

Stock Valuation of Startup: A Case Study of Ram's Associate Cold Storage Ltd.

***Navrang Agrawal**
****CA (Dr.) Prithvi Ranjan Parhi**
*****Dr. Sthitipragyan Biswal**

ABSTRACT

As per the Efficient Market Hypothesis, information flow to the market results in change of stock prices. These information flows are absorbed by the market and reflected in stock prices making it either over-priced or underpriced. The state of under or over-pricing happens when the true value (intrinsic value) of a stock deviates from its market value hence providing opportunities to the investors to decide their strategies. Lots of valuation models are widely used by the investors for this purpose. However, the Discounted Cash Flow method is logically grounded and correct method as a true value of a stock is always the present value of all future cash flows generated by the stock discounted at the required rate of return. When it comes to the valuation of unlisted stocks, lack of handy information makes the valuation process a complex one. Keeping the above realities and challenges in consideration, the present work aims at estimating the true value of Ram's Associate Cold Storage Ltd. that is a start-up company. This work is a case study, where the DCF method is adopted to calculate the value of stocks by exploring the fundamentals of the company. Accordingly, the numerator in terms of forecasted cash flow using growth rate and the denominator using cost of equity are employed in the discounted cash flow valuation method. Data used for the research work is secondary in nature.

Keywords: True value, Market value, Stock valuation, Startup Company

***Navrang Agrawal**, Student, ASTHA School of Management, Email: navrangagrawal123@gmail.com

****CA (Dr.) Prithvi Ranjan Parhi**, BAPS & Associates, Bhubaneswar, Email: prithvi.baps@gmail.com

*****Dr. Sthitipragyan Biswal**, Assistant Professor, ASTHA School of Management, Bhubaneswar, Email: sthitifinance@gmail.com

Introduction

The intrinsic value of an equity share depends on a multitude of factors. The earnings of the company, the growth rate and the risk exposure of the company have a direct bearing on the price of the share. In the real world, analysts have been grouped into either Technical or Fundamental camps for many years but in reality, there are very few pure technicians or fundamentalists who exist. Fundamental analysts cannot really ignore the effect and timing of economic announcements and technical analysts cannot really ignore various signals derived from the study of historic prices and volatility. It is fairly difficult to take into account all the different economic announcements as well as the political and social situations that affect an economy particularly, in today's global market. However, by understanding the basics and delving deeper into the various fundamentals of the economies, one will likely create a valuation model that can capture the true value of securities that are traded in market. The present case study based work tries to estimate the true or intrinsic value of stock of Ram's Associate Cold Storage Ltd. that is a start-up company by exploring its fundamentals.

Literature Review

Much of the empirical research on valuation using multiples has focused on the optimal value driver and statistical procedure used to estimate the multiple of the target firm. In a comprehensive study of these issues, Liu et al. (2002) (LNT) conclude that the most accurate valuation procedure uses forward earnings as the value driver (Kenton, 2004). Kim and Ritter (1999) find a similar result in their investigation of how IPO prices are set. LNT find that the best statistic is the harmonic mean of the price–earnings multiples of comparable firms, as suggested by Baker and Ruback (1999). They also find that using the entire sample of firms in an industry is better than using the entire cross-section of firms in all industries. However, they do not examine the properties of estimates based on samples smaller than all the firms in an industry.

In an early study of the selection of the comparable group, Alford (1992) finds that using all firms in a 3-digit Standard Industrial Classification industry is as good as

other selection procedures. The alternatives, he examines select the comparable group based on leverage, return on equity, assets, and growth. Of these variables, he finds that the analysts' long-term growth forecast is the fundamental measure that contributes most to valuation accuracy. However, he finds that selecting the comparable group on the basis of forecast growth rates adds little or no predictive accuracy to portfolios of comparable firms formed on the basis of industry.

Using a different approach, Bhojraj and Lee (2002) (BL) show that accuracy in forecasting future multiples can be improved by using a closely matched set of comparable firms. They suggest that their method of selection offers a significant improvement in accuracy over comparable firms selected on the basis of industry.

