

The Impact of Integrity on Stock Returns: Corporate Integrity Ratings Provide Unique Risk Factor

Returns Analysis for the AGR Equity Factor Results for the Time Period 1999 - 2008

Overview and Summary

Audit Integrity measures corporate integrity through an extensive analysis of both financial and non-financial metrics. This approach builds on prior approaches to determine the fundamental risk behind earnings quality factors – can the numbers, and the management, be trusted?

Audit Integrity ratings have proven to be significant indicators of negative events such as securities class action litigation, financial restatements, bankruptcies and SEC enforcement actions. In short, aggressive accounting behavior and risky corporate governance practices increase the likelihood of such negative events.

Extensive research has also shown a clear relationship between Audit Integrity's primary risk measure, the Accounting and Governance Risk (AGR[®]) rating, and equity returns. Consistently, the lowest-rated companies underperform the market and highest-rated companies outperform.

In presenting these most recent research results, Audit Integrity studied equity returns using AGR scores over a 10-year period, 1999-2008.

The results were consistent with prior research showing that corporate integrity, as measured by the AGR rating, is a significant factor in equity returns, with low correlation to other factors.

Key Findings:

- There is a **large and persistent returns spread** between the highest and lowest-rated companies – a **15.3% spread** between the best and worst decile over the prior 10 years
- Returns by year showed a very consistent performance pattern as well, with **8 of the 10 years having positive spreads** – the last 4 years all show double-digit spreads; the AGR Equity Factor has **worked particularly well in down and volatile markets**
- This returns disparity is seen **across all market capitalization groups** – while greatest in the small- and micro-cap groups, the spread is 11.8% annually for large caps as well
- The results are also consistent across industry sectors, with **10 of 12 major industry sectors** showing positive return spreads – Basic Materials, Services, Technology and Healthcare had the best results
- The AGR Equity Factor **works equally well for both Growth and Value stocks**, indicating corporate integrity is important for all companies
- From a quantitative modeling standpoint, **the Equity Factor provides risk-adjusted, well behaved returns**, as validated through key statistical measures
- The AGR Equity Factor **measures a different type of risk**, as confirmed through low correlation with broadly-used factors such as Price-to-Book and Accruals

Background and Methodology

- **AGR** – The AGR Score is based on a quantitative model which weights specific accounting and governance metrics derived from corporate reporting. The score ranges from 0 to 100, with lower scores indicating higher risk.
- **AGR Equity Factor** – based solely on the AGR score, the AGR Equity Factor adds variables related to AGR persistence and volatility to provide a better measure of equity risk than the AGR on a stand-alone basis. The AGR Equity Factor scores have been partitioned into equal deciles for the purposes of this research.

Back Test Research Methodology

To test and validate the AGR Equity Factor (EQF), the model was back-tested over the time period of 1999-2008. The following parameters were used:

- **Company Coverage:** U.S.-traded public companies with > \$50m market capitalization
- **Deciles:** the assignment of companies to 1 of 10 equal-size groups was done at the universe level
- **Pricing Data:** IDC, via FactSet
- **Rebalancing:** All groupings were rebalanced monthly.
- **Holding Period:** 3-months
- **Returns:** Equal-weighted returns; Split and dividend adjusted
- **Market Capitalization:** based on Reuters data, with ranges of \$5b+ (Large), \$1-\$5b (Mid), \$250m-\$1b (Small) and \$50-\$250m (Micro)
- **Industry Groups:** based in Reuters major industry classifications (RIC codes)
- **Growth/Value Groups:** based on Price-to-Book ratio, with the highest 1/3 of the population classified as Growth and the lowest 1/3 as Value
- **Accruals Factor:** to compare the EQF vs. an accruals-based approach, a standard definition of an accruals model was taken from academic literature – (Net Income before Extraordinary Items less Operating Cash Flow) / Average Total Assets

AGR Equity Factor Validation

Back test results are provided for the 10-year period, overall and by Year, Market Capitalization Range, Industry Sector and Growth/Value (using a basic Price-to-Book measure.)

The FactSet Alpha Tester outputs provided a wealth of results to measure and validate returns. While we list many of those statistics in the following tables, our analysis will focus on those highlighted in the following table:

Best-Worst Spread	Volatility	Persistence
Basic Returns	Information Ratio (IR)	% > Benchmark
Alpha	Information Coefficient (IC)	% > Down Benchmark
Excess Returns	IC T-Stat	

Definitions:**Key Statistics**

- **Basic Returns:** The difference in returns between the top decile and the bottom decile.
- **Alpha:** The difference in residual return of the top and bottom deciles over the systematic universe return (Beta); the intercept of the regression line for the deciles return vs. the universe return.
- **Information Ratio:** The ratio of the annualized residual return per unit of residual risk; calculated as excess return over the standard deviation of excess return.
- **% > Down Benchmark:** The percentage of periods in a down market (return<0%) when the decile outperforms the benchmark.

