



# Performance Appraisal Of Hindustan Zinc Through Free Cash Flow Analysis

Sanjay Kumar Panchal

Assistant Professor

Department of Economic Administration & Financial Management, Faculty of Commerce

<sup>1</sup>Government Commerce College, Kota, India

**Abstract:** An evaluation of Hindustan Zinc's free cash flow status is made in this study. This study aids in illuminating the reasons behind the company's cash inflows and outflows and provides an in-depth examination of the influence these factors have on the business's performance, enabling insightful recommendations to be made to enhance it going forward. The essential resource required to maintain a business's continuing operation is cash. Cash management entails organizing cash inputs and outflows, evaluating the benefits of cash, establishing effective systems and practices, and planning cash movements. The current research study has employed free cash flow as a technique for the scientific assessment of any business concern's performance. This research aims to investigate how the performance of the company is affected by free cash flow and its varying characteristics. The information is gathered from Hindustan Zinc's electronic annual reports, which span five years, from 2018–19 to 2022–2023; a single sample T-test is used for data analysis.

**Index Terms** - Free Cash Flow; Free Cash Flow to Equity and to the Firm, Performance Appraisal, and Hindustan Zinc

## I. INTRODUCTION

Measures of free cash flow indicate the volume of operating cash that remains after a company settles down its outstanding obligations and dividends. An organization can find options for enhancing shareholder value by raising dividends, manufacturing innovative products, paying down debt, or repurchasing stock with free cash flow. While an ongoing drop in free cash flow anticipates concerns ahead for the business, which may force it to turn to internal investments for growth and operations, a boost in free cash flow shows sustained growth in the company's earnings. But, since it may result from substantial expenditures on capital, briefly negative and falling free cash flow is not considered as troublemakers. Determining the root cause of the rise or decline in free cash flow is significant. A key indicator to evaluate the potential for growth of a business is free cash flow. The final say on how to reinvest extra cash in the firm to increase earning potential or use it for investor benefits rests with the management of the company. A legal entity needs sufficient funds on hand to reinvest in the business in order to grow. If this isn't the case, the business won't be able to increase its earnings per share. Financial difficulties arise even for the most successful companies when they have inadequate cash flow. Those in charge of handling the company's cash flows have to legitimate repatriation of the extra funds for the benefit of its investors. When a corporation has a deficit or dwindling cash flow, it ought to attempt to generate more its revenues in order to optimize the potential for earnings growth

## **I. REVIEW OF THE LITERATURE**

"Cash forecast is used as a method to predict future cash flow because it deals with the estimation of cash flow (i.e., cash inflows and outflows) at different stages and offers the management an advance notice to take appropriate and timely action," stated Hartely, W.C.F. and Meltzer, Y.L. (1967). "The various collection and disbursement methods can be employed to improve cash management efficiently since they constitute two sides of the same coin," stated Orgler, Y.E. (1970). The overall impact of cash management depends on by both collections and disbursements. In the words of Rama Moorthy (1978), "deposit float is the total amount of customer checks that the business has not yet been able to use." He added that as checks often take longer to clear in India than in most other nations, deposit float might anticipate huge chances."Cash is an oil to lubricate the ever turning wheels of business; without it, the process grinds to a stop," said Bottan, S.E. (2000). He went on to say that a cash shortage has costs associated with it, whether they are anticipated or not. Short costs are the expenditures incurred as a result of a scarcity.

## **II. RESEARCH GAP**

As The most prominent integrated zinc manufacturing company in India and the second- largest internationally is identified as Hindustan Zinc. Currently, its fully integrated zinc operations constitute around 75% of the primary zinc market in India. Having a yearly production capacity of 800 MT, Hindustan Zinc Limited is the third-biggest producer of silver in the entire world. A summary of previous investigations demonstrates that no such study or research has been conducted regarding any mining firm up until this the point, covering the years 2018 to 2023. It is important to find out how free cash flows impact HZL's performance.

