

The Role of Quality in S&P 500 Stock Returns: An Empirical Analysis 2007-2015

By: Sam Verrilli

Advisors: Dr. Robert Dean and Dr. Trevor Collier

Study Objective:

- Determine if High Quality Stocks Outperform Low Quality Stocks

Research Design:

- Use return on equity (ROE) as measure of quality
- Sort S&P 500 stocks by ROE
- Top 25 = High quality
- Bottom 25 = Low quality
- Investment strategy used was to rebalance yearly
- Time period: 2007-2015

Hypotheses Tested:

- 1) High quality (ROE) stocks outperform low quality (ROE) stocks
- 2) High quality stocks outperform S&P 500 (SPY)
- 3) Low quality stocks underperform S&P 500 (SPY)

Table 1 Rebalanced Strategy			
Annual Returns			
Year	Top 25	Bottom 25	Alpha
2007	16.02%	27.67%	-11.66%
2008	-33.70%	-37.25%	3.56%
2009	18.25%	51.28%	-33.03%
2010	9.12%	23.38%	-14.25%
2011	16.27%	-27.34%	43.61%
2012	9.28%	47.77%	-38.49%
2013	21.87%	49.21%	-27.34%
2014	3.47%	22.30%	-18.83%
2015	-3.54%	16.18%	-19.72%
Cum. Alpha			-116.15%

Table 2 Rebalanced Strategy			
Annual Returns			
Year	Top 25	SPY	Alpha
2007	16.02%	3.24%	12.78%
2008	-33.70%	-38.28%	4.58%
2009	18.25%	23.49%	-5.24%
2010	9.12%	12.84%	-3.72%
2011	16.27%	-0.20%	16.47%
2012	9.28%	13.47%	-4.20%
2013	21.87%	29.69%	-7.81%
2014	3.47%	11.29%	-7.82%
2015	-3.54%	-0.81%	-2.73%
Cum. Alpha			2.30%

Table 3 Rebalanced Strategy			
Annual Returns			
Year	Bottom 25	SPY	Alpha
2007	27.67%	3.24%	24.43%
2008	-37.25%	-38.28%	1.03%
2009	51.28%	23.49%	27.79%
2010	23.38%	12.84%	10.54%
2011	-27.34%	-0.20%	-27.15%
2012	47.77%	13.47%	34.29%
2013	49.21%	29.69%	19.52%
2014	22.30%	11.29%	11.01%
2015	16.18%	-0.81%	16.99%
Cum. Alpha			118.46%

Conclusions:

- 1) HQ (ROE) stocks underperformed LQ (ROE) stocks
- 2) HQ (ROE) stocks outperformed SPY
- 3) LQ (ROE) stocks outperformed SPY