Commodity Derivatives and Risk Management
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Lecture 17
Agri Commodity Price Risk Management (Part 2)

Welcome to the next session on Commodity derivatives and risk management. If you recall in the last session we were discussing about the traditional price risk management avenues for Indian farmer and we discussed how crop insurance contract farming and minimum support price mechanism of government of India has been used by Indian farmers. And we were discussing how a CACP that is Commission of Cost and Prices Commission of Agricultural Cost and Prices, CACP announces what is going to be the minimum support price for different kind of a agri commodity couple of years before so that the farmers the farmers get to know if they go ahead and produce this agri commodity, what is the minimum they are going to get.

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And CACP considers various kinds or factors before it decides what is going to be the minimum support price. And who are the bodies which help government of India in procuring this agri produces, agri produces from farmers, so these are Food Corporation of India and you have Cotton Corporation of India, you have Jute Corporation of India and you have Nafed and Tobacco board. So these are the 5 government bodies which function as the procurement agency for government of India and they pay minimum support price to the farmers and buy the agricultural commodities from the farmers.

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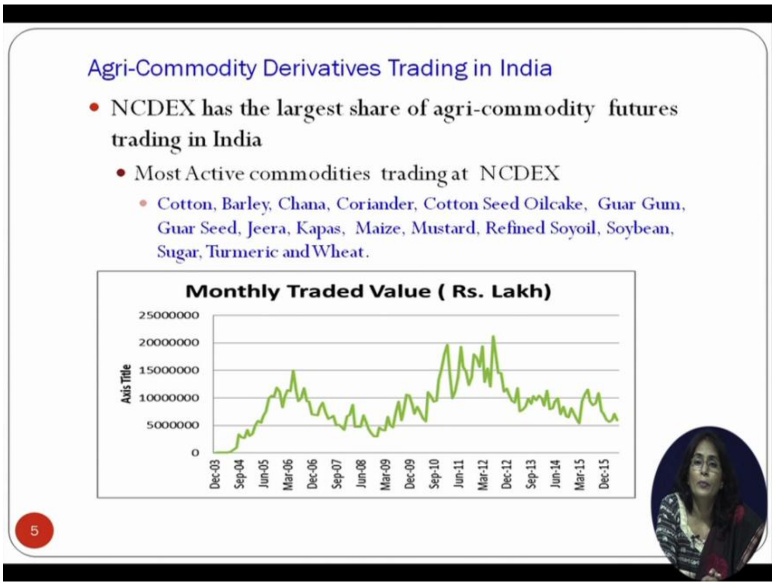

Now, let us go to this today’s discussion that besides these 3 pricing traditional price risk management mechanism, a need was felt for providing a market infrastructure by which farmers will be able to mitigate the price risk, that is the reason why you we discussed some initial sessions, the reasons behind the reintroduction of commodity futures exchange in India. And since the inception of these commodity exchanges in India in the year 2003, Indian commodity agri commodity derivatives trading has grown significantly.

In fact we have MCX and NXDEX. MCX is predominantly known or it has got a major market share in metal futures contract. However NCDEX has the largest share in agri commodity futures trading in India and which are the most active agri commodity futures contract trades trade at NCDEX, you have cotton, barley, chana, coriander, cotton seed oilcake, guar gum, guar seeds, soybean etc and this particular graph which you see, it it shows how the quantum of quantum of commodity derivatives trading has gone up year on year since the year 2003.

This data is pertaining up to 2000 December 2015, so if you can see it achieved a peak during 2011 and it has gone down a little bit however considering the quantum which has been mentioned in the Y axis, it is substantially higher. Now, let us take some examples, how a different commodity producer, agri commodity producers and commodity consumers have used this NCDEX platform or MCX platform from mitigating that price risk.

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We have discussed many a times that a party who is long on asset and fears that price is going to go down in future. That party will be able to mitigate the price risk by entering into short futures contract. So agri commodity consumers, who are short on underlying, will enter into long futures contract if they fear a price increase. Similarly every commodity producers who fear that price will go down in near future, they will be able to enter into short futures contract if they fear the price is going to decline in near future.

