

# Emerging Challenges & Issues Of Pulses In Commodity Futures Market

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## INTRODUCTION

Futures trading of the pulses began in the year 2004 through national-level commodity exchanges. A vibrant and active futures market for various pulses was developed in a short span. Futures market enabled the various segments of pulses trade to utilize a platform for hedging and price risk management. The most active pulses' contracts were Urad, Tur & Chana. However, the physical market trading practices in commodities continued in the same fashion. The delivery mechanism in futures exchanges was based on pre - certification of stocks by professional agencies, while in physical markets, trades take place based on visual inspection. Similarly, futures exchanges follow strict quality norms, while physical markets do not have any fixed quality standards. Physical trade takes place based on mutual trust, precedence or visual inspection. Since structured growth of the futures market is largely dependent upon a structured physical market, the absence of a structured spot market has created a number of inefficiencies in futures contracts. In the absence of a sound linkage between physical and futures market, the futures contracts were sometimes subject to wide fluctuation. It was also observed that at the time of maturity of futures contracts, the spot and futures were not converging at the same level. The reason was that the process of giving delivery or taking delivery in the futures contract was complicated, discouraging the participants to use the futures contracts for taking or giving deliveries. On one side, the arbitrageurs actively participated in the futures contracts by buying pulses in spot and selling futures contract to earn the difference, but on the other hand, the end users were not comfortable in taking delivery from futures exchanges, either due to doubts relating to quality or due to the cumbersome process of demoting and remitting involved. As a result, futures contracts sometimes gave birth to price aberrations, affecting the basis between spot and futures, which in turn affected the price discovery process of futures contracts.

In addition to the above, FMC imposed near month open position limits, which adversely affected the hedgers' participants. If the futures prices are abnormally high in near month and if a hedger in possession of physical delivery wanted to offer large deliveries, the same was not allowed. Though hedge policies notified by FMC enabled the hedgers to take positions beyond the normal limits, still there were conditions applicable on quantum of delivery, which could be offered and also other conditions, such as not allowing churning of positions discouraged the hedgers to take such hedge limits. The combined effect of the scenario was that futures contracts were not able to build up a sound linkage with physical market of commodities, which helped the speculators to influence the prices, knowing fully well that actual hedgers were not able to deliver in large quantity.

In the meantime, pulses' prices went up due to demand and supply mismatch, which triggered a general hue and cry against futures markets in general. The facts relating to unorganized structure of physical pulses market were ignored. Even the impact of strong fundamentals on prices was overlooked and all opinions and actions to control price rise centered on banning futures market in pulses.

Eventually, in a desperate attempt to curb the price rise, the Government banned futures trading of pulses such as Tur & Urad in 2007. Such ban impacted the efficiency of pulses' importers and all sectors of the pulses ecosystem. If an importer contracts for import of 5000 MT of Urad and by the time his shipment arrives in India, if the prices have crashed in the physical market, he has no option other than incurring a huge loss. Similarly, the pulses' mills do not have any option to hedge their inventory or take cover against forward commitments made by them regarding supply of pulses. Today, every sector in the pulses complex is just dependent upon the vagaries of the market, and it has no way to seek price protection against fluctuating prices. Instead of providing any subsidy or viability gap, which directly dents the state exchequer, it is desirable to provide structured futures contracts to the pulses industry to enable all such

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participants to protect themselves against price fluctuation.

## OFFICIAL POLICIES ON FUTURES TRADING IN COMMODITIES

Recalling the changes in official policies relating to commodity futures in India during the post liberalization years, the first major move was the opening up of the market for 17 commodities, as recommended by the Kabra Committee in 1994, with suggestions for further opening for several items. Another 7 were added to the list in 1999. Futures market in commodities got a boost in 2003, with the opening of the market to 54 commodities, including the sensitive items (wheat, rice, sugar and potato) trading, which were banned earlier. With rising prices (the WPI at 206.2, index for wheat at 210.5 & Urad Dal at 403.8 with base at 2003–04), the functioning of futures markets came under scrutiny during 2006–07, and the government ordered a delisting of futures contracts in February 2007 for commodities like Urad, Tur, Wheat & Rice, with a suspicion that futures trading in these commodities had been contributing to the rise in their domestic spot prices.

