


4-9-2014

Research exercise: Betting Against Beta: A Low Volatility Investment Strategy for Market Period 2008-2012

Follow this and additional works at: https://ecommons.udayton.edu/stander_posters

 Part of the [Arts and Humanities Commons](#), [Business Commons](#), [Education Commons](#), [Engineering Commons](#), [Life Sciences Commons](#), [Medicine and Health Sciences Commons](#), [Physical Sciences and Mathematics Commons](#), and the [Social and Behavioral Sciences Commons](#)

Recommended Citation

"Research exercise: Betting Against Beta: A Low Volatility Investment Strategy for Market Period 2008-2012" (2014). *Stander Symposium Posters*. 401.

https://ecommons.udayton.edu/stander_posters/401

This Book is brought to you for free and open access by the Stander Symposium at eCommons. It has been accepted for inclusion in Stander Symposium Posters by an authorized administrator of eCommons. For more information, please contact frice1@udayton.edu, mschlangen1@udayton.edu.



Betting Against Beta: A Low Volatility Investment Strategy for the Market Period 2008-2012

Anthony Caruso

Advisors

Dr. Bob Dean

Dr. Trevor Collier

Study Objective

Examine the risk/return relationship
For 6 style/size ETF's Vs. S&P 500,
2008-2012

Risk Measure: Beta

ETF's Analyzed

1. Large Cap Growth (LCG)
2. Large Cap Value (LCV)
3. Mid Cap Growth (MCG)
4. Mid Cap Value (MCV)
5. Small Cap Growth (SCG)
6. Small Cap Value (SCV)

Model Specification

$$R_{it} = a + b (R_{mt})$$

Where R_{it} = Returns for ith ETF

A = Intercept

B = Beta

R_{mt} = Return to market (S&P 500)

Portfolio Weighting Model

$I_{bit} = (1/B_{it}) =$ Inverse of beta

$W_{it} = (I_{bit}/\text{Sum}(I_{bit})) =$ Portfolio Weight

$D_{vit} = W_{it} \times 6,000,000 =$ Dollar investment in ith ETF

$S_{it} = (D_{vit}/P_{it}) =$ Shares in ith ETF

$DV_{it+1} = S_{it} \times P_{it+1} =$ Dollar investment in t+1

Hypothesis:

An inverse beta strategy generates
alpha in volatile markets

Conclusions:

08-12: IB portfolio outperforms S&P by 14.70%

- All IB weighted ETF's outperform S&P except LCV

09-12: IB portfolio outperforms S&P by 41.77%

- All IB weighted ETF's outperform S&P

Summary: Portfolio results indicate IB weighted
portfolio of 6 style/size ETF's outperform S&P
when market conditions are highly volatile

Portfolio Performance

| 2008-2012 | | |
|-----------|---------|---------|
| ETF | Returns | Alpha |
| LCG | 8.46% | 11.06% |
| MCG | 28.38% | 30.98% |
| SCG | 24.63% | 27.23% |
| LCV | -13.06% | -10.46% |
| MCV | 10.78% | 13.38% |
| SLV | 15.59% | 18.19% |
| Port | 12.10% | 14.70% |
| SPY | -2.60% | |

| 2009-2012 | | |
|-----------|---------|--------|
| ETF | Returns | Alpha |
| LCG | 80.94% | 23.49% |
| MCG | 117.68% | 60.23% |
| SCG | 128.33% | 70.88% |
| LCV | 78.47% | 21.02% |
| MCV | 100.05% | 42.60% |
| SLV | 107.94% | 50.49% |
| Port | 99.22% | 41.77% |
| SPY | 57.45% | |