

## Is Depreciation A Source of Funds? : A Critical Analysis

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### *Abstract*

*Depreciation is one of the most important expenditure, which is charged, in the financial accounting and income tax accounting. But since very beginning it has been a matter of controversy whether depreciation is a source of fund or not. It is obvious that any change in the position of fund will be only due to either change in current assets or current liability. In this context depreciation is not a source of funds. But on the other hand the amount of depreciation affects to the tax saving which makes available some additional funds in the hands of the Finance manager such an additional fund can be called as depreciation-generated funds. Though some theoretical work in this context has been done by the previous researchers but in the present research paper efforts has been made to critically examine this issue that “depreciation is a source of fund or not”. For proper justification of the theme a case study of some textile mills in Rajasthan have been undertaken. It was found that prima facie the depreciation is not a source of funds but certainly it provides some additional cash funds in the hands of financial manager, which made the depreciation accounting important for the research in the said context. It is expected that this research will pursue further research in this regard.*

**Key Words:** *Depreciation, Fund, Tax Shield Mechanism,*

### **INTRODUCTION**

Depreciation is one of the most important expenditure, which is shown in the final accounts of a business entity. According to American Encyclopedia depreciation, in accounting is a decrease in the value of, or, loss of usefulness of fixed assets because of wear and tear, action of the elements, accidents, inadequacy, or obsolescence<sup>1</sup>. According to Harlod Bierman depreciation accounting is generally defined as a systematic procedure for allocating the cost of long-lived assets over its useful life<sup>2</sup>. According to the Finance Manager's view point depreciation is a source of funds for financing the financial requirement of firm. Logic behind this view is that depreciation is non-cash cost and hence provision for depreciation is merely transfer of funds from one pocket of the firm to the other. As this article is limited to the discussion about depreciation as a source of funds therefore finance manager's view about depreciation has been emphasized.

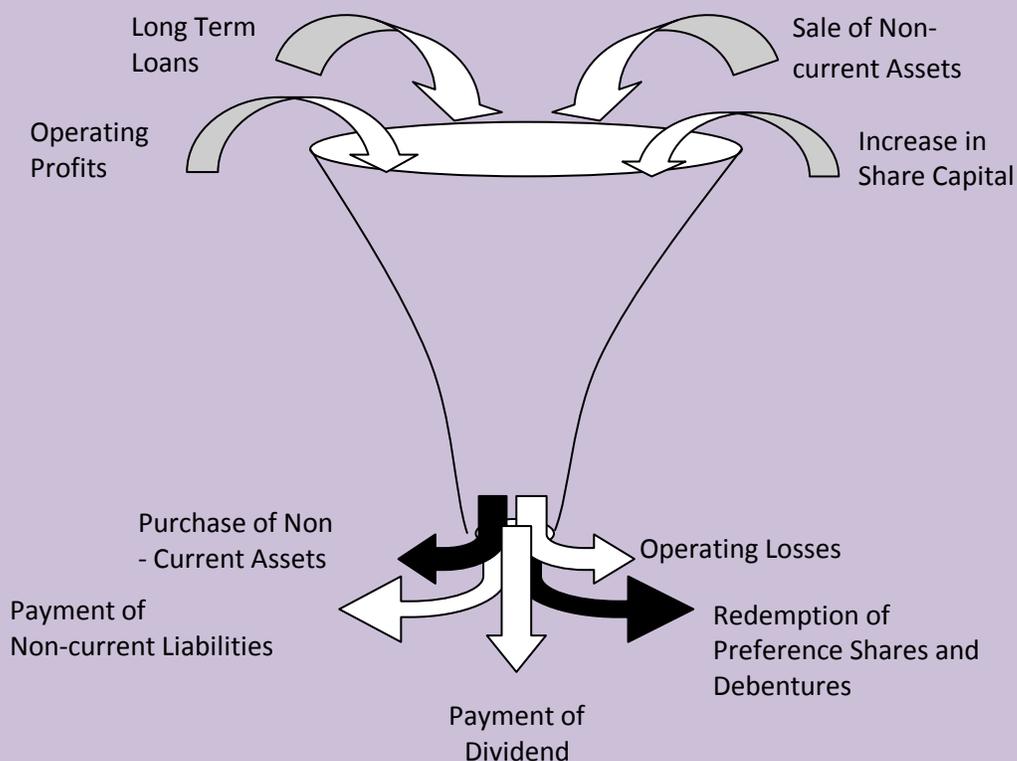
The term “expired capital outlay” is an exact definition of that which the depreciation is intended to imply when used in its commercial sense. Like all other business expenses, depreciation is

also an expense as expired cost. It is charged against gross revenue of the period in which the cost of fixed asset degenerate into expense as expired cost. But such charge of depreciation creates an altogether different situation as against the effect of charging other business expenses as depreciation is a 'non-cash consuming' expense unlike other expenses. Since there is no outflow of cash or other liquid assets in respect of depreciation, this gives rise to the impression that depreciation when charged to gross revenue serves as a source of fund.

