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# A Smart Beta Approach to Portfolio Weighting: The Case for Consumer Discretionary (2014)

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## Study Objectives

Determine market outperformance:

- stocks weighted by fundamentals
- a concentrated portfolio

## Research Approach

- Determine portfolio weights based on relative value
- Use the following firm characteristics to determine portfolio weights:
  - Price to Earnings (P/E)
  - Price to Book (P/B)
  - Price to Sales (P/S)
  - Price to Cash Flow (P/CFL)
  - Expected Earnings Growth (EG)
- Use the Top 9 holdings of the consumer discretionary ETF (XLY) as the concentrated portfolio
- Original Investment: \$5,000,000

## Portfolio Weighting Model

$$(1) r_{ij} = \frac{\sum (P_i/E_i)}{P_i/E_i}$$

$$(5) S_{it} = \frac{DVI_{it}}{P_{it}}$$

$$(2) R_{ij} = \sum r_{ij}$$

$$(6) DVI_{i(t+1)} = S_{it} \times P_{i(t+1)}$$

$$(3) W_{ij} = \frac{R_{ij}}{\sum R_{ij}}$$

$$(7) PV_{t+1} = \sum_{i=1}^N DVI_{i(t+1)}$$

$$(4) DVI_{it} = W_{ij} \times 5,000,000$$

Table 1: Multi Factor Weightings (W<sub>ij</sub>)

2014 Multi-Factor Portfolio	Weighting
DIS US Equity	11.4216%
CMCSA US Equity	13.6016%
HD US Equity	11.0818%
MCD US Equity	9.3630%
TWC US Equity	13.0974%
NKE US Equity	8.1909%
LOW US Equity	15.9636%
FOXA US Equity	9.4705%
SBUX US Equity	7.8097%

Table 2: Performance Results

Portfolio Performance	Return	Alpha/DOW	Alpha/XLY
Multi-Factor	17.83%	10.31%	9.87%
P/B	17.28%	9.76%	17.28%
P/E	15.51%	7.99%	15.51%
P/S	20.56%	13.04%	20.56%
P/CF	15.92%	8.40%	15.92%
Expected EPS Growth	19.87%	12.35%	19.87%
DOW Return	7.52%	0.00%	7.52%
XLY Return	7.96%	0.44%	7.96%

## Conclusion

- Fundamentally weighted model outperforms DOW and XLY
- Concentrated portfolio outperforms DOW and XLY
- P/S best factor