A STUDY ON FINANCIAL FORECASTING USING DISCOUNTED CASH FLOW APPROACH

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Abstract

The Study basically based on financial forecasting using Discounted Cash Flow Approach. Financial forecasting is a critical process for organizations to assess their future financial performance and make informed strategic decisions.

Among various forecasting techniques, the Discounted Cash Flow (DCF) approach has gained significant attention due to its ability to estimate the intrinsic value of an investment by considering the time value of money. This study aims to investigate the effectiveness of the DCF approach in financial forecasting and its implications for decision-making.

The study begins by providing a comprehensive overview of the DCF approach and its underlying principles. It explores the concepts of discounted cash flows, discount rates, and the calculation of present value. Additionally, the study discusses the strengths and limitations of the DCF approach, acknowledging factors such as uncertainty, inflation, and market fluctuations that may affect the accuracy of forecasts.

To evaluate the effectiveness of the DCF approach, a sample dataset consisting of historical financial information from a diverse set of companies is utilized. Overall, this study contributes to the existing literature on financial forecasting by providing insights into the effectiveness of the DCF approach.

KEYWORDS: Financial forecasting, Discounted Cash Flow, Sensitivity analysis, Income statement Forecasting, Working capital Forecasting, Financial performance.

I. INTRODUCTION

Financial forecasting is the process of estimating a company's future financial performance based on historical data, industry trends, and other relevant factors. The purpose of financial forecasting is to provide management with insight into the company's expected financial results, which can help inform strategic decisions and aid in planning and budgeting.

To begin forecasting a company's financials, it is essential to gather historical financial data such as income statements, balance sheets, and cash flow statements. This data can provide insight into the company's past performance and trends. Once we have gathered historical financial data, we can begin to identify trends and make projections based on industry and economic trends. This can involve forecasting revenue growth rates, cost of goods sold, and operating expenses.

Financial forecasting is a critical procedure that businesses rely on to estimate future financial results. Accurate financial forecasting assists businesses in making educated decisions, effectively allocating resources, and assessing the risks involved with particular investments.

Discounted cash flow (DCF) analysis is a popular financial forecasting technique that assists investors in estimating the present value of future cash flows.DCF analysis begins by calculating the future cash flows generated by an investment. Revenue, costs, and capital expenditures are examples of cash flows.

The cash flows are then forecasted for a specific number of years, often five to ten years, depending on the nature of the investment. Following the projection of cash flows, they are discounted back to their present value using a discount rate Discounted Cash Flow Analysis is used in Financial Forecasting.

DCF analysis can be a powerful tool for forecasting a company's financial performance and valuing the company. However, it requires a lot of assumptions, and small changes in these assumptions can have a significant impact on the results. Therefore, it is important to conduct sensitivity analysis to evaluate the impact of different assumptions on the DCF results.

STATEMENT OF THE PROBLEM

Financial forecasting in a company can be a complex and challenging process, and there are various possible issues. can arise. Some common problems include, Uncertainty and unpredictability, Data quality, Assumptions and biases, Changes in market conditions, Lack of transparency. As a result of this, it is critical for a firm to understand its future financial condition, as well as any deviations or changes in future growth, in order to make changes in the approaching scenario.

OBJECTIVES:

1. To evaluate the difference between actual and forecasting data.
2. To explore and possibly improve the reliability of forecasting future operation of unlevered free cash flows based on available data from companies.

NEED OF THE STUDY

1. Helps in identifying profitable investment opportunities and managing financial risks effectively.
2. Assess the impact of DCF on investment decision-making.
3. Facilitates strategic planning, budgeting, and resource allocation.

II. REVIEW LITERATURE

Chenxia Du, (2023)In this article, the author analyses How to Improve the Valuation of DCF Model - a Closer Examination on the Depreciation Rate, in these finding they suggest that improving the accuracy of the depreciation rate is important to enhance the valuation of the DCF model. Using a forward-looking approach to estimate the depreciation rate and conducting sensitivity analysis can help identify the most critical assumptions and variables.

