

# Performance of Aquaculture companies in India with reference to Avanti Feeds Ltd. and Apex Frozen Foods Ltd.

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**Abstract:** *The purpose of this paper is to study the performance of aquaculture companies in India with reference to Avanti Feeds Ltd. (AVANTIFEED) and Apex Frozen Foods Ltd. (APEX). The data taken for the study is from January 1, 2018 to December 31, 2020. The factors considered for the study is the daily closing prices and summary statistics is included to find the mean and standard deviation. Linear regression is done between daily closing prices of AVATIFEED and APEX to find the relationship between the variables. The net profit ratio and current asset ratio is taken for the past five years to analyse the profit and liquidity position of the firms. Avanti Feeds Ltd. one of the leading manufacturers of prawn and fish feeds saw a great downfall in the daily prices during June 2018 causing a high standard deviation. The net sales and profits have been increasing from 2017 to 2021 amidst the fluctuation caused by the decline in the exports to other countries. Current ratio is calculated to know the position of currents assets and current liabilities in the firms. The findings of this study show that there is more scope for aquaculture firms to grow in India. Better credit facilities from the banks and allowances like subsidy from the government can help small business to grow in this sector. The risk involved in these firms discourages banks to lend loans to fisheries businesses. The growth of aquaculture industry has provided income to people in rural areas but also caused pollution and genetic degradation of cultured species.*

**Keywords:** *Aquaculture, Current Ratio, Net Profit Ratio*

## 1. INTRODUCTION

Aquaculture refers to the refinement of marine organisms in controlled aquatic environment. Usually fish farming is a family-run business in India, but has become a growing business in recent years. Carp and shrimp farming play a greater role in the economic development of the country by generating more jobs in the country now. The demand for the seafood around the world has transformed subsistence farming into a commercial business. Although the business is growing, fish farming involves greater risks caused by market risks, low productivity and diseases like Early Mortality Syndrome (EMS) or White Spot epidemic in the shrimp business. China ranks first in the aquaculture production in the world followed by Indonesia and India. More than 50 percentage of the global production is dominated by China. Fish culture was a family business in China, which the government later introduced technology and thus resulting in the expansion of the industry. **X. Li et al., (2011)** discusses the current state and challenges

of aquaculture in China. This industry has brought development in the rural areas by providing jobs to many people. Pollution, diseases and genetic degradation of cultured species are some of the problems faced by the growth of aquaculture industry in China.

One of the profitable businesses in aquaculture industry is the Tilapia farming. Both large-scale and small-scale fishing business in India is a profitable one. The risks involved in this type of business are the spread of deadly diseases causing losses to the firm. The government of India is also providing support through the Ministry of Fisheries by helping small businesses to grow. Aquaculture is not only a source of food, but also provides jobs to people in the coastal areas. Aquaculture is less expensive when compared to the normal fishing and uses innovative technologies thus resulting in high profits as a result of increased demand all over the world. Avanti Feeds Ltd. (AVANTIFEED) is one of the leading manufacturer of fish feed and prawn. Apex Frozen Foods Ltd. (APEX) ranked next to Avanti Feeds Ltd. in terms of sales during January 2021. Most part of the revenue generated by Avanti Feeds Ltd. is from the shrimp feed business. There was a drop in shrimp prices during the year 2018 due to temporary decline in shrimp consumption in the United States due to extended winter. APEX started off initially as a partnership firm, and then changed into a private limited company and later into a public limited company in 2016. APEX has been into farming of shrimps in 1000 acres of land which is partially owned and partially on lease basis.

## 2. REVIEW OF LITERATURE

**Melba and Bondad (2019)** desired to raise awareness on the application of the risk involved in the aquaculture. Businesses take decision based on the information they have and it may involve high degree of uncertainty. Sustainable aquaculture and businesses can be improved by involving risk analysis as a decision making tool. **Sung YY and MacRae TH (2011)** analysed how aquatic organisms react to pathogen infection by producing the four major Hsp (Families of heat shock proteins) with regard to their mechanism and structures. The results showed that by increasing the Hsps in aquatic organisms by chemical application, heat shock, and feeding exogenous Hsps also enhances resistance to infection. **P, Jebah. (2020)** examined the relationship between 12 constituents of Nifty PSU banks with Nifty 50 index from May 01, 2011 to May 30, 2020 using daily stock returns. The stock prices displayed volatility. The sensx displayed market crash in the beginning of 2020 due to 'Covid 19' which was greater than the stock market crash in 2008.

