December 19, 2018

Benefit Improvement Account

EDUCATIONAL BRIEFING

By Ryan Frost
Senior Research & Policy Manager
360-586-2325
ryan.frost@leoff.wa.gov

ISSUE STATEMENT

The $25 million payment to the LEOFF Plan 2 Benefit Improvement Account (BIA) originally scheduled for September 30, 2017 has not been made. A payment in the amount of $25 million may be due to the BIA by September 30, 2019.

OVERVIEW

This report will provide background on the history and purpose of the Law Enforcement Officers' and Fire Fighters' (LEOFF) Plan 2 Benefit Improvement Account. It will also identify questions arising from the State's decision not to make scheduled payments to the BIA.

BACKGROUND

What is the LEOFF Plan 2 Benefit Improvement Account?

LEOFF Plan 2 historically had two sources of revenue to fund plan benefits; contributions and investment earnings. Any increase in costs to the plan, including benefit improvements, would be paid for by an increase in contributions from plan members, employers, and the State.

The Benefit Improvement Account is a subaccount of the LEOFF Plan 2 Retirement Fund that was created by legislation in 2008. Its purpose is to provide an additional means of funding benefit improvements in LEOFF Plan 2. The assets in this account are invested in the same way as other LEOFF 2 fund assets as part of the Comingled Trust Fund managed by the Washington State Investment Board (WSIB).

Alternate Revenue Legislation

The 2008 Legislature passed Engrossed Substitute Senate Bill 6573 providing local government public safety employers and the LEOFF Plan 2 pension system with additional revenues.

Legislative Intent

The intent of the legislation recognized the need for additional revenue to provide for public safety and protection. The legislature also recognized the physical and challenging demands of fire fighters and law enforcement officers, effect on the length of working careers, and impact on earning adequate pension benefits. Section 1 of the legislation reads, in part:

"The legislature finds that local governments need additional revenues to provide public safety resources in order to protect the citizens of Washington from fire and crime. The legislature finds that the current benefit formula and contributions for the law enforcement officers' and firefighters' plan 2 are inadequate to modify that formula in recognition of the shorter working careers for firefighters and police officers. The legislature recognizes that although some officers and firefighters are able to work comfortably beyond twenty-five years, the combat nature of fire suppression and law enforcement generally require earlier retirement ages. In recognition of the physical demands of the professions and the inherent risks faced by law enforcement officers and firefighters, eligibility for retirement in the law enforcement officers' and firefighters' plan 2 system has been set at age fifty-three. However, the benefit formula is designed for careers of thirty-five to forty years, making retirement at age fifty-three an unrealistic option for many."

Alternate Revenue Trigger and Payment Schedule

Beginning in 2011, and by September 30 of odd-numbered years in each subsequent fiscal biennium in which general state revenue collections increase by more than 5 percent from the prior fiscal biennium, the State Treasurer is required to transfer, subject to appropriation, prescribed funds to the Local Public Safety Enhancement Account (LPSEA). The amounts that would be transferred to the LPSEA if the Alternate Revenue trigger is met are shown in the following schedule:

- $5 million for 2011
- $10 million in 2013
- $20 million in 2015
- $50 million in 2017

In subsequent fiscal biennia's after 2017, the amount eligible for transfer is the lesser of one-third of the general revenue increase amount or $50 million. General state revenues mean total revenues to the General Fund-state less state revenues from property taxes.

Distribution of Funds

After a transfer to the LPSEA, one-half of the funds transferred into the LPSEA would then be transferred to the LEOFF 2 BIA. The remaining funds in the LPSEA are distributed to local governments for public safety purposes. Therefore, contributions to the BIA would be made according to the following schedule:

- $2.5 million for 2011
- $5 million in 2013
- $10 million in 2015
- $25 million in 2017 and beyond

Money transferred to the BIA can only be used to fund benefits adopted by the Legislature. Benefits may be funded from the BIA if the State Actuary determines that the actuarial present value of the proposed and existing benefit obligations is met or exceeded by the actuarial present value of the projected revenues to the account. WSIB is authorized to adopt investment policies and invest the money in the BIA.