Their approach involves two components:

- (1) regression analysis of multiples using standard value-drivers as independent variables
- (2) the selection of closely comparable firms based on the estimated relationships.

The evidence in LNT suggests that regression analysis alone does not improve the accuracy of valuations. Therefore, it seems likely that the extra accuracy in BL's procedure is coming from the information contained in the multiples of a small number of closely comparable firms. However, because BL's tests involve forecasting future multiples rather than simply examining the accuracy of current valuations, they are not directly comparable with the results in LNT. Our study adds to this literature in three ways. First, we examine theoretically the way that valuation accuracy changes as more comparable firms are added. We show the trade-off involved in increasing the number of comparable firms.

Adopting a different valuation perspective, Bartram and Grinblatt (2018) propose a simple approach to fundamental analysis to approximate a firm's fair equity value as a linear function of almost all of its most recently reported information in financial statements. Similar to our theoretical model, this statistician's approach to valuation is also based on the law of one price and the values obtained are the market values of synthetic stocks or replicating portfolios (as each of the portfolios' fundamental

characteristics is identical to those of the firm being valued). They find that the estimation of fair market values in this way leads to trading strategies that can earn abnormal profits.

Gao et al. (2019) develop a hybrid valuation model by combining the advantage principles of multiples-valuation approach and standard discount models. They show that their hybrid model outperforms the price-to-earnings multiple which Liu et al. (2002) find performs remarkably well. Another hybrid approach is given in Cornell and Gokhale (2016), where they extend the usual multiples approach by including the information in the entire term structure of earnings forecasts and find that it improves accuracy.

Second, we show empirically how the number of comparable firms affects valuation accuracy. Across our entire sample we obtain a result that explains the preference of practitioners for relatively small samples of comparable firms. Using the 10 firms in the industry with forecast growth rates most similar to the target firm is as accurate as using the entire industry. Using only five firms selected on the basis of growth rates results in only a small decrease in accuracy. This suggests that the largest gain to be made in the accuracy of valuation using multiples may be in selecting and weighting the evidence in a small number of closely comparable firms, rather than statistical procedures for processing the information in a large sample. We also show that the incremental accuracy from using an entire industry rather than a small number of comparable firms varies between industries. This suggests that the search for a “one-size-fits-all” procedure for valuation using multiples may not work unless it makes the sample of comparable firms depend on industry characteristics.

Objective of the study

The objectives of the study are as follows

- To analyse the company profile and its fundamentals
- To prepare a valuation model using DCF technique
- To estimate the true value of the stock of Ram’s Associate Cold Storage Ltd.
- To interpret the result.

Research Methodology

Keeping in view the objective of this valuation, and the fact that the company is a going concern and has the capacity to generate future cash flow, and also the investor has no intention to close the business in near future, the more appropriate technique of valuation i.e., Discounted Cash Flow Method is adopted by the valuer as that reflects the future cash flows. The book value method is rejected as the investor is looking at the future cash flows whereas book value only reflects the current financial position.

The following matters are considered for preparation of this research work.

- i. The audited financial statements of the Company as at March 31, 2022.
- ii. The financial records of the company prepared up to the Valuation Date i.e. October 18, 2022.
- iii. Projections and assumptions provided by the Company for predicting the future cash flows for 10 years
- iv. Representations made by the Company in course of the valuation exercise, both written and verbal, including technical, financial and operating data.
- v. We have also obtained necessary explanations and information, which we believed were relevant to the present exercise, from the Management of the Company.

This valuation has been done pursuant to a legal/regulatory requirement using the Discounted Free Cash Flow Method and hence we are unable to comment on whether a different method will give a better indication of the value of the company or not. The Income approach includes Discounted Cash Flow method.