Other Statistics

- **Excess Returns:** The difference between the top and bottom deciles with respect to excess return. Excess returns are defined as the return of a particular decile minus the return of the specific universe being examined.
- **Information Coefficient (IC):** The Spearman ranked correlation between forward returns and the Equity Factor. Values lie between 1 and -1.
- **IC T-Stat:** Indicates the statistical significance of the Information Coefficient. The value is heavily dependent on the number of companies that went into the computation. With large samples, a T-statistic above 1.66 is significant at a 90% confidence interval for a two-tailed test.
- **% > Benchmark:** The percentage of periods in which the decile outperforms the benchmark.

TABLE I

**Summary Results by Market Capitalization
Ten Year Period, 1999-2008
Equity Factor Decile Spreads (10-1)**

	Return Spread	IC	IC T-Stat	Information Ratio		Number of Securities
				Best (10)	Worst (1)	
All Capitalization Ranges (> \$50M)	15.29	0.05	2.74	0.58	-1.21	427,175
Large Cap (> \$5B)	11.79	0.04	0.75	0.74	-0.70	46,312
Mid Cap (\$1B - \$5B)	10.25	0.03	0.81	0.22	-0.89	96,130
Small Cap (\$250M - \$1B)	12.29	0.04	1.34	0.41	-0.82	128,138
Micro Cap (\$50M - \$250M)	20.35	0.07	2.45	0.43	-1.13	156,595

Observations - AGR Equity Factor:

- ✓ Return spread differences between Best-ranking decile (10) versus Worst decile (1) are highly positive for the 10-year period
- ✓ Information Ratio high for both Best (10) and Worst (1) groups. There is more information for Worst group.
- ✓ Information Coefficient is strong for the entire population, and is significant at the 95% confidence interval. Information Coefficient varies by Market Cap.

TABLE II

**Average Annual Decile Returns and Statistics
Ten Year Period, 1999-2008**

ALL CAP (>\$50M)	Universe		Excess vs.	Std. Dev.	Information	% >	% >	Number of Securities
	Return	Alpha	Universe	Excess vs. Universe	Ratio	Benchmark	Down Benchmark	
10	10.45	6.20	4.41	7.54	0.58	66.10	92.31	42,783
9	7.77	3.26	2.43	5.05	0.48	64.41	90.38	42,721
8	6.76	2.17	1.75	3.23	0.54	66.10	76.92	42,822
7	7.68	3.43	2.92	3.20	0.91	72.88	84.62	42,552
6	5.51	1.16	0.87	2.91	0.30	50.85	38.46	42,522
5	4.92	0.79	0.56	3.02	0.19	50.00	32.69	43,108
4	4.14	-0.12	-0.20	3.05	-0.07	47.46	38.46	42,367
3	2.37	-1.72	-1.76	4.06	-0.43	38.98	26.92	42,890
2	0.71	-3.41	-3.23	4.83	-0.67	35.59	19.23	42,729
1	-4.84	-8.40	-8.34	6.87	-1.21	23.73	5.77	42,681
Spread 10-1	15.29	14.61	12.74					

Observations - AGR Equity Factor:

- ✓ Well-behaved (monotonic) returns for both Universe and excess returns.
- ✓ Alpha (risk-adjusted excess return) extremely high at tails (both positive and negative) and diminishing as one moves toward median.
- ✓ Benchmark performance very positive at decile tails. Decile 1 and 10 outperform Universe in both Up and Down Markets. Both decile groups substantially outperform peers in Down Markets.

