SENATE FINANCE COMMITTEE
April 4, 2016
5:04 p.m.

5:04:56 PM

CALL TO ORDER

Co-Chair MacKinnon called the Senate Finance Committee meeting to order at 5:04 p.m.

MEMBERS PRESENT

Senator Anna MacKinnon, Co-Chair
Senator Pete Kelly, Co-Chair
Senator Peter Micciche, Vice-Chair
Senator Mike Dunleavy
Senator Lyman Hoffman
Senator Donny Olson

MEMBERS ABSENT

Senator Click Bishop

ALSO PRESENT

Randall Hoffbeck, Commissioner, Department of Revenue; Martin Baily, Economist, McKinsey and Company, Senior Fellow, Brookings Institution; Craig Richards, Attorney General, Department of Law.

SUMMARY

SB 114	PERM FUND: EARNINGS, DEPOSITS, ACCOUNTS
	SB 114 was HEARD and HELD in committee for further consideration.
SB 128	PERM. FUND:DEPOSITS;DIVIDEND;EARNINGS
	SB 128 was HEARD and HELD in committee for further consideration.

#sb114
#sb128
SENATE BILL NO. 114

"An Act relating to deposits into the dividend fund; and relating to the Alaska permanent fund."

SENATE BILL NO. 128

"An Act relating to the Alaska permanent fund; relating to appropriations to the dividend fund; relating to income of the Alaska permanent fund; relating to the earnings reserve account; relating to the Alaska permanent fund dividend; making conforming amendments; and providing for an effective date."

5:05:11 PM

RANDALL HOFFBECK, COMMISSIONER, DEPARTMENT OF REVENUE, referred to the Permanent Fund Protection Act that was established earlier in the year. He shared that McKinsey and Company was contracted to do the analysis. He remarked that they were a leader in nonprofit, business, and government consulting. He shared that, over the recent five years, McKinsey had supported more than 300 public finance projects in 35 countries. They were a lead advisor to institutional investors, including sovereign wealth funds and U.S. state pension funds. He shared that McKinsey had advised other petrol rich states that had considered adopting fixed dividend models for their sovereign wealth funds.

Co-Chair MacKinnon noted that the presentation was available on the State of Alaska website.

5:09:23 PM

MARTIN BAILY, ECONOMIST, MCKINSEY AND COMPANY; SENIOR FELLOW, BROOKINGS INSTITUTION, discussed the presentation "Ensuring a sound fiscal future," authored by McKinsey and Company (copy on file). He turned to slide 1:

The Alaska Department of Revenue has sought an objective assessment of the financial model it built to evaluate an annual draw from the Earnings Reserve of the Permanent Fund, as outlined in the Alaska

Permanent Fund Protection Act. The fact-based assessment of the financial model included in this document was conducted by McKinsey and Company, Inc. with support from expert Martin Baily.

Mr. Bailey discussed slide 2, "Context for this effort":

The APFPA proposal would re-route oil revenues to the APFC to help stabilize State spending

The Alaska Permanent Fund Protection Act (APFPA) calls for directing a steady annual amount to the General Fund to mitigate the impact of oil price volatility on year-to-year budgeting. Specifically, the proposal recommends that:

50 percent of oil royalty revenues and 100 percent of production tax revenues flow to the Alaska Permanent Fund Corporation (APFC) for investment

A fixed annual draw of $3.3B (adjusted for inflation beginning in 2020) from the APFC to the General Fund to fund State expenditures; the amount would be methodically revisited every 4 years to ensure continued Fund sustainability

Dividend payments be paid out of the remaining 50 percent of oil royalties

The APFPA seeks to improve budget stability

Given a rising budget deficit and declining oil production revenues, the APFPA seeks to:

Protect and grow the State’s sovereign wealth to maximize long-term returns, acknowledging the rising importance of investment income in funding its budget

Delink public spending from volatile commodity prices and stabilize the budget by establishing a disciplined, formulaic approach to drawing from the State's wealth

State modeling proposes that a $3.3B draw should be sustainable

The Department of Revenue (DOR) has undertaken an extensive exercise to assess in a financial model what amount of annual draw will be sustainable (i.e., what draw amount can the State expect with greater than 50 percent confidence to maintain the starting asset's real value over time without depleting the Earnings Reserve)

