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CASH FLOW RATIOS UNDER GROWTH APPROACH AS AN INDICATOR FOR EVALUATION OF BUSINESS PERFORMANCE

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Abstract *For smooth functioning of key business activities, sufficient amount of cash is needed to meet an obligation when it becomes due or to meet an unanticipated expense. In India, cash flow is prepared as per the guidelines of Ind AS 7 - Statement of Cash Flows. The main objective of this standard is to provide information about the "historical changes in cash and cash equivalents" through the statement of cash flows. The financial analysis of different entities largely depends on accounting ratios, particularly in the areas of return on assets and sales to income. But, it is interesting to note that Ind AS 7 does not suggest any such set of ratios at all. Though cash flow statement can be treated as an integral part of financial statement, it is hardly found that authors of accounting have developed any set of cash flow ratios in order to evaluate the performance of a business. This paper attempts to use a set of cash flow ratios suggested by some renowned authors. The primary objective of this paper is to find out the usefulness of the ratios relating to cash flow statement in today's business scenario. The paper discusses about the use of cash flow statement for the purpose of determining liquidity and flexibility of financial activities. It also has a significant role to play in the area of adoption of investment or credit decisions by the investors or creditors and it is equally applicable in the area of taking financial decisions by the corporate managers.*

Keywords: *Cash Flow Statement, Cash Flow Ratio, Ind AS, Growth*

INTRODUCTION

The key activities of an enterprise may be considered as the collection of recourses from different sources and proper application of those recourses into different assets and the survival or extinction of the said enterprise largely depends on those activities. Sufficient amount of cash is needed for the smooth functioning of those activities. Ample supply of cash is also needed to meet an obligation when it becomes due or to meet an unanticipated expense. A cash flow statement is nothing but the movement of cash into or out of an enterprise from operating, investing and financial activities. It is measured during a specific period of time or an accounting period.

Cash flow statement may be prepared either by following direct method or indirect method. According to Ind AS 7, Statement of Cash Flows, Paragraph 18, profit or loss arising out of non-cash nature of transactions in addition to any deferrals or accruals of operating cash receipts or payments of past or future and also any item of income or expense related to investing or financing cash flows is adjusted (Indirect method). Cash flow statement by using indirect method has only been considered here ignoring direct method. The main objective of this standard is, however, to provide information about the "historical changes in cash and cash equivalents" through the statement of cash flows.

Over a long period of time, financial analysis of different entities largely depends on accounting ratios, particularly in the areas of return on assets and sales to income. But, it is interesting to note that Ind AS 7 does not suggest any such set of ratios at all. Though the cash flow statement can be treated as an integral part of financial statement, it is hardly found that authors of accounting have developed any set of cash flow ratios in order to evaluate the performance of a business. In this paper, a set of cash flow ratios suggested by some renowned authors has been used.

When a company grows steadily, it is inevitable to plan for building the growth of current assets as well as sales for

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better working capital management. Operating cash flow growth rate can be considered here as the long-term growth of operating cash that comes from business operations. A growth rate has been contemplated here and a profit & loss account, balance sheet and cash flow statement have been prepared adjusting that growth rate. A set of cash flow ratios has been prepared based on data of both cash flow statements without application and with the application of growth approach. A resultant conclusion has been drawn based on the comparison of results of both the approaches.

OBJECTIVES

The primary objective of this paper is to find out the usefulness of the ratios relating to cash flow statement in today's business scenario. It leads us to discuss here about the use of cash flow statement for the purpose of determining liquidity and flexibility of financial activities. It has also a significant role to play in the area of adoption of investment or credit decisions by the investors or creditors and it is equally applicable in the area of taking finance decisions by the corporate managers. A cash flow statement should be prepared by taking the assumed growth into consideration and a comparison that should be made between cash flow statement with the application of growth approach and without the application of the said approach. Again, this will throw light at knowledge with respect to the conclusion to be drawn at the end.

LITERATURE REVIEW

Ind AS 7, *Cash Flow Statement* (Revised 2016), has some specific objectives that can be stated here. The primary objective of the standard is to provide information about cash flows of an entity so as to assess the ability of a firm to pay its obligation in due time. Not only that, it provides information with respect to adopt economic decisions that require the capacity to generate cash and cash equivalents of the entity. Again, it provides information about the historical changes in cash and cash equivalents of any entity.