TABLE III**Average Annual Decile Returns by Market Capitalization Range**

Ten Year Period, 1999-2008

	Universe Return	Alpha	Excess vs. Universe	Std. Dev. Excess vs. Universe	Information Ratio	% > Benchmark	% > Down Benchmark	Number of Securities
Large Cap (>\$5b)								
10	6.30	4.82	4.17	5.62	0.74	66.10	76.60	4,588
9	2.83	1.79	1.03	5.14	0.20	55.93	65.96	4,642
8	3.98	2.87	2.10	5.35	0.39	60.17	70.21	4,603
7	5.03	4.50	3.23	7.70	0.42	50.85	57.45	4,631
6	0.23	-0.83	-1.38	5.29	-0.26	43.22	51.06	4,684
5	1.52	0.64	-0.03	5.85	0.00	50.85	53.19	4,663
4	1.94	0.70	0.42	4.77	0.09	47.46	40.43	4,702
3	0.64	-0.07	-0.97	6.27	-0.15	50.00	44.68	4,608
2	-2.24	-3.40	-3.84	6.85	-0.56	40.68	42.55	4,607
1	-5.49	-4.95	-6.37	9.07	-0.70	29.66	12.77	4,584
Spread 10-1	11.79	9.77	10.54					
Mid Cap (\$1-5b)								
10	6.46	2.61	1.50	6.79	0.22	52.54	76.60	9,608
9	5.05	1.36	0.55	5.76	0.10	58.47	68.09	9,547
8	4.34	0.75	0.04	4.89	0.01	52.54	63.83	9,610
7	5.66	2.03	1.56	4.57	0.34	58.47	55.32	9,642
6	4.00	0.35	0.01	4.90	0.00	50.00	42.55	9,659
5	6.34	3.58	2.75	6.58	0.42	56.78	40.43	9,629
4	5.41	2.04	1.31	5.28	0.25	50.85	51.06	9,783
3	4.47	0.79	0.65	4.80	0.14	48.31	40.43	9,483
2	0.68	-2.45	-2.99	5.90	-0.51	34.75	36.17	9,619
1	-3.79	-6.19	-6.91	7.77	-0.89	27.12	17.02	9,550
Spread 10-1	10.25	8.79	8.42					
Small Cap (\$.250-1b)								
10	8.85	4.95	3.31	7.99	0.41	60.17	88.00	12,694
9	8.35	4.14	3.53	5.72	0.62	63.56	82.00	12,805
8	7.39	3.92	2.91	5.37	0.54	66.10	70.00	12,909
7	7.14	3.58	2.66	4.75	0.56	60.17	68.00	12,839
6	4.47	0.88	0.10	4.54	0.02	53.39	60.00	12,834
5	3.84	0.62	-0.05	5.44	-0.01	46.61	34.00	12,852
4	1.46	-2.07	-2.40	4.40	-0.54	44.07	40.00	12,799
3	2.15	-1.28	-1.47	5.24	-0.28	39.83	24.00	12,934
2	-0.16	-3.74	-3.64	5.94	-0.61	35.59	14.00	12,723
1	-3.45	-6.21	-6.60	8.04	-0.82	33.90	18.00	12,749
Spread 10-1	12.29	11.16	9.91					
Micro Cap (\$50-250m)								
10	12.37	8.05	4.71	10.93	0.43	66.95	89.29	15,648
9	9.26	5.66	2.65	9.65	0.27	63.56	82.14	15,547
8	6.53	2.04	0.80	6.25	0.13	57.63	71.43	15,711
7	10.11	5.22	4.69	4.92	0.95	66.95	75.00	15,636
6	7.99	3.50	3.08	5.70	0.54	60.17	53.57	15,775
5	4.93	0.70	0.11	4.92	0.02	44.07	37.50	15,697
4	4.07	-0.21	-0.23	6.83	-0.03	41.53	37.50	15,609
3	2.12	-1.54	-2.08	6.95	-0.30	41.53	30.36	15,752
2	-0.74	-4.35	-4.29	8.35	-0.51	33.90	14.29	15,666
1	-7.98	-10.91	-11.36	10.09	-1.13	22.03	7.14	15,554
Spread 10-1	20.35	18.96	16.07					

Observations - AGR Equity Factor:

- ✓ Returns are well-behaved by Market Cap, with lower returns when moving from best to worst deciles.
- ✓ Alpha is high at the tails, indicating effective investment strategies focused on those deciles.
- ✓ Micro-caps show better performance, although all cap groups have wide Spreads.
- ✓ There is a persistence in the Equity Factor signal, as indicated by decile outperformance vs. the overall market; for down markets in particular, the difference between the highest and lowest rated companies is exceptionally high.

TABLE IV

Average Annual Decile Returns by Industry Sector
Ten Year Period, 1999-2008

	Basic Materials	Capital Goods	Conglomerates	Consumer Cyclical	Consumer Non-Cyclical	Energy	Financial	Healthcare	Services	Technology	Transportation	Utilities	Universe Return
Summary	6.03	8.45	2.68	-1.15	6.06	14.84	4.76	5.12	1.57	0.74	6.93	7.10	4.59
10	11.51	11.57	-1.18	5.95	13.95	15.40	6.97	14.70	10.71	9.72	6.38	9.13	10.45
9	6.65	13.76	-8.86	0.70	8.29	14.23	8.34	8.66	5.49	3.57	11.34	6.37	7.77
8	-0.12	8.57	6.43	-1.82	6.73	15.04	6.60	8.46	4.93	5.30	6.53	6.81	6.76
7	13.36	14.32	-5.36	2.17	3.84	17.22	5.79	9.72	4.33	3.76	1.50	4.76	7.68
6	1.43	9.10	-0.13	-3.10	4.06	13.94	4.64	9.54	1.39	3.42	7.46	5.59	5.51
5	7.17	6.38	6.39	-4.78	9.49	16.04	4.17	4.30	1.54	0.49	4.72	5.58	4.92
4	6.90	6.37	-3.18	-7.69	4.53	18.31	3.11	2.21	-1.81	4.40	0.59	6.58	4.14
3	10.97	0.84	2.86	0.16	0.83	16.11	2.91	3.00	-1.74	-3.88	6.69	8.95	2.37
2	1.89	4.14	-11.37	-1.20	2.53	15.13	1.32	-2.50	-2.65	-2.08	4.08	4.41	0.71
1	-9.53	2.58	17.74	-9.61	-2.79	-0.04	0.94	-3.60	-10.10	-9.22	7.80	4.75	-4.84
Spread 10-1	21.04	8.99	-18.92	15.57	16.74	15.44	6.02	18.30	20.81	18.94	-1.43	4.38	15.29

Number of Securities (per sector)