Since very beginning it has been a matter of controversy whether depreciation is a source of fund or not. But before going into further discussion it seems better to first know about the concept of fund.

In specific term any change in net working capital will show flow of funds, which may be either inflow or outflow. Increase in net working capital in a period of time is said as inflow of fund or vice versa. Further those items, which increase the fund, called as source of fund and those, which decrease the fund called as an application of fund. It is obvious that any change in the position of fund will be only due to either change in current assets or current liability.

#### Exhibit-I: Sources and Uses of Funds



Whether deprecation is a source of fund or not is little bit doubtful, as deprecation is neither current asset nor current liability. However matter is worth consideration, analysis and discussion. As every discussion has two results i.e. one in favour and second in against such an arguments. The same case is with deprecation that is one group considers deprecation as a source of fund and another group don't accept this view. Therefore in this article both the views have been presented to reach at conclusion. Further a case study of some selected textile mills in

Rajasthan have been undertaken for proper justification of the concept. (If the numbers of mills have been increased or even some other industries were included the findings would be the same therefore only some mills have been selected)

### RESEARCH METHODOLOGY

The study is of analytical nature. The main source of data is annual reports of the companies under study. Other required information has been collected through relevant journals and refereed books.

### OBJECTIVES OF THE STUDY

The study has been undertaken with the following objectives

1. To find out whether depreciation is a source of funds or not.
2. To find out the reasons behind misconception about depreciation regarding source of funds.

### DEPRECIATION IS NOT A SOURCE OF FUNDS

The experts in the field of accounting hold this view. According to Harold Bierman, depreciation accounting will not affect the amount of funds on hand. The relationship of depreciation and fund is frequently misunderstood; it is being thought that depreciation is a source of funds<sup>3</sup>. Harold Bierman further states that it is often stated that funds are obtained from depreciation reserve. Leaving out the tax consequences, this is an incorrect observation. Funds are not generated by charging or accruing depreciation; they are created by sales<sup>4</sup>

In the opinion of the Institute of Chartered Accountants of India, depreciation does not generate funds, as the funds actually flow from the sales revenue. Depreciation involves neither the use of working capital, nor the insurance of current liability<sup>5</sup>.

Similarly, Harry G.Guthmann states that finance people have adopted the practice of adding such non-cash expenses to the net income and speaking of them as "Sources" of funds. The funds actually derive from sales and are available to the extent that a business collects enough from customers to cover the depreciation and other non cash expenses; it has so much cash that can be either to replace assets, to pay off debts, or to meet other corporate needs. The total funds generated by operations are said to be the net income plus these non-cash expenses<sup>6</sup>. Further Charles T. Horngren also states that depreciation expenses does not entail an outflow of current resources in the form of cash, which is the prime form of cash as well as of the prime form of working capital<sup>7</sup>. Actually the misunderstanding lies in the presentation of source of funds (See Table-1).

**Table-1: Presentation of Source of Funds**

Particulars	Amount (Rs.)	Amount (Rs.)
Sources:		
Net Income		43000
Add: Charges not requiring working capital		

-Depreciation	17000	
-Other (amortization of patents, etc.)	-----	17000
Total funds provided by operation		60000
Other Sources		-----

Unfortunately, the use of this shortcut method creates an erroneous impression that depreciation is, by itself, a source of funds. If that were really true a Corporation could merely double or triple depreciation charges when funds were badly needed. What would happen? Funds provided by operation would be unaffected; suppose in the above case depreciation is doubled then overall position will be as under (See Table- 2).

**Table-2: Analysis of Income Statement: Effect of Operations on Net Working Capital**

Particulars	Charging Normal Depreciation	Charging Twice of Normal Depreciation
Sales	200000	200000
Less: all expenses requiring working Capital (Detailed)	140000	140000
Net Funds Provided by operations	60000	60000
Less: Depreciation	17000	34000
Net Income before tax.	43000	26000

It can be easily concluded that depreciation is not a source of fund in as much as the funds are generated by sales and not by depreciation.