Given the Earnings Reserve's current size and the $3B proposed transfer from the Constitutional Budget Reserve, the State can plan with 100 percent confidence to draw $3.3B annually for at least 4 years (at which point the draw amount will be reviewed)

The cumulative confidence level of being able to draw $3.3B annually falls to 95 percent over 10 years and to 69 percent through 2040. Revisiting the draw on a 4-year cadence will lend additional confidence (e.g., this safeguard has not been factored in to modeling)

The State sought an independent review of this model's rigor

The State sought an independent evaluation of (i) the soundness of the model's methodology and (ii) critical assumptions underlying the model (most notably those related to expected oil revenues and investment returns)

Mr. Baily addressed slide 3, "Overview of conclusions":

The DOR model is sound in its methodology

The model tests whether a $3.3B annual draw will be sustainable

- The DOR used probabilistic analysis, including Monte Carlo simulations, to estimate confidence levels for (i) future oil prices and (ii) investment returns, as well as deterministic analysis to establish a base case scenario for oil production

- The approach taken is reasonable and the model's logic is generally robust in testing the likely impact of a $3.3B draw, based on a review of the model's structure, logic, conceptual soundness, and process for future updates

The assumptions that underlie the model are reasonable

Key assumptions on future crude oil selling price, oil production, and investment returns (total and statutory) were obtained from credible, objective sources

These assumptions are all within the range of reasonableness Assumptions on oil production and price are reasonable and, taken together, somewhat more conservative than most

Investment returns assumptions are reasonable, though were considered optimistic for the near-term by some members of the APFC investment staff and were higher than those projected by APFC's strategic partners (third-party asset managers)

Certain institutional investor best practices could help improve this plan's long-term sustainability

The State of Alaska could further strengthen the long-term viability of the APFC and the sustainability of its contributions to the General Fund by leveraging best practice learnings from other SWFs and investors, e.g.:

Clear savings-and-spending rules and capital planning

Regular communication between investor and sponsor

Formal and informal investment education opportunities for government officials and board members

Board governance processes with appropriate composition, appointment expertise and roles

Well-designed strategy tied to Fund obligations and long-term investing

5:14:30 PM

Co-Chair MacKinnon asked members to hold their questions to the end of the presentation.

Mr. Baily continued to discuss slide 3.

Mr. Baily moved to slide 4, "Contents":

- Scope of the review
- Summary of the APFPA proposal
- Review of DOR model

Mr. Baily spoke to slide 5, "The scope of this assessment":

Overview
The Department of Revenue is seeking an objective assessment of its financial model which analyzes a $3.3B fixed annual draw from the Earnings Reserve of the Permanent Fund to finance General Fund spending

In scope:

Detailed review and vetting of the DOR financial model's methodology and construction, including appropriateness of use of Monte Carlo analysis

Assessment of the reasonableness of key baseline assumptions (oil price, oil production, investment returns) affecting the sustainable draw

Perspective on best practices of other SWFs which inform consideration of the proposed model

Not in scope:

Holistic evaluation of the proposed budget or budget deficit

Perspectives relating to current or future tax regimes (e.g., Petroleum Value model)

Assessment of the Permanent Fund's mandate or its investment management processes

Macroeconomic study of future market fundamentals

Recommendations for alternative funding models

Mr. Baily turned to slide 6, "SWFs benefit from establishing a clear set of disciplined saving and spending rules to invest for the long-term":

Establishes a clear set of disciplined saving and spending rules as well as a predefined capital plan

Singapore's SWF, GIC, has developed a proprietary internal model projecting 20-year sub-asset class level returns

Government of Singapore is allowed to spend 50 percent of the annualized 20-year expected returns giving Government flexibility on a year-by-year basis on how much to draw, but capping outflows at a low enough level to grow the corpus

The National Fund of Kazakhstan had previously suffered from discretionary draws from the

corpus. Under 2010 reforms annual draw is fixed at $8 billion for use both to reduce budget deficits and for economic development. Government can adjust the annual draw by 15 percent (as it did in 2013)

