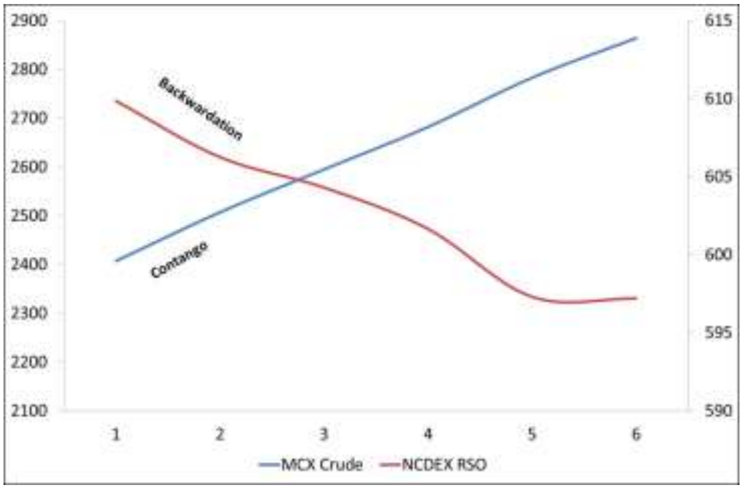
KCSL Knowledge Series- Cost of Carry- Concept and Implication

7-Jan-16

Indian commodity trading comprises of physical or spot trading and derivative trading which is largely in form of futures. The current price at which a particular commodity can be bought or sold at a specified time and place is termed as the spot price. In simple terms price of futures reflect the expected price of a commodity at a given point in time in future. While this explains the general market perception as to future price, there is more to it. The price of a futures contract is equal to the spot price plus the net cost incurred in carrying the commodity till the expiry date of the futures contract.

While trading commodity futures, few terms which are repeatedly heard include contango, backwardation, spread, and cost of carry, basis etc. The purpose of this note is to explain these concepts for the benefit of trading.

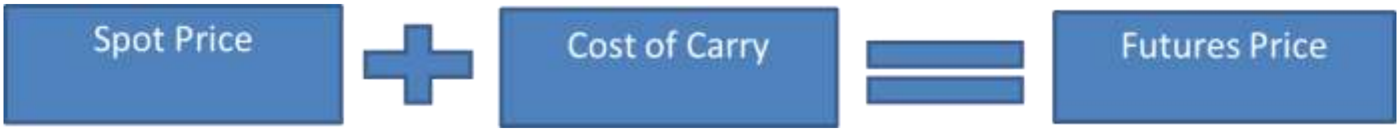


Contango and backwardation indicate market structure of a particular commodity. In contango structure, near month contract trades at a discount to farther month contracts. In backwardation, near month contract trades at a premium to farther month contracts. For example, at present crude futures are in steep contango. On other hand, Refined Soy Oil futures are in backwardation.

The market structure can shift from contango to backwardation and vice versa based on demand supply situation. If demand increases and supply is tight, near month contract rises more than farther month contract. However, if supply increases and demand remains weak, near month contract falls more than farther month contract.

Spread is a price difference between two futures contracts and also the price difference between spot price and a particular futures contract. For example, if MCX Crude January contract is trading at Rs.2407 per barrel and February contract is trading at Rs.2507 per barrel, spread between the two is said to be Rs.100 per barrel. Spread is sometimes also quoted in percentage terms. The Rs.100 spread between these two contracts comes to about 4.15%. This is the spread for one month and when it is annualized it come about 50%.

The spread between spot and futures and between future month contracts indicates the cost of carry. Cost of carry is all fixed costs incurred when you buy a commodity (in spot or near month contract), hold it for the limited period and then deliver it against the futures contract.



The difference between spot and future is called the basis. If the futures price of a commodity is trading higher than its spot price, then the basis for the commodity is negative. On other hand, if the spot price of the asset is higher than its futures price, the basis for the commodity is positive. The basis risk is the risk faced due to mismatch between movement in spot and futures after initiation of a trading position.

