# Insights from our Chicago Quantum Net Score Data Analysis

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## PART 1: SHOULD INVESTORS INVEST IN STOCKS OF MONEY LOSING COMPANIES?

Should investors invest in validated, US listed stocks that lose money, or more precisely have negative net income. The simple answer is that our model found only 8 stocks out of 1,157 that would be more efficient (higher expected returns vs. stock price variance) than buying a broadly diversified portfolio.

We see four portfolios that are more efficient to hold than investing in individual money losing companies:

1. The $IWM, or the iShares Russell 2000 ETF
2. A portfolio of all 1,157 common stocks of money-losing companies
3. The $QQQ, or the Invesco QQQ Trust Series 1 (ETF)
4. The $SPY, or the S&P 500 ETF Trust ETF

We answer this question during a time of moderating market returns. The 'forward' one-year expected market return is 8.13% for a balanced portfolio of $SPY, $IWM and $QQQ, using a risk-free rate of 1.00%.

Stock Price Volatility
Money losing companies stocks have a higher daily price variance than those that make money, often by a factor of 2:1 to 3:1. Today's ratio is 3.42 x 10-4 / 1.18 x 10-4 = 2.89.

Expected Returns
Money losing companies stocks have a higher BETA and therefore a higher expected return in the coming year than money-losing company stocks. Expected Return = 11.84% / 9.14% = 1.295.

We believe the greater risk outweighs the greater expected returns during times of moderating market returns. Investors should avoid holding individual stocks in companies with negative net income. They should either focus on profitable companies, or in buying a broadly diversified portfolio such as $SPY, $QQQ or $IWM.

# PART 2: HOW CAN WE PROFIT FROM STOCKS OF MONEY-LOSING COMPANIES?

We did find small portfolios that would be the most inefficient you could hold. We say small portfolios because diversification of risk increases efficiency, so these portfolios have between one and three stocks, held equally.

Inefficient portfolios have significantly more risk than expected return, when normalized against the 'all stock' portfolio above (#2), or the $SPY.

We call these our CQNS DOWN portfolios, because they are portfolios of stocks you should avoid holding, or can bet against after they move higher. They have seen significant daily price variance without significant BETA values.

Sometimes you cannot short these stocks because they are not available to be borrowed. In those cases, you may be able to buy puts or sell calls.

# PART 3: HOW IS THIS DIFFERENT FOR STOCKS OF MONEY MAKING COMPANIES?

Investors have a better chance investing in stocks of companies that make money. In contrast to the 8 / 1,157 stocks (0.0069) that were more efficient than $SPY, 124 individual stocks of money-making companies, or 124/2,399 stocks (0.052), were more efficient than the $SPY, $IWM or a broadly diversified portfolio.

We found larger portfolios (from 2 to 14 stocks) that are significantly more efficient than a fully diversified portfolio. Your choice of efficient investments is diverse and allows for different types of stocks to be held.

However, if you are not confident in picking individual stocks or stock portfolios, a broadly diversified portfolio is a very efficient and 'safe' choice.

Also, if you are not confident in the direction of the overall market, then just choosing portfolios on the basis of efficiency could leave you with a significant BETA value of your stocks, which will overstate market movements in your portfolio. You win in advancing US equity markets but you lose in declining US equity markets.