But, the above standard is not free from criticism. It may be noted that AS-3 (Ind AS 7) ignores the term 'operation' and one can rightly argue how operating cash flow of an entity can be determined without having a precise definition of this very term. Again, the leading Accounting Boards have conflicting views regarding the treatment of interest while computing operating cash flows (Majumdar, 2015).

However, a study examined the performance of entities in Sri Lanka (Kajananthan & Velnampy, 2014) by applying both cash flow ratios and traditional financial ratios over a period of five years. Analyzing sample t-tests, the performance of two entities was measured by using liquidity, solvency and operational efficiency indicators. They observed that traditional ratios generated different results from cash flow ratios in liquidity, solvency and profitability.

It may be noted that cash flow statement provides a cash-based summary of balance sheet and income statement. The entities should test the results by comparing cash flow ratios with traditional financial ratio analysis by using balance sheet and income statements to have accurate results (Esin, Figen).

One of the aspects of working capital management is to plan for funding of growth of current assets as well as sales growth as an entity gradually develops. Again, a cash flow sustainable growth rate may said to be here as that rate at which the entity should maintain its sales in such a way that its cash flow remains constant. It may rather be presented in a different way. It is the percentage of annual growth of sales that is in agreement with an entity's established financial policies (Higgins, 1977). Therefore, one can rightly say that it is a maximum growth rate that an entity can sustain without having any change in leverage. Whatever it may be, we will use the terms 'growth rate' and 'sustainable growth rate' in the same sense.

Cash Flow Statement Under Traditional Financial Accounting Vis-À-Vis Cash Flow Under Growth Approach

We will explain the projected analysis using the financial statements for the hypothetical company ABC Co. shown in Exhibit 1 and 2. Exhibit 3 shows the Statement of Cash Flows using Indirect Method suggested by Institute of Chartered Accountants of India in Ind AS 7. Exhibit 4 presents the alternative form of Statement of Cash Flows.

Exhibit 1: Income Statements for ABC Co. (Rs. 000's)

Particulars	2012	2013	2014	2015	2016
Net Sales	19,327	19,985	37,608	64,225	73,400
Cost of Goods Sold	(16,807)	(17,581)	(32,123)	(56,105)	(64,120)
	2,520	2,404	5,485	8,120	9,280
Administrative & Selling Expenses (Excluding Deprecitation)	(1,806)	(1,953)	(4,156)	(5940)	(6784)
Depreciation	(266)	(277)	(322)	(364)	(416)
Operating Profit	448	174	1,007	1,816	2,075
Interest	(385)	(228)	(385)	(892)	(1,019)
Net Profit before Taxes	63	(54)	622	924	1,056
Income Taxes	(32)	27	(311)	(462)	(528)
Net Income	31	(27)	311	462	528

Exhibit 2: Balance Sheets for ABC Co. (000's)

Assets	**2012**	**2013**	**2014**	**2015**	**2016**
Cash	133	88	147	193	221
Inventory	4,585	4,200	7,606	12,950	14,800
Receivables	2,877	2,625	4,729	8,680	9,920
Prepaid Expenses	203	175	220	290	331
Current Assets	7,798	7,088	12,702	22,113	25,272
Net Fixed Assets	3,238	3,255	4,655	6,048	6,912
Total Assets	11,036	10,343	17,357	28,161	32,184
Liabilities					
Short-term Loan	2,597	1,929	6,668	13,934	15,925
Accounts Payable	1,330	1,453	3,220	5,180	5,920
Income Tax Payable	32	(27)	311	462	528
Outstanding Expenses	105	122	147	245	280
Current Liabilities	4,064	3,477	10,346	19,821	22,653
Long-term Debt	525	350	175	1,050	1,200
Total Liabilities	4,589	3,827	10,521	20,871	23,853
Shareholders' Fund	6,447	6,516	6,836	7,290	8,331
	11,036	10,343	17,357	28,161	32,184
Shareholders' Fund:					
Capital	5,000	5,000	5,000	5,000	5,000
Reserves	1,416	1,512	1,521	1,513	2,026
Profit & Loss A/C	31	4(31-27)	315(311+4)	777(315+462)	1,305(777+528)

Exhibit 3: Statement of Cash Flows for ABC Co. (000's)

