

Evaluation of the Chaikin Power Gauge Stock Rating System

By

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Executive Summary

The **Chaikin Power Gauge Rating** is a quantitative model for the analysis of U.S. equities created by market analyst Marc Chaikin, and independently evaluated by the author (Gerstein). The model looks at 20 fundamental and technical metrics to arrive at an overall Rating ranging from “Very Bearish” to “Very Bullish”. The goal of the Rating is to indicate a stock’s likely performance relative to the overall market over an intermediate-term investment horizon (3-6 months), in a way that is stable and reliable.

This evaluation does not examine the construction of the model itself – rather, it examines its efficacy against its stated goal of indicating a stock’s **relative intermediate-term price performance** with a high degree of consistency across varying stock selection criteria, performance evaluation methods, and market conditions. The model is intended to provide better-than-market returns assuming an “average” money management system, across Bull and Bear markets.

The evaluation was able to demonstrate the strong efficacy of the Rating across a wide range of performance tests run over a 10-year period from 1999 through mid-2010. In the Baseline Performance Test, using standard monthly rebalancing, stocks rated “Very Bullish” were up over 20% on an annualized basis, while stocks rated “Very Bearish” were down over 2%, during a period that the S&P was essentially flat.

We further investigated the possibility that the favorable big-picture performance was significantly attributable to factors other than the merits of the model, e.g. luck. To address that, a larger series of Rank performance tests was conducted based on various time periods and randomly-generated subsets of the full universe. These results were comparable to full-universe testing, indicating that overall results are likely driven by model performance rather than luck.

Finally, we tested true model portfolios, and examined issues raised by differing Bullish and Bearish market environments that occurred over the course of the test period, as well the “small-cap effect” to ensure that the model was stable relative to these parameters. In all cases tested, model performance was shown to be robust.

Power Gauge Overview

The Chaikin Power Gauge model looks at four Components for each stock:

- Financial Metrics
- Earnings Performance
- Price/Volume Activity
- Expert Opinions

Ranking vs. Rating

Each component is comprised of five factors, scored relative to a comparison universe (the stock's Industry Group or overall market), weighted by a proprietary weighting system, and combined into the component value. Component values are combined into a composite score which is ranked across the overall market to determine a stock's **Ranking**. A proprietary "bucketing" scheme is applied to the Rankings to determine the stock's Power Gauge **Rating**, which ranges from Very Bearish to Very Bullish, and which is displayed in Chaikin applications and services.

In these performance tests, a Rating is calculated for each qualifying stock at the end of each market week and used until the close of the following week¹.

We want to test both **stability** of the underlying Ranking system to determine its correlation to relative performance in a wide variety of scenarios, as well as the efficacy of the bucketing method used by Chaikin.

¹ Chaikin applications compute Power Gauge Ratings on a daily basis, but the end-of-week value is stored historically. Only the end-of-week value is tested here.

Model Testing

Rating Test Universe

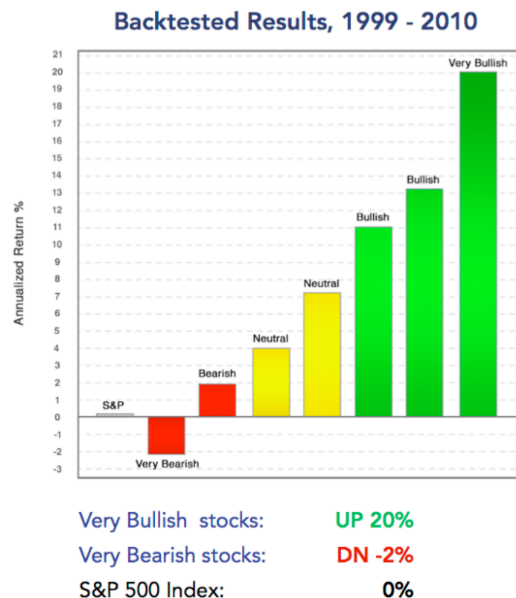
The Rating Test Universe consists of the Russell 3000 - the 3,000 largest market cap stocks which pass Russell's index inclusion criteria, representing approximately 98% of the investable U.S. equity market by market cap². Stocks must have at least 1 year of trading history.

Testing the Power Gauge Rating

First we run a "Baseline Performance Test" to evaluate the performance of the **Rating** system, using standard monthly rebalancing. The test is run on the Rating Test Universe, over the period from 1/2/1999 through 8/31/2010 – the last day included in the development of the model.

In this method, we start at the beginning of the test period, buy an equal value of all stocks in each Rating bucket and evaluate 1-month average share price percent change for all stocks in the bucket. We move forward to the next month, evaluate bucket performance for that month, add new returns onto previous returns, and repeat until we have determined an annualized return for each bucket. **Figure 1** shows the results of the test. We include average annualized performance of the S&P500 – the standard benchmark for portfolio managers.

Figure 1 – Baseline Performance Test of Power Gauge Rating



These results show a classic stairstep pattern where stocks in each bucket outperform stocks in the lower-rated bucket. Most notably stocks rated "Very Bullish" (the green bar at right) showed an annualized return over 20% while stocks rated "Very Bearish" (the red bar, 2nd from left) lost over 2% on an annualized basis, during a test period in which the S&P was essentially flat (leftmost bar). This shows a very high correlation between the Power Gauge Rating method used by Chaikin, and relative price performance.

