount listed should be $350 million, not $357 million. Overall, the performance is very similar to last year.

MR. ROBERTSON explained the ratios displayed. DPI is distributions divided by paid-in capital. As of this year, the portfolio has received back all of its capital. RVPI is residual value or NAV divided by paid-in capital. For every dollar paid in, the portfolio has 53 cents remaining in portfolio value, and the original dollar has been paid back. TVPI is total value divided by paid in, which is 1.53, and translates to an 11% return. The portfolio is above median in all areas. MR. ROBERTSON reviewed the specific ratios and performance percentiles for Abbott, Pathway, and the in-house portfolio. There are no concerns. The portfolio is well-positioned with high quality individual names. MR. ROBERTSON noted the first half of the fiscal year was much more volatile. The expectations are the market will moderate and not be as robust next year.

14. IS INTERNATIONAL INVESTING STILL WORTHWHILE?

CHAIR JOHNSON outlined the remaining agenda schedule for the day is Item 14, a 10-minute break, Item 15, and lastly, Item 22. There were no objections.

CHAIR JOHNSON introduced DR. JERRY MITCHELL of the Investment Advisory Counsel to present on international investing. DR. MITCHELL expressed appreciation to members and staff for the opportunity to speak on a topic very dear to his heart. He acknowledged the presentations by Callan and MR. BOB MITCHELL this morning covered much of the information that will be reviewed now. DR. MITCHELL noted his presentation is purposefully less rich in data, less scientific, and more impressionistic and opinionated than most presented at Board meetings.

DR. MITCHELL believes the topic discussion regarding whether or not international investing is still worthwhile is timely because international equities have underperformed domestic equities this year. As of yesterday, domestic equities were close to flat and international equities were negative 14%. The caveat is bearing in mind performance measurement is very much a time-dependent calculation. The starting point and ending point in a series of yearly returns is critical in determining the outcome. The same wariness is appropriate in selecting the index chosen to represent domestic and foreign markets. The benchmark may significantly influence the outcome of research and judgment as to whether the portfolio has done well or poorly. Having reviewed each of those considerations, it is clear international markets have underperformed this year.

DR. MITCHELL discussed the underperformance has prompted the expected questioning regarding the utility of non-U.S. stocks as an asset class. Human nature embraces a winner and walks away from a loser. Examples of past asset class infatuations that have gone sour include real estate, small cap, junk bonds, timber, and absolute return. Foreign markets are engulfed in difficulty, both economically and politically. Europe is in chaos with issues such as Brexit, the north/south divide, the end of monetary stimulus, and nationalism. Japan has been stagnant for a decade and carries deflation as a constant threat. China is immersed in debt and the government statistics and company earning cannot be trusted. Emerging markets have become submerging markets.

DR. MITCHELL shared anecdotally the process he underwent in 1970 to introduce the firm he was working for to international investing. In preparing for this presentation, DR. MITCHELL wondered if the same five reasons used to validate international investing in 1970 could be applied today to answer the question: Is international investing still worthwhile? DR. MITCHELL requested members participate interactively and anonymously by writing whether they agree, disagree, or are neutral to each of the five reasons presented. The determinations will be tallied and revealed during the IAC comment period tomorrow. DR. MITCHELL noted foreign markets include both developed and emerging markets.

DR. MITCHELL informed the first reason for international investing is valuation. The 12-month forward price/earnings ratio of the U.S. market is 18, and is 13 for foreign markets. The price-to-book ratio for the U.S. market is about three times, and 1.5 times for foreign markets. The yield of the U.S. market is 1.9%, and 3.4% for foreign markets. Other metrics such as price-to-cash flow, the Shiller CAPE ratio, and the PEG ratio have similar patterns. Foreign markets are cheaper. They sell at a steep discount on the order of 30% to the U.S. market and are a better value. He requested members write down whether they agree, disagree, or are neutral to the first reason for international investing, and will repeat the process after discussion of each of the five reasons.

DR. MITCHELL discussed the second reason for foreign investing is growth. Investors want lower valuations, along with the ability for the investment to grow. According to most economists, U.S. GDP growth is probably in a range of around 2%. Europe is basically in the same growth range. Japan remains sluggish and could possibly grow from flat to 1%. Emerging economies are in the growth range of 7% to 8%. Some recent studies suggest GDP growth does not always lead to earnings growth, and earnings growth does not always lead to good equity performance. DR. MITCHELL believes economic growth provides a platform for future earnings growth, and foreign markets have a long-term advantage. The 2019 approximate forecasts place U.S. earnings at 8%, emerging markets at 15%, Europe at 10%, and Japan at perhaps 5%.

DR. MITCHELL reviewed the third reason for foreign investing is diversification. The investment sentiment remains; the way to reduce risk and enhance return is to build a portfolio of non-correlated assets. It is dangerous, imprudent, and perhaps a dereliction of fiduciary duty for Trustees and institutional investment professionals to concentrate funds into only one asset class. DR. MITCHELL believes the various international markets are non-correlated and the declines and gains fluctuate in the same manner as other investments. Diversification benefits from foreign equities should continue for both economic and cultural reasons.

The fourth reason for foreign investing is the opportunity set, meaning more choice in a greater universe of economies and companies. International investing provides access to trends, products, and entrepreneurship not found domestically. Direct exposure to personal economic growth of the massive populations outside the U.S. is beneficial. Some of the pure-play investments, such as mining, telecommunications equipment, and consumer electronics, may only be available abroad.

DR. MITCHELL reviewed the last reason to invest internationally is timing. This may be the most difficult to identify and perhaps the most important. He agrees the attempts of timing the market for most investors, more often than not, results in underperformance or disaster, but that does not mean timing should be ignored completely or that timing an investment to take advantage of persistent patterns might at least be worth consideration. Looking at the period from 1970 to present, the U.S. market has outperformed foreign markets 25 times, and foreign markets have outperformed the U.S. market 23 times. It seems to have a certain pattern of predictable cyclicality between periods of U.S. advantage and periods of international advantage. It is unknown whether the cyclicality will continue, but it is known the U.S. has experienced an extended period of outperformance. A good entry point for an investment is beneficial towards a satisfactory return. Foreign markets are currently low.

DR. MITCHELL requested MS. ALEXANDER collect the member responses and results will be presented tomorrow. DR. MITCHELL highlighted his opinions regarding the most frequently asked questions on formulating and executing an international investment program. Currency exposure should not be hedged. Foreign-based managers are not better international investors than U.S.-based managers. Both indexing and active managers should be used for international investing. The allocation weight for domestic/international should be 60% domestic and 40% foreign, with a plus or minus 10% variance. The allocation weight for developed/emerging should be 60% developed and 40% emerging, with a plus or minus 10% variance. Politics is not the critical variable in international investing. The portfolio does not have international exposure through U.S. multinationals. China will be the best performing market in 2019.

CHAIR JOHNSON recessed the meeting from 3:00 p.m. to 3:16 p.m.

15. FARMLAND PORTFOLIO

Action: Real Assets Investments - Farmland
Resolution 2018-20

MR. MITCHELL introduced NICHOLAS ORR, Manager of Real Assets, to present the recommendations regarding changes to the existing farmland guidelines. MR. ORR made a presentation during the previous Board meeting covering the real assets of real estate, infrastructure, timberland, and farmland. Resolutions were passed at that meeting with respect to changes to investment guidelines for real estate and infrastructure. Board feedback was gathered concerning farmland and timberland guidelines with the intent to discuss final recommendations during this meeting. Following the presentation, an action item will occur.

