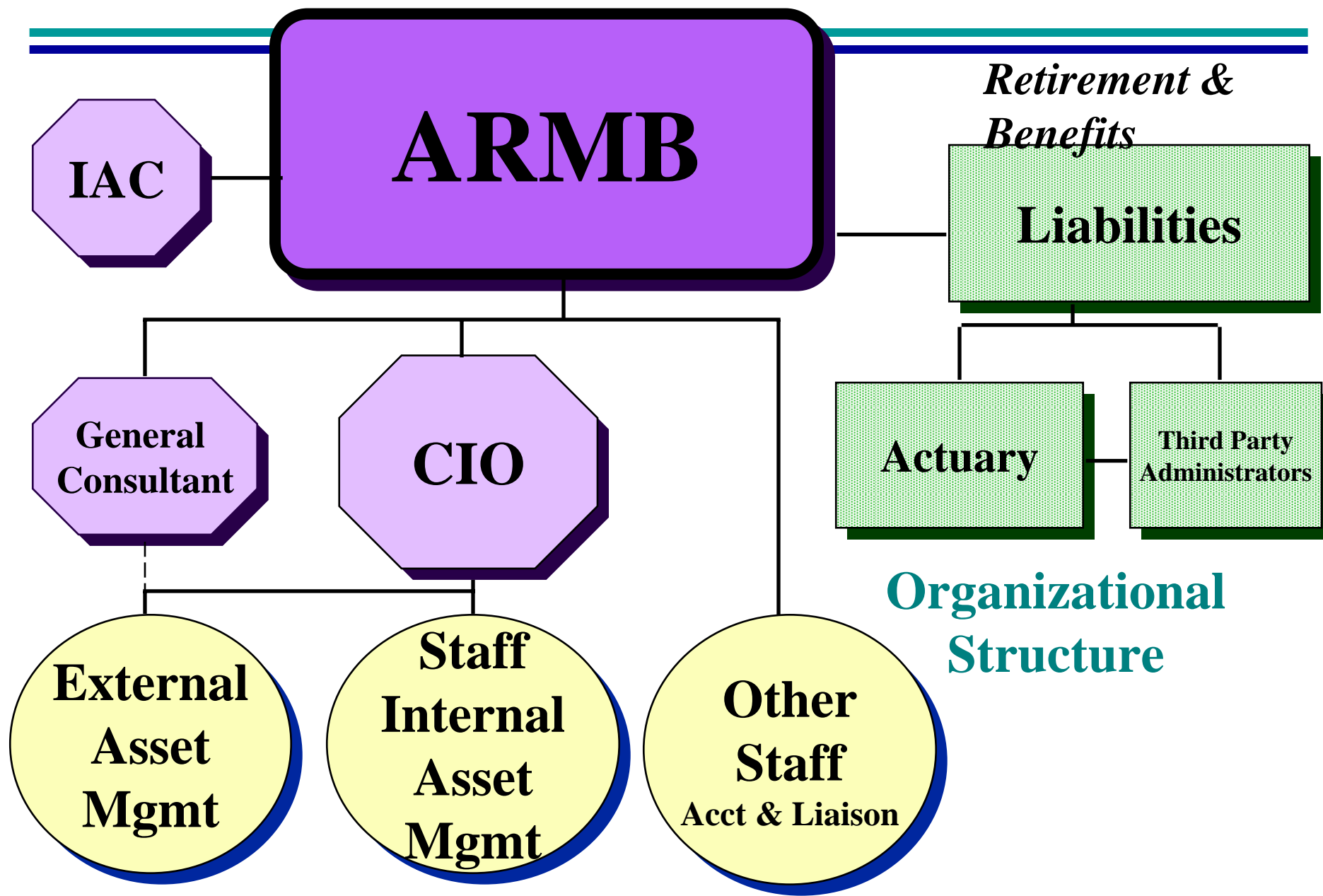

State of Alaska Department of Revenue

Investment Operation Orientation

Treasury Division, Portfolio Management Section

February 2009



Alaska Retirement Management Board

Fiduciary of the Fund

- **AS 14.25.007**
- **Consider status of the fund's investments and liabilities**
- **Determine the appropriate investment objectives**
- **Establish investment policies to achieve objective**
- **Act only in regard to the best interest of the system's plan and beneficiaries**

