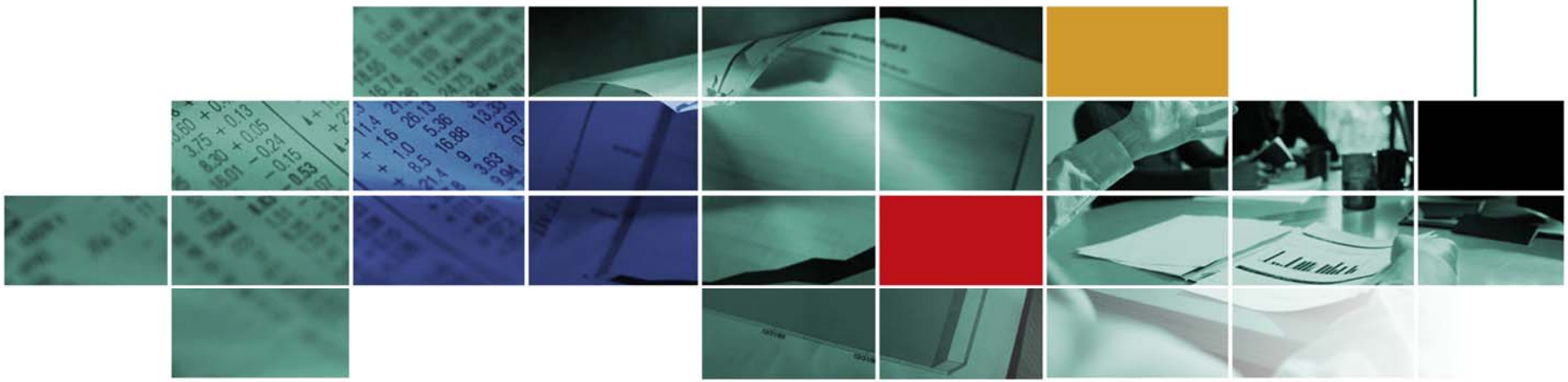
RVKuhns

& ASSOCIATES, INC.

Wyoming State Treasurer's Office

Asset Allocation Discussion

April 2009



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Asset Allocation
&
Monte Carlo Simulation

Figure 1a

RV Kuhns Assumptions vs Longest Possible Historical Time Frame

Longest Historical Time Frame statistics are calculated based on monthly periodicity, except where noted by a (Q) for quarterly periodicity.

Asset Class	Return Assumption	Risk Assumption	Index	Longest Historical Time Frame	Annualized Return	Annualized Risk
Large Cap US Equity	8.25%	17.00%	S&P 500	Jan 1926 - Dec 2008 (83 yrs)	11.05%	19.17%
Small/Mid Cap US Equity	9.25%	21.00%	Russell 2500	Jan 1979 - Dec 2008 (30 yrs)	13.09%	18.20%
Broad International Equity	8.85%	18.10%	MSCI ACWI ex-US (Gross)	Jan 1988 - Dec 2008 (21 yrs)	6.34%	17.04%
Fixed Income	5.25%	4.50%	BC US Aggregate	Jan 1976 - Dec 2008 (33 yrs)	8.31%	5.80%
Real Estate - Core	7.00%	9.25%	NCREIF-ODCE (Gross)	Jan 1978 - Dec 2008 (31 yrs) (Q)	9.06%	4.23%
Real Estate - Value Added	10.00%	18.50%	NCREIF Property + 2%	Jan 1978 - Dec 2008 (31 yrs) (Q)	11.45%	3.89%
Absolute Return	8.00%	7.75%	HFN FOF Multi-Strat (Net)	Jan 1982 - Dec 2008 (27 yrs)	12.73%	5.91%
Private Equity	12.50%	29.75%	S&P 500 + 5%	Jan 1926 - Dec 2008 (83 yrs)	16.05%	19.17%
Convertibles	5.75%	9.50%	ML Convertible Bonds All Qualities	Jan 1988 - Dec 2008 (21 yrs)	8.15%	11.39%
Cash Equivalents	3.25%	2.00%	U.S. 30-Day T-Bill	Jan 1926 - Dec 2008 (83 yrs)	3.65%	0.87%

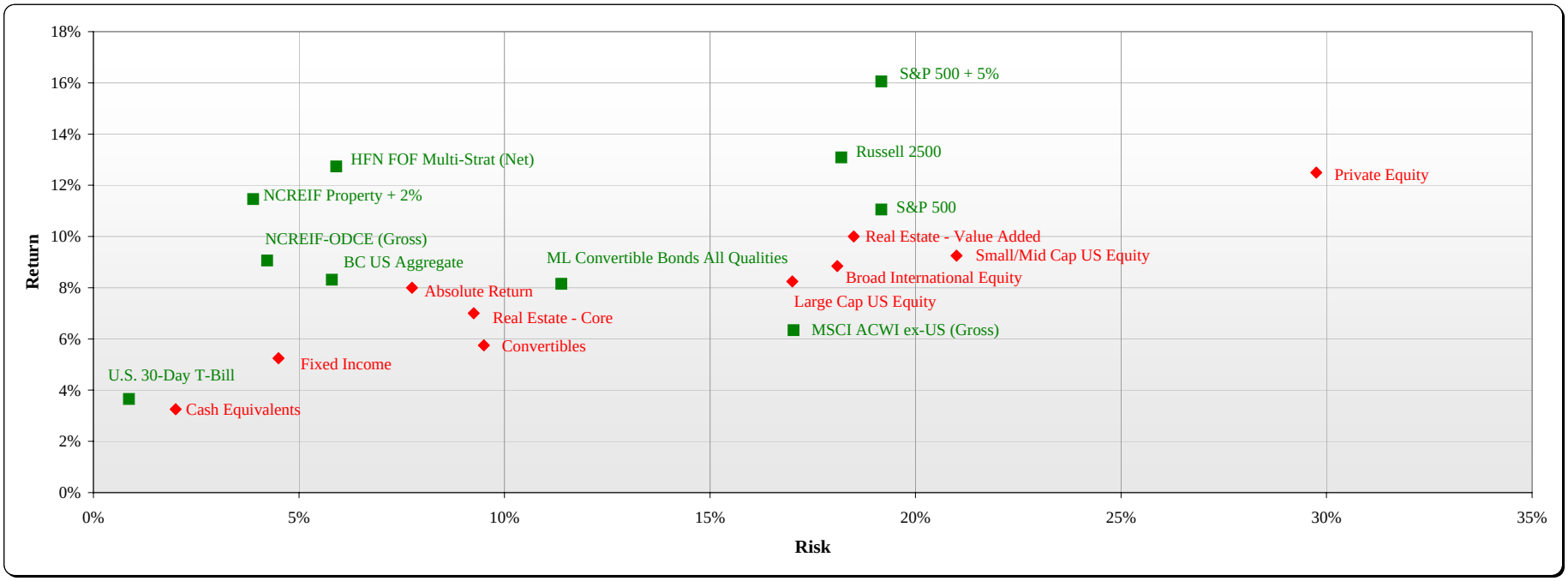


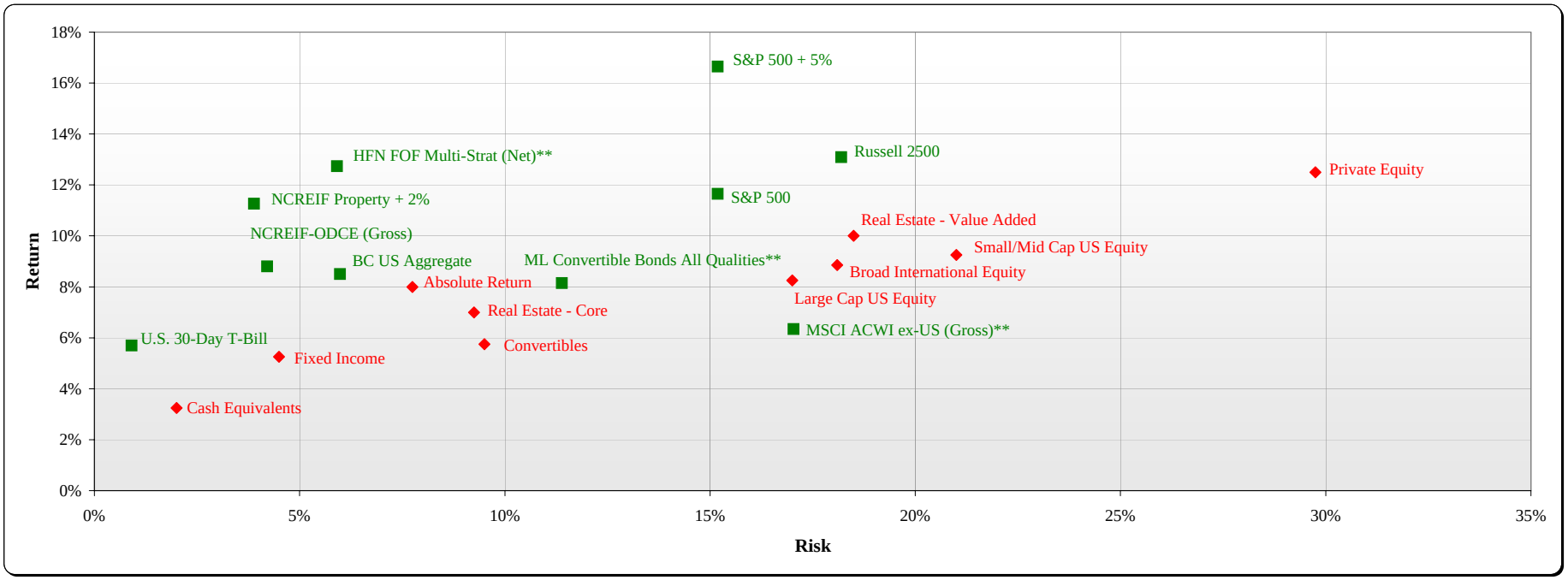
Figure 1b

RV Kuhns Assumptions vs Longest Common Time Frame

(** Not included in the common time frame due to a lack of performance history.)

Longest Common Time Frame statistics are calculated based on monthly periodicity, except where noted by a (Q) for quarterly periodicity.

Asset Class	Return Assumption	Risk Assumption	Index	Longest Common Time Frame	Annualized Return	Annualized Risk
Large Cap US Equity	8.25%	17.00%	S&P 500	Jan 1979 - Dec 2008 (30 yrs)	11.65%	15.19%
Small/Mid Cap US Equity	9.25%	21.00%	Russell 2500	Jan 1979 - Dec 2008 (30 yrs)	13.09%	18.20%
Broad International Equity	8.85%	18.10%	MSCI ACWI ex-US (Gross)**	Jan 1988 - Dec 2008 (21 yrs)	6.34%	17.04%
Fixed Income	5.25%	4.50%	BC US Aggregate	Jan 1979 - Dec 2008 (30 yrs)	8.50%	5.99%
Real Estate - Core	7.00%	9.25%	NCREIF-ODCE (Gross)	Jan 1979 - Dec 2008 (30 yrs) (Q)	8.80%	4.21%
Real Estate - Value Added	10.00%	18.50%	NCREIF Property + 2%	Jan 1979 - Dec 2008 (30 yrs) (Q)	11.26%	3.89%
Absolute Return	8.00%	7.75%	HFN FOF Multi-Strat (Net)**	Jan 1982 - Dec 2008 (27 yrs)	12.73%	5.91%
Private Equity	12.50%	29.75%	S&P 500 + 5%	Jan 1979 - Dec 2008 (30 yrs)	16.65%	15.19%
Convertibles	5.75%	9.50%	ML Convertible Bonds All Qualities**	Jan 1988 - Dec 2008 (21 yrs)	8.15%	11.39%
Cash Equivalents	3.25%	2.00%	U.S. 30-Day T-Bill	Jan 1979 - Dec 2008 (30 yrs)	5.69%	0.91%



Efficient Allocation

The table below shows the current allocation for each of the State's Permanent Funds as of December 31, 2008. In addition, the table also shows the current long-term target for each Fund.

Permanent Funds

Asset Classes	Min	Max	December 31, 2008 Allocations						Current Long-Term Targets					
			PMTF Current	CSPLF Current	PLF Current	UPLF Current	Hathaway Current	Higher Ed. Current	PMTF Long-Term Target	CSPLF Long-Term Target	PLF Long-Term Target	UPLF Long-Term Target	Hathaway Long Term Target	Higher Ed. Long Term Target
Large Cap US Equity	15	40	14.3	14.3	13.9	15.0	9.4	10.1	16.0	16.0	16.0	16.0	16.0	16.0
Small/Mid Cap US Equity	3	10	6.5	6.5	6.3	6.8	4.3	4.6	8.0	8.0	8.0	8.0	8.0	8.0
Broad International Equity	5	20	10.4	10.3	10.0	11.4	7.4	7.8	14.0	14.0	14.0	14.0	14.0	14.0
Fixed Income	0	100	42.7	32.9	36.6	33.3	45.2	47.7	43.0	43.0	41.0	41.0	41.0	41.0
Real Estate - Core	0	5	4.8	4.6	4.5	5.0	2.0	2.3	4.0	4.0	4.0	4.0	4.0	4.0
Real Estate - Value Added	0	3.5	0.1	0.3	0.3	0.3	0.3	0.3	1.0	1.0	1.0	1.0	1.0	1.0
Absolute Return	0	5	2.6	2.6	2.6	2.7	1.1	1.2	5.0	5.0	5.0	5.0	5.0	5.0
Private Equity	0	4	5.1	4.9	6.8	5.2	0.0	0.0	4.0	4.0	4.0	4.0	4.0	4.0
Convertibles	2	3	1.6	1.6	1.6	1.7	1.5	1.6	2.0	2.0	2.0	2.0	2.0	2.0
Cash Equivalents	3	5	11.9	22.0	17.4	18.6	28.8	24.4	3.0	3.0	5.0	5.0	5.0	5.0
Total			100	100	100	100	100	100	100	100	100	100	100	100
Total Equity	23	88	44	44	44	46	25	26	52	52	52	52	52	52
Return			6.62	6.41	6.60	6.58	5.49	5.63	7.06	7.06	7.02	7.02	7.02	7.02
Risk (1 Year Holding Period)			7.06	6.89	7.21	7.29	4.55	4.82	8.08	8.08	8.05	8.05	8.05	8.05
Return (Compound)			6.39	6.19	6.36	6.33	5.39	5.52	6.76	6.76	6.72	6.72	6.72	6.72
Risk (3 Year Holding Period)			4.08	3.98	4.16	4.21	2.63	2.78	4.66	4.66	4.65	4.65	4.65	4.65
Risk (5 Year Holding Period)			3.16	3.08	3.22	3.26	2.03	2.16	3.61	3.61	3.60	3.60	3.60	3.60
Risk (7 Year Holding Period)			2.67	2.60	2.73	2.76	1.72	1.82	3.05	3.05	3.04	3.04	3.04	3.04
Risk (10 Year Holding Period)			2.23	2.18	2.28	2.31	1.44	1.52	2.56	2.56	2.55	2.55	2.55	2.55

Group Constraints:
Note [1]: Large Cap Equity must be at least two-thirds (2/3) of total Domestic Equity allocation.
Note [2]: Large Cap Equity must be greater than International Equity.
Note [3]: Total Equity (including core and value added real estate, absolute return, and private equity) not to exceed 55% of the total portfolio.
Note [4]: Total Real Estate not to exceed 7.5% of the total portfolio.
Note [5]: Real Estate - Core to be at least one-half (1/2) of total Real Estate allocation.

Efficient Allocation

Table 3 shows the possible optimal allocations given the selected asset classes and constraints listed under "Min" and "Max." Each frontier portfolio (optimal allocation) is created using target rates of return both above and below the projected rate of return for the current allocation. This range illustrates the trade-off between return and risk; additional return can only be achieved by undertaking additional risk.

Table 3

Asset Classes	Min	Max	1	2	3	4	5	6	7	8	9	10
Large Cap US Equity	15	40	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	20.3
Small/Mid Cap US Equity	3	10	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.5	10.0
Broad International Equity	5	20	5.0	5.0	5.0	5.0	5.0	7.2	11.1	15.0	15.0	20.0
Fixed Income	0	100	65.0	60.3	58.6	58.2	56.3	53.3	49.4	45.5	42.0	39.0
Real Estate - Core	0	5	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	0.4
Real Estate - Value Added	0	3.5	0.0	0.5	2.5	3.5	3.5	3.5	3.5	3.5	3.5	0.4
Absolute Return	0	5	0.0	4.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0
Private Equity	0	4	0.0	0.0	0.0	1.3	3.2	4.0	4.0	4.0	4.0	4.0
Convertibles	2	3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0
Cash Equivalents	3	5	5.0	5.0	3.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Total			100	100	100	100	100	100	100	100	100	100
Total Equity	23	88	28	33	36	37	39	42	46	49	53	55
Return			6.01	6.15	6.29	6.43	6.56	6.70	6.84	6.98	7.12	7.26
Risk (1 Year Holding Period)			5.35	5.38	5.47	5.71	6.02	6.41	6.89	7.40	7.96	9.77
Return (Compound)			5.88	6.01	6.15	6.28	6.39	6.51	6.62	6.72	6.83	6.82
Risk (3 Year Holding Period)			3.09	3.11	3.16	3.30	3.48	3.70	3.98	4.27	4.60	5.64
Risk (5 Year Holding Period)			2.39	2.41	2.45	2.55	2.69	2.87	3.08	3.31	3.56	4.37
Risk (7 Year Holding Period)			2.02	2.03	2.07	2.16	2.28	2.42	2.60	2.80	3.01	3.69
Risk (10 Year Holding Period)			1.69	1.70	1.73	1.81	1.90	2.03	2.18	2.34	2.52	3.09

Group Constraints:
Note [1]: Large Cap Equity must be at least two-thirds (2/3) of total Domestic Equity allocation.
Note [2]: Large Cap Equity must be greater than International Equity.
Note [3]: Total Equity (including core and value added real estate, absolute return, and private equity) not to exceed 55% of the total portfolio.
Note [4]: Total Real Estate not to exceed 7.5% of the total portfolio.
Note [5]: Real Estate - Core to be at least one-half (1/2) of total Real Estate allocation.

The risk and return relationship is illustrated in Figure 3. The risk of each alternative allocation is plotted against the horizontal axis, while the return is measured on the vertical axis. The line connecting the points represents all the optimal portfolios subject to the given constraints and is known as the "efficient frontier." The upward slope of the efficient frontier indicates the direct relationship between return and risk.

Figure 3

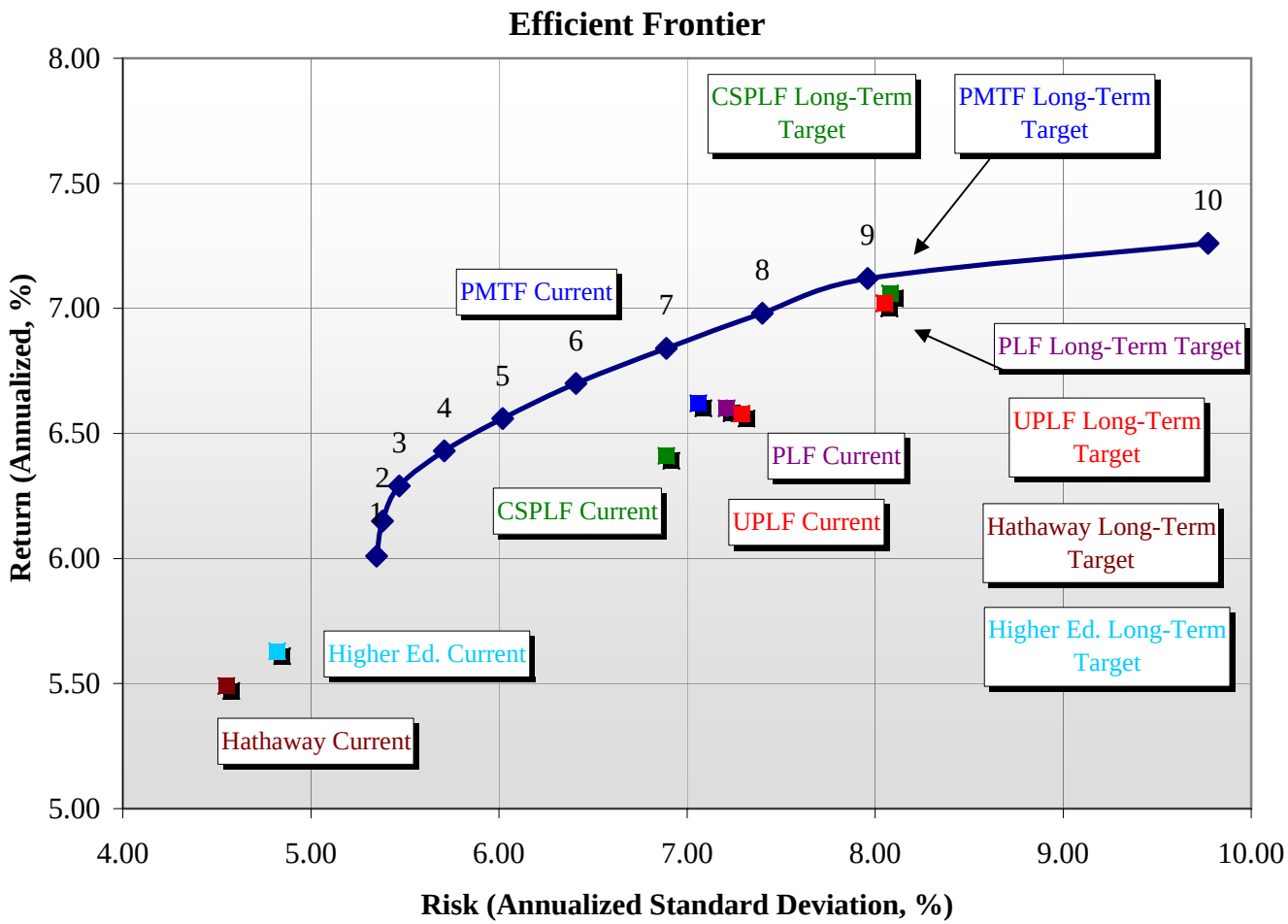


Table 4 shows the possible allocations for a "new" efficient frontier that considers increased allocations to Absolute Return strategies for the Permanent Funds.

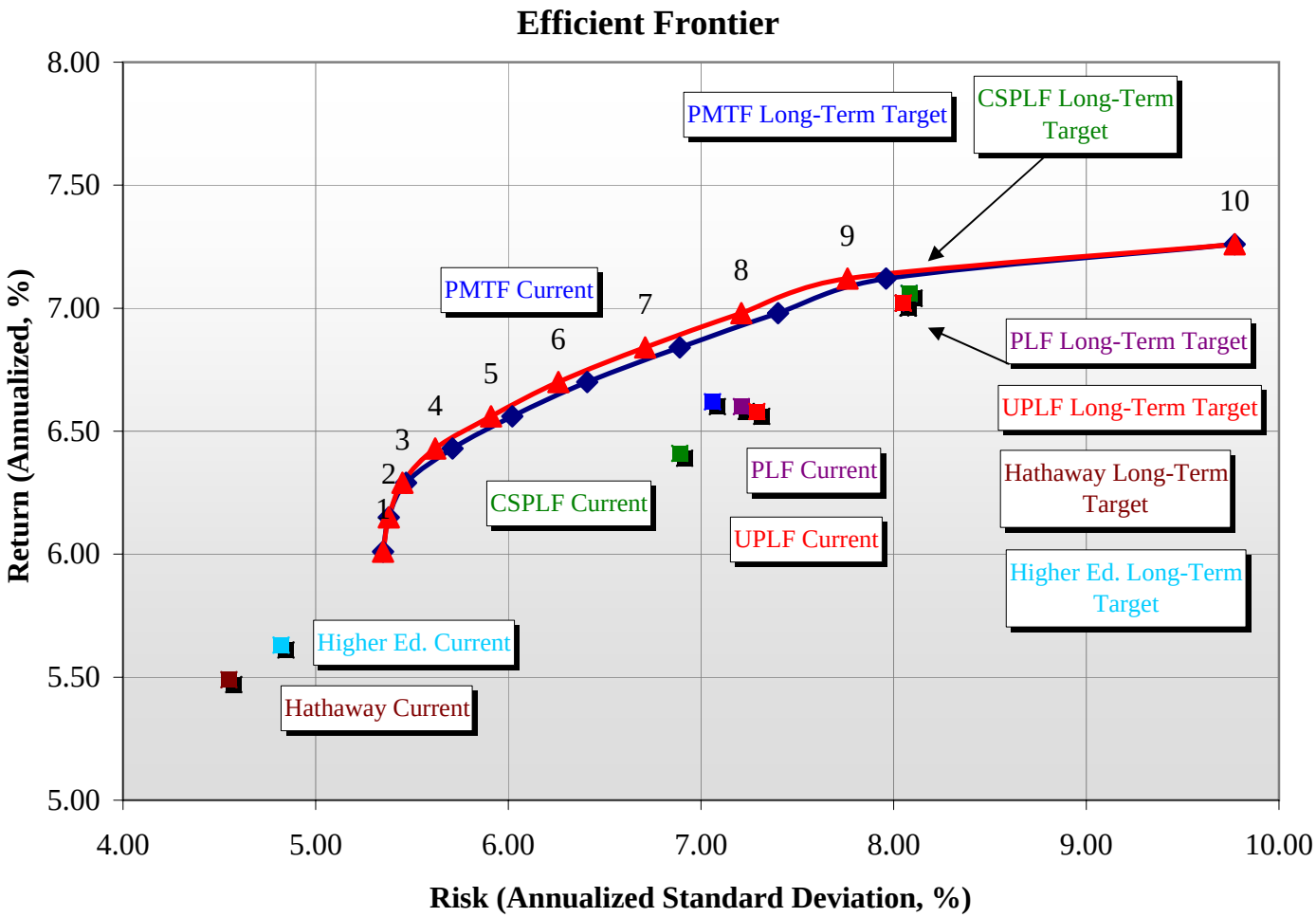
Table 4

Asset Classes	Min	Max	1	2	3	4	5	6	7	8	9	10
Large Cap US Equity	15	40	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	20.3
Small/Mid Cap US Equity	3	10	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.8	10.0
Broad International Equity	5	20	5.0	5.0	5.0	5.0	5.0	5.3	9.2	13.1	15.0	20.0
Fixed Income	0	100	65.0	60.3	56.0	56.7	54.8	52.7	48.8	44.9	41.3	39.0
Real Estate - Core	0	5	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	0.4
Real Estate - Value Added	0	3.5	0.0	0.5	1.5	3.5	3.5	3.5	3.5	3.5	3.5	0.4
Absolute Return	0	7.5	0.0	4.1	7.5	7.5	7.5	7.5	7.5	7.5	7.5	0.0
Private Equity	0	4	0.0	0.0	0.0	0.3	2.2	4.0	4.0	4.0	4.0	4.0
Convertibles	2	3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0
Cash Equivalents	3	5	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Total			100	100	100	100	100	100	100	100	100	100
Total Equity	23	90	28	33	37	38	40	42	46	50	54	55
Return			6.01	6.15	6.29	6.43	6.56	6.70	6.84	6.98	7.12	7.26
Risk (1 Year Holding Period)			5.35	5.38	5.45	5.62	5.91	6.26	6.71	7.21	7.76	9.77
Return (Compound)			5.88	6.01	6.15	6.28	6.40	6.52	6.63	6.74	6.84	6.82
Risk (3 Year Holding Period)			3.09	3.11	3.15	3.24	3.41	3.61	3.87	4.16	4.48	5.64
Risk (5 Year Holding Period)			2.39	2.41	2.44	2.51	2.64	2.80	3.00	3.22	3.47	4.37
Risk (7 Year Holding Period)			2.02	2.03	2.06	2.12	2.23	2.37	2.54	2.73	2.93	3.69
Risk (10 Year Holding Period)			1.69	1.70	1.72	1.78	1.87	1.98	2.12	2.28	2.45	3.09

Group Constraints:
Note [1]: Large Cap Equity must be at least two-thirds (2/3) of total Domestic Equity allocation.
Note [2]: Large Cap Equity must be greater than International Equity.
Note [3]: Total Equity (including core and value added real estate, absolute return, and private equity) not to exceed 55% of the total portfolio.
Note [4]: Total Real Estate not to exceed 7.5% of the total portfolio.
Note [5]: Real Estate - Core to be at least one-half (1/2) of total Real Estate allocation.