MR. ORR began with an overview of the farmland portfolio. It began in 2004, and currently has $852 million, comprised of $585 million with manager UBS and $267 million with manager Hancock. The investments are allocated to row crops and permanent crops. Currently the split is about 84% row crops and 16% permanent crops. The NCREIF Index is approximately 60% row crops and 40% permanent crops.

MR. ORR described row crops consist of grain commodities and vegetables. They are planted seasonally in a row, with the potential for the crop type to be changed. They are leased, and the crop may have multiple uses. Permanent crops are more capital intensive, are planted once, and have to be maintained. They are typically for food, like oranges and pistachios, rather than having multiple uses. The current yield expectation for row crops is 3% to 5%, and for permanent crops is 7% to 9%. A gross nominal return of between 3% and 6% is low for an illiquid asset class.

MR. ORR explained the expected capital appreciation and cap rates for row crops are challenged. The cap rate generally decreases as property values increase. Property values have increased since 2005. Interest rates are a component of pricing in the farmland space and if interest rates remain the same or rise, the appreciation of farmland will struggle. Another way to see accreted farmland returns is if prices were high in row crops, specifically soy and corn. Double-digit returns occurred during most of the period between 2006 and 2014, primarily due to the Renewable Fuel Standards Act, which mandated ethanol production increase from four billion gallons a year to 15 billion gallons a year, and the growth and affluence of the Chinese middle class. Those factors have since abated and prices have decreased. Row crop prices are expected to remain near long-term averages going forward.

MR. ORR reviewed the returns of permanent crops are competitive to the returns of row crops. Permanent crops retain diversification benefits and have particularly low correlation to the Barclays Ag Index. Currently, 86% of the permanent crop space uses a directly operated investment structure. ARMB guidelines allow for investment in leased properties only, and as such, the portfolio is not able to fully benefit from permanent crops. The directly operated investment structure offers higher returns, more control, better information, and alignment with duration of capital expenditures.

MR. ORR recommends changing the farmland allocation from 80% row crops to 60% row crops, and from 20% permanent crops to 40% permanent crops. The second recommendation is to allow for investment into directly operated permanent crops.

CHAIR JOHNSON inquired as to the tax implications of directly operated permanent crops. MR. ORR suggested additional discussions with the CIO and Counsel are appropriate regarding specifics. He believes blockers could be applied and the portfolio would not have unrelated business taxable income (UBTI), nor be subject to unrelated business income tax (UBIT). MR. MITCHELL noted private equity used blockers initially, but has since shifted away from them. He feels a similar course could be taken with permanent crops, if there are no concerns from Counsel.

In response to questions and comments from MR. WEST and VICE-CHAIR SCHUBERT, trustees, staff and counsel discussed issues related to UBIT.

MR. WEST asked if leasing provisions are recommended to be removed for row crops. MR. ORR noted direct operations in row crops do not occur. It is more cost effective for smaller farm owners to operate because of the government provides minimum payments. MR. WEST reminded the Board that direct operations in permanent crops hook the plan to the crop commodity, as well as increasing the investments in property, plant, and equipment.

MR. WILLIAMS asked if staff is confident we have the competence to move into direct operations of permanent crops and to be able to provide above median returns. MR. ORR expressed confidence in the recommendation. He explained the arrangement would not be considerably different than the current process. Instead of leasing to the farmer, who is operating the property, the portfolio would pay the farmer to operate, and the portfolio would take on the commodity risk. Many of the commodities hold long-term contracts to suppliers.

There were no further questions from members.

MR. BRICE moved to approve Resolution 2018-20. MS HARBO seconded the motion.

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

22. INTERNAL EQUITY MANAGEMENT

MR. MITCHELL introduced MARK MOON, Manager Internal Public Equity, to present on internal equity management. MR. MITCHELL reminded the Board of the organizational change within the Treasury Division, which occurred last year, whereby MR. MOON was promoted to oversee the Internal Equity Team. He is the senior portfolio manager. MR. MOON brings with him a 30-year investment background, which includes designing, researching, and communicating to investors about equity strategies, long and short, and fixed income derivatives. He has had the opportunity to work and study with a number of amazing financial experts, including DICK THALER, DANNY KAHNEMAN, and STEVE ROSS. MR. MOON utilizes this experience to efficiently and effectively manage the internal strategies.

MR. MOON described his overall view of equities and partitions strategies into two broad categories; systematic strategies and high expected alpha strategies. Systematic strategies choose stocks from a well-defined universe, utilize an understandable and repeatable process of selection, do not contain heavy concentrations of individual stocks, and maintain performance that is driven by the overall broad systemic exposures of the portfolio. High expected alpha strategies focus on comparative advantages in perhaps a narrow space, a particular set of analytics, particular forecasts, and usually run a higher concentrated portfolio. If the higher expected alpha strategy managers can succeed, they are probably more deserving of far higher fees than managers running systematic strategies.

The Internal Equity Department runs systematic strategies, in which staff has the tools and knowledge to execute. The internal equity management focuses on improving net-of-fee returns by eliminating the external manager fees, while deepening the expertise within the Department. The first strategy began in 2004 with REITs. There are currently nine distinct mandates, comprising about $5.5 billion. MR. MOON highlighted the themes that are consistent with the market environment. Growth is outperforming value, and large cap is outperforming small cap. All nine of the strategies are performing in line with their benchmarks.

MR. MOON described each strategy and gave a brief update. The Russell 1000 Growth, the Russell Top 200, and the S&P 600 Index strategies have outperformed their benchmarks. The Russell 1000 Value and the S&P 500 Equal Weight Index have underperformed their benchmarks. The Equity Yield and REIT strategies were quasi-active, and have been moved to more passive strategies. The Scientific Beta and STOXX Minimum Variance strategies are quasi-active, in that the portfolio weights are licensed by the providers and replicated by staff.

MR. MOON noted six of the nine strategies are domestic large cap. The recommendation for improvement is to combine the six large cap mandates into a single portfolio that targets systematic exposures deemed appropriate and consistent with the existing array of individual strategies. He explained the portfolio would be essentially an enhanced index, with weights tilted in favor of certain value-added exposures and tilted away from exposures deemed to be detracting. MR. MOON believes the new portfolio can be created and managed internally using existing infrastructure and human resources. The portfolio would be scaled in such a way that offers the opportunity to demonstrate the efficacy of the concept without materially affecting the existing individual mandates.

MR. MOON explained the strategic tilt pilot portfolio would be optimized against the Russell 1000 Index with constraints and limitations on sector differences of +/- 3%, a tracking error not to exceed 200 basis points per annum, monthly rebalancing, and less than 120% annual turnover. He conveyed if the pilot portfolio structure was approved, staff would run the consolidated portfolio along with the existing mandates for several quarters and then report back to the Board with a recommendation to roll-out the consolidated portfolio more generally.

MR. MOON showed the conceptual framework and mapping for the strategic tilt portfolio and related it to a composite constructed from 20 years of data. Staff believes the strategic tilt portfolio will offer a chance to be more efficient as a group in streamlining operations, provide the potential for reducing manager fees, and broadly leverage staff's expertise to other areas within the portfolio.

MR. MITCHELL informed the action item adjacent to this presentation was scheduled during tomorrow's meeting. He believes it is appropriate to proceed with action today.