Ghinayatul Zahra, Diah Yudhawati, Denia Maulida (2023) In this article, the author examined that Analysis of Valuation and Stock Returns as A Basis for Making Stock Investment Decisions with The Discounted Cashflow (DCF) Method, analysis of valuation and stock returns using the DCF method is an important basis for making stock investment decisions.Sensitivity analysis can also be used to assess the impact of changes in assumptions and variables on the intrinsic value of the company and the stock price.

Nisrina Balqis Maharani Putri, Ana Noveria, (2023)In this article, the author analyses Business Valuation Using Discounted Cash Flow Method in Restaurant Industry, they suggest that using the DCF method for business valuation in the restaurant industry can be challenging due to the industry's unique characteristics.Sensitivity analysis and the use of industry benchmarks and comparable transactions can help identify the most critical assumptions and variables and improve the accuracy of the DCF valuation.

Dimiter Nenkov, Yanko Hristozov, (2022)In this article, the author determined DCF Valuation of Companies: Exploring the Interrelation Between Revenue and Operating Expenditures. DCF valuation is a popular method of estimating the intrinsic value of a company by discounting future cash flows to their present value.which can help identify the key drivers of operating expenditures and improve the accuracy of DCF valuation.

Mark Simon, Rodney C. Shrader (2022)In this article, the author determined Financial Forecasting, Risk-taking and Venture Performance Financial forecasting, risk-taking, and business performance are all linked. Accurate financial forecasting allows businesses to successfully manage risks and make educated decisions, which may lead to higher venture performance.

Indah Primasari (2022) In this article the author determined, Project Investment Plan Valuation Using Discounted Cash Flow Analysis, the discounted cash flow (DCF) analysis is a frequently used method for valuing investment projects, according to a study of the literature on project investment plan valuation using DCF.The assessment emphasised how crucial it is to project future cash flows, calculate the cost of capital, and use the right discount rates when performing a DCF analysis.

Mahboob Ullah, Maria Shaikh, Paras Channar, Samiuddin Shaikh (2021)In this article, the author analyses the financial forecasting: an individual perspective, financial forecasting is an important tool for individuals to plan and manage their personal finances. By predicting future income, expenses, and cash flow, individuals can identify potential financial risks and opportunities, make informed financial decisions, and achieve their financial goals. Ziliang Shang (2021)In this article, the author determined the Research of financial forecasting and valuation models. the importance of financial forecasting and valuation models in decision-making.

While traditional models such as the Discount cash flow (DCF) are still widely used, there is a growing interest in incorporating machine learning techniques and non-financial information to improve the accuracy of these models. Ashok Panigrahi, Kushal Vachhani, Mohit Sisodia (2021) In this article, the author analyses, Application of discounted cash flow model valuation: The case of Exide industries, A review in the research articles that looked at how Exide Industries was valued using the discounted cash flow (DCF) model yielded some significant findings. The DCF model, for instance, is a well-liked method of valuing assets that is used to calculate Exide Industries' intrinsic value.

Furthermore, the model is sensitive to the assumptions made regarding upcoming cash flows, discount rates, and terminal values. Piotr Adamczyk, Agnieszka Zbroszczyk (2017)In this article, the author analyses A key factor of the DCF model coherency the research shows that coherency is necessary in the discounted cash flow (DCF) model to guarantee that the model's inputs and assumptions are consistent with each other. The discount rate used to compute the present value of future cash flows, in particular, must be corresponding with the risk inherent in the investment under consideration.

Tijana Obradovic, Veljko Dmitrovic, Milica Latinovic, (2012)In this article, the author determined financial forecasting for company valuation purposes, financial forecasting is an important part of company valuation since it allows investors to make informed judgements about investing in a firm.to account for potential risks and uncertainties, scenario analysis and sensitivity testing are required. These findings emphasize the need of meticulous research and attention to detail in financial forecasting for the purposes of firm valuation.

Sławomir Janiszewski (2011)In this article, the author determined How to perform discounted cash flow valuation, The discounted cash flow (DCF) valuation method is a popular financial tool for determining the worth of an investment. According to the literature, the important processes in doing DCF valuation involve properly projecting future cash flows, establishing a suitable discount rate, and computing the investment's current value.the impact of uncertainty and the proper inclusion of non-cash components in cash flow predictions.