The **"new" efficient frontier (red)** has been added to show the new set of efficient portfolios, compared to those on the original Permanent Funds frontier.

Figure 4



Dec 2008 - Dec 2009
Simulations: Annual Return, %
Permanent Funds

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	-10.59	-2.26	2.20	5.68	9.31	15.14	34.55
Portfolio 2	-10.06	-2.19	2.31	5.85	9.51	15.42	33.82
Portfolio 3	-9.84	-2.17	2.40	5.98	9.64	15.62	33.20
Portfolio 4	-10.02	-2.33	2.42	6.10	9.89	16.06	33.61
Portfolio 5	-10.59	-2.60	2.35	6.21	10.23	16.71	33.52
Portfolio 6	-11.91	-3.00	2.27	6.28	10.56	17.43	35.10
Portfolio 7	-13.57	-3.51	2.06	6.35	11.00	18.44	36.89
Portfolio 8	-15.23	-4.08	1.86	6.46	11.42	19.43	38.68
Portfolio 9	-17.02	-4.78	1.60	6.55	11.88	20.62	41.28
Portfolio 10	-22.22	-7.65	0.33	6.47	13.24	24.31	49.99
PMTF Current	-15.05	-4.12	1.61	6.07	10.99	18.93	38.20
PMTF Long-Term Target	-17.92	-5.36	1.32	6.40	12.02	21.15	42.53
CSPLF Current	-15.12	-4.05	1.52	5.87	10.68	18.48	37.18
CSPLF Long-Term Target	-17.92	-5.36	1.32	6.40	12.02	21.15	42.53
PLF Long-Term Target	-17.97	-5.35	1.30	6.39	11.96	21.08	42.37
PLF Current	-15.91	-4.31	1.50	6.02	11.04	19.25	39.60
UPLF Current	-16.18	-4.53	1.43	6.01	11.08	19.32	39.13
UPLF Long-Term Target	-17.97	-5.35	1.30	6.39	11.96	21.08	42.37
Hathaway Current	-8.59	-1.62	2.26	5.24	8.32	13.33	28.81
Hathaway Long-Term Target	-17.97	-5.35	1.30	6.39	11.96	21.08	42.37
Higher Ed. Current	-9.14	-1.86	2.22	5.36	8.63	13.96	30.27
Higher Ed. Long-Term Target	-17.97	-5.35	1.30	6.39	11.96	21.08	42.37

Dec 2008 - Dec 2011
Simulations: Annual Return, %
Permanent Funds

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	-5.84	0.95	3.80	5.82	7.88	11.02	19.04
Portfolio 2	-5.48	1.08	3.91	5.95	8.04	11.20	19.02
Portfolio 3	-5.11	1.17	4.04	6.10	8.22	11.42	18.95
Portfolio 4	-5.03	1.15	4.11	6.21	8.40	11.71	19.30
Portfolio 5	-5.34	1.02	4.14	6.33	8.62	12.16	20.41
Portfolio 6	-5.78	0.83	4.16	6.45	8.89	12.62	21.60
Portfolio 7	-6.58	0.53	4.08	6.55	9.18	13.24	23.70
Portfolio 8	-7.38	0.16	3.98	6.65	9.47	13.92	25.78
Portfolio 9	-8.25	-0.24	3.87	6.78	9.78	14.61	28.02
Portfolio 10	-11.16	-1.97	3.10	6.76	10.48	16.66	34.05
PMTF Current	-7.17	0.01	3.66	6.31	9.07	13.44	24.57
PMTF Long-Term Target	-8.66	-0.57	3.64	6.68	9.81	14.88	28.56
CSPLF Current	-7.24	-0.06	3.52	6.10	8.81	13.07	24.05
CSPLF Long-Term Target	-8.66	-0.57	3.64	6.68	9.81	14.88	28.56
PLF Long-Term Target	-8.69	-0.59	3.62	6.64	9.76	14.80	28.47
PLF Current	-7.38	-0.13	3.61	6.28	9.10	13.60	24.86
UPLF Current	-7.78	-0.26	3.52	6.25	9.11	13.64	25.52
UPLF Long-Term Target	-8.69	-0.59	3.62	6.64	9.76	14.80	28.47
Hathaway Current	-4.37	1.20	3.61	5.36	7.11	9.78	15.89
Hathaway Long-Term Target	-8.69	-0.59	3.62	6.64	9.76	14.80	28.47
Higher Ed. Current	-4.72	1.08	3.65	5.48	7.34	10.20	16.57
Higher Ed. Long-Term Target	-8.69	-0.59	3.62	6.64	9.76	14.80	28.47

Dec 2008 - Dec 2013
Simulations: Annual Return, %
Permanent Funds

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	-3.17	2.11	4.27	5.87	7.48	9.85	15.13
Portfolio 2	-3.15	2.23	4.39	5.98	7.62	10.03	15.30
Portfolio 3	-3.07	2.33	4.51	6.10	7.77	10.19	15.66
Portfolio 4	-3.10	2.37	4.58	6.23	7.96	10.46	15.99
Portfolio 5	-3.46	2.27	4.60	6.35	8.16	10.82	16.69
Portfolio 6	-3.84	2.15	4.63	6.46	8.38	11.18	17.49
Portfolio 7	-4.30	1.97	4.60	6.57	8.63	11.65	18.41
Portfolio 8	-4.77	1.75	4.56	6.69	8.90	12.15	19.54
Portfolio 9	-5.45	1.49	4.49	6.78	9.16	12.69	20.52
Portfolio 10	-9.15	0.10	3.92	6.76	9.71	14.20	24.20
PMTF Current	-5.40	1.50	4.25	6.31	8.48	11.70	18.89
PMTF Long-Term Target	-6.58	1.15	4.32	6.69	9.14	12.84	21.17
CSPLF Current	-5.09	1.40	4.11	6.10	8.22	11.39	18.41
CSPLF Long-Term Target	-6.58	1.15	4.32	6.69	9.14	12.84	21.17
PLF Long-Term Target	-6.53	1.14	4.28	6.64	9.10	12.79	21.10
PLF Current	-5.44	1.38	4.21	6.28	8.48	11.83	19.18
UPLF Current	-5.51	1.26	4.13	6.26	8.48	11.86	19.28
UPLF Long-Term Target	-6.53	1.14	4.28	6.64	9.10	12.79	21.10
Hathaway Current	-2.65	2.16	4.01	5.37	6.73	8.80	13.40
Hathaway Long-Term Target	-6.53	1.14	4.28	6.64	9.10	12.79	21.10
Higher Ed. Current	-2.96	2.11	4.06	5.49	6.94	9.13	14.02
Higher Ed. Long-Term Target	-6.53	1.14	4.28	6.64	9.10	12.79	21.10

Dec 2008 - Dec 2018
Simulations: Annual Return, %
Permanent Funds

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	0.05	3.14	4.72	5.86	6.98	8.64	12.56
Portfolio 2	0.12	3.25	4.85	5.99	7.13	8.79	12.49
Portfolio 3	0.19	3.37	4.97	6.11	7.28	8.97	12.44
Portfolio 4	0.18	3.40	5.06	6.24	7.45	9.18	12.61
Portfolio 5	0.16	3.40	5.13	6.36	7.64	9.46	12.92
Portfolio 6	0.09	3.35	5.18	6.47	7.84	9.77	13.57
Portfolio 7	-0.25	3.24	5.19	6.59	8.05	10.10	14.41
Portfolio 8	-0.64	3.10	5.19	6.69	8.26	10.44	15.29
Portfolio 9	-1.11	2.92	5.18	6.79	8.47	10.83	16.21
Portfolio 10	-3.85	1.95	4.75	6.76	8.86	11.91	19.23
PMTF Current	-0.87	2.83	4.89	6.33	7.87	10.05	14.71
PMTF Long-Term Target	-1.64	2.70	5.04	6.70	8.45	10.93	16.62
CSPLF Current	-0.92	2.70	4.72	6.14	7.62	9.74	14.30
CSPLF Long-Term Target	-1.64	2.70	5.04	6.70	8.45	10.93	16.62
PLF Long-Term Target	-1.68	2.67	5.01	6.66	8.41	10.88	16.55
PLF Current	-1.04	2.74	4.83	6.30	7.87	10.08	14.83
UPLF Current	-1.26	2.64	4.78	6.28	7.86	10.10	15.03
UPLF Long-Term Target	-1.68	2.67	5.01	6.66	8.41	10.88	16.55
Hathaway Current	0.35	3.06	4.42	5.37	6.34	7.74	10.80
Hathaway Long-Term Target	-1.68	2.67	5.01	6.66	8.41	10.88	16.55
Higher Ed. Current	0.22	3.07	4.49	5.50	6.53	8.01	11.23
Higher Ed. Long-Term Target	-1.68	2.67	5.01	6.66	8.41	10.88	16.55

Efficient Allocation

The table below shows the current allocation for the State's Worker's Compensation Fund as of December 31, 2008. In addition, the table also shows the current long-term target for the Fund.

Worker's Compensation Fund

Asset Classes	Min	Max	Workers Current	Workers Long Term Target	1	2	3	4	5	6	7	8	9	10
Large Cap US Equity	0	15	5.5	8.0	0.4	2.2	3.9	5.1	6.3	7.5	8.6	9.8	11.5	15.0
Small/Mid Cap US Equity	0	5	2.5	4.0	0.0	0.0	0.0	0.0	0.4	1.3	2.6	3.5	5.0	5.0
Broad International Equity	0	10	4.4	7.0	0.4	2.2	3.9	5.1	6.3	7.5	8.6	9.8	10.0	10.0
Fixed Income	0	100	59.8	65.0	80.2	76.7	73.2	72.9	71.0	67.7	65.2	61.9	58.5	54.0
Real Estate - Core	0	3	1.3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Absolute Return	0	3	1.3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Convertibles	2	3	2.4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	3.0
Cash Equivalents	7	10	22.8	7.0	10.0	10.0	10.0	8.0	7.0	7.0	7.0	7.0	7.0	7.0
Total			100	100	100	100	100	100	100	100	100	100	100	100
Total Equity	0	36	15	25	7	10	14	16	19	22	26	29	32	36
Return			5.30	5.93	5.24	5.36	5.47	5.59	5.71	5.82	5.94	6.05	6.17	6.28
Risk (1 Year Holding Period)			3.88	4.93	3.75	3.79	3.91	4.11	4.33	4.61	4.94	5.30	5.71	6.20
Return (Compound)			5.23	5.82	5.17	5.29	5.40	5.51	5.62	5.72	5.83	5.92	6.02	6.10
Risk (3 Year Holding Period)			2.24	2.85	2.17	2.19	2.26	2.37	2.50	2.66	2.85	3.06	3.30	3.58
Risk (5 Year Holding Period)			1.74	2.20	1.68	1.69	1.75	1.84	1.94	2.06	2.21	2.37	2.55	2.77
Risk (7 Year Holding Period)			1.47	1.86	1.42	1.43	1.48	1.55	1.64	1.74	1.87	2.00	2.16	2.34
Risk (10 Year Holding Period)			1.23	1.56	1.19	1.20	1.24	1.30	1.37	1.46	1.56	1.68	1.81	1.96

Group Constraints:
Note [1]: Large Cap must be at least two-thirds of total Domestic Equity allocation.
Note [2]: Large Cap Equity must be greater than International Equity.

The below efficient frontier shows the set of efficient portfolios for the Worker's Compensation Fund.

Figure 5

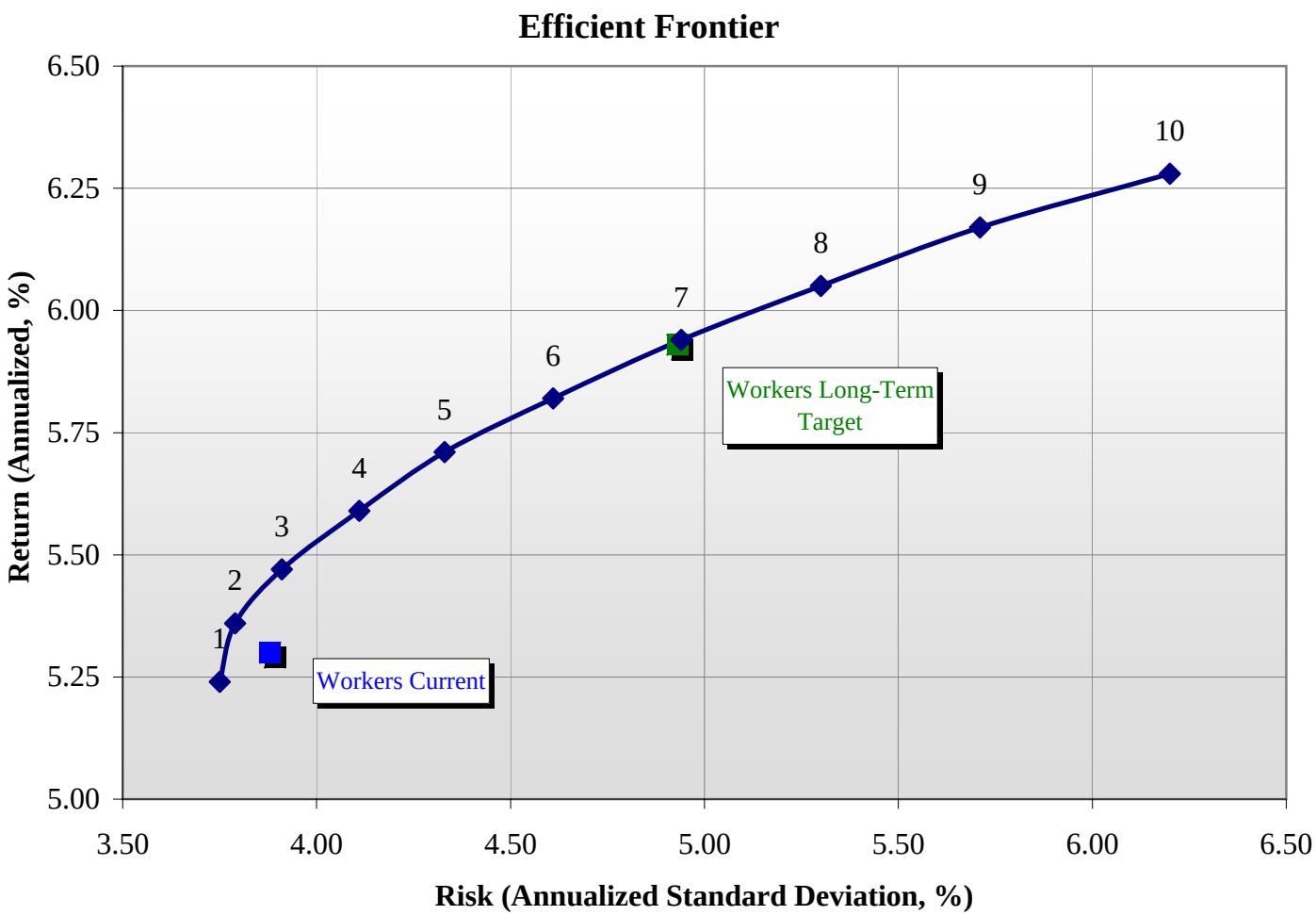


Table 6 shows the possible allocations for a “new” efficient frontier that considers increased allocations to Absolute Return strategies for the Worker's Compensation Fund.

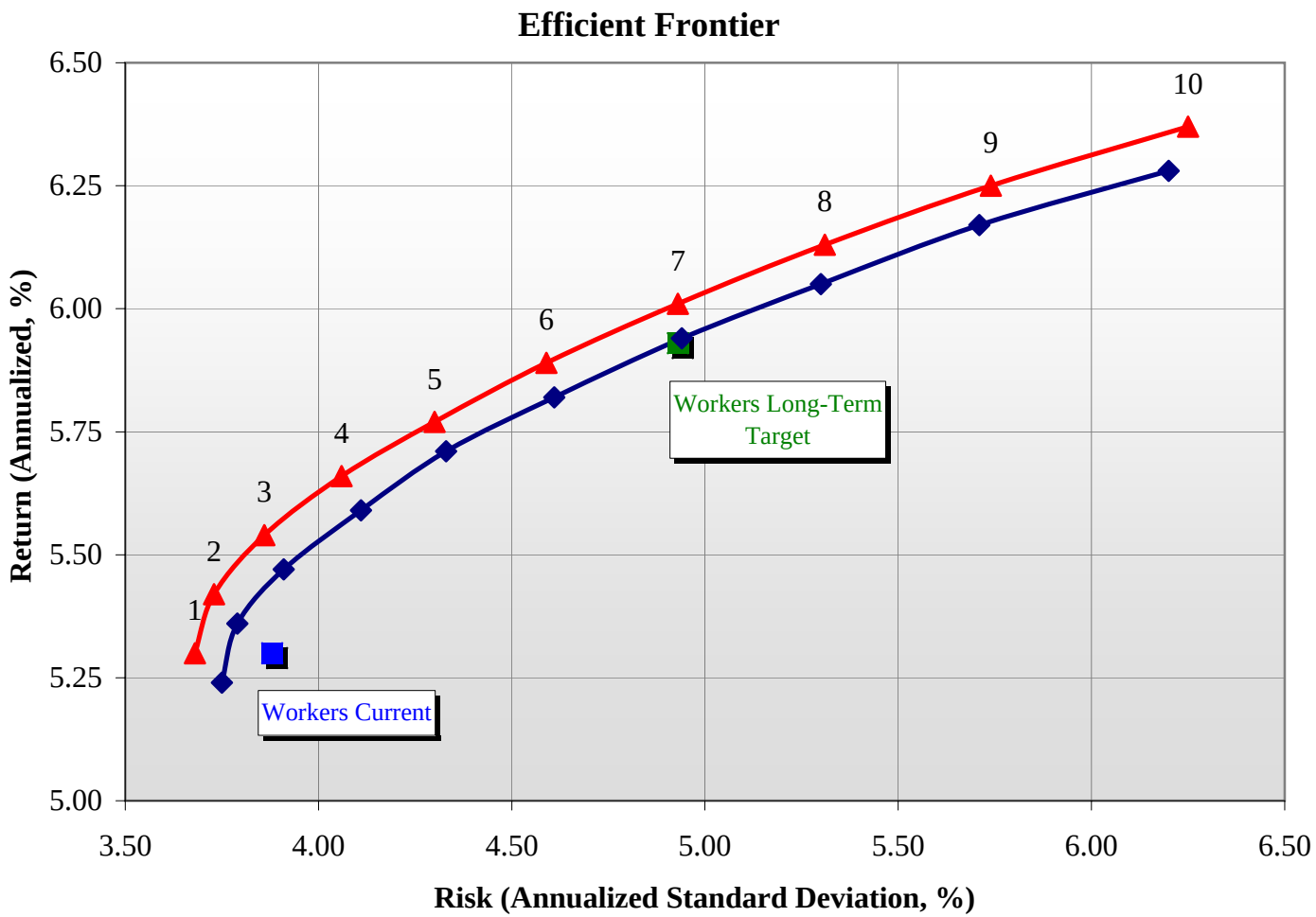
Table 6

Asset Classes	Min	Max	Workers Current	Workers Long Term Target	1	2	3	4	5	6	7	8	9	10
Large Cap US Equity	0	15	5.5	8.0	0.0	1.8	3.6	4.6	6.2	7.4	8.6	9.8	11.4	15.0
Small/Mid Cap US Equity	0	5	2.5	4.0	0.0	0.0	0.0	0.0	0.2	1.2	2.5	3.4	5.0	5.0
Broad International Equity	0	10	4.4	7.0	0.0	1.8	3.6	4.6	6.2	7.4	8.6	9.8	10.0	10.0
Fixed Income	0	100	59.8	65.0	77.9	74.3	70.7	71.5	68.4	65.0	62.4	59.0	55.6	51.0
Real Estate - Core	0	3	1.3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Absolute Return	0	6	1.3	3.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Convertibles	2	3	2.4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	3.0
Cash Equivalents	7	10	22.8	7.0	10.0	10.0	10.0	7.3	7.0	7.0	7.0	7.0	7.0	7.0
Total			100	100	100	100	100	100	100	100	100	100	100	100
Total Equity	0	39	15	25	9	13	16	18	22	25	29	32	35	39
Return			5.30	5.93	5.30	5.42	5.54	5.66	5.77	5.89	6.01	6.13	6.25	6.37
Risk (1 Year Holding Period)			3.88	4.93	3.68	3.73	3.86	4.06	4.30	4.59	4.93	5.31	5.74	6.25
Return (Compound)			5.23	5.82	5.24	5.35	5.47	5.58	5.68	5.79	5.90	6.00	6.10	6.19
Risk (3 Year Holding Period)			2.24	2.85	2.12	2.15	2.23	2.34	2.48	2.65	2.85	3.07	3.31	3.61
Risk (5 Year Holding Period)			1.74	2.20	1.65	1.67	1.73	1.82	1.92	2.05	2.20	2.37	2.57	2.80
Risk (7 Year Holding Period)			1.47	1.86	1.39	1.41	1.46	1.53	1.63	1.73	1.86	2.01	2.17	2.36
Risk (10 Year Holding Period)			1.23	1.56	1.16	1.18	1.22	1.28	1.36	1.45	1.56	1.68	1.82	1.98

Group Constraints:
Note [1]: Large Cap must be at least two-thirds of total Domestic Equity allocation.
Note [2]: Large Cap Equity must be greater than International Equity.

The **"new" efficient frontier (red)** has been added to show the new set of efficient portfolios, compared to those on the original Worker's Compensation Fund frontier.

Figure 6



Dec 2008 - Dec 2009
Simulations: Annual Return, %
Worker's Compensation Fund

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	-6.59	-0.67	2.71	5.14	7.63	11.47	22.52
Portfolio 2	-6.08	-0.56	2.82	5.23	7.79	11.63	23.23
Portfolio 3	-6.59	-0.68	2.83	5.35	7.98	11.95	24.32
Portfolio 4	-7.15	-0.85	2.81	5.46	8.23	12.40	25.54
Portfolio 5	-7.76	-1.02	2.73	5.55	8.54	13.02	26.91
Portfolio 6	-8.38	-1.33	2.63	5.63	8.80	13.66	28.56
Portfolio 7	-9.08	-1.69	2.49	5.74	9.10	14.40	30.34
Portfolio 8	-9.69	-2.09	2.31	5.86	9.44	15.19	31.99
Portfolio 9	-10.45	-2.62	2.16	5.90	9.79	16.15	34.12
Portfolio 10	-12.03	-3.22	1.95	5.97	10.26	17.18	36.10
Workers Current	-7.53	-0.82	2.57	5.09	7.76	11.84	26.01
Workers Long-Term Target	-9.47	-1.72	2.41	5.65	9.02	14.27	31.53

Dec 2008 - Dec 2011
Simulations: Annual Return, %
Worker's Compensation Fund

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	-3.36	1.78	3.79	5.23	6.68	8.73	13.93
Portfolio 2	-3.64	1.85	3.89	5.35	6.80	8.87	14.39
Portfolio 3	-3.92	1.85	3.96	5.46	6.95	9.14	14.85
Portfolio 4	-4.23	1.81	4.00	5.57	7.13	9.43	15.36
Portfolio 5	-4.52	1.70	4.02	5.66	7.33	9.75	15.89
Portfolio 6	-4.81	1.53	4.02	5.77	7.54	10.16	16.64
Portfolio 7	-5.13	1.35	4.02	5.87	7.76	10.64	17.37
Portfolio 8	-5.42	1.14	3.94	5.95	8.01	11.10	18.22
Portfolio 9	-5.73	0.86	3.85	6.04	8.27	11.67	19.39
Portfolio 10	-6.03	0.50	3.77	6.12	8.55	12.30	21.06
Workers Current	-4.07	1.62	3.71	5.21	6.72	8.92	14.66
Workers Long-Term Target	-5.33	1.30	3.92	5.78	7.68	10.51	17.51

Dec 2008 - Dec 2013
Simulations: Annual Return, %
Worker's Compensation Fund

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	-1.39	2.56	4.14	5.25	6.35	7.96	11.60
Portfolio 2	-1.35	2.65	4.24	5.36	6.48	8.11	11.52
Portfolio 3	-1.31	2.67	4.30	5.49	6.63	8.32	12.16
Portfolio 4	-1.44	2.64	4.35	5.59	6.80	8.59	12.75
Portfolio 5	-1.65	2.61	4.38	5.71	6.97	8.88	13.38
Portfolio 6	-2.22	2.51	4.41	5.79	7.17	9.19	14.04
Portfolio 7	-2.76	2.40	4.41	5.88	7.37	9.57	14.83
Portfolio 8	-3.33	2.21	4.40	5.98	7.59	9.96	15.72
Portfolio 9	-4.00	2.05	4.37	6.07	7.81	10.37	16.54
Portfolio 10	-4.67	1.82	4.32	6.14	8.04	10.86	17.48
Workers Current	-1.64	2.47	4.06	5.23	6.40	8.11	12.10
Workers Long-Term Target	-2.95	2.34	4.33	5.81	7.28	9.48	14.69

Dec 2008 - Dec 2018
Simulations: Annual Return, %
Worker's Compensation Fund

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	0.97	3.35	4.45	5.22	6.02	7.18	9.45
Portfolio 2	1.05	3.46	4.55	5.34	6.15	7.32	9.79
Portfolio 3	1.01	3.49	4.64	5.46	6.29	7.48	10.23
Portfolio 4	0.85	3.49	4.71	5.57	6.43	7.70	10.64
Portfolio 5	0.62	3.49	4.76	5.67	6.59	7.92	11.07
Portfolio 6	0.41	3.43	4.80	5.77	6.76	8.19	11.47
Portfolio 7	0.18	3.35	4.83	5.87	6.95	8.44	11.89
Portfolio 8	-0.03	3.26	4.85	5.97	7.11	8.74	12.29
Portfolio 9	-0.22	3.16	4.85	6.05	7.29	9.05	12.69
Portfolio 10	-0.43	3.01	4.84	6.15	7.49	9.41	13.32

Workers Current	0.76	3.25	4.40	5.22	6.04	7.25	10.14
Workers Long-Term Target	0.22	3.29	4.76	5.80	6.85	8.37	11.88

Efficient Allocation

The table below shows the current allocation for each of the State's Non-Permanent Funds as of December 31, 2008. In addition, the table also shows the current long-term target for each of the Funds.

