



A Portfolio Weighting Model for the Consumer Staples Sector with firm revenue growth the factor weight: An empirical analysis of portfolio returns, 2009-2022.

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Study Objective:

Hypothesis Tests:

1. Determine if revenue growth factor model outperforms an equal weight model
2. Determine if revenue growth is a priced in risk factor

Portfolio Characteristics:

1. Sector : XLP
2. # of Stocks:10
3. State Economic Variable: Consumer Spending (PCE)
4. Loading Factor: Revenue Per Share
5. Size: Large Cap
6. Strategies: (1) Buy and Hold
(2) Adjustable Shares
7. Regression Period: 2009-2019
8. Period of Analysis
 - (1) 2009-2019
 - (2) 2009-2020
 - (3) 2009-2021
 - (4) 2009-2022

Portfolio Weighting Model (RS):

Investment Strategy: Constant Share Model

1st Iteration:

- Step 1. $R_{si}(t) = A_i + B_i(PCE_t)$
- Step 2. $W_{li}(t) = B_i / \sum B_i$
- Step 3. $D_i(t) = W_{li}(t) * 1,000,000$
- Step 4. $SHR_{Si}(t) = D_{li}(t) / P_i(t)$
- Step 5. $MV_i(t+1) = SHR_{Si}(t) * P_i(t+1)$
- Step 6. $PV(t+1) = \sum MV_i(t+1)$

2nd Iteration

- Step 7. $MV_i(t+2) = SHR_{Si}(t) * P_i(t+2)$
 - Step 8. $PV(t+2) = \sum MV_i(t+2)$
- Total Iterations: 11

Constant Share Model			
Years	CR Model	CR Equal Weight	Alpha
2009-2019	502%	260%	243%
2009-2020	643%	314%	329%
2009-2021	940%	439%	501%
2009-2022	809%	362%	447%

Constant Share Model			
Years	CR Model	CR SPY	Alpha
2009-2019	502%	258%	244%
2009-2020	643%	315%	328%
2009-2021	940%	427%	513%
2009-2022	809%	323%	486%

Adjusted Shares Model			
Years	CR Model	CR SPY	Alpha
2009-2019	559%	258%	301%
2009-2020	427%	315%	112%
2009-2021	716%	427%	289%
2009-2022	324%	323%	1%

Findings:

1. CR Model outperforms EW Model
2. CR Model outperforms SPY
3. AS Model outperforms SPY
4. AS Model outperforms EW Model