



# **Nonlinear Casual Nexus between Stock Prices and Real Activity: Evidence from the Developed Countries**

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**Abstract:** We examine the nexus of stock price changes and real economic activity for seven developed countries by using the vector error correction model, the bounds testing methodology, and linear and non-linear Granger causality methods. The empirical results substantiate that a long-run level equilibrium relationship exists among real activity and stock prices only for four of ten countries. The results from the linear Granger causality test indicate significant short-run and long-run causal relations between the stock price changes and real activity. In the results of the non-linear Granger causality, there are unidirectional and bidirectional non-linear causal relations between stock price changes and real output growth among these developed countries. Failure to allow for this non-linear property would lead to a misspecification of the relationship between real output growth and stock returns.

JEL Classification: G1, O47, C32

**Keywords:** real activity, stock price, causality, non-linear, cointegration

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## **1. Introduction**

The relationship between stock price changes (or stock returns) and real economic activity is an important and interesting issue in the financial literature and has long been of interest to the public sector and academic circles alike. The interactions between the two sectors were first underlined by the *q*-theory of investment proposed by Brainard and Tobin (1968). They showed that capital