	Basic Materials	Capital Goods	Conglomerates	Consumer Cyclical	Consumer Non-Cyclical	Energy	Financial	Healthcare	Services	Technology	Transportation	Utilities	Universe Return
Totals	22,541	23,683	1,764	20,529	13,151	21,480	77,462	51,139	90,214	84,395	8,245	12,572	427,175
10	2,152	2,769	66	2,052	1,179	1,804	12,589	3,819	9,218	5,293	721	1,121	42,783
9	2,445	2,716	81	2,349	1,403	2,226	8,403	4,524	9,641	6,744	845	1,344	42,721
8	2,519	2,603	192	2,133	1,256	2,269	7,430	4,692	9,532	8,008	789	1,399	42,822
7	2,532	2,439	173	2,033	1,457	2,205	7,191	4,938	9,116	8,289	784	1,395	42,552
6	2,466	2,613	258	2,115	1,349	2,293	6,782	5,081	8,987	8,543	779	1,256	42,522
5	2,408	2,517	265	1,893	1,362	2,220	6,563	5,602	9,112	9,003	868	1,295	43,108
4	2,409	2,303	192	2,061	1,299	2,161	6,369	5,566	8,720	9,186	885	1,216	42,367
3	2,173	2,147	213	2,098	1,382	2,182	6,772	5,549	8,780	9,500	837	1,257	42,890
2	1,956	1,899	180	1,847	1,395	1,962	7,199	5,587	8,837	9,677	916	1,274	42,729
1	1,481	1,677	144	1,948	1,069	2,158	8,164	5,781	8,271	10,152	821	1,015	42,681

* Factor deciling is done at the universe level. Therefore, sector-specific deciles do not have equal numbers of securities.

Breakdown as defined by Reuters sectors.

Observations - AGR Equity Factor:

- ✓ Return spreads between Best (10) and Worst (1) deciles are high and positive for 10 of the 12 sectors.
- ✓ The spreads are particularly high for Healthcare, Services and Technology.
- ✓ Conglomerates, a small group, and Utilities are somewhat negative, suggesting that this model is not as predictive in these sectors.

TABLE V

Annual Returns by Decile and Market Capitalization
Ten Year Period, 1999-2008
Equal Weighted, Compounded Monthly

