

**POLICIES AND PROCEDURES APPLICABLE  
TO THE TREASURY DIVISION,  
DEPARTMENT OF REVENUE,  
STATE OF ALASKA**



**APPENDIX AB**

**Changes to Alaska Children's Trust Asset Allocation in response to CSHB 190(FIN)**

# MEMORANDUM

## STATE OF ALASKA DEPARTMENT OF REVENUE Treasury Division

To: Pat Galvin  
Commissioner

Date: August 5, 2010

From: Gary Bader   
Chief Investment Officer

Telephone: (907) 465-4399

Subject: Changes to Alaska Children's Trust Asset Allocation in response to CSHB 190(FIN)

The purpose of this memo is to summarize the methodology and thought process behind the construction of the asset allocation for the Alaska Children's Trust (ACT) Fund in response to new investment objectives required by the passage of CSHB 190(FIN) in 2010.

### Summary of investment objective changes required by CSHB 190(FIN)

Significant changes were made to the statutes pertaining to investment of the ACT funds. Structurally, the funds will no longer be managed in separate income and principal funds. Formerly, only income earned by the principal assets could be used for the purposes of the ACT. The new legislation repeals this structure. In its place, a 5% POMV distribution formula was enacted based on the average market value over the preceding three years.

As it pertains to investment strategy, new language was enacted in the legislation which directs you to invest the ACT assets in a manner likely to yield at least a five percent real rate of return over time.

### Process and Methodology

To establish an appropriate asset allocation we first performed a mean variance optimization analysis using the 2010 Capital Market Assumptions developed by Callan Associates with the goal of identifying the efficient mix of assets that produce a 5% real expected rate of return.

The results of this initial analysis suggested the ACT funds would need to be invested approximately 83% in equities and 17% in fixed income. This level of equity exposure is considered uncomfortably high based on comparisons with other State asset allocations and discussions with Callan Associates regarding the level of equity exposure in other public endowment funds.

To accommodate the objective of a 5% real return over the long term with the current capital market assumptions we developed a range of expected returns based on varying levels of inflation assumptions. Callan Associates uses a 2.75% expected inflation rate over the next five years while other credible sources have much lower inflation expectations. For example, the expected inflation rate currently priced into the US Treasury market is approximately 1.50% for

five years and 1.80% for 10 years. While the expected level of inflation, if different than the Callan assumption, would likely impact expected returns, the shorter term 1 year asset allocation cycle compared to the 5 year Callan horizon provides some flexibility in applying a different inflation assumption for the current year without compromising the expected returns used in the analysis.

We identified ten asset allocations that assumed varying degrees of expected inflation, from .90% to 3.50%. This information (attached), along with an explanation of the statutory requirements, was provided to the ACT Board by you at their August 4th Board meeting in Anchorage. You indicated your starting point at option 5 and asked them for feedback on what their risk tolerance was along the spectrum and whether the ACT Board was comfortable with more risk or less risk. After some deliberation, they passed a motion indicating their comfort with options 3, 4, or 5.

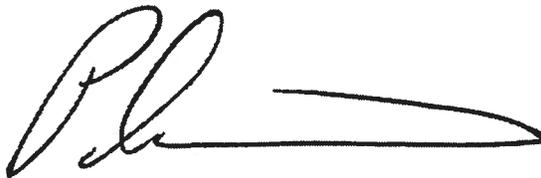
### Conclusion

As a result of the ACT Board's feedback and your mandate to deliver a 5% real return over time, option 4.5 was developed (attached) which reflects the following asset allocation:

Domestic Equity	56.40%
International Equity	11.23%
Domestic Fixed	32.37%

This asset allocation produces an expected real return of 5% assuming a 2.10% expected inflation rate. This asset allocation is consistent with your mandate to deliver a 5% real return over time and, while still on the high side, reduces the equity exposure to a more acceptable level.

