

The Impact of Safety and Leverage in S&P 500 Stock Returns

Kevin Wargo

Dr. Robert Dean & Dr. Trevor Collier

● Study Objective

- Determine if high or low debt-to-equity (D/E) stocks outperform the market

● Research Design

- Let Low D/E = Safe Stocks
- Let High D/E = Leveraged Stocks
- Sort S&P stocks by size and then by D/E
- Establish portfolio categories
 - Large Cap Low D/E
 - Small Cap Low D/E
 - Small Cap High D/E
- Investment Strategies
 - (1) Buy and Hold (*B/H*)
 - (2) Buy and Hold Rebalanced (*r*)
 - (3) Resorted and Rebalanced (*Reb.*)
- Hypotheses Tested
 - (1) Large Cap Low D/E outperforms SPY
 - (2) Small Cap Low D/E outperforms SPY
 - (3) Large Cap Low D/E outperforms Small Cap High D/E

● Conclusions

- LCL D/E outperforms SPY – all models
- SCL D/E outperforms SPY – all models
- LCL D/E outperforms SCH D/E – all models
- SCL D/E outperforms SCH D/E for B/H & Reb. models
- Low D/E outperforms High D/E for Large vs. Small Cap
- In general, safe stocks outperformed leveraged stocks throughout economic recession and long-term recovery.

Year	<i>B/H</i>	<i>B/H (r)</i>	<i>Reb.</i>	<i>SPY</i>
2007	44%	44%	44%	4%
2008	-19%	-13%	-13%	-36%
2009	39%	53%	52%	-21%
2010	65%	77%	75%	-11%
2011	89%	104%	98%	-11%
2012	126%	143%	134%	1%
2013	169%	189%	175%	30%
2014	226%	205%	191%	45%
2015	231%	159%	150%	44%

Year	<i>B/H</i>	<i>B/H (r)</i>	<i>Reb.</i>	<i>SPY</i>
2007	-1%	-1%	-1%	4%
2008	-35%	-42%	-44%	-36%
2009	9%	19%	30%	-21%
2010	48%	60%	59%	-11%
2011	42%	41%	57%	-11%
2012	51%	60%	86%	1%
2013	79%	81%	133%	30%
2014	94%	84%	139%	45%
2015	98%	68%	120%	44%

Year	Large Cap Low D/E			Small Cap High D/E		
	<i>B/H</i>	<i>B/H (r)</i>	<i>Reb.</i>	<i>B/H</i>	<i>B/H (r)</i>	<i>Reb.</i>
2007	44%	44%	44%	-13%	-13%	-13%
2008	-19%	-13%	-13%	-56%	-57%	-58%
2009	39%	53%	52%	-17%	28%	12%
2010	65%	77%	75%	1%	45%	47%
2011	89%	104%	98%	-5%	43%	29%
2012	126%	143%	134%	21%	92%	-17%
2013	169%	189%	175%	57%	144%	38%
2014	226%	205%	191%	90%	187%	40%
2015	231%	159%	150%	73%	155%	4%