If the balance of the National Fund falls below 20 percent of Kazakh GDP in a given fiscal year the Government must reduce the annual draw until the balance has returned to 20 percent of GDP

Norway has a bipartisan balanced budget consensus which limits government non-oil deficits to 4 percentage points. This prevents the government from drawing down the corpus of Norway's Government Pension Fund Global unless Norges Bank Investment Management beats the long-run expected investment returns of 4 percent

Temporary increases in withdrawals are allowed under only limited circumstances, but requires a specific parliamentary resolution

5:19:07 PM

Mr. Baily discussed slide 7, "The DOR model was built to establish and test the sustainability of a fixed annual draw from the Earnings Reserve":

What are the major inflows into the Fund?

Production tax revenues

Royalty revenues

Investment returns

What are the most important drivers of future inflows?

Oil production

Oil price

Investment returns (total statutory)

What is the projected spendable output based on cash flow projections?

Sustainable draw amount must ensure:

less than 50 percent confidence that real value of starting assets is preserved over time

Earnings Reserve durability (confidence that the annual draw can be taken from ER)

Mr. Baily looked at slide 8, "The DOR conducted advanced probabilistic (“Monte Carlo”) modeling to better understand the Fund’s ability to sustain the draw." which showed three graphs for a high-level description of the DOR modeling process":

Step 1

Understand the critical revenue drivers of the model – in terms of restricted and unrestricted revenue sources

Step 2

Build a probabilistic model of expected oil price and investment returns fluctuations

Step 3

Understand impact on revenue flows into the Fund and Earnings Reserve available for the annual draw

Mr. Baily spoke to slide 9, "Over 4 weeks, a detailed review of the most critical elements of the DOR’s modeling methodology and assumptions was conducted":

SWF Model

Assumptions and Methodology

The existing DOR sovereign wealth fund model was reviewed along 2 dimensions: methodology and assumptions

Oil revenues (oil price and production); Investment returns (total and statutory net income); Structure of model; Logic and conceptual soundness; Process

Key elements of the model were prioritized and pressure-tested using industry experts, third-party projections and proprietary modelling assessment framework

5:24:12 PM

Mr. Baily displayed slide 11, "The DOR model implies a 69 percent cumulative confidence that a $3.3B annual draw can be made from the Earnings Reserve each year through 2040":

Earnings Reserve acts as a buffer to short-term investment return and oil revenue volatility

$10B starting balance means near 100 percent confidence of being able to draw $3.3B per year for first four years even with negative investment returns

APFC has only had negative total investment returns four times in the past 30 years

Effects of cumulative volatility and declining oil production reduce confidence over time – but even in 2040 cumulative confidence that a $3.3B annual draw can be made from Earnings Reserve is 69 percent (confidence would be even higher if adjusted for periodic review)

Co-Chair Kelly asked if the model on slide 11 assumed the $3 billion draw on the CBR, but asserted that most legislators did not believe that was politically possible. He wondered whether future slides would show the probability for removing the draw.

Mr. Baily clarified that the model was run on the assumption that the $3 billion was brought into the earnings reserve, starting at $10 billion. He stated that the model was not run the lower level of $7 billion. He felt that, had the model been run at $7 billion, the draw would need to be lowered and there may not be the same level of confidence to have enough money in the earnings reserve going forward. He remarked that there was opportunity in the periodic review, so there could be adjustments at that time.

Vice-Chair Micciche asked how the single significant failure affect the future cumulative confidence.

Mr. Baily replied that one would be able to see a significant failure. He felt that there was enough money in the earnings reserve, so one could anticipate a necessary adjustment. He remarked that there would need to be a new run on the model to assess the confidence under the new situation.

5:29:46 PM

Vice-Chair Micciche thought it would be interesting to view slide 11 without the CBR infusion.

Co-Chair MacKinnon stated that the committee had the data and it had been distributed the previous week.

Vice-Chair Micciche did not remember a cumulative confidence level slide.

Co-Chair MacKinnon wondered if Commissioner Hoffbeck could provide that information. Commissioner Hoffbeck agreed to provide that information.

Co-Chair MacKinnon asked if the committee could get the information as soon as possible. Commissioner Hoffbeck stated that he would provide that information in a couple of days.