## OBJECTIVES OF FUTURES TRADING

- ✿ Efficient price discovery;
- ✿ Need for large number of buyers and sellers;
- ✿ Entry and exit efficiency;
- ✿ Fair price discovery;
- ✿ Transparent trading platform;
- ✿ Management of price volatility;
- ✿ Reflection of underlying fundamentals;
- ✿ Output signals provided by futures prices;
- ✿ Demand signals provided by futures prices;
- ✿ Facilitation of deliveries.

## HOW THE MARKET WORKS: ARBITRAGEURS, FIREFLIES, OPPORTUNISTS

- ✿ Drive the efficiency by thrusting the convergence of futures to spot;
- ✿ Likely to invest in the areas of infrastructure; procurement and turn hedgers;

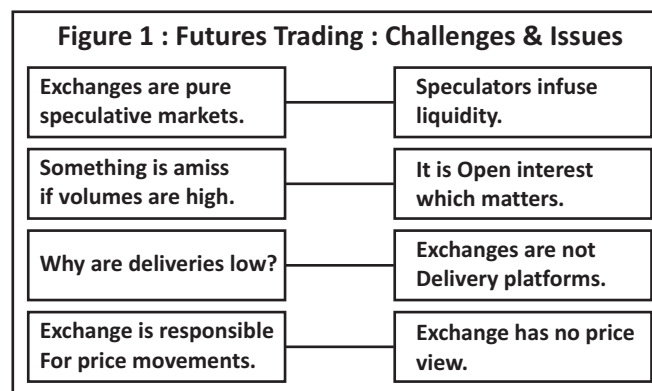


Figure 2 : Expectations & Value of Hedgers		
	Expectations	Value addition Available/Required
<div>Price risk</div> <div>odd lot</div> <div>Price view</div> <div>Delivery</div> <div>Mkt Stability</div>	Price risk transfer- should be able to plan operations forward.	Bring the post market price linkage in contract trading.
	Delivery possible in case unable to sell in spot.	Bring the post market price linkage in contract trading.
	Northwards/Southwards linked to physical position.	Free market mechanism required-like water will always find its own level.
	At their place of convenience.	EFP required; strengthens spot linkage, increases hedger participation.
	Essential as they carry physical positions with futures cover.	Essential for growth of markets and indirect investment flow.

Figure 3 : Expectations & Value of Players		
<div>Speculators</div> <div>Arbitrageurs</div> <div>Institutions</div>	Expectations	Value addition Available/Required
	Risk taking.	Efficient price discovery and provide stability at arrivals time.
	Fine trading.	Price efficiency and spot-futures linkage.
	Marketing discipline and value added services.	Aggregation and liquidity.

- ✿ Scale will increase;
- ✿ Critical Price support at time of crop surplus arrivals;
- ✿ Flow of private investment into Indian agriculture.

## BANKS, FIS, FIIS

- ✿ Price risk of the collateral can be hedged;
- ✿ Number of bigger players increases – fight of might leads to efficient markets;
- ✿ Likely to invest in the areas of infrastructure; procurement and turn hedgers;
- ✿ Scale will increase;
- ✿ Critical Price support at time of crop surplus arrivals;
- ✿ Flow of private investment into Indian agriculture.

Table 1 : How Price Volatility Had Came Down In Pulses			
Average Annual volatility (%)			
	Pre Futures (Apr2002-Apr 2004)	Post Futures (since Launch)	Date of Launch
Chana	22.4	19.1	Apr 2004
Tur	N.A.	21.5	Apr 2005
Urad	29.2	24.2	Jul 2004

