

## **The impact of index futures basis on effectiveness of hedging strategies**

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### **Abstract**

Futures basis, defined as the spread between spot and futures prices at a given moment, is considered as one of the main indicators of the derivatives market. The future basis risk is believed to be one of the crucial factors of hedging performance. The aim of the dissertation is to conduct a thorough analysis of index futures basis' impact on the effectiveness of hedging strategies.

The scope of the research encompassed WIG20 futures, traded on the Warsaw Stock Exchange, as well as the WIG20 index itself. Data from the period of 1998-2020 was used to create time series indices, defined as the spread between the theoretical and market value of futures based on WIG20 index. The researcher evaluated futures basis' volatility, as well as conducted statistical analyses of time series indexes, including their stationarity, homogeneity and to what extent they follow a normal distribution. Statistical analyses were conducted with the use of Excel and Gretl software.

Researcher concludes that, in line with the outcome of the research, futures basis risk diminishes over time until maturity date. It was proven that the futures basis risk is of particular importance to investors closing their positions prior to maturity date. Moreover, since Poland's country rating by the rating agency FTSE Russell was upgraded from emerging to developed, futures basis risk seems to be consistent with that of other developed countries.

The outcome of this study does confirm that in the researched period, futures basis risk was higher than the volatility of the underlying financial derivatives. As a result, the researcher confirmed the main hypothesis that the futures basis risk and its effect of hedging effectiveness is different between bullish and bearish markets.

keywords: futures, futures basis, index futures, WIG20, hedging;

