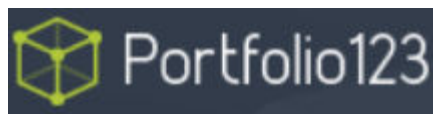# Cherry-Picking the Blue Chips

A 10-stock rules-based Portfolio123 Strategy for outperforming the S&P 500

By

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Portfolio123

The Challenge

- Generate investment alpha from among S&P 500 constituent stocks

- This is a difficult task because the markets in these stocks, among the largest and most closely followed in the world, tend to be more "efficient" than is the case for smaller issues

- Yet its desirable because these stocks are also among the most liquid (easily tradable)

The General Idea

- Identify S&P 500 constituents that are more favorable ranked than most others under each of two important but sometimes contradictory characteristics
  - Value
  - Sentiment
- From among this prequalified subset, choose the 10 stocks that rate highest under the most broad-based Portfolio123 primarily ranking system

Implementation

- A screen refreshed every Monday
  - Quantitative pass-fail tests
  - Each stock must pass all tests

- A ranking system used to sort stocks that pass the screen

- Portfolio holds the 10-highest ranked stocks in approximately equal weights
  - Weights are equal when portfolio is initiated
  - When stocks are sold cash raised is allocated equally among replacement stocks

- Comparative benchmark
  - The S&P 500 Equal Weight Index

The Screening Tests (Buy Rules)

- Stock must rank 80 or above (on a 0-100 scale relative only to S&P 500 constituents) under the Portfolio123 **Basic: Value*** ranking system

- Stock must rank 80 or above (on a 0-100 scale relative only to S&P 500 constituents) under the Portfolio123 **Basic: Sentiment*** ranking system

* Ranking system details explained in Appendix

The Ranking

- From among passing stocks, select the 10 that rate highest under the Portfolio123 **Comprehensive: QVGM**[*] ranking system

- This ranking system is an equally-weighted combination of four specialized ranking systems:
  - Q: the Portfolio123 **Basic: Quality**[*] ranking system
  - V: the Portfolio123 **Basic: Value**[*] ranking system
  - G: the Portfolio123 **Basic: Growth**[*] ranking system
  - M: the Portfolio123 **Basic: Momentum**[*] ranking system

* Ranking system details explained in Appendix

Criteria for Selling

- Refresh the model every week (on Monday)
- Sell a stock if its **Basic: Sentiment*** rank falls to or below 70

* Ranking system details explained in Appendix

General Observations

- The Buy criteria contains a noticeable value tilt
  - The Value ranking system plays a role as one of two screening rules
  - That same Value ranking system also comprises 25% of the QVGM sort model
- The Sell criteria is based solely on deterioration in Sentiment

