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# Accounting Practices for Agri-Commodity Derivatives between India and South Africa

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## Abstract

Developing the comprehensive accounting for the derivatives has become a challenge for all the accounting bodies around the world. In India government has taken several initiatives to bring Agri-Commodity derivatives trading into main stream, so that it can solve the problems such as price fluctuation, price manipulation and ineffective price discovery which are the major treats to the Indian economy that to the farmers. Hence in this study Indian accounting standards are compared with International Financial Reporting Standards for the derivatives accounting. For this sample of three companies from each country are selected with basic criteria has the companies must use. Agri-Commodity derivatives in their risk management parties. Independent samples t-test has been used to analysis the collected date. The results of the study reveal low level of derivatives reporting among these countries.

**Keywords:** Agri-Commodity Derivatives, IFRS, Indian GAAP, India, South Africa



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## 1. Introduction:

Agri-commodity derivatives are an important tool against uncertainty arising out of fluctuating in agricultural commodities which is a cause of concern for farmers, industries and exporters because it affects the income margin and makes venerable to operate efficiently. So currently agri-commodity derivatives trading volume as witnessed phenomenal growth in the exchanges.

But one of the biggest apprehensions posed by derivatives is from leverage they provide to the participant. Since investor to take a large price position in the market while committing to small amount, this advantage of derivatives has leads to some vital commodity derivatives disasters which can be evidence in Amaranth hedge fund, Ceyhen peteroleum corporation and recently Reliance industries limited commodity derivatives loss of five billion. Lack of clear reporting lines, managerial understanding and faculty assumptions is the core reason which resulted in this derivatives disasters and it has made a negative impact on investors regarding derivatives.

So there is need for investors to understand derivatives exposure of companies. Thus today accounting practices for derivatives has got central stage, because till now derivatives are treated as off-balance sheet items and accounting treatment for derivatives had applied inconsistently by the companies which as caused lack of transparency in the derivatives accounting. In India derivatives are reported only when loss reported in the derivatives, but investors are not able to understand how is loss occurred and it become difficulty to evaluate the companies risk management practices because of inadequate information in the reports.

Hence, this study aims to study the current accounting practices made by Indian companies with South African companies to identify the level of disclosure made between this countries regarding agri-commodity derivatives. Because there is a high level of agricultural commodity price fluctuation, so agri-commodity derivatives usage has growing rapidly in these countries.

## 2. IFRS and Indian GAAP:

IFRS convergence with Indian Accounting Standards will be mandatory applied on or after 1 April 2016, which was notified in the press release of ICAI. But this will be consider by MCA in determine its final decision on implementation, because IFRS convergence will leads to several issues in reporting practices of companies including tax related issues which must be resolved before implementation. In preparation for convergence with IFRS, MCA initially notified 35 Indian accounting standards called Draft IND AS, but this were not identical to IFRS so modification made to IFRS in promulgating IND AS. On March 22 2014 ICAI has finalized necessary changes required to convergence with IFRS and submitted to MCA. This efforts evidence the India is making the required necessary efforts to convergence with IFRS as soon as possible to have effective global accounting standard.

Currently accounting standard 30, 31 and 32 are standards which prescribed for accounting for derivatives, till now these standards are applied by the companies on voluntary basics. This standard is largely based on the International accounting standard 39, but this is now replaced by IFRS 9 in the three


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stage because there were several issues which made difficult and complex for companies to apply. IFRS 9 will become mandatory applied from period beginning on or after January 2015. But these changes are not yet implemented in AS 30 till now. Today South African companies are still applying IAS 39.

## 3. Literature review:

Currently there has been lot of research work has been carried out around the world to addressed the key derivatives accounting issues which has made complex, but there has been an limited research activities has been taken place which specially addressed the accounting issues of agri-commodity derivatives and the major research work concentrates only to financial derivatives. But there is a significant difference between the accounting issues of both financial and commodity derivatives. So due to inadequate research work on agri-commodity derivatives, in this study some important relevant literature on derivatives accounting was reviewed to frame an effective theorical framework and methodology for the present study.