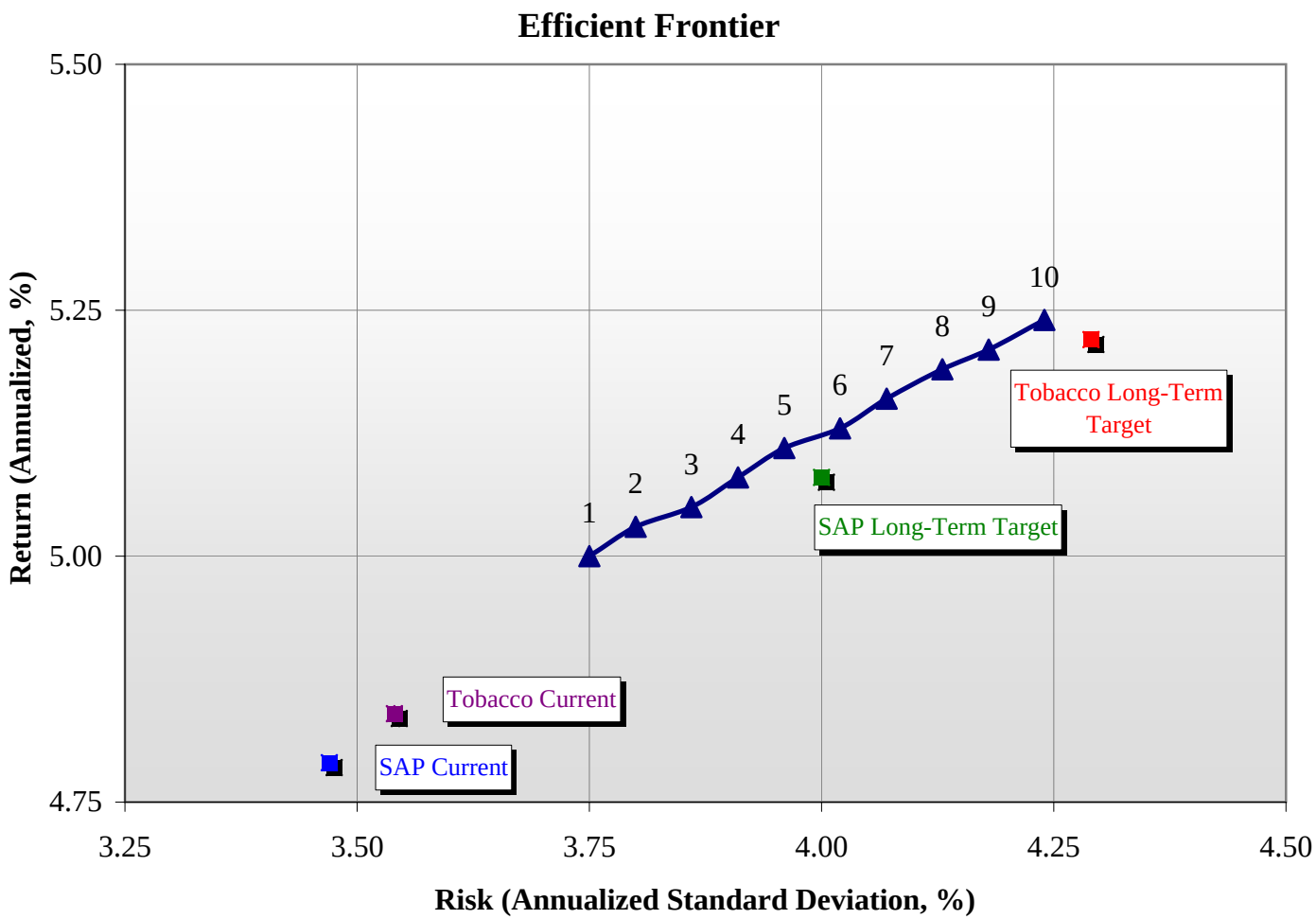
Non-Permanent Funds

Asset Classes	Min	Max	SAP Current	SAP Long-Term Target	Tobacco Current	Tobacco Long-Term Target	1	2	3	4	5	6	7	8	9	10
US Core Fixed Income	0	100	74.0	87.0	75.9	94.0	80.0	81.3	82.7	84.0	85.3	86.7	88.0	89.3	90.7	92.0
Convertibles	0	5	2.1	3.0	2.3	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Cash Equivalents	3	15	23.9	10.0	21.8	3.0	15.0	13.7	12.3	11.0	9.7	8.3	7.0	5.7	4.3	3.0
Total			100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total Equity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return			4.79	5.08	4.84	5.22	5.00	5.03	5.05	5.08	5.11	5.13	5.16	5.19	5.21	5.24
Risk (1 Year Holding Period)			3.47	4.00	3.54	4.29	3.75	3.80	3.86	3.91	3.96	4.02	4.07	4.13	4.18	4.24
Return (Compound)			4.73	5.00	4.78	5.13	4.93	4.96	4.98	5.01	5.04	5.05	5.08	5.11	5.13	5.15
Risk (3 Year Holding Period)			2.00	2.31	2.04	2.48	2.17	2.19	2.23	2.26	2.29	2.32	2.35	2.38	2.41	2.45
Risk (5 Year Holding Period)			1.55	1.79	1.58	1.92	1.68	1.70	1.73	1.75	1.77	1.80	1.82	1.85	1.87	1.90
Risk (7 Year Holding Period)			1.31	1.51	1.34	1.62	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58	1.60
Risk (10 Year Holding Period)			1.10	1.26	1.12	1.36	1.19	1.20	1.22	1.24	1.25	1.27	1.29	1.31	1.32	1.34

Group Constraints:
* None

The below efficient frontier shows the set of efficient portfolios for the Non-Permanent Funds.

Figure 7



Dec 2008 - Dec 2009
Simulations: Annual Return, %
Non-Permanent Funds

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	-7.07	-1.02	2.35	4.83	7.40	11.32	22.78
Portfolio 2	-7.22	-1.07	2.34	4.86	7.45	11.43	23.07
Portfolio 3	-7.37	-1.13	2.32	4.88	7.52	11.54	23.37
Portfolio 4	-7.53	-1.17	2.30	4.90	7.58	11.66	23.66
Portfolio 5	-7.68	-1.23	2.29	4.92	7.64	11.79	23.95
Portfolio 6	-7.83	-1.29	2.28	4.95	7.69	11.91	24.24
Portfolio 7	-7.99	-1.35	2.26	4.98	7.75	12.02	24.53
Portfolio 8	-8.14	-1.41	2.26	5.00	7.81	12.13	24.82
Portfolio 9	-8.29	-1.46	2.24	5.03	7.87	12.24	25.12
Portfolio 10	-8.45	-1.53	2.24	5.05	7.94	12.36	25.41
SAP Current	-6.67	-0.77	2.35	4.64	7.02	10.62	20.89
SAP Long-Term Target	-8.07	-1.32	2.24	4.89	7.63	11.77	23.91
Tobacco Current	-6.86	-0.83	2.33	4.68	7.11	10.78	21.35
Tobacco Long-Term Target	-8.87	-1.64	2.19	5.04	7.95	12.41	25.45

Dec 2008 - Dec 2011
Simulations: Annual Return, %
Non-Permanent Funds

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	-3.68	1.43	3.47	4.93	6.41	8.50	13.83
Portfolio 2	-3.76	1.41	3.47	4.96	6.46	8.57	14.01
Portfolio 3	-3.85	1.37	3.47	4.98	6.51	8.65	14.19
Portfolio 4	-3.98	1.35	3.48	5.00	6.55	8.73	14.38
Portfolio 5	-4.10	1.33	3.48	5.03	6.60	8.80	14.56
Portfolio 6	-4.22	1.29	3.48	5.05	6.64	8.89	14.74
Portfolio 7	-4.35	1.28	3.50	5.07	6.68	8.96	14.92
Portfolio 8	-4.47	1.26	3.50	5.10	6.73	9.03	15.10
Portfolio 9	-4.60	1.23	3.50	5.13	6.78	9.11	15.28
Portfolio 10	-4.72	1.21	3.51	5.15	6.82	9.19	15.46
SAP Current	-3.20	1.49	3.37	4.72	6.12	8.06	12.75
SAP Long-Term Target	-4.36	1.26	3.44	5.00	6.59	8.83	14.60
Tobacco Current	-3.37	1.46	3.39	4.76	6.19	8.17	13.03
Tobacco Long-Term Target	-5.01	1.12	3.46	5.12	6.82	9.24	15.56

Dec 2008 - Dec 2013
Simulations: Annual Return, %
Non-Permanent Funds

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	-1.89	2.23	3.83	4.93	6.09	7.69	11.41
Portfolio 2	-1.96	2.22	3.83	4.96	6.12	7.75	11.55
Portfolio 3	-2.03	2.20	3.84	4.98	6.16	7.82	11.68
Portfolio 4	-2.10	2.18	3.85	5.00	6.21	7.89	11.82
Portfolio 5	-2.17	2.17	3.85	5.03	6.25	7.95	11.95
Portfolio 6	-2.24	2.15	3.86	5.05	6.29	8.01	12.09
Portfolio 7	-2.31	2.14	3.86	5.08	6.33	8.08	12.22
Portfolio 8	-2.38	2.11	3.87	5.11	6.37	8.14	12.35
Portfolio 9	-2.45	2.10	3.88	5.13	6.41	8.21	12.49
Portfolio 10	-2.52	2.09	3.89	5.16	6.45	8.27	12.62
SAP Current	-1.54	2.23	3.71	4.74	5.80	7.30	10.97
SAP Long-Term Target	-2.24	2.12	3.82	5.00	6.23	7.95	12.23
Tobacco Current	-1.64	2.22	3.73	4.78	5.87	7.40	11.15
Tobacco Long-Term Target	-2.61	2.04	3.86	5.14	6.45	8.29	12.94

Dec 2008 - Dec 2018
Simulations: Annual Return, %
Non-Permanent Funds

Frontier 2	0 Percentile	5th Percentile	25th Percentile	50th Percentile	75th Percentile	5th Percentile	100th Percentile
Portfolio 1	0.53	3.03	4.14	4.92	5.73	6.92	9.20
Portfolio 2	0.49	3.03	4.15	4.95	5.77	6.97	9.29
Portfolio 3	0.44	3.03	4.16	4.98	5.80	7.02	9.39
Portfolio 4	0.40	3.03	4.18	5.00	5.84	7.07	9.48
Portfolio 5	0.35	3.02	4.19	5.03	5.87	7.13	9.58
Portfolio 6	0.30	3.02	4.20	5.06	5.91	7.18	9.67
Portfolio 7	0.26	3.02	4.21	5.08	5.94	7.24	9.76
Portfolio 8	0.21	3.02	4.22	5.11	5.98	7.29	9.86
Portfolio 9	0.17	3.02	4.24	5.13	6.02	7.34	9.95
Portfolio 10	0.12	3.01	4.25	5.15	6.05	7.39	10.04
SAP Current	0.59	2.97	3.99	4.73	5.48	6.58	8.70
SAP Long-Term Target	0.19	2.97	4.15	5.00	5.85	7.11	9.64
Tobacco Current	0.53	2.98	4.02	4.77	5.53	6.66	8.84
Tobacco Long-Term Target	-0.06	2.96	4.21	5.14	6.05	7.39	10.13

Long Term Target Recommendations

Asset Allocation

➢ Permanent Funds

Asset Classes	PMTF Long-Term Target	CSPLF Long-Term Target	PLF Long-Term Target	UPLF Long-Term Target	Hathaway Long-Term Target	Higher Ed Long-Term Target	Revised Long-Term Target
Large Cap US Equity	16.0	16.0	16.0	16.0	16.0	16.0	15.0
Small/Mid Cap US Equity	8.0	8.0	8.0	8.0	8.0	8.0	3.0
Broad International Equity	14.0	14.0	14.0	14.0	14.0	14.0	13.0
Fixed Income	43.0	43.0	41.0	41.0	41.0	41.0	45.0 *
Real Estate - Core	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Real Estate - Value Added	1.0	1.0	1.0	1.0	1.0	1.0	3.5
Absolute Return	5.0	5.0	5.0	5.0	5.0	5.0	7.5
Private Equity	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Convertibles	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cash Equivalents	3.0	3.0	5.0	5.0	5.0	5.0	3.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

** Adjusted for cash target. For funds with a cash target of 5%–the fixed income target will be 43%.*

Asset Allocation

- Permanent Funds
  - Modest reduction in allocation to Large Cap Domestic Equity
  - Meaningful decrease in allocation to Small/Mid Cap Domestic Equity
  - Modest decrease in allocation to Broad International Equity

  - Modest increase in allocation to Core Fixed income
  - Meaningful increase in allocation to Value-Added Real Estate
  - Meaningful increase in allocation to Absolute Return

Asset Allocation

- Workers Compensation

Asset Classes	Workers Long-Term Target	Revised Long-Term Target
Large Cap US Equity	8.0	8.0
Small/Mid Cap US Equity	4.0	1.0
Broad International Equity	7.0	7.0
US Core Fixed Income	65.0	65.0
Real Estate - Core	3.0	3.0
Absolute Return	3.0	6.0
Convertibles	3.0	3.0
Cash Equivalents	7.0	7.0
Total	100.0	100.0

Asset Allocation

- Workers Compensation
  - Meaningful decrease in allocation to Small/Mid Cap Domestic Equity
  - Meaningful increase in allocation to Absolute Return

Asset Allocation

- SAP and Tobacco Funds

Asset Classes	SAP Long-Term Target	Revised Long-Term Target
US Core Fixed Income	87.0	87.0
Convertibles	3.0	3.0
Cash Equivalents	10.0	10.0
Total	100.0	100.0

Asset Classes	Tobacco Long-Term Target	Revised Long-Term Target
US Core Fixed Income	94.0	94.0
Convertibles	3.0	3.0
Cash Equivalents	3.0	3.0
Total	100.0	100.0

Asset Allocation

- SAP and Tobacco Funds
  - Recommend no changes to these funds and believe that a substantial allocation to fixed income will continue to provide an appropriate long-term return consistent with the goals of these funds.

Wyoming Objectives

Income Needs

- During 2008 some managers took capital losses resulting in a hit to total net income.
- The Consensus Revenue Estimating Group meets only twice a year: in October and January—it is at these meetings where income estimates are set.
- It is known that active managers focused on total return can produce negative income in the pursuit of higher total economic returns.
- Ways to mitigate the income losses from active management are:
  - move to passive strategies,
  - move to lower turnover active strategies, or
  - reduce the size of high turnover managers through additional manager/style diversification or allocation shift
- *In positive return environment, that coincides with a need for more income, lower turnover strategies represent a different set of challenges.*

Manager Fee Reductions

- Desire to reduce external management fees by $2.5 million.

Equity Structure

Large Cap Domestic Equity

- Based on a structure study previously completed we recommend allocating 25% of the Large Cap Domestic Equity allocation in an Enhanced Index strategy.
  - Adding an Enhanced strategy will provide further manager diversification.
  - Enhanced managers have the capability of taking advantage of current market dislocation.
  - Increases expected information ratio (excess return/active risk)
- The remaining 75% will continue to be invested in a Passive Large Cap Domestic Equity strategy.
- Some fee increase to be expected, but modest relative to full active management.

Frontier Constraints

Min, %	Max, %
50	100
0	50
0	50
0	50

Weights and Returns

	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 4	Portfolio 5	Portfolio 6	Portfolio 7	Portfolio 8	Portfolio 9	Portfolio 10	**Current Allocation**
LC Passive	94.1	69.1	58.5	50.0	50.0	50.0	50.0	50.0	50.0	50.0	**100.0**
LC Enhanced	5.9	25.0	31.1	35.2	29.0	23.0	17.2	11.4	5.7	0.0	**0.0**
LCC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
ACC	0.0	5.9	10.4	14.8	21.0	27.0	32.8	38.6	44.3	50.0	**0.0**
Excess Rtn	0.05	0.29	0.43	0.55	0.68	0.79	0.91	1.02	1.13	1.25	**0.03**
Tracking Error	0.46	0.71	0.96	1.21	1.46	1.71	1.96	2.21	2.45	2.70	**0.47**
Information Ratio	0.12	0.41	0.44	0.46	0.46	0.46	0.46	0.46	0.46	0.46	**0.06**

Group Constraints:
* None

Small/Mid Cap Domestic Equity

- Based on the asset allocation study we recommend reducing the overall allocation to Small/Mid Cap Domestic Equity.
- We continue to be a proponent of active management for Small/Mid Cap Domestic Equity and your managers have both added value.
- Reducing the allocation to Small/Mid Cap Domestic Equity will:
  - Provide a meaningful reduction in your manager fees
  - Reduce potential for income losses from higher turnover managers

Manager Review

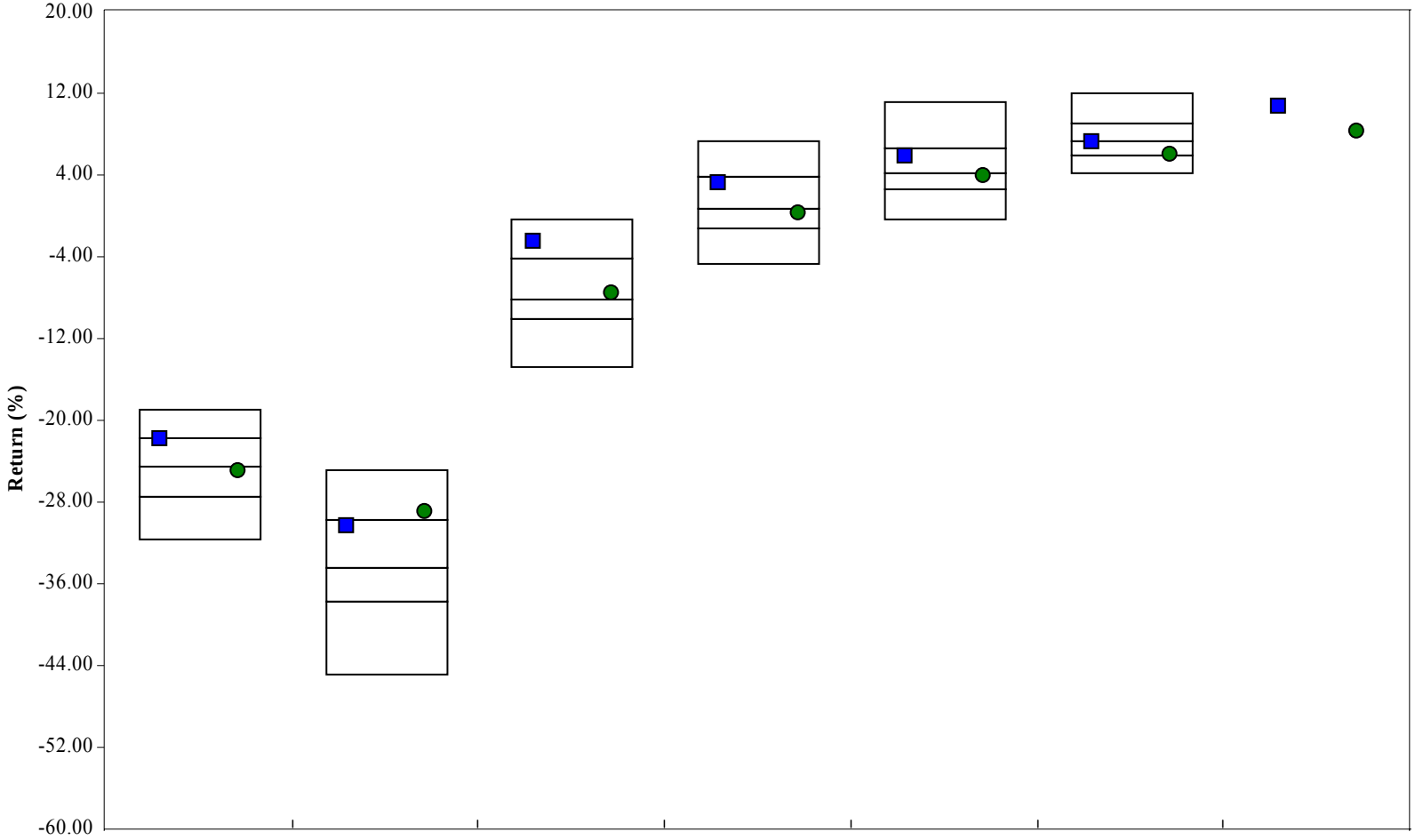
Small/Mid Cap Equity

Gabelli Small Cap Value

- Recommendation: Retention
- Over the 1, 3, 5, 7 and 10 year trailing periods the manager ranks above median in their peer universe.
- Over the 5, 7, 10 and 15 year trailing periods the manager has provided excess return above the R 2000 Value benchmark.
- Prior to 2008, over the past 10 years, they have had only one calendar year with negative performance.
- Over the past 10 years there have been 13 down quarters in the Small Cap Value market—during which time your manager has outperformed the R 2000 Value benchmark by more than 250 basis points.

** Manager data based on longest historical composite performance.*

Wyoming State Treasurer's Office
US Small/Mid Cap Value (SA+CF)
Peer Group Analysis - Trailing Time Periods
As of December 31, 2008

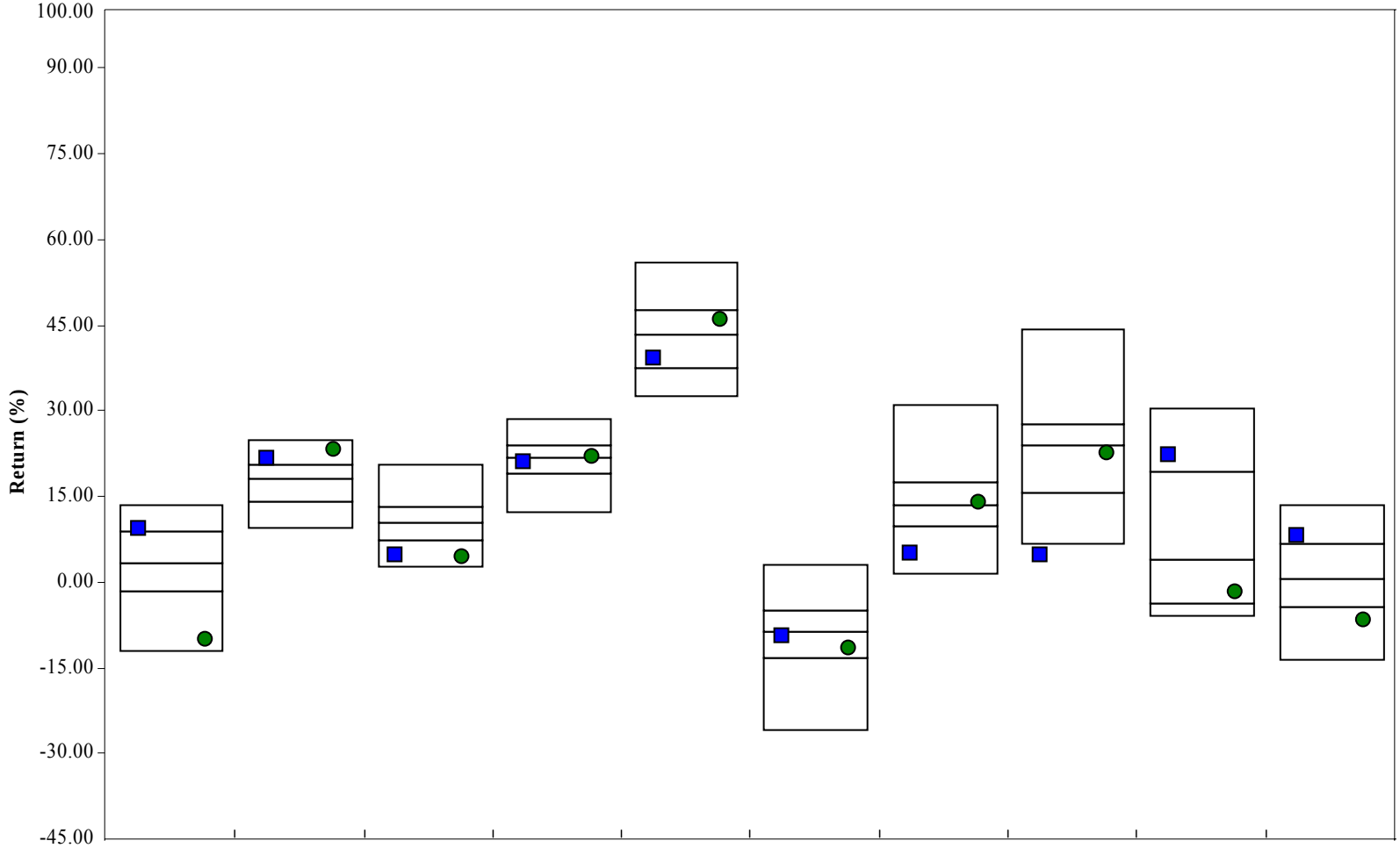


	1 Quarter	1 Year	3 Years	5 Years	7 Years	10 Years	15 Years
Gabelli Small Cap Equity Composite	-21.74 (25)	-30.33 (28)	-2.45 (8)	3.36 (32)	5.90 (35)	7.28 (49)	10.75 (N/A)
R 2000 Value Index	-24.89 (53)	-28.92 (19)	-7.49 (49)	0.27 (55)	3.94 (56)	6.11 (69)	8.39 (N/A)
Median	-24.45	-34.46	-8.12	0.69	4.18	7.23	N/A
Population	69	69	61	52	44	25	4

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.
Performance is annualized for periods greater than one year.

