

# How Does a Momentum Manager Measure Risk?

### AUTHOR



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Joe coordinates JAG's equity research activities and serves as Senior Analyst on JAG's managed equity strategies. Risk taken by asset managers can be assessed in a number of ways. Comparing a manager's portfolio beta to that of their relevant index is a longstanding first step in considering how risky a collection of stocks may be. More sophisticated risk assessments include a review of component factors that explain systematic risks. Unfortunately, neither of these methods serves a useful purpose when evaluating momentum portfolios. <u>A 2012 study by Barroso and Santa-Clara</u> shows that beta explains only 23% of the risk for momentum stocks. Most of the risk for momentum stocks is specific risk. Second, since momentum styles actively choose to over-index the momentum factor, factor risk assessments serve to confirm at least one known and intentional factor risk, making that indicator useful only in a relative or historical context. What risk measure makes sense?

#### >> It's not beta.

>> It's not factor exposure.

#### >> It's not risk/expected return.

Getting away from risk-only measures, other risk assessment tools contemplate both risk and expected return. Pure momentum investment styles have issues with such measures as well. Price targets are unusual in momentum strategies. A typical momentum manager axiom would be that "you never know how far a stock move may go." Lacking explicit price targets, momentum managers also generally lack expected return estimates. An absence of expected return projections frustrates a prospective risk/return measurement. This metric can be tabulated only on a looking backward basis, as in a Sharpe ratio, but it cannot be created on a prospective basis and therefore it defies utility as a portfolio management tool.

So, if beta is minimally relevant, some factor exposures are obvious, and expected return is absent from typical momentum security analyses, how can risk be assessed? We explore volatility, momentum itself, and gap analysis.



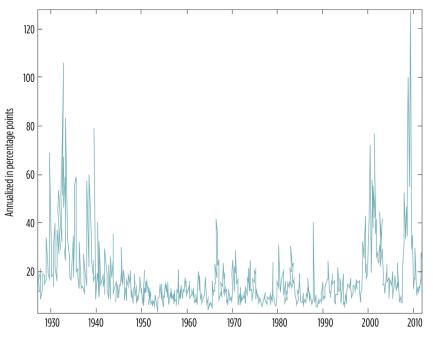
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#### Easy...Just Avoid Momentum Crashes... (Eye Roll)

Momentum factor investing has produced an attractive return over time. However, the foil to the momentum strategy is that returns are not normally distributed. Instead, the distribution has a fat left tail, meaning that incidents of underperformance are relatively severe. Whole markets have experienced sudden "momentum crashes" in the past, and to the extent that the crash concept can be applied to individual stocks, stocks that lose momentum often experience harsh corrections as well. If a momentum investor can avoid these crashes, risks drop to below market average levels.

#### Volatility Matters

Absolute levels of volatility and changes in volatility appear to be good indicators of the potential for momentum crash. <u>The Barroso study earlier</u> cited finds that using change in volatility for the momentum cohort on the whole can steer momentum investors away from crashes. Historically, volatility has increased ahead of momentum corrections. When market volatility rises, momentum investors are to liquidate their portfolios, pause, and then reinvest once volatility declines. As an institutional investor, our experience is that few clients would tolerate large cash positions and that this practice is sufficiently similar to the discredited notion of market timing.



# The Realized Volatility of Momentum Obtained from Daily Returns in Each Month from 1927:03 to 2011:12

Source: Barroso, JAG Capital Management

Aligning in time period with the Barroso study, JAG research revealed 180-day volatility as a significant risk measure for individual momentum stocks. Our work suggests that high absolute levels of individual stock volatility are indicative of higher risks. At JAG, we have a quantitative tool which helps us see upward changes in volatility.



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#### Can it Be This Simple?

While rising volatility can signal increased risk of a momentum crash, shedding risk in a momentum investment discipline may be just as simple as avoiding falling momentum. Technical indicators, RSI (relative strength index) and ROC (momentum oscillator) are commonly used to gauge changes in momentums. Practitioners using RSI tend to sell overbought stocks, with RSI scores greater than 70. ROC users wait for the oscillator to move down while the stock price is moving up, indicating momentum is changing to the negative. While these tools are common, we see a significant divergence in how such tools are used in terms of thresholds and timing. Despite differences, however, JAG believes that selling momentum stocks on evidence of weakening momentum has a success path. JAG employs a relative strength moving average crossover tool to highlight sustained negative changes in momentum.

## Conclusion

We believe that selling momentum stocks showing both an increase in volatility and a sustained decrease in price momentum reduces potential exposure to momentum crashes, both on an individual stock and a portfolio basis. As such, JAG suggests that meaningful risk measures for a momentum portfolio would be volatility and relative strength.

#### ABOUT JAG

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