Simulated (Pre-Launch: 1/2/99-4/9/13) Test

- Performance Chart (log scale)
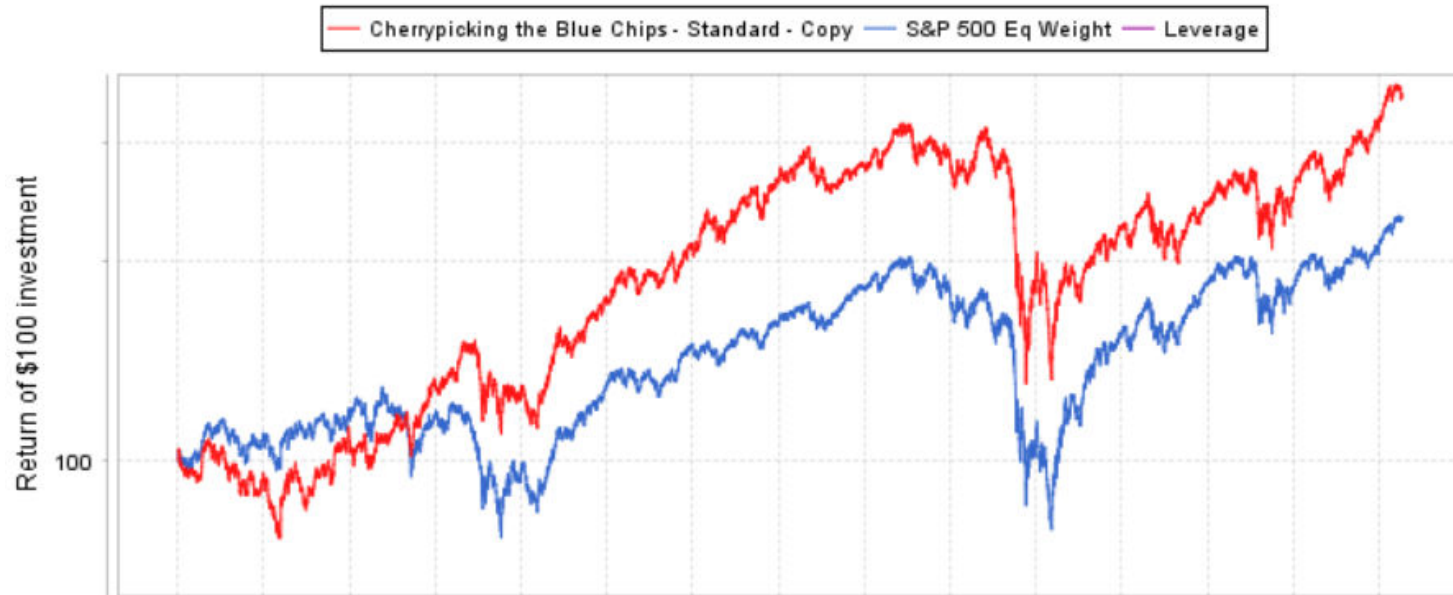
Simulated (Pre-Launch: 1/2/99-4/9/13) Test

- Performance Statistics

Performance Stats

Return (%)	Model	S&P 500 Eq Weight
Total	252.85	132.38
Annualized	9.24	6.09
Year To Date	0.00	0.00
Month To Date	-2.48	-0.38
4 Week	-2.36	0.85
13 Week	9.82	9.08
1 Year	26.48	17.51
3 Year	47.69	36.50

Monthly Performance (Last 12 Months)

Return (%)	5/2012	6/2012	7/2012	8/2012	9/2012	10/2012	11/2012	12/2012	1/2013	2/2013	3/2013	4/2013
Model	-7.96	4.06	-0.35	7.93	4.46	-0.54	2.79	3.10	8.86	1.55	3.34	-2.48
Benchmark	-7.14	3.70	0.15	2.80	2.32	-0.87	1.04	2.05	6.45	0.99	4.18	-0.38
Excess	-0.81	0.36	-0.50	5.13	2.13	0.32	1.75	1.05	2.41	0.55	-0.84	-2.10

Annualized Performance by Calendar Year

Return (%)	1998*	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013**
Model	N/A	-4.81	15.01	18.90	-5.12	40.04	21.47	23.21	6.47	3.85	-34.11	16.86	8.84	1.82	29.71	N/A
Benchmark	N/A	10.20	7.63	-1.85	-19.43	38.71	15.22	6.45	14.02	-0.03	-40.99	43.26	19.81	-1.92	15.27	N/A
Excess	N/A	-15.01	7.38	20.75	14.31	1.33	6.25	16.76	-7.56	3.88	6.88	-26.40	-10.98	3.74	14.44	N/A

33% of annual data is required to calculate annualized return.

(*) Inception Date: 01/02/99 (**) End Date: 04/09/13

Simulated (Pre-Launch: 1/2/99-4/9/13) Test

- Risk Measurements

Risk Measurements - Since Inception

	Model	S&P 500 Eq Weight
Inception Date	01/02/99	01/02/99
Total Return (%)	252.85	132.38
Annualized Return (%)	9.24	6.09
Max Drawdown (%)	-59.15	-60.83
Standard Deviation	23.87	22.29
Sharpe Ratio	0.23	0.09
Sortino Ratio	0.30	0.12
Correlation with Benchmark	0.89	-
R-Squared	0.80	-
Beta	0.96	-
Alpha (%) (annualized)	3.34	-