Alaska Retirement Management Board

- **Nine Members**
- **Establish Investment Policies**
- **Review Actuarial Earnings Assumption**
- **Establish Asset Allocation**
- **Provide Investment Options**

Alaska Retirement Management Board

Consultant

- **Asset Allocation/Strategy**
- **Performance Measurement**
- **General Consulting**

**General
Specific**

Assist in Asset Manager Searches

Alaska Retirement Management Board

Investment Advisory Council

Permitted by Statute

Three to Five Members

**Review and Advise on Investment Policy, Strategy &
Procedures**

Dr. Jerrold Mitchell

Dr. William W. Jennings

George Wilson

Alaska Retirement Management Board

Asset Allocation Decision

Investment Objective

Risk Tolerance

Expected Return of Each Asset Class

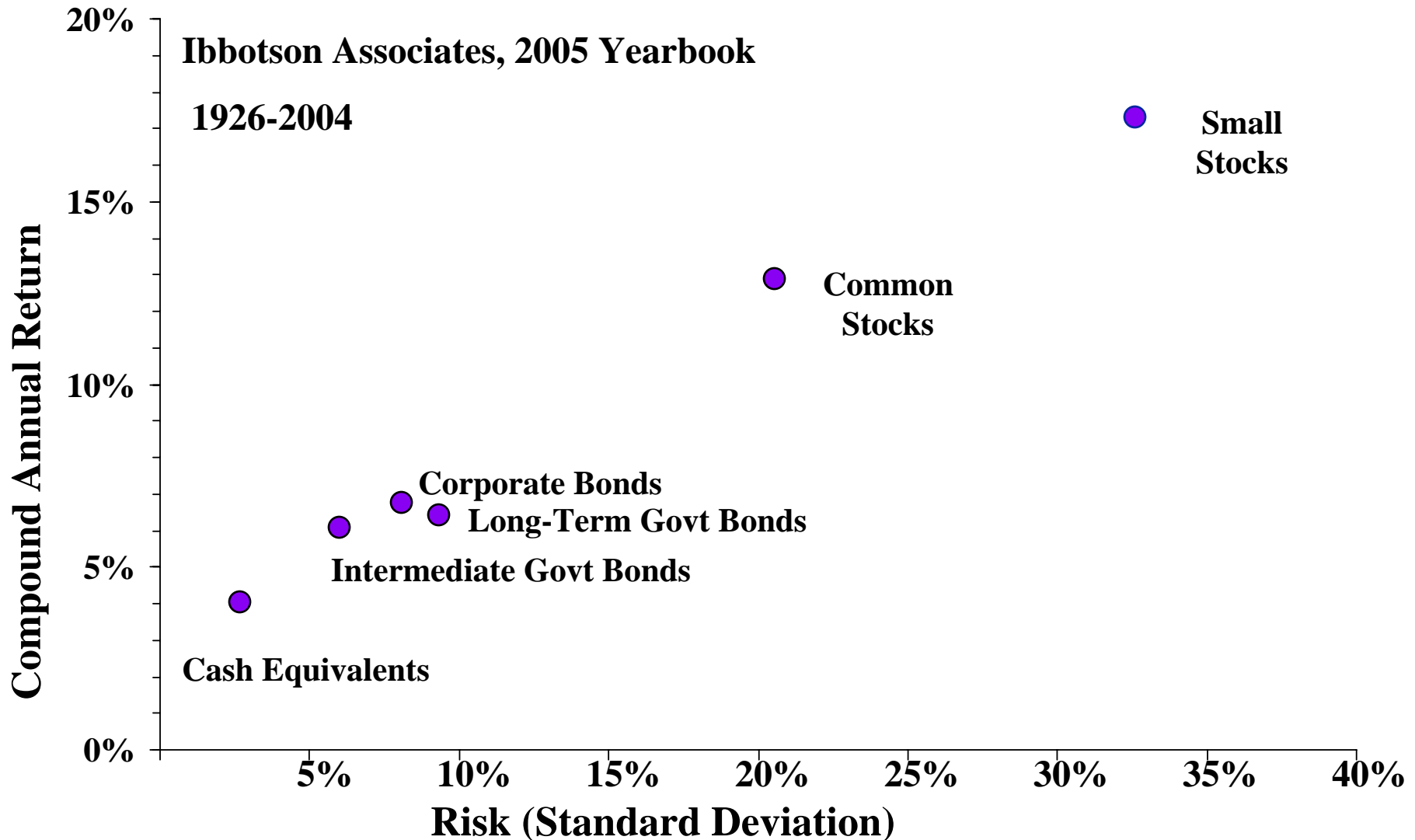
Expected Volatility of Each Asset Class

Correlation of Performance Between Asset Classes

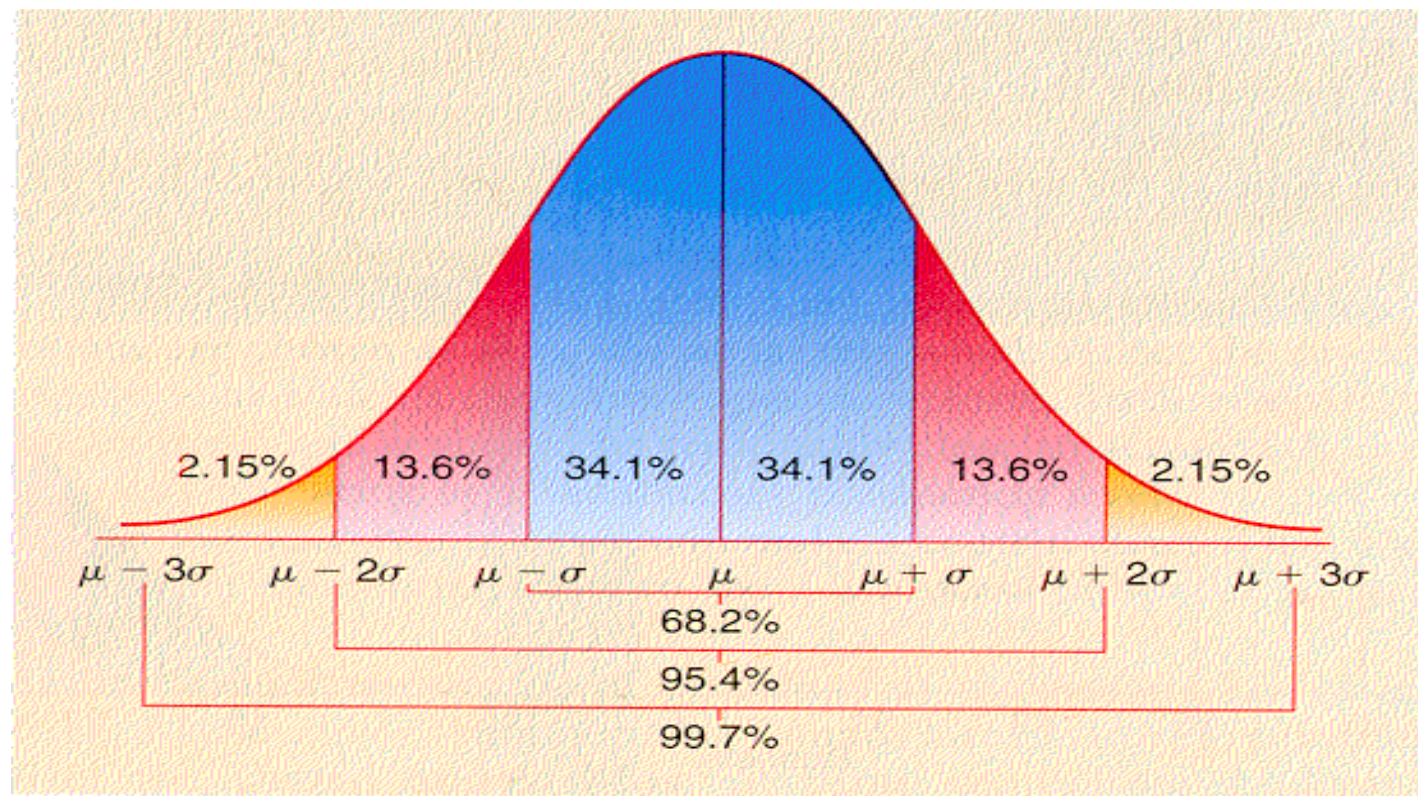
Efficient Frontier

Alaska Retirement Management Board

Historical Risk/Return Tradeoff



Normal Curve and Standard Deviation