**Peters, (2013),** the study focus on derivatives risk disclosure under International Financial Reporting standard with objective to examine the level of financial reporting for derivatives and its usefulness to the users. 133 respondents were selected no the basics of their occupational category profile. Finding indicated that disclosure requirements for derivatives are complex and confusing, because of highly complex derivatives accounting rules. Inadequate disclosure of risk exposure of derivatives has made users difficult to evaluating overall companies risk exposure and existed risk management practices.

**Sheth, (2012),** paper provides views on the different concepts like, fair value accounting, daily mark to market, effects of hedging on commodities transactions and taxability of commodity derivatives. It points out major accounting differences between equity and commodity derivatives in segments, settlement, expiry date and underlying asset. Concludes stressing on the importance on improving accounting practices for commodity derivatives.

**Middelberg, (2011),** the objective of the interpret the application of IAS 39 in the commodity derivatives in agricultural sector and to consider the impact of IFRS statements on the companies financial operations. Seven companies are selected on basics of convince sampling technique and conducting interviews of auditing firms of sample companies. Study points out nine different transactions types in agri-commodity derivatives. Study concludes by stressing to establishing accounting benchmark and best practices for agri- commodity derivatives which can help South African agribusinesses, processors and auditor to have comparable and consistent reporting practices for agri-commodity derivatives.

**Vipul,(2003),** it is a conceptual paper focusing mainly on the comparison of accounting standards of derivative with FAS 133(Accounting for Derivative Instrument and Hedging Activities) of United States of America and IAS 39 (Financial Instrument ; Recognition and Measurement) of International Accounting Standards Board. The author develops an example to compare these standards and identifies that Indian accounting standard for derivatives is at informative stage compare two other standards.

1. **Bansal, (2004),** it examines the accounting practices for commodity derivatives in India by comparing with International Accounting Standard 39, because absence of specific accounting standard in India. For


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this derivatives are classified in two for accounting perspective, like fair value hedge and cash flow hedge and points major accounting differences between them.

## 4. Need for the study:

The importance for derivatives accounting has started from last decade, because companies started posting huge derivative loss in their financial statements. But this derivative exposure of the companies was not aware to the investor because in the company's statements it was not disclosed properly. Because accounting for derivatives have been a complex issue due to its high leverage and dynamic change in their valve. But currently there is great need for having effective and quality reporting for derivative because it helps investor to understand risk exposure, risk positions and nature of risk. In derivatives, agri-commodity derivatives is most important to developing countries like India and south Africa were till this countries economy is oriented to agriculture and facing huge problems. So this problems can be effectively addressed by agri-commodity derivatives.

It is most important to have effective reporting practices agri-commodity derivatives because it helps farmers, traders and exporters to hedge their commodity price risk against increasing flucution prices, which is most evident in developing countries. But currently accounting practices for agri-commodity derivatives among the companies is becoming inconsistent and incomparable which has make investor difficult to understand the potential risk exposure of agri-commodity derivatives. Were it can be evidence among the different accounting standard setting bodies like IASB has changed IAS 39 to IFRS 9 and in India AS 30, 31, and 32 are still an voluntary standards because of existing issues in the standards. So study aims at studying the existing accounting practices for agri-commodity derivatives among two different countries to identify difference in their reporting practices.

## 5. Objective:

1. To compare the accounting parties for agri-commodity derivatives between Indian GAAP and South African IFRS.
2. To examine the level of current accounting parties for agri-commodity derivatives difference between Indian companies and South African companies.

## 6. Hypotheses:

The following hypotheses were formulated for testing in this study:

$H_1$: "There is a significant difference between Indian companies and South African companies in accounting parties for agri-commodity derivatives.

## 7. Research Methodology

### 1. Research Design:

To execute the purpose of the current study content analysis method as been adopted. Both Indian GAAP and South Africa IFRS have considered for the study. on the basic of existing accounting standard standardized checklist with a three point Likert scale has been prepared to analysis annual reports of the sample companies to examine the accounting practices for agri-commodity derivatives.



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## 2. Sample design:

### 2.1 sample frame:

Sampling frame for the study contains both Indian companies adopted Indian GAAP and South African companies adopted International Financial Reporting Standards in the their annual reports.

