

# **TIME VARYING AND ASYMMETRIC EFFECT BETWEEN OIL PRICES AND NOMINAL EXCHANGE RATE VOLATILITY: A MULTIVARIATE FIEGARCH-DCC APPROACH**

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## **Abstract**

This study examines the interdependence of four exchange rate expressed in dollar namely (AUD/USD, CAD/USD, EUR/USD and MXN/USD) and crude oil (WTI). The aim of this paper is to examine how the dynamics of correlations between the major exchange rate and oil price evolved from January 01, 2004 to May 31, 2015. To this end, we adopt a dynamic conditional correlation (DCC) model into a multivariate Fractionally Integrated Exponential GARCH (FIEGARCH) framework, which accounts for long memory, leverage terms and time varying correlations. The empirical findings indicate the evidence of time-varying co-movement, a high persistence of the conditional correlation and the dynamic correlations revolve around a constant level and the dynamic process appears to be mean reverting.

**Keywords:** DCC-FIEGARCH, Asymmetries, Long memory, nominal exchange rate and Crude oil.

**JEL classification:** C13, C22, C32, C52