# APPENDIX ZO

# MEMORANDUM

**STATE OF ALASKA**
**DEPARTMENT OF REVENUE**
**OFFICE OF THE COMMISSIONER**

Approved
JLC 3/3/00

*TO:* Wilson Condon
Commissioner of Revenue

*Thru:* Neil Slotnick NS 3/3
Deputy Commissioner

*FROM:* Michael Cheung MC
State Investment Officer

*DATE:* March 1, 2000

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*SUBJECT:* Recommendation for changing the Benchmark for the Fixed Income Investment Pool

Summary

Treasury staff recommends that you change the performance benchmark of the Long-term Fixed Income Investment Pool (Pool) from the Lehman Brothers Government Corporate Bond Index to the Lehman Brothers Aggregate Index. Staff compared the characteristics of the Aggregate Index and the Government/Corporate Index and determined the Aggregate Index is better suited as the benchmark. Additionally, managing against the Aggregate Index is consistent with the fixed income management effort that is in place for the retirement systems' portfolio.

Background

Liquidity: The Aggregate Index includes 34% Federal agency mortgage backed securities (MBS), the largest weighting among all bond sectors. MBS have the most liquidity among all fixed income investments other than the most recently issued U.S. treasury securities. Fixed income dealers usually make a very tight bid/ask market for MBS. This means investors will only incur a minimal transaction costs in MBS. This increased liquidity will help Treasury manage the Pool to meet the liquidity needs of the participants investing in the pool. The increased liquidity helps Treasury ensure a smooth transition when it changes from managing the Pool against the Government/Corporate Index to the Aggregate Index.

Yield to Maturity: In reviewing the yield characteristics between the two indices, the data show the Aggregate Index enjoys a consistent yield to maturity advantage over the Government/Corporate Index. The main reason is the MBS in the Aggregate Index. Homeowners can refinance the underlying mortgage loans and MBS investors can experience early prepayment on their investments. Therefore, MBS investors demand additional yield to compensate for this risk. Due to the interest calculation method, the yield advantage of the Aggregate Index translates into higher interest earnings for the participants in the investment pool. This will help Treasury manage the Pool to meet the high accounting income need of some pool participants.

**Yield To Maturity**

| Period Ending December 31, 1999 | 3 Yr. | 5 Yr. | 10 Yr. |
|---|---|---|---|
| Lehman Aggregate | 6.36% | 6.53% | 6.97% |
| Lehman Gov/Corp | 6.13% | 6.29% | 6.70% |

Rating: MBS are triple A rated by the rating agencies. In turn, the Aggregate Index has over 81% of its bond rated AAA or higher in comparison with 69% for the Government/Corporate Index.

Volatility of returns: Over various measurement periods, the Aggregate Index has returns similar to the Government/Corporate Index. However, the Aggregate Index has a lower volatility of returns than the Government/Corporate Index. The main reasons for this are that the Aggregate Index has a higher yield and lower duration (interest rate sensitivity) than the Government/Corporate Index. Stability of income could enhance the planning process of the participants in the long-term investment pool.

**Volatility of Returns**

| Period Ending December 31, 1999 | 3 Yr. | 5 Yr. | 10 Yr. |
|---|---|---|---|
| Lehman Aggregate | 1.03% | 1.18% | 1.13% |
| Lehman Gov/Corp | 1.17% | 1.29% | 1.25% |

**Historical Returns**

| Period Ending December 31, 1999 | 3 Yr. | 5 Yr. | 10 Yr. |
|---|---|---|---|
| Lehman Aggregate | 7.29% | 7.27% | 9.26% |
| Lehman Gov/Corp | 7.33% | 7.30% | 9.33% |

Conclusion: Staff concludes that Treasury Division should adopt the Aggregate Index as the investment benchmark for the Long-term Fixed Income Investment Pool. This will be consistent with the retirement systems' fixed income benchmark.