The Board has the sole authority to authorize disbursements from the BIA, and to establish all other related policies, which must be administered in an actuarially sound manner. Funds in the BIA may not be considered assets of the plan and are not included in contribution rate calculations by the State Actuary until directed by the Board for purposes of financing benefits adopted by the Board. The LEOFF Plan 2 Board is required to include sufficient funds from the account in the LEOFF Plan 2 Fund to meet benefit obligations within 90 days of the fund's transfer into the account.

Contribution History

The 5% required revenue growth necessary to trigger the 2011 LPSEA contribution of $5 million was not met.

The 5% revenue growth trigger was met for the 2013 LPSEA contribution. However, the $10 million transfer was not appropriated by the legislature in the budget so there was no transfer to the LPSEA nor the BIA.

The 5% revenue growth trigger was met for the 2015 LPSEA contribution. However, the $20 million transfer was not appropriated by the legislature in the budget so there was no transfer to the LPSEA nor the BIA. Instead, the legislature directed a $15,776,000 transfer into the BIA from the LEOFF Plan 2 Trust. The amount was calculated to include the $5 million scheduled for 2013 plus the $10 million scheduled for 2015 plus lost earnings at the actuarially assumed rate.

The 5% revenue growth trigger was met for the 2017 LPSEA contribution. However, the $50 million transfer was not appropriated by the legislature in the budget so there was no transfer to the LPSEA nor the BIA.

POLICY ISSUES

Present Value of BIA

Staff requested the Office of the State Actuary to determine the present value of future contributions to the LEOFF 2 BIA. OSA's full findings are attached as Appendix A. Under OSA's assumptions, they determined a present value of **$117 million**.

As the Board is aware, the Legislature has historically contributed to the BIA by moving funds from the LEOFF 2 trust fund, rather than appropriating the money out of the general fund as current law stipulates. OSA calculated that if the Legislature were to transfer the entire $117 million from the LEOFF 2 trust into the BIA, it would lower the plan's funded status from 108.6 to 107.3 percent.

Current Amount Due

The Legislature has amended the LPSEA statute 3 times since its inception in 2008. In the 2013 session, they removed the required September 2013 payment. In the 2015 session, they removed the required September 2015 payment. In the 2017 session, they removed the required September 2017 payment.

The 2013 and 2015 payments have been made whole by the transfer of the funds out of the LEOFF 2 trust, but the 2017 payment of $25 million is still on the books. In addition, with the way revenues are looking, the 2019 trigger is most certainly going to be hit, which will require a $25 million payment by September 2019. This will put the amount owed by the legislature to the BIA at $50 million.

SUPPORTING INFORMATION

Appendix A: ACTUARIAL ANALYSIS ON LEOFF 2 BENEFIT IMPROVEMENT ACCOUNT

APPENDIX A

Office of the State Actuary

"Supporting financial security for generations."

December 14, 2018

Steve Nelsen
Executive Director
LEOFF Plan 2 Retirement Board
P.O. Box 40918
Olympia, Washington 98504

RE: ACTUARIAL ANALYSIS ON LEOFF 2 BENEFIT IMPROVEMENT ACCOUNT

Dear Steve,

At your request, we determined the present value of future contributions to the Law Enforcement Officers' and Fire Fighters' Retirement System Plan 2 (LEOFF 2) Benefit Improvement Account (BIA). Using the data, assumptions, and methods described in this letter, we determined a present value of future contributions to the BIA 0f \$137 million, measured at September 30, 2019 (\$117 million measured at June 30, 2017).

We also reviewed how this present value would change if we changed our key assumptions or methods. Based on this analysis, we found the present value would range from \$53 million to \$183 million, measured at September 30, 2019. The actual present value of future contributions to the BIA could fall outside this range.

Historically, the Legislature has contributed to the BIA by moving funds from the LEOFF 2 trust fund instead of making an appropriation as contemplated under current state law. If the Legislature transferred \$117 million from the LEOFF 2 trust fund to the BIA, it would lower the plan's funded status from 108.6 to 107.3 percent, measured at June 30, 2017.