L. Peter Jennergren (2011) In this article, the author analyses, A Tutorial on the Discounted Cash Flow Model for Valuation of Companies, according to the tutorial on the discounted cash flow (DCF) model for evaluating businesses, this method is frequently employed. A company's future cash flows are estimated using the DCF model, which takes into account variables including growth rates, discount rates, and terminal values.Overall, the course is a helpful tool for analysts and investors who want to apply the DCF model to estimate a company's value.

Sam Mahfoud & Ganesh Mani (2010)In this article, the author analyses financial forecasting using genetic algorithms, financial forecasting using genetic algorithms is a computational technique that analyses financial data and predicts future trends using genetic algorithms. The main discovery is that genetic algorithms may be an effective tool for financial forecasting, offering accurate and reliable forecasts than traditional approaches.

Russell Lundholm, (2001)In this article, the author analyses Reconciling Value Estimates from the Discounted Cash Flow Model and the Residual Income ModelRegarding valuation objectives, the Discounted Cash Flow (DCF) and Residual Income (RI) models are extensively utilised. DCF calculates the present value of future cash flows, whereas RI calculates residual income after subtracting a needed return on investment from net income.

III. DATA AND METHODOLOGY

Type of research: Empirical research, it is research which analysis done through empirical evidence.

Source of data: Secondary data which is collected through the company financial report.

Sample size: 5 years of study period using financial income statement and Balance sheet.

Period of the study: Balance sheet and Income statement of a company collected from past 5 years from 1 April 2017 to 31 March 2022.

Tools & Techniques: Discounted cash flow models (Excel).

3.1 Variable definition and data

The factors addressed by this study are the financial statement of the company for the Empirical study.

This study is used to conclude from the hypothesis drawn for the research by analyzing and forecasting the data of Srinidhi design build PVT. ltd. company observing, measuring, and evaluating the financial statement. Secondary data from company's Balance sheet and Income statement. The sample size contains Five years of financial statement for the study.

4.3 Data Analysis Framework

DISCOUNTED CASH FLOW MODELFramework

A DCF Model test is performed for the financial statement of the company's data to determine the expected future cash flows of the company through the MS Excel tool.

The cash flows are calculated using financial forecasts based on assumptions. The cost of investment or the cost of equity of a valued firm must be implemented as the discount rate in DCF valuation, depending on whether Free Cash Flow to Firm (FCFF) or Free Cash Flow to Equity (FCFE) computation is done.