	10	9	8	7	6	5	4	3	2	1	Universe Return	Best(10)- Worst (1)
All Cap (>\$50M)												
1999	12.81%	9.23%	13.95%	25.26%	25.64%	38.09%	30.61%	24.24%	28.12%	21.99%	22.89%	-8.84%
2000	9.39%	13.10%	4.22%	12.82%	3.86%	3.44%	0.07%	3.35%	-0.58%	-20.05%	2.96%	31.68%
2001	33.89%	19.12%	23.17%	28.73%	18.25%	17.57%	19.58%	11.74%	17.79%	3.33%	19.32%	19.17%
2002	6.34%	-4.57%	-10.47%	-12.04%	-14.72%	-18.02%	-13.20%	-21.10%	-25.12%	-34.63%	-15.24%	49.55%
2003	47.22%	56.38%	64.86%	65.76%	56.37%	57.27%	60.04%	64.90%	69.32%	64.27%	60.63%	-12.26%
2004	27.85%	24.34%	15.37%	15.91%	16.83%	17.89%	18.91%	19.13%	18.07%	18.96%	19.35%	6.71%
2005	13.69%	8.47%	5.60%	8.62%	6.10%	7.85%	3.09%	0.47%	-0.54%	-4.45%	4.86%	18.34%
2006	21.47%	18.81%	20.28%	17.25%	15.45%	15.45%	14.45%	15.47%	13.37%	3.80%	15.57%	16.63%
2007	-6.23%	-4.59%	-2.98%	-1.68%	-3.97%	-6.09%	-7.98%	-9.20%	-9.17%	-11.61%	-6.40%	5.51%
2008	-34.50%	-38.54%	-37.83%	-38.15%	-42.61%	-42.98%	-47.20%	-45.45%	-47.52%	-47.85%	-42.44%	22.46%
Large Cap (>\$5b)												
1999	26.07%	21.06%	30.62%	26.17%	23.17%	28.73%	44.54%	18.40%	22.95%	28.11%	27.17%	-3.38%
2000	4.60%	-2.73%	13.88%	30.49%	-4.27%	-12.81%	2.57%	13.26%	-10.13%	-17.01%	1.52%	22.93%
2001	-13.10%	-0.23%	-2.05%	-16.51%	-11.99%	-3.20%	-16.70%	-12.22%	-7.78%	-34.80%	-12.12%	25.51%
2002	-5.00%	-14.14%	-14.35%	-15.34%	-22.55%	-21.21%	-16.39%	-18.62%	-21.52%	-35.79%	-18.75%	39.94%
2003	33.40%	31.40%	30.82%	31.35%	33.78%	37.21%	40.15%	35.31%	37.11%	41.37%	35.43%	-7.05%
2004	25.25%	16.18%	13.75%	12.75%	12.82%	23.93%	17.57%	24.08%	18.72%	17.26%	18.20%	6.63%
2005	9.68%	15.02%	16.00%	14.79%	11.56%	10.79%	11.65%	7.13%	7.89%	6.59%	11.19%	2.91%
2006	17.01%	15.45%	11.95%	18.42%	14.33%	17.50%	15.36%	14.07%	13.49%	9.05%	14.61%	7.48%
2007	8.39%	7.72%	7.23%	13.90%	5.56%	6.86%	5.92%	6.88%	3.88%	-1.72%	6.42%	9.66%
2008	-31.00%	-41.69%	-43.54%	-41.10%	-39.77%	-41.39%	-41.61%	-44.17%	-37.22%	-45.87%	-40.69%	24.99%
Mid Cap (\$1-5b)												
1999	10.92%	-5.34%	14.30%	16.52%	20.11%	29.00%	27.54%	35.59%	28.16%	14.56%	18.93%	-4.03%
2000	17.49%	22.51%	13.21%	2.00%	-2.58%	24.15%	19.41%	11.72%	1.14%	-9.84%	9.80%	26.62%
2001	2.56%	-1.59%	3.46%	13.91%	-1.18%	4.64%	0.22%	7.63%	-2.13%	-13.25%	1.67%	6.96%
2002	-9.04%	-11.91%	-12.27%	-10.97%	-12.68%	-17.62%	-13.53%	-23.70%	-26.76%	-29.98%	-17.01%	21.09%
2003	33.03%	44.25%	44.55%	41.60%	43.42%	37.88%	42.59%	51.14%	42.44%	46.80%	42.74%	-10.44%
2004	26.33%	17.03%	13.85%	16.45%	25.11%	18.59%	18.29%	19.55%	14.37%	20.37%	19.00%	4.53%
2005	5.95%	10.41%	11.15%	12.64%	6.21%	12.44%	7.71%	2.52%	6.66%	3.02%	7.87%	2.55%
2006	15.81%	19.83%	17.12%	11.30%	13.21%	16.00%	16.48%	11.46%	15.76%	9.22%	14.63%	6.15%
2007	0.29%	3.82%	-0.29%	4.26%	-3.54%	0.48%	-1.29%	2.49%	-1.48%	-9.74%	-0.57%	10.43%
2008	-29.90%	-34.28%	-31.63%	-37.62%	-34.17%	-35.96%	-38.24%	-40.10%	-44.30%	-44.81%	-37.27%	23.52%
Small Cap (\$.250-1b)												
1999	10.02%	10.45%	21.45%	24.49%	24.94%	21.29%	8.43%	9.00%	17.94%	23.36%	17.31%	-13.06%
2000	18.13%	21.67%	17.64%	24.16%	13.35%	2.52%	-5.79%	0.84%	-9.11%	-17.73%	6.01%	36.09%
2001	31.10%	24.33%	17.34%	23.03%	14.51%	21.31%	26.10%	22.14%	26.20%	11.67%	22.00%	10.61%
2002	-4.52%	-11.02%	-14.57%	-11.90%	-20.13%	-18.94%	-20.25%	-22.84%	-29.40%	-35.65%	-19.02%	35.43%
2003	38.52%	51.41%	57.95%	51.28%	51.03%	46.85%	57.62%	64.99%	72.44%	58.90%	54.93%	-15.15%
2004	20.85%	23.20%	16.97%	15.26%	11.97%	17.10%	19.97%	27.91%	14.56%	19.12%	18.83%	0.56%
2005	7.16%	12.75%	7.45%	5.30%	2.27%	6.18%	4.88%	1.42%	-1.36%	-1.48%	4.49%	7.38%
2006	24.17%	19.98%	20.96%	22.55%	17.77%	23.29%	16.72%	16.85%	16.39%	8.33%	18.64%	13.97%
2007	-12.89%	-10.88%	-2.01%	-2.84%	-4.22%	-6.54%	-14.11%	-21.32%	-16.32%	-8.81%	-10.09%	-4.77%
2008	-25.50%	-30.45%	-34.48%	-33.57%	-36.28%	-43.11%	-45.11%	-41.54%	-39.14%	-49.21%	-38.15%	39.46%
Micro Cap (\$50-250m)												
1999	13.83%	8.42%	13.73%	22.31%	33.85%	55.17%	48.80%	33.34%	27.32%	24.15%	27.53%	-9.76%
2000	1.56%	3.25%	-11.59%	13.30%	-4.07%	-4.02%	-1.22%	0.38%	-6.66%	-27.92%	-3.53%	28.95%
2001	50.05%	38.05%	40.64%	60.41%	39.43%	37.56%	32.43%	24.10%	31.65%	24.24%	38.36%	3.32%
2002	17.10%	11.51%	2.16%	-9.93%	-9.74%	-16.91%	-14.24%	-9.60%	-26.58%	-36.38%	-10.22%	64.34%
2003	53.64%	68.57%	79.65%	94.60%	98.77%	86.15%	72.29%	94.09%	103.07%	88.71%	83.55%	-21.76%
2004	30.15%	33.96%	20.18%	17.17%	17.22%	14.32%	19.96%	15.60%	20.02%	15.95%	20.34%	10.18%
2005	17.00%	13.89%	0.15%	4.39%	2.34%	12.89%	-4.17%	-9.23%	-6.22%	-12.98%	1.42%	33.06%
2006	25.16%	18.75%	21.15%	20.67%	16.34%	9.17%	10.60%	8.89%	14.46%	-5.08%	13.81%	30.59%
2007	-8.19%	-5.89%	-7.40%	-6.14%	-9.66%	-18.55%	-12.16%	-14.29%	-13.45%	-22.80%	-11.94%	17.52%
2008	-37.56%	-47.00%	-48.51%	-42.53%	-50.68%	-46.69%	-52.69%	-56.72%	-58.97%	-52.04%	-49.54%	25.40%

Observations - AGR Equity Factor:

- ✓ Returns are well-behaved over time across each Market Cap group; return spreads are positive eight out of ten periods.
- ✓ Return spreads are negative in two annual periods where total Market returns were extremely high and positive (1999 and 2003).
- ✓ Return spreads are highest and the most volatile in the Small- and Micro-cap groups.

