A STUDY ON EXPLORING VRL LOGISTICS VALUE AND INCOME STATEMENT FORECASTING

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Abstract

VRL Logistics, a significant player in the logistics sector, is the focus of this study, which delves into its value and income statement forecasting. The logistics industry's pivotal role in facilitating global trade and managing supply chains underscores the importance of comprehending the financial performance and anticipating future outcomes for companies like VRL Logistics. Investors, analysts, and industry stakeholders have a keen interest in this. To gain insights into VRL Logistics' financial health and performance, the study conducts a thorough analysis of its financial statements, particularly the income statement. Various forecasting techniques, such as trend analysis, ratio analysis, and time series modeling, are applied to project the company's future financial outcomes. The study's ultimate goal is to offer valuable insights into VRL Logistics' financial position, intrinsic value, and growth potential. The forecasting models developed through this study are not just academic exercises; they are tools that can be utilized for making well-informed investment decisions and strategic plans for the company. This research adds to the existing body of knowledge on valuing logistics companies and forecasting their financial future. The framework established here can be applied to similar businesses within the industry, making it a valuable contribution to the field.

Key words: Discounted Cash Flow, weighted Average Cost of Capital, Cost of Debt, Cost of Equity, Intrinsic Value, Market Value, CAGR, Market Risk, Financial Projections.

Introduction

Discounted cash flow (DCF) To determine the true worth of an investment, financial analysts use analysis, most especially the Discounted Cash Flow (DCF) method. To do this, one must first estimate future cash flows, then discount those flows to account for the passage of time, and then calculate their NPV. Many fields, including accounting, finance, and investment research, make use of the discounted cash flow (DCF) method. The main idea is to calculate how much an investment's future cash flows are worth right now. If an investment is expected to provide cash flows in the future, then its present value is equal to the sum of those cash flows.

The present value is determined by applying a discount rate, which takes into account both

the investment risk and the time worth of money. The discounted cash flow (DCF) method offers a thorough evaluation of an investment's value by calculating the present value of expected future cash flows using this discount rate.

Income statement Forecasting the income and costs expected over a specific time frame is a practice crucial for estimating a company's future financial performance. The income statement, also known as the profit and loss (P&L) statement, is a financial record detailing earnings, costs, gains, and losses within a defined business period.

To predict an income statement, analysts utilize historical data, industry trends, and market conditions, employing diverse financial models and methods like trend analysis, regression analysis, and Monte Carlo simulations. The resulting anticipated income statement becomes a valuable tool for lenders, investors, and stakeholders, empowering them to make well-informed decisions regarding the business's financial health.

This forecasting of income statements holds significance in financial planning and budgeting for businesses. Moreover, it serves as a guide for investors assessing the risks and rewards associated with a particular investment.

Statement of the Problem

"Despite the significant growth potential in the logistics industry, VRL Logistics, one of the leading logistics providers in India, has witnessed a decline in its market share and profitability. The problem is to identify the factors affecting the logistics value of VRL and to develop a framework using discounted cash flow approach and income statement forecasting to assess its future financial performance and value creation potential."

Objective of the Study

1. To evaluate the financial performance of VRL Logistics using the Discounted Cash Flow approach and Income Statement Forecasting, and to determine the company's value.

2. To identify the key drivers of VRL Logistics' market value, such as revenue growth, cost control, and cash flow management, and to assess their impact on the company's future performance.

3. To provide recommendations for VRL Logistics based on the findings of the study, including strategies for improving financial performance and increasing shareholder value.

Scope of the Study

The Scope of the research is to thoroughly evaluate all financial elements of renowned logistics firm VRL Logistics. The research aims to examine the company's value and income

statement projections, offering insightful information about its past financial health and possibilities for future growth.

The scope includes a thorough analysis of VRL Logistics' historical financial data, including revenue, expenses, profit margins, and other relevant financial indicators. It will explore various forecasting methods and techniques used to predict future financial outcomes, such as revenue growth, profitability, and cost management.