Risk Measurements - Trailing 3 Year

	Model	S&P 500 Eq Weight
Total Return (%)	47.69	36.50
Annualized Return (%)	13.88	10.93
Max Drawdown (%)	-24.07	-23.21
Standard Deviation (%)	23.50	20.38
Sharpe Ratio	0.52	0.42
Sortino Ratio	0.70	0.55
Correlation with Benchmark	0.95	-
R-Squared	0.91	-
Beta	1.10	-
Alpha (%) (annualized)	2.74	-

Live (4/9/13-3/10/15) Performance

Return ● Model: 59.50% ● S&P 500 Eq Weight: 37.50%
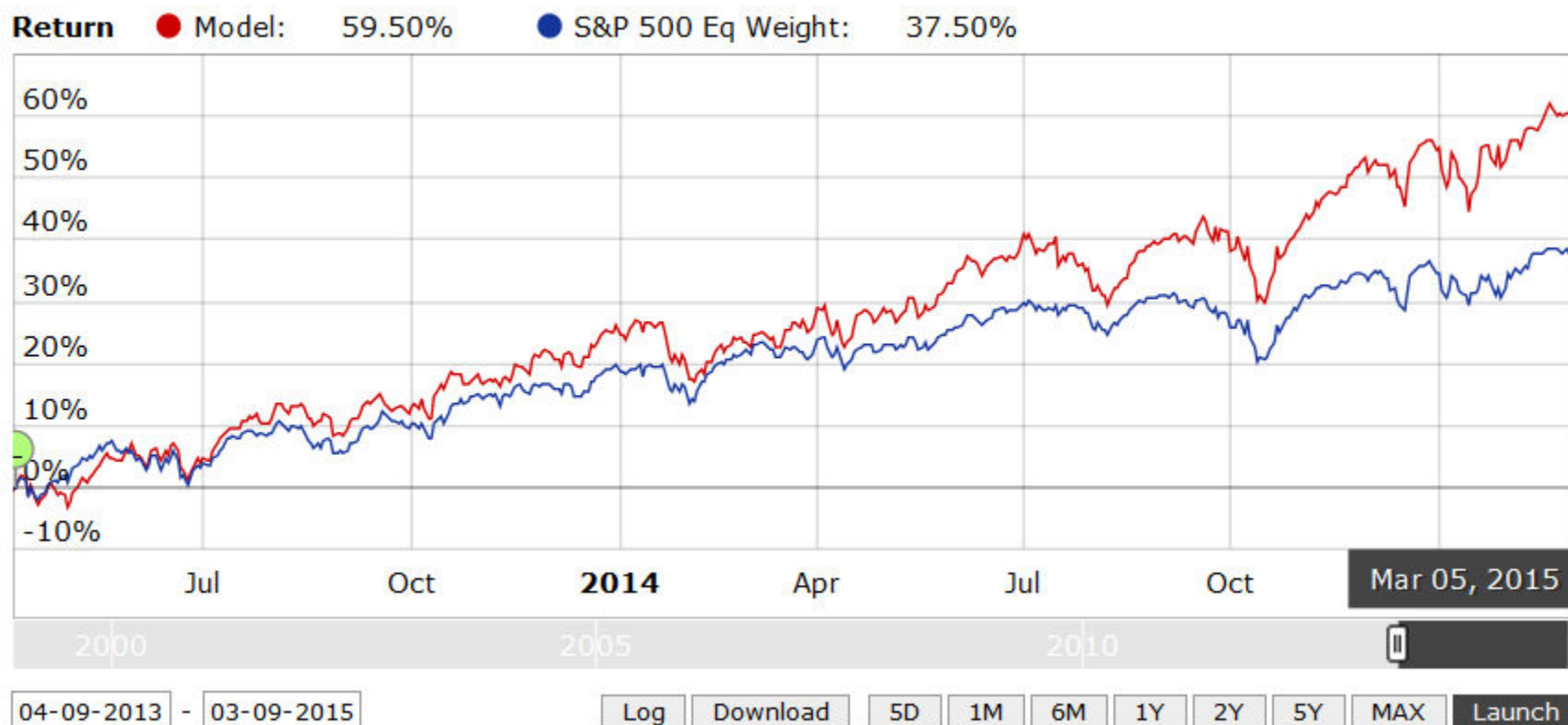
Appendix 1 – The Portfolio123 Comprehensive: **QVGM** Ranking System