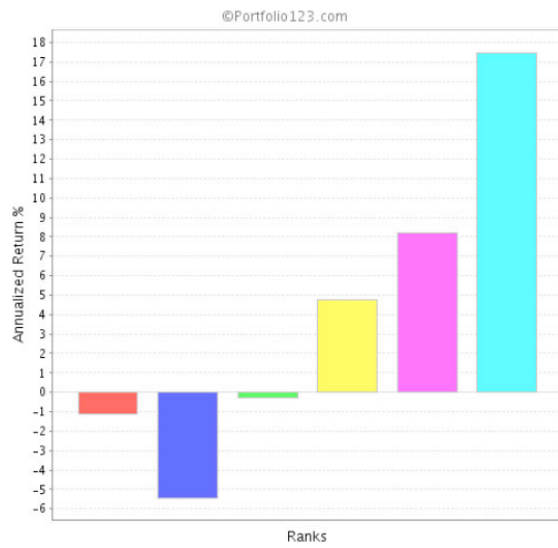
² http://en.wikipedia.org/wiki/Russell_Indexes. Russell excludes stocks trading below \$1, stocks that trade on the pink sheets and OTC Bulletin Board, closed-end mutual funds, limited partnerships, royalty trusts, non-U.S. incorporated stocks (other than the benefits driven incorporations described above), foreign stocks, and American Depositary Receipts (ADRs).

Testing the Ranking System

Next we evaluate the underlying **Ranking** system. As a baseline performance test, we create 5 equal-sized buckets. All subsequent tests look at the Rating Test Universe, over the period available in the modeling system at the time of the test (3/31/01 through 8/31/10). We use a similar monthly rebalancing scheme, evaluating each bucket's aggregate percent price change over one month, then recalculating the buckets each month.

Figure 2 shows the overall performance record.

Figure 2



As expected, we see a similar staircase using five evenly distributed buckets.

Performance Tests Across Various Parameters

Next we examine the **stability** of the model. To achieve its stated goal, model performance should exhibit a high degree of consistency across a variety of evaluation methods. To this end, the overall sensitivity of the Rating system was evaluated over “randomly” selected sub-universes, across varying rebalancing periods, and across varying Rating bucket sizes.

Randomized Sub-Universes

Four sub-universes of the Russell 3000 were created, starting with the following rules/filters:

- Daily trading volume over the past 60 days must have averaged at least 15,000 shares
- The stock price must be at least \$1

This preliminary universe was then sub-divided based on an arbitrary value - the latest closing price of the stock:

1. Stocks whose prices were even numbers
2. Stocks whose prices were odd numbers

The preliminary universe was also sub-divided based on another arbitrary value - trailing 12 month sales:

1. Companies whose sales were even numbers
2. Companies whose sales were odd numbers

All four sub-universes (two based on price and two based on sales) were tested over the 3/31/01 – 8/31/10 period.

The approach used here controls for differing market environments. All tests use the same sample period. If the model has merit, we would expect the sub-groupings to exhibit generally comparable performance. Figure 3 through 6 show performance results for our sub-groups based on the same parameters used for the baseline test: five buckets, re-balancing every four weeks, and an overall 3/31/01 - 8/31/10 time horizon.

Figure 3 – Sales: Even Numbers

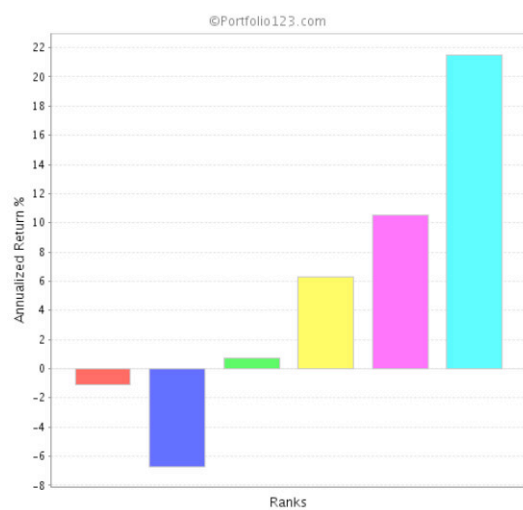


Figure 4 – Sales: Odd Numbers

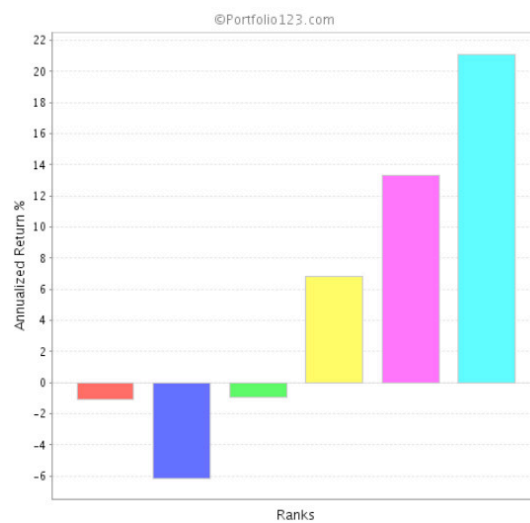


Figure 5 – Share Price: Even Numbers

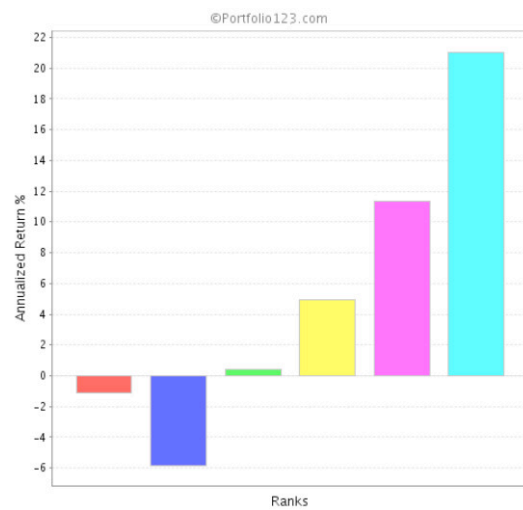
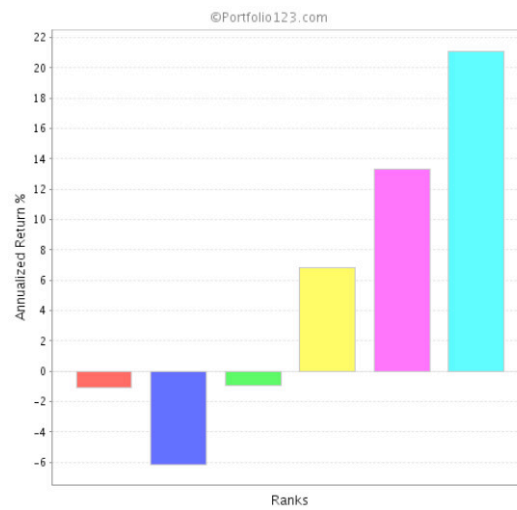


Figure 6 – Share Price: Odd Numbers



Varying Rebalancing Intervals

Figures 7 through 10 repeat the tests assuming 1-week re-balancing intervals.