## **III. RATIONALITY OF THE STUDY**

A sufficient flow of cash is required for satisfying the financial needs of the company in question. Since cash is productive and indispensable to everyday company operations, it is especially important to regulate the volume of cash that an entity possesses at all times. A company's cash requirements have to be projected for the purpose to effectively handle its cash flows, seek financing for a brief period, and execute cash payments. A company can predict its cash surplus or deficit for any planning period using the assistance of appropriate cash planning, and any additional funds should be invested in short-term marketable securities in order to make profits. As a result, this study aims to provide a comprehensive evaluation of the Hindustan Zinc with respect to its free cash flow

## **IV. THE TIME DURATION OF THE STUDY**

The current study encompasses five years, from 2018–19 to 2022–2023 (inclusive). Five years have been determined to be sufficient to examine whether enough free cash flow was obtainable to equity as well as the company in order to assess Hindustan Zinc's free cash flow position based on the key variables.

## **V. THE AIM OF STUDY**

- to investigate a concept of free cash flow.
- To assess Hindustan Zinc's free cash flow to equity
- To measure Hindustan Zinc's free cash flow to the company
- To figure out how much impact free cash flow has on Hindustan Zinc's performance.

## **VI. THE STUDY'S LIMITATIONS**

Given that secondary data form the majority of the study, it is anticipated that the necessary study will include the following limitations- • Hindustan Zinc's performance will run out in 2023 after just five years. The limitations of this study will thus be any unusual patterns that occur before or after the designated period. This examination is solely based on financial data; non-financial elements are not taken into account. Certain information has been classified grouped and sub grouped in accordance with the study's specifications. • The company's website contains the annual reports, which serve as the sole basis for this investigation. Statuary news accounts, cash flow statements, and aggregated accounting records are all included in E annual reports.

## VII. THE STUDY'S HYPOTHESIS

H01: During the study period, there is no discernible difference in Hindustan Zinc's free cash flow to equity.  
H02: During the study period, there is no discernible difference in the flow of free cash to the firm of Hindustan Zinc.

## VIII. METHODOLOGY

Statistical data necessary for the study was compiled from Hindustan Zinc's annual reports. Additionally, there has also been utilization of statistical instruments which involves averages, percentages, graphical representation, coefficient of variation, and t-test.

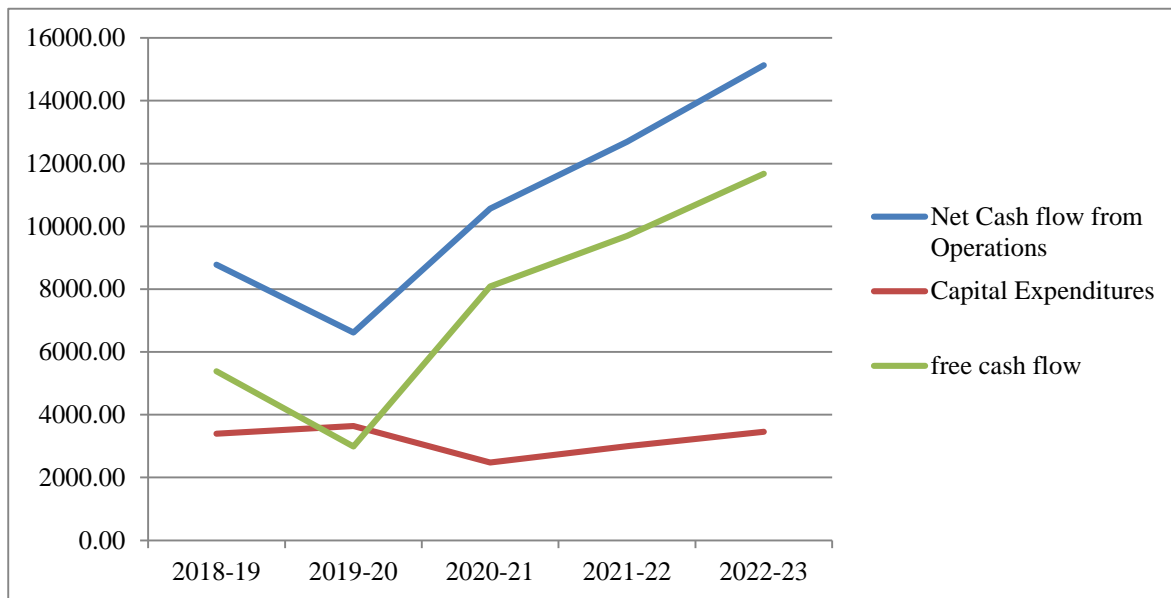
**An examination of the effect of free cash flow on Hindustan Zinc's performance:**-Using information obtained from the cash flow statements, a free cash flow analysis of HZ has been accomplished. The business's accomplishment has been assessed by considering a variety of parameters, such as free cash flow, free cash flow to equity, and free cash flow to firm. When considering a company's cash flow above what is needed for expansion at the typical present rate, free cash flow can be useful. Organization must make capital expenditures in order to continue existing, develop, and expand, and free cash flow takes these expenditures into consideration. The capacity of a company to make unannounced investments while sustaining financial flexibility is made conceivable by free cash flow. The formula used to calculate free cash flow is: Cash flow from operations less capital expenditures equals free cash flow, whereas cash flow from the operation demonstrates the volume of revenue pouring in from the company's going on, routine activities, such as manufacturing and marketing items or rendering services. It will never cover investment costs or long-term expenditures on capital. It is estimated in the following manner and is sometimes referred to as operating cash flow or net cash flow from operating operations. Operating cash flow (CFO) is equal to EBIT plus depreciation plus taxes. Capital Expenditure incorporates the costs which an entity suffers to upgrade or buy physical assets; these payments are crucial for its operation to boost its capacity or endure the scope of what it does.