Mr. Baily discussed slide 12, "The DOR model predicts that the Permanent Fund will be $96B in 2040 with an interquartile range of $34B and $196B":

> Permanent Fund balance will grow or shrink in any given year because of volatility in investment returns and oil revenues
>
> DOR goal is to maintain the real value of starting assets by seeing the median balance grow with inflation of 2.25 percent
>
> Modelled output meets this threshold, predicting median balances rising to ~$96B in 2040 (nominal value)
>
> Given expected volatility, 2040 ending balance is predicted to be between $34B and $196B with a 50 percent confidence level (the threshold set by DOR)

Mr. Baily moved to slide 14, "Review of the DOR model indicates that the assumptions and methodology underlying Fund projections are sound":

> Conclusions from the review
> - The DOR modeling assumptions and methodology are reasonable
>
> - Key assumptions on future oil price, oil production, and investment returns (total and statutory) were obtained from objective sources and are within the range of reasonableness
> - The methodological approach taken, including use of Monte Carlo simulations, is reasonable, and the model logic is generally

robust in testing the likely impact of a $3.3B draw

Future iterations of the model could benefit from the following changes: Build functionality to account for second-order relationships (e.g., year-on-year correlation between variables1 and the impact on production of reaching certain breakeven prices for crude2)

Establish consistent process and ownership for model construction and sources

Assumptions may be periodically revisited based on changes to Fund strategy and investment management, or changes to the tax regime affecting Fund inflows

5:34:05 PM

Mr. Baily discussed slide 15, "The review considered the modeling methodology and assumptions behind critical drivers of inflows to the Fund":

Crude selling price

Explanation of DOR approach

DOR has employed a Monte Carlo analysis using ERG crude oil price projections to determine the likelihood of price evolution in the future based on a survey of expert forecasts

How approach was assessed

Comparison of projections with multiple third-party objective sources (e.g., Woodmac, Rystad)

Production volume

Explanation of DOR approach

DOR has employed a deterministic analysis using ERG oil production projections – this approach takes a fairly conservative approach (e.g., approach reflects the uncertainty of future production projects)

How approach was assessed

Comparison of projections with multiple third-party sources

Total return rate and Statutory net income rate

Explanation of DOR approach

DOR has relied on Monte Carlo analysis based on projections from Callan Associates (the third-party financial consultant that the Permanent Fund has used for 20+ years) to estimate the likelihood of future Fund performance based on current Fund strategy

How approach was assessed

Comparison of projections with historic performance and third-party projections

Interviews with Permanent Fund investors to understand view of projections and potential for change to future fund performance

Mr. Baily displayed slide 16, "Two types of analysis are used in the DOR model: “probabilistic” and “deterministic” analysis":

Deterministic

Explanation

Describes the outcome of some scenario given appropriate inputs (in this case, based on the average or median value and the degree to which that value varies over time)

When is it best used

When projections are based on an assumed trend given variance from that trend within certain standard deviation (e.g., use of a conservative baseline case for oil production)

Probabilistic “Monte Carlo”

Explanation

Monte Carlo analysis is a modeling technique that runs multiple trials and gives a distribution of potential outcomes. Running a Monte Carlo model creates a probability distribution that indicates the likelihood that an outcome will occur

When is it best used

When attempting to project highly volatile and less predictable drivers where the impact of “randomness” is important to understanding risk (e.g., oil price, investment returns)

Mr. Baily moved to slide 17, "Model methodology is robust, with some potential opportunities for future improvement":

Structure

Check for errors

Explanation:
No major mechanical errors found

Potential steps to improve model:
None

Dependencies on other models

Explanation:
Petroleum Model model sub-optimally structured

Oil production projections are not linked to price projections

Potential steps to improve model:

Consider full audit of Petroleum Model (particularly in light of tax / royalty regime)

Wire model to account for price/production relationship in future model iterations

Single use of source

Explanation:
Sources consistently used with exception of some oil price inputs (e.g., median used in Petroleum Model vs. probabilistic price used in SWF model)

Potential steps to improve model:
Validate Petroleum Model for consistency in oil pricing (e.g., using probabilistic model vs. median)