Figure 7 – Even Sales (1-week rebalancing)

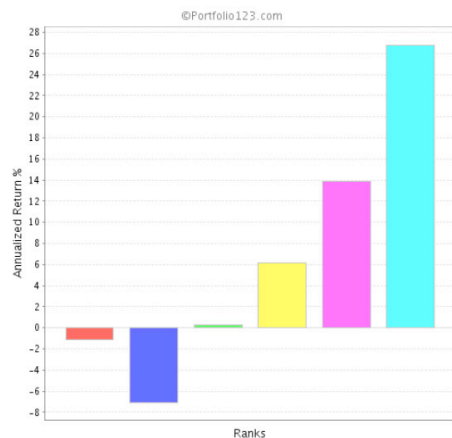


Figure 8 – Sales: Odd Sales (1-week rebalancing)

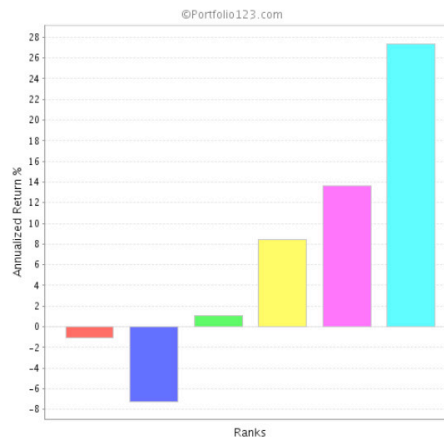


Figure 9 – Even Share Price: (1-week rebalancing)

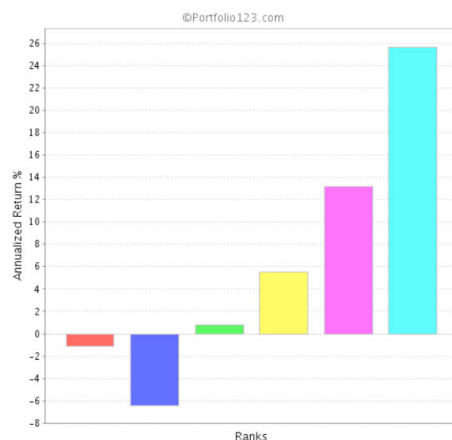
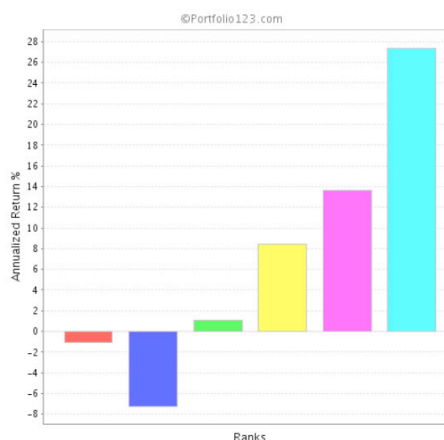


Figure 10 – Share Price: Odd Number (1-week rebalancing)



Both sub-universes can be seen to exhibit similar results using one-week rebalancing³, with the most striking result the amount by which the top bucket (the highest-ranked stocks) outperforms even the second bucket.

³ A note on model testing methods versus real-world behavior: Rating systems are typically tested in a fashion “agnostic” to exit criteria or money management strategies, by buying all stocks with a given rating and evaluating performance out to some future interval. Using this method, we should expect to see higher returns with more frequent rebalancing due to capturing more alpha (assuming the model delivers it). This is the “purest” way to evaluate a rating, allowing for the widest range of investing strategies, however, it does not necessarily reflect likely real-world behavior. This is because we average in returns from stocks at all stages of their momentum cycles, including stocks which have yet to begin moves, and stocks which may be topping out. The tests used here employ industry-standard 1-month rebalancing. 3 and 6-month rebalancing also show positive alpha for the Chaikin Power Gauge model, although returns are lower than 1-month rebalancing. If we were to only buy stocks which had *just become* Bullish/Very Bullish, rather than buying all stocks *currently rated* Bullish or Very Bullish at a given point in time, 3- and 6-month returns would go up somewhat and 1-month returns would be slightly lower.

Varying Bucket Sizes

In Figures 11 through 14, we go back to four-week re-balancing periods, but examine 20 buckets, rather than five.

Figure 11 – Even Sales (4-week rebalancing)

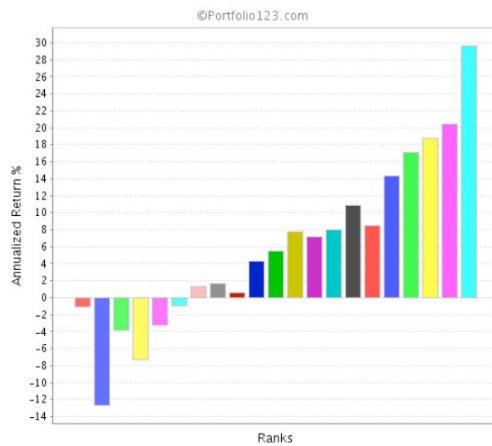


Figure 12 – Odd Sales (4-week rebalancing)