Table 1: Statement of Free Cash Flow

year	net cash flow from operations	capital expenditures	free cash flow
2018-19	8781.00	3400.00	5381.00
2019-20	6621.00	3637.00	2984.00
2020-21	10567.00	2481.00	8086.00
2021-22	12691.00	2998.00	9693.00
2022-23	15133.00	3457.00	11676.00
Mean	10758.60	3194.60	7564.00
Standard deviation	3314.25	462.23	3444.40
COV %	30.81	14.47	45.54
Growth	72%	2%	117%

Source: Collected from the annual reports of Hindustan Zinc (2018-2023)

Figure 1. graphical representation of data used in table 1 data



Self-compiled through secondary data as a source

### Interpretation

According to Table 1, free cash flow peaked in 2022–2023 at 11676.00 crores, and it fell to its lowest point in 2019–20 at 2984.00 crores. Over the course of the research period, the free cash flows averaged positive. Over the course of the study, the average free cash flow was 7564.00 crores. The free cash flow's coefficient of variation was 45.54%, and its standard deviation was 3444.40. From 2008 to 2023, the free cash flow growth rate was almost 117%.

**Free cash flow to the owners:**—The adjusted free cash flow for debt cash flows is essentially the free cash flow to equity because proprietors or users are the only ones qualified for the company's residual. In simple terms, net income, debt, working capital, and capital expenses constitute free cash flow to equity. The income statement illustrates net income; the cash flow statement depicts expenditures on capital under the cash flow from investment operations portion; the cash flow affirmation reveals working capital under the cash flow from operating activities section; and the cash flow statement indicates debt or net borrowings under the cash flow from financing operations section.

The free cash flow to equity ratio is used to figure out whether payouts of dividends and stock repurchases come from free cash flow to equity or from other sources of funding. If the amount paid for the buyback of shares or the payment of dividends falls short of than the free cash flow to equity, the company has utilized its existing capital or loans to fund its business operations. Cash flow from operations less capital expenditure plus net borrowings equals free cash flow to equity.

