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ARCH modeling in finance. A review of the theory and empirical evidence. (English)

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J. Econom. 52, No. 1-2, 5-59 (1992).

Summary: Although volatility clustering has a long history as a salient empirical regularity characterizing high-frequency speculative prices, it was not until recently that applied researchers in finance have recognized the importance of explicitly modeling time-varying second-order moments. Instrumental in most of these empirical studies has been the Autoregressive Conditional Heteroskedasticity (ARCH) model introduced by *R. F. Engle* [Econometrica 50, 987–1007 (1982; Zbl 0491.62099)]. This paper contains an overview of some of the developments in the formulation of ARCH models and a survey of the numerous empirical applications using financial data. Several suggestions for future research, including the implementation and tests of competing asset pricing theories, market microstructure models, information transmission mechanisms, dynamic hedging strategies, and the pricing of derivative assets, are also discussed.

MSC:

91G70 Statistical methods; risk measures

62P05 Applications of statistics to actuarial sciences and financial mathematics

91-02 Research exposition (monographs, survey articles) pertaining to game theory, economics, and finance

Cited in **3** Reviews
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