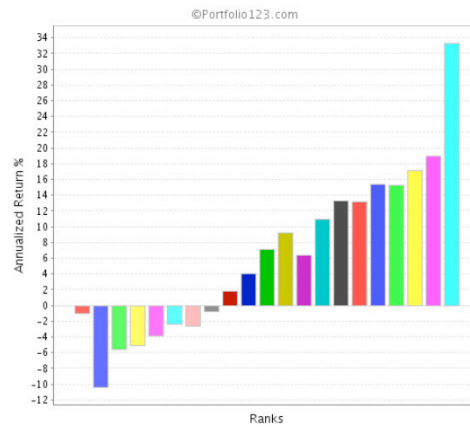


Figure 13 – Even Share Price (4-week rebalancing)

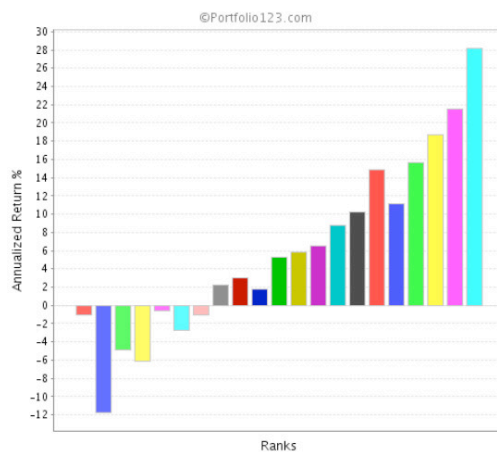
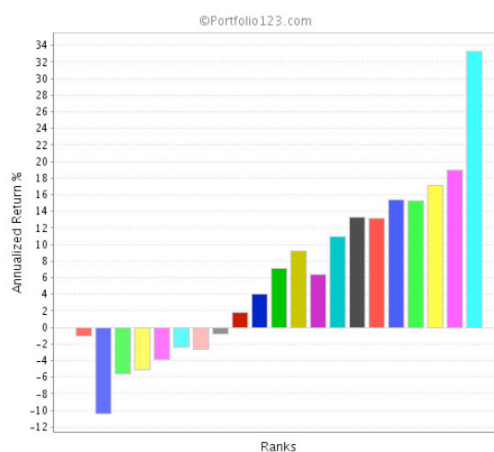


Figure 14 – Odd Share Price (4-week rebalancing)



While the more granular buckets begin to surface minor deviations from a perfect stairstep pattern and slight differences between the two sub-universes, we nevertheless continue to see an extremely high correlation between bucket position and annualized performance. Most strikingly, as we narrow the bucket size, the performance of the top and bottom buckets (roughly 150 stocks) begins to distinguish itself even more dramatically, confirming the efficacy of the Ranking system.

Varying Rebalancing Intervals and Bucket Sizes

Finally, in Figures 15 through 18, we examine 1-week re-balancing periods with 20 buckets.

Figure 15 – Even Sales (1-week rebalancing)

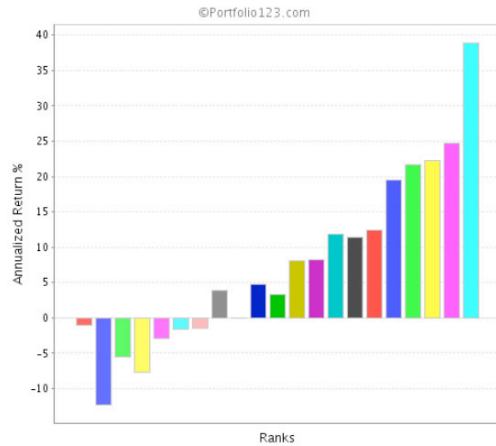


Figure 16 – Odd Sales (1-week rebalancing)

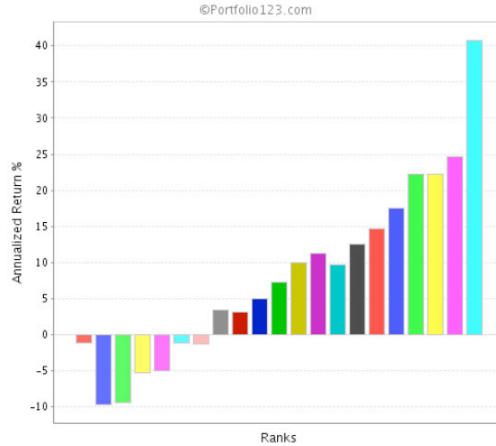


Figure 17 – Even Share Price (1-week rebalancing)

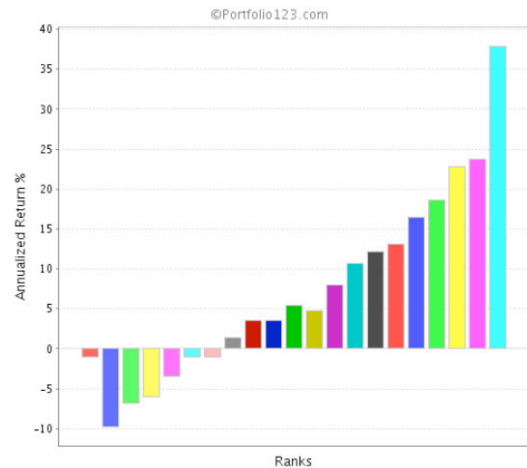
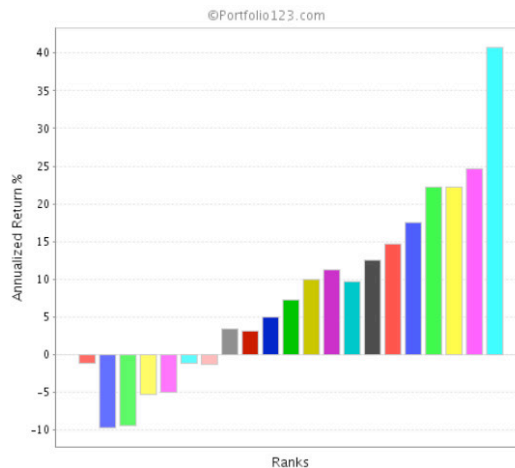


Figure 18 – Odd Share Price (1-week rebalancing)



One week rebalancing and more granular bucketing provide the smoothest stairstep patterns yet, with the top bucket continuing to dramatically outperform the rest of the Test Universe.