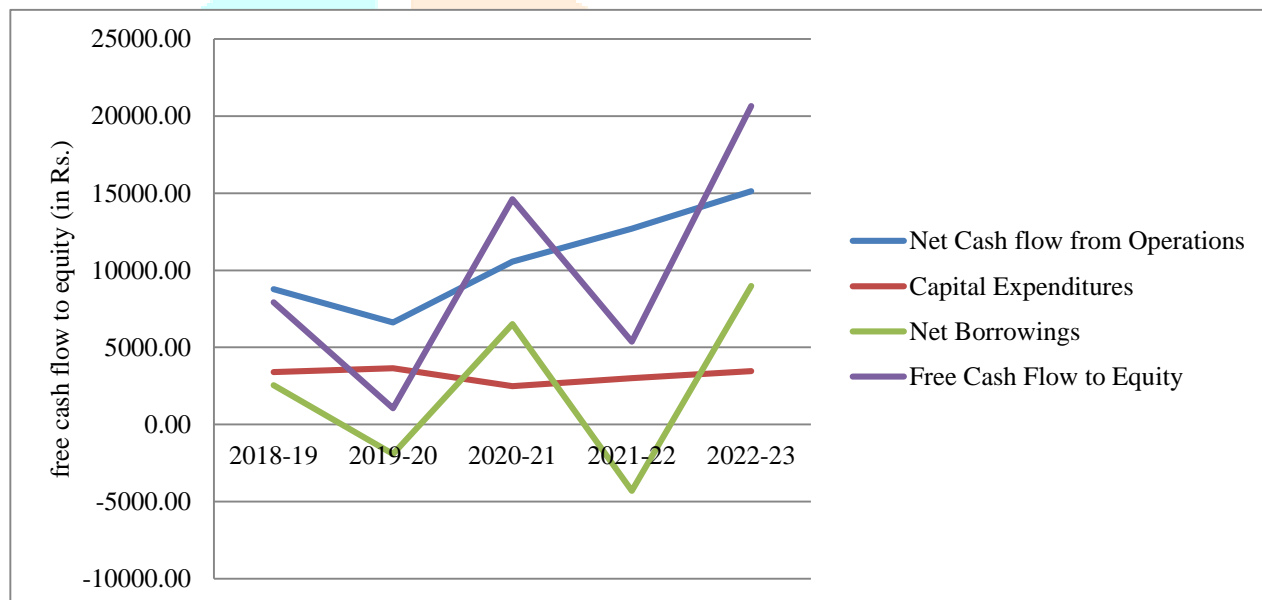
Table 2: Statement Showing Free Cash Flow to Equity

(Rs. in  
crores)

year	net cash flow from operations	capital expenditures	net borrowings	free cash flow to equity
2018-19	8781.00	3400.00	2536.00	7917.00
2019-20	6621.00	3637.00	-1924.00	1060.00
2020-21	10567.00	2481.00	6521.00	14607.00
2021-22	12691.00	2998.00	-4315.00	5378.00
2022-23	15133.00	3457.00	8978.00	20654.00
Mean	10758.60	3194.60	2359.20	9923.20
Standard Deviation	3314.25	462.23	5568.91	7751.26
COV %	30.81	14.47	236.05	78.11
Growth	72%	2%	254%	161%

Source: collected from the annual reports of Hindustan Zinc (2018-2023)

Figure 2. Graphical representation of above data of table 2



Source: Self Compilation from secondary data

### Interpretation

Table No. 2 and Figure 2 display that the free cash flow to equity was at its lowest in 2019–20 at Rs. 1060.00 Cr. and at its maximum in 2022–2023 at Rs. 20654.00 Cr. From 2018–19 to 2019–20, the free cash flow to equity exhibited a declining tendency. It then jumped to Rs. 14607.00 Cr from Rs. 1060.00 Cr in 2020–21, although it was still positive. It continued to decline, reaching Rs. 5378.00 Cr in 2021–22 before rising to its greatest amount of Rs. 20654.00 Cr. Over the course of the investigation, the average free cash flow to equity was Rs. 9923.20 Cr, and the standard deviation was 7751.26 having 78.11% coefficient of variance. From 2018 to 2023, free cash flow to equity increased at a pace of 161%.

Free cash flow to the firm:-The net amount of cash generated for a company or organization after taking into account expenses, taxes, changes in working capital, and investments is used to determine the firm's free cash to firm ratio. In a nutshell it is a measurement of how profitable an organization is following a reimbursement of all costs and capital. It symbolizes a company's capacity to settle debt, repurchase shares, and pay dividends. A positive free cash flow to the firm signifies excess cash left over after all costs have been paid, whereas a negative free cash flow to the firm implies the firm has not generated enough revenue or funds to pay its cost of investing operations. Since free cash flow to the company is cash flow before