Alaska Retirement Management Board

Correlation of Asset Class Returns

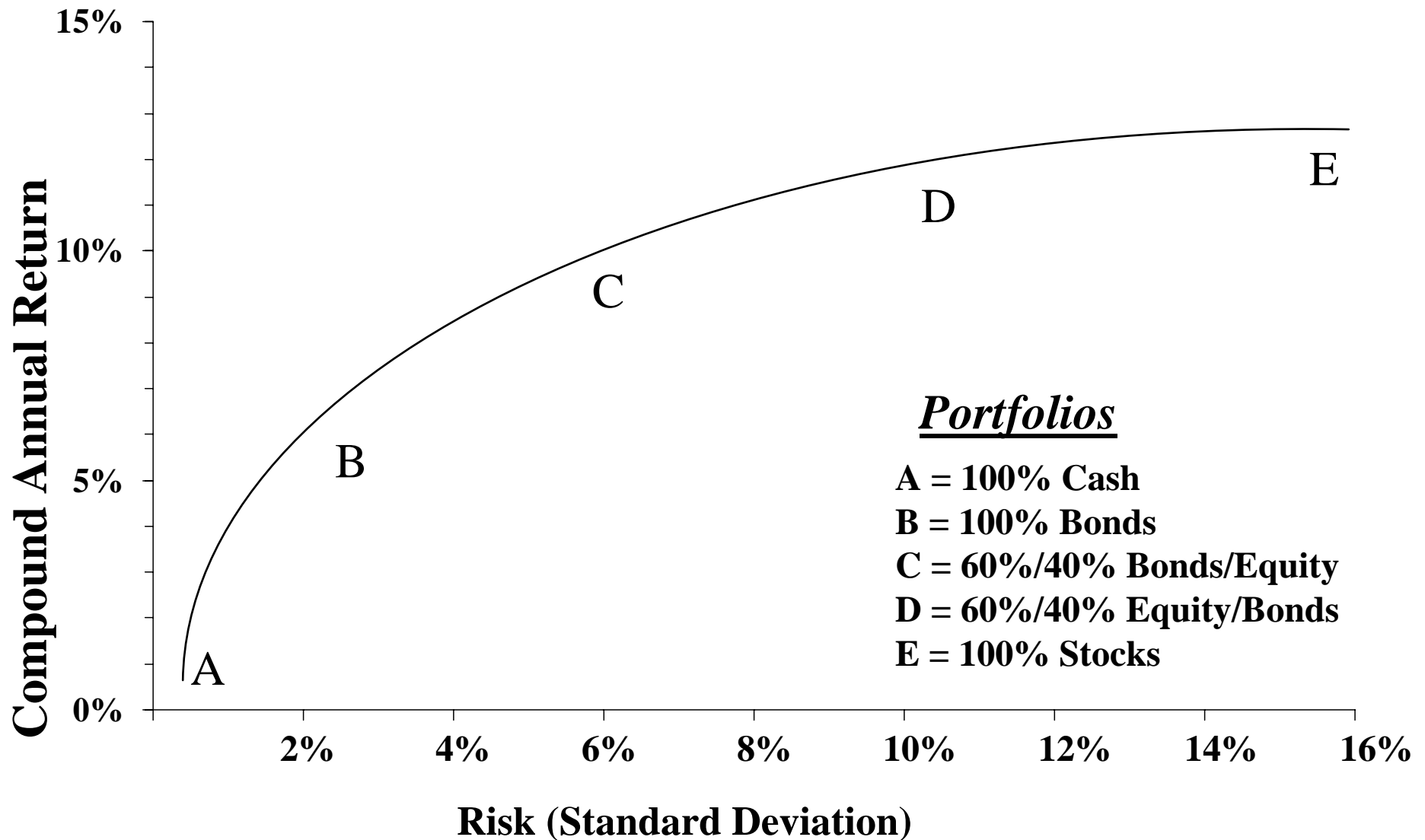
Ibbotson Associates, 2005 Yearbook

1926 to 2004

	<u>Large</u> <u>Stocks</u>	<u>Small</u> <u>Stocks</u>	<u>LT Corp</u> <u>Bonds</u>	<u>LT Govt</u> <u>Bonds</u>	<u>Int Govt</u> <u>Bonds</u>	<u>US</u> <u>T-Bills</u>
Large Stocks	1.00					
Small Stocks	0.79	1.00				
LT Corp Bonds	0.19	0.08	1.00			
LT Govt Bonds	0.12	-0.02	0.93	1.00		
Int Govt Bonds	0.04	-0.07	0.90	0.90	1.00	
US T-Bills	-0.02	-0.10	0.20	0.23	0.48	1.00