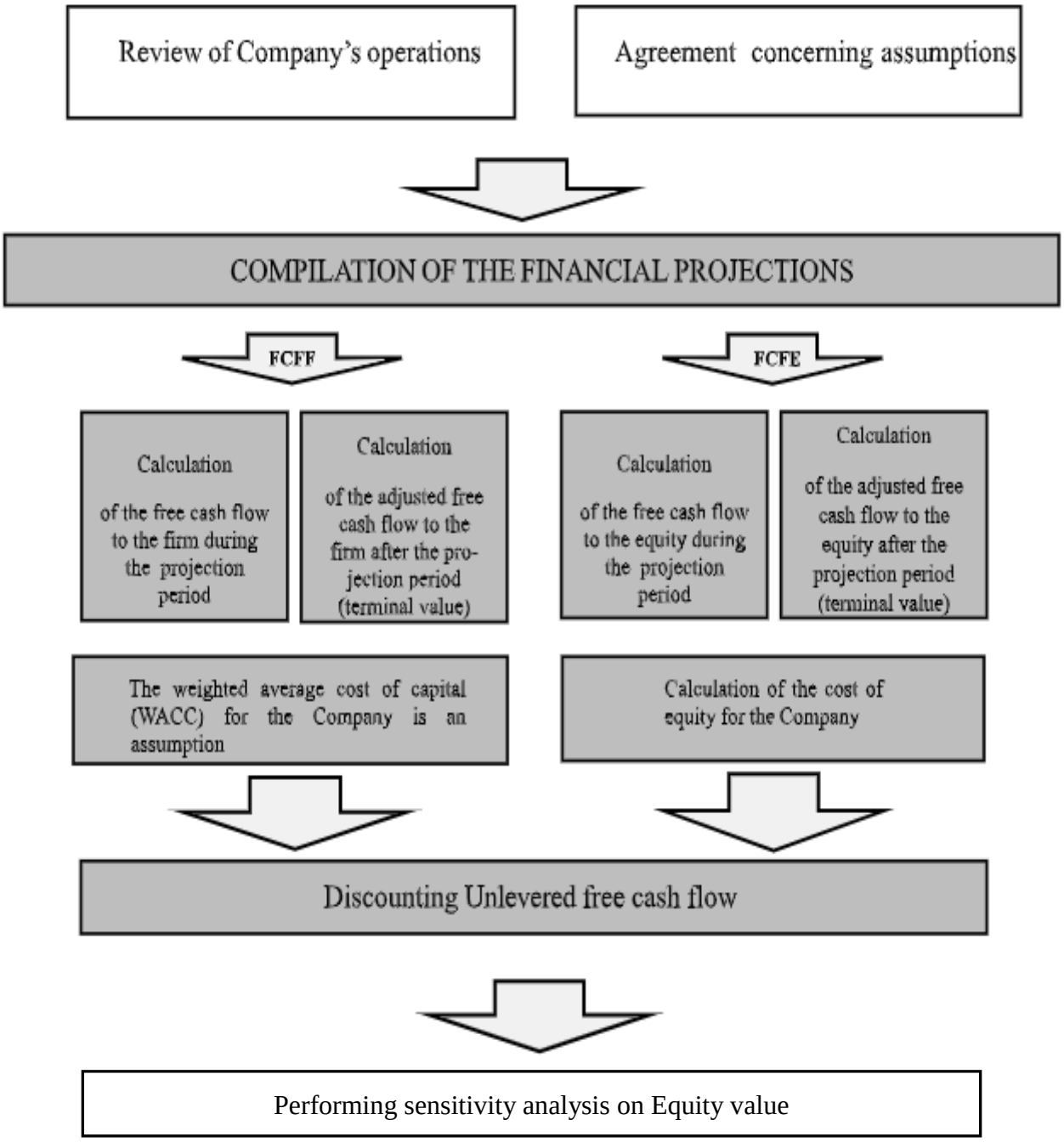

Figure 1: The major steps in valuations using DCF approach

IV. DATA ANALYSIS AND FINDINGS

4.1 Data analysis and Interpretation

Table 4.1.1 Income statement projection of a company in the year 2023 to 2027

Particular (Rupees in thousand)	Projected				
	2023	**2024**	**2025**	**2026**	**2027**
Sales	176478	240010	312013	386896	456537
Growth rate%	42%	36%	30%	24%	18%
Cost of Sales	18877	30808	57797	89112	101371
Gross Profit	157600	209202	254215	297784	355166
Gross Profit Margin %	89%	87%	81%	77%	78%
Other operating expenses	151299	200291	242630	283013	337535
Depreciation & Amortization	2295	3232	4106	5424	6269
Amortization	0	0	0	0	0
Depreciation	2288	3223	4095	5408	6147
Operating profits (EBIT)	4006	5679	7479	9347	11362
operating profits margin %	2%	2%	2%	2%	2%
Interest expenses	2418	2479	2861	3021	3110
Tax rates	30%	30%	30%	30%	30%
PBT	1588	3200	4618	6326	8252
Tax expenses	476	960	1385	1898	2475

Source: (Company's Website)

Retrieved on 4/05/2023 06:40pm and author's own calculation

INTERPRETATION

The financial projections show a steady growth in sales from 2023 to 2027, with growth rates gradually declining each year. Despite the growth, the cost of sales is also projected to increase, resulting in a gross profit margin that fluctuates between 89% and 78%. Other operating expenses are expected to rise consistently over the years. The depreciation and amortization expenses remain relatively stable, with depreciation being the significant component. As a result, the operating profits margin is constant at 2%. Interest expenses also show a slight upward trend. Considering a 30% tax rate, the projected profit before tax increases annually, leading to an increase in tax expenses. Overall, the interpretation suggests that the company's sales are growing, but it needs to manage its costs effectively to maintain profitability.