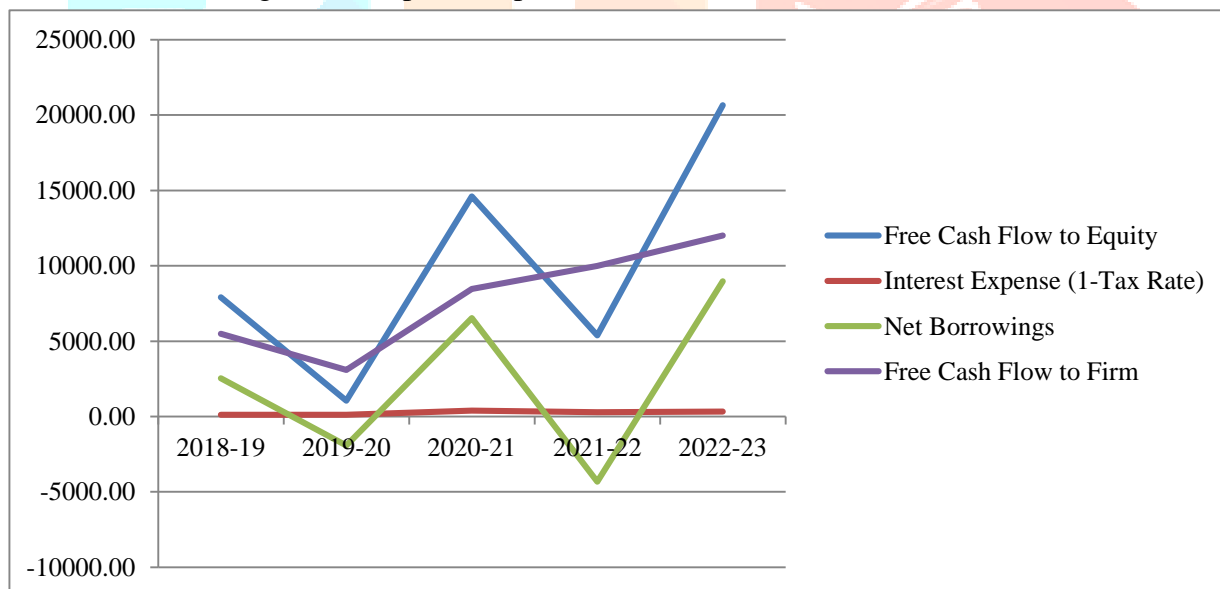
interest on debt, it is often referred to as unlevered free cash flow. The calculation of free cash flow to the firm is: -Free cash flow to the company is equal to net borrowing - interest expense (1 - tax rate) + free cash flow to equity.

Table 3: Free Cash Flow Statement for the Firm  
(in Indian Rupees, expressed as crores)

year	free cash flow to equity	interest expense (1-tax rate)	net borrowings	free cash flow to firm
2018-19	7917.00	113.00	2536.00	5494.00
2019-20	1060.00	112.00	-1924.00	3096.00
2020-21	14607.00	386.00	6521.00	8472.00
2021-22	5378.00	290.00	-4315.00	9983.00
2022-23	20654.00	333.00	8978.00	12009.00
Mean	9923.20	246.80	2359.20	7810.80
Standard Deviation	7751.26	127.23	5568.91	3548.85
COV %	78.11	51.55	236.05	45.44
Growth	161%	195%	254%	119%

Source: Compiled from the annual reports of Hindustan Zinc (2018-2023)

Figure 2. Graphical representation of above data of table 3



Source: Self Compilation from secondary data

### Interpretation

As shown in the figures in Table 3 and Diagram 3, the firm's free cash flow peaked in 2022–2023 at Rs. 12009.00 Cr, and bottomed in 2019–20 at Rs. 3096.00 Cr. The free cash flow to Hindustan Zinc's business diminished between 2018 and 2019, then increased to Rs. 8472.00 Cr from Rs. 3096.00 Cr in 2020–21. This increase was still positive, nevertheless and it headed on to increase to Rs. 9983.00 Cr in 2021–22 prior to reaching its highest at Rs. 12009.00 Cr. Over the lifespan of the study, the average free cash flow to the firm was Rs. 7810.80 Cr, with a coefficient of variation of 45.44%, the free cash flow to the firm had a standard deviation of 3548.85. Comparatively, the growth rate of free cash flow to equity was 119% between 2018 and 2023.