### 2.2 Sampling technique and size:

Companies were selected on basis of convenience sampling with two important criteria was considered for selecting the sample companies like: Companies operation must expose commodity price risk and placed the risk management system to mitigate this risk. For the study 6 companies are selected, were 3 companies for India and another 3 companies form South African.:

| INDIAN COMPANIES | SOUTH AFRICAN COMPANIES |
|---|---|
| Britannia Ltd | AFRI Limited. |
| Ruchi soya Ltd | TONGAAT HUlETT STARCH Limited |
| Tata coffee Ltd | NWK Limited. |

## 3. Data Collection:

The present study is purely based on secondary sources of data. The data are collected from the annual reports of the companies for the year of 2013.Content analysis method was used to collect the data. Both quantitative and qualitative data are quantified to achieve the research objectives using checklist. Information item is scored one when not disclosed, two when partially disclosed (not clearly mentioned the quantitative items in figures and when no explanation is given in the notes for such disclosures) and three when fully disclosed.

## 4. Data analysis:

Statistical Package for Social Sciences (SPSS) was used for the statistical analysis of data. Descriptive statistics including independent samples t test and measures of central tendency has been used to measure the data's goodness of fit.

## 5. Questionnaire design:

To analysis of the current accounting practices for agri-commodity derivatives in companies standardized questionnaire has been prepared by making three important classifications to identify the level of accounting disclosure made in the companies annual report

1. **Confirming the practice:** this part help to identify the company is exposed to commodity price risk and it has adopted the risk management system to mitigate the risk. This information are qualitative.
2. **Verifying the Practice:** When companies are using the agri-commodity derivatives for risk management purpose. It must have effective accounting practices for recognition, measurement and disclosure of these instruments. This part helps to identify in what manner companies is reporting for Agri-commodity derivatives. It includes both qualitative and quantitative information.


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3. **Validating the practice:** This part helps to identify the level of disclosure practices made by the companies regarding the instrument in the report. It examine the level of information presented in the report.

## 8. Results

### Testing of Hypothesis:

Independent sample t test is applied for testing the hypothesis to identify the level significance difference between Indian companies and south African companies in accounting parties for agri-commodity derivatives. Hypothesized significance value is assumed at 0.05.

**$H_0$:** "There is a significant difference between Indian companies and South African companies in accounting parties for agri-commodity derivatives.

**$H_1$:** "There is no significant difference between Indian companies and South African companies in accounting parties for agri-commodity derivatives

**Table 1: Group statistics of Indian and south African companies.**

| Companies | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Indian | 3 | 1.2967 | 0.08505 | 0.04910 |
| South African | 3 | 1.7500 | 0.20298 | 0.11719 |

Table shows the descriptive statistics of two countries companies. South African companies has mean value of 1.75 with std. deviation 0.202 showing wider spread of scores in the all sample companies compare to Indian companies.

**Table 2: results of independent t sample test of both Indian and South Africa companies.**

| T | Sig (2-tailed) | Mean Difference | Std. Error Difference |
|---|---|---|---|
| -3.568 | 0.023 | -0.45333 | 0.12706 |

Independent sample t test compares the means of two independent groups and determine the significant difference between the groups. In test 0.05 is assumed as standardized benchmark, were significance value below 0.05 proves the existence significant difference between the two groups and above 0.05 shows no significant difference between the groups. So test results accepts the null hypothesis and rejects the alternative hypotheses, as the test results significance value is 0.023 which is below the hypothesized significance value of 0.05 and concludes that There is a significant difference between Indian companies and South African companies in accounting parties for agri-commodity derivatives.

Further difference can be evidence in t values were positive t value indicates first group is higher than second group and negative t value shows second group is higher than first group. So for analysis Indian companies are grouped first and South African companies second. Results shows negative t value


