State of Alaska
Department of Revenue
State Investment Review Meeting
November 17, 2021

MEETING SUMMARY

Meeting Details:
Start Time: 9:30 a.m.
End Time: 10:35 a.m.

Department of Revenue Staff present:
Lucinda Mahoney, Commissioner
Brian Fechter, Deputy Commissioner
Zachary Hanna, Chief Investment Officer
Pamela Leary, Director of Treasury
Scott Jones, Head of Operations and Analytics
Hunter Romberg, State Investment Officer
Steve Sikes, State Investment Officer
Ryan Kauzlarich, Accountant IV
Alysia Jones, ARMB Liaison Officer

Investment Advisory Council (IAC) Members present:
William Jennings
Jerrold Mitchell
Ruth Ryerson

I. Introduction

Commissioner Lucinda Mahoney welcomed everyone and turned it over to Mr. Hanna to introduce staff.

Mr. Hanna said that he intended to have different staff members within the Treasury Division present at these meetings going forward. Mr. Jones and Ms. Romberg of the Middle Office staff would present on performance analytics and Mr. Sikes would cover state investment topics.

II. Performance Analytics

Mr. Jones and Ms. Romberg provided a walk-through of the performance calculations they do for the assets under the fiduciary responsibility of the Commissioner of Revenue.

Mr. Jones explained that during contract negotiations with their custodial bank in FY2016, they were asked to identify cost saving measures. One of the areas that was identified and explored was bringing the monthly Commissioner’s report in-house. He said they had identified a material amount of annual cost associated with having State Street Bank (SSB) provide these reports and following discussions, staff believed they had the necessary capabilities to complete the work in house with existing staff.

Staff officially took over the Commissioner’s monthly report at the beginning of FY17. With the transition, the frequency of the calculations changed from monthly to daily since Treasury had adopted daily accounting in July 2012, the beginning of FY13. Staff concluded that the best way to calculate performance going forward was to use the daily reconciled and finalized reporting from the custodial bank – placing all the necessary daily accounting processes ahead of the performance calculation.

Mr. Jones explained that they contracted with a vendor for the initial wireframe for A-P-P (Advanced Performance Processing) as a web-based application. He said once the daily reconciliations are complete the application calculates and stores all required performance figures for a day. At the end of each month, the system calculates and stores the monthly returns for each investment as well as generates and stores both daily and monthly returns for each of the benchmarks using daily index-close prices.

In terms of performance methodology, A-P-P calculates daily time-weighted returns for the Commissioner's plans as well as the investments and asset classes that they participate in. Mr. Jones said that pricing at the custodial bank is done daily and based on an approved pricing matrix between the Treasury Division and SSB. He added that the pricing matrix was reviewed regularly.

Mr. Jones said months with partial performance are excluded from reporting and explained A-P-P handles this process systematically through exclusion periods which are managed by staff and can be applied at any level – plans, pools, or individual investment mandates.

Mr. Jones stated that the daily index close values are used to calculate the daily benchmark returns for each of the investments that the Commissioner's pools or funds use. Plan blended benchmark returns are calculated using approved plan/asset class target allocations. Rebalancing is also handled systematically through A-P-P. Mr. Jones noted that rebalancing was done monthly until July 1st 2021 when it switched to quarterly for all the Commissioner's plans.

Commissioner Mahoney asked what percentage of trades are electronic vs. manual. Mr. Jones said that very few were manual and provided repos as an example. He added that the fixed income group was working on getting those done through Bloomberg through the use of SWIFT.

Ms. Romberg provided an overview of A-P-P. She said it was an ever-expanding, web-based Treasury application and that they were always trying to expand new systematic roles to validate performance input and output data. She said A-P-P was hosted on an internally facing web server that sits behind an F5 firewall and access was very restricted.

Ms. Romberg said A-P-P utilized integrated windows authentication to manage user access groups and has three separate database servers that are exclusively used by Treasury. Backups are taken and archived based on OIT's normal policy and the system utilizes logging to track modifications and initiated processes. She added that A-P-P falls under their Continuity of Operations (COOP) maintenance and testing plan which included conducting restorative testing periodically.

