FINANZAS

VOLATILITY AND RETURN SPILLOVERS ACROSS COMMODITY AND EQUITY MARKETS

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ABSTRACT: This paper presents an empirical analysis of the relationship between commodity market shocks and stock markets. Using a total volatility connectedness measure, we study the relationship between oil, gold, copper and agricultural commodity shocks and emerging and developed stock markets. We perform a connectedness analysis in the time and frequency domain to quantify market linkages using volatility spillovers over the period 2004 to 2021. Furthermore, we analyse the spillovers of returns in these markets and over the same period. Our results suggest that both in terms of volatility and in terms of returns, slightly more than 35% of the total variance of forecast errors is explained by shocks across markets over the period January 2004 to June 2021. We show that, both for volatility and returns, the contribution of shocks in equity markets to the other markets is substantially more important than that from commodities. However, our analysis reveals that the total connectedness among market returns are higher in the short-term than in the long-term, while in the case of volatility the long term frequencies concentrate the market connectedness. Furthermore, we use dynamic analysis to evaluate both the temporal evolution of total connectedness and all partial directional connectedness between markets. Our results show that both volatility

and return connections change significantly over time and that a set of events have a significant impact on them.

KEYWORDS: spillover effect; volatility connectedness; variance decomposition, volatility.