In fact in this context, I would like to share a very good initiative which has been taken by National Commodity Derivative Exchange, and this is this is a case study which is available at MCX website. This is the Ram Rahim Pragati producer company limited, so this is the producer company and many small farmers have joined hands to form a producer company because if you know, a small farmer may not be educated enough, a small farmer may not have the necessary skill set. May not have access to a trading platform and may not have the amount of minimum trading lot required to enter into a futures contract.

So by forming a producer company and by aggregating the produce, they are using this exchange platform to hedge commodity price risk so this Ram Rahim Pragati producer company limited has taken a membership at NCDEX and they are using, this particular company is using the NCDEX platform to mitigate price risk associated with various types of commodities specifically with respect to maize. So this when I visited the company's website to understand more about how this company is leveraging NCDEX platform to mitigate the price risk of the small farmers, the company website mentioned that the company is first emerging as one of the India's largest producer owned agri value Chain Company.

I want all of you to focus on the word “producer owned”, so this is a company whose ownership is with the producers and one of the India’s largest producer owned agri value chain company working on soybean, maize, pulses, wheat and millets by helping farmer at the non pesticide management protocol. And it is also the first producer owned to become a listed member with NCDEX, so this as per the information available in the company’s website as well as popular news reports from the web, it shows that, using NCDEX platform, these farmers have been benefiting and they are able to mitigate the price risk associated with their produce.

So I have given the link to this particular company here, if time permits or if you are more interested on how these small farmers are going for aggregation model to mitigate the price risk, do spend some time. Now, question comes to what about other value chain partners, how do they mitigate the price risk. You have commodity producer, agri commodity producer, they enter into short futures contract, agri consumers they enter into long futures contract but what about the value chain partner?

Let us say a wholesaler or a exporter. Let us take an a case of a exporter which is into export of various spices, so what the exporter does is that it buys spices from the open market and exports it to different parties or different countries. Let us say, if this particular export house has already holding the inventory and does not have any fixed sales commitment, that means it has already spent money buying the spices but it does not have a fixed order to whom it is going to sell, to whom it is going to export and at what price it is going to export this price spices.

It is not it is not yet it is not yet formed up by the company so in the mean time, if the the prices of spices goes down, the company incurs loss. Also the company, in the mean time, the company must have spent considerable amount of money in storage, insurance, packaging cost, so in that case how the company will be able to mitigate the risk, the risk associated with this the long position on in the underlying spices can be mitigated by entering into short futures contract. So in this case, the wholesaler or the exporter can enter in a long futures contract as and when it gets a export order, it will be able to deliver the underlying deliver the spices to the buyer and square of its short futures position.

Now let us take a next situation, let us see the exporting house or exporting company has a firm export order at a fixed price. It has agreed to deliver let us say 300 tons of some spices to some exporter based in Dubai. However, this Indian export house does not have the inventory in its hand and if it is goes to market on a given day, it may not get 300 metric ton of a spices at a reasonable price even if it gets a price at a reasonable 300 metric tons of spices at a reasonable price, it may not get the desired quality.

So how the exporting house will be able to mitigate the risk in this case? So instead of going for a bulk purchase on a given day, the export house can enter into a long futures contract and as and when it starts aggregating or buying the spices from the open market, it can go on squaring up its position by taking a short futures contract. So let me summarize what I just mentioned, a middleman or a like a value chain partner may be long on asset or may be short on asset.

When the export house is holding inventory without any fixed sales commitment, it is long on asset and it will be able to mitigate that risk by entering into a futures by entering into a short futures contract. Similarly when the same export house has a farm export order but it does not have the underlying inventory in its hand, it will be able to mitigate that risk by entering into long futures contract and as and when it buys the inventory from the spot market, buy the spices from the spot market, it can start squaring up its long futures position. In that case, in both the cases, it will be able to at least protect its margin by entering into the futures contract.

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So in fact there is a company called P.C. Kannan & Co which hedged its coriander prices at NCDEX, so you can visit the link provides how this P.C. Kannan & Co hedged its coriander price risk at NCDEX. It is a very beautifully prepared document and you can spend some time to get an understanding of how NGL Life company use these exchange platforms for mitigate mitigating price risk.