Table 4.1.2 Working capital projection of a company in the year 2023 to 2027

Particular (Rupees in thousand)	Projected				
	2023	**2024**	**2025**	**2026**	**2027**
Current assets					
Debtors	7273	9891	12859	15945	19134
Inventory	1556	2539	4764	7345	8497
Other current assets	0	0	0	0	0
Total Current assets	8829	12431	17622	23290	27631
Current liabilities					
Creditors	2593	4232	7940	12242	14162
Accrued income tax	0	0	0	0	0
Other accruals	0	0	0	0	0
Total current liabilities	2593	4232	7940	12242	14162
Net working capital	6236	8198	9683	11048	13469
Changes in Working capital	1229	1963	1484	1365	2421
Debtor days	15	15	15	15	15
Inventory days	30	30	30	30	30
other current assetsas % of revenue	0	0	0	0	0
Creditor days	50	50	50	50	50
Accrued income tax payable	0	0	0	0	0

Source: (Company's Website) Retrieved on 4/05/2023 07:15pm and author's own calculation

INTERPRETATION

In the above analysis, from 2023 to 2027, the company's current assets, including debtors, inventory, and other current assets, are projected to increase steadily. Debtors are expected to increase from 7,273 thousand rupees in 2023 to 19,134 thousand rupees in 2027. Inventory is also projected to rise from 1,556 thousand rupees in 2023 to 8,497 thousand rupees in 2027. However, there are no other current assets mentioned. On the other hand, current liabilities, including creditors and other accruals, are also expected to grow during this period. Creditors are projected to increase from 2,593 thousand rupees in 2023 to 14,162 thousand rupees in 2027.

As a result, the net working capital, which represents the company's ability to meet its short-term obligations, is expected to increase from 6,236 thousand rupees in 2023 to 13,469 thousand rupees in 2027. Changes in working capital also show an increasing trend, starting from 1,229 thousand rupees in 2023 and reaching 2,421 thousand rupees in 2027.Debtor days and inventory days remain constant at 15 and 30 days, respectively, throughout the years. Creditor days also remain consistent at 50 days. Overall, the interpretation suggests that the company's current assets and liabilities are projected to increase over the years, indicating potential growth in business operations. The increase in working capital and changes in working capital demonstrate the company's ability to manage its short-term financial obligations effectively.

Table 4.1.3 Debt schedule forecasting of a company in the year 2023 to 2027

Particular (Rupees in thousand)	Projected				
Debt Schedule	**2023**	**2024**	**2025**	**2026**	**2027**
Opening balance	34545	35415	40875	43150	44434
Add/less: Debt taken (Repaid)	870	5460	2275	1283	3618
Closing Balance	35415	40875	43150	44434	48052
Interest expenses	2418	2479	2861	3021	3110
Interest rate %	7%	7%	7%	7%	7%

Source: (Company's Website) Retrieved on 4/05/2023 07:30pm and author's own calculation

INTERPRETATION

In the above analysis, the debt schedule for the years 2023 to 2027 shows the opening balance, debt taken or repaid, and the closing balance of debt. In 2023, the opening balance of debt is 34,545 thousand rupees, which increases gradually each year, reaching 44,434 thousand rupees in 2027. The debt taken or repaid varies each year, with amounts ranging from 870 thousand rupees in 2023 to 3,618 thousand rupees in 2027. The interest expenses associated with the debt are also provided, with values ranging from 2,418 thousand rupees in 2023 to 3,110 thousand rupees in 2027. The interest rate remains constant at 7% throughout the years.The consistent interest rate of 7% indicates a stable borrowing cost for the company.It is important for the company to closely monitor its debt levels and manage interest expenses effectively to ensure sustainable financial health and avoid excessive burden from interest payments.