## Evaluating Hypothesis

H01: Throughout the study period, Hindustan Zinc's free cash flow to equity did not significantly change.

Table 4: one-sample statistics

	n	mean	standard deviation	standard error mean
free cash flow to equity	5	9923.10	7751.26	3466.47

Table 5: one-sample test

	Test Value=0			remarks if any
	t-statistics	degree of freedom	p-values	
free cash flow to equity	2.8625960357	4	0.04580931966361 45	0

Source: Calculation made by author with help of MS Excel, Formulas Tab, More Options, Statistical

**T-test interpretation;** - the null hypothesis is rejected because the P value is less than 0.05, which provides strong evidence to support the rejection. Since the calculated value of t is 2.862, which is greater than the table value, and degree of freedom is 4, the alternative hypothesis is accepted. This means that there is a significant difference in the free cash flow to firm to Hindustan Zinc throughout this investigation period.

H02: During the study period, there is no discernible difference in the free cash flow to the firm of Hindustan Zinc

Table 6: One-Sample Statistics

	N	Mean	Standard Deviation	Standard Error Mean
free cash flow to firm	5	7810.80	3548.85	1587.09

Table 7: One-Sample Test

	Test Value=0			remark if any
	t-statistics	degree of freedom	p-values	
free cash flow to firm	4.9214477249	4	0.0079211782	0

Source: Calculation made by author with help of MS Excel, Formulas Tab, More Options, Statistical

**T-test interpretation;**-the null hypothesis is rejected because the P value is less than 0.05, which provides strong evidence to support the rejection. Since the calculated value of t is 4.921, which is greater than the table value, and the degree of freedom is 4, the alternative hypothesis is accepted. We also conclude that there is a significant difference in the free cash flow to firm to HZ during the study period.

## XI. RESULT AND DISCUSSION:-

Based on this analysis, it can be shown that Hindustan Zinc's free cash flow to firm position is solid and robust, with positive growth expected throughout the study period of 2018–2023. The free cash flow to the company increased from Rs. 5494.00 Cr. in 2018–19 to Rs. 12009.00 Cr. in 2022–2023; these patterns are evident. It indicates that the business has strong cash management practices. There isn't any evidence of a deficit or negative free cash flow over the study period. Upon examining the firm's free cash flow, it is evident that the company has made every effort to preserve and grow its cash flow by strategically allocating capital. Therefore, it may be said that the company is performing well since it is producing enough cash flows from operations to meet its investment requirements, cover its costs, and pay dividends, buy back its shares, settle debt, and so on. Additionally, it can be said that the company's debt policy as well as, cash management strategy are quite sound and satisfactory.

**X. RECOMMENDATIONS:-** The findings could be used to provide the following recommendations: 1. To improve its cash on hand, bank cash, and other short-term securities, the company has to lower its cash outlay. 2. The company needs to keep a balance between liquidity and profitability, which is only conceivable with a sufficient liquidity level. 3. The company ought to prioritize maximizing its net income after taxes because doing so would help it maintain a sufficient cash balance, which permits it to remain financially flexible and make additional investments. 4. To ensure that there is a sufficient flow of cash available for those who invest throughout the entire year, the company must continually track its free cash flow to equity.

## XI. ACKNOWLEDGMENT

I am extremely thankful of my colleagues and other students for their editing assistance, late-night feedback sessions, and spiritual support. I also like to thank the college's librarians, support staff, and study participants for their inspiration and influence.

Finally, I would be negligent if I did not acknowledge my family, particularly my parents, spouse, and kids. Their confidence in me has sustained my motivation and positive attitude throughout this process. In addition, I want to express my gratitude to my cat for all the fun and emotional support.