Logic and conceptual soundness

Calculation of inputs

Explanation:
Underlying data sources are objective (e.g., Callan)

Does not account for impact of unrealized returns on Earnings Reserve balance)

Potential steps to improve model:

Consider impact unrealized returns that are apportioned to Earnings Reserve on the funds available for spend

Deterministic vs. probabilistic

Explanation:
Current use of Monte Carlo methods is defensible given behavior of oil price and investment returns

Potential steps to improve model:
None

Probabilistic methodology

Explanation:
Pert distribution of oil price (i.e., 3 points) is sufficient but highly sensitive to accuracy of underlying inputs to the distribution (P10, P50, P90)

Does not account for year-on-year correlations in oil prices (e.g., “gamblers dilemma”)

Potential steps to improve model:
Consider exploring more sophisticated probabilistic methodology (e.g., revisit accuracy of Delphi-style method used in PERT distribution)

Account for year-on-year correlations in probabilistic analysis

Process

Repeatable and consistent process

Explanation:

Informal construction process (partly driven by ongoing iterative policy process)

Governance procedures to ensure systematic auditing/updating not yet developed

Potential steps to improve model:

For future sustainable draw re-visitations, create set of rules / guidelines for timeline / triggers of update and develop design principles to guide construction

Ownership

Explanation:
Unclear future ownership (partly driven by unclear end use of model)

Potential steps to improve model:
For future sustainable draw re-visitations, articulate clear owner(s) with auditing / updating rights

5:39:02 PM

Mr. Baily turned to slide 18, "Each of the modeling methodology used by the DOR model to project critical fund inflow drivers is technically sound":

Crude selling price

Description of DOR model methodology:
Use of probabilistic analysis (PERT distribution) based on P10=$31/bbl, P50=$56/bbl, P90=$87/bbl

Rationale for methodology:
Probabilistic analysis accounts for volatility

Distribution method leverages preexisting DOR/ERG crude oil price projections

Production volume

Description of DOR model methodology:
Use of deterministic analysis based on conservative base case (e.g., assuming no new project-driven increase in production)

Rationale for methodology:
Not much volatility in the projections and hence no need for probabilistic analysis

Total return rate

Description of DOR model methodology:
Use of probabilistic analysis (normal distribution) based on 6.9 percent mean rate of return and 13.9 percent standard deviation

Rationale for methodology:
Objective and transparent methodology

Distribution method based on mean reversion methodology used by Callan

Statutory net income rate

Description of DOR model methodology:
Use of probabilistic analysis (PERT distribution) based on based on P10=3.7 percent, P50=6.01 percent, P90=8.14 percent

Rationale for methodology:
Probabilistic analysis accounts for volatility

Distribution based on data available from Callan statutory model (P10/50/90 distribution)

Mr. Baily spoke to slide 19, "Based on the recommendations that came out of the model review, a series of actions were executed":

Improvement identified:

Build Earnings Reserve sufficiency test into the master model (versus using separate models to test Fund balance and ER sufficiency)

Adapt fully objective, repeatable source for investment returns (versus prior use of blended projected and historic returns rates)

Update standard deviation of returns assumption to match Fund returns projections

Use most technically correct formulas and @Risk functions (e.g., calculation for geometric mean, @Risk and risk target function cross check)

Changes made to model

Expanded model to include ER sufficiency analysis

Changed source from a 50 percent historic/50 percent projected return to a 10 year deterministic projection from 3rd party (Callan)

Changed standard deviation from use of Power Cost Equalization Fund deviation to deviation matched to returns source (Callan)

Executed tactical improvements (e.g., updated the formula to calculate geometric mean, revised at risk function to calculate cumulative confidence)

Mr. Baily discussed slide 20, "Assumptions appear generally reasonable; returns projections are perhaps aggressive in the near term":

Crude oil price

Assumption

10th percentile @ $31/bbl
Median @ $56/bbl
90th percentile @ $87/bbl

Source

Annual expert conference held by DOR/ERG1

Explanation

Roughly in-line with third-party estimates, albeit conservative

Objective use of DOR/ERG projections

Crude production

Assumption

Declining from 500k bbl/day in 2017 to 112k in 2040

Source

Survey of O and G companies (with likelihood adjustments)

