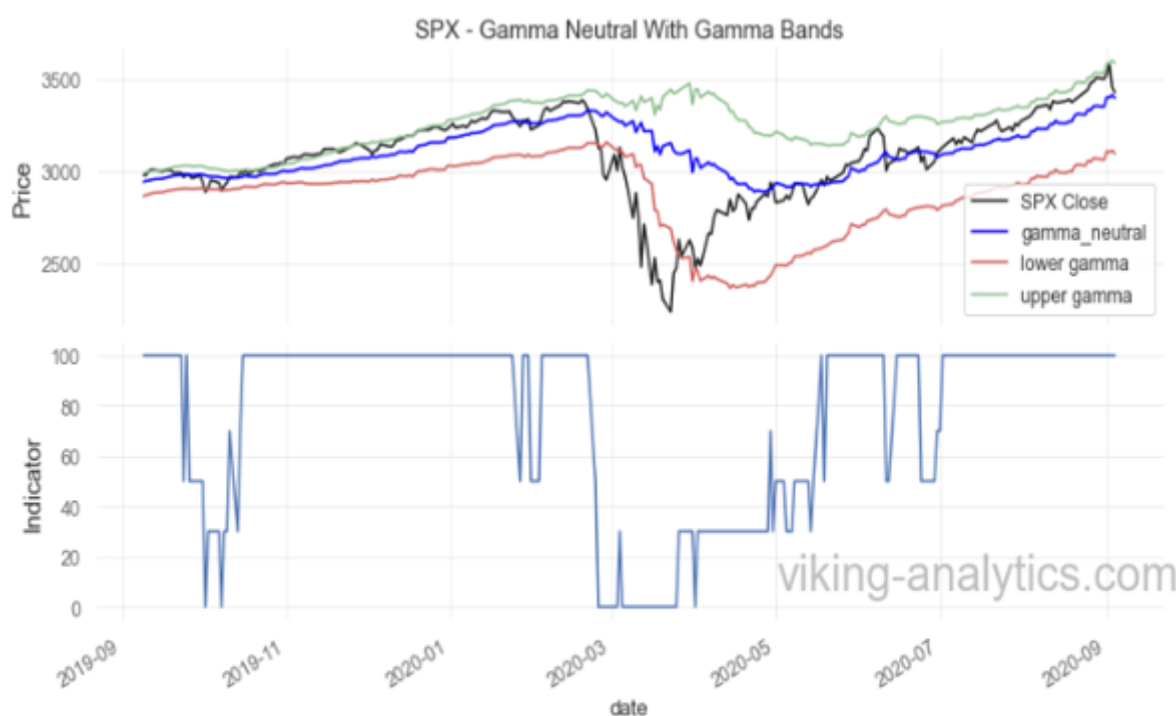


We are thrilled to announce that Viking Analytics will be providing RIA Pro subscribers their Weekly Gamma Bands update. The report uses options gamma to help you better manage risk and your equity allocations. In the future, we will release this report each Monday.

9/8/2020 Gamma Band Update

- The S&P 500 (SPX) traded towards the upper band and sold off to end the week just above the Gamma Neutral level.
- Accordingly, if the SPX closes below the Gamma Neutral level (3397.15), our Gamma Band model will begin to reduce allocation to equities.



Date	Close	Upper Band	Gamma Neutral	Lower Band	Model Allocation*
08-21-20	3397.16	3470.91	3311.13	3044.83	100%
08-28-20	3508.01	3521.20	3355.05	3078.14	100%
09-04-20	3426.96	3572.59	3397.15	3104.76	100%

Background

Market participants are increasingly aware of how the options markets can affect the equity markets. In this case, it can be viewed as the *tail wagging the dog*.