Alaska Retirement Management Board

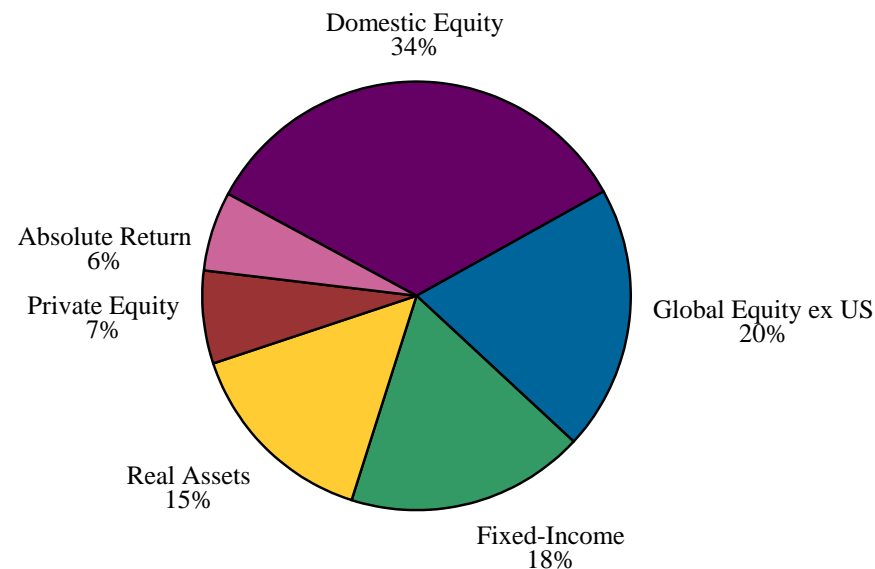
Efficient Frontier



Alaska Retirement Management Board

Target Asset Allocation 2009

Target Asset Allocation



Expected Rate of Return 8.15%
Standard Deviation (Risk) 12.85%

Alaska Retirement Management Board

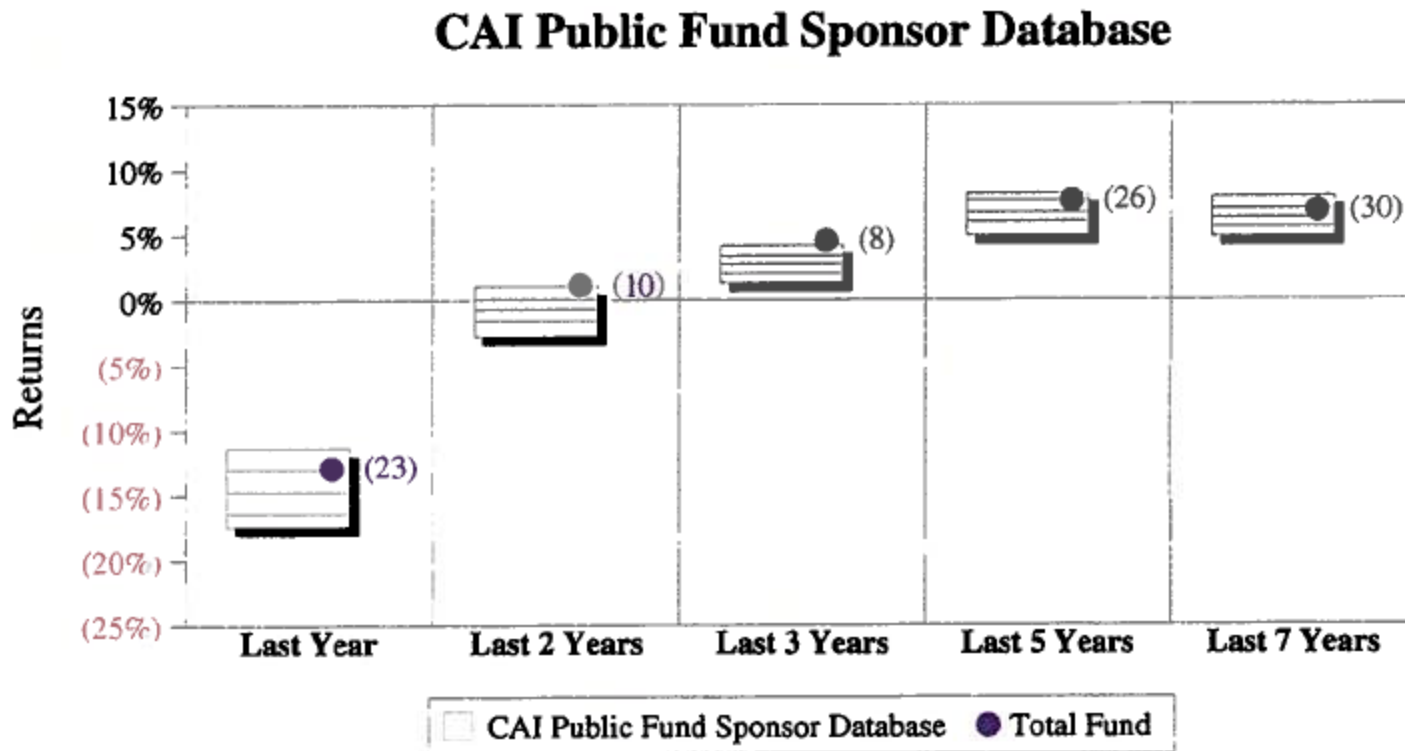
One Year Cumulative Attribution Effects

Asset Class	Effective Weight	Avg Trgt Weight	Actual Return	Target Return	Manager Effect	Asset Allocation
Domestic Equity	34%	36%	(21.61%)	(22.05%)	0.15%	0.16%
Fixed-Income	18%	18%	2.05%	2.59%	(0.09%)	0.02%
High Yield	2%	2%	-	-	0.02%	(0.03%)
Real Assets	13%	11%	0.20%	2.74%	(0.30%)	0.19%
International Equity	19%	17%	(29.28%)	(31.22%)	0.41%	0.01%
Int'l Fixed-Income	2%	2%	-	-	0.01%	(0.01%)
Private Equity	8%	7%	0.47%	(22.27%)	1.73%	(0.07%)
Absolute Return	4%	5%	(2.28%)	7.82%	(0.33%)	(0.17%)
Other	1%	2%	-	-	0.05%	(0.13%)