While some randomness will always find its way into investment results, comparisons within each collection indicate that it is the model, not the randomness, that is the true driver of performance.

Portfolio Simulations

Previous tests have assumed the ability to maintain long positions in all stocks in a particular Rating bucket, which is a standard modeling technique but does not reflect feasible real world behavior of individuals or most institutions. Next, we move closer to real-world settings. Here, it is assumed we have a portfolio consisting of the 50 stocks with the highest Power Gauge Rankings at each interval.

The basic simulation parameters are as follows:

- Re-balancing: 4 weeks (*based on a refreshed list and re-establishment of equal weightings*)
- Assumed pricing: average of next day's high and low
- Commission: \$9.99 per trade
- Benchmark index: Russell 2000 (*for performance comparison*)
- Stock Universe: No OTCBB stocks, price at least \$1, trading volume over past 60 days averaging at least 15,000 shares, and subject to the following sub-divisions:
 - Trailing 12 Month Sales is an Even Number
 - Trailing 12 Month Sales is an Odd Number
 - Share Price is an Even Number
 - Share Price is an Odd Number

In each instance, 10 separate 5-year simulations are run. The start and end dates are as follows:

- 9/6/05 – 8/31/10
- 8/9/05 – 8/3/10
- 7/12/05 – 7/6/10
- 6/14/05 – 6/8/10
- 5/17/05 – 5/11/10
- 4/19/05 – 4/13/10
- 3/22/05 – 3/16/10
- 2/22/05 – 2/16/10
- 1/25/05 – 1/19/10
- 12/28/04 – 12/22/09

In a perfect world, one where absolutely no unidentifiable or random factors influence outcomes, all 40 results (10 samples for each of four sub-universes) would be identical. Realistically, we cannot expect to see that since random and unidentifiable factors are present. We do, however, hope to see that all 40 results are, at least, in the same ballpark. In fact, that will be the case, as we'll see in the following Figures.

Figure 19 shows the end-date dollar value of each simulated portfolio (starting values were all set to \$100,000).

Figure 19

Ending Market Value (Start = \$100,000)					
Simulation Period		TTM Sales		Latest Share Price	
Start Date	End Date	Even #	Odd #	Even #	Odd #
9/6/2005	8/31/2010	\$ 152,910	\$ 153,179	\$ 149,939	\$ 156,150
8/9/2005	8/3/2010	\$ 175,206	\$ 164,555	\$ 171,312	\$ 168,449
7/12/2005	7/6/2010	\$ 166,565	\$ 157,450	\$ 161,672	\$ 162,343
6/14/2005	6/8/2010	\$ 183,933	\$ 176,535	\$ 177,163	\$ 183,305
5/17/2005	5/11/2010	\$ 221,506	\$ 211,604	\$ 214,172	\$ 218,938
4/19/2005	4/13/2010	\$ 221,281	\$ 206,558	\$ 219,217	\$ 208,622
3/22/2005	3/16/2010	\$ 201,073	\$ 183,755	\$ 199,040	\$ 185,788
2/22/2005	2/16/2010	\$ 186,650	\$ 163,020	\$ 178,473	\$ 171,197
1/25/2005	1/19/2010	\$ 200,110	\$ 185,464	\$ 195,423	\$ 190,151
12/28/2004	12/22/2009	\$ 179,147	\$ 164,140	\$ 172,761	\$ 170,526
Avg		\$ 188,838	\$ 176,626	\$ 183,917	\$ 181,547
StDev		\$ 22,341	\$ 20,145	\$ 22,436	\$ 20,111

Number positions: 50

Re-balancing Period: 4 weeks

Commission per trade: 9.99

Figure 20 shows the “active return” for each simulated portfolio. Active return is defined as portfolio price change minus Russell 2000 price change.

Figure 20

Active Return (Portfolio Return - Russell 2000 Return) - %					
Simulation Period		TTM Sales		Latest Share Price	
Start Date	End Date	Even #	Odd #	Even #	Odd #
9/6/2005	8/31/2010	63.7	63.9	60.7	66.9
8/9/2005	8/3/2010	75.9	65.3	72.0	69.2
7/12/2005	7/6/2010	78.6	69.5	73.7	74.4
6/14/2005	6/8/2010	86.6	79.2	79.8	86.0
5/17/2005	5/11/2010	104.7	94.8	97.3	102.2
4/19/2005	4/13/2010	102.4	87.7	100.4	89.7
3/22/2005	3/16/2010	91.2	73.9	89.2	75.9
2/22/2005	2/16/2010	86.2	62.6	78.0	70.8
1/25/2005	1/19/2010	93.1	78.4	88.4	83.1
12/28/2004	12/22/2009	83.9	68.9	77.5	75.3
Avg		86.6	74.4	81.7	79.4
StDev		12.3	10.6	12.1	10.9

Number positions: 50

Re-balancing Period: 4 weeks

Commission per trade: 9.99

Figures 21 and 22 address risk. Figure 21 shows the standard deviation of portfolio price-returns.

