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# Working Capital Management of Selected Fertilizer Companies in India

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**Abstract:** Fertilizer plays an extremely important role in increasing agricultural production. It continues to be the most important input, next only to water in agricultural production. Agriculture acts as a back born of economic growth and development in India. The working capital management is growing businesses require cash, and being able to free up cash by shortening. This cycle is the most inexpensive way to grow. We measure the working capital management by using financial data's from moneycontrol.com. We draw comparisons on the Ratios and Trend analysis. It is used in the past to predict the future.

**Keywords:** Fertilizer, Agriculture, Ratio analysis, Co-variance, Trend.

## I. INTRODUCTION

Fertilizer can be defined as a chemical or natural substance used to make soil or land more fertile. First used by ancient farmers, fertilizer technology developed significantly as the chemical needs of growing plants were discovered. Through fertilizers, farms get enable to produce a sustained high level of production. Fertilizers are applied to plants both as liquids and solids. Almost ninety percent of fertilizers are used as solids that are typically powdered or granulated. To be successful in agriculture, people need to know the basics of different fertilizers and their usage. Fertilizers need to be applied to all types of crop production systems in order to achieve yield levels which make the effort of cropping worthwhile. A financial ratio is a relatively significance of selected measurable values taken from a company's financial statements.

## II. OBJECTIVES OF THE STUDY

- A. To know the financial position of the fertilizer companies in India
- B. To measure the working capital efficiency of the fertilizer companies in India

## III. REVIEW OF LITERATURE

Peter Hess & Murray McBride stated as "There are a much more toxic metals on the periodic table than what they obvious to regulate. According to him they regulate only nine metals with known health risks plus lead, cadmium and arsenic. And metals are just the beginning. Pharmaceuticals and other organic chemicals found in biosolids are cause for even greater concern.

R.Sylvester – Bradley, D.T. stokes and R.K. scott stated as on rehentive soils in the UK, SNS in early spring was a good gauge of N availability throughout growth of unfertihzed wheat, because the N excess arising from previous fertilizer mineralized before analysis still persist largely within root range. The later process of grain filling was assist by continued N uptake as well as from sources not related to previous fertilizer use significant net mineralization was apparent in some subsoils

John W. Mc Arthu, GordonC. Mccord "This paper estimates the role of acronomic inputs in cereal yield improvements and the consequences for countries processes of structural change. The identification strategy includes a novel instrumental variable that utilize the especial economic geography of fertilizer production and transport costs to countries agricultural heartlands.

## IV. METHODOLOGY

The study has classified in to four, like I. Illustrate that the introduction of fertilizer industry, II. Objectives III. Review the earlier literature relevant to subject knowledge, IV explains that the ratio analysis of selected fertilizer companies and finally IV visualize that the table of analysis and conclusions. The study has based on secondary data, which is taken from money control.

### A. Ratio analysis of selected companies

- 1) *Coromandel International Limited:* Coromandel International Limited is an Indian corporation founded in the early 1960s by IMC and Chevron Companies of USA. Originally named Coromandel Fertilizers, the company is in the business of fertilizers,

pesticides and specialty nutrients. The company is also in rural retail business in the state of Andhra Pradesh through its ManaGromor Centers.

YEAR	CR	QR	INTR	DE	ATR
2017	1.22	0.91	5.81	0.79	117.02
2016	1.13	0.75	4.90	0.93	130.05
2015	1.11	0.72	5.01	0.97	135.82
2014	1.15	0.77	5.61	0.62	132.82
2013	1.25	0.95	6.77	1.03	116.50
2012	1.25	0.84	5.29	1.02	134.45
2011	1.36	0.86	5.05	0.72	146.23
2010	0.89	0.56	6.98	1.27	146.87
2009	0.85	0.45	7.08	1.44	203.03
2008	1.04	0.49	4.39	1.15	139.31
MEAN	1.125	0.73	5.689	0.994	140.21
STDV	0.153118	0.166373	0.901637	0.2372	23.10408
COVARIANCE	13.61	22.79	15.85	23.86	16.48

2) *Chambal Fertilisers And Chemicals Limited*

Chambal Fertilizers and Chemicals Limited (Chambal) is one of the largest private sector fertilizer producers in India. It was promoted by Zuari Industries Limited in the year 1985. The Company has a vast marketing network comprising 13 regional offices, 1,700 dealers and 20,000 village level outlets. The Company has donned the mantle of providing all agri-products through a 'single window' to enable the farmer to buy all products from one source.

