

Spot and Derivative Contract Prices: Articulation of Relationships of Cardamom through ARDL Method

Sachin Kumar, Yash Pal Taneja, Nishi Bala

Abstract: India is known as land of spices and boast of a long history in spices trading. Cardamom derivative contract is listed for trading on Multi commodity Exchange in India. This paper endeavors to find out relationship between spot and derivative contract of cardamom. The relationship is also tested between derivative price of cardamom and spot price. Two period derivative contracts, near month contract and next contract of cardamom are used for the study. Long run relationship is examined through ARDL Bounds test. ECM is applied to find out short term relationship and speed of adjustment towards long run. Long run relationship was found between spot and derivative as well as between derivative and spot. Long run relationship was established in both period contracts. Short run relationship was also established and speed of adjustment is higher in near month contract.

Index Terms: Derivative contract, Spot contract, ARDL, ECM, Cointegration

I. INTRODUCTION

India is known as land of spices and boast of a long history in spices trading. India has diverse soil and climate which provides the opportunity to cultivate a variety of spice crops. Spices are low volume and high value crops. Spices plays a unique role in economy of India, as this is labour intensive industry so provides great opportunities of employment in rural India. Most of these spices are produced in southern of parts of India and exported out of India. The major spices produced in India are Cardamom, Chilli, Pepper, Turmeric, cumin, Ginger, Coriander, Fenugreek, Garlic etc. Cardamom is one of the valuable spices which is exported out of India. In year 2016-17, 3850 Tons of cardamom valuing 421.5 crores was exported from India. In year 2017-18 there is substantial increase in export of cardamom as 5680 Tons of cardamom was exported from India valuing Rs.609.08 crores as per report of Ministry of Commerce and industry. To ensure transparency and better price for cardamom to the growers cardamom is listed in derivative market of Multi commodity Exchange in India (MCX). Derivatives commodity markets are primarily used as a tool by farmers and participants to understand the trend of the market on price front on the basis of which an informed decision on whether to hold the crop or to sell the crop. Efficient commodity market, the derivatives price is considered to be an unbiased predictor of the spot price at expiry of contract and the current derivatives price

should be match to the spot price on maturity of derivative (Kellard et al., 1999; Haigh, 2000). Market efficiency implies cointegration between spot market and derivative market as both the markets are dependent on same factors. So spot and derivative prices should not drift from each other (Beck S 1994). So it is important to find out relationship between spot and derivative market.

II. REVIEW OF LITERATURE

Wiese and Lake (1978) studied the price discovery between spot prices and derivative prices. The significance of their study depends upon the convergence between spot market and derivative market. Kawaller et al (1987) revealed that movement in index derivative leads to movement in spot market and relationship exist between spot and derivative. Stoll and Whaley (1990) found that S&P500 derivatives price lead in price discovery of spot price. Schwarz and Szakmary (1994) studied the inter relationship between the spot and derivatives market. He used data from NYMEX in the petroleum sector and concluded that petroleum derivatives and spot markets are co integrated and the derivatives market overtakes the spot market. Beck (1994) examined the long run and short run market efficiency, with the help of cointegration and ECM, in five US commodity derivatives markets for 8 and 24 weeks time span. Garbade and Silber (1983) and later on Engle and Granger (1987), examined price discovery process through co integration technique. Silvapulle and Moosa (1999) examined the relationship between the spot and crude oil derivative contract prices. Daily crude oil data was collected from NYMEX. Linear causality test results depict that derivative prices lead spot prices, but nonlinear causality testing shows a bi-directional casual relationship. Yang and Leatham (1999) examine price discovery process in derivative contract of wheat through used forecast error variance decomposition found that future play a leading role. Moosa (2002) applied Garbade and Silber (1983) model to find out role of derivative in price discovery along with risk transfer using data of crude oil. Daily price data of crude oil was collected and analyzed. The result indicate that derivative contracts are 60% efficient in Price discovery. Irwin et al. (2009) examined data from commodity market and indicated that in the long-run equilibrium between spot and derivative market. He further concluded that cash market is strong in price discovery where actual forces of demand and supply effect price movement.