## XII. REFERENCES AND CITATION

- 1) Khan, M.Y. and Jain, P.K. (1982), "Basic Financial Management", New Delhi: Tata McGraw Hill Publishing Co. Ltd., p.139
- 2) Orgler, Y.E., (1970), "Cash Management: Methods and Models", California: Wordsworth Publishing Company, p. 392
- 3) Pandey, I.M., (2002): "Financial Management": New Delhi: Vikas Publishing House Pvt. Ltd, p.912
- 4) Ramamoorthy, V.E. (1978), "Working Capital Management", Madras: Institute of Financial Management and Research, p.136
- 5) Hartely, W.C.F and Meltzer, Y.L., (1967), "Cash Management, Planning, Forecasting and Control" New Jersey: Prentice-hall inc., p58
- 6) Khatik, Dr. S. K., & Nag, Dr. A. K. (2016). "Performance Appraisal of HPCL through Free Cash Flow". Indian Journal of Accounting, XLVIII (No. 02, December, 2016), 18–24.
- 7) Howard, B.B. Uptan, M., (1953) "Introduction to Business Finance", New York: McGraw Hill Book Co., Inc., p188
- 8) Accountants Handbook (1970), New York: A Ronald Press Publication; John Wiley & Sons, Section 1, P.9
- 9) Bhat, S. (2008), "Financial Management-Principles and Practice": New Delhi: Excel Books, pp 608-615.
- 10) Brigham, E.F., (1978) "Fundamentals of financial Management", Illinois: The Dryden Press, p.168,
- 11) WEBSITES:

- <https://www.hzindia.com/>
- <https://indianaccounting.org/>
- <https://www.ijsr.net/>
- <https://recentscientific.com/>

- 12) Brush, T. H., Bromiley, P., & Hendrickx, M. (2000a). The free cash flow hypothesis for sales growth and firm performance. *Strategic Management Journal*, 21(4), 455–472. [https://doi.org/10.1002/\(sici\)1097-0266\(200004\)21:4](https://doi.org/10.1002/(sici)1097-0266(200004)21:4)
- 13) Brush, T. H., Bromiley, P., & Hendrickx, M. (2000b). The free cash flow hypothesis for sales growth and firm performance. *Strategic Management Journal*, 21(4), 455–472. [https://doi.org/10.1002/\(sici\)1097-0266\(200004\)21:4](https://doi.org/10.1002/(sici)1097-0266(200004)21:4)
- 14) Free Cash Flow: The Key to Shareholder Value Creation. (n.d.). Richard Malekian. [http://books.google.ie/books?id=Fpp0jinQHv4C&printsec=frontcover&dq=free+cash+flow+analysis&hl=&cd=5&source=gbs\\_api](http://books.google.ie/books?id=Fpp0jinQHv4C&printsec=frontcover&dq=free+cash+flow+analysis&hl=&cd=5&source=gbs_api)
- 15) Jury, T. (2012). *Cash Flow Analysis and Forecasting*. John Wiley & Sons. [http://books.google.ie/books?id=OHC2l4BQLhYC&printsec=frontcover&dq=free+cash+flow+analysis&hl=&cd=7&source=gbs\\_api](http://books.google.ie/books?id=OHC2l4BQLhYC&printsec=frontcover&dq=free+cash+flow+analysis&hl=&cd=7&source=gbs_api)
- 16) Mulford, C. W., & Comiskey, E. E. (2005). *Creative Cash Flow Reporting*. John Wiley & Sons. [http://books.google.ie/books?id=BJCvSSyk5roC&printsec=frontcover&dq=cash+flow+analysis&hl=&cd=6&source=gbs\\_api](http://books.google.ie/books?id=BJCvSSyk5roC&printsec=frontcover&dq=cash+flow+analysis&hl=&cd=6&source=gbs_api)
- 17) Nohel, T. (1998). Share repurchases and firm performance: new evidence on the agency costs of free cash flow. *Journal of Financial Economics*, 49(2), 187–222. [https://doi.org/10.1016/s0304-405x\(98\)00022-1](https://doi.org/10.1016/s0304-405x(98)00022-1)
- 18) Park, K., & Jang, S. (2013). Capital structure, free cash flow, diversification and firm performance: A holistic analysis. *International Journal of Hospitality Management*, 33, 51–63. <https://doi.org/10.1016/j.ijhm.2013.01.007>
- 19) Anderson, L. P., & Heptonstall, J. (1971). *Planning Cash Flow*. [http://books.google.ie/books?id=g-QpAQAAMAAJ&q=cash+planning&dq=cash+planning&hl=&cd=2&source=gbs\\_api](http://books.google.ie/books?id=g-QpAQAAMAAJ&q=cash+planning&dq=cash+planning&hl=&cd=2&source=gbs_api)