Review of Literature

Ghinayatul Zahra, Diah Yudhawati, and Denia Maulida (2023) draw attention to the fact that in order to make educated stock investing selections, it is necessary to integrate the Discounted Cashflow (DCF) Method with Equity and Returns Analysis. Their research shows that using the DCF approach to analyse company returns and valuation is an important first step when choosing companies to invest in. To find out whether a stock is cheap or expensive right now, investors may use this technique to evaluate a company's intrinsic value.

Huaying Wang (2022) focuses on the use of the discounted cash flow model in valuing companies, using Netflix as a case study. The study emphasizes the significance of employing cash flow for valuing businesses, where intrinsic worth is assessed based on the firm's growth risk and cash flow characteristics.

Jan-Pieter Oosterom and Charles A.S. Hall (2022) advise supplementing the conventional discounted cash flow model with energy ROI analysis to better evaluate energy investments. According to the research, an energy firm may not get the best solution to reach its goals by only looking at these two factors.

In **Kerong Wang's (2022)** analysis of how businesses' market valuations are determined The research shows that the DCF model still includes arbitrary components, including the growth rate, based on the Discounted Cash Flow Method. Forecasting the daily changes in the market and the future course of the company's growth requires the consideration of a variety of data points.

Andrew B. Jackson (2021) Highlights the Importance of Financial Statement Analysis for Assessing a Company's Past, Present, and Future Performance. Researchers found that financial statements—which include income, balance, and cash flow statements—are helpful for analysts and investors in seeing patterns and signs of financial health.

In their study from **2021**, **Ashok Panigrahi, Kushal Vachhani, and Mohit Sisodia** utilize the discounted cash flow model to examine the Exide Industries case. The research illustrates

how understanding and applying the Discounted Cash Flow model can help estimate the present market value of a company based on its anticipated future cash flow.

Carlos J.O., Trejo-Pech, and Jada M. Thompson (2020)   Their research of conventional and cage-free production investments contributes to the area of discounted cash flow valuation. By revising investment and cost budgets for egg production using consistent accounting and management practises, the research contributes significantly to the expanding corpus of literature on cage-free agriculture.

Eddy Sutjipto, Wawan Setiawan, and Imam Ghozali (2020)   Look at the Indonesia Stock Exchange's Dividend Discount Model (DDM) and Discounted Cash Flow (DCF) approaches to determining intrinsic value. In order to demonstrate their use in calculating the fair value of shares, the research gives exact calculations of both methods.

Mengxiao Li (2020)   projects Uber's future worth with the use of the Discounted Cash Flow Model. The research casts doubt on the DCF method's accuracy in estimating share fair value by using the mean absolute pricing error (MAPE) approach. However, investors should still think about adding Uber stock to their portfolios since the study predicts a bright future for the company, with a price target higher than the present share price. Nevertheless, you should proceed with care because of possible risks.

According to **Erkki K. Laitinen (2019)**,   One potentially dangerous indicator for gauging a startup's financial success is discounted cash flow (DCF). The report warns that investors should exercise caution when using DCF as an investing metric, particularly when pursuing strategies to back high-tech companies with lengthy payback periods and quick growth.

Agne Pivoriene (2017)   explores the use of real options and discounted cash flow analysis to the evaluation of strategic investment projects. Some assumptions used in DCF analyses are found to be inappropriate when attempting to value such projects due to the inherent ambiguity in the data. To counteract the effects of incorrect assumptions and establish a stronger connection between strategic intuition and analytical accuracy, real options analysis that accounts for flexibility is recommended.

Finally, **Russell Lundholm & Terry O'Keefe (2010)**   suggest settling disagreements between the Residual Income Model's value estimations and the Discounted Cash Flow Model's. The research emphasises the need of aligning valuation methodologies by highlighting gaps between academics' and practitioners' evaluations of equity value using these models.

Data and Methodology

Variable Definition and Data

This empirical research uses the company's financial statement as its primary data point. Secondary data sourced from the company's balance sheet is used in the study. and Income statement to conduct an in-depth analysis and forecasting of VRL company data. The goal is to draw conclusions from the hypotheses formulated for the research by observing, measuring, and evaluating the financial statement.