Approved



8/26/10

Attachments

# AK Children's Trust (2).xls

2010

## Asset Classes

Equity - Broad Market	100.00%
International Equity	100.00%
Bonds Gov 1-5	100.00%
Domestic Fixed	100.00%
LEI Plus	0.00%
Cash Equivalents	0.00%
Totals	100.00%

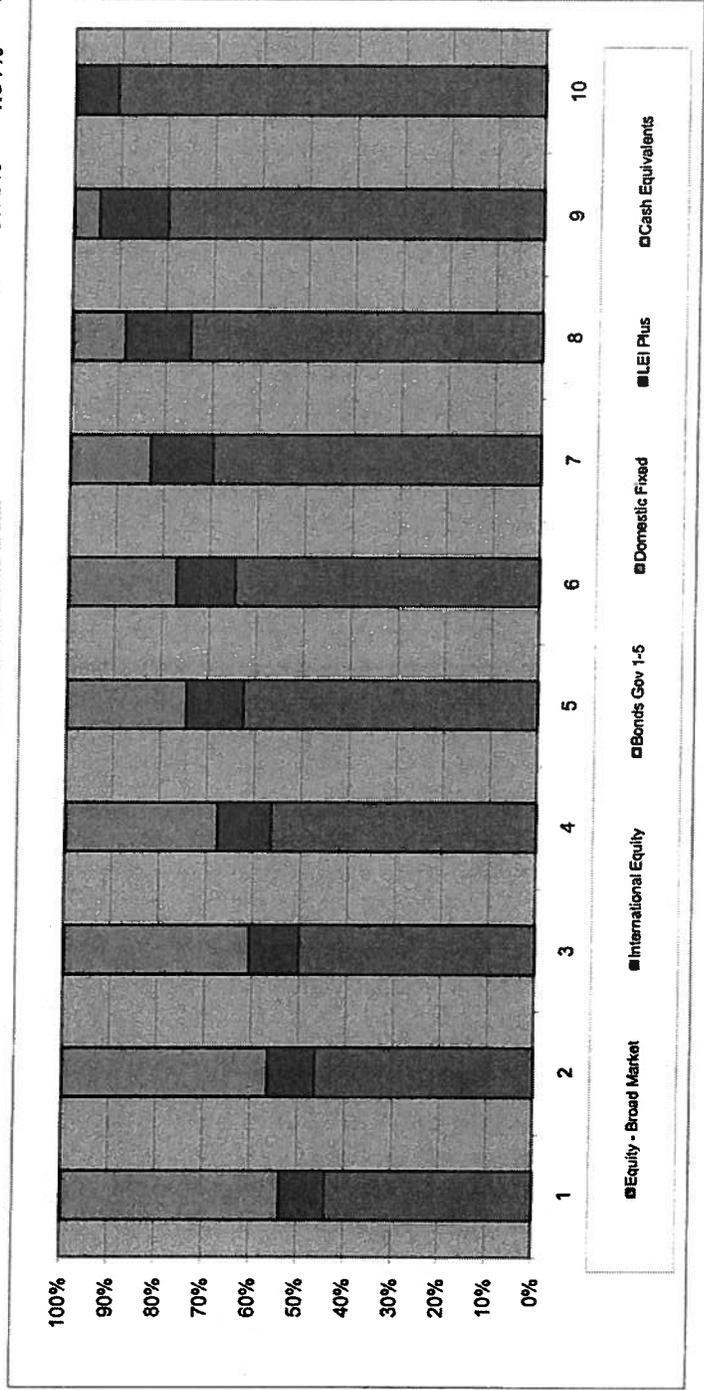
## Constraints

	Min	Max
Equity - Broad Market	0.00%	100.00%
International Equity	0.00%	100.00%
Bonds Gov 1-5	0.00%	100.00%
Domestic Fixed	0.00%	100.00%
LEI Plus	0.00%	0.00%
Cash Equivalents	0.00%	0.00%