Figure 21

Standard Deviation					
Simulation Period		TTM Sales		Latest Share Price	
Start Date	End Date	Even #	Odd #	Even #	Odd #
9/6/2005	8/31/2010	30.6%	31.4%	31.6%	30.4%
8/9/2005	8/3/2010	30.4%	31.3%	31.5%	30.2%
7/12/2005	7/6/2010	30.2%	31.1%	31.3%	30.0%
6/14/2005	6/8/2010	30.0%	30.9%	31.1%	29.8%
5/17/2005	5/11/2010	29.5%	30.6%	30.7%	29.4%
4/19/2005	4/13/2010	29.2%	30.4%	30.4%	29.2%
3/22/2005	3/16/2010	29.2%	30.4%	30.4%	29.2%
2/22/2005	2/16/2010	29.2%	30.4%	30.4%	29.2%
1/25/2005	1/19/2010	29.0%	30.2%	30.3%	28.9%
12/28/2004	12/22/2009	29.1%	30.2%	30.3%	29.0%
Avg		29.6%	30.7%	30.8%	29.5%
StDev		0.6%	0.5%	0.5%	0.5%

Number positions: 50

Re-balancing Period: 4 weeks

Commission per trade: 9.99

Figure 22 shows maximum drawdown.

Figure 22

Maximum Drawdown (%)					
Simulation Period		TTM Sales		Latest Share Price	
Start Date	End Date	Even #	Odd #	Even #	Odd #
9/6/2005	8/31/2010	-63.0	-66.7	-63.6	-66.1
8/9/2005	8/3/2010	-62.9	-66.6	-63.3	-66.2
7/12/2005	7/6/2010	-62.7	-66.3	-63.0	-66.0
6/14/2005	6/8/2010	-62.4	-66.0	-62.7	-65.7
5/17/2005	5/11/2010	-62.1	-65.7	-62.3	-65.5
4/19/2005	4/13/2010	-62.2	-65.9	-62.4	-65.7
3/22/2005	3/16/2010	-62.4	-66.1	-62.5	-66.0
2/22/2005	2/16/2010	-62.3	-66.3	-62.6	-66.0
1/25/2005	1/19/2010	-62.1	-65.9	-62.3	-65.7
12/28/2004	12/22/2009	-62.3	-66.1	-62.5	-65.9
Avg		-62.4	-66.2	-62.7	-65.9
StDev		0.3	0.3	0.4	0.2

Number positions: 50

Re-balancing Period: 4 weeks

Commission per trade: 9.99

Figures 23 and 24 address the relationships between portfolio returns and market returns. Figure 23 shows Beta (or “correlated volatility” of the stock and the overall market).

Figure 23

Beta					
Simulation Period		TTM Sales		Latest Share Price	
Start Date	End Date	Even #	Odd #	Even #	Odd #
9/6/2005	8/31/2010	0.71	0.74	0.75	0.70
8/9/2005	8/3/2010	0.71	0.74	0.75	0.70
7/12/2005	7/6/2010	0.71	0.74	0.75	0.70
6/14/2005	6/8/2010	0.71	0.74	0.75	0.70
5/17/2005	5/11/2010	0.70	0.74	0.75	0.69
4/19/2005	4/13/2010	0.70	0.74	0.74	0.70
3/22/2005	3/16/2010	0.70	0.74	0.74	0.70
2/22/2005	2/16/2010	0.70	0.74	0.74	0.70
1/25/2005	1/19/2010	0.69	0.73	0.74	0.68
12/28/2004	12/22/2009	0.70	0.73	0.74	0.69
Avg		0.70	0.74	0.75	0.70
StDev		0.01	0.00	0.01	0.01

Number positions: 50

Re-balancing Period: 4 weeks

Commission per trade: 9.99

Figure 24 shows portfolio R-Squared, or percent of stock returns which can be explained by overall market activity.

Figure 24

R-Squared					
Simulation Period		TTM Sales		Latest Share Price	
Start Date	End Date	Even #	Odd #	Even #	Odd #
9/6/2005	8/31/2010	0.76	0.77	0.79	0.74
8/9/2005	8/3/2010	0.75	0.77	0.79	0.73
7/12/2005	7/6/2010	0.75	0.77	0.79	0.73
6/14/2005	6/8/2010	0.75	0.77	0.78	0.74
5/17/2005	5/11/2010	0.74	0.76	0.78	0.72
4/19/2005	4/13/2010	0.74	0.76	0.78	0.72
3/22/2005	3/16/2010	0.74	0.76	0.78	0.72
2/22/2005	2/16/2010	0.74	0.76	0.78	0.72
1/25/2005	1/19/2010	0.74	0.76	0.77	0.73
12/28/2004	12/22/2009	0.74	0.76	0.77	0.73
Avg		0.75	0.76	0.78	0.73
StDev		0.01	0.01	0.01	0.01

Number positions: 50

Re-balancing Period: 4 weeks

Commission per trade: 9.99

Finally, Figure 25 shows Alpha, or risk-adjusted returns.

Figure 25

Alpha					
Simulation Period		TTM Sales		Latest Share Price	
Start Date	End Date	Even #	Odd #	Even #	Odd #
9/6/2005	8/31/2010	9.6%	9.8%	9.4%	10.0%
8/9/2005	8/3/2010	11.0%	9.7%	10.7%	10.0%
7/12/2005	7/6/2010	11.6%	10.5%	11.1%	11.0%
6/14/2005	6/8/2010	12.3%	11.5%	11.6%	12.2%
5/17/2005	5/11/2010	14.0%	12.9%	13.2%	13.7%
4/19/2005	4/13/2010	13.7%	12.1%	13.4%	12.4%
3/22/2005	3/16/2010	12.6%	10.6%	12.4%	10.8%
2/22/2005	2/16/2010	12.1%	9.3%	11.3%	10.1%
1/25/2005	1/19/2010	12.8%	11.2%	12.3%	11.7%
12/28/2004	12/22/2009	11.9%	10.1%	11.3%	10.7%
Avg		12.2%	10.8%	11.7%	11.3%
StDev		1.3%	1.1%	1.2%	1.2%

Number positions: 50

Re-balancing Period: 4 weeks

Commission per trade: 9.99

As noted at the outset, the 40 outcomes within each Figure are not identical as they would be in a perfect world with no unexplained or random factors. The more appropriate inquiry is whether the randomness dominates, or even looms excessively large, in the context of overall results. The data here indicates that this is definitely not the case. As can be seen by comparing the 40 outcomes within each Figure, by noting the four averages in each figure, and by noting how small the four standard deviations are relative to their respective averages, the impact of randomness is modest. Results are clearly being driven, across the board, by the Power Gauge ranking system.

