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Chana Prices: Bears Ready to Take Over

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ABSTRACT *Chana or Gram is a largely consumed pulse in India with maximum consumption in the form of 'Dal' or splits and 'Besan' or Flour. Chana is rich in protein, with high fibre and low fat content. It also has medicinal uses. India is the largest producer and yet, the largest importer of Chana in world due to high consumption levels.*

The present study aims to study Chana price trends using technical analysis and considering the extraneous factors. The study focuses to estimate Chana prices over a 4 – 6 month horizon, to help those involved in cultivation and trading of Chana, with reasonable price estimates. Chana prices have been bullish since December 2014 and have peaked around 4850 levels. In the coming months, a sharp fall in two phases to around 3500 and 2900 levels is expected.

Introduction

Chana also known as Bengal Gram or Gram or Chickpea is a leguminous plant of Facaceae family. It is a type of pulse. Chana plant grows to height of about 20–50 cm and has small feathery leaves on either side of the stem. It has small white flowers with blue, violet or pink veins. The seeds of the plant are developed in pods with a seed-pod containing two to three peas. The seeds of the plant, which are white, green, red or black in colour, are very rich in protein. Chana is one of the oldest cultivated legumes having originated before 10000 BC. It has been cultivated since the Neolithic times in Turkey. By Bronze Age, they were popular in Italy and Greece, where they were eaten as dessert, stable or eaten raw. They were cooked down as broth or roasted as snack.

There are three main kinds of Chana:

- **Desi:** Desi Chana is also known as Bengal Gram or Kala Chana. These are split peas having small, dark seeds and a rough coat. They are cultivated mostly in Indian Subcontinent, along with Ethiopia, Mexico and Iran.
- **Bombay:** These are also dark in colour but are slightly larger in size than the Desi variety. They are also grown in the Indian Subcontinent.
- **Kabuli:** Kabuli Chana is also known as Safed Chana. They are whitish-cream in colour, with larger seeds and a smoother coat. They are generally used in soups / salads or as flour. They are produced in Kabul, Afghanistan. They are also grown in Southern Europe, Northern Africa, South America and Indian Subcontinent.

Chana Cultivation and Production

Chana needs a subtropical or tropical climate with more than 400 mm of annual rain. They can be grown in a temperate climate but yields are much lower. Chana is a deep tap root plant enabling it to withstand drought conditions. The plant helps improve soil fertility as it is capable of nitrogen fixation from atmosphere to plant-usable form. It is best grown on sandy, loam soils having an appropriate drainage system.

Chana is a Rabi crop, sown in months of October to December and harvested in the months of February to April. Temperature range of about 20 °C is optimal for growth of Chana. Cool and wet climate increase the possibility of foliar diseases. The maturity period of Desi Chana is 95-105 days and of Kabuli Chana is 100-110 days. The crop is harvested when the plant starts drying and shedding.

Chana is grown in more than 50 countries. India is the largest Chana producing country with 70% of global production. The other major Chana producing countries include Pakistan, Turkey, Iran, Myanmar, Australia, Ethiopia, Canada, Mexicao and Iraq. The global annual production of Chana is around 10 – 12 million tonnes. Chana is the most important of pulse crops grown in India, ranking fourth among the grain crops in acreage and production. In India, Madhya Pradesh is the largest Chana producing state with about 47% of production followed by Rajasthan (14%), Uttar Pradesh (12%), Maharashtra (9%), Andhra Pradesh (6%) and others (12%).

Chana Markets and Consumption

India is the largest consumer of Chana in the World. In India, Chana consumption is about 8 – 8.5 million tonnes per annum. Despite being the largest producer, India is also the largest importer of Chana constituting almost 30% of world imports. India imports Chana mainly from Australia, Canada, Iran, Mexico, Myanmar and Turkey. The major trading centres for Chana in India are Akola, Bikaner, Chennai, Delhi, Hyderabad, Indore, Jaipur, Kanpur, Latur and Mumbai. Indore is the major market for Chana.

Uses of Chana

Chana is an excellent health food. It is a rich protein diet with about 25% protein and is thus an excellent supplement to cereal based diet, especially for vegetarians. It is also rich in carbohydrates, fibre, essential minerals and β-carotene. Chana is low in fat and is mostly polyunsaturated. Thus, it helps reduce blood cholesterol. Desi Chana has markedly higher fibre content than Kabuli Chana but low glycemic index making it more suitable for people with diabetic problem. It is believed to have medicinal uses and is helpful in increasing sperm and milk, provoking menstruation and urine and helping to treat kidney stones.

Chana is eaten as Sprout Salads, cooked in stews, ground as flour and used in a variety of ways. More than 90% of Chana is consumed in the form of Dal, i.e. Chana Spilts and 'Besan', i.e. Chana Flour. Chana leaves are also eaten

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in as vegetable in some parts of the country. Because of their high protein content, Chana is also used as animal feed.

Market Influencing Factors

- Rainfall level and level of moisture in the soil
- Crop progress and output
- Supply from other countries such as Myanmar and Australia
- Prices of the other competitive pulses produced

Research Methodology

The past studies have shown that fundamental and statistical tests have failed to predict the prices of commodities across the globe. With Indian commodity derivatives markets being comparatively naive and imperfect, it is impossible to estimate the prices of commodities with certain degree of reliability using these tools. Technical Analysis has been the only reliable method used for forecasting of commodity prices.