MS. HARBO requested additional information regarding the timeline for the pilot program, what metrics are used for evaluation, and when it would possibly become a real program. MR. MOON reported staff feels the strategic tilts are currently consistent with a number of the underlying equity strategies and this is an appropriate way to try to enhance risk-adjusted performance. The evaluation is staff's execution of this portfolio, which should only take a couple of quarters. Execution issues are not anticipated, but would become obvious very quickly.

MS. ERCHINGER commented on the difficulty for active large cap management to outperform the index. She inquired if this is the best use of staff's energy and time. MR. MOON indicated the process will not take a tremendous amount of staff work and the initial development of data resources has already been conducted. MS. ERCHINGER inquired as to the implementation process requested within the action item. MR. MITCHELL reviewed the intent is to take $100 million from existing large cap strategies and fund this strategy. Staff would come back before the Board to contemplate the potential of folding the remaining large cap strategies into this portfolio.

MR. WILLIAMS remarked the idea of building internal capacity is appealing. He asked how much more staff time the Equal Weight S&P 500 Index takes to run than passive portfolios.

MR. MOON explained some of the portfolios have higher rebalancing similarities. The process is focused mainly on data preparation and portfolio execution by the staff operational specialists.

MR. ERLENDSON requested additional discussion regarding the turnover rate, which is higher than he expected. MR. MOON explained the turnover rate of 120% seems reasonable to staff and is the same rate employed by some of the third-party manager strategies from whom the portfolio licenses.

DR. JENNINGS commented the process of portfolio consolidation makes sense. He asked if staff is relinquishing any mechanisms needed for the overall portfolio allocations in value and growth management. MR. MITCHELL noted the current ability to change the weightings to affect the broader portfolio structures is a flexibility that is not needed. He expressed being comfortable with consolidation.

23. INVESTMENT ACTIONS

B. Internally Managed Pilot Portfolio

MR. MITCHELL stated it is staff's recommendation that the Alaska Retirement Management Board direct staff to invest and internally manage an initial investment of $100 million in a pilot portfolio, incorporating factor exposures, as described in the Internal Equity Management presentation to the ARM Board in December of 2018.

MR. WEST moved that the Alaska Retirement Management Board direct staff to invest and internally manage an initial investment of $100 million in a pilot portfolio, incorporating factor exposures, as described in the Internal Equity Management presentation to the ARM Board in December of 2018. MR. WILLIAMS seconded the motion.

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

RECESS FOR THE DAY

CHAIR JOHNSON recessed the meeting at 4:44 p.m.

Friday, December 14, 2018

CALL TO ORDER

CHAIR JOHNSON reconvened the meeting at 9:03 a.m.

Trustees Schubert, Harbo, Brice, Erchinger, West, and Williams were also present.

16. BRIDGEWATER RISK PARITY OVERVIEW

MR. MITCHELL informed this presentation is a result of members' willingness to learn more regarding risk parity, after the lecture during the education conference in October entitled "How Would a Hedge Fund Guy Invest a Public Pension Portfolio." Bridgewater has employed risk parity strategies for over 20 years. MR. MITCHELL introduced Bridgewater representatives JOEL WHIDDEN and PATRICK DIMMICK. MR. WHIDDEN has been with Bridgewater for 17 years and is responsible for business development. MR. DIMMICK has been with the Bridgewater research portfolio team for 12 years. MR. WHIDDEN commented Bridgewater was founded by RAY DALIO about 25 years ago as a way to invest for their beneficiaries, children and grandchildren, by developing a program that could provide consistent returns throughout all market conditions, without the need to predict the future. Today's presentation will address topics requested by MR. MITCHELL and discuss how to build a diversified asset allocation.

MR. DIMICK explained risk parity is the oldest idea in investing; diversification. The process focuses on how to build a diversified buy-and hold, long-term portfolio that can allow for either more return for the same amount of risk taken or earn the same amount of return with more stable volatility. MR. DIMICK discussed the two key steps in the portfolio construction. The surprises in economic conditions of either growth or inflation cause asset returns to fluctuate wildly and inconsistently from one year to the next and/or one decade to the next. The first step is to collect asset classes in such a way that neutralize or flatten the portfolio to the impact of inevitable growth or inflation surprises.

The second step after constructing the portfolio to be indifferent to either economic growth or inflation is to utilize leverage in order to increase returns depending on the portfolio's purpose. Leverage is not the key to risk parity. It is a tool that can be used or not used depending on the investment objectives. MR. DIMICK reviewed most institutional portfolios have their managers create tactical tilts that can help in some years and hurt in others, which is over 90% of the risk taken. Deviating from the long-term strategic asset allocation is the decision that impacts the portfolio the greatest over the long-term.

MR. DIMICK showed how the traditional 60/40 allocation has delivered a 9.8% total return since 1970. The rate of return on cash during that time was 5.1%, which makes the extra compensation for the equity volatility during the boom/bust cycles at 4.5%. Upwards of 80% to 85% of the risk is from equities, which makes the portfolio more like an 80/20 mix. The process of risk parity is the way to hold assets that would allow for a greater than 4.5% return above cash with less volatility. The traditional concentrated portfolio is 95% correlated to the draw-downs of the equity market. The historic 9.8% returns may provide enough funding to pay benefits, but the current cash rates are so low, the 4.5% equity return above cash may not be sufficient.

MR. DIMICK discussed charts showing a comparison of a traditional concentrated portfolio, which receives most of the cumulative returns from equities, global large cap indices, and very small contributions from other asset classes, and a diversified simulated risk parity portfolio, which receives more balanced cumulative returns from many asset classes. The two portfolios have the same amount of risk and similar size in losing periods, but the returns are higher for the diversified approach over long periods. Bridgewater created the All Weather risk parity portfolio in 1996. All the charts showing time periods after 1996 utilize real data. All the charts showing time periods before 1996 utilize simulated data. The simulated history is reliable and it is important to show periods before 1996 to illustrate how the portfolio would have responded in extreme environments of high interest rates, high inflation, or depressions.

MR. WHIDDEN informed the All Weather risk parity strategy was initially created for internal use, but one of their clients asked to invest in the strategy in early 2000's. Since then, the volatility that occurred in the early 2000's and in 2008, was cause for more investors to consider greater diversification in their portfolios. Bridgewater has 325 institutional clients around the world and approximately 200 of those clients invest in the All Weather portfolio. It is used in a variety of ways. One way is a pilot-like program, dedicating a small allocation to compare side-by-side with a traditional allocation, until there is comfort to increase the allocation. Another way it is used is as a diversifying strategy alongside multi-asset class and absolute return. The sizing within portfolios varies greatly, ranging from 2% to 30%, but the average allocation across the client base is 7%. There is a small group of plans that has adopted the principles and applied those at their total portfolio level themselves.

MR. DIMMICK conveyed clients are encouraged to implement the strategy on their own, as much as they are comfortable. MR. WHIDDEN explained the process begins with a partnership, whereby Bridgewater teaches the concepts and how to build the portfolio. The client either can manage the assets in-house or in combination with external managers. The portfolio generally uses asset classes that already exist in client's portfolios, but are held in a different mix.

MR. MITCHELL inquired as to the minimum useful allocation amount to be effective for the broad portfolio. He requested additional discussion regarding the magnitude of underperformance this strategy may encounter relative to a traditional 60/40 portfolio and how risk parity clients are reacting in an environment like now where peers are outperforming because of a concentration in stocks. MR. WHIDDEN believes a double-digit allocation size of any strategy would have the most effect on the portfolio. Many clients do not want to start at that level and take the very natural path of starting smaller and growing as time progresses. The experience has been an initial range of 2% to 5%.