## RESULT OF GOVERNMENT ACTION ON FUTURES MARKET

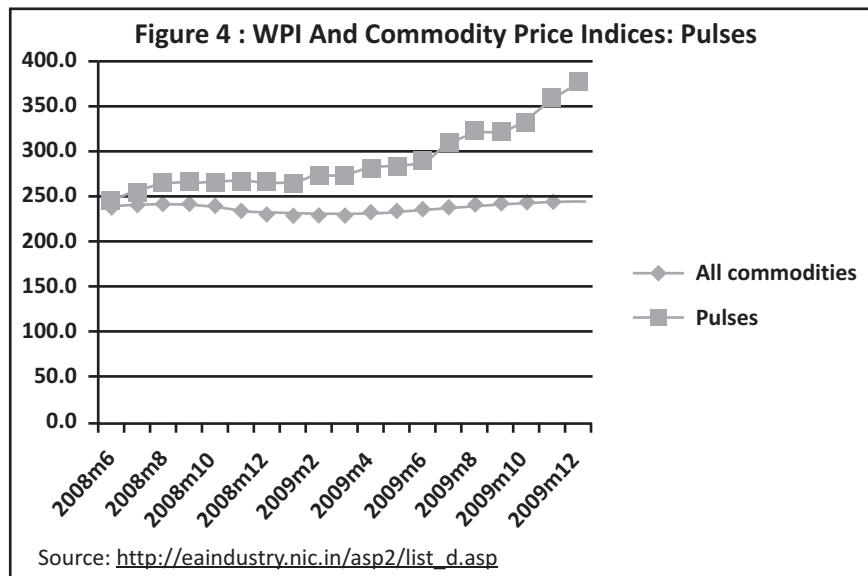
- ✿ Longer value chain;
- ✿ Price differential between wholesale and retail increases;
- ✿ More suppliers in the chain;
- ✿ Processed foods to cost more;
- ✿ Stocks in the country still insufficient;
- ✿ Private sector not to participate in times of surplus;
- ✿ In surplus times, debts of farmers may increase;
- ✿ Could shift away from pulses subsequently.

## BENEFITS OF ONLINE TRADING

- ✿ **Importer** : Can hedge overseas purchase in domestic exchange and protect price fluctuation of sailing period.
- ✿ **Farmer** : Can reduce price risk from sowing to harvesting.
- ✿ **Producers** : Can plan their input requirement by evaluating present price & future price.
- ✿ **Stockiest** : Require huge inventory to run smoothly. Adverse price fluctuation can have an immense negative impact on Stockists.

## IMPACT OF STOCK LIMITS

- ✿ Longer value chain;
- ✿ Price differential between wholesale and retail increases;
- ✿ More suppliers in the chain;



- ⊗ Processed foods to cost more;
- ⊗ Stocks in the country still insufficient;
- ⊗ Private sector not to participate in times of surplus;
- ⊗ In surplus times, debts of farmers may increase;
- ⊗ Could shift away from pulses subsequently.

## RESULTS AND DISCUSSIONS

In order to encourage delivery based trading and to attract the physical market participants, restriction on open position limits in the near month contract should be removed. There should be no limit on the delivery quantity, which can be offered by the seller at maturity of a futures contract. There should be no restriction on churning of positions by a hedger. A hedger continuously keeps on buying futures contracts against forward sales in physical made by him. He keeps on selling futures contracts against physical stocks in his possession as well as new procurement of physical stocks made by him on a day. If such buying and selling of futures contracts turns out to be churning of positions in the eyes of FMC, then no hedger can actually operate in futures. Therefore, the hedge policy should be formulated by FMC in consultation with leading physical market players, so as to make it user friendly, but at the same time, it should not leave any room for manipulation. The trade and industry will provide its constructive inputs for ensuring orderly growth of the futures market. Pulses Importers Association of India can provide a platform for such fruitful interaction. More recently, an Estimates Committee of the Parliament presented at the end of November 2009 pointed out that futures trade in essential commodities for consumption “*may spawn excessive speculation and cause an artificial price increase.*” (Government of India, Report of the Expert Committee to study the impact of future trading on agricultural commodity prices, 2008.)

