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Do High ROE Stocks Outperform the Market with Persistence: An Empirical Analysis, 2009 - 2014

The Performance of High and Low ROE Stocks: An Empirical Analysis 2010 - 2014

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- Study Purpose: to determine if ROE is a predictor of stock excess returns
- Research Design: establish portfolios of high (40%) and low (5%) ROE stocks and compare their returns to the S&P 500 (SPY)
- Period of Analysis: 2010 – 2014
- The Model:

$R_{t+1} = f(ROE_t)$,

where: $R_{t+1} = \text{return to ith stock at t} + 1$

$ROE_t = \text{return on equity for ith stock at time t}$

- Hypotheses:

(1) High ROE stocks outperform the market

(2) High ROE stocks outperform low ROE stocks

- Data Analysis: Table 1

(1) High ROE stocks outperform SPY in all 5 years

(2) High ROE stocks generate strong alpha in the trading range year 2011 and the growth year 2013

- Data Analysis: Table 2

(1) On a cumulative basis, high ROE stocks generate $5 million dollars of alpha based on an original investment of $10 million

Table 1
High ROE Annual Returns

Performance Period	High ROE	S&P 500	Alpha
12/31/09 to 10	15.68%	12.78%	2.90%
12/31/10 to 11	9.36%	0.00%	9.36%
12/31/11 to 12	13.74%	13.40%	0.34%
12/31/12 to 13	43.53%	29.60%	13.93%
12/31/13 to 14	13.60%	11.40%	2.20%

Table 2
High ROE Cumulative Portfolio Values

Portfolio Investment Value	SPY Investment Value	Portfolio Excess Return
11,568,000	11,278,000	290,000
12,650,565	11,278,000	1,372,565
14,388,860	12,789,252	1,599,608
20,652,178	16,574,871	4,077,308
23,461,624	18,464,406	4,997,218

Table 3
Low ROE Annual Returns

Performance Period	Low ROE	S&P 500	Alpha
12/31/09 to 10	21.60%	12.78%	8.82%
12/31/10 to 11	-2.49%	0.00%	-2.49%
12/31/11 to 12	8.40%	13.40%	-5.00%
12/31/12 to 13	34.17%	29.60%	4.57%
12/31/13 to 14	10.98%	11.40%	-0.42%

Table 4
Low ROE Cumulative Portfolio Values

Portfolio Investment Value	SPY Investment Value	Portfolio Excess Return
12,159,576	11,278,000	881,576
11,856,650	11,278,000	578,650
12,852,159	12,789,252	62,907
17,243,902	16,574,871	669,031
19,137,872	18,464,406	673,467

- Data Analysis: Table 3

(1) Low ROE stocks have negative alpha in 3 of the 5 years

(2) Positive alpha was generated in the rebound year 2010 and the growth year 2013

- Data Analysis: Table 4

(1) On a cumulative basis, low ROE stocks generate $673,467 of excess returns on an original investment of $10 million

- Conclusions:

(1) High ROE stocks outperform the market

(2) High ROE stocks outperform low ROE stocks

(3) During the 2010 – 2014 period, both high and low ROE stocks generated excess dollar returns