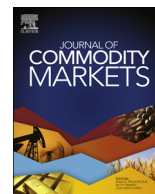


Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

Journal of Commodity Markets

journal homepage: www.elsevier.com/locate/jcomm

Review

Long-short commodity investing: A review of the literature [☆]Joëlle Miffre ¹

EDHEC Business School and Member of the EDHEC-Risk Institute, 392 Promenade des Anglais, Nice, France

ARTICLE INFO

Article history:

Received 9 December 2015

Received in revised form

26 January 2016

Accepted 27 January 2016

Available online 12 February 2016

JEL classifications:

G13,

G14

Keywords:

Commodities

Long-short strategies

Performance

Backwardation

Contango

ABSTRACT

This article reviews recent academic studies that analyze the performance of long-short strategies in commodity futures markets. Special attention is devoted to the strategies based on roll-yields, inventory levels or hedging pressure that directly arise from the theory of storage and the hedging pressure hypothesis. Alternative strategies based on past performance, risk, value, skewness, liquidity or inflation betas are also studied, alongside with recent attempts to enhance performance by modifying or combining the original signals. Overall, the literature highlights the superiority of being long-short in commodity futures markets relative to being long-only.

© 2016 Elsevier B.V. All rights reserved.

Contents

1. Introduction	4
2. Long-short strategies originating in the theory of storage	4
2.1. The theory of storage	4
2.2. Trading strategies based on roll-yields or inventories	4
3. Long-short strategies emanating from the hedging pressure hypothesis	6
3.1. The normal backwardation theory	6
3.2. The hedging pressure hypothesis	6
4. Long-short trend-following strategies	7
4.1. Cross-sectional momentum strategies	7
4.2. Alternative trend-following strategies	7
4.3. Possible rationales for the observed profits	9
5. Alternative profitable long-short strategies	9
5.1. Risk-sorted portfolios	9
5.2. Other sorting signals	10
6. Improving on the basic signals	11
6.1. Curve strategies	11

[☆] I would like to thank an anonymous referee, Marcel Prokopczuk, Betty Simkins and Sjur Westgaard for their comments.

E-mail address: Joelle.Miffre@edhec.edu

¹ Tel.: +33 4 9318 3255.

6.2. Multi-sort approaches	11
6.3. Modifications of the original signals	12
7. Conclusions	12
References	12

1. Introduction

This article reviews recent empirical evidence on the performance of long-short strategies in commodity futures markets. First, the paper presents mainstream strategies based on signals such as roll-yields, inventory levels, hedging pressure or past performance and places the performance of these strategies in the context of the theories that underpin commodity futures pricing; namely, the theory of storage of Kaldor [49], Working [71] and Brennan [16] and the hedging pressure hypothesis of Cootner [22] and Hirshleifer [43]. Second, the article reviews other long-short strategies that attempt to generate good performance by modifying or combining the original signals or by tactically allocating wealth based on other criteria such as risk, value, liquidity, skewness, or inflation betas. The bottom line here is to argue that most of these long-short strategies performed better than long-only positions in the past decades.

It is hoped that this review will be timely to academics who are interested in pricing commodity futures and to long-short market participants such as commodity trading advisors and long-short index providers keen to design practical investment solutions in commodity futures markets.

The article is organized as follows. Section 2 reviews the long-short strategies that originate from the theory of storage. Section 3 covers the long-short strategies that emanate from the hedging pressure hypothesis. Section 4 focuses on commodity-based trend-following portfolios; these are less theoretically sound but their performance has nonetheless been shown to relate to the fundamentals of commodity futures pricing as highlighted by the theories of storage and hedging pressure. Section 5 pays special attention to alternative long-short signals based on risk, value, skewness or open interest. Section 6 documents that one can improve upon these basic frameworks by modifying or combining the original signals. Finally, Section 7 concludes.

2. Long-short strategies originating in the theory of storage

I begin this review by presenting the theory of storage and the strategies based on roll-yields and inventory levels that are direct spin-offs of this theory.

2.1. The theory of storage

The theory of storage, as put forward by Kaldor [49], Working [71] and Brennan [16], relates the basis, or the difference between the spot and futures prices of a commodity, to the cost of storage (transportation, warehousing and insurance costs), the interests foregone in purchasing the physical commodity and the convenience yield earned from owning the spot asset.

According to the theory of storage, a negative basis (also called roll-yield) or an upward-sloping term structure of commodity futures prices comes hand-in-hand with high inventories. Markets are then said to be in *contango*. In this scenario, the commodity is in abundant supply, inventory holders can buy it cheap in the spot market and sell it forward at a profit that compensates them for the costs incurred while storing and financing the asset. Assuming a constant spot price, the futures price of a contangoed contract is expected to decrease in value as maturity approaches, suggesting that a short position in a contangoed market is probably optimal. Alternatively, the theory of storage argues that the basis or roll-yield should be positive when inventories are low or in the event of a stock-out. The term structure of futures prices then slopes downward and markets are said to be in *backwardation*. Under this scenario, the commodity is expensive since it is scarce and the benefits of owning the physical asset (called convenience yield) exceed storage and financing costs. Again assuming a constant spot price, the futures price of a backwardated asset is deemed to appreciate with maturity, suggesting, this time around, that a long position is likely to be profitable.

In line with the theory of storage, Telser [70] shows that the level of inventories is key to determining whether a market is backwardated or contangoed; backwardation occurs when inventories are low (namely, before harvest) and thus when convenience yield is high. Fama and French [30] provide evidence in support of the role of interest rates and convenience yields as drivers of the basis. Backing for inventories as a factor that influences the basis is also provided in Fama and French [31], Gorton, Hayashi and Rouwenhorst [41] or Symeonidis, Prokopczuk, Brooks and Lazar [69].

2.2. Trading strategies based on roll-yields or inventories

It follows from the theory of storage that roll-yields and inventory levels shall be used as signals to capture the fundamentals of backwardation and contango and thus to model the risk premium present in commodity futures markets. Support in favor of this hypothesis is provided in Feldman and Till [33] who show that the stronger the propensity of an agricultural commodity futures market to be in backwardation, the higher its performance. Gorton et al. [41] document likewise that higher roll-yields come hand-in-hand with higher average excess returns. This suggests that roll-yields could be used as signal for asset allocation. Indeed, Erb

Download English Version:

<https://daneshyari.com/en/article/999043>

Download Persian Version:

<https://daneshyari.com/article/999043>

[Daneshyari.com](https://daneshyari.com)