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spot and 8 lags of derivative next contract of cardamom were found significant. F value 19.00073 is above bound value so long term relationship exist between price series of cardamom and next contract derivative prices of cardamom.

Short term relationship between spot and derivative next contract

TABLE 9

Variable	Cof. Coefficient	SE Std. Error	TS t-Statistic	PV Prob.
D(SPOT(-1))	0.094343	0.019508	4.836165	0.0000
D(SPOT(-2))	0.037995	0.019718	1.926927	0.0541
D(SPOT(-3))	0.013119	0.019829	0.661591	0.5083
D(SPOT(-4))	0.067193	0.019751	3.401931	0.0007
D(DERIVATIVE VENM)	0.304901	0.014540	20.96942	0.0000
D(DERIVATIVE VENM(-1))	0.114788	0.015892	7.223003	0.0000
D(DERIVATIVE VENM(-2))	-0.014387	0.016058	-0.895927	0.3704
D(DERIVATIVE VENM(-3))	-0.036390	0.016029	-2.270257	0.0233
D(DERIVATIVE VENM(-4))	0.021038	0.016059	1.310076	0.1903
D(DERIVATIVE VENM(-5))	-0.028090	0.014990	-1.873876	0.0611
D(DERIVATIVE VENM(-6))	0.023724	0.014674	1.616733	0.1061
D(DERIVATIVE VENM(-7))	-0.048149	0.014664	-3.283459	0.0010
CointEq(-1)*	-0.015271	0.002398	-6.368493	0.0000

R Squared : 0.225949 Adjusted R-squared: 0.222325 AIC Value: 8.656847

Error correction term -0.015271 is negative and significant so short run relationship between spot and next contract derivative prices of cardamom. The speed of adjustment towards long run is 1.52 %.

VI. CONCLUSION

The long term relationship or co-integration exists between near month derivative price and spot price series of cardamom. Long term relationship also exists between next month derivative price series of cardamom and spot price of cardamom. Co-integrations also exist between spot and near month derivative price series of cardamom. Long term relationship is also found between spot and next contract derivative series of cardamom. Short term relationship was found in near month derivative price series of cardamom and spot price series of cardamom and vice versa also. Short term relationship was found in next contract derivative price series of cardamom and spot price series of cardamom and vice versa also. The speed of adjustment towards long term is more in near month contract than next derivative contract. So the derivative contract of cardamom is efficient as long term and

short term dynamics exists between the spot and derivative. Near month contracts are more efficient than next contract of derivative as speed of adjustment is higher in near month contract.