To achieve this, five years of financial statements serve as the sample size, allowing for a comprehensive examination. Data from the market prices of VRL Logistics and BSE Midcap index is sourced from the Bombay Stock Exchange (BSE). The analysis involves scrutinizing and predicting the data to reach meaningful conclusions about the company's financial performance.

Period of the Study

Balance sheet and Income statement of the company are collected from the past 5 years i.e.,1st Apr'2017 -31st Mar'2022.

Market prices of the company and Bombay Stock Exchange (BSE)Midcap are collected from past five years i.e., 1st May'2018-1st May'2023

Data Analysis Framework

Discounted Cash Flow Model (DCF)

 In order to find the intrinsic value of a firm and its predicted future cash flows, a DCF Model test is run on the company's financial statement data using the MS Excel tool.

Income Statement Forecasting Model

An income statement forecasting model is a financial analysis tool used to estimate a company's future financial performance by projecting its revenue and expenses over a specified period of time through the MS Excel tool.

CAGR (COMPOUNDING ANNUAL GROWTH RATE) EXAMINATION

CAGR (Compounding Annual Growth Rate) analysis is executed to check how many times the scrip price has grown over the past 12.58 years.

$$CAGR = \sqrt[12.58]{\frac{Current\ price}{Entry\ price}} - 1 \times 100$$

Calculation of WACC (Weighted Average Cost of Capital)

$$WACC = Cost\ of\ equity + Cost\ of\ debt$$

Financial Projections – Assumptions

Estimates for the organization under review should rely on anticipated values of crucial drivers—these are independent variables that wield substantial influence over the company's financial performance. The optimal Discounted Cash Flow (DCF) strategy hinges on in-depth examinations of factors impacting financial performance and the precise identification of primary drivers.
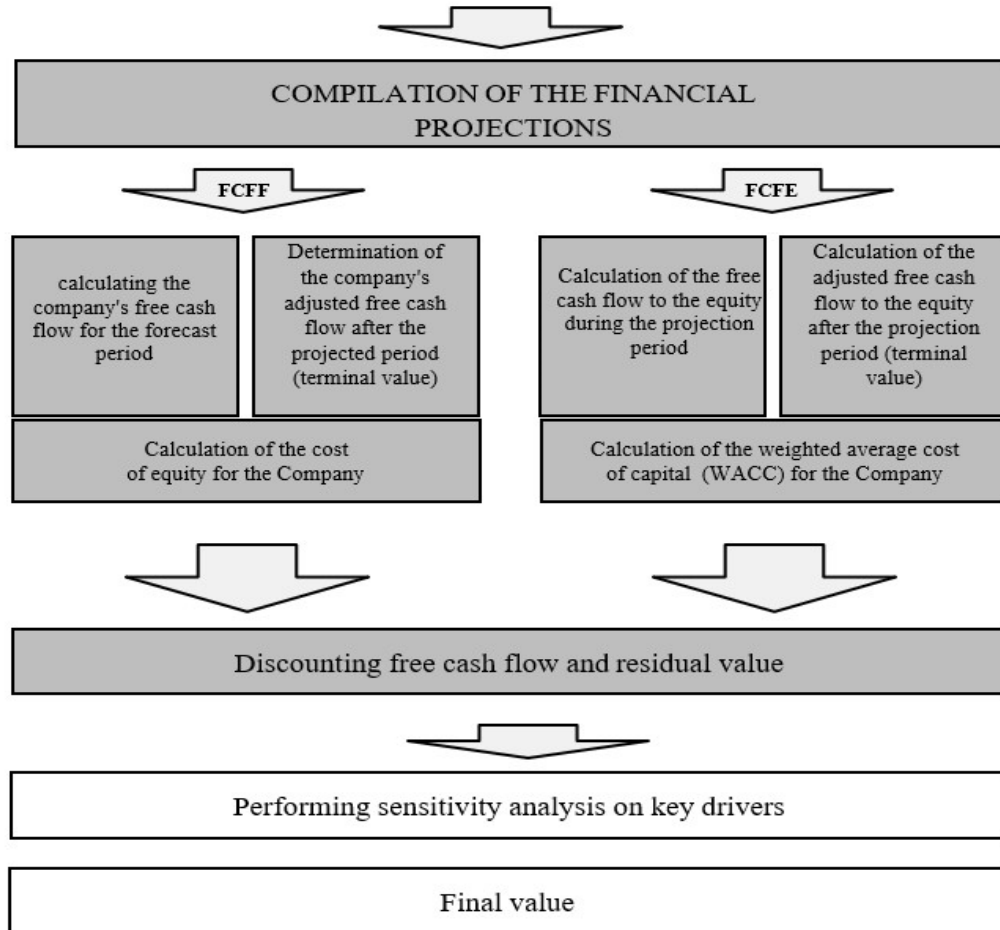
Data Analysis and Findings