It's important to note that the plan's funded status depends on, among other assumptions, the long-term expected rate of return and changes at each point-in-time measurement. If we assume 6.4 percent for the expected long-term rate of return instead of our current best estimate assumption of 7.4 percent, the plans's funded status would decrease from 108.6 to 93.6 percent, measured at June 30, 2017.

Please see the remainder of this letter for further information.

PO Box 40914 | Olympia, Washington 98504-0914 | state.actuary@leg.wa.gov | leg.wa.gov/osa
Phone: 360.786.6140 | Fax: 360.586.8135 | TDD: 711

Background

The BIA exists as a sub account within the LEOFF 2 trust fund. It represents a trust fund dedicated to offset the expected cost of future benefit improvements for LEOFF 2 members when enacted. Consistent with current law, the actuary retained by the Board does not include BIA funds in the actuarial valuation until directed by the LEOFF 2 Board after the enactment of an applicable benefit improvement. Prior to any transfer of funds from the BIA to the LEOFF 2 trust fund, the actuary retained by the Board must determine that the transfer from the BIA is sufficient to offset the full expected cost of the applicable benefit improvement.

Under current law, the Legislature makes biennial contributions to the BIA if the growth in general state revenue exceeds 5 percent (the "trigger") over successive biennia. Starting on September 30, 2019, the contribution amount is the lesser of one-third the biennial increase in state revenue or $50 million. Given the size of state revenues, the contribution amount will likely be $50 million in all future years. The contribution amount is then split equally between the BIA and all local jurisdictions that employ LEOFF 2 members. This means the maximum contribution amount to the BIA will total $25 million each future biennium when triggered.

Summary of Actuarial Analysis

To determine the present value of future contributions to the BIA, we needed to select a measurement date, measurement period, a contribution amount, the likelihood of the contribution (meeting the trigger), and a discount rate. For our best estimate analysis, and consistent with your request, we used a discount rate of 7.4 percent. That assumption matches our current best estimate assumption for plan funding.

We selected a measurement date of September 30, 2019, consistent with the assumed date of the next potential contribution. For your reference, we also measured the present value at June 30, 2017, consistent with the measurement date of our most recent actuarial valuation report and measurement of the plan's funded status.

Current law calls for BIA contributions in perpetuity. For this analysis, we considered projecting contributions over 50, 65, and 100 years. We selected a measurement period of 50 years after we determined that additional years beyond 50 did not significantly impact results.

We assumed a $25 million contribution amount to the BIA each biennium starting in 2019-21 and assumed this contribution would be triggered 75 percent of the time. For the purposes of this analysis, and consistent with your request, we assumed the Legislature would make the full contribution each future year when triggered under current law. The Legislature has not always made a contribution to the BIA when triggered. If this practice continues, the actual present value of future contributions to the BIA would be lower than our best estimate if all our other assumptions are realized.

Using the assumptions and methods described above, we determined a present value of future contributions to the BIA of $137 million, measured at September 30, 2019, and $117 million, measured at June 30, 2017.

Data

To set the assumption that a future contribution to the BIA would be triggered 75 percent of the time, we reviewed historical revenue growth from tax collection and simulated nominal state revenue growth from our latest risk assessment.

In the following table, we summarize the percentage of historical biennial revenue growth above 5 percent we relied on for setting the 75 percent trigger assumption.

Historical Biennial Revenue Growth Exceeding 5 Percent		
1971-2017	1991-2017	2001-2017
83%	69%	63%

Please see the **Appendix** for a full history of revenue growth for each biennium.

We considered different ranges of historical data when setting this assumption. Ultimately we selected an assumption of 75 percent based on revenue growth from 1991-2017 as our best estimate. The 1991-2017 range provides a large and recent history from which to base this assumption and includes both strong and poor business cycles. Throughout the entire history available (1971-2017), only growth from 1999-2003, 2007-2011 fell under the 5 percent trigger. The economic downturns of the early 2000's and Great Recession of 2008 contributed to the low revenue growth from these years. Economic recessions may be less significant or less prevalent in future decades. We set our best estimate of 75 percent by selecting the percentage observed from the 1991-2017 period and increased it consistent with our expectations of future economic business cycles from the selected measurement date. The use of a longer/shorter history would produce a higher/lower assumption than our best estimate.