	2013	2014	2015	2016
Cash Flow from Operating Activities:				
Net Profit after Tax	(27)	311	462	528
Adjustment for: Depreciation	277	322	364	416
Interest	228	385	892	1,019
Taxation	(27)	311	462	528
Transfer to Reserve	96	9	(8)	513
Operating Profit before Working Capital Changes:	547	1,338	2,172	3004
Increase in Inventories	385	(3,406)	(5,344)	(1,850)
Increase in Receivables	252	(2,104)	(3,951)	(1,240)
Increase in Prepaid Expenses	28	(45)	(70)	(41)
Increase in Short-term Loan	(668)	4,739	7,266	1,991
Increase in Accounts Payable	123	1,767	1,960	740
Increase in outstanding Expenses	17	25	98	35
	684	2,314	2,131	2,639
Tax paid	(32)	27	(311)	(462)
Net Cash from Operating Activities:	652	2,341	1,820	2,177
Cash Flow from Investing Activities:				
Purchase of Fixed Assets				
(3,255+277-3,238)	(294)			
(4,655+322-3,255)		(1,722)		
(6,048+364-4,655)			(1,757)	
(6,912+416-6,048)				(1280)
Cash Flow from Financing Activities:				
Increase in Long-term Debts	(175)	(175)	875	150
Interest on Loan	(228)	(385)	(892)	(1,019)
	(45)	59	46	28
Cash & Cash Equivalent at the beginning of the Period	133	88	147	133
Cash & Cash Equivalent at the end of the Period	88	147	193	221

An Alternative Form of Cash Flow Statement

Before preparation of Alternative Form of Cash Flow Statement it is necessary to present it algebrically.

Let P = Net Profit; D = Depreciation; I = Interest; T = Taxation; CA = Current Assets other than Cash and Cash Equivalents; 0 = Beginning of the period; CL = Current Liabilities; F = Fixed Assets; C = Capital; L = Long-term Debt; I = Interest on Loan;

Cg = Cost of Goods Sold; E = Expenses; R = Reserve Transfer; CF = Cash Flow during the Period (Net).

Now, it may be presented as follows:

CF = P + D + I + + R - (CA –) + (CL –) – - (F + D –) + (C –) + (L –) + I

= [{ S – (Cg + E) – D – I – } + D + I + + R } – (CA –) + (CL –) -] – (F + D –) + (C –) + (L –) +I

[As: P = S – (Cg + E) – D – I –]

= [{ S – (Cg + E) + R } – (CA –) + (CL –) -] – [(F + D – + [(C -) + (L -) + I]

2013: [{19,985 – (17,581 + 1,953) +96} – (-385 – 252 -28) + (668 – 123 – 17) – 32] – [294] + [0 – 175 -228} = (45).

2014: [{ 37,608 – (32,123 + 4,156) + 9 } – (3,406 + 2,104 + 45) + (– 4,739 – 1,767 – 25) + 27] – [1,722] + [0 – 175 – 385] = 59.

2015: [{64,225 – (56,105 – 5,940) + (- 8) } – (5,344 + 3,951 + 70) + (– 7,266 – 1,960 -98) – 311] – [1,757] + [875 - 892] = 46.

2016: [{ 73400 – (64,120 + 6,789) + 513} – (1,850 + 1,240 + 41) + (– 1,991 - 740 – 35) – 462] – [1,280] + [150 – 1,019] = 28.

The Cash Flow Statement in Alternative Form has been shown in Exhibit 4.

Exhibit 4: Statement of Cash Flows for ABC Co. (000's) - An Alternative Form

	2013	2014	2015	2016
Sales	19,985	37,608	64,225	73,400
Cost of Goods Sold (Excluding Depreciation)	(17,581)	(32,123)	(56,105)	(64,120)
Gross Profit	2,404	5,485	8,120	9,280
Administrative & Selling Expenses	(1,953)	(4,156)	(5,940)	528
Transfer to Reserve	96	9	(8)	513
Operating Profit Before Working Capital Changes	547	1,338	2,172	3004
Increase in Inventories	385	(3,406)	(5,344)	(1,850)
Increase in Receivables	252	(2,104)	(3,951)	(1,240)
Increase in Prepaid Expenses	28	(45)	(70)	(41)
Increase in Short-term Loan	(668)	4,739	7,266	1,991
Increase in Accounts Payable	123	1,767	1,960	740
Increase in Outstanding Expenses	17	25	98	35
Tax Paid	684 (32)	2,314 27	2,131 (311)	2,639 (462)
Net Cash Flow from Operating Activities	652	2,341	1,820	2,177
Cash Flow from Investing Activities: Purchase of Fixed Assets	(294)	(1,722)	(1,757)	(1,280)
Cash Flow from Financing				
Increase in Long-term Debts	(175)	(175)	875	150
Interest on Loan	(228)	(385)	(892)	(1,019)
	(45)	59	46	28
Cash & Cash Equivalent at the beginning of the Period	133	88	147	193
Cash & Cash Equivalent at the end of Period	88	147	193	221