MR. DIMICK discussed a risk parity balanced approach basically earns the average return of all of the assets, rather than being dominated by a single asset class in the portfolio. The risk parity portfolio will never be the best performing portfolio in the world and will, by definition, earn a lower return than the best asset class in a given year or decade. The best performing asset class in the recent decade has clearly been U.S. equities. It has been the best 10-year period ever for an equity concentrated portfolio. The balanced approach has under-performed the equity-dominated U.S. equity portfolios for quite a few years. It is unknown, however, what asset class with be the best performer in the next decade, and thus, it makes sense to be diversified.

MR. DIMICK highlighted the discussion comes back to the goals of the clients and their comfort with the expected range of outcomes. If the goal is paying benefits consistently over the next 10 to 40 years, he believes risk parity is the winning strategy. If the goal is to be in the top quartile of peers over the next one to seven years, he believes risk parity is probably not the right choice. There will be short-term periods that lag the concentrated portfolios.

CHAIR JOHNSON asked if clients amend the strategy over time because of investor impatience. MR. WHIDDEN noted Bridgewater clients has been investing with the firm for an average of 12 years. The All Weather is a passive strategy and the only aspect that can be altered is the size of the investment. The mix of the assets cannot be changed. On net, Bridgewater is seeing more clients utilize this strategy. Almost none of Bridgewater's clients have their entire portfolio in this strategy. It is utilized it as a piece of the portfolio.

MR. DIMICK continued the presentation discussing the construction of the risk parity portfolio. There is no way to know the future returns of each asset class, the future volatility for each asset class, nor the correlation of the asset returns to one another. MR. DIMICK described the annual excess returns in economic environments of rising growth, falling growth, rising inflation, and falling inflation from 1970 to now, for the asset classes of world equities, world nominal bonds, world IL bonds, and commodities. It is understandable to see that world equities do especially well, better than their long-term average of 4% above cash, during a growth period when business is good, sales are high, and inflation is falling. Equity returns are basically zero when growth is disappointing expectations and inflation is rising. The environment that is good or bad for any given asset class is intuitive, logical, and reliable.

MR. DIMICK described the risk parity portfolio is diversified through four portfolios of equal size representing the economic biased environments that drive asset class returns. One portfolio will do well when growth is rising or strong. One portfolio will do well when growth is falling or weak. One portfolio will do well when inflation is rising. One portfolio will do well when inflation is falling. The diversification of economic biases within the risk parity portfolio is the key to consistent returns over cash regardless of the economic environment. The traditional portfolio, which contains primarily equity risk, will do well in a good economic environment and do poorly in a bad economic environment. MR. DIMICK provided granularity into the composition of each economic biased portfolio.

MR. DIMICK reviewed the risk target of a 60/40 traditional portfolio is about 10%. The All Weather portfolio risk target is about 10%. It uses a modest amount of 1.6 times leverage to achieve long-term returns at 6% above cash, rather than a traditional portfolio long-term returns at 4% above cash, with the same amount of volatility. If no leverage were used, the returns would be the same as a traditional 60/40 portfolio, with dramatically less volatility. Leverage does not have to be used, but it is an option that can be implemented wisely and beneficially to achieve higher returns. MR. DIMICK highlighted there are going to be money losing periods with both the balanced portfolio and the traditional portfolio because they both hold assets that can be sold when people run to cash. The balanced portfolio does not have the economic environment risks, as the traditional portfolio does. Risk parity is the approach developed to most consistently generate wealth over time, with no reliance on predictions of the future.

CHAIR JOHNSON expressed appreciation for the interesting presentation and requested the IAC members provide commentary during the IAC Comments agenda item.

17. SANDS CAPITAL MANAGEMENT - EMERGING MARKETS GROWTH

MR. MITCHELL informed the next two agenda items are presentations from the two finalists from the search process conducted by Callan and staff that was requested by the ARMB for an emerging markets growth manager. MR. MITCHELL introduced representatives from Sands Capital Management, LUKE IGLEHART, managing director of the client and business development team, and ASHRAF HAQUE, senior portfolio manager and one of the co-PMs of the emerging markets (EM) growth strategy. MR. IGLEHART advised Sands is an independent growth manager and has been in business since 1992. For the last 15 years, Sands has been exclusively managing institutional assets. Sands exists to enhance the wealth of clients by investing in high-quality companies with an orientation to owning those businesses for the long-term. The underlying philosophy is stock prices of companies will follow the earnings power trajectory of that business over long-term, full market cycles.

MR. IGLEHART described a global understanding of the opportunity set is necessary for competitive positioning. The EM strategy was developed about six years ago. All of Sands' strategies are managed with the same philosophy and even though each strategy has a discrete portfolio management team, who has been working together for 10 to 15 years, they all draw on the efforts of the global research team. The portfolios are very concentrated and conviction-weighted. The portfolios hold between 30 to 40 stocks, and the top 10 or 12 companies could easily represent 40% to 50% of the portfolio. Turnover is approximately 20% annualized; half of which is adds and trims, and half of which is buying five to seven new businesses. The investment team consists of about 40 individuals, across all the strategies of the firm, who maintain an extremely low ratio of companies per analyst. Sands owns just over a hundred businesses.

MR. HAQUE explained EM investing can be extremely volatile. The approach to mitigate the volatility is to be very selective and very long-term. The exciting influences for EM include the increase in people moving to the cities and the increase in individual wealth. The potential detriments to EM are geopolitical issues, particularly in Russia and China. Understanding and being focused on innovation, disruption, and change is critically important to finding businesses that will grow earnings at a compounded annual rate for the next five or more. The investment team considers volatility periods, like the current period, as opportunities to increase their biggest positions, as long as conviction remains.

MR. HAQUE outlined the six core investment criteria by which every business is measured; sustainable above average earnings growth, leadership position in the business space, significant competitive advantage, professional management's clear mission and value-added focus, financial strength, and fair valuations relative to the market and future earnings. The investment process is similar to most fundamental managers, but the questions asked when managers sit across the table from individual CEOs are very different, and focus on strategic issues regarding the direction of the business in the three to five-year range.

MR. HAQUE conveyed the biggest risk to the portfolio is avoiding permanent capital loss. The portfolio mitigates this risk by investing in businesses that are growing, have low debt, and are in countries with low macro currency risk.

CHAIR JOHNSON asked more about the macro risk issues and assessments of the impact of trade policy, especially with respect to China. MR. HAQUE explained China is an important part of the strategy, comprising approximately a third of the portfolio. India is important as well, comprising approximately another third of the portfolio. The businesses the portfolio owns in China tend to be domestically oriented and benefit from domestic consumption, rather than exports, and are not really impacted by trade issues.

MR. ERLENDSON requested information on how the portfolio addresses concentration risks within the benchmark relative to creating wealth for clients. MR. HAQUE noted the benchmark has changed significantly over the last 10 years. He believes it is a backward-looking benchmark, meaning it is not reflecting the current growth and wealth creation, but is still heavy in state-owned enterprises, energy companies, and financials. The portfolio is benchmark-aware, but does not try to match the benchmark. The firm philosophy is concerned about absolute risk and not benchmark relative risk. The portfolio has about 75% in technology, consumer, and healthcare. MR. HAQUE noted countries like Korea and Taiwan are included in the benchmark, but he does not believe these markets are emerging anymore and does not believe they are good places to own assets for five to 10 years.