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
US Small/Mid Cap Value (SA+CF)
Peer Group Analysis - Calendar Years
As of December 31, 2008

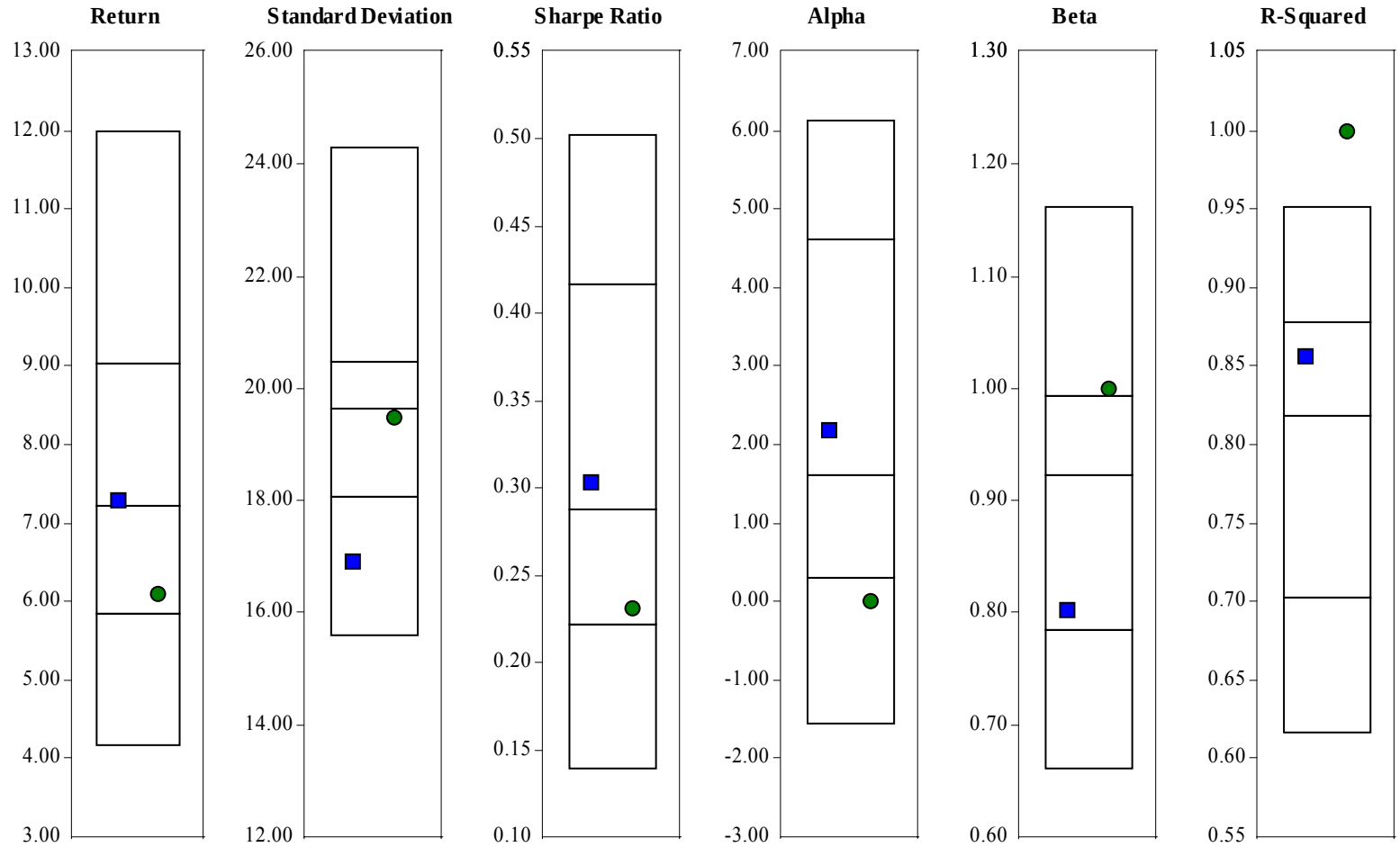


	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
Gabelli Small Cap Equity Composite	9.48 (25)	21.69 (21)	4.82 (90)	21.24 (60)	39.47 (67)	-9.22 (53)	5.17 (89)	4.93 (97)	22.50 (15)	8.36 (15)
R 2000 Value Index	-9.78 (86)	23.48 (11)	4.71 (90)	22.25 (41)	46.03 (31)	-11.43 (67)	14.03 (46)	22.83 (52)	-1.49 (68)	-6.45 (86)
Median	3.19	17.98	10.57	21.72	43.31	-8.73	13.45	24.05	3.94	0.65
Population	71	67	63	57	56	51	47	41	35	28

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
US Small/Mid Cap Value (SA+CF) vs. R 2000 Value Index
Peer Group Analysis - Multi Statistics
As of December 31, 2008



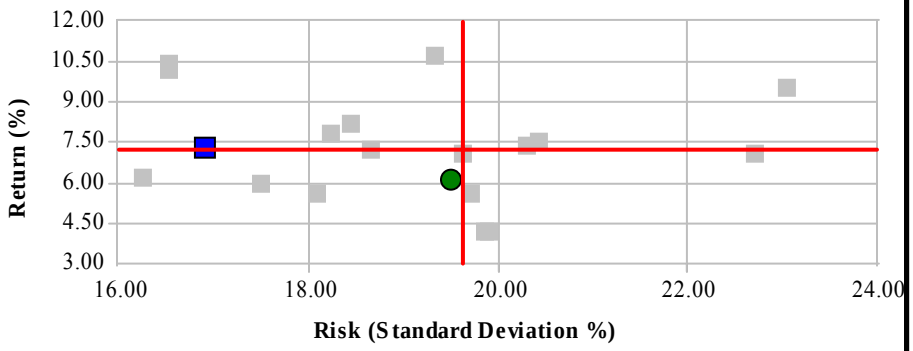
	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
Gabelli Small Cap Equity Composite	7.28 (49)	16.92 (82)	0.30 (41)	2.19 (41)	0.80 (75)	0.86 (33)
R 2000 Value Index	6.11 (69)	19.50 (52)	0.23 (72)	0.00 (77)	1.00 (17)	1.00 (1)
Median	7.23	19.63	0.29	1.62	0.92	0.82
Population	25	25	25	25	25	25

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

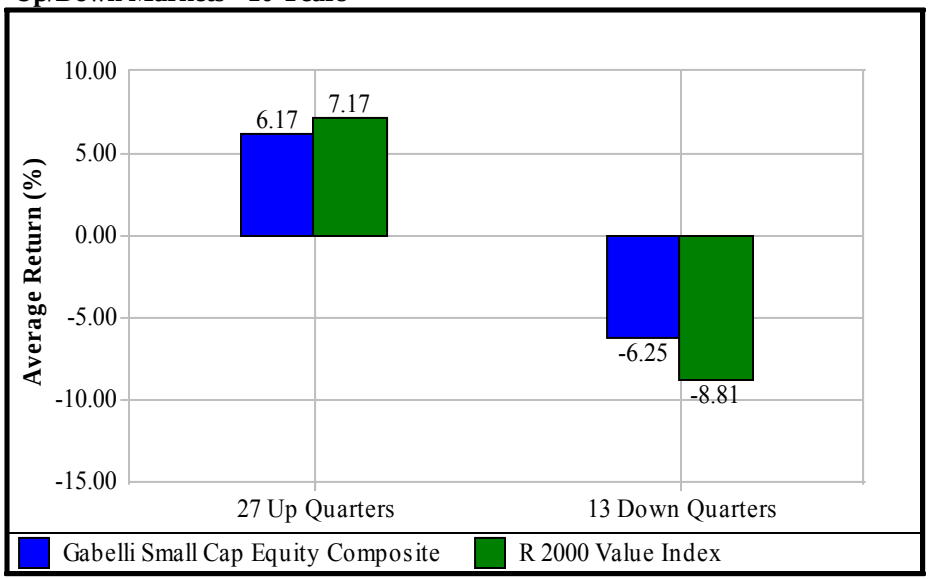
Wyoming State Treasurer's Office
Gabelli Small Cap Equity Composite vs. US Small/Mid Cap Value (SA+CF)
As of December 31, 2008

Peer Group Scattergram - 10 Years

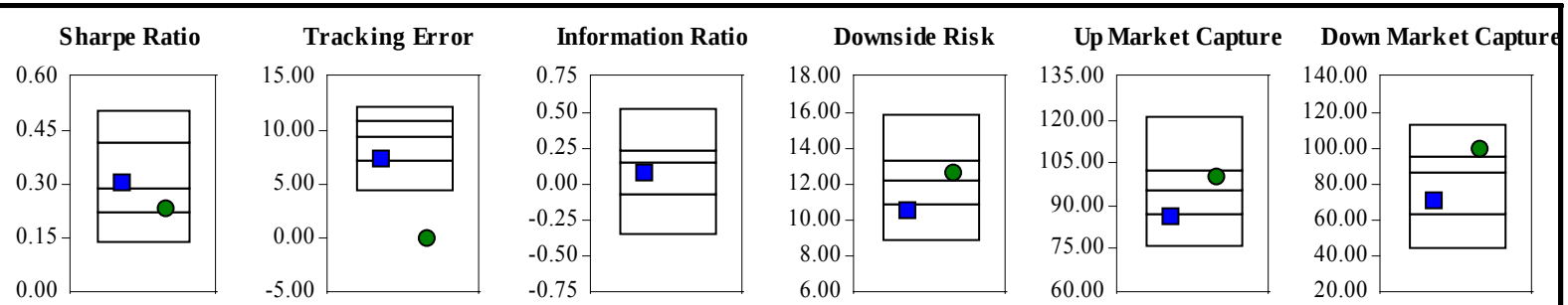


	Return	Standard Deviation
Gabelli Small Cap Equity Composite	7.28	16.92
R 2000 Value Index	6.11	19.50
Median	7.23	19.63

Up/Down Markets - 10 Years



Peer Group Analysis - Multi Statistics



	Sharpe Ratio 10 Years	Tracking Error 10 Years	Information Ratio 10 Years	Downside Risk 10 Years	Up Market Capture 10 Years	Down Market Capture 10 Years
Gabelli Small Cap Equity Composite	0.30 (41)	7.48 (72)	0.08 (68)	10.59 (84)	86.06 (78)	70.94 (72)
R 2000 Value Index	0.23 (72)	0.00 (100)	N/A	12.67 (41)	100.00 (39)	100.00 (18)
Median	0.29	9.36	0.15	12.20	95.44	87.10
Population	25	25	25	25	25	25

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

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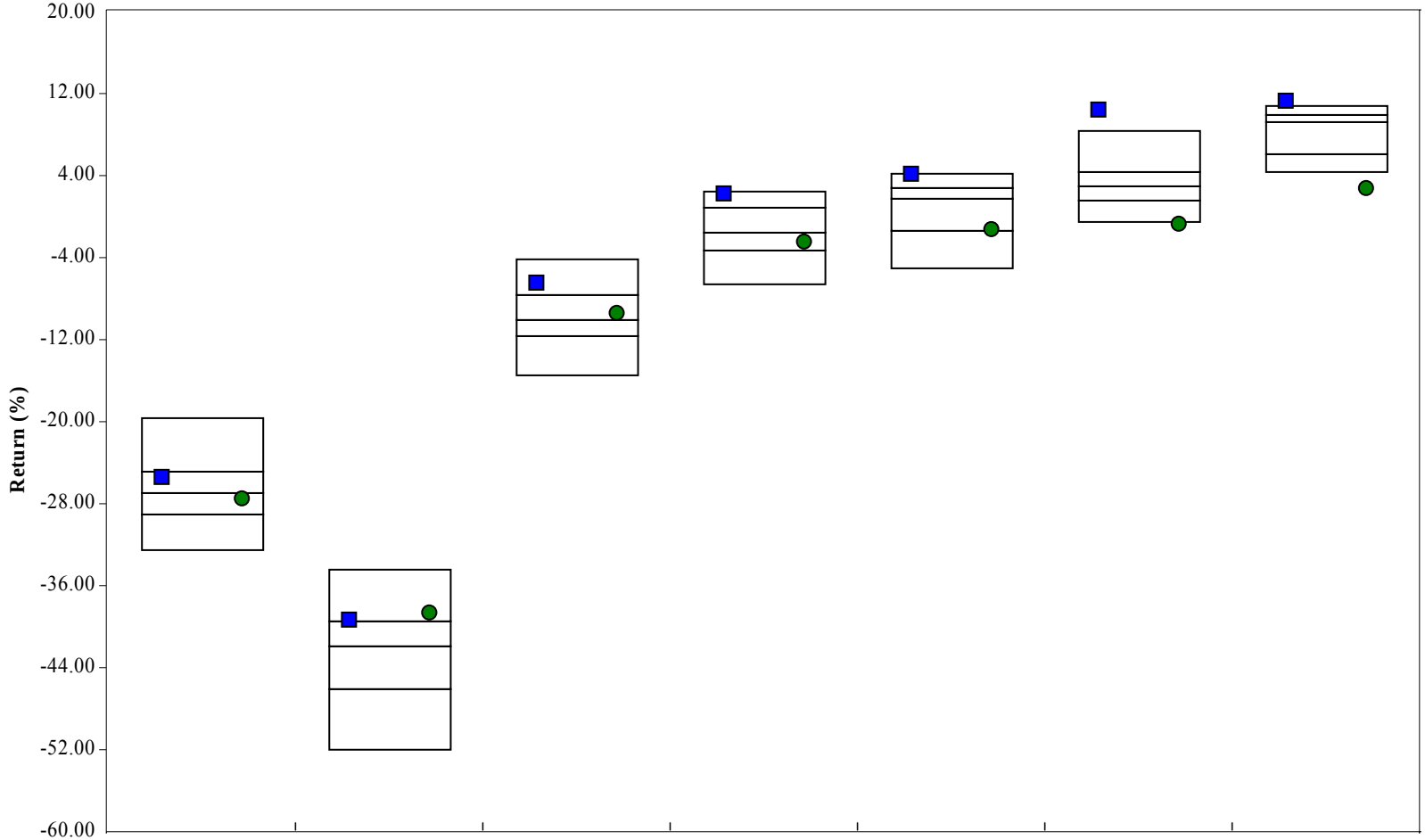
Small/Mid Cap Equity

Friess Small Cap Growth

- Recommendation: Retention
- Over the 1, 3, 5, 7 and 10 year trailing periods the manager has ranked in the top quartile in their peer universe.
- Over the 3, 5, 7, 10 and 15 year trailing periods the manager has provided excess return above the R 2000 Growth benchmark.
- Prior to 2008, over the past 10 years, they have had only two calendar years with negative performance.
- Over the past 10 years there have been 19 down quarters in the Small Cap Growth market—during which time your manager has outperformed the R 2000 Value benchmark by more than 450 basis points.

** Manager data based on longest historical composite performance.*

Wyoming State Treasurer's Office
US Small/Mid Cap Growth (SA+CF)
Peer Group Analysis - Trailing Time Periods
As of December 31, 2008

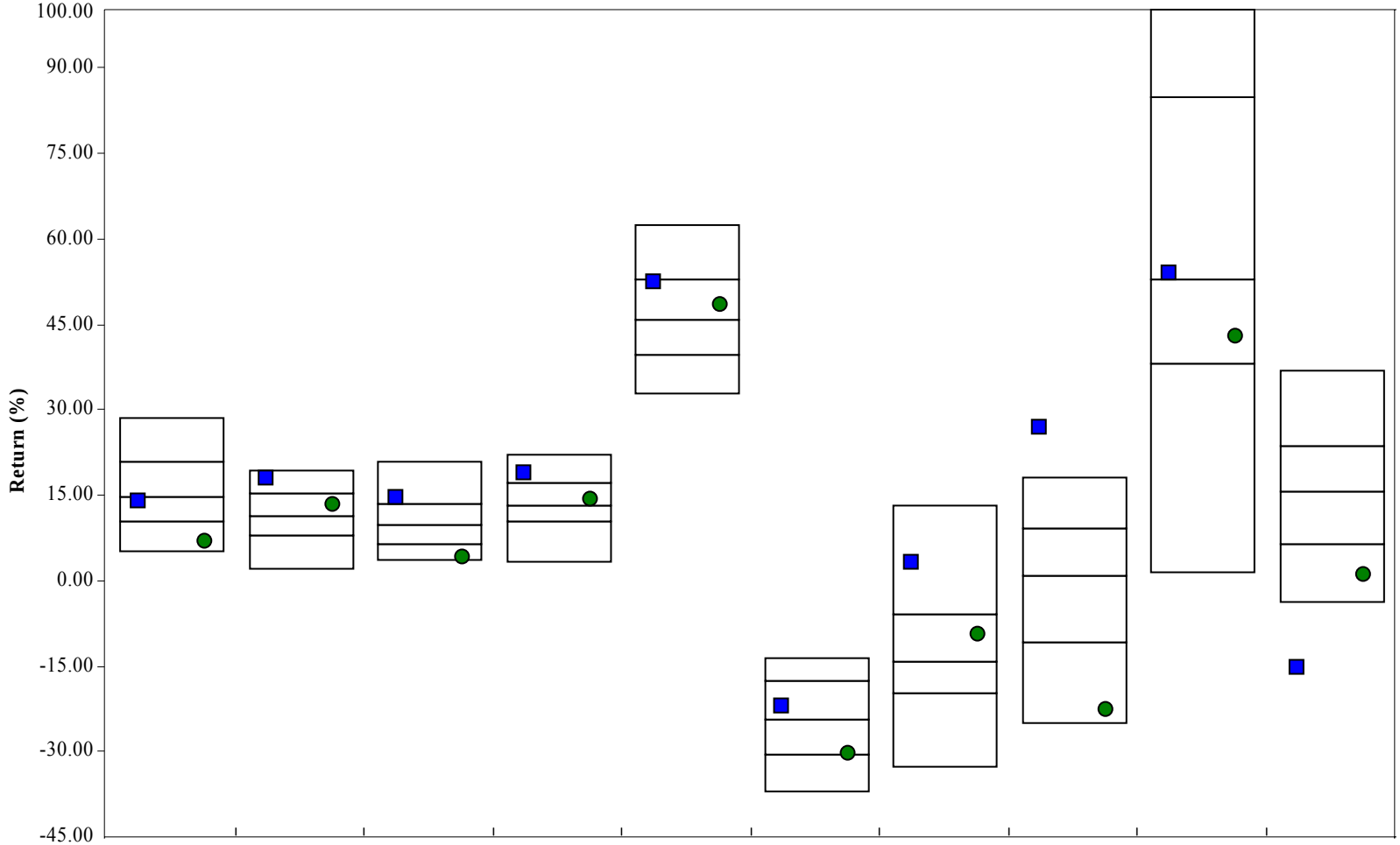


	1 Quarter	1 Year	3 Years	5 Years	7 Years	10 Years	15 Years
Friess Small Cap Growth Composite	-25.44 (32)	-39.32 (24)	-6.51 (17)	2.21 (8)	4.16 (6)	10.42 (2)	11.31 (1)
R 2000 Growth Index	-27.45 (59)	-38.54 (19)	-9.32 (42)	-2.35 (63)	-1.19 (71)	-0.76 (97)	2.77 (100)
Median	-27.03	-41.88	-10.13	-1.60	1.67	3.01	9.22
Population	76	75	67	49	38	24	11

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.
Performance is annualized for periods greater than one year.

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
US Small/Mid Cap Growth (SA+CF)
Peer Group Analysis - Calendar Years
As of December 31, 2008

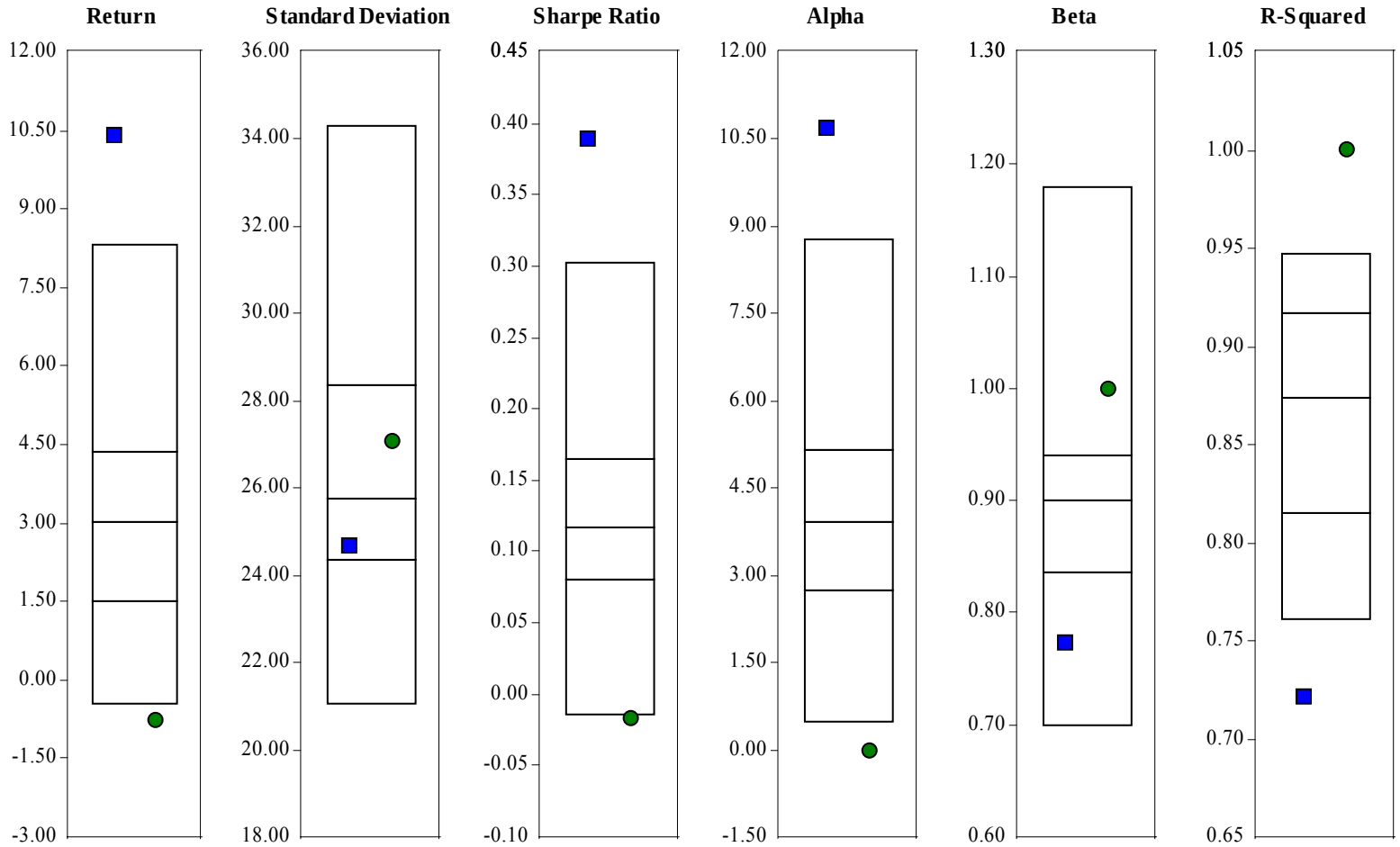


	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
Friess Small Cap Growth Composite	14.15 (58)	17.97 (9)	14.74 (18)	18.96 (17)	52.45 (28)	-21.79 (40)	3.35 (10)	27.09 (1)	54.27 (49)	-15.04 (100)
R 2000 Growth Index	7.05 (88)	13.35 (36)	4.15 (91)	14.31 (39)	48.54 (38)	-30.26 (75)	-9.23 (34)	-22.43 (91)	43.09 (65)	1.23 (91)
Median	14.81	11.26	9.93	13.23	45.75	-24.48	-14.07	0.81	52.76	15.74
Population	80	82	76	69	65	57	54	47	46	38

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
US Small/Mid Cap Growth (SA+CF) vs. R 2000 Growth Index
Peer Group Analysis - Multi Statistics
As of December 31, 2008



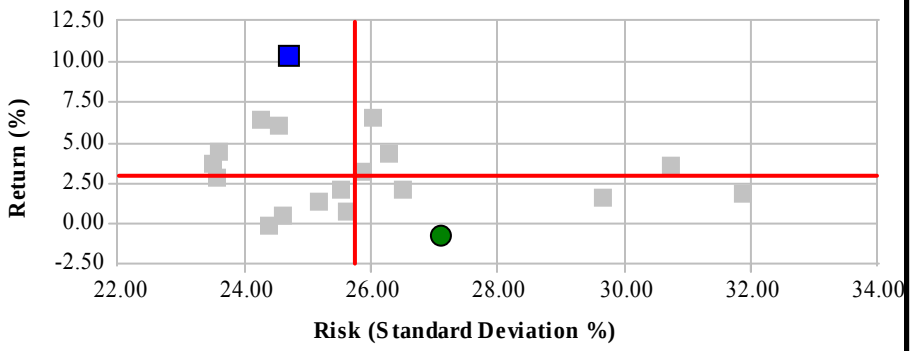
	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
Friess Small Cap Growth Composite	10.42 (2)	24.69 (65)	0.39 (1)	10.71 (2)	0.77 (92)	0.72 (100)
R 2000 Growth Index	-0.76 (97)	27.10 (30)	-0.02 (96)	0.00 (97)	1.00 (18)	1.00 (1)
Median	3.01	25.74	0.12	3.91	0.90	0.87
Population	24	24	24	24	24	24

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

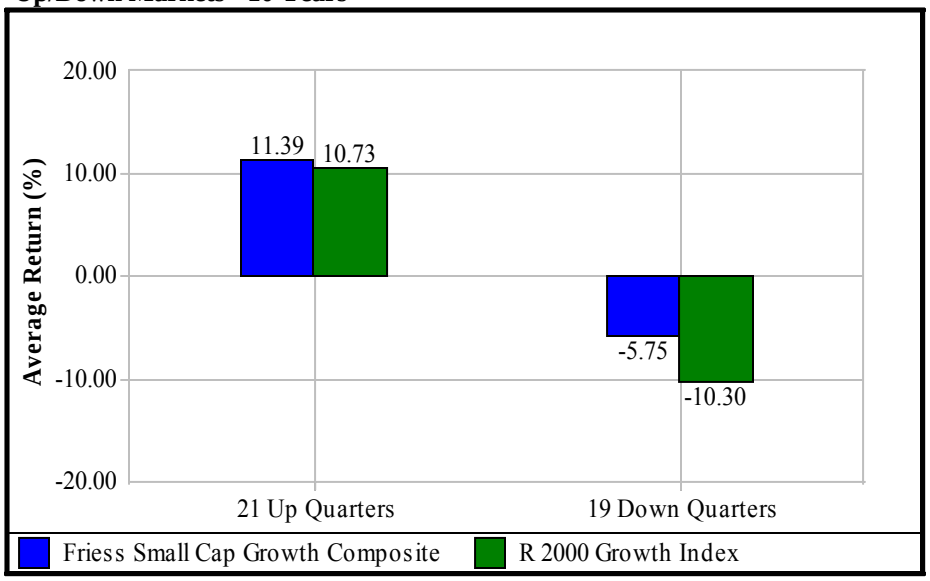
Wyoming State Treasurer's Office
Friess Small Cap Growth Composite vs. US Small/Mid Cap Growth (SA+CF)
As of December 31, 2008

Peer Group Scattergram - 10 Years

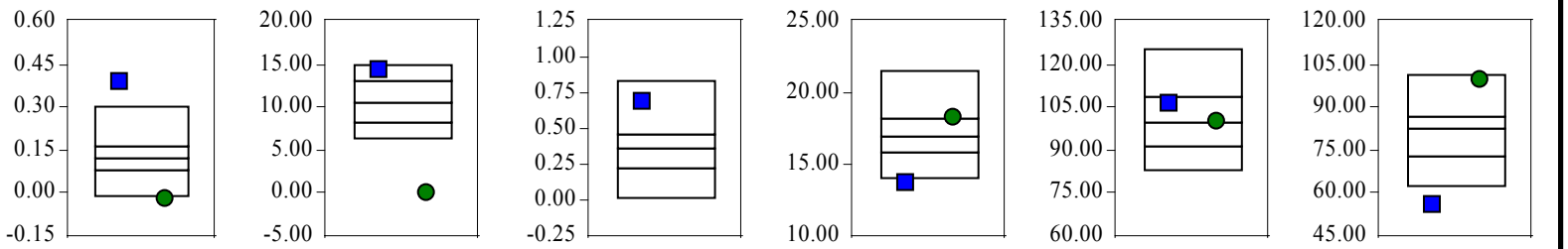


	Return	Standard Deviation
Friess Small Cap Growth Composite	10.42	24.69
R 2000 Growth Index	-0.76	27.10
Median	3.01	25.74

Up/Down Markets - 10 Years



Peer Group Analysis - Multi Statistics



	Sharpe Ratio 10 Years	Tracking Error 10 Years	Information Ratio 10 Years	Downside Risk 10 Years	Up Market Capture 10 Years	Down Market Capture 10 Years
Friess Small Cap Growth Composite	0.39 (1)	14.40 (14)	0.70 (13)	13.73 (97)	106.19 (36)	55.81 (100)
R 2000 Growth Index	-0.02 (96)	0.00 (100)	N/A	18.34 (25)	100.00 (44)	100.00 (10)
Median	0.12	10.43	0.37	16.97	99.47	82.23
Population	24	24	24	24	24	24

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

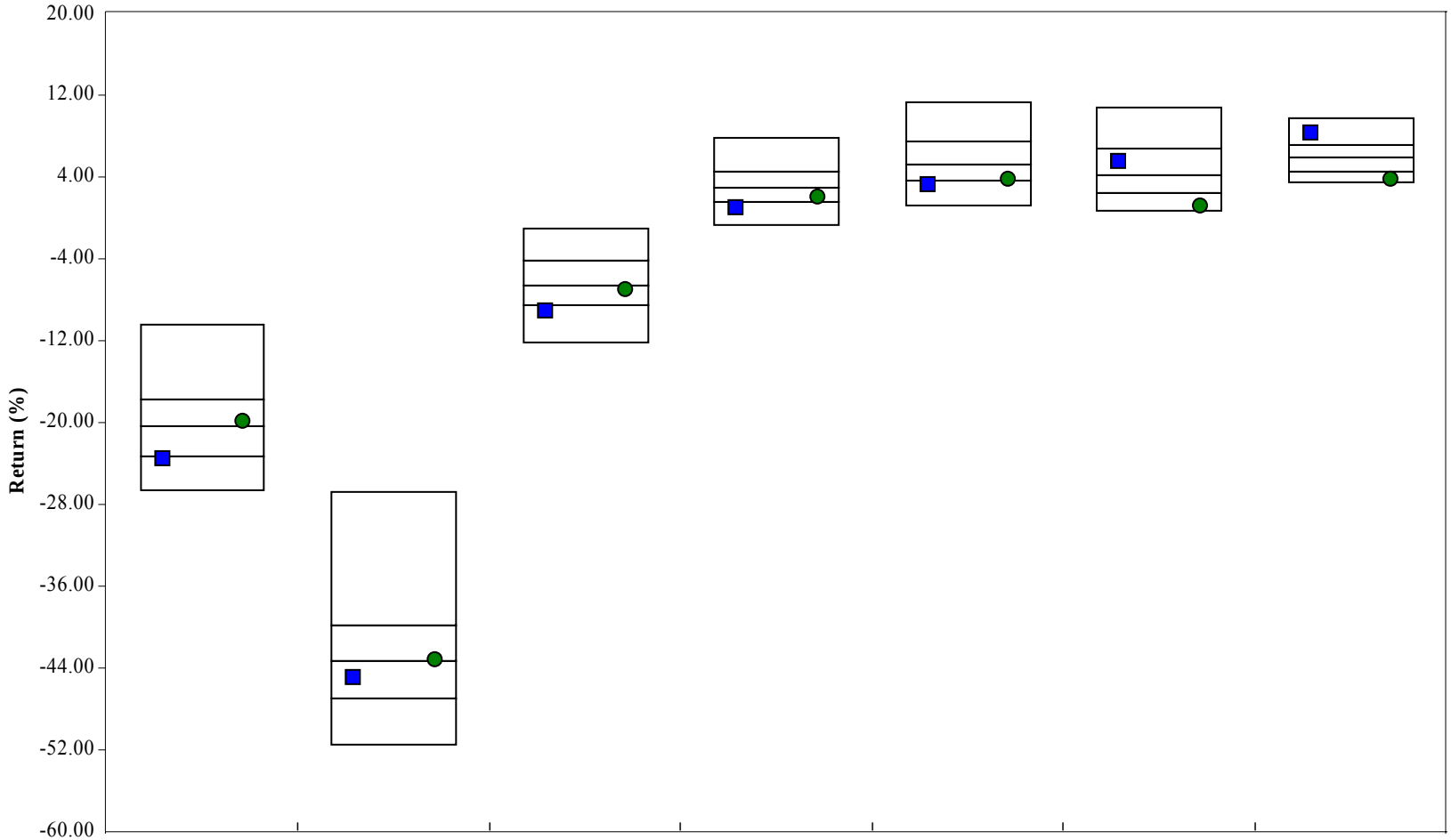
Broad International Equity

Fisher International Equity

- We recommend a replacement search.
- Over the 10 and 15 year trailing periods the manager ranks above median in their peer universe.
- Over the shorter term (1, 3, 5 and 7 year trailing periods) the manager has ranked below median in their peer universe.
- Qualitative concerns include:
  - Relatively small senior investment staff with responsibilities for a wide array of investment products.
  - Extensive focus on retail asset management.