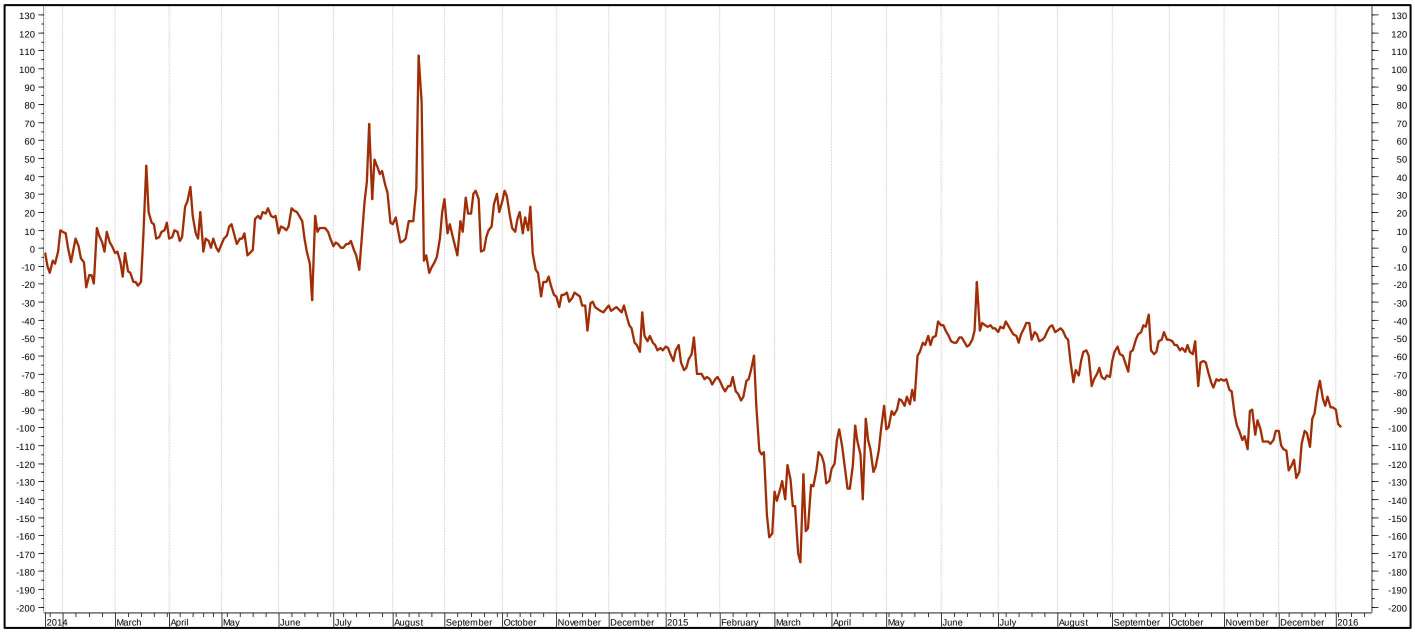
Trading Strategies

Calendar Spreads- Calendar spread is the difference between two futures contract. Based on market demand supply situation, spread between two contracts can vary and an individual can benefit from taking inverse position in two contracts. For example, if current difference between MCX Crude January and February contract is Rs.100 per barrel and we expect it to widen to Rs.150, one should short near month contract and buy farther month contract.

Arbitrage/ Cash and carry- If the price difference between spot and futures or between two futures contract is more than the cost of carry, on can consider buying in physical and selling futures contract. Similarly, one could buy one month futures and take delivery on exchange and sell the farther month contract and give delivery of the same.

Roll-over- Understanding the spread is important for roll over activity. When a person is considering a rollover, spreads have to be monitored to gauge the ideal time to do a roll-over. Similarly, spread also indicates the impact roll over will have on cost as well as profitability.