MR. MITCHELL inquired as to the tracking error of the portfolio over time, given its concentrated nature, and how it compares to the benchmark. He asked for the correlation of the portfolio's performance to the broader ex-U.S. equity market. MR. HAQUE believes the tracking error historically runs in the 6% range, and is anticipated to continue in that range. The portfolio's tracking error normally will be higher than peers because of the concentration and willingness to take long-term views.

MR. HAQUE noted the benchmark itself has been changing and has come closer to reflecting the components of consumer businesses the portfolio owns. The benchmark may continue to change as the market develops. MR. HAQUE discussed the correlation between global equity markets and the portfolio is relative to the drivers of those capital markets. The capital flight dynamics of sell-offs have tended to impair business in energy, financial, or export space which will be directly impacted by a trade war. The companies in the portfolio that are local and secular have not encountered as much negative impact from the fear of sell-off. It is apparent when U.S. markets sell off, the EM portfolio tends to sell off as much or even more. MR. HAQUE described the portfolio's geographic representation and discussed particulars of individual holdings.

VICE-CHAIR SCHUBERT requested a discussion regarding a failure the portfolio has encountered and what was learned. MR. HAQUE explained a five-year look-back was completed recently for the strategy and approximately 50% of the stocks chosen did not produce the performance expectations. The biggest takeaway was the positive results came from the businesses with the highest convictions. The lesson is to be even more diligent and thoughtful to ensure the companies that are making it into the portfolio meet all the high conviction criteria, and concentrate on those. The internet company Netshoes out of Brazil is an example of where the financial strength and the competitive advantages were misread. The company was a small weighting, and lost about 50% because they were out-competed.

MR. IGLEHART commented on the importance of recognizing the volatility and risk within the EM space, including different global leaders starting trade wars. It is critical to select companies focused on niche growth opportunities, which have significant competitive advantages, and can sustain growth during a volatile geo-political macro environment.

CHAIR JOHNSON recessed the meeting from 10:44 a.m. to 10:55 a.m.

CHAIR JOHNSON requested MR. MITCHELL introduce members in the audience from University of Alaska. MR. MITCHELL informed the Department has hosted two interns during the summertime for the last two years from University of Alaska, Anchorage and Fairbanks. One of the previous interns is in attendance today with fellow UAA Finance Club students to observe the proceedings and manager presentations. CHAIR JOHNSON welcomed the students.

18. EMERGING MARKETS EQUITY - AMERICAN CENTURY INVESTMENTS

MR. MITCHELL advised American Century Investments is the second of the two finalists identified through the search process for an emerging markets growth manager. He requested WALT MCGHEE, Vice President Institutional Business Development, and PATRICIA RIBEIRO, Senior Portfolio Manager, introduce themselves during their presentation.

MR. MCGHEE highlighted MS. RIBEIRO brings 34 years of industry experience, including time at Citigroup as the co-head of global research and managed portfolios, and time at JPMorgan as the head of Latin American research and managed portfolios. She joined American Century's emerging market equity team in 2006, was promoted to portfolio manager of the emerging market equity strategy in 2009, and manages approximately $4 billion of client assets.

MR. MCGHEE explained the presentation is built to address what he understands to be the Board's objective for this particular emerging markets equity mandate. He read, "To capture the growth style in the emerging market equity pool with the intention of smoothing the significant deviation and relative performance when growth is in favor." MR. MCGHEE hopes to emphasize the key points of differentiation of the American Century strategy that are well-suited to achieve the ARMB's objectives. American Century is an independent and privately held firm, which offers a long and successful history of serving public fund clients. The portfolio offers consistent and disciplined alpha exposures to large, mid, and small cap names, regional and sector exposures, growth, momentum, and would complement the existing ARMB value exposures, while delivering top ranking, risk-adjusted and meaningful net-of-fee performance over time. The firm offers a dedicated relationship management team that provides a single point of contact and resources to effectively monitor and respond to the unique needs of the ARMB.

MR. MCGHEE informed American Century was started in 1958, employs about 1,300 people, including 70 portfolio managers, 75 analysts, and 15 traders. Its offices are located in Missouri, California, New York, London, Sydney, and Hong Kong. The entire global investment team is located in New York. This emerging market equity portfolio was introduced in 1997. Approximately 20% of the assets under management are in non-U.S. equity strategies.

MS. RIBEIRO explained one of the differentiators of American Century's emerging markets equity strategy is its growth philosophy of looking for inflection point. This characteristic is different from standard growth managers. The inflection point is a fundamental change happening at the company level that will drive accelerated earnings going forward. Past growth of a company is not as relevant as significant changes that will trigger the forward trajectory of earnings opportunities and growth acceleration.

MS. RIBEIRO described the strategy is fundamentally focused on bottom-up selection. The team of seven is strong and dedicated with many years of experience in understanding emerging markets. Most of the team has either lived or were born and raised in emerging markets. The strategy is pure-play emerging markets with exposure across the whole market capitalization. The portfolio holds between 80 and 95 high conviction names and is the range necessary to manage through the challenges of the asset class. MS. RIBEIRO reviewed the consistent long-term performance of the portfolio generating positive alpha over the 36 rolling periods shown.

MR. ERLENDSON asked for additional information on capitalization and if the American Century's stand-alone emerging markets small cap strategy impairs or assists the ability to get small cap exposure within this strategy. MS. RIBEIRO noted the small cap strategy was launched three years ago and is an extension of the current work. It has helped in finding ideas in the small cap space. The liquidity for small cap is lower at about $2 million a day. Companies are identified that may not be a candidate for the all-cap strategy because of liquidity issues, but as the stock appreciates over a period of time, the liquidity gets larger and then it becomes an opportunity for the all-cap portfolio. The overlap is approximately 38 to 40 names. The all-cap portfolio is designed for a capacity of $10 billion to $12 billion.

MS. RIBEIRO continued the presentation illustrating how the portfolio philosophy is applied on a day-to-day basis, showing when to initiate a position during an inflection point and when to divest the position as the acceleration is starting to roll over. Taking advantage of being ahead of the consensus period is important. Understanding valuation is necessary, but does not drive the process. MS. RIBEIRO described an example of an owned asset within the portfolio, its initial attraction for the portfolio and its current status.

MR. MITCHELL asked for comment regarding the suitability of the underlying index representing the opportunity set within emerging markets, and how index-aware the portfolio is from an implementation perspective. MS. RIBEIRO noted the portfolio is index-aware, but the index does not propel the portfolio decisions. The universe of companies is considered and the first elimination aspect is liquidity. The next review level is potential inflection point and sustainability. Consensus is considered and the detailed fundamental research process continues. The quant analytical team supports the portfolio, reviewing factors and identifying any unwanted risks. Guidelines are followed to ensure the stocks are not drifting too far from the objective.

MS. RIBEIRO discussed the background of the seasoned EM investment team. The EM investment team is purposefully responsible for countries, rather than sectors. The macro view gets incorporated into the analytical side of the bottom-up selection. She noted many of the team members speak the languages of the countries they cover. This is important because management of the companies tend to feel comfortable and relaxed speaking their own language and providing more information, as opposed to following the presentation exactly. The analysts have a very good understanding of what works in one country versus another country, because of their experienced understanding of the different challenges in cultures, economics, and geo-political status. Compensation is based on performance of the emerging markets product over the long-term and not individual performance, which contributes to collaborative work and a strong team. The large cap investment teams are responsible for sectors and are utilized when additional global sectorial expertise is needed.