TABLE VI

Average Annual Decile Returns by Style and Market Capitalization
Ten Year Period, 1999-2008

	<u>Annual Returns (%)</u>			<u>Number of Securities</u>		
	<u>Growth</u>	<u>Neither</u>	<u>Value</u>	<u>Growth</u>	<u>Neither</u>	<u>Value</u>
All Cap (>\$50M)						
10	6.90	9.76	12.85	9,896	15,548	15,345
9	3.48	8.40	11.87	11,516	14,929	14,262
8	2.21	8.51	8.66	12,449	13,811	14,125
7	5.10	8.96	8.45	12,709	14,090	13,876
6	2.35	6.12	7.40	13,136	13,462	13,906
5	-0.31	7.12	7.94	13,798	13,453	13,378
4	1.13	6.05	4.78	13,882	13,324	13,510
3	0.12	3.50	4.45	13,561	13,279	13,754
2	-3.10	2.69	2.30	14,102	12,593	13,849
1	-6.02	-1.16	-3.12	13,477	12,333	14,904
Spread 10-1	12.92	10.92	15.97			
Large Cap (>\$5B)						
10	3.91	8.53	3.99	2,502	1,310	607
9	2.40	1.42	7.88	2,556	1,262	609
8	4.93	1.22	6.53	2,584	1,226	640
7	3.39	1.16	1.63	2,521	1,259	673
6	-3.58	2.27	0.29	2,459	1,398	664
5	-0.21	3.78	-3.25	2,339	1,444	683
4	-0.32	5.75	-0.53	2,321	1,586	616
3	-0.44	4.96	-6.93	2,252	1,371	796
2	-1.57	-1.88	-6.85	2,160	1,404	888
1	-3.86	-2.97	-21.17	1,845	1,536	1,021
Spread 10-1	7.77	11.50	25.16			
Mid Cap (\$1-5b)						
10	2.68	7.95	10.17	3,235	3,813	2,219
9	0.79	8.23	6.40	3,426	3,780	2,035
8	-0.75	4.87	6.67	3,495	3,583	2,179
7	4.10	5.16	3.14	3,636	3,687	2,051
6	0.34	5.06	7.30	3,741	3,589	2,039
5	3.39	7.72	5.98	3,610	3,449	2,223
4	6.54	5.92	2.59	3,622	3,577	2,179
3	6.46	2.68	4.03	3,536	3,408	2,306
2	-1.79	3.83	-0.05	3,548	3,396	2,338
1	-5.71	-4.86	-2.43	3,334	3,122	2,758
Spread 10-1	8.40	12.81	12.61			

TABLE VI

Average Annual Decile Returns by Style and Market Capitalization
Ten Year Period, 1999-2008

	<u>Annual Returns (%)</u>			<u>Number of Securities</u>		
	<u>Growth</u>	<u>Neither</u>	<u>Value</u>	<u>Growth</u>	<u>Neither</u>	<u>Value</u>
Small Cap (\$250-1b)						
10	4.99	6.75	15.25	3,367	5,115	3,669
9	4.03	7.48	13.11	3,481	5,021	3,798
8	3.82	7.45	9.69	3,622	4,754	3,797
7	4.04	7.23	7.42	3,522	4,707	4,117
6	-0.73	5.61	5.77	3,583	4,571	4,106
5	-0.80	4.00	10.05	3,830	4,431	4,021
4	-1.80	3.74	3.66	3,962	4,258	4,093
3	-0.18	2.32	3.66	3,776	4,215	4,315
2	-8.67	0.35	7.00	3,822	4,074	4,307
1	-9.89	0.00	-2.26	3,669	3,999	4,471
Spread 10-1	14.88	6.74	17.51			
Micro Cap (\$50-250m)						
10	7.42	10.78	12.02	2,170	5,296	7,126
9	0.73	10.41	11.74	2,735	4,775	7,179
8	-2.10	9.06	7.40	2,899	4,417	7,338
7	2.83	12.83	10.90	3,078	4,346	7,098
6	7.53	6.09	8.75	3,215	4,110	7,411
5	-1.94	10.32	6.98	3,500	4,272	6,909
4	-4.55	8.50	6.78	3,600	4,067	6,986
3	-2.51	1.75	4.12	3,715	3,918	6,978
2	-5.96	2.31	1.98	4,028	3,628	6,982
1	-9.32	-3.12	-5.18	4,230	3,648	6,684
Spread 10-1	16.75	13.90	17.20			

Observations - AGR Equity Factor:

- ✓ Return spreads are high for both Growth and Value, as measured by dividing the market into thirds based on Price-to-Book ratio.
- ✓ Within Large Caps, Value stocks showed a significantly higher spread than Growth.

