[Volatility is defined as ...]

Traditionally, the long memory property, which exhibited through extremely slow decay and non-integrable autocorrelation functions, has been coupled with volatility time series. This was evident in many literatures and modelled by various frameworks, comprising [literature review].

Recently, through assessing empirical implied volatility surface, Gatheral et al. (2014) argued on the roughness of volatility dynamics. [Gatheral et al's arguments] The authors claimed that the volatility dynamics were indeed anti-persistent and enjoys a monofractal scaling property. Therefore, contrasting the FSV model suggested by Comte and Renault, Gatheral et al proposed the RFSV model, employing the fractional Ornstein-Uhlenbeck process driven by the fBM with $H < 1/2$.