Sensitivity Analysis

Assumptions

The present value of future contributions to the BIA changes when we modify the assumptions noted above. The most significant assumptions include the discount rate and the probability of revenue growth exceeding 5 percent ("trigger probability").

We performed sensitivity analysis by varying the discount rate by +/- 1.00 percent and the trigger probability by +/- 10.00 percent. We relied on historical revenue growth over different time periods to inform the selection of applicable assumptions. The table below summarizes the results of our sensitivity analysis in this area.

Present Value of Future Contributions to BIA (At 9/30/2019)			
Dollars in Millions			
	Interest Rate		
Trigger Probability	6.40%	7.40%	8.40%
65%	$134	$119	$107
75%	$154	$137	$124
85%	$175	$156	$140

Methods

We also reviewed how the results of our analysis would change if we selected different methods.

We determined the present value of future contributions to the BIA on a deterministic basis. This means that our analysis does not account for randomness and we calculated the present value based on a set of assumptions that remains fixed (or "determined") during the entire measurement period.

In reality, we know that revenue growth will vary each biennium. Given the nature of this present value calculation and the impact of interest discounting, low or high revenue growth early in the projection will signficiantly impact the results of the present value calculation. For example, if we assume no contribution to the BIA in the first two biennia of the projection period and use our best estimate assumptions thereafter, the present value of future contributions decreases to $102 million, measured at September 30, 2019 (assuming no other changes to our best estimate assumptions).

To assess this impact of randomness in future state revenue growth, we relied on stochastic analysis from our risk assessment model. This model simulates 2,000 equally likely economic outlooks over the next 50 years including projected state revenue growth.

Using the 2,000 simulations of projected state revenue growth over the next 50 years, we determined how many of those simulations would trigger a contribution to the BIA, assumed a $25 million contribution when triggered under the given simulation, and discounted the contribution to September 30, 2019, to determine the resulting present value. Consistent with our deterministic analysis, we assumed a discount rate of 7.4 percent to determine the present value.

We then sorted the results from highest to lowest value and summarize the results of this analysis in the table below.

Summary of Simulated Future BIA Contributions	
Percentiles	Present Value of Future Contributions
100	$183
90	$168
75	$157
50	$142
25	$124
10	$107
0	$53

The 50th percentile of the simuated future BIA contributions and best estimate results of $137 million from the deterministic analysis are similar. We observe this because the number of simulations with biennial revenue growth exceeding the 5 percent trigger is about 77 percent. This is close to our best estimate assumption of 75 percent in the deterministic analysis. In addition, the values from our sensitivity analysis where we increase and decrease the deterministically assumed trigger probability by 10 percent compare closely with the 75th and 25th percentiles, respectively.

Please see our Risk Assessment Assumptions Study for further information on how we simulate future state revenue growth and the assumptions we use.

Additional Information And Considerations

The results of this analysis will change each measurement date and would change when we update our assumptions in the future. Please do not rely on this analysis after the 2019 Legislative Session and replace this anlysis with updated analysis when available.

The analysis summarized in this letter involves calculations that require assumptions about future economic and demographic events. In my opinion, all assumptions, methods, and calculations are reasonable and are in conformity with generally accepted actuarial principles and standards of practice as of the date of this letter. However, the use of another set of assumptions and methods could also be reasonable and could produce materially different results. Actual results may vary from our expectations.

We prepared this analysis for the LEOFF 2 Board, but understand it may be shared with others. We advise readers of this analysis to seek professional guidance as to its content and interpretation, and not to rely on this communication without such guidance. Please read the analysis shown in the letter as a whole. Distribution of, or reliance on, only parts of this communication could result in its misuse and may mislead others.

The undersigned meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. While the analysis provided in this communication is meant to be complete, the undersigned is available to offer extra advice and explanations as needed.