Proposed DCF Valuation Model

Discounted Cash Flow model indicates the fair market value of a business based on the value of cash flows that the business is expected to generate in future. This method involves the estimation of post-tax cash flows for the projected period, after considering the business's requirement of reinvestment in terms of capital

expenditure and incremental working capital. These cash flows are then discounted at a cost of capital that reflects the risks of the business and the capital structure of the entity. The Discounted Free Cash Flow (DCF) as described below is based on the fundamental assumption of going concern for the business under consideration. The DCF to equity method uses the future free cash flows of the equity holders discounted by the cost of equity to arrive at the present value. In general, the DCF method is a strong and widely accepted valuation tool, as it concentrates on cash generation potential of a business. Steps involved in valuation are as follows:

Unlevered Free Cash Flow to Firm

The future free cash flows to the firm have been calculated under both the most likely scenarios on the basis of financial projections. The future free cash flows to the firm are computed in the following manner:

Profit after Tax	XXX
Add: Interest(Net of Tax)	XXX/(XXX)
<i>Net Operating Profit After Tax(NOPAT)</i>	XXX
Add: Depreciation and Amortization	XXX/(XXX)
Less: Net Capital expenditure	XXX
Add/ Less: Decrease/(Increase) in Working Capital Changes	(XXX)
<i>Unlevered Free Cash Flow to Firm</i>	(XXX)
Add: Additional Future Maintainable Income(Net of Tax)	XXX
Less: Additional Future Maintainable Expenditure (Net of Tax)	XXX
Less: Future Projected Capital Expenditure (if any)	
Adjusted Unlevered Free Cash Flow to Firm	XXX

Type of Income or Cash Flow

As per Para 60.4 of IVS-200, the Type of Income or Cash Flow used should be consistent with the type of interest being valued. For example:

- a) Enterprise value is typically derived using cash flows before debt servicing costs and an appropriate discount rate applicable to enterprise level cash flows, such as a weighted-average cost of capital, and
- b) Equity value may be derived using cash flows to equity, that is, after debt servicing costs and an appropriate discount rate applicable to equity cash flows, such as a cost of equity.

Discount Rate

The discount rate considered for arriving at the present value of the free cash flows of the Company is WACC.

Following are the factors used for the calculation of Cost of Equity (k_e).

- a) Risk Free Return (R_f)¹ – R_f is considered at 6.70 % based on average rate of return of Treasury Bills as on a date closer to the valuation date October 18, 2022.
- b) Sector Beta (β_{UL}) – The unlevered beta for the relevant sector is estimated to be 1.01 on the basis of market data. This represents Systematic risk. Systematic risk is that part of the risk which is inherent to the entire market or market segment. The application of a valuation models requires computation of systematic risk (β). The systematic risk is computed as the beta factor. Beta measures the sensitivity of a stock to the stock market index. The standard practice is to estimate β of a stock in relation to the index of the market to which it belongs. Thus β of an Indian industry is related to BSE Sensex, or NIFTY. β is usually computed with reference to market by using the following formula.

$$\beta_x = \frac{\sum x \bar{y} - \bar{n} x y}{\sum y^2 - n (\bar{y})^2}$$

Where:

x = Return of the security.

y = Return from the market.

x = Arithmetic means of the return of the security.

y = Arithmetic means of the market return.

n = Number of observations.

This report has used unlevered β which is gathered from publicly available data sources.

- c) Company Beta (β_L) – The levered bottom-up beta for the company is computed to be 1.01
- d) Market Rate of Return (R_m) - The average monthly returns of overall industry and of biotechnology industry from market indices have been calculated from May 2003 to September 2022 and then annualized to arrive at the Expected Market rate of return. The same comes to 13.79 % and 11.03% respectively.
- e) Cost of Equity (K_e): Cost of Equity of the company = $R_f + \beta_L(R_m - R_f) = 6.70 + 1.01(13.79 - 6.70) = 13.86\%$.
- f) Cost of debt (K_d): Post Tax Cost of debt of the company is taken into consideration which is 9.3%
- g) Weighted Average Cost of Capital (WACC): WACC of the company is computed to be 8.23%.
- h) Perpetuity growth: Perpetuity growth of the company is estimated to be 3.50% on the basis of historical GDP growth rate of India for last 10 years.
- i) HiLo Risk: Simple average of (High Price for year - Low Price / (High Price + Low Price)). It is a non-parametric and simple measure of price risk is taken from industry data as 0.4564.