CHAIR JOHNSON inquired if the portfolio managers are investing more in entities that have a domestic focus rather than an export focus, given the current trade issues. MS. RIBEIRO agreed. The portfolio has much more exposure in demand consumption. The export exposure is minimal at about 3%, and is not coming from China, which makes the direct challenges related to the trade wars very small.

MS. RIBEIRO described a graphic showing how the American Century portfolio has a very consistent negative correlation with the ARMB's other two EM managers over a long period of time. She noted the one-year, and really since July of 2018, the portfolio has been challenged. The spread between value outperforming growth in 2018 is significant, and the largest it has been since 2008. The portfolio is top quartile for annualized return, alpha, information ratio, Sharpe ratio, and batting average for the five years from October 2013 to

September 2018. MS. RIBEIRO discussed country deviation compared to the benchmark is minimal. The sector deviation is larger and is where the strongest convictions are held.

There were no additional questions from Board members.

CHAIR JOHNSON recessed the meeting from 11:43 a.m. to 1:02 p.m.

19. U.S. MICRO CAP VALUE

MR. MITCHELL advised DePrince, Race & Zollo (DRZ) currently manages two mandates for ARMB. Today's presentation regards the domestic microcap strategy that has been active since 2011. It consists of approximately $80 million in assets and has been on the watch list for about a year. MR. MITCHELL introduced KELLY CARBONE, DRZ, who introduced GREG RAMSBY and RANDY RENFROW, co-portfolio managers U.S. Microcap Value Strategy. MS. CARBONE expressed appreciation to the ARMB for its support and patience through this extraordinarily difficult time for the value investment process. The ARMB's patience has allowed DRZ to generate a three-year return ended September 30, 2018, of 21.5%, which is ahead of the Russell Microcap Value Index by almost 400 basis points on an annualized basis net of the 1% fee. The quarter-to-date return is ahead of the benchmark by about 130 basis points.

MS. CARBONE explained the time period of 2012 through 2015 was truly difficult because the market was speculative, providing above average annual returns. The investment team remained committed to their 30-year investment discipline. The snap-back has been profound and is expected to produce additional alpha once a rotation occurs towards value and away from growth and momentum.

MR. RAMSBY stated the most unique aspect of their investment process is the focus on dividends. He reviewed a graphic illustrating how dividends represent almost half of the total return in small cap value in the last 25 years. Dividends are much less of a factor for growth managers. Each individual security in the portfolio must have a 1% dividend yield and meet the market cap cut-off of about $1.5 billion. The focus narrows to a review of 10 years of relative valuation and correlation in the market; price-to-book, price-to-earnings, cash flow, yield. The fundamental bottom-up research is the next step in the process, which identifies and quantifies the catalysts that will cause the business to outperform.

MR. RAMSBY outlined the sell decision is triggered when any of the criteria is violated, such as the yield falls below 1%, the market cap gets too big, the stock outperforms and hits the valuation target. If the catalyst does not manifest as expected, the position is reevaluated to determine if and how the improvement story has changed. The portfolio holds between 65 and 80 names, with the largest positions consisting of about 3% to 4%, and the top 10 holdings consisting of about 20% to 30%.

MR. MITCHELL requested comment on the appropriateness of the benchmark. MR. RAMSBY explained it has been historically difficult to find a good microcap index. He believes this portfolio is benchmarked against the most representative benchmark available;

the Russell Microcap Value Index. There are still times when the benchmark contains companies and sectors that are not owned and cannot be owned in the portfolio, due to the dividend requirements and valuations. Healthcare is an example of a sector that does not meet the criteria and therefore cannot be held and is not in the portfolio.

MR. MITCHELL asked if there is a more appropriate way to benchmark their performance, given the benchmark is not reflective of the portfolio. MR. RAMSBY suggested the portfolio is expected to beat the benchmark over a market cycle net of fees. He noted the importance of paying attention to the relationship between value and growth performance in the market. The characteristics of the portfolio are opposite of growth, and even the stocks in the value index were dominated by non-dividend paying value stocks during the growth favor.

MR. RENFROW described the top 10 holdings; their businesses, specialties, products, management, earnings, and future outlooks. He reviewed nine positions in the portfolio that were acquired by larger companies over the last two years. This confirms managers' fundamental analysis and valuations are in line with strategic buyers. These types of takeovers are expected to continue. MS. CARBONE informed there are prominent private equity firms that are looking for the ability to buy and hold microcap companies. This is an indication the M&A activity will be ongoing. She noted some of DRZ's clients view the microcap value strategy as a proxy for private equity, while offering lower fees, liquidity, and transparency.

There were no further questions.

20. INTERNATIONAL SMALL CAP EQUITY PORTFOLIO

MR. MITCHELL informed Mondrian has been investing as an international fixed income manager on behalf of the plans since 1997. The most recent engagement was in 2010, with the international small cap equity mandate being discussed today. Mondrian manages approximately $170 million in the strategy. Due to performance, the strategy was placed on the watch list in June.

MR. MITCHELL introduced TODD RITTENHOUSE, Client Services, who introduced his colleague AIDAN NICHOLSON, senior portfolio manager with the international small cap team. MR. RITTENHOUSE described Mondrian as an independent employee-owned firm that manages about $55 billion primarily for institutional investors. All 55 of the investment professionals are based in London. The six-person international small cap team has worked together for 15 years.

CHAIR JOHNSON asked what plans Mondrian has regarding Brexit. MR. NICHOLSON noted the firm is relatively unimpacted by Brexit and regulation will remain the same. Approximately 85% of Mondrian's clients are based in North America. MR. NICHOLSON described the investment philosophy as value-oriented, defensive management that finds long-term defendable growth areas with an expected increase in dividend streams. The intent is to provide meaningfully returns above the domestic rate of inflation, while seeking to preserve capital during market declines. The portfolio typically has performance that is less volatile than other small cap managers and the index.

MR. NICHOLSON noted the portfolio's performance is compared to both the MSCI World Ex US Small Cap index and the MSCI EAFE index. The MSCI World Ex US Small Cap index has an approximate 10% weighting to Canadian investments. The EAFE does not include Canadian stocks. The portfolio has a higher weighting to Canadian investments than the MSCI World Ex US Small Cap index, and those investments have outperformed the local Canadian market in each calendar year from 2010 to present. The Canadian market, as a whole, has underperformed EAFE by an average of 10% a year.

MR. NICHOLSON described an illustration showing returns in a bear market and bull market compared to the MSCI World Ex-US Small Cap Index. He discussed the downside protection is built into the selection of each stock by identifying business models that have recurring revenues from service, long-term contracts, replacement related demands, and high quality revenue-generating assets. The defensive positioning means the portfolio does not always capture the full upside with bull markets. The full cycle performance has outperformed the MSCI World Ex US Small Cap index by 1.1% per annum and has given real return comparative to the U.S. CPI. The portfolio's standard deviation is below the MSCI World Ex-US Small Cap benchmark volatility for all periods shown.