Computation of Income statement forecasting for the year starting from 2023-2027

Rupees in Lakhs	Projected				
Particulars	**2023**	**2024**	**2025**	**2026**	**2027**
Sales	315057	403273	500059	600070	690081
Growth rate %	32%	28%	24%	20%	15%
Cost of Sales	217595	278408	343859	413188	474800
Gross Profit	97462	124865	156200	186882	215281
Gross Profit Margin %	31%	31%	31%	31%	31%
Other operating expenses	55487	69942	85215	102111	121343
Depreciation & Amortization	20250	27407	36735	43446	47923
Amortization	57	64	61	58	56
Depreciation	20192	27344	36674	43388	47866
Operating profits (EBIT)	21725	27516	34250	41325	46015
operating profits margin %	7%	7%	7%	7%	7%
Interest expenses	63	74	64	63	72
Tax rates	29%	31%	32%	34%	35%
PBT	21663	27442	34186	41262	45943
Tax expenses	6281	8396	11006	13945	16080

Source:https://www.vrlgroup.in/vrl_investors_desk.aspx?display=finance_a_reports
Retrieved on 4/05/2023 05:40pm and author's own calculation

Interpretation

The table provides financial projections for a company from 2023 to 2027. Sales figures are projected to increase steadily over the years, with growth rates ranging from 15% to 32%. Cost of sales also follows a similar trend, resulting in a consistent gross profit margin of 31%. Other operating expenses and depreciation/amortization costs are expected to increase gradually. As a result, operating profits (EBIT) are projected to rise, maintaining a 7% operating profit margin. Interest expenses remain relatively stable. Tax rates increase from 29% to 35% over the years, resulting in tax expenses that grow proportionally with the rising profits. Overall, the company's sales and profits show consistent growth, indicating a positive outlook for the future.

Table 4.2 Calculation of Market Return, Compound Annual Growth Rate, Cost of Debt (Kd), and Cost of Equity (Ke) Value of equity share (We) and Value of debt (Wd) and Weighted Average Cost of Capital (WACC) of VRL Logistics as on 1st May 2023.

Cost of debt		
Risk free rate	01-May-23	7.12%
Add: company risk premium		1.23%
Add: country risk premium		3.79%
Cost of debt		12.14%
Tax rates (marginal rate)		35%
Post tax cost of debt		**7.89%**
Cost of equity		
Risk free rate	01-May-23	7.12%
Beta		1.04%
Return of markets		10.24%
Risk free rate	01-May-23	7.12%
Cost of equity		**7.15%**
Return of matrket		
Start date	01-Oct-10	8302.6
Valuation date	01-May-23	25681
Years	12.58	
CAGR		**10.24%**
Market value weights (Rupees in Lakhs)		
Shares outstanding		883.43
Price per share		1711.4
Value of equity share		15,11,904.02
Value of debt		14348
WACC Calculation		
Kd		7.89%
Ke		7.15%
Wd		1%
We		99.00%
WACC		**7.16%**