Company Background

RAM'S ASSORTED COLD STORAGE LTD is a private company incorporated on 26th May 1986, engaged in the business of Food Processing. The objective of the company is to produce better and quality product. Ram's Assorted Cold Storage Limited (RACSL) is the seafood processing/exports division of the Suryo Group of companies. The Suryo Group has been a pioneer in the field of shrimp exports and aquaculture in India. It is a family owned company, and has been growing and

expanding the business rapidly. It has its own shrimp hatchery, shrimp farms, shrimp feed distribution and shrimp processing units. With over 35 years in the seafood trade it offers unmatched quality and expertise. RACSL's vision is to cater to a global demand for healthy and ethically produced seafood products. It would like to achieve this by promoting sustainable aquaculture practices in India and contribute towards the development of the rural areas.

Hatchery: Vannamei hatchery is located at Gopalpur on Sea, Odisha. Through the careful selection of imported brood stock from Hawaii and rigorous Bio Security norms and Standard Operating Procedures, a supply of quality specific pathogen free (SPF) Post Larvae to farmers is ensured. Hatchery was BAP certified in 2017.

Farm: 65 acres of farm is located in Parikhi, Balasore, Odisha. It has the most modern and professional farmer network. The practices are imitated by rest of the farming community.

Feed Dealership / Farmers' Network: Avanti Feed in Odisha is sold through the network. Apart from that sell Pro Biotics is also sold to farmers. The network of farmers is provided with Feed, Pro Biotics and most importantly technical guidance and support. There is a buy back arrangement with these farmers.

The brief particulars of the company are as under.

Table -1
Company Details

CIN	U63022OR1986LC001677
Company / LLP Name	RAM'S ASSORTED COLD STORAGE LTD
ROC Code	RoC-Cuttack
Registration Number	001677
Company Category	Company limited by Shares
Company Sub-Category	Non-govt. company
Class of Company	Private
Authorised Capital(Rs)	7,00,00,000
Paid up Capital(Rs)	5,01,01,500
Date of Incorporation	26/05/1986
Registered Address	DINALIPI BHAWAN A-54/1, NAYAPALI,

	BARAMUNDA BHUBANESWAR
Email Id	headoffice@racsl.com
Whether Listed or not	Unlisted
Date of last AGM	30/11/2021
Date of Balance Sheet	31/03/2021
Company Status(for efilng)	Active

****Company Website***

Valuation of stock using DCF method

Industry Growth Rate

Considering the factors in the above, Food Processing industry growth rate is computed as under:

Table -2
Calculation of growth rate

Annual revenue in 2019 =	US\$63 billion
Expected Annual revenue in 2025 =	US\$ 150 billion
Future value factor =	2.38995
Rate that corresponds to Future value interest factor for a period of 7 years ² =	13%

****The Author***

As computed above, the industry growth rate is 13 %. The valuer after exercising his professional judgment has considered 13% as rate of growth of operating cash flow for 10 years.

The company operates in Food Processing Sector in Indian economy. The average return of Indian Capital Market in long run considering overall industry is computed to be 0.09%per month which is annualized to 11.03%per annum.

The average return of Indian Capital Market of Food processing industry in long run is computed to be 1.82% per month which is annualized to 11.03% per annum

The book Value of the equity Shares of the Company is arrived at as under.

Table- 3
Estimated Book Value

<i>Sl</i>	<i>Particulars</i>	<i>UoM</i>	<i>Value</i>
1	Book Value of assets of the Company	Rs.	63,10,36,459
2	Book Value of Liabilities of the Company	Rs.	52,97,34,411
3	Net Value of Equity (3=1-2)	Rs.	10,49,05,756
4	Number of Equity Shares	Nos.	5,01,015
5	Value of Equity (5=3/4)	Rs.	209.52

****The Author***

Analysis of Result & Findings

Valuation as determined as per methodology described above and calculations in most likely scenario is produced as under;