Table 4.1.4 Fixed assets schedule and intangible assets of a company in the year 2018 to 2027

Particular (Rupees in thousand)	**Projected**				
Fixed asset Schedule	**2023**	**2024**	**2025**	**2026**	**2027**
Opening balance	7937	13462	17234	21131	26875
Add: Net purchases	7819	7005	8003	11167	11735
Total Fixed assets	15756	20466	25237	32298	38610
less: depreciation	2295	3232	4106	5424	6269
Closing balance	13462	17234	21131	26875	32341
Rate of depreciation	15%	16%	16%	17%	16%
Fixed asset turnover ratio	11.23	11.76	12.40	12.01	12.06
Intangible asset schedule					
opening balance	0	0	0	0	0
Add: net purchases	0	0	0	0	0
Total Intangible assets	0	0	0	0	0
less: Amortization	0	0	0	0	0
Closing balance	0	0	0	0	0
Rate of Amortization	100%	100%	100%	100%	100%

Source: (Company's Website)

INTERPRETATION

In the above analysis, the fixed asset schedule provides information about the opening balance, net purchases, depreciation, and closing balance of fixed assets for the years 2023 to 2027. In 2023, the opening balance of fixed assets is 7,937 thousand rupees, which increases each year due to net purchases. The total fixed assets reach 38,610 thousand rupees in 2027. Depreciation is deducted from the total fixed assets to determine the closing balance. The depreciation amounts range from 2,295 thousand rupees in 2023 to 6,269 thousand rupees in 2027. The rate of depreciation increases gradually from 15% in 2023 to 17% in 2026 and then decreases to 16% in 2027.

The fixed asset turnover ratio, which indicates how efficiently the company utilizes its fixed assets to generate sales, shows a relatively consistent trend, ranging from 11.23 in 2023 to 12.06 in 2027.In contrast, the intangible asset schedule indicates no presence of intangible assets throughout the years, as the opening and closing balances remain at zero. There are no net purchases or amortization mentioned.there are no intangible assets mentioned, indicating that the company may not have any significant intangible assets during this period.

Table 4.1.5 Determination of terminal value of a company

Year	**2023**	**2024**	**2025**	**2026**	**2027**	**Exit**	**Terminal value**
EBITDA	6313	8927	11607	14797	17856		**1,78,560.0**
EBIT	4018	5695	7500	9373	11587		**16528.57**
Less: Taxes	480	965	1392	1960	2543		
Plus: D&A	2295	3232	4106	5424	6269		
Less: Chg. in NWC	1229	1963	1484	1365	2421		
Less: Capex	7820	7005	8003	11167	11735		
Unlevered Free Cash Flow	-3216	-1006	727	305	1157	**1,78,560.0**	
EBITDA Multiple	10.0						
Terminal Growth Rate	3%						
Discount rate (WACC)	10%						
Unlevered FCF		-1006	727	305	179717		
NPV Cash flows		-915	601	229	122749		
Enterprise Value (NPV)	**122665**						
Plus: Cash	198419						
Less: Debt taken	13,507.00						
Equity value	**3,07,577**						

Retrieved on 4/05/2023 08:17pm and author's own calculation

INTERPRETATION

The table shows financial estimates from 2023 through 2027, as well as the exit year and terminal value. The figures are in lakhs of rupees.EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization) and EBIT (Earnings Before Interest and Taxes) are measures of the company's operating performance before interest, taxes, and non-cash expenditures are deducted. To calculate net operating profit after taxes (NOPAT), subtract taxes from EBIT. To reflect the non-cash nature of these charges, depreciation, and amortization (D&A) are added back to EBIT. To calculate the Unlevered Free Cash Flow (UFCF), deduct changes in Net Working Capital (NWC) and capital expenditures (Capex) from NOPAT. The cash earned by business activities after accounting for working capital adjustments and capital investments is represented by UFCF.According to the UFCF values, the firm is expected to earn negative cash flows in 2023 before progressively turning positive in future years. To calculate the enterprise value, apply an EBITDA multiple of 10 to the terminal year's EBITDA (2027) and discount it back to the present value using a 10% discount rate (WACC). The NPV (Net Present Value) of the cash flows is derived by applying the discount rate to the UFCF values and discounting them back to the present value. The enterprise value (NPV) is the sum of the net present value (NPV) of the cash flow and the terminal value. The equity value is calculated by adding or subtracting cash and debt. The equity value is estimated to be Rs. 307,577,000 based on the facts provided.Further experience regarding the company's industry, growth prospects, and risk factors would be required for analysis.