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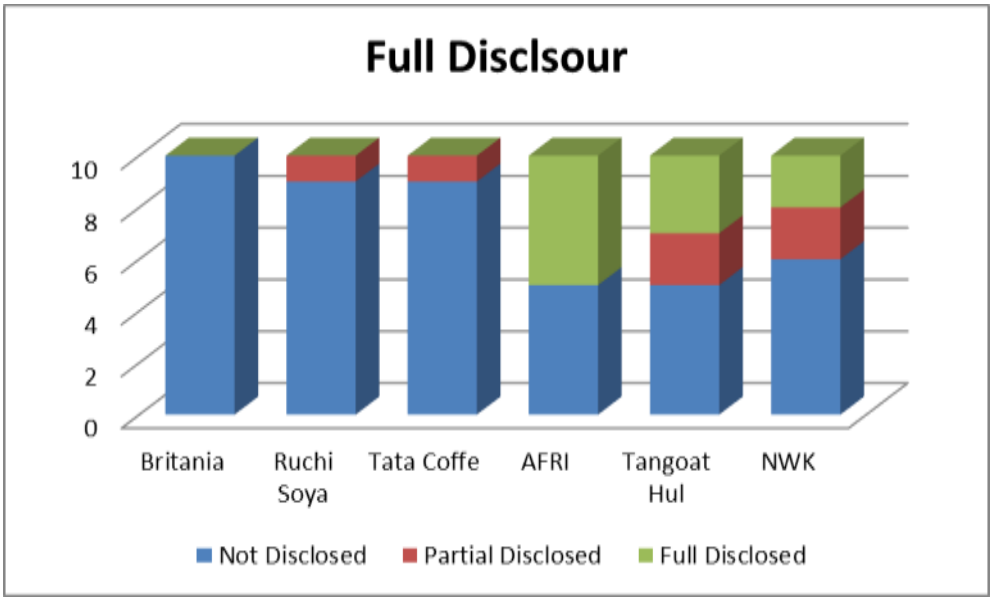
showing second group is higher than first group means disclosure level is higher in the South African companies compare to Indian companies and also has significant mean differences of -0.45333.

**Table 3: Table showing the average overall disclosure of both Indian and south African companies for the year 2012:**

| COMPANY | Confirming the practice | Verifying the practice | Validating the practice | Average |
|---|---|---|---|---|
| Indian companies | | | | |
| Britannia | 1.45 | 1.14 | 1 | 1.20 |
| Ruchi soya | 1.72 | 1.27 | 1.1 | 1.36 |
| Tata coffee | 1.82 | 1.09 | 1.1 | 1.33 |
| South Africa companies | | | | |
| Afri | 2.09 | 1.72 | 2 | 1.93 |
| Tangaat hulett | 2 | 1.59 | 1.8 | 1.79 |
| NWK | 1.81 | 1.18 | 1.6 | 1.53 |

Source: Annual Reports of sample companies.

**Chart1: chart showing the average overall disclosure of both Indian and south African companies for the year 2012:**




## 9. Discussion of results:

Purpose of the study is to find out the extent of disclosure difference existences between the Indian and south African companies in agri-commodity derivatives accounting practices and this results clearly suggest that they do. Independent samples t test is applied to test the hypothesis with main objective is to



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identify the level of significance differences between the groups. In test significance value greater than 0.05 means no statistically significant differences between the groups and below means significant differences. So results show 0.023 below 0.05 proving the differences in accounting practices between the companies. Further it can be evidenced in the negative t value of -3.568.

The existing difference in accounting practices for agri-commodity derivatives between the Indian companies to south African was 45%(-0.4533) mean difference evidence the large gap in the accounting practices by having the similar accounting standards. Indian companies have higher average disclosure level in what constituent like Tata Coffee records 1.82 against Afri 2.09 shows the less difference between them. But the huge difference existences in the where consistent were Tata Coffee records only minimal1 against Agri 2 this creates the huge gap of 100% between the companies. So this shows Indian companies records low score in the where constituent as leads overall significant difference. Such results shows Indian companies are using agri-commodity derivatives for risk management practices, it can be evident in the how constituent but fails to reports in their annual report. But when it compare to south African companies have constantly disclosed in all constituent so it has highest mean disclosure compare to Indian companies.

**10. Suggestion**:

It confirms the Indian companies are exposed to agricultural commodity price risk and this risk is effectively managed by using agri-commodity derivatives. But reporting practices for these instruments been very low in the annual reports of the companies, which is the main cause of concern to the investors currently. So this suggestion is made on the basics of current study.