The objectives of the present research are:

- To suitably help predict the Chana prices over a 4 – 6 month horizon using Technical Analysis
- To draw qualitative inferences considering extraneous factors.

The study will use secondary data collected from the website of NCDEX and websites related to Ministry of Agriculture, Government of India. The study will use future contracts data since 1st January 2011. The data for open, high, low & close price and the volumes for the future contracts will form the basis of the study. The data will be tabulated and moving averages will be calculated. Technical Analysis will then be used to analyse the data for forecasting the Chana prices. Technical analysis is based on price action. It is assumed in technical analysis that the price of any tradable instrument or commodity discounts everything. All fundamental and other factors influencing the supply and demand condition of a commodity or a security always get discounted in its price. Price also moves in trends and once a trend sets in motion it is likely to continue unless there is a change of trend. Thus, the future price trend can be found by studying past price action of the security or the commodity or the future contract. Therefore, the single most important aspect in trading is to identify the trend of the price of any tradable security or commodity and then to take position in the direction of the trend at a price point where the probability of getting a favourable price movement is high. This entry point and subsequent exit point can be found out by using different technical analysis methods and indicators.

For the study, the daily price, moving average and candle stick charts will be prepared to identify the cyclical trend and the forecasts will be made on the basis of these price trends.

Data Analysis and Interpretation

Fig 1 shows the daily price and moving average price chart for Chana.

Fig 1: Daily and Moving Average Chart for Chana Prices

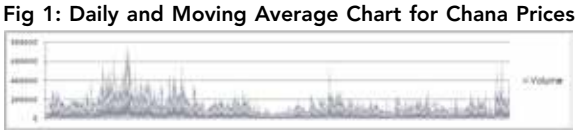

Fig 2 shows the candlestick chart for Chana.

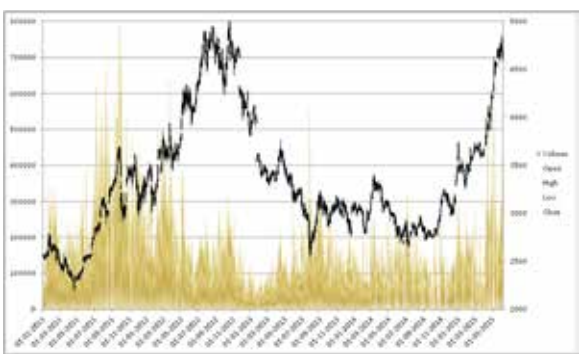

Fig 2: Candlestick Chart for Chana Prices

As is clearly evident from the figures, the uptrend in Chana prices began in May 2011. The daily price line which was initially below the 6 DMA and 25 DMA line crossed over these lines in beginning of May 2011. This was the first bullish signal for the Chana prices, marking an uptrend in the prices. By mid-May, it crossed the 75 DMA and 300 DMA line confirming the uptrend. It continued to form higher tops and bottoms till September 2011. The daily prices stayed above the 75 and 300 DMA till September. In the period, Chana rose from about Rs. 2300 levels to Rs. 3900 levels.

A consolidation phase in Chana prices began in October 2011 which lasted till January 2012. In the period, Chana prices took a sideways correction with the daily prices hovered around 75 DMA, but stayed above the 300 DMA, showing strength and steam for further rally upwards. In the consolidation phase, Chana prices did form lower tops but did not form lower bottoms, rather the prices found support at about Rs. 3000 levels.

After the consolidation phase, a sharp uptrend in Chana prices was seen from February to August 2012. It broke upwards through 75 DMA in February 2012, confirming the bullish undercurrent. Chana prices in the period formed continuous higher tops and bottoms almost reaching to Rs. 5000 levels. The sharp price rally lost its steam by end-August 2012 and a correction was expected.

The daily price chart moving below the green support line in September 2012, clearly marked the beginning of a bear phase in Chana prices. The sharp correction in Chana

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prices was confirmed as the daily price moved below the 75 DMA in October - end and 300 DMA by November 2012. Chana prices fell in bear grip and a very sharp correction in prices was observed, in two phases. The prices fell from Rs. 5000 to Rs. 3400 between September 2012 and January 2013 and from Rs. 3200 to Rs. 2600 in May to July 2013 period. The sharp correction rally hit a bottom in July 2013. Chana prices after minor recovery were range bound between Rs. 2800 -3300 levels, around 75 DMA but below 300 DMA in a lateral movement since August 2013.

The prices tried to break out from the lateral movement in March 2014, as the daily price moved above 75 DMA and 300 DMA. However, the upward momentum failed to continue due to low volumes and Chana prices again fell down and were range-bound around 75 DMA till October 2014. Chana prices once again broke out in November 2014 moving above 75 and 300 DMA, and continued to form higher tops and bottoms, moving upwards in sharp rally in April and May 2015 to reach 4850 levels. The prices are currently hovering around 4600 levels.

Conclusion

The Chana prices seem to now move southwards as the price momentum has lost steam and the volumes have dropped. The important support, as indicated by green line and 75 DMA, lies at 4000 – 4100 levels and further at around 3300 levels, the 300 DMA. The breaking of these levels will further confirm the downtrend, and Chana is likely to move in a bear grip to almost about 2800 – 2900 levels by year end.

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