Total	(12.89%) = (14.51%) + 1.65% + (0.03%)
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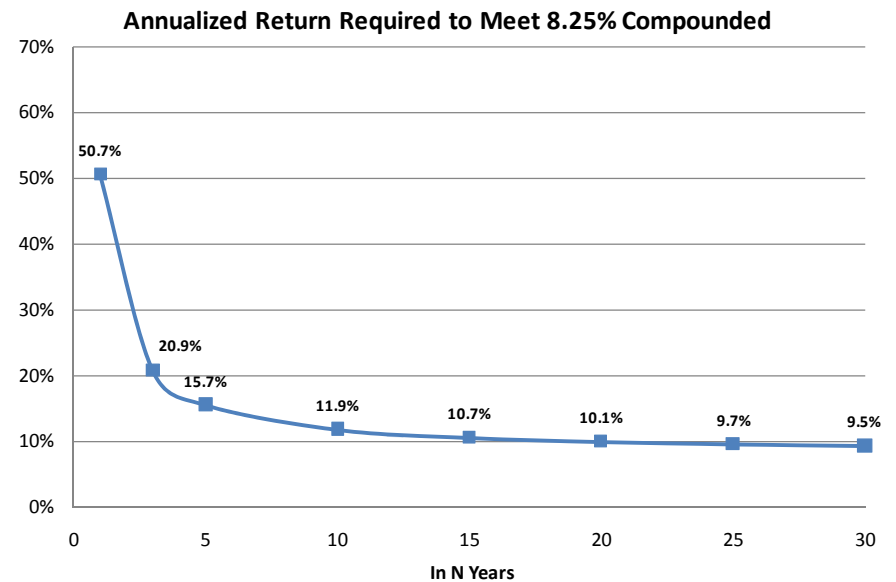
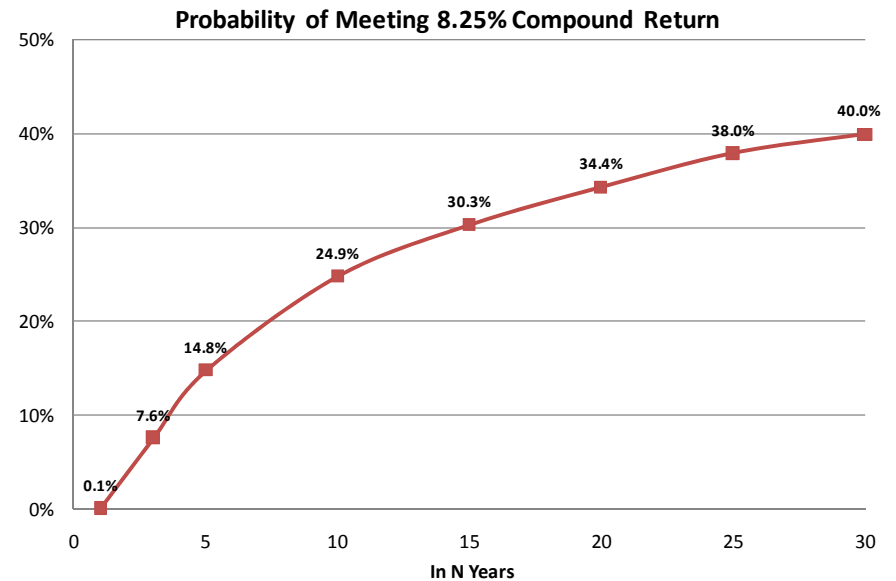
Current Quarter Target = 34.0% Russell 3000 Index, 20.0% MSCI ACWI ex-US Index, 12.6% BC Aggregate Index, 9.0% NCREIF Total Index, 6.0% month Treasury Bill+5.0%, 3.0% BC US TIPS Index, 2.3% MSCI EAFE Index, 2.3% S&P 500 Index, 2.3% Russell 2000 Index, 1.8% Citi Non-US Gvt Bd x, 1.8% 3-month Treasury Bill, 1.8% Hi Yld II Index, 1.5% NCREIF Farmland Index and 1.5% NCREIF Timberland Index.