Table- 4
Calculated True / Intrinsic Value of Stock

<i>Sl.</i>	<i>Details</i>	<i>UoM</i>	<i>Value</i>
1	Enterprise Value	In Crores	1541.32
2	Less: Debt Obligations	In Crores	43.92
3	Add: Cash & Cash Equivalents	In Crores	2.17
4	Add: Premium	In Crores	0
5	Equity value(Fair Value)	In Crores	1499.57
6	Discount factor for lack of Marketability	25%	0.30
7	Discount for lack of Marketability	In Crores	449.87
8	Adjusted Equity Value	In Crores	1049.70
9	No. of Shares	Nos	5,01,015
10	Value per equity share	INR	209.515
11	Rounded Off	INR	209.52

****The Author***

Based on the assumptions and limiting conditions as described in this report, as well as the facts and circumstances as of the valuation date, we conclude that;

- i. The enterprise value is Rs. 1541.32Croresin the most likely Scenario.
- ii. The equity value before adjusting discount for lack of marketability (DLOM) is Rs.449.87Crores.

The fair value of equity shares (Post proposed issue) of the company is Rs. 209.52/- per share

Cash Flow Projection and Value Computation (Rs. In Lakhs)

Table -5

Forecasted Cash flows using growth rate

Cash Flow Projections and Present Values										
<i>Future Years</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
	<i>Projected</i>									
Unlevered Free Cash Flow	- 4953.65	- 10699.87	- 7382.91	4456.55	5035.90	5690.34	6430.34	7266.29	8210.90	9278.32
Add: Additional Future Maintainable Income (Net of Tax)	0	0	0	0	0	0	0	0	0	0
Less: Additional Future Maintainable Expenditures(Net of Tax)	0	0	0	0	0	0	0	0	0	0
Less: Future Projected Capital Expenditure(if any)	0	0	0	0	0	0	0	0	0	0
Adjusted Unlevered Free Cash Flow to Firm	- 4953.65	- 10699.87	- 7382.91	4456.55	5035.90	5690.34	6430.34	7266.29	8210.90	9278.32
Terminal Value beyond Projection	0	0	0	0	0	0	0	0	0	300094.6672
Total Unlevered Free cash flow to Firm for Valuation	- 4953.65	- 10699.87	- 7382.91	4456.55	5035.90	5690.34	6430.34	7266.29	8210.90	309372.99
Discounting Factors	1	0.9239	0.8536	0.7886	0.7286	0.6731	0.6219	0.5746	0.5308	0.4904
Present Value	- 4953.65	- 9985.50	- 6301.84	3514.46	3669.08	3830.50	3999.02	4174.96	4358.64	151727.02

***The Author**

Table -6

Enterprise and Equity Valuation:

Enterprise Value (In Lakhs)	154132.7221	
-----------------------------	-------------	--

Enterprise Value(In Crores)	1541.3272	
Less: Debt Obligations	43.92	Crores
Add: Cash & Cash Equivalents	2.17	Crores
Add: Premium	0	Crores
Equity Value	1499.579652	Crores
Discount factor for lack of Marketability	0.30	
Discount for lack of Marketability (Rs.)	449.87	Crores
Adjusted Equity Value	1049.7057	Crores
No of Shares	5,01,015	
Value per equity share (Rs.)	209.5158	INR
Rounded Off	209.52	INR

****The Author***

Based on the assumptions and limiting conditions as described in this report, as well as the facts and circumstances as of the valuation date, we conclude that

- i. The enterprise value is Rs. 1541.32Croresin the most likely Scenario.
- ii. The equity value before adjusting discount for lack of marketability (DLOM) is Rs.449.87Crores.
- iii. The fair value of equity shares (Post proposed issue) of the company is Rs. 209.52/- per share.

Conclusion

The present study is a case study with the objective of estimation of intrinsic or true value of a start-up company that is Ram's Associate Ltd. In the present study, the aim was to calculate the fundamental or the intrinsic value of the selected company's shares. DCF Model has been used for this purpose. Using this model, the intrinsic values of the sample companies' share is calculated. Cash flow is forecasted to future time period to 2025 using the growth rate. Growth rate is calculated considering the fundamentals of the company. Then the discount rate for the DCF model is estimated using cost of capital method. Taking the result into consideration, it can be safely concluded that "Valuation is not a total mystery. With correct values and right technique, the true value can be estimated".