REFERENCES

1. F. Lake, "The Miller's use of the commodity exchange" In A. Peck (ed). Views from the trade (Chicago: Board of Trade of the City of Chicago, 1978)
2. G. Bekaert, C.R. Harvey, and, C. Lundblad, "Liquidity and expected returns: lessons from emerging markets," Review of Financial Studies, vol. 20, pp. 1783- 1831, 2007
3. H.R. Stoll, and R.E. Whaley, "The Dynamics of Stock Index and Stock Index Futures Returns," Journal of Financial and Quantitative Analysis, vol. 25(4) pp. 441-468, 1990
4. I. Kawaller, P. Koch, and J. Peterson, "Volume and volatility surrounding quarterly redesignation of the lead S&P 500 futures contract" Journal of Future Markets, vol. 21(12), pp. 1119-1149, 2001
5. J. Yang, and J.D. Leatham, "Price Discovery In Wheat Futures Markets," Journal of Agricultural and Applied Economics, Southern Agricultural Economics Association, vol. 31(2), pp. 1-12, 1999
6. K. Garbade and W.L. Silber, "Price movements and price discovery in futures and cash markets," The Review of Economics and Statistics, vol. 65(2), pp. 289-97, 1983
7. P.C. Biswal, "Price Discovery in Futures and Spot Commodity Markets in India," Al-Barkaat Journal of Finance & Management, pp. 21-44, 2008
8. P. Silvapulle, and I.A. Moosa, "The relationship between spot and future prices: evidence from the crude oil market," J. Futur. Mark., vol. 19, pp. 175-193, 1999
9. R.F. Engle, and W. J. Granger, "Co-Integration and Error Correction: Representation, Estimation, and Testing," Econometrica, vol. 55(2), pp. 251-276, 1987
10. R. Salvadi Easwaran and P. Ramasundaram, "Whether Commodity Futures Market in Agriculture is Efficient in Price Discovery ? — An Econometric Analysis" Agricultural Economics Research Review, Vol. 21, pp. 337-344, 2008
11. S. Beck, "Co integration and market efficiency in commodities futures markets," Appl.Econ. , Vol. 26, pp. 249-257, 1994
12. S. Irwin, "A speculative bubble in commodity futures prices? Cross-sectional evidence" Agricultural Economics, vol. 41(1), pp. 25-32, 2010
13. T. Schwarz, and A. Szakmary, "Price discovery in petroleum markets: arbitrage, cointegration and the time interval of analysis," Journal of Futures Markets, vol. 14(2), pp. 147-167, 1994
14. V. Wiese, "Use of commodity exchanges by local grain marketing organizations" In A. Peck (ed). Views from the trade (Chicago: Board of Trade of the City of Chicago, 1978)

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How would we Revive the Lost National Glory? History and Lessons

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Abstract

Through the annals of history, we tend to find episodes of valour, dedication and sacrifice for the cause of nation, of men, who chose to strive against forbidding odds and led a life of difficulties, squalor and misery. They should have been leading a comfortable life but for their urge to keep the nation above everything. They were trained and brought up in such a manner that for them, their nation and people in it were of prime importance, no matter what happened. However, the fact remains that these unsung heroes died a quiet death and were left to wither under the burden of anonymity. When it comes to discussing the Indian history, the above mentioned facts could readily be cross checked. It is our plight that after India gained independence in 1947, the contemporary government undertook the task of giving impetus to only those periods of Indian history which were a black spot on the piety, innocence and Rajdharma of kings who held their promise and name above all things. As we read Indian history and compare it with world histories, this void between the ruler and the ruled, the fact and overdose of fiction come to our view. India is perhaps the only country where nationalistic fervor and sacrifice for the sake of the nation were trampled underfoot thereby giving way to glorification of afghan invaders, conferring titles on dynasties of Muslim invaders and naming institutions and roads after them in the post-independence era while at the same time, the Indian heroes of struggle with foreign forces were forgotten. Over a passage of time and with the rise of nationalism and a surge in patriotic fervor coupled with boost to social and electronic media, questions have begun to be asked and the wrong doings of the dynasties have been questioned repeatedly.

Key Words

Anonymity, Void, Impetus, Fervor, Conferring

Our nation is an old one, probably as old as the earth itself. We are the custodians of a rich heritage, having an aura and a charm of its own, while, at the same time, guiding the world about human values, affinity for fellow beings, importance of being earnestly dedicated, giving the status of God to a guest. For centuries, we have borne the guilt of being very lenient towards the invaders, who came to this great nation with mercenary motives, got involved too much in their selfish and vicious tendencies. (1) Nation and the concept of being united were never an appealing thought to the Indians. When the self-sustaining nature of the villages was given a jolt by the business men from these nations, the artisans and skilled people from these villages were made to shift to cities for working for their survival as the production from their industries was to rule over the handmade things. The industry was given much freebies and the raw material was straight sent to these factories owing to the whims of the princely states satisfied by the costly gifts by these businessmen from the West.

Far sightedness was genuinely lacking in the people of those times. They were not able to fathom the troubles they were to confront by providing facilities to the merchants from the industrial nations. Tackling a state, one at a time was the policy followed by the merchants who stayed to rule. They knew very well that they would not be able to surmount the