** Manager data based on longest historical composite performance.*

Wyoming State Treasurer's Office
International Equity All (SA+CF)
Peer Group Analysis - Trailing Time Periods
As of December 31, 2008

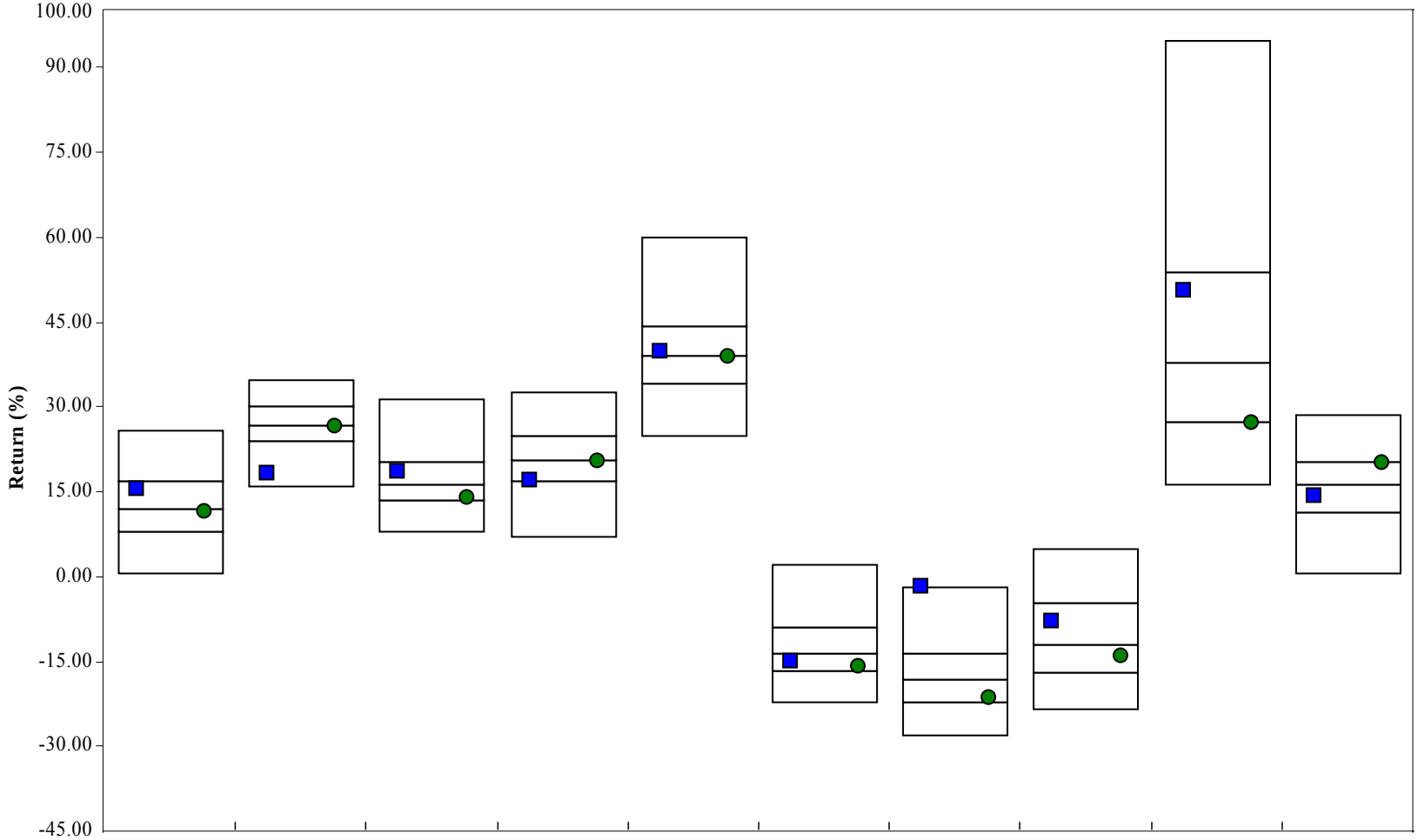


	1 Quarter	1 Year	3 Years	5 Years	7 Years	10 Years	15 Years
Fisher Foreign Equity Composite	-23.42 (77)	-44.86 (61)	-8.98 (79)	0.98 (83)	3.25 (81)	5.53 (36)	8.28 (10)
MSCI EAFE Index (Gross)	-19.90 (43)	-43.06 (47)	-6.92 (55)	2.10 (64)	3.85 (73)	1.18 (89)	3.88 (87)
Median	-20.31	-43.31	-6.57	2.87	5.23	4.11	5.90
Population	500	494	433	372	318	234	102

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.
Performance is annualized for periods greater than one year.

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
International Equity All (SA+CF)
Peer Group Analysis - Calendar Years
As of December 31, 2008

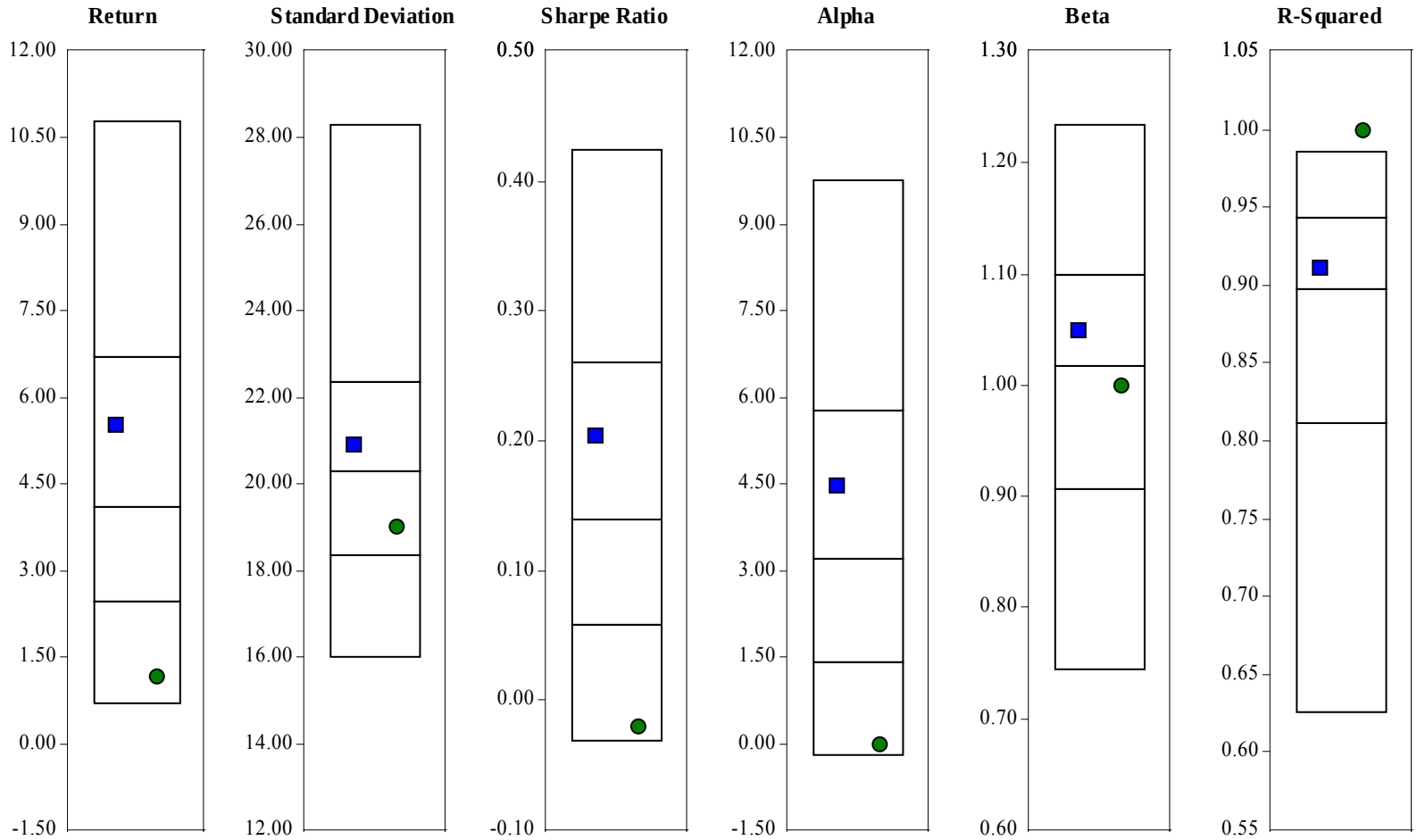


	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
Fisher Foreign Equity Composite	15.50 (33)	18.41 (92)	18.84 (32)	17.14 (74)	39.88 (44)	-14.83 (60)	-1.45 (5)	-7.70 (37)	50.60 (30)	14.32 (62)
MSCI EAFE Index (Gross)	11.63 (52)	26.86 (48)	14.02 (71)	20.70 (49)	39.17 (49)	-15.66 (67)	-21.21 (69)	-13.96 (61)	27.31 (76)	20.34 (26)
Median	12.01	26.69	16.15	20.49	38.97	-13.54	-18.37	-12.02	37.78	16.38
Population	520	501	482	479	487	493	492	475	469	449

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
International Equity All (SA+CF) vs. MSCI EAFE Index (Gross)
Peer Group Analysis - Multi Statistics
As of December 31, 2008



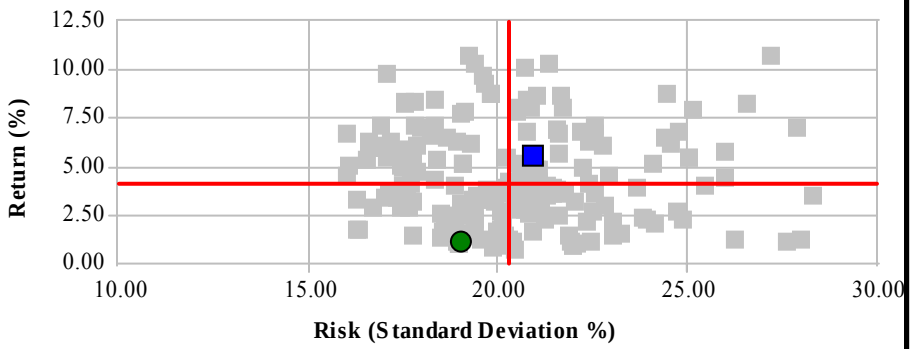
	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
Fisher Foreign Equity Composite	5.53 (36)	20.92 (40)	0.20 (36)	4.49 (37)	1.05 (39)	0.91 (46)
MSCI EAFE Index (Gross)	1.18 (89)	19.03 (68)	-0.02 (92)	0.00 (92)	1.00 (55)	1.00 (1)
Median	4.11	20.28	0.14	3.20	1.02	0.90
Population	234	234	234	234	234	234

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

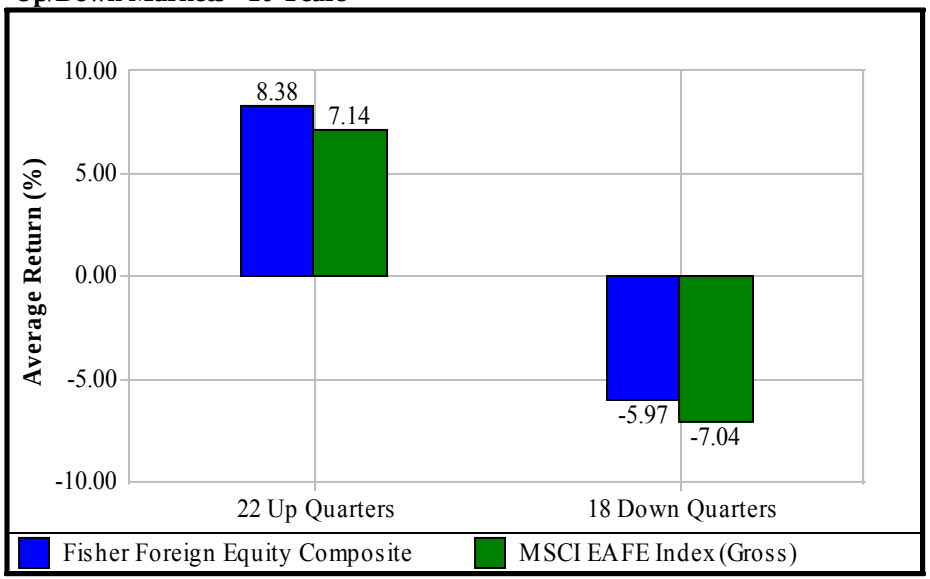
Wyoming State Treasurer's Office
Fisher Foreign Equity Composite vs. International Equity All (SA+CF)
As of December 31, 2008

Peer Group Scattergram - 10 Years

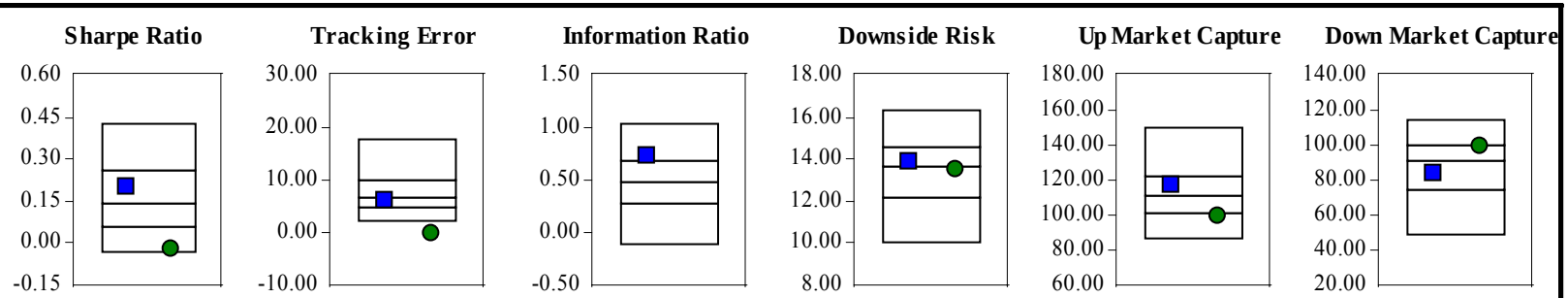


	Return	Standard Deviation
Fisher Foreign Equity Composite	5.53	20.92
MSCI EAFE Index (Gross)	1.18	19.03
Median	4.11	20.28

Up/Down Markets - 10 Years



Peer Group Analysis - Multi Statistics



	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
Fisher Foreign Equity Composite	0.20 (36)	6.30 (56)	0.74 (21)	13.88 (43)	117.30 (34)	84.83 (59)
MSCI EAFE Index (Gross)	-0.02 (92)	0.00 (100)	N/A	13.52 (54)	100.00 (79)	100.00 (25)
Median	0.14	6.84	0.48	13.63	111.66	91.01
Population	234	234	234	234	234	234

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

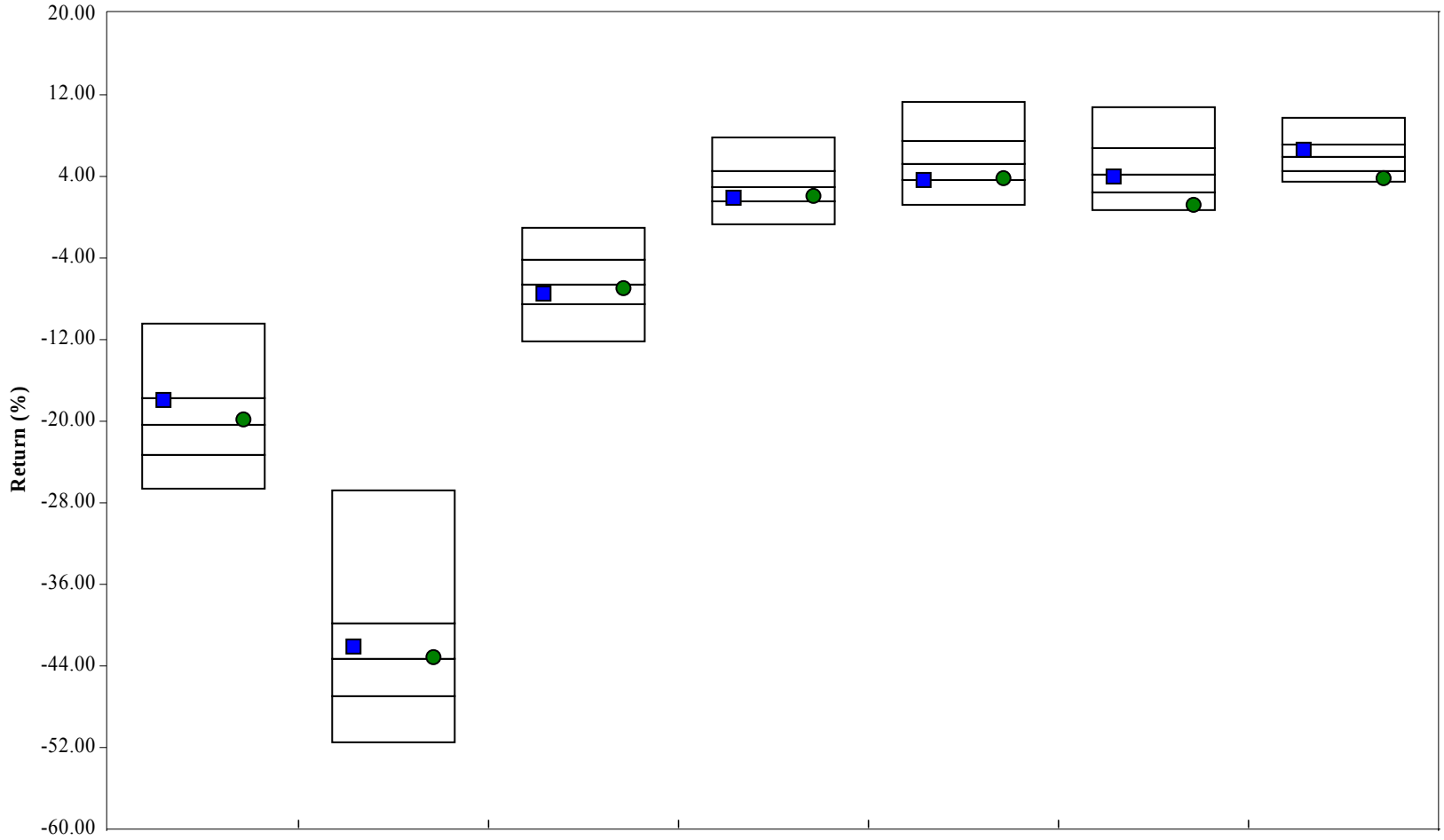
Broad International Equity

Cap Guardian International Equity

- Recommendation: Retention
- Over the 1 and 15 year trailing periods the manager ranks above median in their peer universe.
- Over the 3, 5, 7 and 10 year trailing periods the manager has ranked just below median in their peer universe.
- Qualitative comments:
  - Institutional quality manager with a deep global research analyst platform.
  - Highly diversified approach, employing multiple portfolio manager system.

** Manager data based on longest historical composite performance.*

Wyoming State Treasurer's Office
International Equity All (SA+CF)
Peer Group Analysis - Trailing Time Periods
As of December 31, 2008

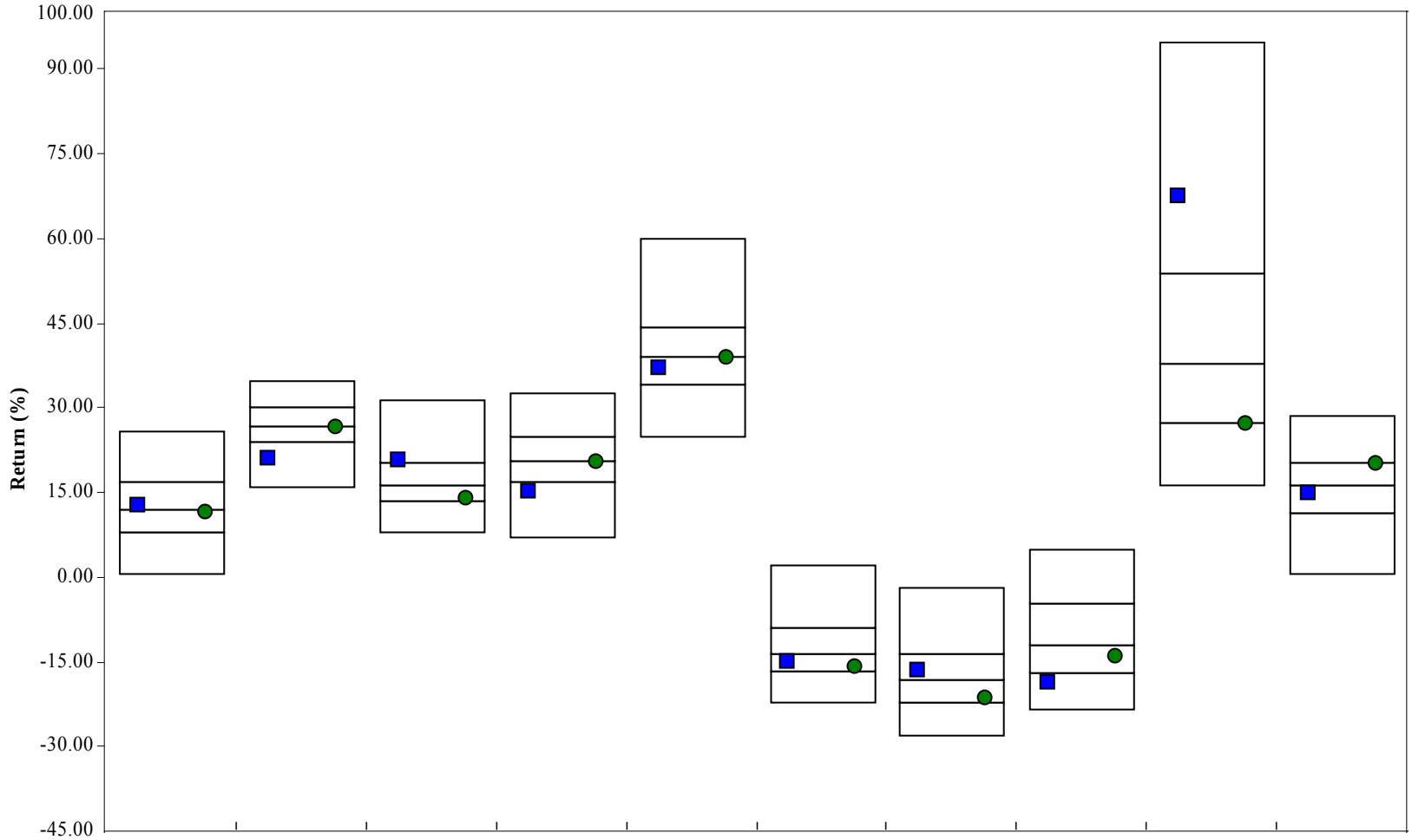


	1 Quarter	1 Year	3 Years	5 Years	7 Years	10 Years	15 Years
Cap Guardian Non-US Equity CF	-17.91 (27)	-42.02 (39)	-7.46 (62)	1.99 (67)	3.69 (76)	3.93 (53)	6.52 (37)
MSCI EAFE Index (Gross)	-19.90 (43)	-43.06 (47)	-6.92 (55)	2.10 (64)	3.85 (73)	1.18 (89)	3.88 (87)
Median	-20.31	-43.31	-6.57	2.87	5.23	4.11	5.90
Population	500	494	433	372	318	234	102

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.
Performance is annualized for periods greater than one year.