#### **CASE STUDY**

A case study of the following textile Mills have been undertaken to prove that depreciation is not a source of funds:

1. Bhilwara Spinners Limited, Bhilwara (Rajasthan)
2. BSL Limited, Bhilwara (Rajasthan)
3. Rajasthan Spinning and Weaving Mills Limited, Bhilwara (Rajasthan)
4. Sangam (India) Limited, Bhilwara (Rajasthan)

Year	Year	Bhilwara Spinners Ltd.	BSL Ltd.	Raj. S. & Weaving Mills Ltd.	Sangam (India) Ltd.
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		Total Funds	Total Dep.	Total Funds	Total Dep.	Total Funds	Total Dep.	Total Funds	Total Dep.
2003-04	1995-96	325.082	189.45	865.98	343.1	2507.98	2382.7	180.35	77.08
2004-05	1996-97	277.26	250.85	756.5	739.41	3085.59	2676.42	652.74	1020.51
2005-06	1997-98	350.62	255.43	960.64	889.39	4074.42	2800.97	908.35	605.66
2006-07	1998-99	-425.89	271.84	1252.55	978.39	4008.11	3454.00	905.48	667.7
2007-08	1999-00	-235.17	331.75	1260.02	960.03	4570.87	3944.00	1537.06	1531.44
2008-09	2000-01	-118.77	326.75	1409.13	925.44	4321.48	3875.00	1830.10	1817.85
2009-10	2001-02	-438.70	331.73	1181.90	965.81	3833.29	3979.00	1510.31	1067.38
2010-11	2002-03	-22.59	333.56	1211.43	1084.76	4364.88	4222.00	2087.83	1188.09
2011-12	2003-04	-137.28	337.36	1175.47	1062.36	4878.97	4281.00	2537.62	1612.87
2012-13	2004-05	-530.62	508.67	1022.94	948.44	4829.86	3514.00	3205.02	2037.18
	<b>Total</b>	<b>-956.06</b>	<b>3137.39</b>	<b>11096.56</b>	<b>8897.13</b>	<b>40475.45</b>	<b>35129.09</b>	<b>15354.86</b>	<b>11548.68</b>
	<b>Average</b>	-95.61	313.74	1109.66	889.71	4047.55	3512.91	1395.90	1049.88
	$\sigma$ (S.D.)	326.30	84.54	201.78	214.10	752.53	676.13	986.58	672.69

**Table-3: Total Funds from Operations after Tax**

Source: Prepared with help of Annexure: I to IV of Annual Reports of Companies

It can be observed through Table-3 that Bhilwara Spinners Ltd. has the highest funds from operations after tax Rs.350.62 lakhs (2005-06) while the lowest is Rs. (530.62) lakhs (2012-13). Actually the company has been running in the loss since 2006-07. It shows that depreciation can not increase the availability of funds and funds are generated through sales. In BSL Ltd. the highest funds was available Rs. 1409.13 lakhs (2008-09) while the lowest is Rs. 756.50 lakhs (2004-05). Rajasthan Spinning and Weaving Mills Ltd. has the highest funds Rs.4878.97 lakhs (2011-12) while the lowest is Rs.2507.98 lakhs (2003-04). As far as Sangam (India) Ltd. is concerned the highest fund was available Rs.3205.02 lakhs (2012-13) while the same was lowest Rs.180.35 lakhs (2003-04).

The main findings in the last three companies are that their funds from operations after tax have been increased due to increase in sales revenue and not due to increase in depreciation. Therefore it can be concluded that depreciation is not a source of funds because:

1. Depreciation is just like other expenses those are charged to revenue. It is simply cost of fixed assets over the useful life of the same.
2. The total of depreciation and net profits remain unchanged in spite of variation in the depreciation.
3. According to Horongren when a firm badly needed funds can not create funds by just charging the depreciation twice or thrice.
4. If there is no sale there will be no fund, no matter how big the charge of depreciation may be.
5. According to C.B. Flick<sup>8</sup> losses such as obsolete inventories, losses written off are added to net profit to find out funds from operations, so also depreciation. But they are recognized as source of funds.

### DEPRECIATION IS A SOURCE OF FUNDS

Contrary to the accounting point of view experts in the area of financial management are of the view that depreciation is a source of funds. There are basically two reasons for the difference in the views, the first one is that the accounting experts are pre-eminently occupied with the task of net income where as the experts in the field of financial management are pre-eminently occupied with the problem of the total amount of funds that it would be available for financing the fund requirement of the firm and the second one is due to non-cash nature of depreciation expenditure as there is difference between the accounting concept of net income and the financial concept of cash flows.