TABLE VII

2008 Returns by Decile by Market Capitalization
Equal Weighted, Compounded Monthly

	10	9	8	7	6	5	4	3	2	1	Universe Return	Best(10)- Worst (1)*
All Cap (>\$50M)												
Full Year-08	-34.50	-38.54	-37.83	-38.15	-42.61	-42.98	-47.20	-45.45	-47.52	-47.85	-42.44	22.46
Jan-08	-3.83	-5.25	-5.80	-4.52	-6.23	-5.97	-5.42	-6.19	-6.16	-5.25	-5.45	1.42
Feb-08	-3.35	-2.85	-2.24	-2.38	-1.96	-2.83	-3.49	-4.17	-4.74	-4.20	-3.22	0.85
Mar-08	-0.28	-1.39	-1.69	-0.51	-0.91	-2.26	-1.48	-3.43	-3.13	-3.41	-1.86	3.14
Apr-08	1.97	2.93	3.57	4.41	3.47	4.31	3.18	2.72	1.91	2.06	3.05	-0.08
May-08	2.61	3.09	4.52	3.95	2.01	5.18	2.72	4.23	2.16	1.70	3.20	0.91
Jun-08	-8.12	-8.51	-9.33	-8.43	-10.03	-9.52	-10.22	-8.92	-10.73	-11.42	-9.54	3.30
Jul-08	2.99	1.53	3.39	1.74	3.20	1.70	0.27	-0.01	1.23	1.04	1.71	1.95
Aug-08	2.28	2.78	3.32	3.66	1.99	4.27	1.72	3.45	3.23	2.52	2.92	-0.24
Sep-08	-7.00	-9.20	-8.00	-9.57	-9.09	-10.68	-10.26	-11.06	-10.65	-12.11	-9.78	5.11
Oct-08	-18.80	-19.02	-21.23	-21.84	-23.21	-24.31	-23.11	-21.53	-22.82	-21.03	-21.72	2.23
Nov-08	-10.56	-13.74	-13.75	-15.39	-13.08	-15.55	-14.97	-13.45	-13.53	-14.28	-13.83	3.72
Dec-08	3.32	5.36	4.77	6.43	3.88	6.22	3.11	3.10	4.65	4.99	4.59	-1.67
Large Cap (>\$5b)												
Full Year-08	-31.00	-41.69	-43.54	-41.10	-39.77	-41.39	-41.61	-44.17	-37.22	-45.87	-40.69	24.99
Jan-08	-6.08	-6.81	-6.84	-5.92	-8.22	-3.56	-5.58	-6.29	-7.46	-3.04	-5.99	-3.04
Feb-08	0.82	0.41	-0.96	-1.48	-1.73	-1.72	-2.94	-4.15	-2.05	-4.51	-1.83	5.33
Mar-08	-2.21	-1.98	-0.63	-2.25	-2.90	-1.08	-0.46	-1.60	0.70	-4.20	-1.62	1.99
Apr-08	6.68	9.16	6.95	5.82	6.18	4.78	6.12	6.03	4.03	6.56	6.23	0.11
May-08	4.94	1.05	3.02	5.90	5.82	3.06	3.75	0.61	2.41	0.84	3.11	4.10
Jun-08	-6.77	-6.47	-8.91	-8.41	-6.84	-8.27	-8.77	-10.09	-7.69	-10.09	-8.28	3.32
Jul-08	-0.30	-3.23	-7.18	-1.41	0.32	-3.84	-3.73	-1.49	1.18	-0.40	-2.00	0.10
Aug-08	1.85	0.60	-0.58	3.31	1.18	2.42	0.68	2.55	0.07	1.68	1.39	0.17
Sep-08	-8.63	-14.94	-13.97	-11.25	-12.96	-12.79	-12.69	-12.91	-9.57	-16.12	-12.62	7.49
Oct-08	-18.88	-20.04	-19.45	-22.88	-20.00	-22.07	-16.95	-21.29	-14.57	-18.83	-19.38	-0.05
Nov-08	-7.77	-8.83	-8.00	-10.10	-11.20	-7.74	-9.58	-7.15	-10.95	-8.90	-9.02	1.13
Dec-08	2.85	2.06	4.28	1.07	4.69	2.20	0.26	2.42	0.42	0.55	2.11	2.30
Mid Cap (\$1-5b)												
Full Year-08	-29.90	-34.28	-31.63	-37.62	-34.17	-35.96	-38.24	-40.10	-44.30	-44.81	-37.27	23.52
Jan-08	-5.77	-5.03	-4.11	-4.16	-5.73	-3.17	-8.31	-5.15	-4.93	-6.58	-5.30	0.80
Feb-08	-3.55	-1.50	-2.37	-4.19	-2.47	-2.68	-3.79	-3.51	-4.72	-5.55	-3.44	2.00
Mar-08	0.56	-1.51	-1.03	0.23	-0.93	-2.17	-0.04	-3.09	-3.18	-1.91	-1.34	2.46
Apr-08	4.62	5.26	5.71	6.61	5.95	4.59	6.12	5.17	4.54	4.20	5.30	0.42
May-08	2.33	4.33	5.80	5.41	4.89	5.66	4.34	3.74	3.78	2.01	4.23	0.32
Jun-08	-6.79	-10.33	-8.79	-10.18	-7.97	-9.46	-9.96	-9.28	-10.62	-6.72	-9.02	-0.07