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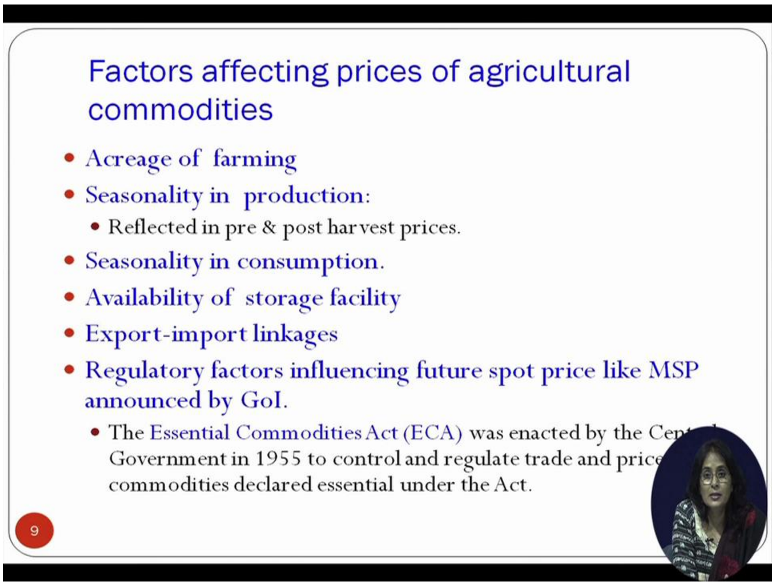

Now, let us let us go to one of the very important aspect of forming views about a future price. we are discussing or we are many a times, I am mentioning that a farmer is fearing the price is going to go down or a consumer is fearing price is going to go up but how that fear, what is the basis of the fear? There has to be some analysis, some basis, based on which the farmer will see that there is a chance of a there is a greater probability of price going down in future.

So it requires understanding of the whole supply demand, who are the major consumers, who are the producers, what factors, global local factors which may have a bearing on the price. So understanding that of for a particular agri commodity is of paramount importance for before we take a decision or a consumer or a producer of that commodity takes a decision regarding whether to hedge the risk or not to hedge the risk. Now, with respect to agri commodities, how we can form a view about whether price is going to go down or price is going to go up in near future so what are the factors which affect the agricultural prices of agricultural commodity.

Let us go to the screen which is in front of you so if you see, these are the points which is mentioned. One is the, one of the important factor is the acreage of farming so what has been the how many hectors has been used for plantation of that crop so that is a very important indicator of what is going to be the total quantum of likely quantum of the production if everything else remains constant, where the parameters do not change. So the this is one of the most important a fundamental factors which must be considered if we are going form an opinion regarding whether price is going to go up or go down.

Then with respect to price, we also have to consider whether there is seasonality in production of that particular commodity or not. In fact most of the agri commodities have some seasonality incorporated into the price because most of the agri commodities are either produced in kharif season or rabi season. Of course there are some commodities which are getting produced in both seasons because of advance in agricultural farming techniques and all but those commodities are not that common.

So that is going to be definitely seasonality in production and whenever there is seasonality in production, there is going to be, seasonality is going to affecting the price and we know mostly during the pre harvest period, prices of agricultural commodities tend to go up and post harvest period, prices of agricultural commodities tend to go down. Of course, the decline of post harvest period depends upon the availability of warehouses or storage, so if enough number of storage or enough warehousing capacities available in an economy then the farmers do not have to go through the distressed sale and commodity, agri commodity prices may not plunge substantially.

In fact, many a times, you must have read that a particular agri commodity prices are ruling so low that the farmers do not farmers are not interested to go and extract the farm produce or harvest the farm produce from the field and take it to the nearby market because the cost associated with extracting or harvesting the agri commodity packing, sorting and bringing it to the local mandi, it is far higher than the price prevailing in the price prevailing at the spot market.

In fact couple of years back, you may have read that tomato prices the farmers were throwing tomato in the roadside. farmers were throwing potato in the roadside or farmers were not even not harvesting onions from the from the field because if onions do not get harvested within some number of days, it starts rotting however the cost associated with harvesting onions as well as packing, sorting and grading and taking it to the nearby mandi was higher than the onion prices prevailing in the local market.