Explanation

In line with or below third-party estimates in short term; below 3rd parties in long-term due to AK LNG exclusion

Objective use of DOR/ERG projections

Total returns

Assumption

Mean 6.9 percent

Standard deviation 13.9 percent

Source

Callan deterministic model (Dec 2015)

Explanation

In line with other available projections (e.g., 6.4 percent historic returns, 7.45 percent alternative probabilistic projection)

Statutory net returns

Assumption

10th percentile at 3.7 percent
Median @ 6.01 percent
90th percentile @ 8.14 percent

Source

Callan probabilistic model (Dec 2015)

Explanation

Only viable estimate available (e.g., no other multi-year projections available)

5:44:58 PM

Mr. Baily turned to slide 21, "Future iterations of the model could account more rigorously for future trends and second-order relationships":

Future shifts in fund target or mandate

Description

SWF proposal requires Permanent Fund to manage toward fixed stream of liabilities (i.e. like a pension fund)

Likely to entails shift in strategy and potentially returns projections

Observations on impact

Investment earnings are single largest driver of success of SWF (vs. O and G taxes and royalties)

Even small percent changes in earnings therefore imply significant changes to fund value and sustainability

Future shifts in fund allocation strategies

Description

Permanent Fund will likely change investment strategies in due course

SWF proposal considers possibility of bringing more investment in-house

Observations on impact

Changes in investment strategy for a given asset class will alter risk/return distributions

Investing in-house will reduce fees

Liquidity constrains

Description

Clearer liability stream will allow for more appropriate level of liquidity

Liability driven investing may introduce greater leverage to portfolio

Observations on impact

Reduced levels of liquidity and/or higher leverage may exacerbate risk on extremes of market return distribution

New tax proposals

Description

Current proposal would amend the tax credit system and directly impact O and G revenues going to the State

Observations on impact

O and G revenues are a relatively small percent of revenue in SWF model

Short-term impact, however, could be significant to ensure stability of fund

Senator Dunleavy referred to slide 20, and asked about the phrase in the title of the slide, "returns projections are perhaps aggressive in the near term."

Mr. Baily replied that there was uncertainty in markets. He stated that 6.9 percent real return was a fairly high return. He felt that 6.9 percent was achievable, and did not feel that it was aggressive over the time period of the model. He remarked that markets were fairly weak at the end of 2015, and slightly weak into 2016. He stressed that many of those markets were reversed.

5:49:51 PM

Vice-Chair Micciche referred to slide 3, and noted that investment assumptions were reasonable. He remarked that some members of the Alaska Permanent Fund Corporation investment staff felt that those numbers were considered optimistic. They believed that the numbers were higher than the projected numbers from the strategic partner's third

party asset managers. He wondered whether local fund managers had experience with that particular asset allocation, and whether they had a higher expertise.

Mr. Baily wondered whether the question was related to whether the people who were running the portfolio knew more than McKinsey.

Vice-Chair Micciche indicated in the affirmative.

Mr. Baily did not have a straight answer to the question.

Vice-Chair Micciche wondered what would happen to the model in the outlier years.

Mr. Baily stated that the model was surprisingly robust.

Co-Chair Kelly referred to slide 21, he noted that oil and gas revenue were a relatively small percentage of revenue. He remarked that tax proposal bent the production curve, and stressed that production was not a small portion of the permanent fund. He wondered if the royalties were also included.

Mr. Baily replied that the royalties and taxes were considered in the evaluation.

5:54:44 PM

Vice-Chair Micciche did not believe that the guarantee of robust markets. He queried the effects of a drawn out correction. He remarked that the choice was between a likely POMV, and the robust success of a fixed draw. He wondered what would occur to a fixed draw model with an extension.

Mr. Baily replied that there would be a periodic review, and deferred to Commissioner Hoffbeck.

Commissioner Hoffbeck explained that the four year periodic review was in place due to the off chance of low oil prices and low market returns.

Vice-Chair Micciche asked why the state would not remain in 'adjustment mode.'

Mr. Baily stressed that McKinsey was taxed with evaluating the fund. The advantage of the DOR proposal was that it was similar in essence to other countries. He thought there was enough robustness in the funds that. He thought the goal in the budget process was to find something that was robust in normal circumstances.