Hence due to tax shield mechanism depreciation indirectly contribute in the funds available in the hands of financial managers. As a result of this tax saving on depreciation it is treated as source of funds. Hence it can be said that it is not possible to increase the funds provided by operations by increasing the charges for depreciation but it is possible to increase the funds generated after taxes. The same can be better understood with the Table-4 (prepared with the help of Table-2). Table-4 shows that due to extra depreciation deduction of Rs. 17000, income tax reduces by Rs. 6800, which makes possible to keep more funds in the business for a longer period of time because of the postponements of income taxes.

It must be remembered that there is no freedom regarding depreciation accounting in the Income Tax Act. It is only allowed as per W.D.V. method and as per rates prescribed in the Income Tax Act, 1961. So financial manager can not affect the funds generated due to tax shield mechanism.

**Table-4: Effects of Depreciation Accounting on Net after Tax Inflow from Operations**  
(Value in Rs.)

Particulars	Charging Normal Depreciation	Charging Twice of Normal Depreciation
Net profit provided by operations	60000	60000

Less: Depreciation	17000	34000
Net Income before tax	43000	26000
Less: Income Taxes @ 40%	17200	10400
Net Income after tax.	25800	15600
Net Funds provided by operations	60000	60000
Less: Income Taxes	17200	10400
Net after tax inflow from operations	42800	49600

### CASE STUDY

A case study of the same four textile mills has been undertaken for finding out the effects on depreciation on availability of funds at hands due to tax shield mechanism. Although it has been proved in the previous section of “Depreciation is not a Source of Funds” that depreciation can not generate funds and therefore the amount of depreciation can not increase the amount of funds yet the amount of depreciation played a vital role in providing the funds available in hands due to tax shield mechanism. It can be observed through Table-5 that due to tax saving on depreciation charged, all the Mills were able to generate such an additional amount of funds.

**Table-5: Depreciation Generated funds due to Tax Shield Mechanism**

Year	Bhilwara Spinners Ltd.		BSL Ltd.		Raj. Spinning & Weaving Mills Ltd.		Sangam (India) Ltd.	
	Dep.Gen. Funds	Total Dep.	Dep.Gen. Funds	Total Dep.	Dep.Gen. Funds	Total Dep.	Dep.Gen. Funds	Total Dep.
2003-04	75.78	189.45	137.24	343.1	953.08	2382.7	30.83	77.08
2004-05	100.34	250.85	295.76	739.41	1070.57	2676.42	408.20	1020.51
2005-06	89.40	255.43	311.29	889.39	980.34	2800.97	211.98	605.66

2006-07	95.14	271.84	342.44	978.39	1208.90	3454.00	233.70	667.7
2007-08	116.11	331.75	336.01	960.03	1380.40	3944.00	536	1531.44
2008-09	114.36	326.75	323.90	925.44	1356.25	3875.00	636.25	1817.85
2009-10	116.11	331.73	338.03	965.81	1392.65	3979.00	373.58	1067.38
2010-11	116.75	333.56	379.67	1084.76	1477.70	4222.00	415.83	1188.09
2011-12	118.08	337.36	371.83	1062.36	1498.35	4281.00	564.50	1612.87
2012-13	178.03	508.67	331.95	948.44	1229.90	3514.00	713.01	2037.18
<b>Total</b>	1120.10	<b>3137.39</b>	3168.12	<b>8897.13</b>	12548.14	<b>35129.09</b>	4123.88	<b>11548.68</b>
Average	112.01	313.74	316.81	889.71	1254.81	3512.91	374.90	1049.88
$\sigma$ (S.D.)	27.29	84.54	67.87	214.10	199.19	676.13	235.11	672.69

Source: Prepared with help of Annexure: I to IV of Annual Reports of the Companies

The Table-5 clearly shows that such a fund is dependent on the amount of depreciation charged. As per WDV method allowed under the Income Tax Act. 1961, the depreciation amount charged every year should be decreased & therefore tax benefit on such an amount will also be decreased. But Table-5 shows that instead of decreasing the depreciation in later years it has been increased, the reason being only that all the Companies' invest in fixed assets during the succeeding years. Therefore the depreciation-generated funds due to tax shield mechanism has been lowest in the initial years in all the Companies while the highest & average funds due to tax shield mechanism were Rs. 178.03lakhs (2012-13)& Rs. 112.01 lakhs in Bhilwara Spinners Ltd., Rs.379.67 Lakhs (2010-11) & Rs.376.81 lakhs in BSL Ltd., Rs. 1498.35 lakhs (2011-12) & Rs.1254.81 lakhs in Rajasthan Spinning & weaving Mills Ltd. & Rs.636.25 lakhs (2008-09)& Rs.454.78 lakhs in Sangam (India) Ltd. respectively.