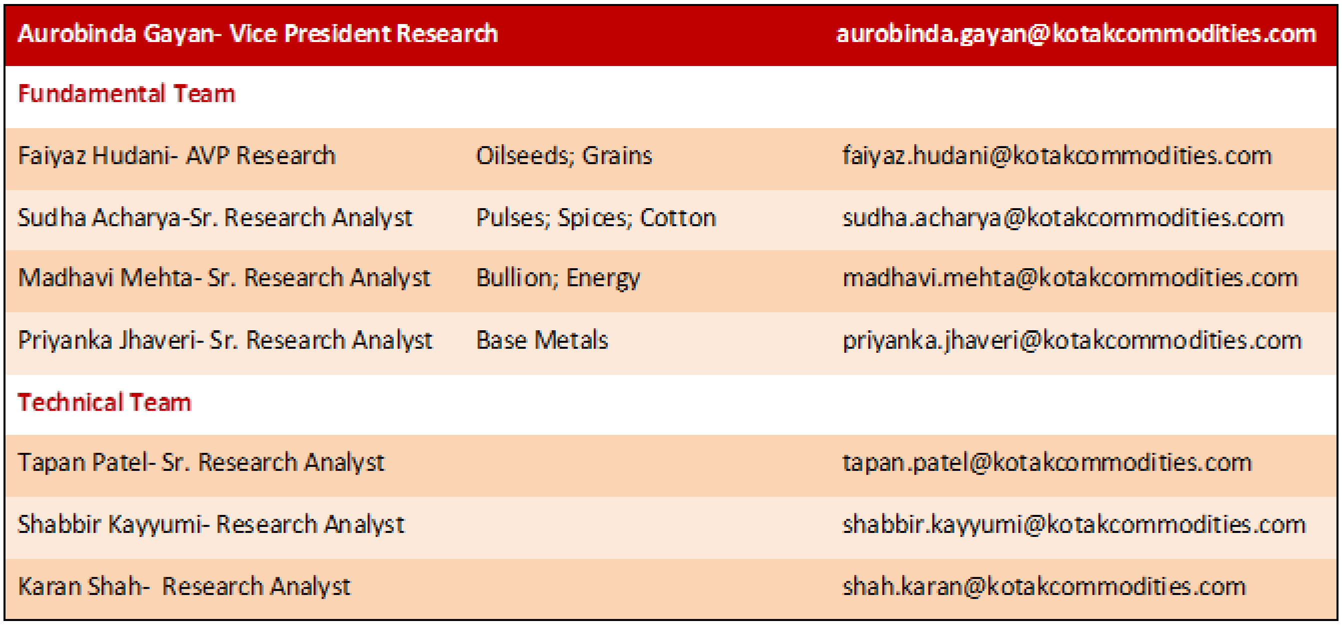
Example- MCX Crude Oil Spread Chart



The chart above shows how the movement of spread between first and second month crude oil contract. There have been sharp variations in the spread in last few months. The spread between first two contracts was almost flat in early 2014 but widened to Rs.175 per barrel in March 2015 and is currently near Rs.100 per barrel

The Rs.100 spread between two month contracts indicates that the cost of carry for one month is Rs.100 or 4.15%. On annualized terms, the cost of carry is almost 50%.

If one is holding a long position in crude and is considering a roll over the impact cost is 4.15%. This means that after every roll over the cost of long position increases by 4.15%. If one is holding a position with a view of one year, crude oil price has to rise by more than 50% to cover the cost of roll over itself. Hence while considering a roll over one has to keep two things in mind, first is direction of the trade and second is impact to the cost due to roll over.



Aurobinda Gayan- Vice President Research		aurobinda.gayan@kotakcommodities.com
Fundamental Team		
Faiyaz Hudani- AVP Research	Oilseeds; Grains	faiyaz.hudani@kotakcommodities.com
Sudha Acharya-Sr. Research Analyst	Pulses; Spices; Cotton	sudha.acharya@kotakcommodities.com
Madhavi Mehta- Sr. Research Analyst	Bullion; Energy	madhavi.mehta@kotakcommodities.com
Priyanka Jhaveri- Sr. Research Analyst	Base Metals	priyanka.jhaveri@kotakcommodities.com
Technical Team		
Tapan Patel- Sr. Research Analyst		tapan.patel@kotakcommodities.com
Shabbir Kayyumi- Research Analyst		shabbir.kayyumi@kotakcommodities.com
Karan Shah- Research Analyst		shah.karan@kotakcommodities.com

Disclaimer

This document is not for public distribution and has been furnished to you solely for your information and must not be reproduced or redistributed to any other person. Persons into whose possession this document may come are required to observe these restrictions.

This material is for the personal information of the authorized recipient and we are not soliciting any action based upon it. This report is not to be construed as an offer to seller or solicitation of an offer to buy any commodity or commodity derivative to any person in any jurisdiction where such an offer or solicitation would be illegal. It is for the general information of clients of Kotak Commodity Services Limited. It doesn't constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients.

We have reviewed the report, and in so far as it includes current or historical information, it is believed to be reliable though its accuracy or completeness cannot be guaranteed. Neither Kotak Commodity Services Limited, nor any person connected with it, accepts any liability arising from the use of this document. The recipients of this material should rely on their own investigations and take their own professional advice.

Price and value of the commodity referred to in this material may go up or down. Past performance is not a guide for future performance. Certain transactions including those involving commodity derivatives involve substantial risk and are not suitable for all investors. Reports based on technical analysis centers on studying charts of a commodity's price movement and trading volume as opposed to focusing on a commodity's fundamentals and as such may not match with a report on a commodity's fundamentals.

We do not have any information other than information available to general public. The report is based on information from sources like respective industry associations, FICCI, CII, companies, media and other public sources. Opinions expressed are our current opinions as of the date appearing on this material only. While we endeavor to update on a reasonable basis the information discussed in this material, there may be regulatory, compliance, or other reasons that prevent us from doing so. Prospective investors and others are cautioned that any forward-looking statements are not predictions and may be subject to change without notice. Our proprietary trading may make trading decisions that are inconsistent with the recommendations expressed herein.

We and our affiliates, officers, directors, and employees worldwide may: (a) from time to time, have long or short positions in, and buy or sell the commodities mentioned herein or (b) be engaged in any other transaction involving such commodities and earn brokerage or other compensation or act as a market maker in the commodity/ (ies) discussed herein or have other potential conflict of interest with respect to any recommendation and related information and opinions.

The analyst for this report certifies that all of the views expressed in this report accurately reflect his or her personal views about the subject commodity and no part of his or her compensation was, is or will be, directly or indirectly related to specific recommendations or views expressed in this report.

No part of this material may be duplicated in any form and/or redistributed without Kotak Commodity Services Limited's prior written consent.

Registered Office: Kotak Commodity Services Ltd., Nylon house, 1stFloor, Dr. Annie Besant Road, Opp. Sasmira, Worli, Mumbai-30 CINU65910MH1987PLC042230. Fax: +91 22 24924696. Customer care: 180010266776. www.kotakcommodities.com