**Ivanovski et al., (2016)** examined in their paper the daily returns of ten stocks and stock-exchange index at Macedonian Stock Exchange. The purpose of the research was to identify the mutual dependence and correlation between stocks. The results displayed strong correlation between stocks. Linear regression also displayed statistical significance between the stocks taken for the study.

**Banos-Caballero et al., (2019)** proposed in their study that positive relationship existed between the profitability of the firms and the accounts Payable period and also revealed that accounts payable policy can affect the performance of the firms. **Agmas, Fekadu. (2021)** examined how the working capital had an impact on the exporting firms' performance in Ethiopia. The study was conducted on 164 exporting firms. The results showed that inventory conversion period had a positive relationship with the return on investment, and the accounts payable period had a positive impact on the performance of exporting firms which was contradictory to the study of others like **Raheman and Nasr (2007)** who examined 94 Pakistani firms which was listed on the Karachi Stock Exchange. The study revealed that there is relationship between profitability and liquidity was negative

### 3. DATA & METHODOLOGY

Avanti Feeds Ltd. (AVANTIFEED) and Apex Frozen Foods Ltd. (APEX) are taken for the study. These two firms are the best performing firms in the aquaculture industry in India. The daily closing prices from January 2018 to December 2020 are considered for this research. The data for measuring the financial performance relates to net profits and net sales from March 2017 to March 2021. Descriptive statistics and linear regression model is used to analyse the performance of the companies in the stock market.

**Table 1 showing summary statistics for daily closing price for AVANTIFEED and APEX**

Summary Statistics	Average	Standard Deviation	Skewness	Excess Kurtosis	Median	Minimum	Maximum
<b>AVANTIFEED</b>	725.0259	678.56	1.89	1.83	451.95	261.15	2695
<b>APEX</b>	355.3337	148.85	1.37	1.11	308.8	145.15	830.05

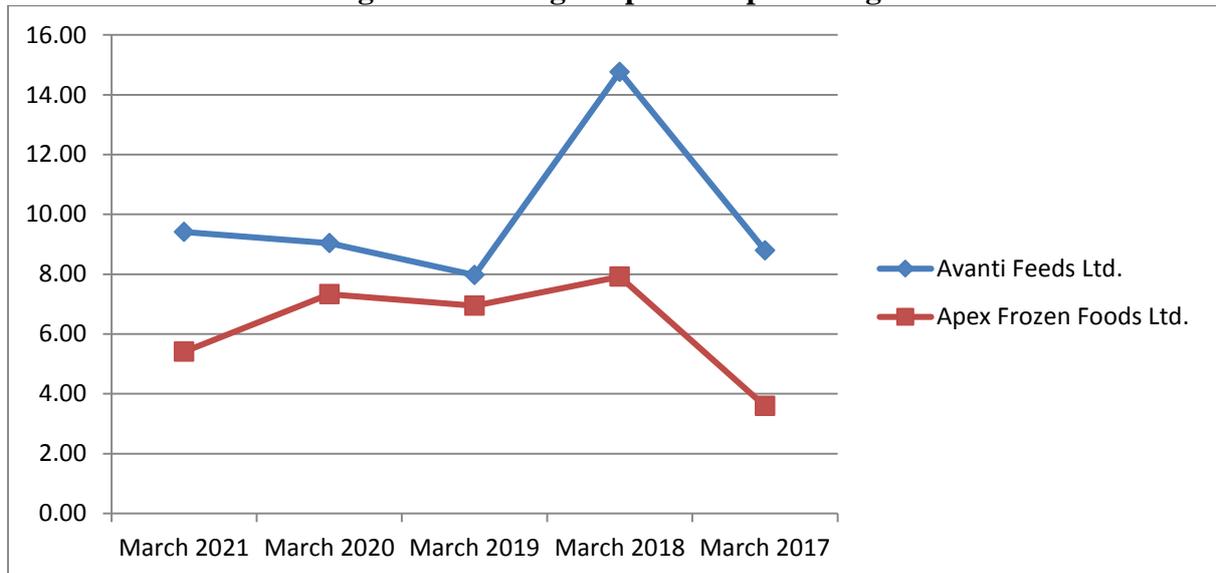
AVANTIFEED had a closing price of Rs.2585.25 on January 01, 2018 and a fall in the price to Rs.599.30 on June 26, 2018 due to the decline in the consumption of shrimp in the United States due to extended winter. The changes in the price caused a deviation of 678.56. While the Apex Frozen Foods Ltd. had a closing price of Rs.830.05 and decline and a fall in the price to Rs.416.8 on June 26, 2018.