YEAR	CR	QR	INTR	DE	ATR
2017	1.14	.94	8.73	1.64	92.08
2016	1.02	.84	10.62	1.93	113.81
2015	1.08	.90	12.80	1.58	122.10
2014	1.06	.90	12.43	1.98	102.64
2013	1.07	.82	5.98	2.45	86.96
2012	1.03	.87	14.10	1.89	102.22
2011	0.95	.75	14.02	1.44	96.74
2010	1.22	.98	14.73	1.88	76.66
2009	0.82	.65	14.53	1.96	87.11
2008	1.05	.73	9.02	1.58	74.96
MEAN	1.044	0.838	11.696	1.833	95.528
STDV	0.101114	0.097139	2.827774	0.27441	14.39563
COVARIANCE	9.69	11.59	24.178	14.97	15.069

### 3) Gujarat Narmada Valley Fertilisers & Chemicals (Gnfc)

Gujarat Narmada Valley Fertilizers & Chemicals (GNFC) is an Indian manufacturer of fertilizers and Chemicals. GNFC was founded in 1976 and it is listed on Mumbai Stock Exchange. The company was jointly promoted by the Government of Gujarat and the Gujarat State Fertilizer Company Limited (GSFC). GNFC started fertilizer manufacturing and marketing operations by setting up in 1982, one of the world's largest single-stream ammonia-urea fertilizer complexes.

YEAR	CR	QR	INTR	DE	ATR
2017	1.23	0.90	6.93	0.42	58.35
2016	1.08	0.81	6.22	0.92	57.29
2015	1.05	0.79	6.19	1.28	54.68
2014	1.02	0.75	5.88	1.14	52.29
2013	1.03	0.74	6.68	1.04	60.56
2012	0.88	0.60	6.45	0.50	67.88
2011	1.09	0.69	6.14	0.40	66.78
2010	1.16	0.94	6.45	0.27	59.24
2009	1.16	0.91	6.78	0.18	72.99
2008	1.51	1.03	8.89	0.17	119.05
MEAN	1.121	0.816	6.661	0.632	66.911
STDV	0.158269	0.122654	0.802626	0.399044	18.3978
COVARIANCE	14.12	15.03	12.049	63.14	27.496

### 4) Gujarat State Fertilizers & Chemicals Limited (Gsfc)

Gujarat State Fertilizers & Chemicals Limited (GSFC) is an Indian manufacturer of fertilizers and Industrial Chemicals. GSFC was founded in 1967. Oil and gas discoveries in Bombay High and South Basin triggered the birth of 8 new generation fertilizer plants to fulfill the growing food needs of India. In 1976, GSFC entered into a joint venture with the State Government of Gujarat by setting up a plant in Bharuch which trades as Gujarat Narmada Valley Fertilizers & Chemicals Limited.

YEAR	CR	QR	INTR	DE	ATR
2017	1.98	1.59	7.49	0.11	58.31
2016	1.80	1.52	9.83	0.25	81.06
2015	2.23	1.79	8.43	0.16	81.54
2014	1.93	1.52	7.83	0.18	83.14
2013	1.72	1.42	9.09	0.38	90.39
2012	1.93	1.53	8.25	0.18	95.24
2011	1.94	1.42	8.42	0.14	109.73
2010	1.41	1.00	6.57	0.32	102.37
2009	1.22	0.60	7.89	0.17	169.92
2008	1.25	0.73	5.70	0.38	116.84
MEAN	1.741	1.312	7.95	0.227	98.854
STDV	1.321448	0.374988	1.12124	0.094557	28.45412
COVARIANCE	75.90	28.58	14.10	41.66	28.78

### 5) Rashtriya Chemicals & Fertilizers

Rashtriya Chemicals and Fertilizers Limited (a Government of India undertaking), was established in 1978 consequent to the reorganization of Fertilizer Corporation of India. RCF manufactures Urea and Complex fertilizers (NPK) along with a wide range of Industrial Chemicals. It is 4th largest Urea manufacturer in India after IFFCO, NFL and KRIBHCO. The Government of India holds 75% of the share capital of the Company as on 31 July 2017.