- *Basic: Quality Ranking System (25%)*
- *Basic: Value Ranking System (25%)*
- *Basic: Growth Ranking System (25%)*
- *Basic: Momentum Ranking System (25%)*

Appendix 2 – The Portfolio123
Basic: **Quality** Ranking System

- *Margins (25%)*
  - *Trailing 12 Month (TTM) Operating Margin (75% - higher is better)*
  - *5 yr. average Operating Margin (25% - higher is better)*
- *Turnover (25%)*
  - *TTM Asset Turnover (100% - higher is better)*
- *Returns on Capital (25%)*
  - *TTM Return on Investment (30% - higher is better)*
  - *5 yr. average Return on Investment (40% - higher is better)*
  - *TTM Return on Equity (10% - higher is better)*
  - *5 yr. average Return on Equity (20% - higher is better)*
- *Finances (25%)*
  - *Latest Current Ratio (30% - higher is better)*
  - *TTM Interest Coverage (45% - higher is better)*
  - *Latest Total Debt to Capital (25% - higher is better)*

Appendix 3 – The Portfolio123
Basic: **Value** Ranking System

- *Value Based on Income Stream (65%)*
  - Based on Earnings (50%)
    - PE based on Trailing 12 months EPS (33.33%)
    - PE based on consensus estimate of Current Yr. EPS (33.33%)
    - PEG ratio with G based on estimate of long-term growth rate (33.33%)
  - Other (50%)
    - Price/Trailing 12 month Sales (50%)
    - Price/Trailing 12 month Free Cash Flow (50%)

- *Value Based on Assets (35%)*
  - Price/Book (100%)

Appendix 4 – The Portfolio123
Basic: Growth Ranking System

- *EPS Growth (75%)*
  - Basic Growth (50%)
    - YTY growth in latest quarter (higher is better – 33%)
    - Trailing 12 Month (TTM) growth (higher is better – 33%)
    - 5 year growth rate (higher is better – 33%)
  - Acceleration in Growth (50%)
    - Latest qtr. growth compared to TTM (higher is better – 50%)
    - TTM growth compared to 5-year growth TTM (higher is better – 50%)

- *Sales Growth (25%)*
  - Basic Growth (75%)
    - YTY growth in latest quarter (higher is better – 33%)
    - Trailing 12 Month (TTM) growth (higher is better – 33%)
    - 5 year growth rate (higher is better – 33%)
  - Acceleration in Growth (25%)
    - Latest qtr. growth compared to TTM (higher is better – 50%)
    - TTM growth compared to 5-year growth TTM (higher is better – 50%)

Appendix 5 – The Portfolio123
Basic: **Momentum** Ranking System

- *Share Price Change (65%)*
  - *Last 120 days (20% - higher is better)*
  - *Last 140 days (20% - higher is better)*
  - *Last 160 days (30% - higher is better)*
  - *Last 180 days (30% - higher is better)*

- *Technical Indicator (35%)*
  - *20 Day Up-Down Ratio* (50% - higher is better)*
  - *60 Day Up-Down Ratio* (30% - higher is better)*
  - *120 Day Up-Down Ratio* (20% - higher is better)*

* Volume in up days in defined period divided by volume in down days

Appendix 6 – The Portfolio123
Basic: **Sentiment** Ranking System

- *Estimates (50%)*
  - % 4 Week Change in Consensus Current Yr. EPS Est. (higher is better - 33.33%)
  - % 4 Week Change in Consensus Current Qtr. EPS Est. (higher is better - 33.33%)
  - Standard Deviation of Current Qtr. EPS estimates/absolute value of consensus estimate (lower is better - 33.33%)

- *EPS Surprise (30%)*
  - Surprise % most recent quarter (higher is better - 65%)
  - Surprise % second most recent quarter (lower is better - 35%)

- *Analyst Recommendations (20%)*
  - 4-week change in consensus recommendation (more bullish is better - 75%)
  - Current consensus recommendation (more bullish is better - 25%)