

## **Abstract**

The thesis applies the wavelet analysis to four stock market indices (USA, UK, Germany and Japan) and four commodities (Gold, Crude oil, Heating oil and Natural gas) and it aims to reveal how they comoved in the period of the Global financial crisis, which began in the USA as the Subprime mortgage crisis. Also the potential presence of contagion caused by the bankruptcy of Lehman Brothers bank is investigated. In addition the Granger causality test is applied to give a different perspective and to extend the analysis.

Empirical results revealed that stock markets comoved during the whole period with each other, but much less with commodities. Also, the wavelet correlation of stock markets and commodities differ significantly when talking about the short-term and the long-term horizon. This information can be utilized in the portfolio analysis. The wavelet analysis revealed contagion coming from the USA to the German stock market, Crude oil and Heating oil market after the bankruptcy of Lehman Brothers. The Granger causality test indicates that there is a very strong causal relationship between stock markets and commodities and it differs at different scales.