Growth Approach and Cash Flow

Now, it is the time to find out the cash flow statement by applying growth rate. Growth rate has been determined here by considering sales as the basis of growth. Other bases or methods of computation of growth (Majumdar, 1986) may be taken into consideration shown elsewhere. The 4- year period growth starting from 2012 and ending at 2016 are given below:

2012 - Rs 19,327; 2016 - Rs 73,400; Growth period - 4 Years.

Annual Growth rate is to be determined by applying the following formula:

$= [(f/s)^{1/y} - 1] \times 100$

[Where: g = Annual Growth rate; f = final value = 73,400; s = starting value = 19,327;

Y = No. of years = 4 years.]

The calculation of Annual Growth Rate has shown below:

$g = (73,400/ 19,327)^{1/4} - 1] \times 100$

$= (1.40 – 1) \times 100 = 40\%.$

The Income Statement, Balance Sheet and Cash Flow Statement of the entity under Growth Approach have been shown in Exhibit 5, Exhibit 6 and Exhibit 7 respectively.

Exhibit 5: Income Statement under Growth Approach for ABC Co. (000's)

	2012	2013	2014	2015	2016
Sales	19,327	27,058	27,979	52,651	89,915
Cost of Goods Sold	(16,807)	(23,530)	(24,613)	(44, 972)	(8,547)
Gross Profit	2,520	3,528	3,366	7,679	11,368
Administrative & Selling Expenses	(1,806)	(2,528)	(2,734)	(5,818)	(8,316)
Depreciation	(266)	(372)	(388)	(451)	(510)
Operating Profit	448	628	244	1,410	2,542
Interest	(385)	(228)	(385)	(892)	(1,019)
Net Profit before Taxes	63	400	(141)	518	1,523
Income Taxes	(32)	(200)	71	(259)	(762)
Net Income	31	200	(70)	259	761

Exhibit 6: Balance Sheet under Growth Approach for ABC Co. (000's)

	2012	2013	2014	2015	2016
Assets					
Cash	133	88	147	193	221
Inventory	4,585	6,419	5,880	10,648	18,130
Receivables	2,877	4,028	3,675	6,621	12,152
Prepaid Expenses	203	175	220	290	331
Current Assets	7,798	10,710	9,922	17,752	30,834
Net Fixed Assets	3,238	4,533	4,557	6,517	8,467
Total Assets	11,036	15,243	14,479	24,269	39,301
Liabilities					
Short-term Loan	2,597	3,636	2,701	9,335	19,508
Accounts Payable	1,330	1,862	2,034	4,508	7,252
Income Tax Payable	32	200	(71)	259	762
Outstanding Expenses	105	122	147	245	280
Current Liabilities	4,064	5,820	4,811	14,347	27,802
Long-term Debts	525	350	175	1,050	1,200
Total Liabilities	4,589	6,170	4,986	15,397	29,002
Shareholders' Fund	6,447	9,073	9,493	8,872	10,299
	11,036	15,243	14,479	24,269	39,301
Shareholders' Fund:					
Capital	5,000	5,000	5,000	5,000	5,000
Reserves	1,416	3,842	4,332	3,452	4,117
Profit & Loss A/C	31	231 (31+200)	161 (231-70)	420 (161+259)	1,182 (420+762)

Exhibit 7: Statement of Cash Flows under Growth Approach for ABC Co. (000's)

