

**VPM's**  
**DR VN BRIMS, Thane**  
**Programme: PGDM (2014-16)**  
**Fourth Trimester (Fin.) Examination September 2015**

<b>Subject</b>	<b>Commodity Markets</b>		
<b>Roll No.</b>		<b>Marks</b>	<b>60 Marks</b>
<b>Total No. of Questions</b>	<b>7</b>	<b>Duration</b>	<b>3 Hours</b>
<b>Total No. of printed pages</b>		<b>Date</b>	<b>29.09.2015</b>

**Note: Q1 is compulsory and solve any FOUR from the remaining SIX questions.**

**Q1) Refer to the case study and answer the following (20 Marks)**

**In-depth Case study on Regulation Related to Commodity Derivatives Markets in India?  
Evolution of Commodity Derivative Markets in India**

Commodity Derivative markets were set up in India in cotton in 1875 and in oil seeds in 1900 at Bombay. Forward trading in raw jute and jute goods started at Calcutta in 1912. Forward Markets in Wheat had been functioning at Hapur since 1913, and in bullion at Bombay, since 1920. In 1919, the government of Bombay passed Bombay Contract Control (War Provision) Act and set up the Cotton Contracts Board. With a view to restricting speculative activity in cotton market, the Government of Bombay issued an Ordinance in September 1939 prohibiting option business. Bombay Options in Cotton Prohibition Act, 1939, later replaced the Ordinance.

In 1943, the Defence of India Act was utilized on a large scale for the purpose of prohibiting forward trading in some commodities and regulating such trading in others on an all India basis. In the same year oil seeds forward contracts prohibition order was issued and forward contracts in oilseeds were banned. Similarly orders were issued banning forward trading in food-grains, spices, vegetable oils, sugar and cloth. These orders were retained with necessary modifications in the Essential Supplies Temporary Powers Act 1946, after the Defence of India Act had lapsed. With a view to evolving the unified systems of Bombay enacted the Bombay Forward Contract Control Act, 1947.

The experience has shown that the security market does not operate independently, i.e. without interaction with of money/forex market. The commodity derivatives market is relatively insignificant at present to be influenced by the money/forex markets. But this may not necessarily be the case in near future. In the USA, the Commodity Futures Trading Commission (CFTC) has jurisdiction to regulate all types of derivative contracts – forex, government securities, interest rates, equities etc. In U.K., even greater convergence of regulatory authority is achieved by vesting regulatory powers to a single agency, the Financial Services Authority, (FSA).

In India, there have been occasions to disentangle of issues of regulatory jurisdiction between RBI and SEBI. The proposals of allowing stock brokers to trade in commodity derivatives market and regional stock exchanges being allowed to trade commodity futures contract are being discussed at regulatory levels. Therefore, similar issues of regulatory jurisdiction and the desirability of regulatory convergence are likely to become relevant.

**Present Status of Commodity Derivative market and Policy Liberalization in Indian Commodities market.**

Forward trading was banned in 1960's except for pepper, turmeric, castor seed and linseed. Futures trading in castor seed and linseed was suspended in 1977. Apparently on the basis of the recommendations made by Khusro Committee, forward trading in potato and gur was

allowed in early 1980's and in castor seed in 1985. After the process of liberalization of the economy started in 1990, the government set up a committee under the Chairmanship of Prof. K. N. Kabra in 1993 to examine the role of futures trading in the context of liberalization and globalization. The Kabra Committee recommended allowing futures trading in 17 commodity groups. It also recommended strengthening of the FMC and amendments to the FCRA, 1952. The major amendments include allowing options in goods, increase in outer limit for delivery and payment from 11 days to 30 days for the contract to remain ready delivery contract and registration of brokers with the FMC. The government accepted most of these recommendations. Additional staff was provided to the FMC and the post of Chairman was upgraded to the level of Additional Secretary to the government of India. The recommendations to set up Regional office at Lucknow, Delhi and Kochi were kept in abeyance for the time being. As of end 2002, futures trading had been permitted in all recommended commodities except bullion and basmati rice.

### **Integration of spot and derivatives markets**

Integration of spot and futures market is another critical factor for growth of commodity futures in India. The spot market in commodities is controlled to a large extent by the State Governments. There are restrictions on holding of stocks, turnover, and movement of goods and there are variations in the duties levied by the different State Governments. This fragments the commodity spot markets and impedes the commodity futures markets from reaching the market players outside the boundaries of the states, or zones in which the exchanges are located. Harmony, if not the rigid uniformity in the policies of different states would be necessary for developing nationwide commodity markets. It is difficult to anticipate the time frame within which this can be achieved in view of the multi-party federal structure of Indian polity.

### **Warehouses and warehouse receipts**

Despite these largely uncontrollable factors causing fragmented spot markets, it would be necessary to address some of the other issues, which contribute to the fragmentation. The prices of commodities are influenced by their qualities, grades, seasons of production, the quality of storage and warehousing etc. Unlike securities, commodities come in different grades and qualities. Commodities are also bulky involving difficulties in transportation, which affect spatial integration. These issues can be addressed by introducing nationwide warehouse receipt system. Under this system, the warehouses, which meet the prescribed standards of storage, preservation, testing, grading and certification would be licensed by the Central Regulatory Authority and warehouse receipts issued by these warehouses could become negotiable.

