

## VIDEO - How To Build The Optimal Portfolio



**<u>Register Now</u>** for our upcoming webinar to learn more about Optimal Beta and Portfolio Construction ~ Monday, March 17<sup>th</sup> at 11am ET.

Over the past few months, we have written two research notes on portfolio beta. The first (<u>The Higher The Beta The Lower</u> <u>The Alpha</u>) examined the enormous historical alpha destruction from a higher beta portfolio and identified that when the annual performance of the S&P500 is less than 12% actively reducing beta was prudent. The second note (<u>What's The Right</u> <u>Beta For Your Portfolio?</u>) found the "efficient frontier" of a portfolio-level beta, identifying the optimal portfolio beta for three common approaches--minimum volatility, maximum Sharpe ratio, and maximum return. We concluded that the optimal beta ranges between 0.95 and 1.0, with the maximum Sharpe portfolio at 0.97 on average over the last 25 years. There are several ways a portfolio manager could construct such a portfolio. For instance, an overall portfolio-level beta can be achieved by owning only stocks with extreme betas (in the top and bottom decile), or from a tighter band of individual stock

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**Ryan McGovern** Director of Research Sales 973-271-8017 ryan@trivariateresearch.com Chang Ge Analyst 614-397-0038 chang@trivariateresearch.com betas near the center of the distribution. Today's research examines how to construct an "optimal" portfolio by assessing the distribution of betas.

We simulated 100 portfolios each month over the last six years, choosing 60 cap-weighted stock portfolios at random from various deciles of beta. D1 means the lowest decile of beta, D2 the second lowest, and D10 the highest beta decile. For the Top 500 stocks by market cap, each beta decile has 50 stocks. In a portfolio constructed from only high and low beta stocks, a D1-D10 combination, we chose 60 stocks at random, 100 different times each month, and studied their subsequent 12-month forward returns. We then compared this to the results from choosing stocks from the 2<sup>nd</sup> and 9<sup>th</sup> beta decile (D2D9), to D3D8, D4D7, and so on.

**S&P500 results:** Portfolios with extreme beta (D1D10 or D1D2D9D10) had the highest return, and those derived exclusively from stocks with closer to median beta, performed worst. **S&P500-index portfolio managers should actively look to own stocks with extremely high and low beta over average beta stocks, even though the overall portfolio beta should on average be less than 1.0.** 

We also did this for value, growth, and small caps, and found ...

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