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# DELTA-HEDGING OF WARRANTS: EVIDENCE FROM FRANKFURT STOCK EXCHANGE

## Abstract:

Delta-hedging is a powerful strategy how to hedge a portfolio consisting of derivatives and shares. This paper focuses on portfolio consisting of warrants and shares. Warrants are chosen to be American call type with shares as underlying assets. Shares belong to the world-known companies such as Lufthansa, Microsoft and others. The aim is to find out if delta-hedged portfolio has lower risk than the non-hedged portfolio and if so, how big is the difference. The delta is derived from the Black-Scholes option pricing model. Based on the data from Frankfurt Stock Exchange we build 50 different portfolios. Results are that the average percentage of avoided risk is 70 %. In some cases delta-hedging also causes profit instead of a loss and in very less cases it causes losses instead of the profits, which would be gained without hedging. Delta-hedging makes the derivatives feasible even for risk-averse investors.

## Keywords:

Delta-hedging, warrants, portfolio

**JEL Classification:** G10, G11, G15