Commissioner Mahoney asked if A-P-P was a common tool used by investment organizations. Ms. Romberg explained that it was a custom contracted project originally developed by RDI for State of Alaska Treasury files and processes.

Commissioner Mahoney asked if it was standard for entities to build their own systems. Ms. Romberg said that lot of the processes had been done in Excel documents that users were heavily involved with, and the intent was to standardize and automate processes. Mr. Jones added that during initial consideration in FY16, they determined it would be more cost effective and provide a product that was more customizable to their needs to have something custom made. He said RDI built the initial development and that it had since been built out and customized based on evolving needs of the various user groups within Treasury. Mr. Jones said he couldn't comment on the commonality of this practice, but estimated it would cost approximately $750,000 annually to have SSB calculate performance and they would not necessarily have the same features and results that they have with A-P-P.

Commissioner Mahoney asked if it were fair to say that several in the organization understand A-P-P. Mr. Jones said A-P-P sits with the Middle Office, comprised of 3 staff, and noted that the system was intentionally built out using common program language. He added that the combined expertise of the current team which included backgrounds in accounting as well as management information systems was extremely helpful. Ms. Romberg noted that the asset accounting staff were one of the primary users and that they do a lot of cross-training within their group.

Ms. Romberg explained that Treasury contracted with WWT in 2020 to conduct review of the ISO 27000, which focuses on information security. She stated that there were no major findings related to A-P-P or the security around it. Following the review, Treasury formally adopted ISO 27000 as their Information Security Management System (ISMS) framework and began mapping controls already in place to that framework, including separate environments, authentication, least privilege access, logging, and COOP.

Ms. Romberg provided a high-level workflow of the A-P-P Advanced Performance Area emphasizing the controls in place and value that A-P-P added. She shared a screenshot of the A-P-P dashboard, which displays information regarding file uploads, report status, and reconciliations. She explained A-P-P allows different data sources, reports out of sync file issues, maintains history of all files, distinguishes between system retrieved files and user uploaded files, and accepts and flags Working Trial Balance amendment files. She explained that A-P-P allows accountants to create new Working Trial Balance amendment lines to adjust the current Working Trial balance as needed to ensure that the information in A-P-P is accurate.

Controls for running the daily reports include specific file data formatting requirements, report validation, and report dependency issues, which relates to the order in which reports are run and requirement for all report warnings to have a user note. There are also controls in place to report outdated issues in the event any daily report uses inactive files.

Ms. Romberg said that the third step in the workflow process was daily reconciliations, which examine different aspects of the daily reports to ensure data integrity. She said the tolerances were set for each individual reconciliation by the Asset Accounting group and generally there was a super low tolerance for any variance. Reconciliation errors are then investigated and resolved by the Asset Accounting group.

Ms. Romberg shared part of their Reconciliations Matrix that focused on a sample of reconciliations relevant to the performance calculation process. She explained that the matrix showed what was being compared for the reconciliations to illustrate that they are comparing everything from the individual security level all the way up to the plan level.

Mr. Jones then walked through the review process for the Commissioner's Report. He said Ms. Romberg pulls the SQL report from SRS (Server Reporting Services), a web-based reporting service and conducts the initial review focusing on 1-month, 3-month, and FYTD performance, looking for discrepancies and potential errors or significant relative performance. Relative performance greater or equal to +/-5bps was always investigated. Mr. Jones said that he then conducts the final review and approval for finalized reporting.

Mr. Jones explained that attribution review was one of the tools used to help understand the cause of any over or under performance experienced by the plans. The attribution tool provides a couple ways of looking at the plans including the Brinson-Fachler and Brinson-Hood-Beebower models. Mr. Jones noted that the team had expanded their capabilities for measuring contribution returns from REITs only to fixed income as well. He said it was a good tool for reviewing portfolio-level returns and enhancing their understanding of why an individual portfolio performed the way it did.