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
International Equity All (SA+CF)
Peer Group Analysis - Calendar Years
As of December 31, 2008

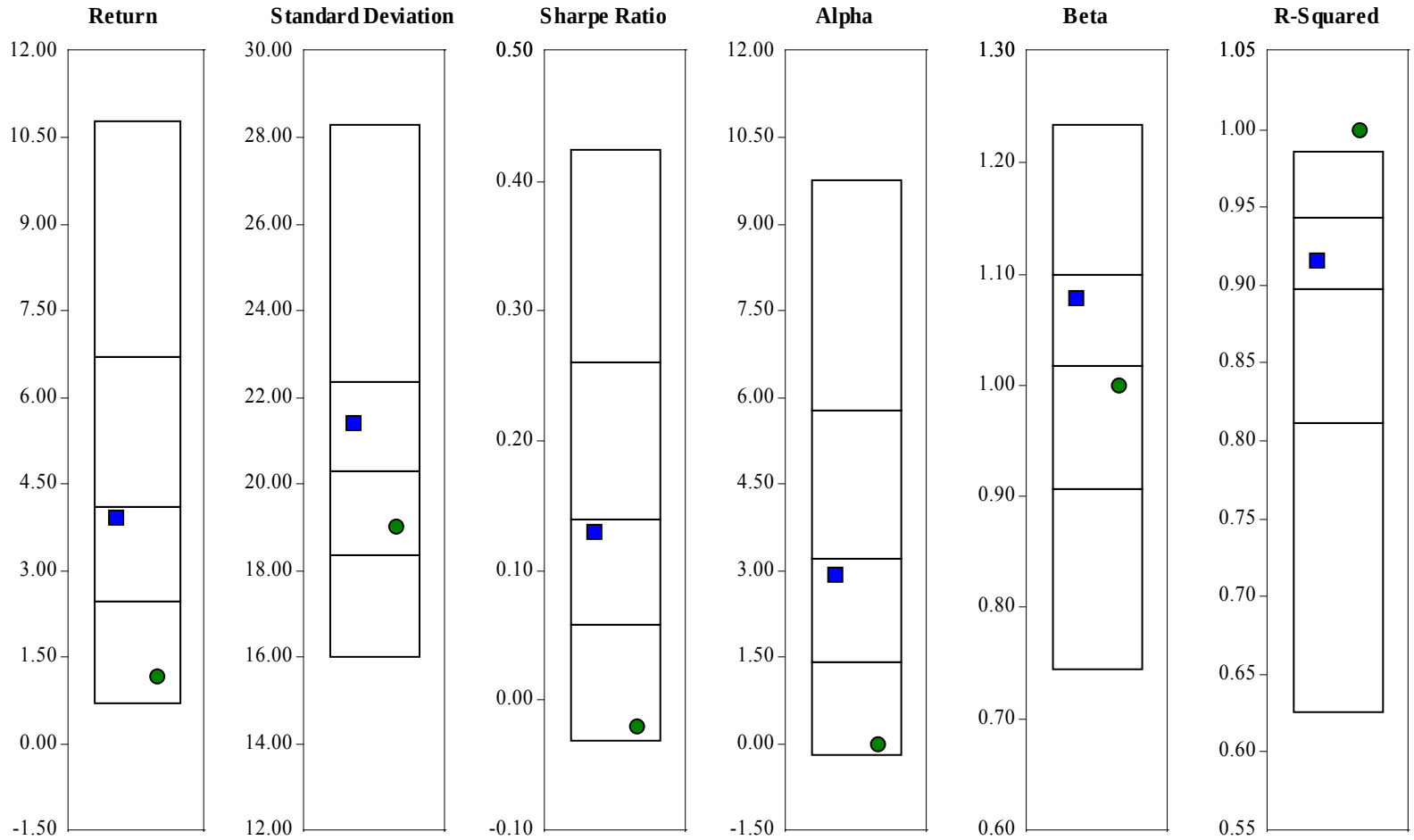


	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
Cap Guardian Non-US Equity CF	12.73 (46)	21.23 (87)	20.87 (22)	15.21 (83)	37.25 (59)	-14.88 (61)	-16.52 (38)	-18.46 (82)	67.60 (12)	15.16 (58)
MSCI EAFE Index (Gross)	11.63 (52)	26.86 (48)	14.02 (71)	20.70 (49)	39.17 (49)	-15.66 (67)	-21.21 (69)	-13.96 (61)	27.31 (76)	20.34 (26)
Median	12.01	26.69	16.15	20.49	38.97	-13.54	-18.37	-12.02	37.78	16.38
Population	520	501	482	479	487	493	492	475	469	449

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
International Equity All (SA+CF) vs. MSCI EAFE Index (Gross)
Peer Group Analysis - Multi Statistics
As of December 31, 2008



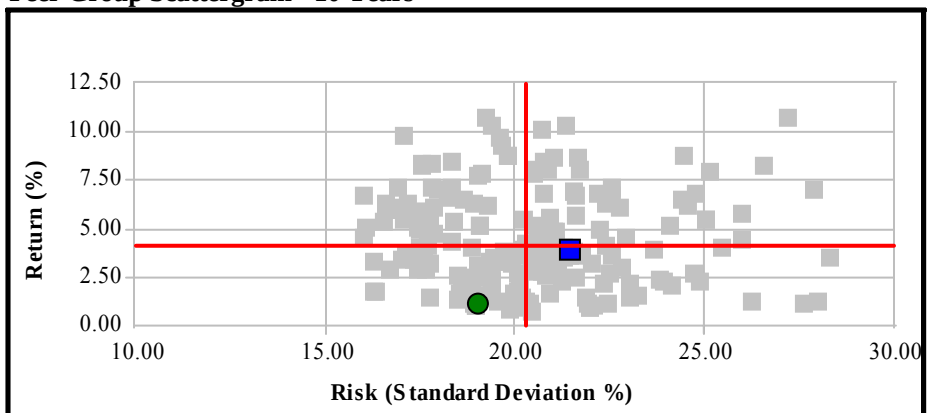
	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
■ Cap Guardian Non-US Equity CF	3.93 (53)	21.42 (34)	0.13 (52)	2.92 (54)	1.08 (30)	0.92 (43)
● MSCI EAFE Index (Gross)	1.18 (89)	19.03 (68)	-0.02 (92)	0.00 (92)	1.00 (55)	1.00 (1)
Median	4.11	20.28	0.14	3.20	1.02	0.90
Population	234	234	234	234	234	234

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

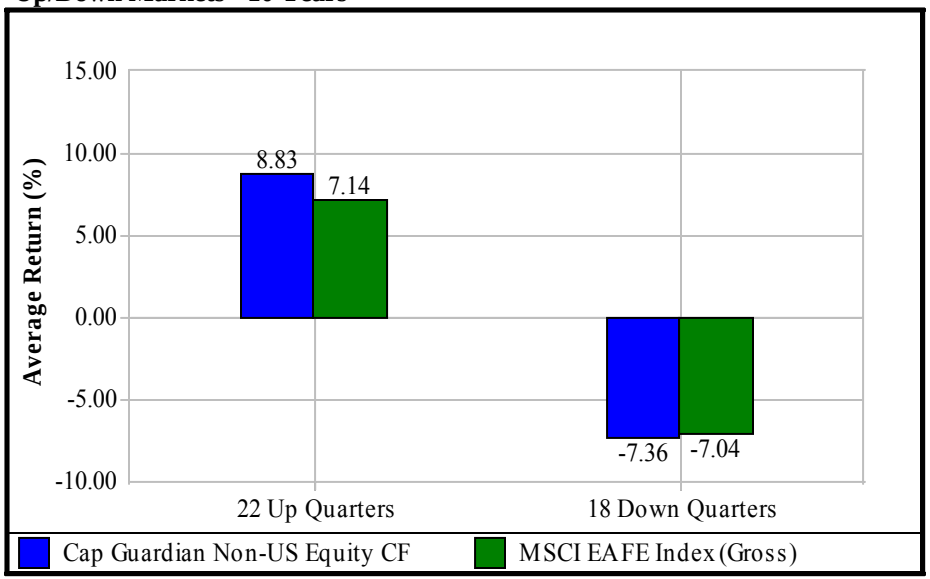
Wyoming State Treasurer's Office
Cap Guardian Non-US Equity CF vs. International Equity All (SA+CF)
As of December 31, 2008

Peer Group Scattergram - 10 Years

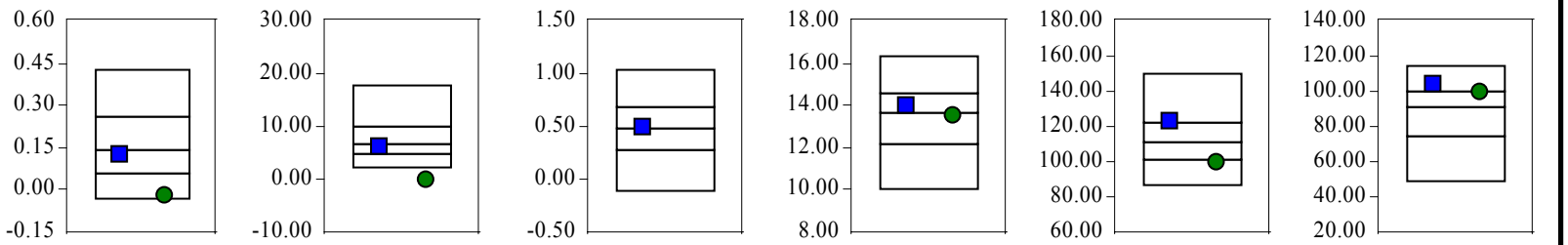


	Return	Standard Deviation
Cap Guardian Non-US Equity CF	3.93	21.42
MSCI EAFE Index (Gross)	1.18	19.03
Median	4.11	20.28

Up/Down Markets - 10 Years



Peer Group Analysis - Multi Statistics



	Sharpe Ratio 10 Years	Tracking Error 10 Years	Information Ratio 10 Years	Downside Risk 10 Years	Up Market Capture 10 Years	Down Market Capture 10 Years
Cap Guardian Non-US Equity CF	0.13 (52)	6.37 (55)	0.49 (49)	14.02 (39)	123.70 (22)	104.51 (17)
MSCI EAFE Index (Gross)	-0.02 (92)	0.00 (100)	N/A	13.52 (54)	100.00 (79)	100.00 (25)
Median	0.14	6.84	0.48	13.63	111.66	91.01
Population	234	234	234	234	234	234

Performance shown is gross of fees and is product-specific composite returns. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

RVKuhns & ASSOCIATES, INC.

Fixed Income

- We acknowledge that your fixed income managers have not ranked in the top quartile however we haven't lost our conviction in their abilities to actively manage your assets.
- The credit markets have shown an unprecedented level of spread widening due to forced selling and the tremendous flight to quality.
- Spreads in the credit market are at historically wide levels and present opportunities for outperformance while maintaining better capital structure positioning over equities.
- Top quartile managers all had one thing in common—above benchmark allocation to Treasuries and Government securities.

Absolute Return

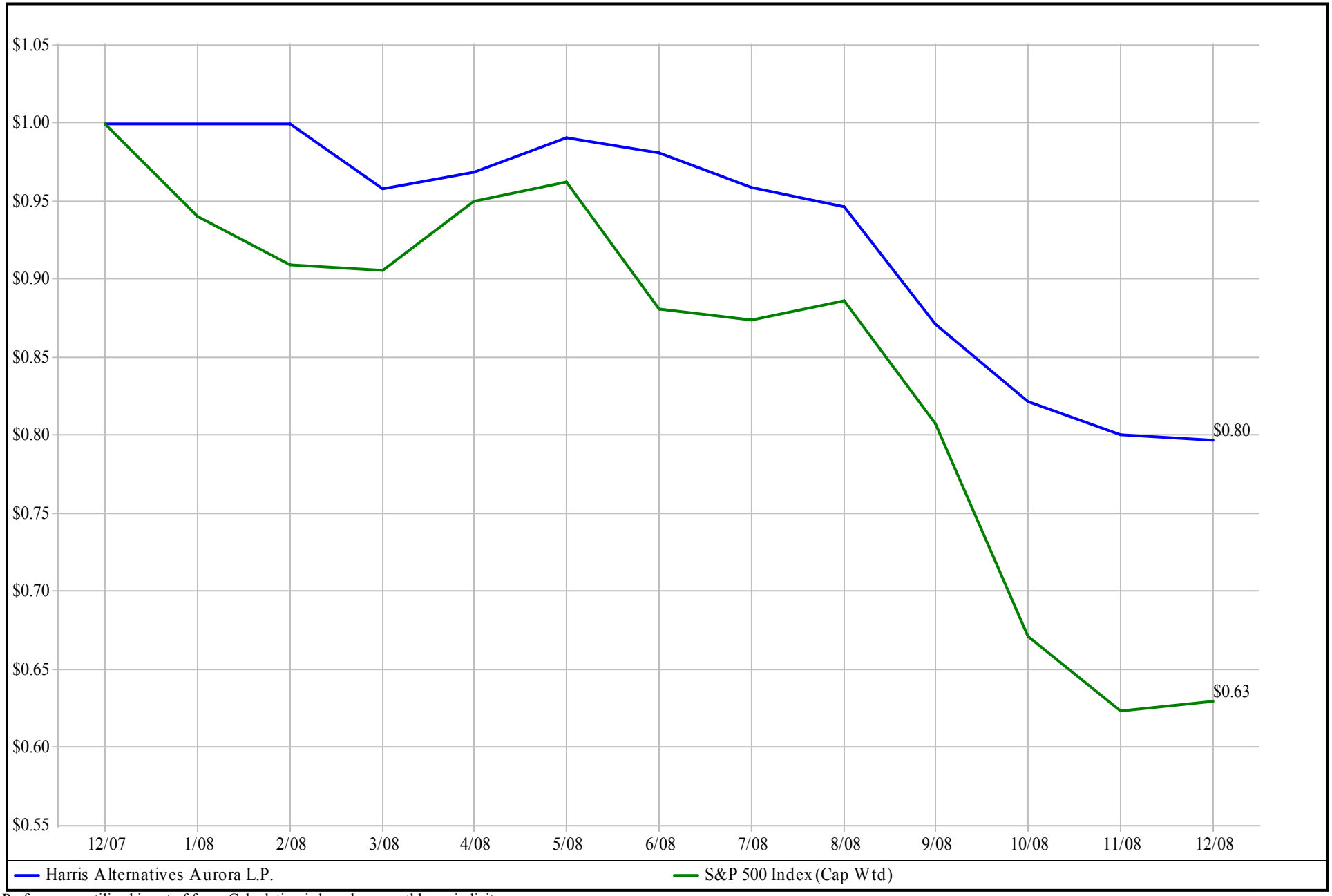
- Increased allocation to absolute return strategy through second generation Harris Aurora Fund which launched due to increased demand.
- New fund details:
  - $250K minimum
  - 1 Year lockup
  - Quarterly redemptions with 95 days notice
  - Launch date around May 1st
  - Discounted Fee: 0.75% & 10% (RVK clients)
- The manager estimates this fund will have very high (90%+) overlap with Aurora LP given current underlying manager capacity.
- New set of documents required.
- Potential dispersion of return between two products.
- Continue to recommend 50/50 split between PAAMCO and Harris.

Wyoming State Treasurer's Office
Comparative Performance
As of December 31, 2008

	1 Quarter	1 Year	3 Years	5 Years	7 Years	10 Years	15 Years	Since Inception	Inception Date
Wyoming-specific performance									
Harris Alternatives Aurora L.P.	**-8.55**	**-20.29**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**-20.29**	**01/01/2008**
S&P 500 Index (Cap Wtd)	-21.94	-37.00	-8.36	-2.19	-1.53	-1.38	6.46	-37.00	
PAAMCO - Jackalope Fund	**-12.47**	**-21.33**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**-19.54**	**12/01/2007**
S&P 500 Index (Cap Wtd)	-21.94	-37.00	-8.36	-2.19	-1.53	-1.38	6.46	-35.14	
Manager composite performance									
Harris Aurora L.P.	**-8.36**	**-20.28**	**0.53**	**4.03**	**5.31**	**8.45**	**8.77**	**11.04**	**01/01/1988**
S&P 500 Index (Cap Wtd)	-21.94	-37.00	-8.36	-2.19	-1.53	-1.38	6.46	8.80	
PAAMCO Moderate Multi-Strategy AWC	**-12.87**	**-21.79**	**0.56**	**2.62**	**4.06**	**N/A**	**N/A**	**4.01**	**06/01/2001**
S&P 500 Index (Cap Wtd)	-21.94	-37.00	-8.36	-2.19	-1.53	-1.38	6.46	-2.47	

Performance shown is net of fees. Performance is annualized for periods greater than one year.

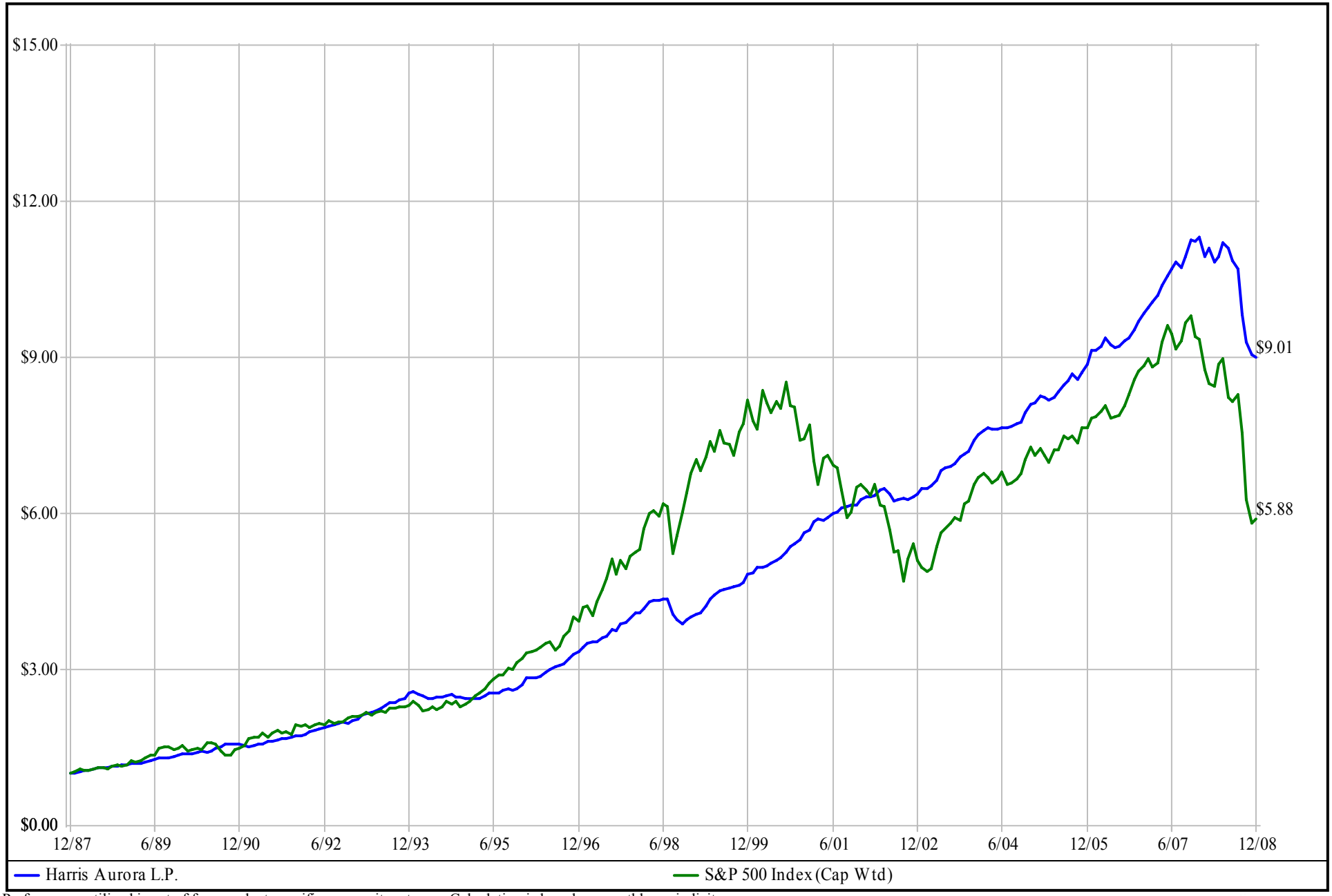
Wyoming State Treasurer's Office
Growth of $1 - Wyoming-specific
From January 1, 2008 To December 31, 2008



Performance utilized is net of fees. Calculation is based on monthly periodicity.

RVKuhns & ASSOCIATES, INC.

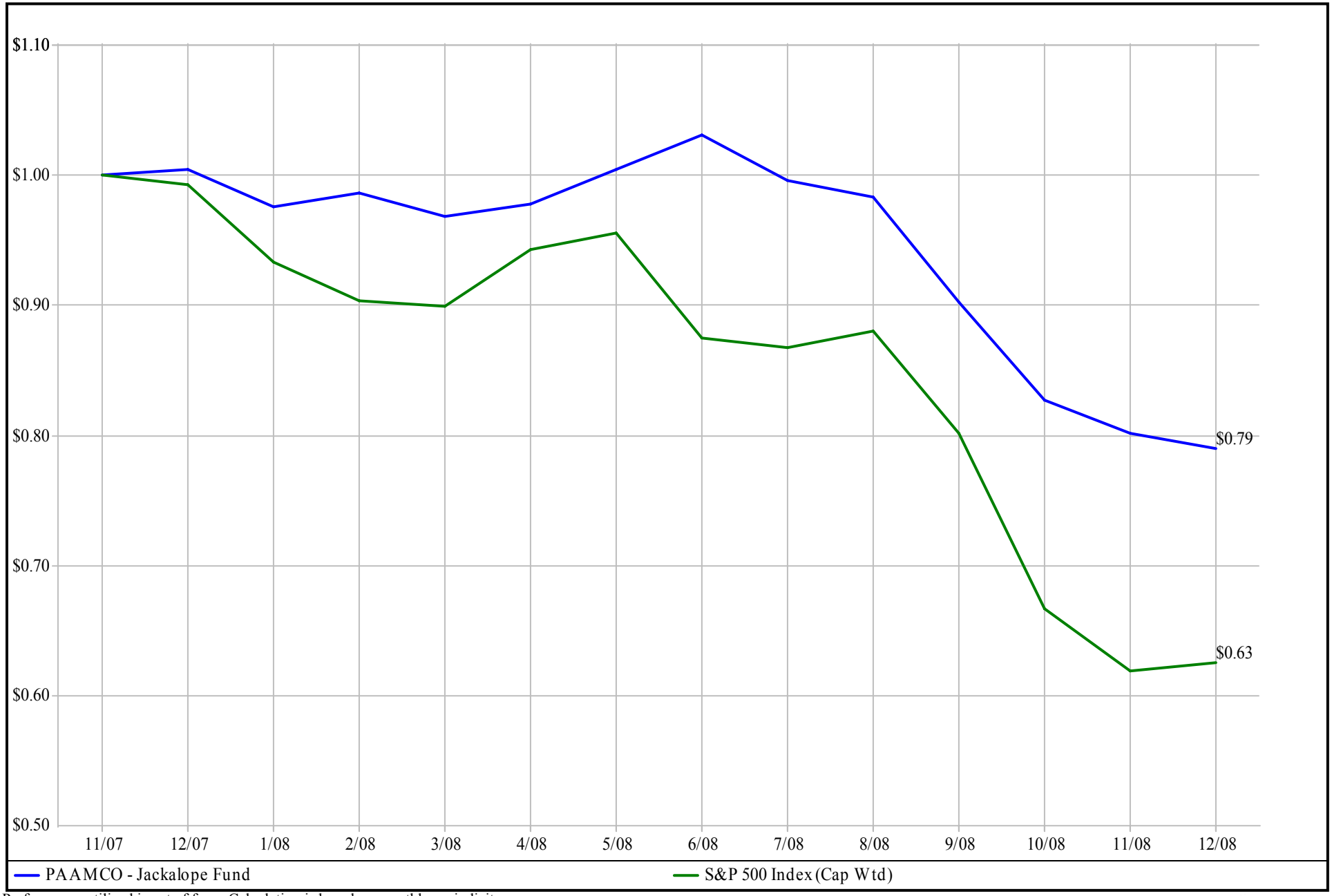
Wyoming State Treasurer's Office
Growth of $1
From January 1, 1988 To December 31, 2008



Performance utilized is net of fees product-specific composite returns. Calculation is based on monthly periodicity.

RVKuhns & ASSOCIATES, INC.

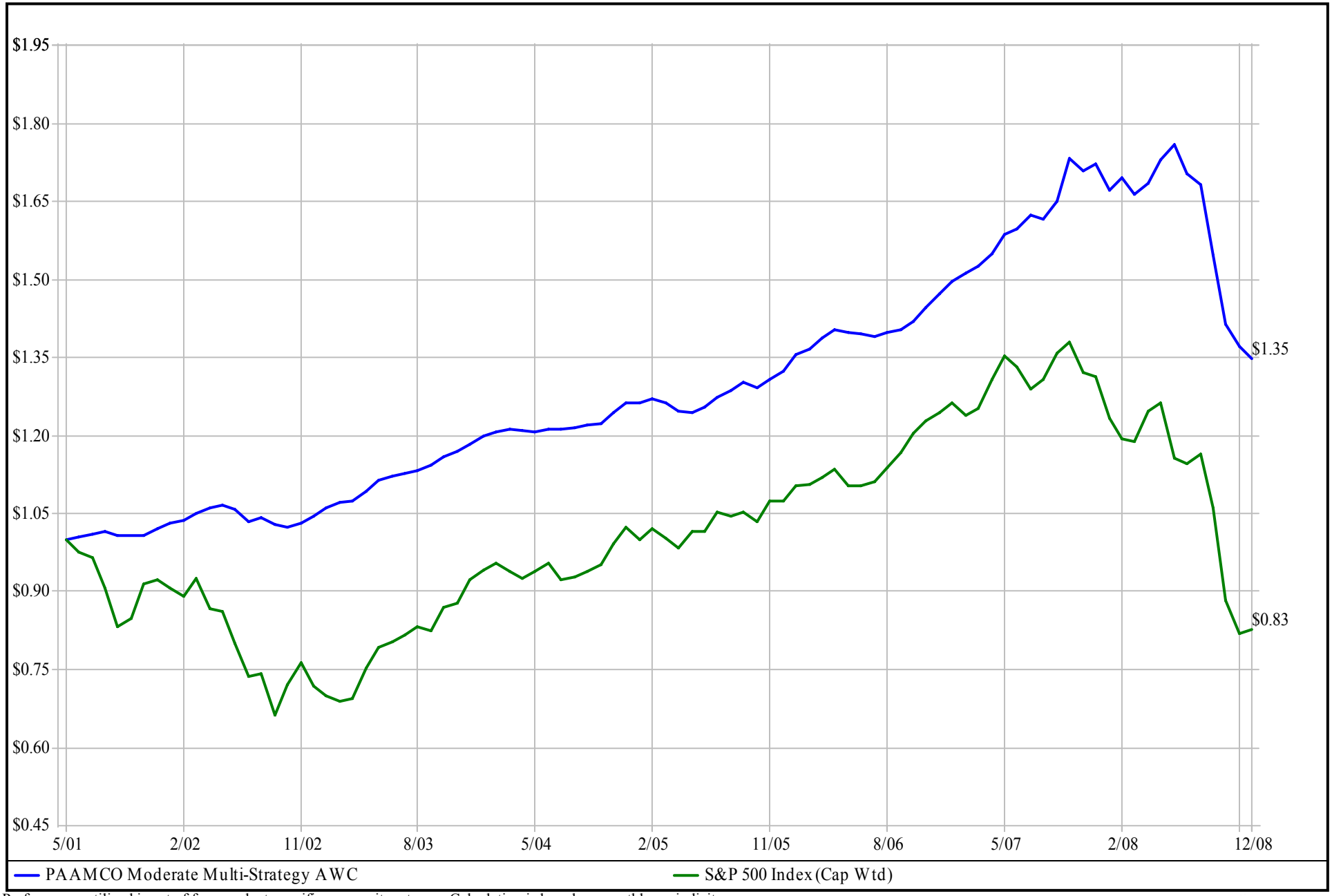
Wyoming State Treasurer's Office
Growth of $1 - Wyoming-specific
From December 1, 2007 To December 31, 2008



Performance utilized is net of fees. Calculation is based on monthly periodicity.

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
Growth of $1
From June 1, 2001 To December 31, 2008



Performance utilized is net of fees product-specific composite returns. Calculation is based on monthly periodicity.

RVKuhns & ASSOCIATES, INC.

Value-Added Real Estate

- **Zero to Low** Leverage – Target funds that will use low leverage compared to other real estate funds in the same risk category.
- **Financing Capabilities** – Funds for investment should have a significant track record of securing financing on attractive terms.
- **Better Risk-Adjusted Portfolios and Lower Fees** –Focus on firms that provide similar strategies charging lower asset management and promoted interest fees versus their competitors.
- **Distressed Sellers** –Target funds that are well-capitalized to move swiftly to take advantage of the market dislocation in niche areas over their competitors.

Manager Search Priorities

Manager Search Priorities

- Broad International Equity Search
- Value Added Real Estate
- Enhanced Large Cap Domestic Equity Search
- Long Duration Search (*longer term priority*)

Implementation

Implementation

- Investments in Value-Added Real Estate will likely take some time to develop and require appropriate pricing.
  - We recommend investing incoming cash pro-rata with your fixed income managers and allocating excess cash balances, targeted for Value-Added Real Estate opportunities, in the internal account temporarily as we progress toward the long term targets.