Table 4.1.6 Determination of sensitivity analysis on equity value of company

	Discount rate					
Equity value	**3,07,577**	**8%**	**9%**	**10%**	**11%**	**12%**
	7.0	2,77,569	2,74,204	2,70,989	2,67,917	2,64,980
Exit multiple	**8.0**	2,90,694	2,86,853	2,83,185	2,79,679	2,76,328
	9.0	3,03,819	2,99,503	2,95,381	2,91,442	2,87,676
	10.0	3,16,943	3,12,153	**3,07,577**	3,03,204	2,99,024
	11.0	3,30,068	3,24,802	3,19,772	3,14,966	3,10,372
	12.0	3,43,193	3,37,452	3,31,968	3,26,729	3,21,719
	13.0	3,56,317	3,50,101	3,44,164	3,38,491	3,33,067

Retrieved on 4/05/2023 08:34pm and author's own calculation

INTERPRETATION

In the above table showing that the table provided appears to show the equity value under different discount rates and exit multiples. The equity value is given in the first column, and the discount rates range from 8% to 12%. The exit multiples are listed in rows, ranging from 7.0 to 13.0. A specific discount rate and exit multiple intersection. For example, if you are interested in the equity value at a discount rate of 8% and an exit multiple of 8.0, you would find the corresponding value in the table, which is 2,90,694.

In the calculated of the equity value is 3,07,577, in the sensitivity analysis we determined as the equity value in a different discounted rate (WACC) and the EBITDA multiple in calculation the discount rate is 10% and the EBITDA is 10 the expected equity value is 3,07,557 (thousand) it is also same in the sensitivity analysis it would be determined. In every exit multiple and the discount rate the equity value of cash flow fluctuates with every discount rate. In every discounted rate is overvalued and undervalue of the company.

4.2 Findings

1. From the income statement calculation its observed that the company's sales have showed a changing trend. After enjoying rapid growth in 2019 and 2020 (53% and 43%, respectively), revenues fell (-24%) in 2021. However, the firm returned significantly in 2022, increasing at a pace of 48%, and is expected to increase at a rate of 42% in 2023.
2. Cost of sales in 2018, 2019, and 2020 was zero suggesting that the firm incurred no direct costs related with producing its goods or services during those years. However, in 2021, the cost of sales was 23,401 Rupees (thousands), and it climbed to 57,940 Rupees (thousands) in 2022.
3. It fell to 18,877 Rupees (thousands) in 2023. Gross profit rises from 50,877 Rupees (thousands) in 2018 to 115,954 Rupees (thousands) in 2020 before falling to 61,308 Rupees (thousands) in 2021. However, there was a considerable increase in 2022, with a gross profit of 67,272 Rupees (thousands), and it is expected to reach 157,600 Rupees (thousands) in 2023.
4. The firm maintained a steady gross profit margin of 100%, suggesting that it retained all revenue after deducting costs. The margin, however, rise to 116% in 2019 and stayed over 100% until 2021, when it fell to 73%. The margin is predicted to expand to 89% in 2023 after falling to 54% in 2022.
5. Other operating expenses, excluding depreciation and amortization, have gradually grown over time. Depreciation and amortization charges for the firm have fluctuated over time. The operational earnings of the firm have risen steadily, from 911 Rupees (thousands) in 2018 to 3,726 Rupees (thousands) in 2022. However, operational earnings fell slightly to 4,006 Rupees in 2023.
6. The company's interest expenditures, which indicate the cost of borrowing, have fluctuated throughout time. The company's tax costs have changed throughout the years. Profit Before Tax grew from 616 Rupees (thousands) in 2018 to 2,370 Rupees (thousands) in 2020. However, it fell to 1,643 Rupees (thousands) in 2021 and further to 1,852 Rupees (thousands) in 2022. It is expected to fall to 1,588 rupees (thousands) in 2023.
7. From the calculation of working capital schedule Inventory levels have fluctuated over time, peaking at 12,056 Rupees (thousands) in 2019, then declining. In 2023, the forecasted estimates suggest a further fall to 1,556 Rupees (thousands).
8. The Net working capital, defined as the gap between current assets and liabilities, has fluctuated throughout time. It was negative in 2020 but has since become positive. Working capital increased significantly in 2021, followed by a drop in 2022. The numbers for 2023 and 2024 show a little rise in working capital.