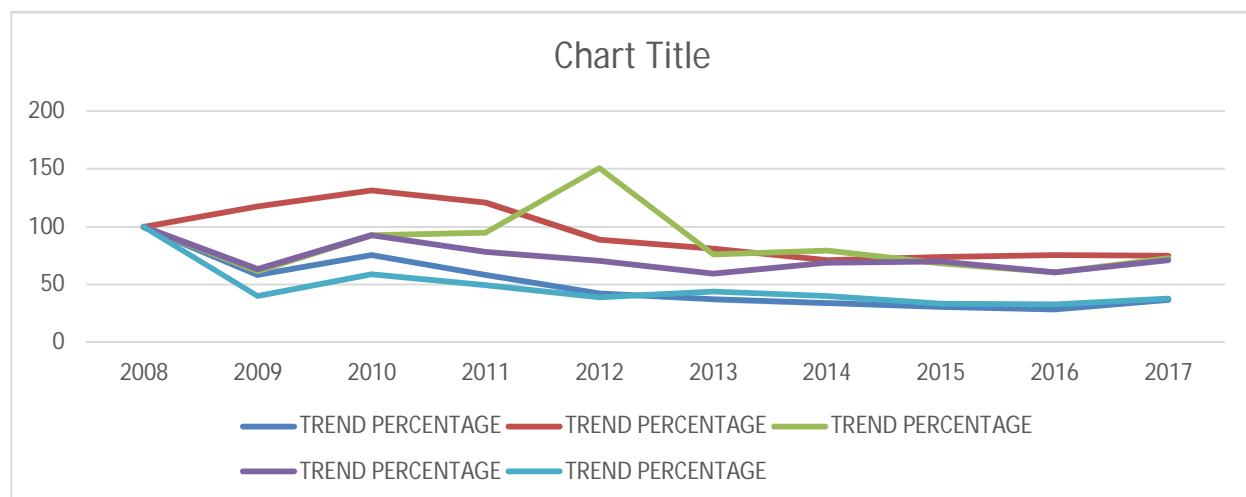
YEAR	CR	QR	INTR	DE	ATR
2017	1.56	1.28	9.11	0.57	110.51
2016	1.35	1.06	7.12	0.97	112.53
2015	1.62	1.26	7.72	0.70	123.61
2014	1.58	1.24	8.21	0.66	117.32
2013	1.42	1.00	5.72	0.71	118.37
2012	1.40	0.98	5.46	0.55	114.51
2011	1.85	1.41	10.33	0.21	147.36
2010	1.33	1.17	13.81	0.72	114.64
2009	1.18	0.97	12.10	0.85	156.20
2008	1.17	0.73	5.96	0.81	133.16
MEAN	1.446	1.11	8.554	0.675	124.821
STDV	0.199208	0.18905	2.662075	0.195666	14.9244
COVARIANCE	13.776	17.032	31.121	28.988	11.96

**B. Trend Analysis**

The trend analysis is calculated on basis of yearly sales of the selected companies with the following formula:

$$\frac{\text{Base year}}{\text{Current year}} \times 100$$

YEAR	TREND PERCENTAGE				
	CFC	GNFC	RCF	GSFC	CIL
2008	100	100	100	100	100
2009	58.58	117.59	61.84	63.38	40.078
2010	75.58	131.34	92.68	92.73	58.76
2011	58.113	120.66	94.95	78.38	49.20
2012	42.14	88.92	150.57	70.29	38.67
2013	37.07	80.75	76.05	59.60	44.097
2014	34.10	70.84	79.62	68.86	40.23
2015	30.67	73.98	68.05	69.99	33.47
2016	28.53	75.49	60.61	60.47	32.93
2017	36.706	74.83	72.62	70.79	37.699





CR = current ratio

Qr = quick ratio

Intr= inventory turnover ratio

De = debt equity ratio

Atr= asset turnover ratio

Cfc = champal fertilisers and chemicals limited

Rcf = rashtriya chemicals and fertilizers

Gsfcl = gujarat state fertilizers and chemicals limited

Cil = coromandel international limited

Gnfc = gujarat narmada valley fertilisers and chemicals

## V. CONCLUSIONS

The above fertilizer companies are in satisfied level in their working capital. The trend analysis is used to improve the sales in future. In this study the Rashtriya Chemicals and Fertilizers are much better than the other companies in their sales performance.

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