- Move toward the largest variances at an accelerated speed.
  - Absolute Return
  - Fixed Income
  - Value-Added Real Estate

Implementation

- Continue to make modest allocations to categories with smaller variances.
  - Large Cap Domestic Equity
  - Broad International Equity
    - No additional investment in Fisher
  - Convertibles

Implementation

- Overweight categories:
  - Small/Mid Cap Domestic Equity
    - Selling may create additional loss recognition
    - Monitor gain/loss positioning and move assets to other equity categories opportunistically
    - New investments and portfolio growth will also shrink allocation naturally
- Real Estate – Core
  - Illiquid – new investments and portfolio growth will shrink allocation naturally
- Private Equity
  - Illiquid – new investments and portfolio growth will shrink allocation naturally

Implementation

➢ Permanent Funds (Variance)

Asset Classes	PMTF Current	CSPLF Current	PLF Current	UPLF Current	Hathaway Current	Higher Ed Current	Revised Long-Term Target
Large Cap US Equity	14.3	14.3	13.9	15.0	9.4	10.1	15.0
Small/Mid Cap US Equity	6.5	6.5	6.3	6.8	4.3	4.6	3.0
Broad International Equity	10.4	10.3	10.0	11.4	7.4	7.8	13.0
US Core Fixed Income	42.7	32.9	36.6	33.3	45.2	47.7	45.0
Real Estate - Core	4.8	4.6	4.5	5.0	2.0	2.3	4.0
Real Estate - Value Added	0.1	0.3	0.3	0.3	0.3	0.3	3.5
Absolute Return	2.6	2.6	2.6	2.7	1.1	1.2	7.5
Private Equity	5.1	4.9	6.8	5.2	0.0	0.0	4.0
Convertibles	1.6	1.6	1.6	1.7	1.5	1.6	2.0
Cash Equivalents	11.9	22.0	17.4	18.6	28.8	24.4	3.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Over-allocated based on Revised Long-Term Target
Under-allocated based on Revised Long-Term Target

Implementation

- Workers Compensation (Variance)

Asset Classes	Workers Current	Revised Long-Term Target
Large Cap US Equity	5.5	8.0
Small/Mid Cap US Equity	2.5	1.0
Broad International Equity	4.4	7.0
US Core Fixed Income	59.8	65.0
Real Estate - Core	1.3	3.0
Absolute Return	1.3	6.0
Convertibles	2.4	3.0
Cash Equivalents	22.8	7.0
Total	100.0	100.0

Over-allocated based on Revised Long-Term Target
Under-allocated based on Revised Long-Term Target

Implementation

- Workers Compensation (Variance)

Asset Classes	SAP Current	Revised Long-Term Target
US Core Fixed Income	74.0	87.0
Convertibles	2.1	3.0
Cash Equivalents	23.9	10.0
Total	100.0	100.0

Asset Classes	Tobacco Current	Revised Long-Term Target
US Core Fixed Income	75.9	94.0
Convertibles	2.3	3.0
Cash Equivalents	21.8	3.0
Total	100.0	100.0

Over-allocated based on Revised Long-Term Target
Under-allocated based on Revised Long-Term Target

Implementation – Manager Fee Reduction

- Indicated approx. $21 million annually has been budgeted towards investment managers fees and there is a desire to reduce management fees by $2.5 million.
- Decrease in overall assets of the State due to recent market losses does equate to a small reduction in overall fees (year-over-year) in dollar terms.
- Recommended asset allocation and manager structure changes are expected to reduce explicit fees.
  - Reduction in allocation to equities, specifically small/mid cap equity.
- Recommended increases to real estate and absolute return are likely to increase overall management fees for the State.
  - While still important to understand and monitor, these fees are not paid explicitly so they do not impact the State's fee budget.
  - Fee reduction offered for additional investments with Harris does mitigate expected increase.
- Fee comparison on the following page indicates that the fees Wyoming has negotiated with external managers are competitive versus industry peers.

Wyoming State Treasurer's Office
Fee Analysis
December 31, 2008

Current Managers		Current Manager Fees				Peer Expense Ratios		
Investment Manager	Market Value	Current Fee Schedule		Fees Charged	Expense Ratio	Median	1st Quartile	Peer Group
Domestic Equity								
Large Cap								
State Street Global Advisors	$ 828,291,606	0.030%	$ 100,000,000	$ 30,000				
		0.020%	$ 100,000,000	$ 20,000				
		0.010%	on remainder	$ 62,829				
			Total:	*$ 112,829*	0.01%	0.054%	0.044%	eA Passive Large Cap Equity
						0.223%	0.188%	eA Enhanced Index Large Cap Equity
SMid Cap Value								
Gabelli SMCV	$ 219,161,161	0.800%	$ 50,000,000	$ 400,000				
		0.500%	on remainder	$ 845,806				
			Total:	*$ 1,245,806*	0.57%	0.734%	0.583%	eA Small-Mid Cap Value Equity
SMid Cap Growth								
Friess SMCG	$ 175,918,785	1.000%	on all assets	$ 1,759,188				
			Total:	*$ 1,759,188*	1.00%	0.750%	0.633%	eA Small-Mid Cap Growth Equity
International Equity								
Fisher Int'l Eq	$ 299,938,602	0.750%	$ 25,000,000	$ 187,500				
		0.650%	$ 25,000,000	$ 162,500				
		0.600%	$ 25,000,000	$ 150,000				
		0.500%	$ 25,000,000	$ 125,000				
		0.400%	on remainder	$ 799,754				
			Total:	*$ 1,424,754*	0.48%	0.554%	0.325%	eA International Large Cap Core
Capital Guardian	$ 318,485,110	0.700%	$ 25,000,000	$ 175,000				
		0.550%	$ 25,000,000	$ 137,500				
		0.425%	$ 200,000,000	$ 850,000				
		0.375%	on remainder	$ 256,819				
			Total:	*$ 1,419,319*	0.45%	0.554%	0.325%	eA International Large Cap Core
Fixed Income								
Lehman Brothers Core Plus	$ 932,114,650	0.120%	$ 400,000,000	$ 480,000				
		0.100%	on remainder	$ 532,115				
			Total:	*$ 1,012,115*	0.11%	0.216%	0.188%	eA Core Plus Fixed Income
Western Asset Core Plus	$ 955,037,940	0.150%	$1,000,000,000	$ 1,432,557				
		0.125%	$1,000,000,000	$ -				
		0.100%	on remainder	$ -				
			Total:	*$ 1,432,557*	0.15%	0.216%	0.188%	eA Core Plus Fixed Income
Western Asset Corporates	$ 289,651,855	0.150%	$1,000,000,000	$ 434,478				
		0.125%	$1,000,000,000	$ -				
		0.100%	on remainder	$ -				
			Total:	*$ 434,478*	0.15%	0.254%	0.231%	eA Corporate Fixed Income
Logan Circle Corporates	$ 204,447,154	0.300%	$ 25,000,000	$ 75,000				
		0.225%	$ 75,000,000	$ 168,750				
		0.200%	on remainder	$ 208,894				
			Total:	*$ 452,644*	0.22%	0.254%	0.231%	eA Corporate Fixed Income
JP Morgan Mortgages	$ 498,395,239	0.175%	$ 75,000,000	$ 131,250				
		0.150%	$ 75,000,000	$ 112,500				
		0.070%	on remainder	$ 243,877				
			Total:	*$ 487,627*	0.10%	0.216%	0.179%	eA Mortgage Fixed Income
PIMCO Core Plus	$ 779,071,240					0.216%	0.188%	eA Core Plus Fixed Income
PIMCO Mortgages	$ 512,927,723					0.216%	0.179%	eA Mortgage Fixed Income
PIMCO Global/EM								
*PIMCO Global**	$ 138,539,419	** Assumes Global is 3/8 of the Global/EM mandate*				0.321%	0.289%	eA Global Fixed Income
*PIMCO EM **	$ 230,899,032	** Assumes EM is 5/8 of the Global/EM mandate*				0.543%	0.443%	eA Emerging Markets Fixed Income
Total PIMCO	$ 1,661,437,414	0.25%	$ 600,000,000	$ 1,500,000				
		0.20%	$ 700,000,000	$ 1,400,000				
		0.15%	on remainder	$ 542,156				
		0.10%	on EM Balance	$ 230,899				
			Total:	*$ 3,673,055*	0.22%	0.315%	0.269%	
JP Morgan Cash	$ 1,074,559,964	0.250%	$ 25,000,000	$ 62,500				
		0.200%	$ 475,000,000	$ 950,000				
		0.100%	on remainder	$ 574,560				
			Total:	*$ 1,587,060*	0.32%	0.090%	0.121%	eA Enhanced Cash Management
Overlay Strategies								
First Quadrant	$ 500,000,000	0.230%	on all assets	$ 1,150,000				
			Total:	*$ 1,150,000*	0.23%			
Total	**$ 7,457,439,477**			**$ 16,191,432**	**0.217%**	**0.237%**	**0.190%**	

Market Value data is as of 12/31/2008
Premium of 10 bps is assessed to EM holdings within PIMCO Global/EM mandate.
Peer Expense Ratios for total PIMCO is calculated on a weighted market value basis.
First Quadrant market value represents notional principle amount and is therefore excluded from the total market value.
JP Morgan Cash Benchmark is comprised of 1/3 ML 1-3 Treasury Index, 1/3 ML 1-3 Agency Index, 1/3 ML 0-3 WAL Mortgage Index
eA Enhanced Cash peer group may not be a direct comparison

First Quadrant

First Quadrant

- First Quadrant investment strategy works to provide additional income on the notional equity exposure on which it is overlaid.
- Based on the State's exposure to the Large Cap Domestic Equity market we recommend reevaluating the current notional amount of the overlay being executed.
- At present the target notional for the overlay strategy is $500 million.
- We recommend adjusting the notional overlay annually and targeting a value approximately equal to the "dollar" exposure in Passive Large Cap Domestic Equity.
- Since Inception (02/01/2005) return of 1.18%

Appendix

Wyoming State Treasurer's Office
Comparative Performance
As of December 31, 2008

	1 Quarter	1 Year	2 Years	3 Years	4 Years	2007	2006	2005	Since Inception	Inception Date
Domestic Equity										
SMid Cap Value										
Gabelli SMCV	**-22.09**	**-32.95**	**-14.51**	**-3.65**	**-1.67**	**9.02**	**22.38**	**4.53**	**4.87**	**01/01/2002**
R 2500 Value Index	-24.86	-31.99	-20.59	-8.83	-4.94	-7.27	20.18	7.74	3.78	
Difference	2.77	-0.96	6.08	5.18	3.27	16.29	2.20	-3.21	1.09	
US Small/Mid Cap Value (SA+CF) Median	-24.39	-34.28	-18.37	-8.12	-3.92	3.19	17.98	10.57	N/A	
Percentile Rank	**29**	**39**	**22**	**19**	**35**	**25**	**19**	**90**	**N/A**	
Absolute Rank	**20**	**27**	**14**	**12**	**20**	**18**	**13**	**57**	**N/A**	
Population	68	68	65	61	57	71	67	63	N/A	
Gabelli SMCV (Net of Fees)	**-22.27**	**-33.53**	**-15.23**	**-4.43**	**-2.45**	**8.11**	**21.46**	**3.76**	**4.16**	**01/01/2002**
R 2500 Value Index	-24.86	-31.99	-20.59	-8.83	-4.94	-7.27	20.18	7.74	3.78	
Difference	2.59	-1.54	5.36	4.40	2.49	15.38	1.28	-3.98	0.38	
US Equity Mid-Cap Value Funds (MF) Median	-24.19	-37.43	-21.18	-10.13	-5.13	1.66	15.46	10.15	N/A	
Percentile Rank	**29**	**21**	**8**	**5**	**7**	**16**	**9**	**96**	**N/A**	
Absolute Rank	**109**	**74**	**25**	**14**	**17**	**52**	**28**	**258**	**N/A**	
Population	375	353	317	285	244	325	310	269	N/A	
Gabelli SMCV (Net of Fees)	**-22.27**	**-33.53**	**-15.23**	**-4.43**	**-2.45**	**8.11**	**21.46**	**3.76**	**4.16**	**01/01/2002**
R 2500 Value Index	-24.86	-31.99	-20.59	-8.83	-4.94	-7.27	20.18	7.74	3.78	
Difference	2.59	-1.54	5.36	4.40	2.49	15.38	1.28	-3.98	0.38	
US Equity Small-Cap Value Funds (MF) Median	-25.31	-31.92	-20.21	-9.01	-5.30	-5.28	16.73	6.28	N/A	
Percentile Rank	**19**	**61**	**15**	**13**	**14**	**2**	**12**	**75**	**N/A**	
Absolute Rank	**64**	**196**	**44**	**34**	**34**	**6**	**35**	**200**	**N/A**	
Population	337	321	295	264	241	308	288	266	N/A	

Friess SMCG (Net of Fees) and Gabelli SMCV (Net of Fees) are shown in both a Mid-Cap and Small-Cap Universe since an appropriate net of fees Smid Cap Universe is currently not available.

Performance shown is gross of fees except where noted. Performance is preliminary and subject to change.
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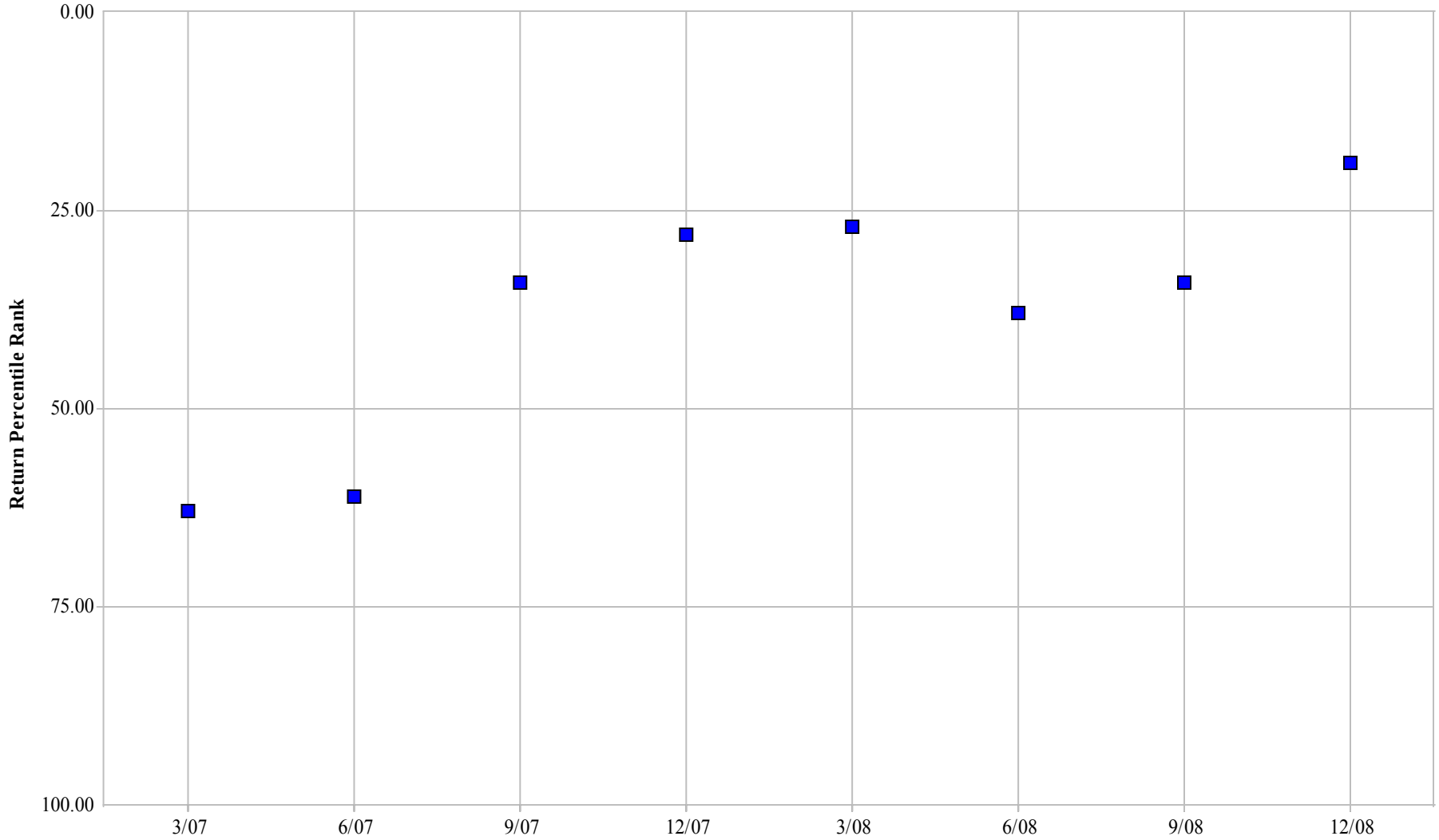
Wyoming State Treasurer's Office
US Small/Mid Cap Value (SA+CF)
Rolling Percentile Ranking
3 Year Rolling Periods as of December 31, 2008



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Gabelli SMCV	8	1 (13%)	5 (63%)	2 (25%)	0 (0%)

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
Comparative Performance
As of December 31, 2008

	1 Quarter	1 Year	2 Years	3 Years	4 Years	2007	2006	2005	Since Inception	Inception Date
Domestic Equity continued...										
SMid Cap Growth										
Friess SMCG	**-26.54**	**-41.09**	**-15.83**	**-7.00**	**N/A**	**20.27**	**13.53**	**N/A**	**-0.59**	**05/01/2005**
R 2500 Growth Index	-27.77	-41.50	-19.90	-10.36	-6.05	9.69	12.26	8.17	-4.00	
Difference	1.23	0.41	4.07	3.36	N/A	10.58	1.27	N/A	3.41	
US Small/Mid Cap Growth (SA+CF) Median	-26.79	-41.64	-18.96	-10.14	-5.47	14.79	11.24	9.87	N/A	
Percentile Rank	**50**	**41**	**25**	**20**	**N/A**	**28**	**35**	**N/A**	**N/A**	
Absolute Rank	**36**	**29**	**17**	**13**	**N/A**	**22**	**28**	**N/A**	**N/A**	
Population	72	71	67	64	56	79	81	75	N/A	
Friess SMCG (Net of Fees)	**-26.75**	**-42.01**	**-16.85**	**-8.06**	**N/A**	**19.21**	**12.42**	**N/A**	**-1.69**	**05/01/2005**
R 2500 Growth Index	-27.77	-41.50	-19.90	-10.36	-6.05	9.69	12.26	8.17	-4.00	
Difference	1.02	-0.51	3.05	2.30	N/A	9.52	0.16	N/A	2.31	
US Equity Mid-Cap Growth Funds (MF) Median	-26.93	-45.13	-19.48	-11.00	-6.24	15.81	8.29	10.44	N/A	
Percentile Rank	**48**	**33**	**29**	**19**	**N/A**	**35**	**20**	**N/A**	**N/A**	
Absolute Rank	**300**	**199**	**163**	**99**	**N/A**	**211**	**120**	**N/A**	**N/A**	
Population	625	602	562	522	459	603	601	556	N/A	
Friess SMCG (Net of Fees)	**-26.75**	**-42.01**	**-16.85**	**-8.06**	**N/A**	**19.21**	**12.42**	**N/A**	**-1.69**	**05/01/2005**
R 2500 Growth Index	-27.77	-41.50	-19.90	-10.36	-6.05	9.69	12.26	8.17	-4.00	
Difference	1.02	-0.51	3.05	2.30	N/A	9.52	0.16	N/A	2.31	
US Equity Small-Cap Growth Funds (MF) Median	-26.85	-42.00	-20.72	-11.43	-7.62	8.77	9.74	5.56	N/A	
Percentile Rank	**48**	**51**	**16**	**17**	**N/A**	**11**	**31**	**N/A**	**N/A**	
Absolute Rank	**302**	**308**	**90**	**86**	**N/A**	**66**	**183**	**N/A**	**N/A**	
Population	629	604	561	508	459	600	591	580	N/A	

Friess SMCG (Net of Fees) and Gabelli SMCV (Net of Fees) are shown in both a Mid-Cap and Small-Cap Universe since an appropriate net of fees Smid Cap Universe is currently not available.

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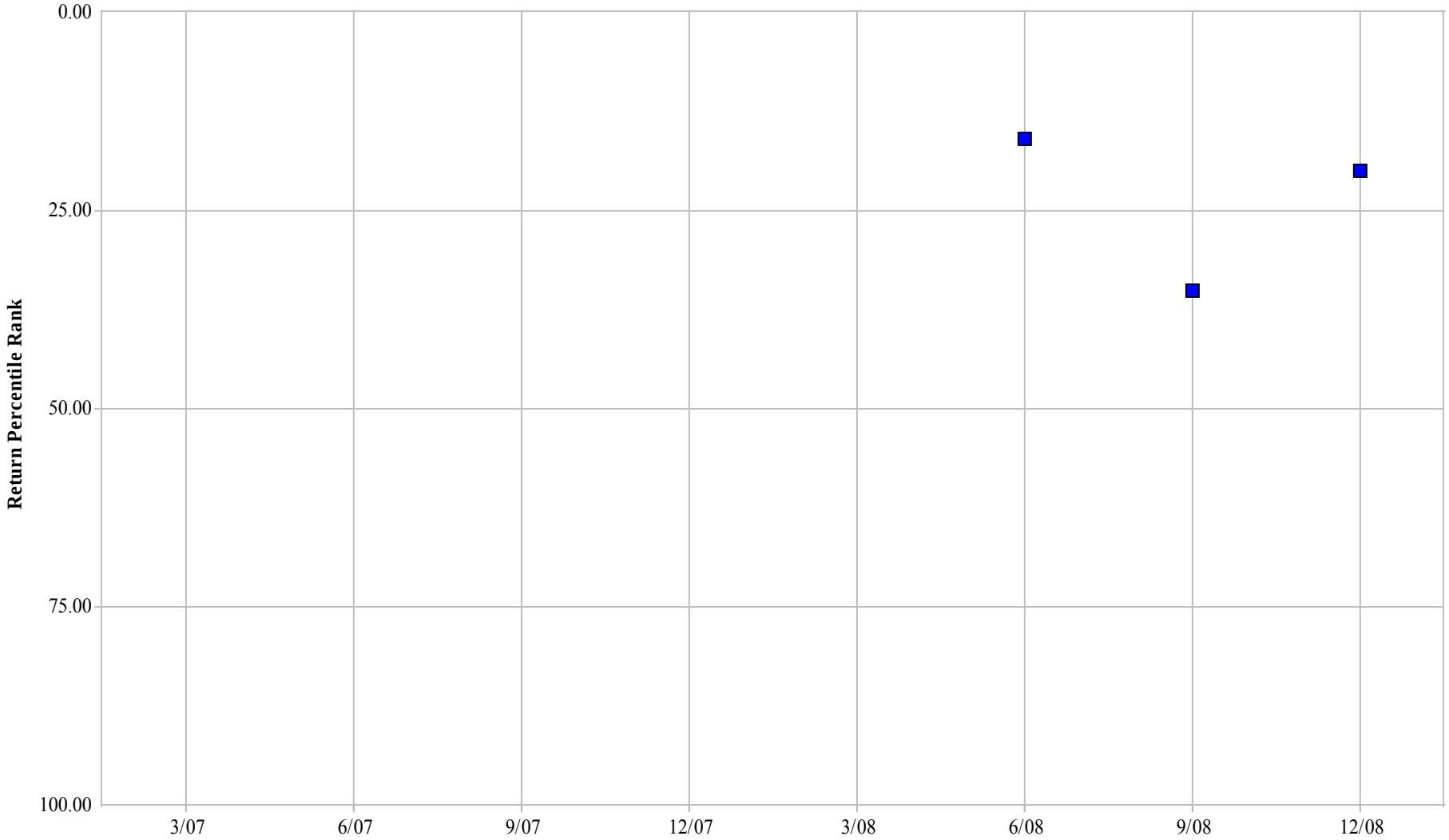
Wyoming State Treasurer's Office
US Small/Mid Cap Growth (SA+CF)
Rolling Percentile Ranking
3 Year Rolling Periods as of December 31, 2008



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Friess SMCG	3	2 (67%)	1 (33%)	0 (0%)	0 (0%)

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
Comparative Performance
As of December 31, 2008

	1 Quarter	1 Year	2 Years	3 Years	4 Years	2007	2006	2005	Since Inception	Inception Date
Int'l Equity										
Fisher Int'l Eq	**-23.42**	**-43.74**	**-19.25**	**-8.06**	**-2.12**	**15.90**	**19.21**	**18.08**	**1.82**	**08/01/2004**
MSCI EAFE Index (Gross)	-19.90	-43.06	-20.27	-6.92	-2.08	11.63	26.86	14.02	2.05	
Difference	-3.52	-0.68	1.02	-1.14	-0.04	4.27	-7.65	4.06	-0.23	
International Equity All (SA+CF) Median	-20.30	-43.24	-19.93	-6.55	-1.30	12.00	26.69	16.15	N/A	
Percentile Rank	**78**	**54**	**43**	**71**	**67**	**31**	**92**	**37**	**N/A**	
Absolute Rank	**374**	**256**	**194**	**295**	**257**	**160**	**459**	**178**	**N/A**	
Population	479	474	452	416	383	517	499	481	N/A	
Fisher Int'l Eq (Net of Fees)	**-23.52**	**-44.02**	**-19.65**	**-8.51**	**-2.63**	**15.34**	**18.62**	**17.38**	**1.27**	**08/01/2004**
MSCI EAFE Index (Gross)	-19.90	-43.06	-20.27	-6.92	-2.08	11.63	26.86	14.02	2.05	
Difference	-3.62	-0.96	0.62	-1.59	-0.55	3.71	-8.24	3.36	-0.78	
International Equity All (MF) Median	-22.09	-46.20	-21.01	-7.39	-2.01	13.04	26.22	15.75	N/A	
Percentile Rank	**61**	**36**	**37**	**63**	**60**	**41**	**93**	**42**	**N/A**	
Absolute Rank	**1359**	**723**	**636**	**908**	**760**	**740**	**1493**	**617**	**N/A**	
Population	2,228	2,008	1,718	1,441	1,266	1,804	1,605	1,468	N/A	
Cap Guardian Int'l Eq	**-18.20**	**-41.89**	**-18.72**	**-7.06**	**-1.22**	**13.69**	**21.53**	**18.58**	**2.74**	**09/01/2004**
MSCI EAFE Index (Gross)	-19.90	-43.06	-20.27	-6.92	-2.08	11.63	26.86	14.02	1.98	
Difference	1.70	1.17	1.55	-0.14	0.86	2.06	-5.33	4.56	0.76	
International Equity All (SA+CF) Median	-20.30	-43.24	-19.93	-6.55	-1.30	12.00	26.69	16.15	N/A	
Percentile Rank	**28**	**38**	**40**	**57**	**49**	**41**	**86**	**33**	**N/A**	
Absolute Rank	**134**	**180**	**181**	**237**	**188**	**212**	**429**	**159**	**N/A**	
Population	479	474	452	416	383	517	499	481	N/A	
Cap Guardian Int'l Eq (Net of Fees)	**-18.32**	**-42.20**	**-19.13**	**-7.55**	**-1.78**	**13.15**	**20.83**	**17.78**	**2.15**	**09/01/2004**
MSCI EAFE Index (Gross)	-19.90	-43.06	-20.27	-6.92	-2.08	11.63	26.86	14.02	1.98	
Difference	1.58	0.86	1.14	-0.63	0.30	1.52	-6.03	3.76	0.17	
International Equity All (MF) Median	-22.09	-46.20	-21.01	-7.39	-2.01	13.04	26.22	15.75	N/A	
Percentile Rank	**18**	**23**	**32**	**52**	**47**	**50**	**87**	**40**	**N/A**	
Absolute Rank	**401**	**462**	**550**	**749**	**595**	**902**	**1396**	**587**	**N/A**	
Population	2,228	2,008	1,718	1,441	1,266	1,804	1,605	1,468	N/A	