Sincerely,

Matthew M. Smith, FCA, EA, MAAA
State Actuary

cc: Mitch DeCamp
Actuarial Analyst
Graham Dyer
Senior Actuarial Analyst
Lisa Won, ASA, FCA, MAAA
Deputy State Actuary
Dennis Lawson
Chair, Law Enforcement Officers' and Fire Fighters' Plan 2 Retirement Board
Ryan Frost
Senior Research and Policy Manager, Law Enforcement Officers' and Fire Fighters' Plan 2 Retirement Board

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APPENDIX – HISTORICAL REVENUE AMOUNTS

The table below contains the historical revenue data from tax collection we reviewed to perform this analysis. The annual revenue figures are available at dor.wa.gov.

Biennial Revenue from Tax Collection		
Biennium	**Revenue**	**Growth**
1969-71	$2,001	
1971-73	$2,268	13%
1973-75	$2,710	19%
1975-77	$3,706	37%
1977-79	$4,874	31%
1979-81	$5,728	18%
1981-83	$7,317	28%
1983-85	$8,687	19%
1985-87	$10,253	18%
1987-89	$11,775	15%
1989-91	$14,460	23%
1991-93	$16,389	13%
1993-95	$18,660	14%
1995-97	$20,470	10%
1997-99	$22,855	12%
1999-01	$23,801	4%
2001-03	$24,092	1%
2003-05	$27,004	12%
2005-07	$32,383	20%
2007-09	$32,567	1%
2009-11	$31,136	(4%)
2011-13	$33,186	7%
2013-15	$36,507	10%
2015-17	$42,413	16%

LEOFF

Plan 2 Retirement Board

Benefit Improvement Account

Educational Briefing

December 19, 2018

Issue

- The payment to the LEOFF Plan 2 Benefit Improvement Account (BIA) originally scheduled for September, 2016 has not been made. The payment originally scheduled for September 2018 was not included in the State Operating Budget.

Background

- What is the LEOFF Plan 2 Benefit Improvement Account?
  - The Benefit Improvement Account is a sub-account of the LEOFF Plan 2 Retirement Fund that was created by legislation in 2008
  - Its purpose is to provide an additional means of funding benefit improvements in LEOFF Plan 2
- Alternate Revenue Legislation
  - Local Public Safety Enhancement Account
  - Legislative Intent

Background

- Alternate Revenue Trigger and Payment Schedule
  - General state revenue collections increase by more than 5 percent from the prior fiscal biennium
  - $5 million for 2011
  - $10 million in 2013
  - $20 million in 2015
  - $50 million in 2017
  - Lesser of one-third of the general revenue increase amount, or $50 million

Background

- Distribution of Funds
- Contribution History – 5% trigger met?
  - 2011: No
  - 2013: Yes
    - $10 million transfer not appropriated by legislature
  - 2015: Yes
    - $20 million transfer not appropriated by legislature
    - Legislature directed a $15,776,000 transfer into the BIA from the LEOFF 2 Trust
  - 2017: Yes
    - $50 million transfer not appropriated by legislature

Policy Issues

- Present Value of BIA
  - Staff requested the Office of the State Actuary to determine the present value of future contributions to the LEOFF 2 BIA.
  - Under OSA's assumptions, they determined a present value of **$117 million**.
- Legislature has historically contributed to the BIA by moving funds from the LEOFF 2 trust fund
- OSA calculated that if the Legislature were to transfer the entire $117 million from the LEOFF 2 trust into the BIA, it would lower the plan's funded status from 108.6 to 107.3 percent.

Policy Issues

- Current Amount Due
  - The 2013 and 2015 payments have been made whole by the transfer of the funds out of the LEOFF 2 trust
  - 2017 payment of $25 million is still on the books.
  - 2019 trigger is most certainly going to be hit, which will require a $25 million payment by September 2019.
  - This will put the amount owed by the legislature to the BIA at $50 million.

Policy Issues

- **Current Amount Due**
  - The Legislature has amended the LPSEA statute 3 times since its inception in 2008.
    - In the 2013 session, they removed the required September 2013 payment.
    - In the 2015 session, they removed the required September 2015 payment.
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Thank You

Ryan Frost

Senior Research and Policy Manager

ryan.frost@leoff.wa.gov

(360) 586-2325