## CONCLUSION

Future trading in pulses has neither resulted in price discovery, nor less of volatility in food prices. No effects are visible on farmers in fetching higher prices as a rule in the market. Futures market in commodities in India seems to have provided new avenues of speculation to traders. In order to encourage delivery based trading and to attract physical market participants, restriction on open position limits in the near month contract should be removed. There should be no limit on the delivery quantity, which can be offered by the seller at maturity of a futures contract. There should be no restriction on churning of positions by a hedger. The researchers observed the step increases in spot prices for pulses from futures to spot prices for pulses on which future data was available. Some policies come in helpful to remove the threat of an increase in pulses prices. For India, further opening of the futures market in commodities, and especially of food, needs to be dispensed with and be treated with caution, in order not to let speculators have a wider

playground to play with!

## SUGGESTED DIRECTION FOR POLICIES

- ✿ For Imports by Government of India – timing and availability is important.
- ✿ **Price subsidization, if any, taken up before new financial year commences as :**
- ✿ It will cause the prices of pulses to be low at the time of crop arrival during Kharif Season, which can cause farmer backlash.
- ✿ Government agency importing pulses may not succeed in importing at efficient prices as compared to private sector imports.
- ✿ Far months for pulses may be offered at the time of arrivals to cover the peak consumption so that prices do not nose dive.
- ✿ The Government should recognize the economic relevance of pulses futures trading in term of providing instrument to hedge price risk, especially for those who are in the pulses import and trade.

### Medium Term Strategy

- ✿ Increase acreage under cultivation.
- ✿ Improve yield per acre, pressing need to improve productivity.
- ✿ Research initiatives for new genetic varieties of seeds.
- ✿ Contract farming to be considered within and outside the country.
- ✿ Corporate/contract farming on fallow land.
- ✿ Contract farming with Myanmar & Africa.

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## APPENDIX 1

### ✿ Granger Test Results on spot and future prices for Chana (I): Causality Tests

#### ✿ Null Hypothesis: SCHANA does not Granger Cause FCHANA

Obs : 512

Statistic : 34802

Prob : 0.0359

#### ✿ SCHANA does not Granger Cause FCHANA

**Obs : 512**

**Statistic : 16.8153**

**Prob : 8.E08**

In the above pulses commodities, null hypothesis of no granger causality from future prices to spot prices is rejected as indicated by low p values, but this is not true for the null hypothesis of granger causality from spot to future prices, so it can be inferred that in the above case, future price is causing changes in spot prices.

✿ **Period 1: Sample- January 2004 to May 2011**

✿ **Dependent Variable: URADS**

✿ **Method: Least Squares**

✿ **Sample: 2003M01- 2009M05**

✿ **Included observations: 77**

Table 1				
Dependent Variable : URADS				
Method : Least Squares				
Sample : 2003M01 2009M05				
Included observations : 77				
	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
TSE	0.000307	5.41E-05	5.673869	0.0000
C	221.7452	14.83490	14.94753	0.0000
R-squared	0.300326	Mean dependent var		295.9913
Adjusted R-Squared	0.290997	S.D. dependent var		72.83058
S.E. of regression	61.32503	Akaike info criterion		11.09588
Sum squared resid	282056.9	Schwarz criterion		11.15676
Log likelihood	-425.1915	Hannan-Quinn criter.		11.12023
F-statistic	32.19279	Durbin-Watson stat		0.156685
Prob (F-statistic)	0.000000			

Table 2				
Dependent Variable : URADS				
Method : Least Squares				
Sample : 2008M05 2009M05				
Included observations : 13				
	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
TSE	-3.26E-05	8.05E-05	-0.405303	0.6930
C	357.3276	27.59547	12.94878	0.0000
R-squared	0.014714	Mean dependent var		346.4592
Adjusted R-Squared	-0.074858	S.D. dependent var		22.65719
S.E. of regression	23.48992	Akaike info criterion		9.291658
Sum squared resid	6069.537	Schwarz criterion		9.378573
Log likelihood	-58.39578	Hannan-Quinn criter.		9.273793
F-statistic	0.164270	Durbin-Watson stat		0.185889
Prob (F-statistic)	0.693026			