**Table 2 showing net sales in crores for AVANTIFEED and APEX**

Company	March 2021	March 2020	March 2019	March 2018	March 2017
AVANTIFEED Net Sales in crores	3242.51	3162.57	2738.42	2815.33	2230.85
Apex Frozen Foods Ltd. Net Sales in crores	818.48	827.11	874.71	998.63	698.70

There has been an increase in the net sales of AVANTIFEED from Rs.2230.8 (in crores) in March 2017 to Rs.3242.51 (in crores) in March 2021. While APEX also has been showing increase in the net sales from Rs.25.13 (in crores) in March 2017 to Rs.44.29 (in crores) in March 2021, which shows the sales has been increasing in the past 5 years amidst the fluctuations in the share prices due to decline in the exports.

**Figure 1 showing net profit in percentage**



The net profit ratio is calculated by using the formula, Net Profit Ratio = Net Profit/ Sales \* 100. AN average of 10 percentage is considered good for the firm. Both the companies received higher profit in 2018 of Rs.415.73 (in crores) for Avanti Feeds Ltd. and Rs.79.1 (in crores) for Apex Frozen Foods Ltd.

**Table 3 showing current ratio for AVANTIFEED and APEX**

Year	Current ratio for AVANTIFEED	Current ratio for APEX
March 2021	1.58	7.68
March 2020	2.45	3.95
March 2019	1.93	5.38
March 2018	1.34	6.2
March 2017	1.24	3.13

The standard current ratio is 2:1. Although current ratio is not a sufficient indicator to prove the company's liquidity, it is widely used to measure the position of current assets and current liabilities in a company. APEX is in a better position than AVANTIFEED with regard to the current ratio throughout the five years from 2018 to 2021.

**Table 4 showing Linear Regression Statistics for AVANTIFEED and APEX using daily closing prices**

Regression Statistics					
Multiple R	0.90529070				
R Square	0.81955126				
Adjusted R Square	0.81930774				

Standard Error	288.441083				
Observations	743				
ANOVA					
	Df	SS	MS	F	Significance F
Regression	1	279997876	279997876.1	3365.43	9.75E-278
Residual	741	61649909.5	83198.2584		
Total	742	341647786			
	Coefficients	Standard Error	t Stat	P-value	Lower 95%
Intercept	-741.44	27.40	-27.06	0.00	-795.24
X Variable 1	4.13	0.07	58.01	0.00	3.99

Table 4 shows the results for Regression statistics for the two companies **AVANTIFEED** and **APEX**. **AVANTIFEED** is taken as the independent variable and **APEX** is taken as the dependent variable. The values for multiple R and R square showed 0 .91 and 0.82 which shows that there is positive relationship between the two variables.

#### 4. DISCUSSION

There is greater scope for the aquaculture industry to grow in India due to the rising demand from rising population around the world. Businesses which make use of the natural resources in a proper way with good management abilities and proper capital can succeed in this industry. One of the benefits of aquaculture is that it is more efficient as it gives more yields with little resources. The findings of this research are expected to provide constructive information to investors regarding the market information that could influence the movements of the stock price index and thus help them to make efficient investment decisions in the Indian equity market. Aquaculture industry should be developed without destroying the ecosystem. Effective waste management can be developed by applying water quality standards and proper disposal of waste. Aquaculture can have a damaging impact on the economy if it is not maintained at good standards.

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