So if enough amount of cold storage of warehouse are available, this kind of situation may not happen so seasonality or decline in prices, post harvest prices may not be substantially lower if enough amount of cold storage is available. Now, let us go to the next factor so there is seasonality in consumption. Consumption pattern can also have a seasonality incorporated into it and if a particular commodity is demanded, highly demanded during a given period of time, that price tends to up during that point of time.

However one thing I would like to sensitize all of you here at this point of time is that there is nothing called seasonality in consumption of agri commodity anymore. Why? With the availability of the food processing industry, we are consuming all agri commodities, almost throughout the year. In fact, if you recall earlier in India we used to specifically in the north India, the dry fruits were eaten predominantly during the winter months but now it is, if you go the consumption of dry fruits is fairly smooth.

May be during pre Dipawali, little the prices may be going up little more because during Dipawali, lot of people start lot of people start giving each other dry fruits so that could be the reason of little extra consumption during that period of time however if you see throughout the year, the consumption pattern is quite stable for most commodities. And this is also corroborated with the fact that we are becoming we are consuming more, more and more consumption, per capital consumption of everything, we are as a human being we are doing.

Uh if according to the WHO, the total obese persons in the world with the increase in population also so it has gone, it has almost doubled. We have population increasing and with that also the obese people, the percentage of obese people has doubled since last 15-20 years and the 15% of adult population all over the world are considered to be obese. And also one thing on a lighter note, I would like to say share is that female are more obese than male population so anyway, I mean I do not want to discuss anymore about it.

So what I am basically driving it is that, though seasonality of consumption could be a factor for increase in prices for certain commodities, but that probably is not that bigger factor. So higher consumption lead price increase may not be a factor for agri commodity. We have already discussed availability of storage facility; another important aspect which influences a price of a agri commodity is the export import linkages. So if a country is open to export its agri commodities to other countries or it is open to import a agri commodities into the country then the commodity prices do not exhibit that kind of a or that significant volatility.

So whenever the local price increases, there will be export houses or export import houses who will be bringing the commodities into the country and whenever foreign country, the price increases versus the domestic prices, they will be probably they will be exporting those cheaper commodity to the other locations.

So if a country has export import linkage for agricultural commodities, that country, prices at that country may not be exhibiting may not be exhibiting higher seasonality. Also, another aspect which is the regulatory factor influencing future spot price. As we discussed, even if many a times, the supply demand situation should be such that that there should be great amount of a variability however many a times, government of a country ensures that there is not much of a volatility or price fluctuation in certain commodities.

Government ensures, government mechanism ensures that the price change or price volatility remains within certain level and this specifically let us take an example of government of India, you if you recall, we discussed about minimum support price in the previous session, so the minimum support price ensures that the farmers get some fixed amount of price so even if there is a bumper production for a particular commodity, price does not go down substantially because the minimum support price ensures that the farmers are given a some basic price.

So when a farmer is getting this suppose X amount of price, any other party has to pay a little more than X price to buy the goods for the farmer, so minimum price prevailing in a economy will be, or the floor price will be the minimum support price. In fact, government of India has Essential Commodities Act in which government of India, the central government regulates the price of certain essential commodities and if price goes up substantially higher, it undertakes different measures so that the price rise is curtailed.

So with this, we will come to an end of this session, so what basically we discussed in this session is, how commodity producers, consumers and value chain partners are able to use the exchange partner, exchange platforms to mitigate the price risk. We discussed also about how even small and marginal farmers, how they have formed producer companies and at a at a collectively they are able to go to exchange platform and mitigate their price risk which otherwise would not be possible have they been operating on a individual level.

We also discussed about all other factors which could have a bearing on the spot price prevailing for a particular commodity because the spot price influences what is going to be the futures price prevailing at futures price for that commodity. So with this we will be ending up this session. In the next session, we will be discussing more about how seasonality, how can we go ahead and identify seasonality and how seasonality influences the price of a particular agri commodity, Thank you all of you.