Mr. Jones said SSgA (State Street Global Advisors) manages two comingled funds for them which benchmark against the Russell 3000 and MSCI ACWI ex US and that daily manager returns and benchmarks are received and reconciled to internally calculated returns each month. Any significant differences are reviewed and discussed with SSgA.

III. State Investments

Mr. Sikes reviewed the periodic table of returns, provided in J.P. Morgan's *Guide to the Markets*. He commented that equity owners were enjoying strong results, with U.S. equities and REITS having had a strong year. Commodities were the best performing asset class this year and were consistent with inflation and increases in energy, industrial, metals, and agriculture. He added that looking over the fifteen-year history, investors still would have lost in commodities and experienced a high volatility level.

Mr. Sikes said that fixed income results had struggled due to low yield and pressures emanating from monetary policies and inflation pressures.

Based upon information published by J.P. Morgan, Mr. Sikes said domestic markets looked full on almost every conventional measure of valuation. All metrics were greater than 1 standard deviation away from the 25-year average. He said this suggested that it would be more difficult to replicate past equity returns in the near future and that returns were more dependent on economic growth than multiple expansion going forward.

Mr. Sikes noted that international stocks appeared less aggressive, with the PE valuation only slightly above its long-term average. He said the main takeaway was that robust equity performance from the aggressive global monetary policy response and economic recovery continue.

Mr. Sikes said the U.S. Treasury yields for fixed income were in a negative real rate condition across the curve, which was unusual, but consistent with global fixed income markets. He said nominal yields had increased since September 30th and that inflation expectations had increased even more. He compared J.P. Morgan's methodology with the October consumer price index and noted that using J.P. Morgan's methodology the real yield dropped from minus 2.6 percent to minus 3.0. Using the more conventional forward-looking TIPS yield, the 10-year real yield was approximately minus 1.2 percent. He said that increasing inflation and positive real GDP, a negative real risk-free rate would likely be a headwind for fixed income results in the near term.

Mr. Sikes said the Federal Open Market Committee (FOMC) and market were expecting the fed funds target rate to increase over the next few years. He shared that the FOMC announced at their November 3rd meeting, that it would begin to wind down its asset purchase program, with a reduction of 10 billion in U.S. Treasury and 5 billion in mortgage-backed securities per month with an expected completion date in June 2022.

Mr. Sikes reported that the U.S. economy had shown strong signs of recovery with dramatic improvement in the unemployment rate and GDP since the initial onset of the pandemic. He noted that 531,000 jobs were added in October 2021 which exceeded expectations. Job openings were at historically high levels and the labor participation rate continued to be at lower levels compared to pre-pandemic rates.

Mr. Sikes shared a table illustrating how GDP had changed since the start of the pandemic and added that since preparing the table, third quarter GDP had been released at 2% quarter over quarter annualized rate. He said supply chain problems and lower consumer spending were restraining growth.

A. September 30, 2021, Performance – Commissioner's Report

Mr. Sikes walked through the Commissioner's Report. He noted that the primary state operating funds and savings were held within the Constitutional Budget Reserve, GEFONSI I, and GEFONSI II, which were mainly in cash and fixed income. He then shared the relative actual allocation of each fund compared to its target as of September 30th. Mr. Sikes said they had moved from a monthly to a quarterly rebalancing cycle in FY22, so the relative allocation for the 1st quarter reflects movement from the portfolios during the full 3-month period. He said that rebalancing typically takes effect during the first week of the new quarter, so these snapshots at period end reflect the portfolio condition immediately before rebalancing. He explained that all of the funds were rebalanced on October 1st and allocation differences were addressed with open market transactions and rebalancing. All funds were inside approved bands at quarter end.

Mr. Sikes reviewed actual allocations as well as target allocations. He reiterated that cash and fixed income dominate many asset allocations. He also noted the introduction of REITs to several longer-term funds, as part of the FY22 allocation.