MR. MITCHELL requested additional explanation on stock valuation during a commodity down cycle. MR. NICHOLSON advised the investment philosophy and implementation has remained the same for 15 years. The portfolio's downside protection has added significant recent outperformance versus the MSCI World Ex-US Small Cap index. The volatility in the market is greater now and the environment has moved from quantitative easing to quantitative tapering, which has contributed to relative performance in this period. MR. NICHOLSON explained the impact the withdrawal of monetary stimulus may have on markets around the world. Strength is seen within New Zealand, Singapore, Scandinavia, and Canada.

MR. NICHOLSON reviewed the portfolio is underweight Japan, and overweight France, Germany, New Zealand, Singapore, Canada, and Norway. The market outlook has not changed over a number of years, inasmuch as progress has been slow in deleveraging the debt overhang in the developed world. The gradual shift toward a monetary tightening stance will alter the risk appetite, giving rise to social and political risk, and causing higher levels of volatility, as seen through 2018. MR. NICHOLSON does not believe significant eroding will result, but does feel periods of uncertainty and relative weakness can be expected going forward. Mondrian is well-suited to harness these alpha opportunities through their disciplined investment approach.

MR. ERLENDSON commented the portfolio's price-to-book ratio, P/E multiples, Z scores have increasingly moved in the direction of growth fundamentals over time. He asked if this was due to the market environment or intentional growth-oriented characteristics. MR. NICHOLSON agreed the style analytics do not always screen the portfolio to value. The portfolio's focus is on the business model, in terms of the downside reduction of market risks through the discount dividend methodology. This has been exhibited particularly in the portfolio's software companies.

There were no further questions.

21. BMO DISCIPLINED SMALL-CAP CORE STRATEGY

MR. MITCHELL informed BMO has managed a small cap strategy on behalf of the ARMB for almost two years. The portfolio contains approximately $92 million in assets. BMO has an expected tracking error of about 2.5%. BMO was asked to present to the Board today to discuss the sources of their year-to-date underperformance by about 600 basis points. MR. MITCHELL noted managers being placed on the watch list have a six-year horizon, and BMO only has a two-year history. MR. MITCHELL introduced NIAMH FITZGERALD, managing director BMO Global Asset Management (GAM), and CHRIS JENKS, director with the disciplined equity team.

MS. FITZGERALD discussed BMO GAM manages approximately $260 billion globally across offices in the UK, U.S., Canada, Hong Kong, and the Middle East. About $22 billion is managed within the disciplined equity team. The investment team is based in the U.S. and is comprised of 15 investment professionals with an average of 18 years experience. MR. JENKS informed the small cap core strategy began in 2010, and has approximately $287 million in assets under management. The investment team is stable and has had no significant turnover the last five years. The investment process and philosophy has been utilized since 1985. The portfolio maintains a team-based approach to management through the integration of quantitative analysis, which brings consistency and discipline, with fundamental analysis, which brings transparency and intuition. This is combined into one holistic investment decision-making process. The objective of the strategy is to outperform the benchmark by a range of 3% to 4% over a full market cycle. The five-year numbers for the strategy show an outperformance of 2.8% annualized compared to the benchmark, with a 3.6% tracking error. MR. JENKS noted the information ratio of the metrics for the portfolio is .8, which is near the top decile ranking within the small cap core universe.

MR. ERLENDSON commented an expectation for 3% to 4% above benchmark over a full market cycle seems like a heroic hurdle. He asked if the expectation is being reconsidered, especially given the current performance deficit. MR. JENKS highlighted the short-term deficit is explainable and believes the contributing market conditions are unsustainable. The portfolio managers feel the long-term expectation numbers are within a reasonable and thoughtful range. The research is based off of the great inefficiencies within the small cap universe and the portfolio's dedication to the risk controls. MR. JENKS described each step of the portfolio's stock selection and investment process. The portfolio is a core strategy with an emphasis on company valuations.

MR. JENKS showed the returns of both the U.S. large cap and small cap markets through September 30, 2018. The Russell 2000 benchmark was up approximately 11.5%. The portfolio was up 7.8% gross of fees. Momentum factors dominated the market during this time and a flight to higher quality stocks occurred. There was a continued outperformance of companies with higher sales and earnings growth relative to more attractively valued securities in the market. Value underperformed growth through September 30, 2018. There was an extreme degree of leadership by the most expensive 10% segment of the U.S. equity market. Given the emphasis on valuation and the process, the portfolio holds no weight in the most expensive decile of the small cap universe, which has been a tremendous headwind during this period.

MR. JENKS reported the benchmark returned 3.6% in the most recent quarter compared to the portfolio of 2.5% gross of fees. The one-year return for the benchmark was about 15% and the one-year return for the portfolio was about 12.5% gross of fees. Since the end of the 3rd quarter to-date, lower risk stocks have wildly outperformed higher risk stocks within the broader U.S. equity market and value indices have outperformed growth indices. Within that value index composition, the lower risk stocks have been trading more expensive relative to their historical average, and as a result, the portfolio has not picked up a tailwind from value investing. The underperformance compared to the benchmark has continued.

VICE-CHAIR SCHUBERT commented on the intention of the portfolio to outperform the Russell 2000 by 3% to 4% per year. She noted it is possible BMO is overselling its intended performance. The one-year numbers show an underperformance to the benchmark of 3%, plus the underperformance of the projected 3% above the benchmark, equals the 6% total underperformance from the stated intent. She asked if this was the way to view the underperformance. MR. MITCHELL agreed. He explained the market behavior has been unexpected, extreme, and in direct opposition to the strategy. He is not recommending action at this point, but is carefully watching the strategy's performance profile. MR. JENKS reiterated the performance expectation is over a full market cycle and not a one-year period. He explained BMO has seen similar cyclical lows in other mandates managed and the time-tested process has demonstrated the ability to recover.

VICE-CHAIR SCHUBERT expressed her preference for managers is to begin the presentation talking about the underperformance and why it happened, rather than showing a longer-term annualized outperformance that is irrelevant to the concerns at-hand.

MR. WILLIAMS conveyed his greatest concern is the stated intent the portfolio will outperform the Russell 2000 by 3% to 4% year over the long-term. He asked how long the horizon needs to be to reach the outperformance. MR. JENKS noted it is difficult to asses when the market trends causing the headwinds will abate. He does not believe the headwinds are sustainable and expects the strategy to drastically improve relative to the benchmark. The sources of underperformance can be explained quantitatively. MR. JENKS discussed the graphics showing the standard valuation factors in the market today. The underperformance can be compared to the late 1990s' tech bubble. He believes the current investor behavior and market trends are cyclical. MR. JENKS advised the transparent investment process has not changed in 30 years, and has demonstrated the ability to recover from cyclical lows.

CHAIR JOHNSON recessed the meeting from 2:40 p.m. to 2:50 p.m.

CHAIR JOHNSON requested MR. MITCHELL comment on the last three watch list presentations. MR. MITCHELL informed staff is monitoring all managers, including the watch list managers. No action is recommended at this time. The investment strategies of the watch list managers have all remained the same. DRZ and Mondrian strategies are out of favor, but have seen recent improvements in performance. BMO continues to underperform during this extreme environment. A return to a more normal environment should provide improvement. If staff becomes uncomfortable and tolerance erodes, a recommendation to terminate would be brought before the Board.

CHAIR JOHNSON asked MR. MITCHELL for a sense of the tone during staff discussions with managers during unhappy circumstances. MR. MITCHELL explained the focus of discussions tends to be on the consistency of the approach, the belief the strategy will work going forward, and reasons for underperformance. The staff member who has the most interaction with managers is MR. CARSON. The tone is not one of cross-examination. It is professional and direct with the intent to understand the source of underperformance.