Alaska Retirement Management Board



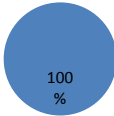
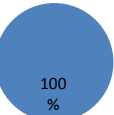
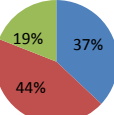
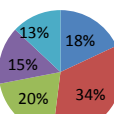
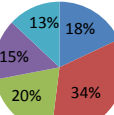
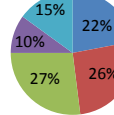
PERS Probability of Meeting 8.25% Compound Return

- Simulation Approach:
 - 2007 was the base year for the simulation. The tracking portfolio was increased at a compounded rate of 8.25% per annum for 31 years.
 - The PERS portfolio assumed the 2008 estimated loss of -22.24% and simulated returns for 30 years using the 2008 asset allocation and 2009 capital market assumptions.
 - Cash flows were not modeled.
 - PERS portfolio and tracking portfolio started at the same level in 2007.
- The upper graph is the probability of the PERS portfolio exceeding the 8.25% tracking portfolio in 1, 3, 5, 10,..., 30 years.
- The lower graph is the annualized return required to meet the 8.25% compounded return in 1, 3, 5, 10,..., 30 years.



Alaska Retirement Management Board

Comparative Analysis of the General Fund, CBRF, PERS and TRS retirement plans and APFC.

Account	Purpose	Market Value 12/31/07	Market Value 12/31/08	Estimated Market Value 1/31/09	Investment Objective	Target Asset Allocation		Fiduciary Oversight	Calander YTD Returns	3 year Actual Returns	Returns Forecast
General Fund (and other nonsegregated investments)	Operating Fund	\$5,269.3 million	\$7,466.4 million	\$7,274.5 million	Moderate Risk, Short to Intermediate investment horizon	100% Fixed Income: Short term 37% Intermediate term 63%		Commissioner of Revenue	4.66%	5.29%	4.07%
Constitutional Budget Reserve (main fund)	Main Savings account	\$2,521.4 million	\$3,240.8 million	\$3,232.3 million	Moderate Risk, Intermediate investment horizon	100% Fixed Income: Short term 5% Intermediate term 75% Broad Market 20%		Commissioner of Revenue	5.67%	5.71%	4.53%
Constitutional Budget Reserve (sub fund)	Long-term Savings Account	\$576.9 million	\$3,590.8 million	\$3,382.2 million	High Risk, Moderately Long investment horizon	Fixed Income 37% Dom Equity 44% Int'l Equity 19%		Commissioner of Revenue	-29.34%	-5.17%	7.61%
PERS Retirement Defined Benefit	Public Employees Retirement Savings Account	\$11,129.1 million	\$8,359.8 million	\$7,958.0 million	Moderate Risk, Long Term investment horizon	Fixed Income 18% Dom Equity 34% Int'l/Global Equity 20% Real Assets 15% Alternatives 13%		Alaska Retirement Management Board	-22.24%	-0.35%	8.25%
TRS Retirement Defined Benefit	Teachers Retirement Savings Account	\$5,003.7 million	\$3,705.8 million	\$3,551.3 million	Moderate Risk, Long Term investment horizon	Fixed Income 18% Dom Equity 34% Int'l/Global Equity 20% Real Assets 15% Alternatives 13%		Alaska Retirement Management Board	-22.33%	-0.38%	8.25%
APFC	Constitutionally Dedicated Fund for All Alaskans	\$39,463.5 million	\$29,500.7 million	\$28,050.0 million	Long term Investment Goal is to achieve a real rate of return of 5% per year	Fixed Income 22% Dom Equity 26% Int'l/Global Equity 27% Real Assets 10% Alternatives/Infras. 15%		APFC Board	-25.64%	-2.74%	8.05%