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An Empirical Analysis of the Effects of Corporate Derivatives Use on the Underlying Stock Price Exposure: South African Evidence

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Abstract : Derivative products have become essential instruments in portfolio diversification, price discovery, and, most importantly, risk hedging. Derivatives are complex instruments; their valuation, volatility implications, and real impact on the underlying assets' behaviour are not well understood. Little is documented empirically, with conflicting conclusions on how these instruments affect firm risk exposures. Given the growing interest in using derivatives in risk management and portfolio engineering, this study examines the practical impact of derivative usage on the underlying stock price exposure and systematic risk. The paper uses data from South African listed firms. The study employs GARCH models to understand the effect of derivative uses on conditional stock volatility. The GMM models are used to estimate the effect of derivatives use on stocks' systematic risk as measured by Beta and on the total risk of stocks as measured by the standard deviation of returns. The results provide evidence on whether derivatives use is instrumental in reducing stock returns' systematic and total risk. The results are subjected to numerous controls for robustness, including financial leverage, firm size, growth opportunities, and macroeconomic effects.

Keywords : derivatives use, hedging, volatility, stock price exposure
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