23. INVESTMENT ACTIONS

A. EM Growth Manager Hire

MR. MITCHELL discussed the earlier presentations from the two EM growth manager finalists. This is the last step in the search process initiated by the Board action in June. He requested the ARM Board deliberate regarding which of the two managers to consider hiring for an initial investment of up to $200 million, subject to successful contract and fee negotiations.

CHAIR JOHNSON asked for comments regarding the current timing of hiring an EM growth manager, given the market conditions. MR. MITCHELL reviewed his understanding the motivation for conducting the search was to provide balance within the existing emerging markets structure. Staff believes the relative underperformance in emerging markets is partially due to the value style being out of favor for a prolonged period of time. Reallocating within emerging markets toward the growth style would help balance the performance profile within the asset class.

MR. WEST commented his observations of the market lead him to believe value investing may not produce the kinds of results over time that it has historically. He feels the ability to properly identify value in an equity is getting more difficult because access to information has increased. MR. WEST favored the presentation of American Century and feels their process was more structured and quantifiable than Sands.

<u>MR. WEST moved to direct staff to invest $200 million within the emerging markets growth area with American Century Investments. MR. BRICE seconded the motion.</u>

MS. ERCHINGER requested feedback from IAC. DR. MITCHELL noted he does not know either manager well and does not have enough information to provide an opinion on which manager to choose. He does, however, recommend moving forward with commitments to emerging markets at this time. He feels emerging markets are undervalued and will grow faster than developed markets over the long-term.

DR. JENNINGS suggested choosing one of the two managers, rather than splitting the allocation between two managers. He feels the choice of either manager should be the one the Board has the most confidence in and believes has the most persuasive strategy. DR. JENNINGS noted American Century has an intriguing angle with the all-cap opportunities.

MR. SHAW advised he knows both firms very well. The San Francisco Retirement System has retained Sands for their Select Growth flagship product. Both portfolios have performed well compared to their peers over the last five years. Sands is a secular growth manager. Sands' performance pattern is different from American Century in that Sands rebalances to target every month or quarter and is relatively volatile. The upside of companies is captured this way. The ARMB would want to have confidence a portfolio with Sands could be maintained for a very long period of time. MR. SHAW believes hiring an EM growth manager will provide balance to the current two EM value-oriented managers. MR. SHAW favors Sands because of his previous experience with them.

VICE-CHAIR SCHUBERT inquired about the possibility of hiring both managers at the full $200 million each. She agreed American Century was really detailed, in terms of their process, and thought Sands Capital gave more information about the markets and their strategy. MR. MITCHELL informed that decision is within the Board's purview. The determination would have to be made to either overweight emerging markets or take funding from the existing emerging markets value managers and shift it to a growth bias. MR. MITCHELL would have to review the portfolio to ascertain if another source of capital is available. He noted $400 million is approximately 1.7% of the total portfolio size. MR. MITCHELL advised staff is also currently engaged in two other activities regarding emerging markets. One is a China-only search and the other is in contract negotiations with Legal and General regarding a smart beta mandate.

MR. WILLIAMS expressed his concerns regarding the emerging markets asset class and the underperformance over the last 10 years. He understands the need for diversification in the plans and believes both candidates are strong considerations. MR. WILLIAMS favored Sands and noted their enthusiasm and confidence.

MS. ERCHINGER commented her preference was Sands and their strategy was easier to understand. She thought American Century's inflection point discussion was interesting, but felt the implementation would be difficult.

MR. WEST noted staff has done full due diligence on both managers and requested staff's recommendation. MR. MITCHELL conveyed he will support the ARM Board's decision 100%. He walked the Board through the process and evaluation staff followed to determine the two finalists. The preference of staff is Sands Capital.

<u>MR. WEST withdrew his motion</u>. <u>There was no objection from the second MR. BRICE.</u>

MR. WILLIAMS made a motion to invest $200 million with Sands Capital, subject to successful contract and fee negotiations. MR. WEST seconded the motion.

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

UNFINISHED BUSINESS

CHAIR JOHNSON noted MR. GOERING was scheduled to discuss his opinion on layering, in the context of the decisions respective to the assumptions and setting the contribution rate. The discussion was primarily for the benefit of the new COMMISSIONERS, who were not present at the moment. CHAIR JOHNSON expressed appreciation for the memorandum prepared by MR. GOERING that was provided to each Board member. No further discussion was requested.

NEW BUSINESS
None

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD
None

PUBLIC/MEMBER COMMENTS
None

INVESTMENT ADVISORY COUNCIL COMMENTS

DR. JENNINGS noted the IAC will first discuss their risk parity opinions, as requested, and their general comments will follow. He believes a small risk parity allocation is sound and reasonable because it provides further diversification. DR. JENNINGS does not believe it would be wise to have risk parity allocation for an entire portfolio. He feels it is critical to adapt to changing circumstances, including yield curve and leverage. The overall risk parity presentation highlighted the importance the U.S. equity risk is on the ARMB portfolio. The portfolio does not contain symmetrical risk.

DR. MITCHELL agreed a small commitment to risk parity is reasonable and feels it would enable staff and the Board to view the process in practice. He noted a latent concern with the leader of Bridgewater becoming an outgoing figure in both investing and in presenting his philosophy of life.

MR. SHAW informed he has known the Bridgewater firm for about 15 years. He believes it would be valuable to build a small in-house portfolio and engage in the learning partnership that is offered. MR. SHAW conveyed their process is guarded closely.

MR. MITCHELL informed he will continue to provide the Board with the study and analysis phase of risk parity. In the event there is interest from the Board after additional exploration, staff would conduct a search for an appropriate manager and product. There was no objection.

DR. MITCHELL expressed appreciation for those who participated in the interactive process yesterday during his presentation. There were 23 papers submitted containing the responses to the five questions, totaling 115 data points. Seventy-eight of the responses or 68% agreed international investing, as described, was a good idea. Twenty-five of the responses or 22% were neutral, and 12 responses or 10% disagreed. The greatest unanimity was the discussion point on opportunity set, where 19 people agreed, two disagreed, and two were neutral.

TRUSTEE COMMENTS

MS. ERCHINGER expressed appreciation to former COMMISSIONER RIDLE and COMMISSIONER FISHER for their service to the Board and to the State. She welcomed the two new Commissioners and looks forward to working with them.

MS. HARBO shared gratitude the investment team and Division of Retirement and Benefits staff remains in their positions. She expressed appreciation for their work on behalf of members and wished all a merry Christmas.

MR. WILLIAMS discussed his excitement regarding the risk parity diversification strategy. He described the usefulness of the five-year rolling return chart shown on page 33 of the presentation. In the event the Board invests in the strategy, MR. WILLIAMS suggests information be provided to future Boards explaining the strategic philosophy, time horizon, and return expectations.

FUTURE AGENDA ITEMS

CHAIR JOHNSON noted MS. ALEXANDER will make recommendations as to convening a January meeting.

ADJOURNMENT

There being no objection and no further business to come before the Board, the meeting was adjourned at 3:45 p.m. on December 14, 2018, on a motion made by MS. HARBO and seconded by MR. WEST.

Chair of the Board of Trustees
Alaska Retirement Management Board
ATTEST:

____
Corporate Secretary