Source: https://www.vrlgroup.in/vrl_investors_desk.aspx?Display=finance_a_reports
Https://in.investing.com/rates-bonds/india-10-year-bond-yield-historical-data
https://pages.stern.nyu.edu/~adamodar/
https://finance.yahoo.com/quote/VRLLOG.NS/history?p=VRLLOG.NS
Retrieved on 4/05/2023 07:15pm and author's own calculation

Interpretation

The table provides key financial figures for calculating the weighted average cost of capital (WACC) for a company. The cost of debt is determined by adding the risk-free rate, company risk premium, and country risk premium, resulting in a pre-tax cost of debt of 12.14%. After considering the marginal tax rate of 35%, the post-tax cost of debt is estimated to be 7.89%. The cost of equity is calculated using the risk-free rate, beta, and the return of the market, resulting in a cost of equity of 7.15%. The market value weights for equity and debt are provided, with equity representing 99% and debt representing 1%. By applying these figures, the WACC is calculated to be 7.16%.

Table 4.3 Computation of shareholders Value per share (Intrinsic value) of VRL Logistics as on 1st May 2023.

Rupees in Lakhs	0	1	2	3	4	5
Particulars		2023	2024	2025	2026	2027
EBIT		21,725	27,516	34,250	41,325	46,015
Less: taxes		6,299	8,419	11,027	13,966	16,105
NOPAT		15,426	19,098	23,223	27,359	29,910
Add: Depreciation and amortization		20,250	27,407	36,735	43,446	47,923
Add/less: Working capital changes		7,586	4,966	5,118	5,254	4,837
Less: Investment in Fixed assets		-38,634	-73,886	-91,305	-89,528	-80,687
FCFF		4,627	-22,415	-26,229	-13,469	1,983
Discount factor		0.97	1	1	1	1
Present value of Explicit period	-55660					
EV/EBITDA	24					
EBITDA						93,938
Enterprise value (Terminal value)	15,85,116					22,45,109
Total Present value of operations	15,29,456					
Add: Non-Operating assets including cash	1404					
Value of firm	15,30,860					
Less: Debt	-14348					
Less: Non-controlling interest	-4608					
Value of equity	15,11,904					
Shares outstanding	883.43					
Value per share (01-May-2023)	1711.4					

Source: https://www.vrlgroup.in/vrl_investors_desk.aspx?display=finance_a_reports
https://finance.yahoo.com/quote/VRLLOG.NS/history?p=VRLLOG.NS
Retrieved on 4/05/2023 06:50pm and author's own calculation

Interpretation

Based on the shareholders' worth, the intrinsic value per share is estimated to be 0.97 in the first year and 1.00 in future years. The firm's free cash flow (FCFF) is 55,660 lakh rupees in 2023. One quarter of the company's value is equal to its EBITDA. By the conclusion of the fifth year, the discounted value has increased to an estimated 22,45,109 lakh rupees, which represents the operational worth of the firm, from 93,938 lakh rupees at the beginning of the project. When you add together the terminal value with the current value for the explicit projection period, you get 15,29,456 lakh rupees. The result indicates that the company's intrinsic worth is 1711.4 rupees per share as of May 1, 2023.

Conclusion

The analysis of the value and income statement projections for VRL Logistics has shed light on the business's financial performance and prospects. We got a thorough grasp of VRL Logistics' value in the market by analyzing its enterprise value, equity value, and value per share. We were also able to anticipate the company's future earnings and evaluate its financial viability thanks to income statement forecasting. These results help investors and stakeholders make well-informed decisions. Overall, this study clarifies the value of VRL Logistics and offers a basis for strategic planning and financial choices in the logistics sector.

The analysis of VRL Logistics' value using the DCF technique and income statement projections, taken as a whole, offers a thorough assessment of the firm's financial standing and investment potential. It provides useful information about the company's profitability, total worth, and potential for future cash flow creation. This information may be used by stakeholders and investors to analyse VRL Logistics' potential for long-term growth in the logistics sector and to make well-informed investment decisions.

The analysis concludes that VRL Logistics has been undervalued, given that its intrinsic value surpasses the market value. This indicates that the company is in good financial standing and is likely to yield favourable returns for its shareholders.

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