## Asset Mix Alternatives

	2	3	4	4.5	5	6	7	8	9	10	Current	Approved
Equity - Broad Market	44.13%	46.58%	50.26%	56.40%	62.53%	64.58%	69.65%	74.80%	79.91%	90.91%	59.00%	11.00%
International Equity	9.49%	9.84%	10.36%	11.23%	12.10%	12.39%	13.12%	13.84%	14.57%	9.09%	0.00%	0.00%
Bonds Gov 1-5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Domestic Fixed	46.38%	43.58%	39.38%	32.37%	25.37%	23.03%	17.20%	11.38%	5.52%	0.00%	30.00%	30.00%
LEI Plus	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cash Equivalents	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Totals	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Target Return	7.30%
Projected Return	7.30%
Expected Inflation Rate	2.75%
Real Return	4.55%
Projected Risk	12.23%
1 Yr. Probability of Loss	27.54%
5 Yr. Probability of Loss	9.11%
10 Yr. Probability of Loss	2.96%



**Legend**  
**Source of Inflation Assumptions**

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<b>Source</b>	<b>Inflation Assumption</b>
1. Federal Reserve PCE*	.90%
2. 5 Year TIP Breakeven	1.50%
3. Bloomberg Mean 2010	1.62%
4. 10 Year TIP Breakeven	1.80%
5. Congressional Budget Office – CPI** 2010 Forecast	2.40%
6. Buck 2010 Alternatives – Draft Experience Study	2.5%
7. Callan	2.75%
8. Buck 2010 Alternatives – Draft Experience Study	3.0%
9. Buck 2010 Alternatives – Draft Experience Study	3.25%
10. Buck PERS Actuarial Report June 30, 2009	3.5%

\* PCE = Personal Consumption Expenditure

\*\* CPI = Consumer Price Index

# AK Children's Trust.xls

2010

## Asset Classes

Equity - Broad Market	100.00%
International Equity	100.00%
Bonds Gov 1-5	100.00%
Domestic Fixed	100.00%
LEI Plus	0.00%
Cash Equivalents	0.00%
Totals	100.00%

## Constraints

	Min	Max
Equity - Broad Market	0.00%	100.00%
International Equity	0.00%	100.00%
Bonds Gov 1-5	0.00%	100.00%
Domestic Fixed	0.00%	100.00%
LEI Plus	0.00%	0.00%
Cash Equivalents	0.00%	0.00%

## Asset Mix Alternatives

	1	2	3	4	5	6	7	8	9	10
Equity - Broad Market	31.86%	44.13%	46.58%	50.26%	62.53%	64.58%	69.69%	74.80%	79.91%	90.91%
International Equity	7.74%	9.49%	9.84%	10.36%	12.10%	12.39%	13.12%	13.84%	14.57%	8.09%
Bonds Gov 1-5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Domestic Fixed	60.39%	46.38%	43.58%	39.38%	25.37%	23.03%	17.20%	11.38%	5.52%	0.00%
LEI Plus	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cash Equivalents	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Totals	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Current	59.00%
Approved	11.00%
	30.00%
	100.00%

## Target Return

Projected Return

Expected Inflation Rate

Real Return

Projected Risk

1 Yr. Probability of Loss

5 Yr. Probability of Loss

10 Yr. Probability of Loss

	1	2	3	4	5	6	7	8	9	10
Target Return	5.90%	6.50%	6.62%	6.80%	7.40%	7.50%	7.75%	8.00%	8.25%	8.50%
Projected Return	5.90%	6.50%	6.62%	6.80%	7.40%	7.50%	7.75%	8.00%	8.25%	8.50%
Expected Inflation Rate	0.90%	1.50%	1.62%	1.80%	2.40%	2.50%	2.75%	3.00%	3.25%	3.50%
Real Return	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Projected Risk	6.59%	8.90%	9.38%	10.10%	12.55%	12.96%	13.99%	15.02%	16.06%	17.12%
1 Yr. Probability of Loss	18.52%	23.27%	24.02%	25.05%	27.77%	28.14%	28.98%	29.72%	30.38%	30.98%
5 Yr. Probability of Loss	2.26%	5.13%	5.73%	6.62%	9.36%	9.78%	10.77%	11.69%	12.54%	13.35%
10 Yr. Probability of Loss	0.23%	1.05%	1.28%	1.67%	3.11%	3.36%	3.99%	4.61%	5.22%	5.82%

	7.30%
	7.30%
	2.76%
	4.55%
	12.23%
	27.54%
	9.11%
	2.96%