Jul-08	0.42	2.26	1.29	0.18	5.01	1.60	1.74	-2.40	0.94	-0.55	1.07	0.98
Aug-08	3.24	2.91	3.54	3.70	3.44	4.65	2.94	3.23	2.14	4.80	3.46	-1.56
Sep-08	-5.89	-7.46	-10.12	-10.46	-8.63	-13.12	-8.96	-10.70	-9.76	-12.90	-9.86	7.01
Oct-08	-18.13	-18.81	-18.18	-22.39	-22.82	-22.44	-22.58	-20.70	-23.44	-22.79	-21.25	4.66
Nov-08	-8.32	-10.49	-11.14	-12.56	-13.31	-10.93	-9.58	-10.62	-12.91	-10.89	-11.08	2.57
Dec-08	4.97	2.34	5.57	6.37	6.42	8.77	5.26	6.98	5.59	2.96	5.50	2.01
Small Cap (\$.250-1b)												
Full Year-08	-25.50	-30.45	-34.48	-33.57	-36.28	-43.11	-45.11	-41.54	-30.14	-49.21	-38.15	39.46
Jan-08	-3.55	-5.72	-8.17	-4.40	-7.12	-5.87	-6.47	-6.01	-6.82	-5.22	-5.96	1.67
Feb-08	-5.53	-4.30	-3.96	-2.11	-2.28	-4.40	-4.01	-5.52	-5.35	-5.82	-4.32	0.30
Mar-08	4.39	3.06	1.68	-0.81	2.51	-1.85	-0.92	-1.48	-3.41	-4.03	-0.06	8.42
Apr-08	2.84	2.77	2.25	3.55	3.43	3.62	2.11	2.92	2.56	1.85	2.79	0.99
May-08	5.18	6.16	4.35	3.14	2.45	3.60	2.93	6.85	2.89	2.52	3.99	2.65
Jun-08	-9.79	-11.10	-8.75	-10.28	-10.07	-11.29	-11.96	-11.88	-11.17	-14.55	-11.08	4.75
Jul-08	6.05	3.82	6.78	5.88	3.75	4.79	4.17	2.82	5.42	4.12	4.74	1.93
Aug-08	1.73	4.86	5.73	3.57	3.37	4.40	2.34	3.58	6.35	3.58	3.98	-1.85
Sep-08	-4.24	-7.97	-5.61	-4.62	-7.38	-8.27	-10.15	-7.26	-7.81	-7.91	-7.12	3.67
Oct-08	-20.26	-16.87	-22.81	-22.82	-22.71	-26.52	-22.95	-22.59	-20.99	-23.84	-22.27	3.58
Nov-08	-7.88	-11.60	-14.80	-13.88	-10.74	-15.01	-14.97	-13.96	-11.35	-19.08	-13.38	11.20
Dec-08	5.79	4.73	7.06	7.43	4.89	7.94	6.27	4.79	5.28	8.55	6.25	-2.76
Micro Cap (\$50-250m)												
Full Year-08	-37.56	-47.00	-48.51	-42.53	-50.68	-46.69	-52.69	-56.72	-58.97	-52.04	-49.54	25.40
Jan-08	-2.21	-4.45	-6.78	-1.13	-5.44	-5.82	-4.86	-7.49	-4.69	-5.99	-4.91	3.77
Feb-08	-2.92	-0.28	-2.57	-3.14	-1.84	-1.77	-2.67	-3.83	-4.92	-2.75	-2.66	-0.16
Mar-08	-2.23	-6.57	-3.38	-3.18	-2.57	-3.14	-2.61	-4.27	-4.72	-4.55	-3.71	2.32
Apr-08	0.26	1.08	0.02	1.70	0.49	4.48	1.09	-1.24	-1.24	-0.09	0.67	0.35
May-08	2.37	-0.94	4.48	2.09	0.69	3.62	1.24	3.07	1.99	0.61	1.90	1.76
Jun-08	-8.22	-5.85	-9.67	-8.29	-9.95	-8.37	-9.60	-7.02	-11.43	-13.01	-9.13	4.79
Jul-08	4.66	-1.64	0.96	2.43	2.26	3.02	-1.14	1.58	-3.27	1.20	0.98	3.47
Aug-08	2.23	1.60	1.16	3.27	2.24	2.40	2.69	1.32	2.13	2.51	2.15	-0.28
Sep-08	-8.19	-11.69	-10.15	-9.64	-11.21	-8.85	-11.42	-11.89	-12.68	-14.67	-11.06	6.49
Oct-08	-17.50	-20.23	-21.23	-22.58	-22.33	-25.50	-22.75	-25.95	-24.06	-21.99	-22.41	4.49
Nov-08	-12.47	-14.46	-17.42	-18.36	-19.26	-17.83	-20.13	-19.07	-21.40	-13.95	-17.38	1.48
Dec-08	0.68	4.87	4.15	7.74	2.83	1.90	2.21	-1.22	3.48	5.78	3.26	-5.10

* Spread reflect monthly compounding of investment returns

Observations - AGR Equity Factor:

- ✓ Return spreads were positive in 9 of 12 months during 2007; all cap ranges had strong results.
- ✓ The results for the most volatile market months - Sept, Oct, Nov - were positive overall and for each market cap group.