Considering Changing Market Conditions

Different factors dominate market psychology at different times. Investors are best served when model builders address as many different kinds of environments as possible and recognize what their models can and cannot do.

Sometimes, the market will favor value - in such periods, models heavily oriented toward value will perform well. When the market favors momentum, momentum-oriented models will perform well. More generally, there are times when the market will be influenced by fundamentals, and times when fundamentals are of less consequence. In 2008, for example, the market looked mainly to liquidity and expectations. Most fundamental models therefore performed poorly.

The Power Gauge model is quite powerful in the way it considers such a wide variety of factors, whether the current market favors value, growth, good balance sheets, estimate revisions, technical momentum, etc. This gives the model a good chance to perform well across a wider-than-usual variety of market conditions.

Model robustness should not be pursued so fanatically as to back ourselves into a data mining situation – there will always be times when any model operates less effectively on an absolute basis. In such times, we would hope to still see positive relative performance.

Figures 26 through 29 show Power Gauge model performance for specific various time ranges of the overall test period. First, three distinct market periods where absolute model performance was strongly positive:

Figure 26: 3/31/01 – 12/31/03 (Bear Market)

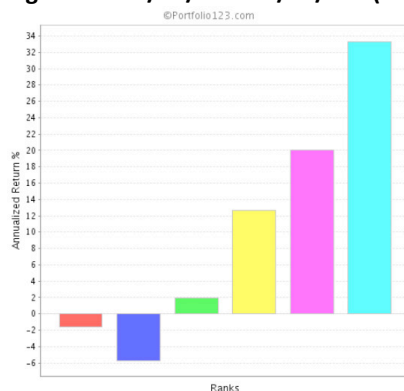


Figure 27: 12/31/03 – 6/30/07 (Bull Market)

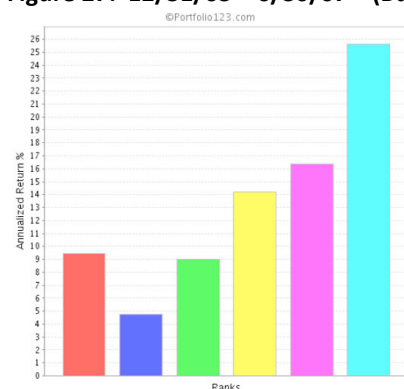
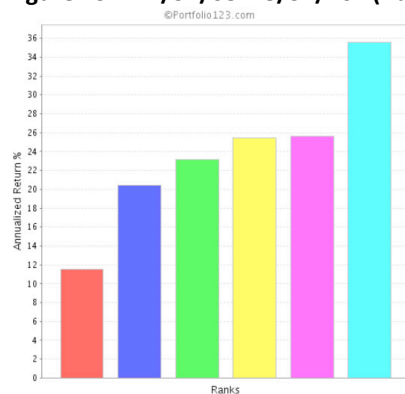
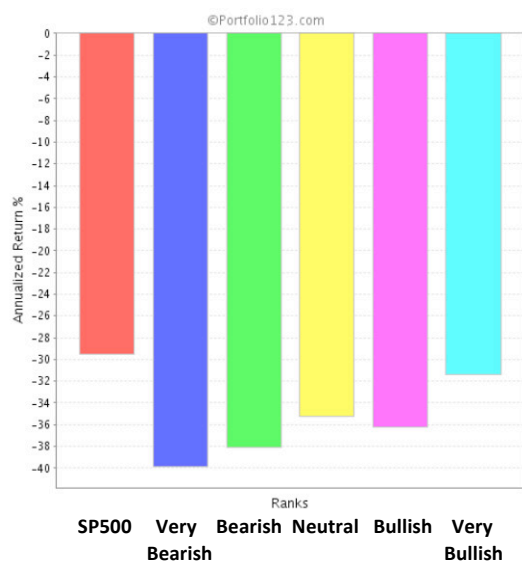


Figure 29: 12/31/08 – 8/31/10 (Bull Market)



And one period where absolute performance was negative:

Figure 29 7/1/07 – 12/30/08



Interestingly, despite the fact that all buckets lost money on an absolute basis during this period⁴, investors would still have been relatively best off had they been in the highest-ranked bucket, and would have fared much worse in the lowest-ranked bucket. Fortunately, that period was unusual in the extent of the market's aversion to data-driven fundamental strategies.

These results show that Power Gauge rankings maintain their correlation to relative price performance in all market periods examined, and most notably the top bucket maintains a distinct separation from even its nearest neighbor in all conditions. This is what we would expect from a robust model.

⁴ In this Bear market, all buckets underperformed the S&P because the large-cap, cap-weighted index performed better than an unweighted average of all stocks in any given Rating bucket, which is what these tests measure.

Considering The Small-Cap Effect

At a 3/29/11 panel discussion in New York City on the evolution and state of quant strategies, Dr. Margaret Stumpp, Chief Investment Officer of Quantitative Management Associates observed, “if ever there was an efficient market, the S&P 500 would be it.” Many who have significant experience working with quant models agree, after years of seeing how quickly performance degrades as market cap thresholds are raised and vice versa.

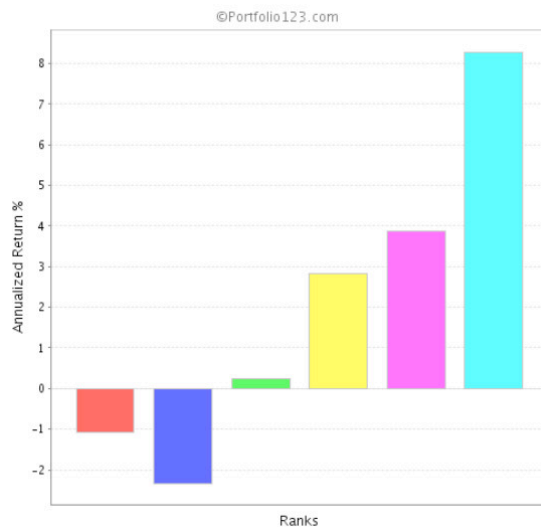
We need not search for a small-cap effect when we build fundamental models because we know at the outset that it will be there. The larger the stock issue, the more attention it receives, the more thoroughly studied are its fundamentals and the more intense the buzz. Quant models are very hard pressed to add value in this area.

