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Speculators, commodities and cross-market linkages☆

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A B S T R A C T

We use a unique, non-public dataset of trader positions in 17 U.S. commodity futures markets to provide novel evidence on those markets' financialization in the past decade. We then show that the correlation between the rates of return on investible commodity and equity indices rises amid greater participation by speculators generally, hedge funds especially, and hedge funds that hold positions in both equity and commodity futures markets in particular. We find no such relationship for commodity swap dealers, including index traders (CITs). The predictive power of hedge fund positions is weaker in periods of generalized financial market stress. Our results support the notion that *who* trades helps

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Commodity index traders
Dynamic conditional correlations (DCCs)

predict the joint distribution of commodity and equity returns. We find qualitatively similar but statistically weaker results using a proxy for hedge fund activity based on publicly available data.

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1. Introduction

In the past decade, financial institutions such as hedge funds and commodity index funds have assumed an ever greater role in commodity futures markets. We use a unique, non-public dataset from the U.S. Commodity Futures Trading Commission (CFTC) to provide novel evidence of this "financialization" and to document its association with an important aspect of the joint distribution of commodity and equity returns.

Since Friedman (1953), a large body of work has investigated whether the composition of trading activity (i.e., *who* trades) matters for asset pricing. On the one hand, many traders face constraints on their choices of trading strategies. Hence, the arrival of traders facing fewer restrictions should in theory help alleviate price discrepancies (Rahi and Zigrand, 2009) and improve risk transfers across markets (Başak and Croitoru, 2006). Insofar as hedge funds are less constrained than other investors (Teo, 2009) and as commodity markets have historically been partly segmented from other financial markets (Bessembinder, 1992), this theoretical argument suggests that increased hedge fund activity in commodity markets could strengthen cross-market linkages – especially if this increase reflects the arrival of traders not previously active in those markets.

On the other hand, the same financial traders who may help link different asset markets in normal times often face, in periods of financial market stress, borrowing constraints and sundry other pressures to liquidate risky positions. If so, then their exit from "satellite" markets (such as emerging markets or commodity markets) during a period of stress in a "central" market (such as the U.S. equity market) could in theory bring about cross-market contagion – see, e.g., Kyle and Xiong (2001), Kodres and Pritsker (2002), Broner et al. (2006), Pavlova and Rigobon (2008), and Danielsson et al. (2011, 2013). Then again, in the aftermath of the initial shock, reduced activity by value arbitrageurs or convergence traders could in turn lead to a decoupling of markets that they had helped link in the first place.

In this paper, we present empirical evidence that hedge fund positions in commodity futures markets help predict the strength of commodity–equity cross-market linkages. Controlling for market fundamentals, we document that commodity–equity return co-movements are positively related to the extent of commodity market participation by financial speculators as a whole and hedge funds especially – notably by hedge funds that hold positions in *both* equity and commodity futures markets. We find no such relationship for a measure of commodity index trading activity. The predictive power of hedge fund activity varies over time. Strikingly, it is weaker during periods of financial market turmoil. Our findings contribute to the debate on the implications of the "financialization" of commodity markets.

A major innovation of our paper is its dataset. In general, testing whether the activities of specific types of traders help predict cross-market linkages is difficult because doing so requires detailed information about the trading activities of all market participants as well as knowledge of each participant's main motive for trading. We overcome this empirical pitfall by constructing a daily dataset of individual trader positions in 17 U.S. commodity and equity futures markets between July 2000 and March 2010. The underlying raw data, which are non-public, originate from the CFTC's large trader reporting system (LTRS). The LTRS contains information on the end-of-day positions of every large trader in each of these 17 markets and, crucially, information on each trader's main line of business and purpose for trading. The LTRS information covers 70–90% of the open interest in the main U.S. commodity futures markets (Fishe and Smith, 2012).

We make three contributions to the debate on the financialization of commodities. First, we provide a decade's worth of novel data on the growing importance of different types of financial traders in a large number of U.S. commodity-futures markets. Second, we provide the first evidence about the