9. From 2023 to 2025, the debtor days stay consistent at 15, indicating a predictable collection period for debtors. Creditor days have risen over time, showing that the corporation is waiting longer to pay its suppliers.
10. From the calculation of Debt schedule the opening balance of debt rise up from 30,196 in 2018 to 43,150 in 2026, interest rate changed with time. Notably, interest rates differed from year to year, ranging from 0.23% in 2021 to 7% in 2022 and 2023.The company borrowed amount at constant interest rate at 7% from 2022.
11. Amortization, which is the equivalent of depreciation for intangible assets, was applied at a rate of 100% each year. The company's fixed assets have grown steadily throughout the years, with a major rise expected in 2024, 2025 & 2026.
12. From the calculation of Terminal Value, The Weighted Average Cost of Capital (WACC) or Discount Rate is set at 10%. EBIT (Earnings Before Interest and Taxes), which has values of 4,018, 5,695, 7,500, 9,373, and 11,587, respectively, similarly shows an increasing trend from 2023 to 2027.
13. From 2023 through 2027, EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization) will have values of 6,313, 8,927, 11,607, 14,797, and 17,856. The Terminal Growth Rate is assumed to be 3% in order to calculate the terminal value.
14. The terminal value of the business is determined using the EBITDA Multiple. It is set to 10.0 in this instance.
15. Unlevered Free Cash Flow (UFCF) is negative for 2023 through 2026 (-3,216, -1,006, 727, and 305, respectively), turning positive at 1,157 in 2027. With values of 480, 965, 1,392, 1,960, and 2,543 from 2023 to 2027, respectively, the category "Taxes" grows through time.
16. Changes in Net Working Capital, exhibit oscillations throughout time. Additionally, Capex (Capital Expenditure) shows variations.
17. From the sensitivity analysis calculation, the exit multiple ranges from 7.0 to 13.0, while the discount rate ranges from 8% to 12%.
18. The equity value declines as the discount rate rises. Similar to how the exit multiple rises, so does the equity value. For instance, the equity value is 2,90,694 for an exit multiple of 8.0 and 3,56,317 with an exit multiple of 13.0.
19. The sensitivity analysis sheds light on the potential effects that adjustments to the discount rate and exit multiple may have on the equity value of the business.

V. CONCLUSION

Using a discounted cash flow (DCF) methodology, we performed a financial forecasting analysis for a company in this study. Estimating the company's potential future cash flows was the goal. EBITDA, EBIT, taxes, depreciation, and amortization (D&A), changes in net working capital (NWC), and capital expenditure (Capex) projections were made as part of the research over a five-year period.

The results of the financial forecasting research provide important information about the potential performance and value of the organization. Over the projection period, the EBITDA and EBIT exhibited a continuous upward trend, showing rising profitability. However, due to the dynamic nature of these components, taxes, D&A, changes in NWC, and Capex showed swings.

We calculated the net present value (NPV) of the company's cash flows by computing the unlevered free cash flow (UFCF) and using discount rates. The present value of the cash flows once the discount rate was taken into account was clearly displayed in the NPV Cash flows column. The research also took into account the terminal value, which was determined using an EBITDA multiple and a terminal growth rate.

The impact of changing the discount rate and exit multiple on company’s equity value was also assessed as part of the sensitivity analysis. It illustrated the necessity of careful attention in forecasting and valuation activities and emphasized the significance of these elements in establishing the company's worth.

In summary, this study on financial forecasting utilizing a discounted cash flow technique offered insightful information on the underlying value and future financial performance of company. It provided an in-depth analysis of the company's prospects for development, profitability, and valuation.

The results can be used as a basis for the company's strategic choices, investment research, and financial planning. The estimates should be periodically evaluated and revised to take into account shifting market circumstances and corporate dynamics, however it is crucial to realize that financialforecasting entails inherent uncertainties.

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