

Chapter 8

Which Is Important in Analyzing and Forecasting the Volatility Crossways Livestock Markets: Economic, Financial, Political, or Health Crises?

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ABSTRACT

This paper examines an essential methodology to evaluate the influence of the Subprime mortgage crisis (2007-2010), Euro debt crisis (2009-2019), COVID-19 pandemic (2020-present day) and Russia-Ukraine conflict (2022-present day) surprises conditional returns and volatilities of S&P GSCI Livestock markets. To assess analytically the unexpected component of surprises, we use GARCH (1,1) model during the period of study from June 01, 2005, to June 30, 2024. Our results suggest significant and considerable effect of Subprime mortgage crisis, Euro debt crisis, COVID-19 pandemic and Russia-Ukraine conflict surprises on returns and volatilities of S&P GSCI Livestock markets. Additionally, these outcomes demonstrate the financialization phenomena of S&P GSCI Livestock markets. We find that the volatilities of S&P GSCI Livestock markets are affected by COVID-19 pandemic surprises.

JEL Classifications: L61, D53, H12

1. INTRODUCTION

Livestock feeds are composed of cereals, mineral mixtures, oilcakes, and vitamins that act as a rich source of protein, energy, minerals, and vitamins. In addition, the addition of additives in livestock feed also provides essential nutrients such as vitamins, minerals, enzymes, acidifiers, amino acids, antibiotics,

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and antioxidants, which helps in increasing the production capacity of livestock. The rapid growth in the cattle population is expected to have a positive impact on the global market demand.

The livestock feed market has witnessed significant growth owing to factors such as increasing industrialization of livestock production in emerging countries. Moreover, growing consumer concerns along with increasing demand for meat and meat products offer a huge market opportunity for the major players operating in the livestock feed market. However, fluctuations in raw material prices may hamper the overall growth of the livestock feed market.

The Global Livestock Feed Market Analysis to 2031 is a specialized and in-depth study of the food and beverage industry with a special focus on global market trend analysis. The report aims to provide an overview of the livestock feed market with detailed market segmentation by animal type, ingredient, and geography. The global livestock feed market is expected to witness high growth during the forecast period. The report provides key statistics on the market status of the major livestock feed market players and offers key trends and opportunities in the market. The global livestock feed market is segmented on the basis of animal type and ingredient. Based on the animal type, the product is segmented into dairy cattle, beef cattle, and other cattle types. Based on the application, the product is segmented into cereals, cakes and mixes, food waste, feed additives, and other ingredients.

The report provides a detailed overview of the industry including both qualitative and quantitative information. It provides an overview and forecast of the global livestock feed market based on various segments. It also provides market size and forecast estimates for the period 2021 to 2031 for five major regions, namely: North America, Europe, Asia Pacific (APAC), Middle East and Africa (MEA), and South America. The livestock feed market by each region is further sub-segmented by respective countries and segments. The report covers the analysis and forecast of 18 countries globally along with the current trend and opportunities prevailing in the region.

The vacillations observed in the industrial metals market are significantly affected by ephemeral price fluctuations, which may emerge from supply disruptions caused by extraordinary events such as the financial crisis (Dutta, 2018), geopolitical conflicts (Gong and Xu, 2022), variations in oil prices (Reboredo and Ugolini, 2016; Cortazar et al., 2021), as well as risks introduced by speculative behavior (Mutafoglu et al., 2012). In addition, the persistent dynamics of supply and demand are influenced by fundamental determinants, encompassing the marginal production costs on the supply side and the efficacy of demand-side mechanisms, in conjunction with the approaches utilized by long-term investment entities (Humphreys, 2010). Furthermore, it is pertinent to acknowledge that numerous complementary and substitutive relationships exist among various metals over different temporal horizons, unveiling volatility patterns that may either converge or diverge (Chai et al., 2021), thereby necessitating the implementation of a more systematic framework to thoroughly investigate the volatility dynamics inherent within industrial metal markets.

This study is intricately linked to the impacts of the Subprime mortgage crisis (2007-2010), the Euro debt crisis (2009-2019), the COVID-19 pandemic (2020-present), and the ongoing Russia-Ukraine conflict (2022-present) on the conditional returns and volatilities associated with the S&P GSCI Livestock markets, spanning the temporal frame from June 01, 2005, to June 30, 2024. Consequently, it is imperative to investigate the fundamental connections between the Subprime mortgage crisis, Euro debt crisis, COVID-19 pandemic and Russia-Ukraine conflict surprises and the volatility of financial stock market indices, with particular emphasis on the S&P GSCI Livestock markets.

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