1. Indian accounting standard 30, 31 and 32 are till now applied on voluntary basic and only selected companies are applying these standards. So this standard must be made mandatory applied by all companies in their annual report.
2. Internationally there is several problems has identified in the IAS 39, so it was replaced with the new standard IFRS 9. But it changes has not been made in the existing Indian accounting standards.

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**CHECKLIST FOR COMPANIES PRACTICING ACCOUNTING FOR AGRI-COMMODITY DERIVATIVES.**

| SL NO | PARTICURLAS | | | |
|---|---|---|---|---|
| | Confirming the practice | | | |
| | | ND | PD | FD |
| 1. | Companies agricultural commodity consumption details. | | | |
| 2. | Is companies operation is exposed to risk | | | |
| 3. | What are the different types of market risk faced by the companies including price risk | | | |
| 4. | If company is exposed to commodity price risk, details of hedging strategy | | | |
| 5. | Details about different types of derivative instrument used in hedging activities | | | |
| 6. | Comparison hedge to non-hedge risk exposure. | | | |
| 7. | Description between trading and hedging derivatives instruments | | | |
| 8. | Companies derivative holding in OTC Market | | | |
| 9. | Companies derivatives holding in Domestic and international commodity exchange. | | | |
| 10. | Information regarding company trading in commodity exchanges and its purpose for trading | | | |
| 11. | Extent and nature of the hedged risk | | | |
| | Verifying the practice | | | |
| | | ND | PD | FD |
| 12. | Accounting policies and method adopted for accounting of commodity derivatives. | | | |
| 13. | Information about accounting standards in practice | | | |
| 14 | Any changes has been made regarding accounting practices for commodity derivatives | | | |
| | | | | |
| 15. | If, company is using derivatives for trading: | | | |
| | Recognition | | | |
| | 15.1 Is company classify the contract to buy / sell a commodity as a derivative | | | |
| | 15.2 Under which classification company recognizes commodity derivatives. | | | |
| | 15.3 The method of recognition of the derivatives | | | |
| | 15.4 Specifics about the entity purposes of de-recognition. | | | |
| | Measurement | | | |
| | 15.5 Information about which method is used for measurement of commodity derivatives | | | |


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| | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| 16. | If company is using derivatives for hedging: | | | | |
| | 16.1 | Information about nature of risks being hedge | | | |
| | 16.2 | Information about Basis of hedged exposure | | | |
| | 16.3 | Percentage of hedge exposure to total risk. | | | |
| | 16.4 | Information about hedging purpose and policy. | | | |
| | 16.5 | Is company has specified hedging relationship. | | | |
| | 16.6 | Details about classification of different types of hedges | | | |
| | 16.7 | If company is using more than one type of hedging than proposinate among them. | | | |
| | 16.8 | Information about Magnitude of the hedged versus unhedged exposure. | | | |
| | 16.9 | Reason for applying hedge accounting. | | | |
| | 16.10 | Criteria taken into consideration to qualification for hedge accounting. | | | |
| | 16.11 | When derivatives are designated as a hedging instrument details about under which category it is recognized. | | | |
| | 16.12 | 2. Information about process of monitoring and measurement criteria for hedge effectiveness | | | |
| | 16.13 | 3. Information existing any hedge ineffectiveness and reason for ineffectiveness. | | | |
| | | Validating the Practice | | | |
| 17. | Statement showing division of recently recognized with existing contracts. | | | | |
| 18 | Quantum of current holding of derivative instrument. | | | | |
| 19. | Comprehensive statement showing any change from previous year to current year with details in notes to account. | | | | |
| 20 | Comparison of total number of agri-commodity derivatives with non agri-commodity derivatives. | | | | |
| 21 | Hedging reserve | | | | |
| 22. | Statement showing total number of contracts outstanding for maturity with maturity tables | | | | |
| 23. | Statement showing total number of derivatives classified as hedging and trading purpose. | | | | |
| 24. | Statement showing future cash flows and its impact on profit and loss. | | | | |
| 25. | Sensitivity analysis for each type of market risk. Description of the method, assumptions and parameters used. | | | | |
| 26. | Additional voluntary disclosures with related to Agri-Commodity derivatives. | | | | |


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**Indicators:**

ND – Not Disclosed
PD – Partially Disclosed
FD – Fully Disclosed


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