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Comovement and the Financialization of Commodities

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Over the last decade, commodity futures have become a popular asset class for portfolio investors, as investors increasingly sought out commodities for portfolio diversification after the equity market crash in 2000. This process is sometimes referred to as the "financialization" of commodity markets. The increase in commodity investment (particularly in the form of investment in commodity indices) coincided with increasing comovement between the returns of different commodity classes and led to speculation about the potential negative effects of commodity financialization.

This paper seeks to add to the literature on commodity financialization and its potential economic implications through an analysis of the underlying drivers of the observed increase in commodity comovement. We build on recent academic works we borrow the concept of 'index inclusion' to describe the financialization process. This allows us to distinguish between two views of return comovement: that comovement in returns is driven by news related to the commodity fundamentals (the traditional explanation for comovement), and that excess comovement can be attributed to frictions or traders' sentiment (the alternative theory of comovement tested for here).

We test changes in comovement between the three main commodity indexes and commodities included and not included in the indexes. We focus on two time periods: 1998-2005 (pre-financialization) and 2005-2011 (post-financialization). We observe a significant increase in comovement between index non-energy commodities and index starting in 2005. Conversely, for off-index commodities, either no change or a significant decrease in comovement is observed. These results can be interpreted as evidence of increased financialization post-2005. However, there are alternative explanations for these findings that should be considered. These include non-trading effects (i.e. that the comovement results could have a spurious upward bias due to the greater liquidity and increased trading activity of indexed commodities) and characteristic effects (i.e. that all commodities included in the indices share a common characteristic and that characteristic increases with time). We explicitly test for both of these effects and find that their impact is likely to be minimal. As an additional check of the robustness of our findings, we re-run out tests for an earlier (pre-financialization) period and find no evidence of an increase in comovement between index or non-index commodities and the indices, which provides further support for the financialization interpretation. Finally, to further corroborate the regression findings, we extend our analysis to account for high-frequency returns dynamics by means of the so called realized beta and reach similar results.

Our findings cannot be explained by the fundamentals-based view which considers the commodity price bubble and crash as solely explained as driven by fundamentals. We therefore provide new evidence supporting a friction or sentiment based explanations, which we interpret as evidence of the impact of commodity financialization on return comovement.

The policy implication of our findings are many. First of all, Governments needs to understand that commodity prices are not solely determined by supply and demand forces – driven by fundamentals – but market frictions and investors sentiments are presents. This induce commodity prices to move in the same direction. Secondly, index investment (i.e. the availability of commodity related financial products)

can be partially considered as responsible for this loss in the diversification property that characterized commodities. Our paper does not claim that index investment and/or speculation alone caused the so-called 2008 food-crisis. We do however show that having commodities become a proper asset class (same as bonds and stocks), extreme common moves of prices of different commodities need to be considered as a realistic scenario. Third, Governments needs to be aware that the 'herd' behavior often observed in the stock market is now also observable in the commodity market. This has much more tragic implications as commodities are a form of sustenance: artificially induced high prices may put human lives in danger. Last, avoiding diversification by relying only on a single booming commodity as form of sustenance (e.g. oil for Angola) cannot be a sustainable strategy. Commodity prices have been shown to be mean reverting, hence drop in prices (now more likely to be extreme) are to be accounted for.