	2013	2014	2015	2016
Sales	27,058	27,979	52,651	89,915
Cost of Goods	(23,530)	(24,613)	(44,972)	(78,547)
Gross Profit	3,528	3,366	7,679	11,368
Administrative & Selling Expenses	(2,528)	(2,734)	(5,818)	(8,316)
Reserve: Transfer	2,426	490	(880)	665
Operating Profit before Working Capital Changes	3,426	1,122	981	3,717
Increase in Inventories	(1,834)	539	(4,768)	(7,482)
Increase in Receivables	(1,151)	353	(2,946)	(5,531)
Increase in Prepaid Expenses	28	(45)	(70)	(41)
Increase in Short-term Loan	1,039	(935)	6,634	10,173
Increase in Accounts Payable	532	172	2,474	2,744
Increase in Outstanding Expenses	17	25	98	35
	2,057	1,231	2,403	3,615
Tax Paid	(32)	(200)	71	(259)
Net Cash from Operating Activities	2,025	1,031	2,474	3,356
Cash Flow from Investing Activities:				
Purchase of Fixed Assets:				
(4,533+372-3,238)	(1,667)			
(4,557+388-4,533)		(412)		
(6,517+451-4,557)			(2,411)	
(8,467+510-6,517)				(2,460)
	358	619	63	896
Cash Flow from Financing Activities:				
Increase in Long-term Debts	(175)	(175)	875	150
Interest on Loan	(228)	(385)	(892)	(1,019)
	(45)	59	46	27
Cash at the beginning of the year	133	88	147	193
Cash at the end of the year	88	147	193	221

In Exhibit 5, growth has been assumed to be changed based on previous year's figures in case of Sales, Cost of Goods Sold and Depreciation. Income Taxes have been calculated on the basis of Net Profit before Taxes as shown in Profit & Loss Account by applying Growth Approach. So far as Loan is concerned, no change has been assumed here. As Loan remains constant, interest on same also has not also been changed during that period.

Again, it has also been assumed that Inventory, Receivables', Short-term Loan and Payables have been developed at the same growth rate but based on last year's figures, i.e., growth of individual year. In case of Net Fixed Assets, it has been assumed, that these figures have been changed at par with the projected Sales Growth but based on last years' figures.

Cash Flow Statement and Accounting Ratios

In the recent different cash flow ratios have been discussed in several accounting literature in many countries, particularly where the preparation of cash flow is mandatory in nature. However, no convincing set of cash flow ratios has been put forward so far where an opinion may be formed without facts as proof for the evaluation of the cash flow statement. It may be said that some users may use a set of financial ratios for a particular purpose, whereas another person may use a completely different set of ratios for the same purpose. As a result, different financial ratios, when used for a particular purpose of comparison of results, may be found to be unnecessarily critical (Gombola & Ketz, 1983).

It may be noted in this connection that cash-based performance ratios is not a new idea in accounting literature. The main problem that would be faced by the accountants at that time was non-availability of cash flow data which might be required to be used for a specific purpose. Nowadays, the data supplied by cash flow statement may be successfully used to evaluate the performance of an entity. That is why it has been rightly pointed out that if cash flow information is useful but remains unused, the effective conclusion that may be drawn is that the users are not using available data in a proper manner (Carslaw & Mills, 1991).

A number of suggestions have been put forward by many authors to use cash flow ratios for the proper evaluation of an entity's performance. Giacomino and Mielke (1993) have suggested a set of nine cash flow ratios that can be used effectively to fulfill the said need. They, however, used the cash flow ratios to evaluate the performance of U.S. companies in the chemical, food and electronic industries which almost cover the majority of the industries there. They used three-year averages for the ratios per industry.

Out of the nine ratios suggested by Giacomino and Mielke (1993), we have used eight on the basis of availability of data for the purpose of performance evaluation by using the operating activities which may be treated as the primary activities of an entity. The components and interpretation of such ratios are discussed below. Cash flow ratios including ratios relating Growth Approach are shown in Exhibit 8.

Exhibit 9 shown here presented a summarized form Cash Flow ratios including Ratios relating to Growth approach.