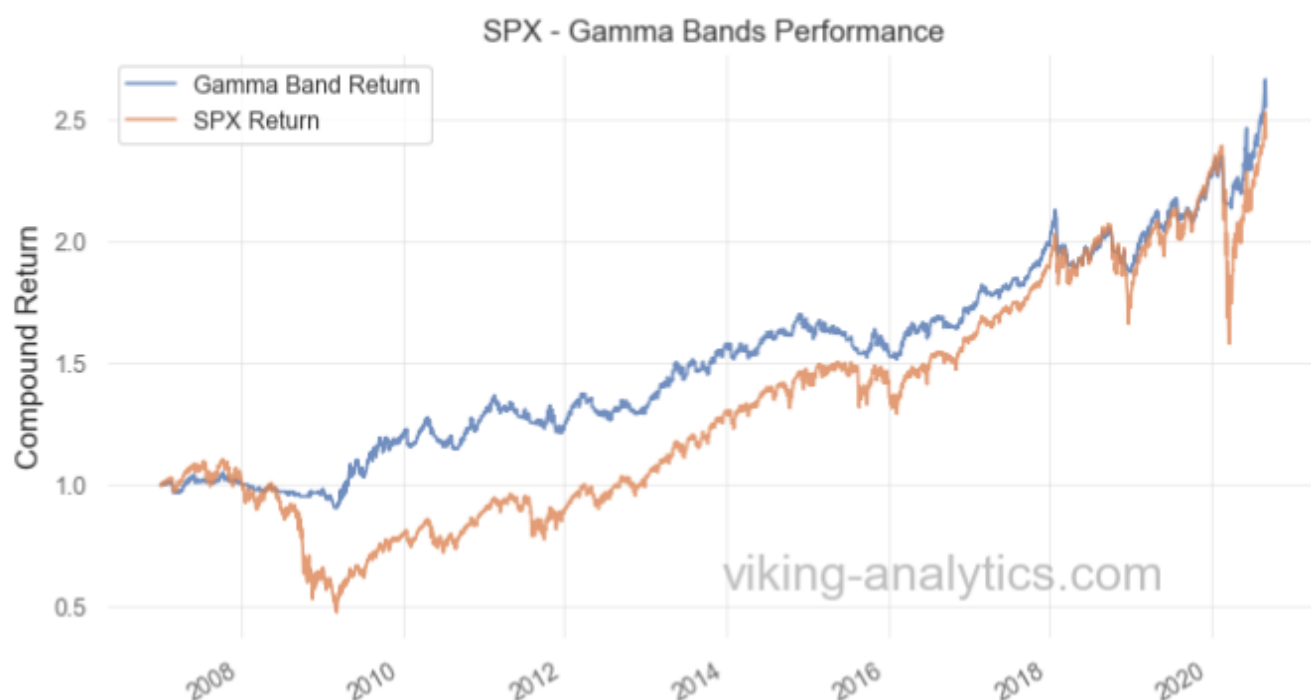
We have created a simple [Gamma Band model](#) to demonstrate the effectiveness of the use of Gamma Neutral in reducing equity tail risk. In our model, we compare the daily close of the SPX to

the Gamma Neutral and Lower band levels. Consequently, we use the model to help us to adjust our equity exposure allocation from 0% to 100%.

Furthermore, we back-tested this strategy from 2007 to present. The model realized an 80% increase in risk-adjusted returns (*measured by the Sharpe ratio*). Accordingly, the annual volatility of this approach, versus a long-only position, falls from 21% to 10%.

	sharpe	kurtosis	annual_vol
Gamma Band Return	0.74	8.49	0.10
SPX Return	0.41	12.81	0.21

* Gamma Bands improve backtested Sharpe by: 78.7%



Authors

Viking Analytics is a quantitative research firm that creates tools to navigate complex markets. If you would like to learn more, please visit our [website](#), or download a complimentary report.

Erik Lytikainen, the founder of Viking Analytics, has over twenty-five years of experience as a financial analyst, entrepreneur, business developer, and commodity trader. Erik holds an MBA from the University of Maryland and a B.S. in Mechanical Engineering from Virginia Tech.

Rob McBride has 15+ years of experience in the systematic investment space and is a former Managing Director at a multi-billion dollar hedge fund. Furthermore, he has deep experience with market data, software, and model building in financial markets. Rob has a M.S. in Computer Science from the South Dakota School of Mines and Technology.
