

Retained Earnings as a Determinant of the Cross Section of Returns 2006-2014

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Study Objectives

1. Determine if retained earnings is a priced in factor in the cross section of returns
2. Determine if a combination of price and retained earnings weighted portfolios outperformed their benchmarks

Research Approach

1. Sort S&P 500 into deciles of 50 stocks by firm size
2. Divide top 50 stocks by size into 2 portfolios of 25 stocks each based on price to book
3. Utilize 3 portfolio weighting strategies
 - a) Price Weighted
 - b) Retained Earnings per Share Weighted
 - c) Combination of Price and Retained Earnings per Share Weighted Portfolios

Model Specification

1. **Price Weighted**
 $(Pw_i) = P_i / (\sum P_i / N)$
2. **Retained Earnings Weighted**
 $REw_i = RE_i / (\sum RE_i / N)$
3. **Combined Weighted**
 $Cw_i = .5Pw_i + .5REw_i$

Hypothesis

- Pw_i outperforms benchmark
- REw_i outperforms benchmark
- Cw_i outperforms benchmark

Table 1			
Cumulative Return			
Large Cap Growth (LCG)			
2006-2014			
Weighting Strategy	Return	Benchmark	Alpha
Price	120%	90%	30%
Retained Earnings	280%	90%	190%
Combined	200%	90%	110%

Table 2			
Cumulative Returns			
Large Cap Value (LCV)			
2006-2014			
Weighting Strategy	Return	Benchmark	Alpha
Price	82%	45%	37%
Retained Earnings	50%	45%	5%
Combined	64%	45%	19%

Table 3			
Cumulative Returns			
Rebalanced Portfolios			
2008-2014			
(LCG)			
Weighting Strategy	Return	Benchmark	Alpha
Price	400%	178%	222%
Retained Earnings	404%	178%	227%
Combined	402%	178%	224%
(LCV)			
Weighting Strategy	Return	Benchmark	Alpha
Price	137%	98%	39%
Retained Earnings	83%	98%	-15%
Combined	132%	98%	34%

Findings:

- LCG – All weighting models generated alpha. RE had highest alpha
- LCV – All 3 weighting models generated alpha. Price Weighted had highest alpha
- Rebalanced – LCG: all 3 models outperformed. RE had highest alpha
 LCV: Price and combined weighted outperform while RE does not

Conclusions:

- Retained earnings appears to be priced-in factor for growth portfolios but not for value portfolios