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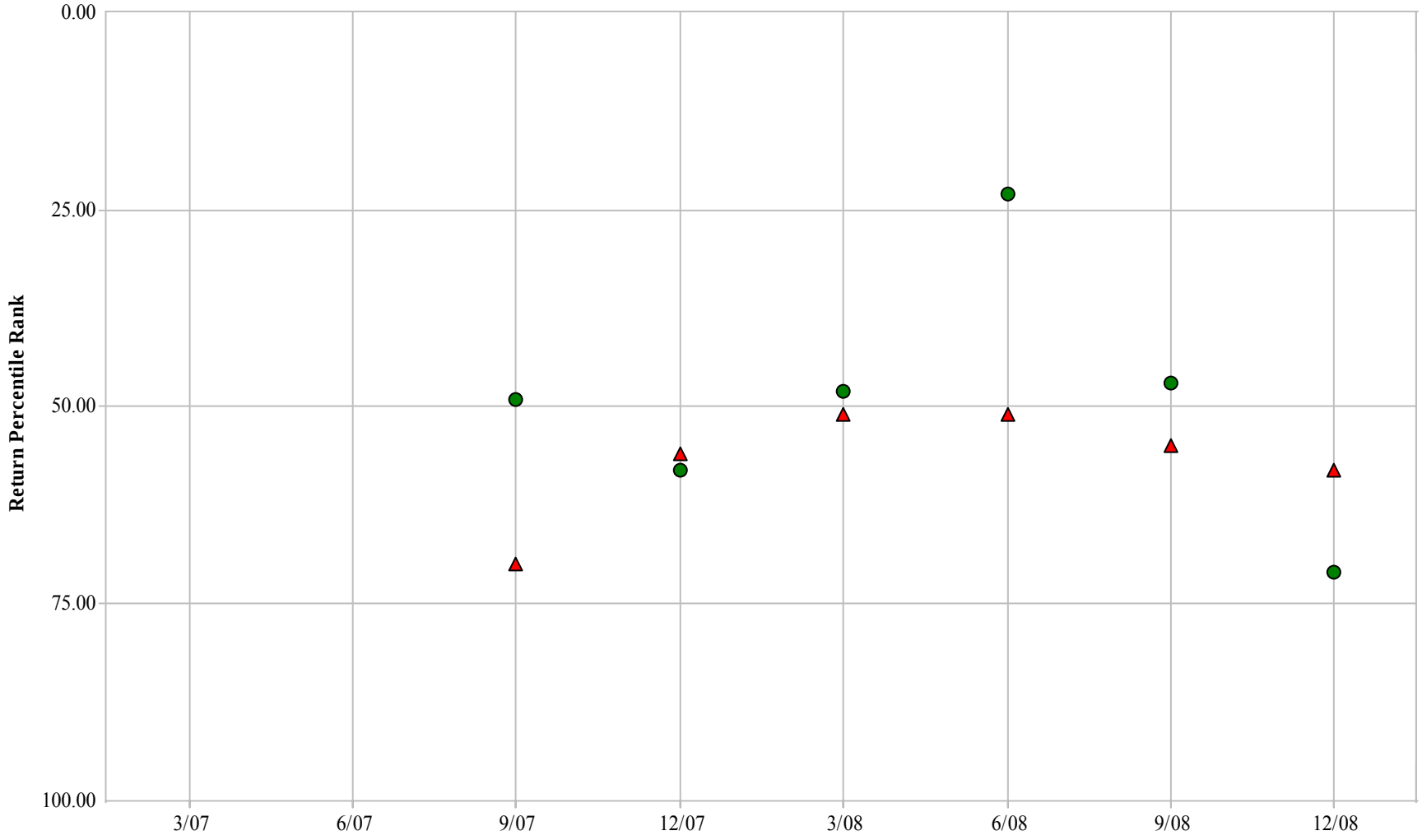
Wyoming State Treasurer's Office
International Equity All (SA+CF)
Rolling Percentile Ranking
3 Year Rolling Periods as of December 31, 2008



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Fisher Int'l Eq	6	1 (17%)	3 (50%)	2 (33%)	0 (0%)
▲ Cap Guardian Int'l Eq	6	0 (0%)	0 (0%)	6 (100%)	0 (0%)

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
Comparative Performance
As of December 31, 2008

	1 Quarter	1 Year	2 Years	3 Years	4 Years	2007	2006	2005	Since Inception	Inception Date
Fixed Income - Core Plus										
WAMCO Core Plus	**1.83**	**0.71**	**3.52**	**4.04**	**3.78**	**6.41**	**5.10**	**2.97**	**6.24**	**10/01/1996**
BC US Agg Bond Index	4.58	5.24	6.10	5.51	4.73	6.97	4.33	2.43	6.34	
Difference	-2.75	-4.53	-2.58	-1.47	-0.95	-0.56	0.77	0.54	-0.10	
US Broad Market Core Fixed Income (SA+CF) Median	3.62	3.30	4.98	4.80	4.24	6.91	4.47	2.72	N/A	
Percentile Rank	**68**	**62**	**62**	**61**	**60**	**65**	**9**	**25**	**N/A**	
Absolute Rank	**132**	**119**	**116**	**113**	**110**	**153**	**23**	**67**	**N/A**	
Population	194	192	187	185	184	236	259	269	N/A	
WAMCO Core Plus (Net of Fees)	**1.80**	**0.56**	**3.37**	**3.89**	**3.62**	**6.25**	**4.94**	**2.82**	**6.08**	**10/01/1996**
BC US Agg Bond Index	4.58	5.24	6.10	5.51	4.73	6.97	4.33	2.43	6.34	
Difference	-2.78	-4.68	-2.73	-1.62	-1.11	-0.72	0.61	0.39	-0.26	
US Broad Market Core Funds (MF) Median	0.47	-2.92	1.18	2.15	2.06	5.36	3.94	1.82	N/A	
Percentile Rank	**38**	**34**	**34**	**28**	**21**	**26**	**12**	**5**	**N/A**	
Absolute Rank	**229**	**195**	**175**	**131**	**93**	**145**	**65**	**27**	**N/A**	
Population	602	573	515	469	444	559	542	539	N/A	
Lehman Core Plus	**1.78**	**-0.93**	**2.43**	**N/A**	**N/A**	**5.91**	**N/A**	**N/A**	**3.69**	**04/01/2006**
BC US Agg Bond Index	4.58	5.24	6.10	5.51	4.73	6.97	4.33	2.43	6.27	
Difference	-2.80	-6.17	-3.67	N/A	N/A	-1.06	N/A	N/A	-2.58	
US Broad Market Core Fixed Income (SA+CF) Median	3.62	3.30	4.98	4.80	4.24	6.91	4.47	2.72	N/A	
Percentile Rank	**68**	**69**	**70**	**N/A**	**N/A**	**80**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**132**	**132**	**131**	**N/A**	**N/A**	**189**	**N/A**	**N/A**	**N/A**	
Population	194	192	187	185	184	236	259	269	N/A	
Lehman Core Plus (Net of Fees)	**1.75**	**-1.05**	**2.30**	**N/A**	**N/A**	**5.76**	**N/A**	**N/A**	**3.54**	**04/01/2006**
BC US Agg Bond Index	4.58	5.24	6.10	5.51	4.73	6.97	4.33	2.43	6.27	
Difference	-2.83	-6.29	-3.80	N/A	N/A	-1.21	N/A	N/A	-2.73	
US Broad Market Core Funds (MF) Median	0.47	-2.92	1.18	2.15	2.06	5.36	3.94	1.82	N/A	
Percentile Rank	**38**	**40**	**41**	**N/A**	**N/A**	**39**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**229**	**229**	**211**	**N/A**	**N/A**	**218**	**N/A**	**N/A**	**N/A**	
Population	602	573	515	469	444	559	542	539	N/A	

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Wyoming State Treasurer's Office
Comparative Performance
As of December 31, 2008

	1 Quarter	1 Year	2 Years	3 Years	4 Years	2007	2006	2005	Since Inception	Inception Date
Fixed Income - Core Plus continued...										
PIMCO Core Plus	**3.87**	**4.68**	**7.06**	**N/A**	**N/A**	**9.50**	**N/A**	**N/A**	**7.53**	**06/01/2006**
BC US Agg Bond Index	4.58	5.24	6.10	5.51	4.73	6.97	4.33	2.43	6.81	
Difference	-0.71	-0.56	0.96	N/A	N/A	2.53	N/A	N/A	0.72	
US Broad Market Core Fixed Income (SA+CF) Median	3.62	3.30	4.98	4.80	4.24	6.91	4.47	2.72	N/A	
Percentile Rank	**47**	**36**	**16**	**N/A**	**N/A**	**1**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**91**	**69**	**30**	**N/A**	**N/A**	**2**	**N/A**	**N/A**	**N/A**	
Population	194	192	187	185	184	236	259	269	N/A	
PIMCO Core Plus (Net of Fees)	**3.82**	**4.46**	**6.81**	**N/A**	**N/A**	**9.22**	**N/A**	**N/A**	**7.28**	**06/01/2006**
BC US Agg Bond Index	4.58	5.24	6.10	5.51	4.73	6.97	4.33	2.43	6.81	
Difference	-0.76	-0.78	0.71	N/A	N/A	2.25	N/A	N/A	0.47	
US Broad Market Core Funds (MF) Median	0.47	-2.92	1.18	2.15	2.06	5.36	3.94	1.82	N/A	
Percentile Rank	**21**	**15**	**2**	**N/A**	**N/A**	**1**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**126**	**86**	**10**	**N/A**	**N/A**	**6**	**N/A**	**N/A**	**N/A**	
Population	602	573	515	469	444	559	542	539	N/A	

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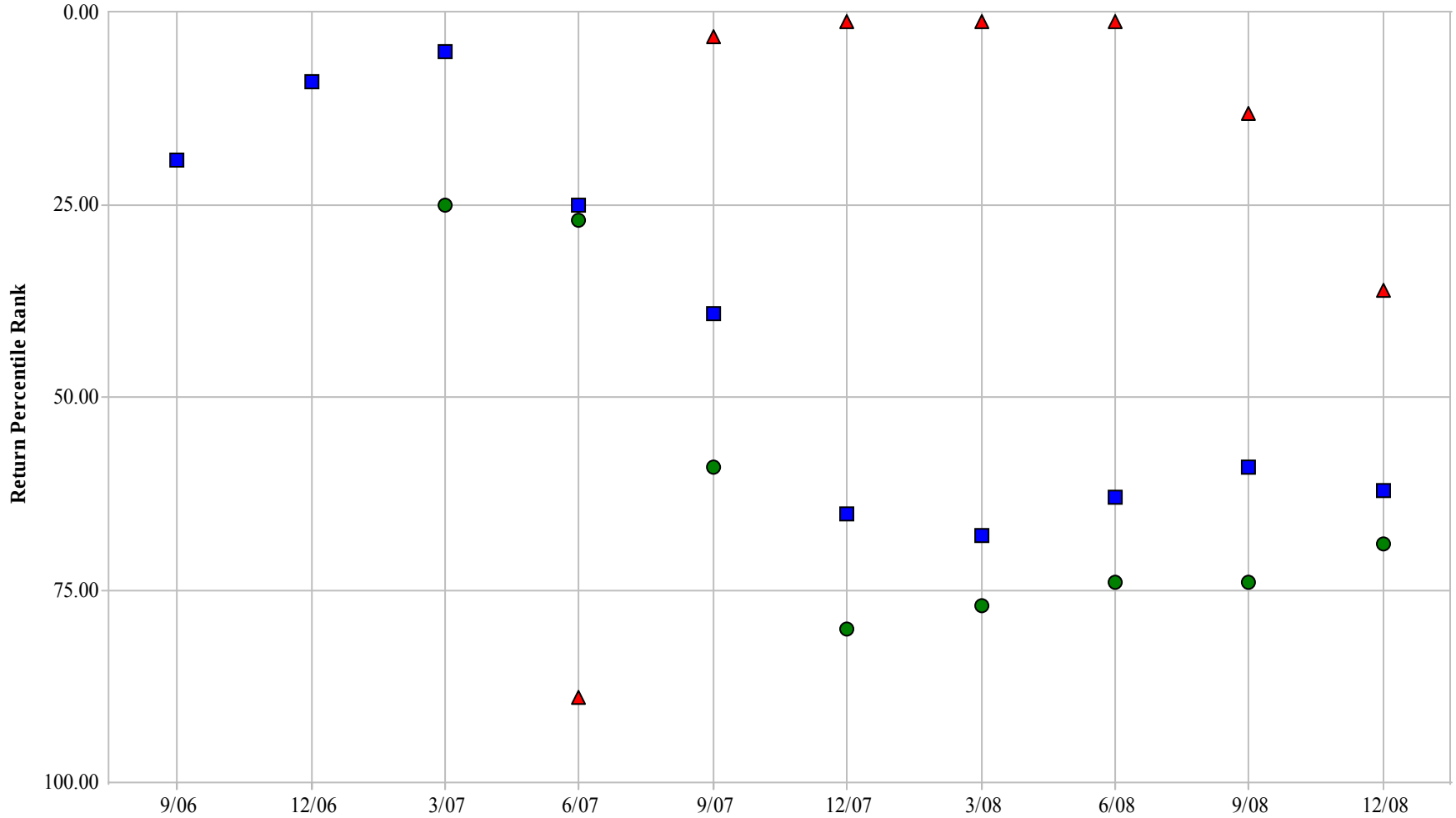
Wyoming State Treasurer's Office
US Broad Market Core Fixed Income (SA+CF)
Rolling Percentile Ranking
1 Year Rolling Periods as of December 31, 2008



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
WAMCO Core Plus	10	4 (40%)	1 (10%)	5 (50%)	0 (0%)
Lehman Core Plus	8	1 (13%)	1 (13%)	4 (50%)	2 (25%)
PIMCO Core Plus	7	5 (71%)	1 (14%)	0 (0%)	1 (14%)

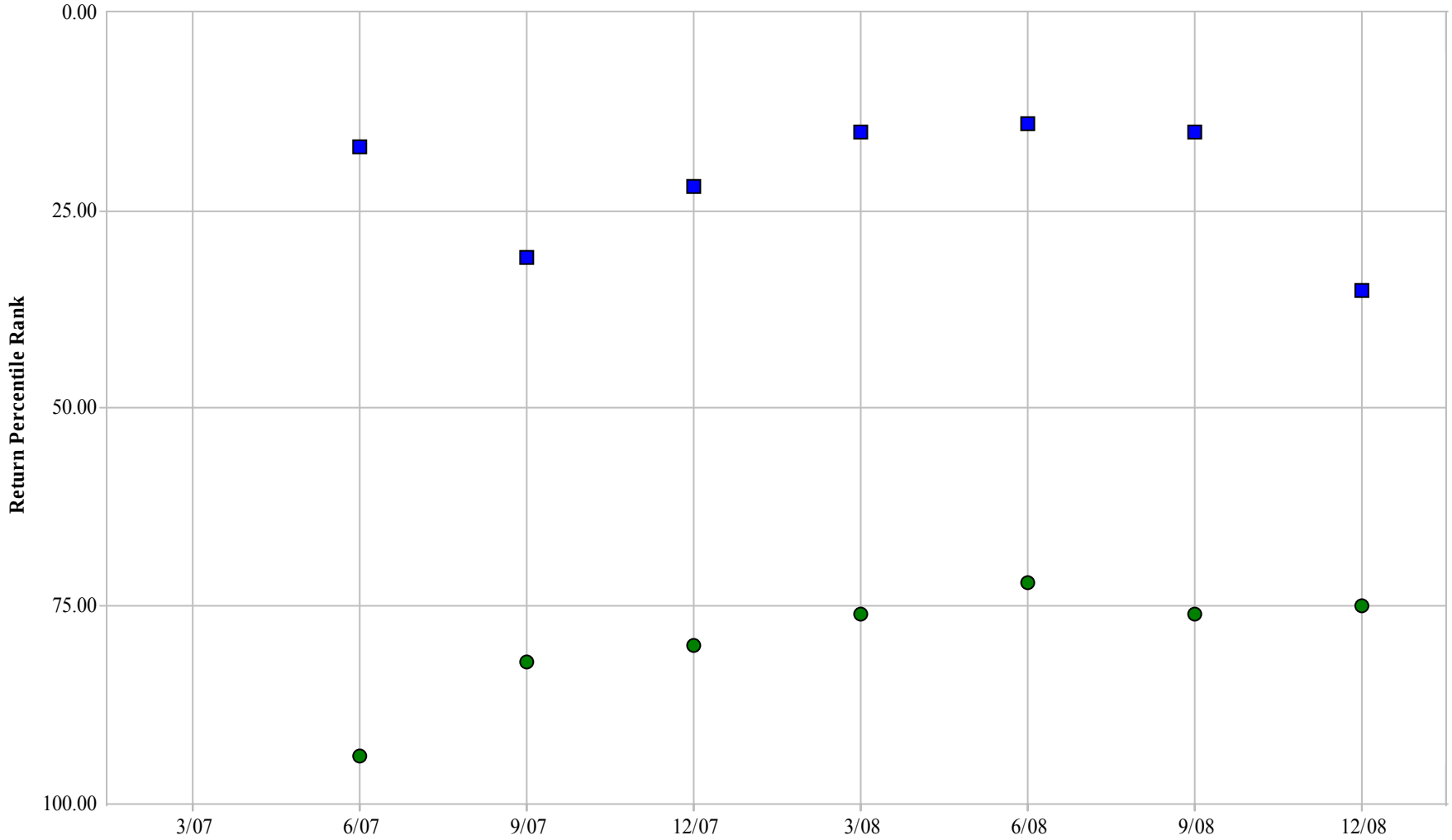
RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
Comparative Performance
As of December 31, 2008

	1 Quarter	1 Year	2 Years	3 Years	4 Years	2007	2006	2005	Since Inception	Inception Date
Fixed Income - Mortgages										
PIMCO Mortgages	**1.52**	**5.24**	**6.09**	**N/A**	**N/A**	**6.95**	**N/A**	**N/A**	**7.04**	**06/01/2006**
BC Mrtg Backed Secr Index	4.34	8.34	7.62	6.81	5.75	6.90	5.22	2.61	8.06	
Difference	-2.82	-3.10	-1.53	N/A	N/A	0.05	N/A	N/A	-1.02	
US Mortgage-Backed Bonds (SA+CF) Median	1.86	3.35	4.30	4.62	4.17	6.28	5.27	2.99	N/A	
Percentile Rank	**54**	**35**	**31**	**N/A**	**N/A**	**22**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**17**	**11**	**9**	**N/A**	**N/A**	**9**	**N/A**	**N/A**	**N/A**	
Population	31	31	29	29	29	39	40	43	N/A	
PIMCO Mortgages (Net of Fees)	**1.47**	**5.02**	**5.85**	**N/A**	**N/A**	**6.70**	**N/A**	**N/A**	**6.79**	**06/01/2006**
BC Mrtg Backed Secr Index	4.34	8.34	7.62	6.81	5.75	6.90	5.22	2.61	8.06	
Difference	-2.87	-3.32	-1.77	N/A	N/A	-0.20	N/A	N/A	-1.27	
US Mortgage Based Funds (MF) Median	1.73	3.05	4.25	4.20	3.45	5.86	4.05	2.14	N/A	
Percentile Rank	**54**	**38**	**33**	**N/A**	**N/A**	**15**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**84**	**59**	**47**	**N/A**	**N/A**	**22**	**N/A**	**N/A**	**N/A**	
Population	156	154	142	140	137	144	153	155	N/A	
JPM Mortgages	**-1.59**	**-5.29**	**-0.97**	**N/A**	**N/A**	**3.54**	**N/A**	**N/A**	**1.38**	**07/01/2006**
BC Mrtg Backed Secr Index	4.34	8.34	7.62	6.81	5.75	6.90	5.22	2.61	8.26	
Difference	-5.93	-13.63	-8.59	N/A	N/A	-3.36	N/A	N/A	-6.88	
US Mortgage-Backed Bonds (SA+CF) Median	1.86	3.35	4.30	4.62	4.17	6.28	5.27	2.99	N/A	
Percentile Rank	**72**	**75**	**74**	**N/A**	**N/A**	**80**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**22**	**23**	**21**	**N/A**	**N/A**	**31**	**N/A**	**N/A**	**N/A**	
Population	31	31	29	29	29	39	40	43	N/A	
JPM Mortgages (Net of Fees)	**-1.62**	**-5.40**	**-1.09**	**N/A**	**N/A**	**3.41**	**N/A**	**N/A**	**1.25**	**07/01/2006**
BC Mrtg Backed Secr Index	4.34	8.34	7.62	6.81	5.75	6.90	5.22	2.61	8.26	
Difference	-5.96	-13.74	-8.71	N/A	N/A	-3.49	N/A	N/A	-7.01	
US Mortgage Based Funds (MF) Median	1.73	3.05	4.25	4.20	3.45	5.86	4.05	2.14	N/A	
Percentile Rank	**83**	**90**	**93**	**N/A**	**N/A**	**91**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**129**	**139**	**132**	**N/A**	**N/A**	**131**	**N/A**	**N/A**	**N/A**	
Population	156	154	142	140	137	144	153	155	N/A	

Performance shown is gross of fees except where noted. Performance is preliminary and subject to change.
Performance is annualized for periods greater than one year.

Wyoming State Treasurer's Office
US Mortgage-Backed Bonds (SA+CF)
Rolling Percentile Ranking
1 Year Rolling Periods as of December 31, 2008



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
PIMCO Mortgages	7	5 (71%)	2 (29%)	0 (0%)	0 (0%)
JPM Mortgages	7	0 (0%)	0 (0%)	2 (29%)	5 (71%)

RVKuhns & ASSOCIATES, INC.

Wyoming State Treasurer's Office
Comparative Performance
As of December 31, 2008

	1 Quarter	1 Year	2 Years	3 Years	4 Years	2007	2006	2005	Since Inception	Inception Date
Fixed Income - Corporates										
WAMCO Corporates	**0.46**	**-11.08**	**-3.88**	**N/A**	**N/A**	**3.90**	**N/A**	**N/A**	**-0.54**	**06/01/2006**
BC US Credit Index	4.03	-3.08	0.93	2.03	2.01	5.11	4.26	1.95	3.04	
Difference	-3.57	-8.00	-4.81	N/A	N/A	-1.21	N/A	N/A	-3.58	
US Investment Grade CorporateBonds (SA+CF) Median	2.10	-3.80	0.53	1.81	2.09	5.12	4.81	2.42	N/A	
Percentile Rank	**69**	**86**	**85**	**N/A**	**N/A**	**86**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**19**	**24**	**24**	**N/A**	**N/A**	**25**	**N/A**	**N/A**	**N/A**	
Population	28	28	28	28	27	29	30	29	N/A	
WAMCO Corporates (Net of Fees)	**0.43**	**-11.22**	**-4.03**	**N/A**	**N/A**	**3.74**	**N/A**	**N/A**	**-0.69**	**06/01/2006**
BC US Credit Index	4.03	-3.08	0.93	2.03	2.01	5.11	4.26	1.95	3.04	
Difference	-3.60	-8.14	-4.96	N/A	N/A	-1.37	N/A	N/A	-3.73	
US Investment Grade Corporate Funds (MF) Median	-2.96	-8.56	-2.13	-0.08	0.43	4.69	3.98	1.84	N/A	
Percentile Rank	**36**	**67**	**69**	**N/A**	**N/A**	**68**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**114**	**201**	**198**	**N/A**	**N/A**	**212**	**N/A**	**N/A**	**N/A**	
Population	316	300	287	271	249	312	316	305	N/A	
Logan Circle Corporates	**-0.32**	**-11.94**	**-4.47**	**N/A**	**N/A**	**3.63**	**N/A**	**N/A**	**-0.88**	**06/01/2006**
BC US Credit Index	4.03	-3.08	0.93	2.03	2.01	5.11	4.26	1.95	3.04	
Difference	-4.35	-8.86	-5.40	N/A	N/A	-1.48	N/A	N/A	-3.92	
US Investment Grade CorporateBonds (SA+CF) Median	2.10	-3.80	0.53	1.81	2.09	5.12	4.81	2.42	N/A	
Percentile Rank	**73**	**86**	**86**	**N/A**	**N/A**	**87**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**20**	**24**	**24**	**N/A**	**N/A**	**25**	**N/A**	**N/A**	**N/A**	
Population	28	28	28	28	27	29	30	29	N/A	
Logan Circle Corporates (Net of Fees)	**-0.38**	**-12.14**	**-4.69**	**N/A**	**N/A**	**3.40**	**N/A**	**N/A**	**-1.11**	**06/01/2006**
BC US Credit Index	4.03	-3.08	0.93	2.03	2.01	5.11	4.26	1.95	3.04	
Difference	-4.41	-9.06	-5.62	N/A	N/A	-1.71	N/A	N/A	-4.15	
US Investment Grade Corporate Funds (MF) Median	-2.96	-8.56	-2.13	-0.08	0.43	4.69	3.98	1.84	N/A	
Percentile Rank	**40**	**75**	**76**	**N/A**	**N/A**	**74**	**N/A**	**N/A**	**N/A**	
Absolute Rank	**126**	**225**	**218**	**N/A**	**N/A**	**231**	**N/A**	**N/A**	**N/A**	
Population	316	300	287	271	249	312	316	305	N/A	

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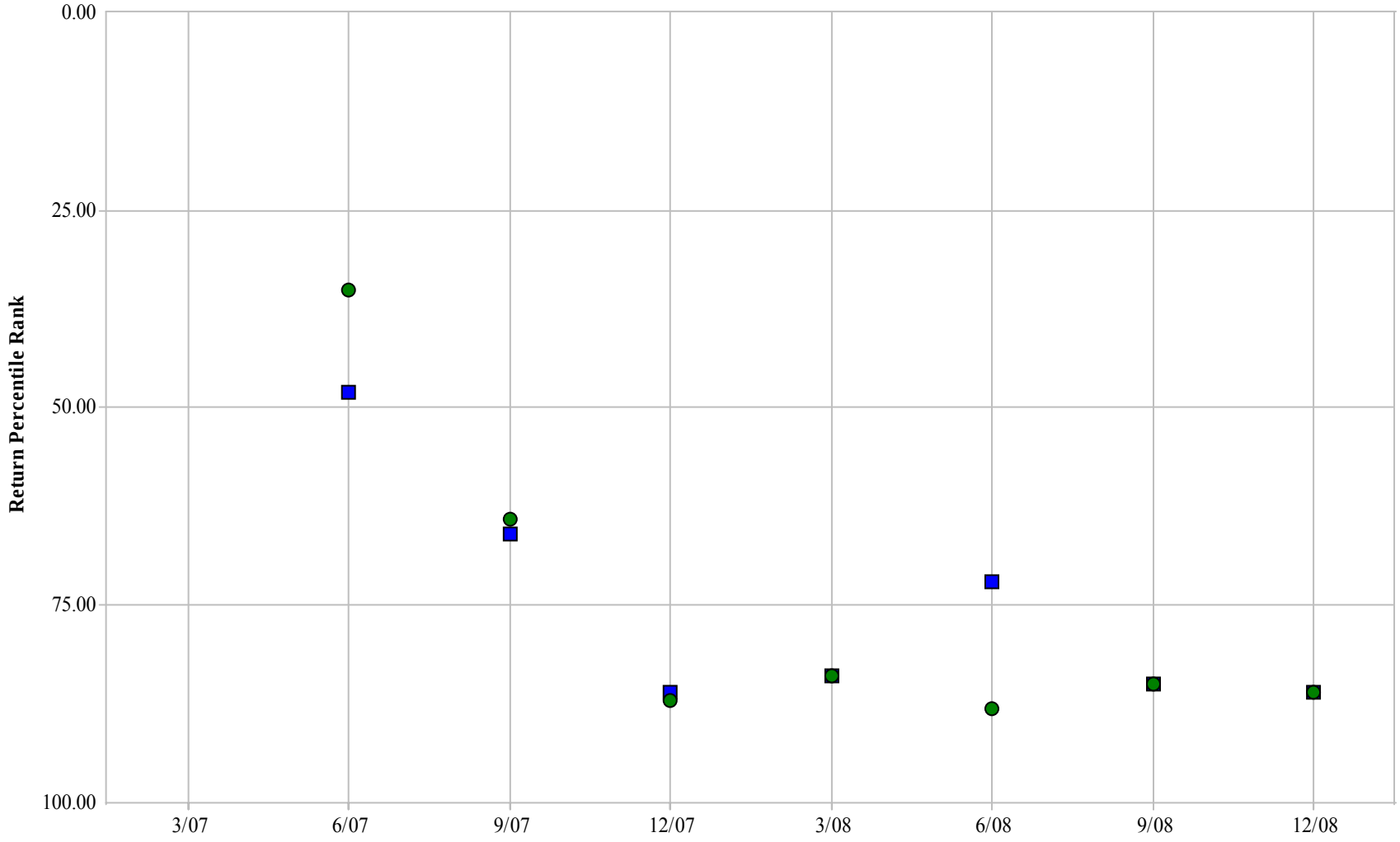
Wyoming State Treasurer's Office
US Investment Grade CorporateBonds (SA+CF)
Rolling Percentile Ranking
1 Year Rolling Periods as of December 31, 2008



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
WAMCO Corporates	7	0 (0%)	1 (14%)	2 (29%)	4 (57%)
Logan Circle Corporates	7	0 (0%)	1 (14%)	1 (14%)	5 (71%)

RVKuhns & ASSOCIATES, INC.