5:59:55 PM
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6:01:51 PM
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Commissioner Hoffbeck commented that using a multi-year average with the POMV, resulting in robust returns followed by low market returns for multiple years. He shared that there would be a review and adjustment. He remarked that, although the POMV was more dynamic, a sustained period of low oil returns could "bust" the earnings reserve.

Co-Chair MacKinnon asked to look at slide 3, and asked about the target "Certain institutional investor best practices could help improve this plan's long-term sustainability." She wondered whether the variables were run between the rates of returns versus the national averages.

Mr. Baily replied in the negative. He explained that it was related to the idea of gaining a clear ownership of the model. The focus was more around the practice of building and preserving the model.

Co-Chair MacKinnon referred to the associated bullet point, "The State of Alaska could further strengthen the long-term viability of the APFC and the sustainability of its contributions to the General Fund by leveraging best practice learnings from other SWFs and investors," and

wondered whether there would be additional training on the models.

Mr. Baily replied in the affirmative.

Co-Chair MacKinnon wondered if Mr. Baily saw a weakness in some practices at the PFC.

Mr. Baily did not say it was a weakness.

6:05:45 PM

Co-Chair MacKinnon referred to slide 5, and the items listed as "Not in scope." She wondered whether those were in the scope of the evaluation.

Commissioner Hoffbeck replied that they were not in the scope of the evaluation.

Co-Chair MacKinnon wondered whether the items not in the scope conducted by the administration.

Commissioner Hoffbeck replied that they were conducted by the administration.

Co-Chair MacKinnon wondered whether there was a holistic evaluation of the budget and budget deficit.

Commissioner Hoffbeck replied in the affirmative.

Co-Chair MacKinnon referred to slide 6, and referred to the non-oil deficits to 4 percentage points. She wondered whether there was consideration of the limit on the deficit on non-oil deficits.

CRAIG RICHARDS, ATTORNEY GENERAL, DEPARTMENT OF LAW, replied that it was taken into account in the sense that there was a realization that they could not follow Norway's rules-based system. He explained that Norway's system saved all the petroleum revenues, and largely budgeted off of broad-based taxation.

Co-Chair MacKinnon thought it was an interesting to trigger to apply to manage the volatility on the other side.

Co-Chair MacKinnon referred to the Singapore model on slide 6, and wondered if there was an examination of a 20-year prospective look at annualizing expected returns to establish a draw versus annuity.

Attorney General Richards stated that he did not exactly look at the Singapore model, but the model was close to the efforts. He explained that they took the expected annualized 24-year returns of the Permanent Fund, and calculated a draw amount that equated to maintaining the real value of the fund after inflation.

6:11:48 PM

Co-Chair MacKinnon assumed the testifiers were considering an asset allocation change. She remarked that the earnings reserve was currently fairing at a 5 to 6 percent interest rate; but the CBR was at 2 percent because of liquidity. She queried the sensitivity to drawing down the actual earning opportunity inside the earnings reserve with the current formula. She stressed that there would not be as much cash available to generate earnings, because it would suddenly be a liquid asset.

Commissioner Hoffbeck stated that there would need to be some level of liquidity in order to make the draw. He remarked that the liquidity could be managed. He stressed that there would be no other change in allocation.

Attorney General Richards stressed that the allocations would continue to change. He remarked that the Permanent Fund was not considered a static fund.

Co-Chair MacKinnon asked if Commissioner Hoffbeck had forecast a lower rate of return due to the liquidity in the earnings reserve.

Commissioner Hoffbeck replied in the negative.

Attorney General Richards answered in the negative. He thought there would be some impact but did not know the exact impact.

Co-Chair MacKinnon asked if the directive of the CBR should be changed if there would be a reduction of the rate in the earnings reserve. She remarked that current state statute mandated that the funds should be liquid in order to be utilized.

Commissioner Hoffbeck agreed. He explained that there would be reinvestments in the subaccount, should the earnings reserve be used as a primary funding source.

Co-Chair MacKinnon asked if Commissioner Hoffbeck believed that the reinvestment could be done without statutory change.