The Central Regulatory Authority could evolve a system of inspection, monitoring and surveillance to ensure that the licensed warehouses comply with the prescribed standards and warehouse receipts issued by them truly reflect the quality, quantity and the ownership of the goods. Commodity exchanges could create market place for trading and settlement of warehouse receipts to facilitate hassle free trading in commodities. This would improve the collateral value of the goods and consequently the credit flow to the commodity sector. This would obviate the need for distress-sale by the farmers and even by some of the mills which do not have waiting capacity due to inadequate liquid assets necessary for meeting the immediate consumption or working capital needs.

### **Exchanges trading multiple commodities**

An issue is debated in respect of regional vs. local exchanges. It is contended that a multiplicity of exchanges trading contracts in the same product results in wastage of valuable resources.

While allowing the multiple exchanges to trade the same product and granting recognition to

new exchanges to trade products already traded by the existing exchanges, the government should announce its policy in unambiguous terms. It would allow free and fair competition and no one should expect the government to provide immunity or bail-out to any exchange against competitive pressures from successful exchanges. Exchanges themselves should conduct due diligence on the competitive environment and its impact on viability of the exchange. The exchanges themselves would be responsible for their commercial decisions to organize trading in the permitted commodities. The regulator should ensure that exchanges do full disclosure to the existing and potential participants about the risks of trading at these exchanges. Complaints of unfair and fraudulent practices against exchange management and administration ought to be dealt with firmly and expeditiously.

- a) Highlight problems faced by Indian commodity markets in India.
- b) What transformation has taken place right from evolution of commodity market to till date?

**Q2. Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks**

- a) State Reasons behind the biggest Nsel scam.
- b) What are the factors affecting prices of agricultural commodity in India
- c) An investor would like to buy a share after 4 months. The price quoted today is Rs.127. the investor can borrow money at nominal rate of 9.25% p.a.
  - i. What would be the forward price if there is no dividend expected in these 4 months?
  - ii. What would be the forward price if there is rs 2.75 per share dividend after 2 months

**Q3. Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks**

- a) What are Contango and Backwardation markets?
- b) Difference between forward and future contracts?
- c) On expiry of one month futures contract. Open interest for cardamom stands at Rs. 875kg and the DDR/FSP stands at rs 1105 per kg. Find out the actual amount to be delivered and the corresponding cash settlement depending on 3 different delivery logic (buyers intention, sellers intention and both)
  - i. Buyer would not like to deliver while seller would like to deliver 300 kg
  - ii. buyer would like to deliver 800kg and sellers would like to take delivery of 100kg.

**Q4. Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks**

- a) Cotton production, consumption, export and import detail for India are as follows  
Ending inventory from 2008 production is 3.3 mn bales. The cotton advisory Board of India (CAB) estimates production for the years 2009 to be at 35.3 mn bales and import to be around 1.2 mn bales. Expected export is around 20mn bales. Find out the stock to use ratio. Historically stock to use ratio for 2006, 2007, 2008 are 43%, 38% and 45%.cotton on domestic cotton price outlook for 2009
- b) What are options and type of options? Illustrate with an example.
- c) Who are the participants in commodity market? Explain their functions in details.

**Q5. Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks**

- a) Average monthly spot prices for cardamon are given below. Find out the monthly seasonal index and comment on pre harvest and post harvest period from the Indies value only. Also plot a graph to identify which months are exhibiting seasonality.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2011	1065.3	962.1	1176	1172.7	1165.2	1591.9	1674.4	1576.2	1147.8	1032.3	980.4	1147.9
2012	1158.8	1234.3	1044.5	1054.7	858.4	718.7	740.5	691.1	638.8	632.3	608	533.8

- b) What is spreads arbitrage?
- c) What are commodity swaps?

**Q6. Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks**

- a) Calculate open interest for the details given below

Date	Long futures	Short futures	Number of contract traded	Open interest
22 JAN 10.00AM	A	B	100	?
22 JAN -11.00 am	C	X	700	?
22 JAN – 4.00 PM	D	E	350	?
23 JAN 11.30 AM	X	D	50	?
23 JAN 4.00 PM	X	D	350	?

- b) List down problems faced by agricultural commodity traded on exchanges in India?
- c) Exchange traded versus OTC derivatives – Differentiate

**Q7. Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks**

- a) Difference between commodity and financial derivative?
- b) Explain the Trading, clearing and settlement process?
- c) On 3 January 2011, a trader wanted to take positions in 5 contracts on aluminum for March 2011. Each contract is for 5000kg. Annualized historical volatility is 11.25%. On 3<sup>rd</sup> Jan 2011, the future price is 107.1 per kg. No of trading days is 305. Find out VaR for 99% two day and 10 day trading horizon.