Table-6 further shows the correlation coefficient between depreciation & total funds generated and depreciation & depreciation generated funds. It clearly shows that there is high degree of correlation between total funds from operation after tax and total depreciation charged which explain that there is effect of depreciation on funds generation though due to tax effect. Correlation between depreciation- generated funds and total depreciation charged is also of very high degree of positive correlation, which explain that, how depreciation generate funds due to tax effect.

**Table-6: Correlation Coefficient between Funds & Depreciation**

Correlation between	Bhilwara Spinners Ltd.	BSL Ltd.	Raj.S.&Weaving Mills Ltd.	Samgam (India) Ltd.

Total Funds from Operation & Dep. Charged	-0.73	0.6478	0.7899	0.9043
Dep.-generated Funds & Dep. Charged	0.9896	0.9900	0.9846	0.9979

Source: Prepared with help of Table-3 & 5

### INVESTMENTS OF DEPRECIATION-GENERATED FUNDS

Such a fund can be invested either internally or externally. Mainly the following facts should be considered before selecting any means of investments for rational investment decision.

1. Cost of Depreciation-Generated Funds: - It can be calculated as follows:
  - Average cost of capital: - Weston and Brigham<sup>9</sup> suggest that cost of depreciation-generated funds is approximately equal to the average cost of capital before outside equity is used.
  - Opportunity cost: - According to this view the cost of depreciation-generated funds is equal to the opportunity cost of the retained earnings. Van Horne<sup>10</sup> supports this view by stating that cost of depreciation-generated funds is not equal to the "firms weighted average cost of capital"
2. Rate of Return: It is the net rate of return, which is derived by reducing the income tax and expense made on income from the investment.
3. Flexibility: It means easy approach to convert investment into cash.
4. Risk Factor: It includes loss due to sale of investment, price fluctuation, income uncertainty, etc.

Study reveals that Management of the various Mills suggests investing the depreciation-generated funds internally due to the following reasons:

1. Management of BSL Ltd, Bhilwara Spinners and Rajasthan Spinning & Weaving Mills Ltd. stated that depreciation-generated funds are used as working capital due to Management policy.
2. Management of all the Mills under study further stated that cost of working capital through outside borrowings is much higher than the income earned through investment of funds generated through depreciation outside.
3. Management of Rajasthan Spinning & Weaving Mills Ltd. gave a very rational and solid reason behind using the depreciation-generated funds as working capital that funds requirement at the time of replacement are available easily at lower cost than income generated with help of working capital which is provided through depreciation-generated funds.

Although it seems rational to invest the depreciation-generated funds internally but it was observed that a number of other textile mills viz. Bijay Mills and Rajasthan State Co-Operative Spinning & Ginning Mills Federation Ltd. (SPINFED) Spinning Unit, Gulabpura didn't possess

sufficient funds for replacement of fixed assets. That is why some suggestion are given by the various Mills as under:

1. According to Bijay Cotton Mills Bijay Nagar, depreciation-generated fund should be invested outside in fixed earning securities so that sufficient funds can be provided at the time of replacement including increased cost of replacement.
2. Rajasthan State Co-Operative Spinning & Ginning Mills Federation Ltd. (SPINFED) Spinning Unit, Gulabpura and Gangapur also of the same view that such a funds should be invested outside but the same should be used as working capital if business is earning more than market earning rates.
3. Rajasthan Spinning & Weaving Mills Ltd, (Bhilwara) Suggest that depreciation-generated funds should be only used for capital expenditure purpose.
4. Sangam (India) Ltd (Bhilwara), BSL Ltd (Bhilwara), Bhilwara Spinners Ltd. (Bhilwara) suggested that depreciation-generated funds should be used as working capital until business earns at higher rates than average market interest rates.
5. Modern Threads (India) Ltd, (Bhilwara) also suggest that depreciation-generated funds should be used for modification of plant and machinery.

## **CONCLUSIONS**

Apparently depreciation is not a source of funds. But due to tax shield mechanism it provides some additional funds in the hands of financial manager. Whatever funds provided by the depreciation accounting can be used as follows:

- A. (i) It should be used as working capital if business is earning more than earning on market securities.  
(ii) If cost of borrowed working capital is more than expected earning of funds so invested outside business.
- B. It should be invested outside business in low risk, certain income securities so that sufficient fund can be provided at the time of replacement of fixed assets.

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