In regard to net pool performance, Mr. Sikes stated that tracking error was relatively tight during the quarter with muted relative performance across pools. Absolute performance was also muted across pools, except for international equity, which was down 3 percent. He also noted that while the quarter was mostly flat, all assets were down for the month of September and the negative correlation between stocks and bonds was not evident in September.

Mr. Sikes reviewed relative plan returns. He commented that the higher tracking error funds, which included the Higher Education Fund, PCE Endowment, and Retiree Health Insurance, were down 9 bps compared to the target. He explained that was a tracking error related to the REIT implementation and slightly higher fixed income allocation, which modestly underperformed during the quarter.

Mr. Sikes pointed out that funds that primarily invest in cash and fixed income were struggling to maintain a positive return, adding that they anticipated this as part of the allocation process. He said there was a meaningful probability of a negative return, but that there was a lower probability that the loss would be significant, so the asset allocation was still justified given the conservative posture required, based on risk tolerance of many of the funds. He said state funds that had been able to take equity risk had seen stronger long-term results

B. Non-Routine Investments

Non-routine investments are investment opportunities that fall outside the scope of the Department's existing investment opportunity set. The Department does not currently have, nor is presently contemplating any non-routine investment opportunities. In the event such an opportunity arises, this is a standing item on the SIR meeting agendas.

IV. IAC Comments

Dr. Mitchell said he was impressed with the sophistication of the performance systems that they had in place and was equally impressed by the staff's understanding of those systems. He said it was one thing to have a sophisticated system and that it was harder to have people that understand it and could make it work.

Dr. Mitchell shared an anecdote about performance management from the 1960s that he referred to as the "cigar box theory", adding that we had come a long way.

Dr. Jennings praised the Middle Office staff for their presentation. He commented that the CIPN designation that Ms. Romberg was in the process of completing was the gold standard. He said that having someone who understands all the intricacies and nuances of performance evaluation was a big win.

Dr. Jennings also commented on the importance of the decision to conduct daily valuation and analysis. He said it should be the standard, but that it was not. He mentioned there were a number of non-profits that he was involved with that are still working with monthly systems and that several major consulting firms conduct daily interpretations of monthly performance. He said daily valuation was best practice, but a hard choice that should not go unrecognized.

Dr. Jennings said that they don't often talk about the Middle Office and the fact that it was as impressive as it was, was really a big win. He gave another shout out to Mr. Jones, Ms. Leary, and everyone that got that system in place.

Ms. Ryerson said that having Ms. Romberg knowledgeable in both accounting and information systems was immeasurable. She asked about the statement that exclusion periods were handled by staff and if there was a set policy. Mr. Jones clarified that it was a web-based application and that what he meant by "handled by staff" was that they set date ranges. He said that they had a process set up where Ms. Romberg would enter the information and then he has to go into the system and actively approve changes, so he double checks that the information was entered correctly.

Ms. Romberg added that in addition to the approval process, the system was set up so that the person submitting the changes cannot also be the approver. She said all changes are also logged in their audit database.

Commissioner Mahoney echoed the comments of the investment advisors and said that she was very impressed with the operations of the Middle Office. She said that it sounded like everything was adequately controlled from an internal controls perspective, and that segregation of duties and reconciliations were all in place.

Mr. Hanna said that from his perspective, he did not see the investment to set up this system and move it in-house as a luxury anymore, but rather a necessity. He said you have to police your providers and in order to do that you need in-house expertise that are able to identify and get issues resolved. He added that having the combined expertise in accounting and information systems has been immeasurably valuable in charting a seamless course to a hybrid environment as well.

IV. Future Agenda Items & Calendar Review

Mr. Hanna presented a draft 2022 meeting calendar for the group's consideration and reviewed potential topics for the upcoming meeting.

The next meeting is scheduled for February 15, 2021.

V. Other Matters for Discussion – None.

VI. Adjournment

Commissioner Mahoney thanked everyone for their time and stated that she would be eager to hear comments from the investment advisors regarding inflation at the next meeting.

There being no further items for discussion, the meeting adjourned at 10:35 a.m.