The relevant question asks whether the current model adds value above and beyond the known Small Cap effect. Here, we can give a definitive, affirmative answer simply by noting that all powerful simulation results seen previously (including the Alphas) are computed with reference to a small-cap benchmark, the Russell 2000.

Having acknowledged that the small-cap effect is one contributor to this model’s success, but by no means the only one, it still can be interesting to see how it fares in the relatively efficient S&P 500 universe. Figures 30-33 show Power Gauge rank performance over this index – it is important to remember that the model itself was not actually built and tested on this universe.

Figure 30 shows a 5-bucket 4-week re-balancing rating system test of the Power Gauge model as applied only to stocks that are included in the S&P 500.

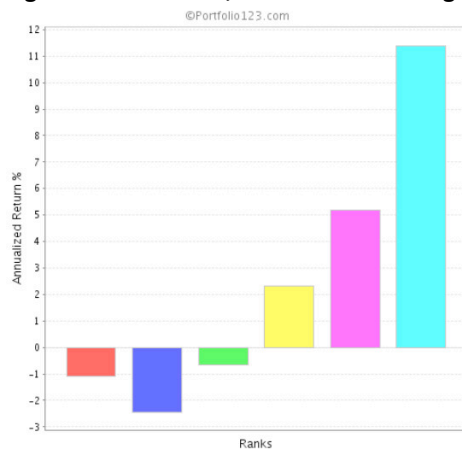
Figure 30



As expected, the results are not nearly as powerful as they are for the broader, less-efficient universe. The annualized return of the top bucket is just modestly above 8%, versus nearly 18% for the Russell 3000 universe (Figure 2). But interestingly, the Power Gauge ranking maintains a positive correlation to relative price performance, even within the S&P 500 universe, in that each bucket’s performance is superior to that of the bucket just below it.

Figure 31 shows this is also the case when we move to a 1-week rebalancing protocol.

Figure 31: 5 buckets, 1-week rebalancing



Figures 32 and 33 are quite impressive. They break the S&P 500 universe down to 20 buckets.

Figure 32: 20 buckets, 4-week rebalancing

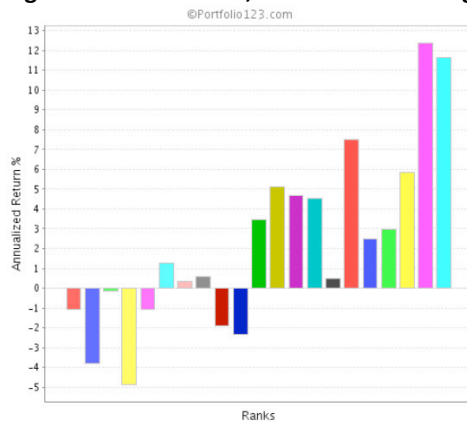
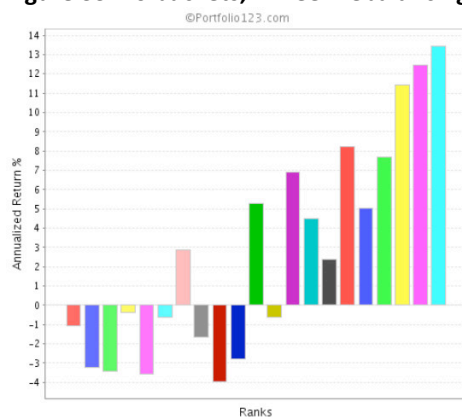


Figure 33: 20 buckets, 1-week rebalancing



Figures 32 and 33 are by no means perfect. But considering that they examine 20 buckets, as opposed to the five usually shown in rating-system performance tests and that they are confined to S&P 500 stocks, the efficient market where quant/fundamental strategies typically wither, the extent to which the Power Gauge discriminates between probable high and low performers is very impressive.

Conclusion

The Chaikin Power Gauge rating system is, to say the least, quite successful in satisfying its stated goal of evaluating a stock's likely **relative intermediate-term price performance**, while exhibiting a high degree of stability across variations in underlying universe selection and performance evaluation parameters.

It passes a basic performance test with flying colors.

Moreover, it fares very well when we subdivide the universe into effectively random sub-parts and note how the Power Gauge's performance characteristics vary little from one sub-group to the next. Simulations, which look at more realistically-sized portfolios, transaction costs, and a more finely articulated set of date samples, confirm that the performance characteristics are driven primarily by the model, as opposed to random or unexplained factors. We saw, too, that model performance is due to more than a small-cap effect (the simulations were all evaluated relative to the Russell 2000), and that the model discriminates surprisingly well even when its use is confined to a relatively efficient S&P 500 universe.

We conclude that the Power Gauge can be used with a variety of investment styles – including a variety of stock selection criteria and a variety of exit methodologies - to increase returns.

About the Author

Marc Gerstein is an independent consultant specializing in rules-based equity investment strategies.

Mr. Gerstein spent twenty years at Value Line Investment Survey, as manager of its high-yield corporate bond fund, and as Assistant Research Director. He was Director of Investment Research at Reuters.com. He is presently editor of Forbes Low Priced Stock Report.

Marc has been working with Portfolio123.com, a back-testing and stock screening platform for investors. Mr. Gerstein has authored two books on stock screening: **Screening The Market** (Wiley, 2002) and **The Value Connection** (Wiley, 2003).

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