Commissioner Hoffbeck replied that the funds that were not projected as necessary could have a longer allocation.

6:16:09 PM

Co-Chair MacKinnon referred to slide 7, and asked Commissioner Hoffbeck if oil production was up or down in the current year.

Commissioner Hoffbeck replied that oil production was up, forecast to be up the following year, and drop off in the third year.

Co-Chair MacKinnon pointed out that the model presumed that it was down for multiple years.

Commissioner Hoffbeck stated that the forecast during the time of the model showed a decline moving forward.

Co-Chair MacKinnon thought it was important to recognize that oil production was currently up and forecast as up, due to the policies adopted by the legislature.

Commissioner Hoffbeck agreed, and stated that there were multiple reasons for increased oil production.

Co-Chair MacKinnon looked to slide 9, and referred to the statement "The existing DOR sovereign wealth fund model was reviewed along 2 dimensions: methodology and assumptions." She wondered whether other sovereign wealth funds used other dimensions to examine their models.

Mr. Baily replied that the assumptions and methodologies would be the two principles.

Co-Chair MacKinnon wondered whether the oil revenues and production were weighted in the model.

Mr. Baily replied that it was illustrative, and not meant to be weighted.

Co-Chair MacKinnon remarked that there was concern about the lack of change in the probabilistic models because of the variables based on the different forecasts. Co-Chair MacKinnon wondered whether the per barrel charge and time were the considered axes.

Mr. Baily answered in the affirmative.

Co-Chair MacKinnon wondered if there was an inclusion of $9 to $150.

Mr. Baily replied that PERT distribution was used, with the high of $96, middle $56, and low of $36.

Co-Chair MacKinnon wondered whether a wider spread would result in a problem because of the wide path on dollar value. He wondered whether the model could break.

Mr. Baily replied in the affirmative, and depended on the probability of the very high price.

Co-Chair MacKinnon asked if the data was based on Callan data.

Mr. Baily replied that the price of oil was based on third party estimators in Callan's own energy practice.

6:21:46 PM

Co-Chair MacKinnon referred to slide 11, "$10B starting balance means near 100 percent confidence of being able to draw $3.3B per year for first four years even with negative investment returns." She wondered whether the state could experience negative returns for multiple years.

Mr. Baily stated that if there was a whole sequence of very large negative returns. He furthered that McKinsey had done an assessment.

Attorney General Richards pointed out that McKinsey had not worked on the POMV. He pointed out that bad probability events on the front would increase decreasing the earnings reserve.

Vice-Chair Micciche noticed that slide 6 listed three sovereign wealth funds, and wondered if the rules of the funds were public.

Mr. Baily stated that there had been extensive studies of sovereign wealth funds.

Vice-Chair Micciche referred to slide 12, and thought that if the CBR insertion was unsuccessful that there would be a different result. He wondered whether they were weighted toward the negative potential balance.

Mr. Baily replied that the computer ran through the different draws and told the median, resulting in the estimates of the probability distributions.

6:26:58 PM

Vice-Chair Micciche wondered why the black dot was not in between the 75 and 25 percentile; and the median at $115 billion.

Mr. Baily stated that the model was not linear.

Vice-Chair Micciche thought the graph was strangely consistent through 2040.

Mr. Baily thought the advantage of the model was that it forced one to be systematic about assumptions, and was a powerful tool. He thought it was not necessarily the most obvious result.

Co-Chair MacKinnon asked if Mr. Baily could speak to the earnings reserve account in reference to the graph on slide 12.

Mr. Baily replied that he did not know what would be in the earnings reserve at that that point.

Commissioner Hoffbeck thanked the committee for the opportunity to bring McKinsey to discuss the model.

Mr. Baily thought the project proved useful when considering the budget options.

SB 114 was HEARD and HELD in committee for further consideration.

SB 128 was HEARD and HELD in committee for further consideration.

Co-Chair MacKinnon discussed the schedule for the week.

6:31:15 PM
AT EASE

6:31:22 PM
RECONVENED

Co-Chair MacKinnon discussed housekeeping.

#
ADJOURNMENT
6:31:38 PM

The meeting was adjourned at 6:31 p.m.