Exhibit 8: Statement Showing Cash Flow Ratios Including Ratios Relating to Growth Approach

Sufficiency Ratios

Cash Flow Ratios	Cash Flow Ratios applying Growth Approach
1. Cash Flow Adequacy $= \frac{\text{CFFO}}{\text{Long-term debt+purchase of Assets+ Dividends paid}}$	
2013 : $\frac{652}{350+294+0} = \frac{652}{644} = 1.01$	2013 : $\frac{2,025}{350+1,667+0} = \frac{2,025}{2,017} = 1.00$
2014 : $\frac{2,341}{175+1,712+0} = \frac{2,341}{1,887} = 1.24$	2014 : $\frac{1,031}{175+412+0} = \frac{1031}{587} = 1.76$
2015 : $\frac{1,820}{1,050+1,757+0} = \frac{1,820}{2,807} = 0.65$	2015 : $\frac{2,474}{1,050+2,411+0} = \frac{2,474}{3,461} = 0.71$
2016 : $\frac{2,177}{1,200+1,280+0} = \frac{2,177}{2,480} = 0.87$	2016: $\frac{3,356}{1,200+2,460+0} = \frac{3,356}{3,660} = 0.92$

2. Long-Term Debt Repayment

$$= \frac{\text{Long-term debt Payments}}{\text{CFFO}}$$

$2013: \frac{350}{652} = 0.54$ $2013: \frac{350}{2,o25} = 0.17$

$2014: \frac{174}{2,341} = 0.07$ $2014: \frac{175}{1,031} = 0.17$

$2015: \frac{1,050}{1,820} = 0.58$ $2015: \frac{1,050}{2,474} = 0.42$

$2016: \frac{1,200}{2,177} = 0.55$ $2016: \frac{1,200}{3,356} = 0.36$

3. Reinvestment

$$= \frac{Purchase\ of\ Assets}{CFFO}$$

$2013: \frac{294}{652} = 0.45$ $2013: \frac{1,657}{2,025} = 0.8217$

$2014: \frac{1,712}{2,341} = 0.73$ $2014: \frac{412}{1,031} = 0.40$

$2015: \frac{1,757}{1,820} = 0.97$ $2015: \frac{2,411}{2,474} = 0.97$

$2016: \frac{1,280}{2,177} = 0.59$ $2016: \frac{2,460}{3,356} = 0.73$

4. Debt Coverage

$$= \frac{Total\ Debt}{CFFO}$$

$2013: \frac{3,827}{652} = 5.87$ $2013: \frac{6,170}{2,025} = 3.05$

$2014: \frac{10,521}{2,341} = 4.49$ $2014: \frac{4,986}{1,031} = 4.84$

$2015: \frac{20,871}{1,820} = 11.47$ $2015: \frac{15,397}{2,744} = 5.98$

$2016: \frac{23,853}{2,177} = 10.96$ $2016: \frac{29,002}{3,356} = 8.64$

5. Impact of Depreciation Write Off :

$= \frac{Depreciation+Amortisation}{CFFO}$

2013 : $\frac{277+0}{652}$ = 0.42

2014 : $\frac{322+0}{2,341}$ = 0.14

2015 : $\frac{364+0}{1,820}$ = 0.20

2016 : $\frac{416+0}{2,177}$ = 0.19

2013 : $\frac{372+0}{2,025}$ = 0.18

2014 : $\frac{388+0}{1,031}$ = 0.38

2015 : $\frac{451+0}{2,474}$ = 0.18

2016 : $\frac{510+0}{3,356}$ = 0.15

6. Cash Flow to sales

$= \frac{CFFO}{Sales}$

2013 : $\frac{652}{19,985}$ = 0.033

2014 : $\frac{2,341}{37,608}$ = 0.062

2015 : $\frac{1,820}{64,225}$ = 0.028

2016 : $\frac{2,177}{73,400}$ = 0.030

2013 : $\frac{2,025}{27,058}$ = 0.075

2014 : $\frac{1,031}{27,979}$ = 0.037

2015 : $\frac{2,474}{52,651}$ = 0.047

2016 : $\frac{3,356}{89,915}$ = 0.037

7. Operating Index

$= \frac{CFFO}{Income\ from\ Continuing\ Operation}$

2013 : $\frac{652}{(27)}$ = (24.15)

2014 : $\frac{2,341}{311}$ = 7.53

2015 : $\frac{1,820}{462}$ = 3.94

2016 : $\frac{2,177}{528}$ = 4.12

2013 : $\frac{2,025}{200}$ = 10.13

2014 : $\frac{1,031}{(70)}$ = (14.73)

