

1999

VaR Without Correlations for Portfolios of Derivative Securities

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Title:	VaR Without Correlations for Portfolios of Derivative Securities
Year:	1999
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Abstract:	We propose filtering historical simulation by GARCH processes to model the future distribution of assets and swap values. Options' price changes are computed by full reevaluation on the changing prices of underlying assets. Our methodology takes implicitly into account assets' correlations without restricting their values over time or computing them explicitly. VaR values for portfolios of derivative securities are obtained without linearising them. Historical simulation assigns equal probability to past returns, neglecting current market conditions. Our methodology is a refinement of historical simulation.