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Range Volatility Models and Their Applications in Finance

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Chapter

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Abstract

There has been a rapid growth of range volatility due to the demand of empirical finance. This paper contains a review of the important development of range volatility, including various range estimators and range-based volatility models. In addition, other alternative models developed recently, such as range-based multivariate volatility models and realized ranges, are also considered here. Finally, this paper provides some relevant financial applications for range volatility.

Keywords

CARR

DCC

GARCH

High/low range

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1. See Garman and Klass ([1980](#)), Beckers ([1983](#)), Ball and Torous ([1984](#)), Wiggins ([1991](#)), Rogers and Satchell ([1991](#)), Kunitomo ([1992](#)), Yang and Zhang ([2000](#)), Alizadeh et al. ([2002](#)), Brandt and Diebold ([2006](#)), Brandt and Jones ([2006](#)), Chou ([2005](#), [2006](#)), Cheung ([2007](#)), Martens and van Dijk ([2007](#)), Chou and Wang ([2007](#)), Chou et al. ([2007](#)), and Chou and Liu ([2008a,b](#)).

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