2015 : $\frac{2,474}{259}$ = 9.55

2016 : $\frac{3,356}{761}$ = 4.41

8. Cash Flow Return on Assets

$$= \frac{CFFO}{Total\ Assets}$$

$$2013: \frac{652}{10,343} = 0.063 \qquad 2013: \frac{2,025}{15,243} = 0.133$$

$$2014: \frac{2,341}{17,357} = 0.135 \qquad 2014: \frac{1,031}{14,479} = 0.071$$

$$2015: \frac{1,820}{28,161} = 0.065 \qquad 2015: \frac{2,474}{24,269} = 0.102$$

$$2016: \frac{2,177}{32,184} = 0.068 \qquad 2016: \frac{3,356}{39,301} = 0.085$$

Exhibit 9: Summarized Cash Flow Ratios Including Ratios Relating to Growth Approach

Sufficiency Ratios

	Cash Flow Ratios				Cash Flow Ratios applying Growth Approach			
	2013	**2014**	**2015**	**2016**	**2013**	**2014**	**2015**	**2016**
Cash Flow Adequacy	1.01	1.24	0.65	0.87	1.00	1.76	0.71	0.92
Long-term Debt Repayment	0.54	0.07	0.58	0.55	0.17	0.17	0.42	0.36
Reinvestment	0.45	0.73	0.97	0.59	0.82	0.40	0.97	0.73
Debt Coverage	5.87	4.49	11.47	10.96	3.05	4.84	5.98	8.64
Impact of Depreciation Written Off	0.42	0.14	0.20	0.19	0.18	0.38	0.18	0.15
Cash Flow to Sales	0.033	0.062	0.028	0.030	0.075	0.037	0.047	0.037
Operating Index	(24.15)	7.53	3.94	4.12	10.13	(14.73)	9.55	4.41
Cash Flow Return on Assets	0.063	0.135	0.065	0.068	0.133	0.071	0.102	0.085

INTERPRETATIONS

The cash flow adequacy ratios in initial years show stronger cash position than that of last two years. Both Cash Flow ratios and Growth Approach ratios are very close to each other, i.e., the ability to generate cash to meet obligations is more or less same in both the cases.

The ability to repay long-term debts is stronger in Cash Flow ratios with the exception of the year 2014 when it is comparatively weaker. When reinvestment is considered, Cash Flow ratios are stronger than Growth Approach ratios.

Debt coverage ratio indicates time length required at the current level of cash from operations to discharge all debts. In case of cash flow ratios, this ratio shows a steady growth

over the period covered; whereas in growth approach, this ratio shows a weaker trend than that of cash flow ratio.

In case of depreciation write off, it evaluates the percentage of cash from operating activities due to adjustments and amounts written off. Cash flow indicates more or less same trend whereas it is a bit higher in 2013. In Growth Approach, it is poorer almost in all the years compared to Cash Flow ratios. It may be noted that Cash Flow ratios are stronger in all the years other than 2014.

Cash Flow to sales ratio indicates proportion of each rupee out of sale from operating activities which is realized in cash. Both cash flow and growth approach ratios have shown almost the same trend. It shows weaker cash flow ratios in all the years other than 2014.

Operating Index ratio compares cash flow from operating activities with income from continued activities. It shows a negative trend in both the cases at least for one year. This particular ratio shows a trend in 2013 and 2014 which may said to be widely dispersed in nature, but Growth Approach ratios are stronger in other years.

Cash Flow return on assets evaluates cash flow from assets utilized. In order to measure cash flow return on assets, ratios measured under Growth Approach are stronger in all the years other than 2014.

To sum up, it may be said that Cash Flow ratios and ratios under Growth Approach method have shown improvement all through other than the year 2014. Some of the Cash Flow ratios are weaker and some are stronger in nature over Growth Approach ratios. However, it may be said that ratios under Growth Approach have shown overall stronger result than that of Cash Flow ratios.

CONCLUSION

It is evident from earlier studies that evaluation based on certain cash flow ratios has better analytical power over ordinary ratio analysis. The ratios that have been considered here when used in conjunction with the Growth Approach may lead to show a good indication of the financial strength and weaknesses of a concern. Again, it can be said that financial distress or bankruptcy of any concern can be predicted well in advance if properly analyzed (Barua & Saha, 2015). Though this paper has concentrated on operating activities, we cannot ignore the importance of investing and financing activities. But, it is interesting to note here that both investing and financing activities support the operating activities to a moderate extent. Above all, what is more interesting to note here that cash flow ratios with or without Growth Approach show more or less the same trend.

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