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Does VIX or volume improve GARCH volatility forecasts?

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ABSTRACT

This article considers whether the inclusion of two additional variables can improve volatility ... alternative ways of ... enous variable... d in whether these va... the baseline ... ume do provide ... n cons... sults may be statisti... Moreover, in a hors... nswering the ques... del, then the answer i... ould be incorpor...

KEYWORDS: GARCH volatility forecasting VIX volume

JEL CLASSIFICATION: C22 G15

Notes

[1] Based on S&P 500 data.

[2] Because its (VIX) level indicates how much market participants are willing to pay in terms of implied volatility to hedge stock portfolios with S&P 100 index put options or to belong by buying S&P 100 index call options. In addition, extreme values of VIX are seen as trading signals, for example, with very high levels of VIX indicating that markets are pessimistic whereas a very low VIX often leads to an increase in stock prices.

[3] Whaley (2009) explains that VIX should be seen the same way as a bond's yield to maturity.

[4] Which is a better known index and because futures contracts on the S&P 500 are actively traded. Furthermore, S&P 500 option contracts are European-style, making them easier to value. Hence, the VIX is implied by the current prices of the S&P 500 index options and represents expected future market volatility over the next 30 calendar days (Whaley 2009).

[5] Volume … absolute returns …

[6] Latane …

[7] The ma… …atistical analy…

[8] The co… … analysis. It was four… …nce multicoll…

[9] This is …

10 There is one exception for the UK.

11 We choose to use a simple AR(1) model in order to keep the model parsimonious. However, several authors have considered including asymmetric terms (Giot, 2005) or allowing for long memory effects (Konstantinidi, Skiadopoulos, and Tzagkaraki 2008; Dunis, Kellard, and Snaith 2013). While in the context of option pricing, Kanniainen, Lin, and Yang (2014) advocate the use of squared VIX.