



## **Financial planning in pharma Industry: A study of select undertakings**

**Pasunuri Amaraveni<sup>1</sup>, Mulukalapally Susruth<sup>2</sup>**

<sup>1</sup> Associate Professor, University College of Commerce and Business Management, Kakatiya University, Warangal, Telangana, India

<sup>2</sup> Research Scholar, Kakatiya University, Warangal, Telangana, India

### **Abstract**

Financial planning is an integral part of financial management which deals with the management of a firm's funds with a view to maximizing profit and the wealth of shareholders. The main aim of this study is to examine the impact of investment decisions on financial planning. The sample used in this study are 5 companies of pharmaceutical industry which listed in National stock exchange and secondary data collected for period 2011-2020. Robust Regression analysis with S-Estimation method were employed to analyze the relationship between the dependent variable and independent variables. Findings show that there is a significant relationship between investment decisions and the financial planning with the  $R^2@ 76\%$ . The study findings indicated that only research and development decision had negative impact on the financial planning while fixed assets decisions and current assets decisions had positive impact on the financial planning. The study recommended the pharma companies should invest optimum amount in research and development decision with maintaining minimum level of profit as it had negative impact on the financial planning, the least variation to the expected results and that leads to highest contribution to operating profit.

**Keywords:** financial planning, investment decisions, pharma companies, robust regression

### **Introduction**

Financial Planning is the process of estimating the capital required and determining its composition. It is the process of framing financial policies in relation to procurement, investment and administration of funds of an enterprise. The quantum of funds needed will depend upon the asset's requirements of the business. The time at which funds will be needed should be carefully decided so that finances are raised at a time when these are needed. The next aspect of a financial plan is to determine the pattern of financing. There are a number of ways for raising funds. The selection of various securities should be done carefully. The funds may be raised by issuing of capital and debentures, rising of loans, etc. Which source of finance should be raised and up to what amount these should be raised is very important. Once a pattern of financing is selected then it becomes very difficult to modify it a financial plan also spells out the policies to be pursued for the floatation of various corporate securities, particular regarding the time of their floatation. No organization can be sustained without some investment decisions. Investment in fixed assets like land, building, plant and machinery, fixtures, fittings and motor vehicle enhances the productive capacity of firms. Profits can be generated by investing in such assets to ensure long term profitability. This category of assets does not change frequently and they are purchased to produce and sell more. Assets have significant role in determining the efficiency and the profit ratio of a firm. Since a firm acquires plant and machinery and other productive fixed assets for the purpose of generating sales.

The investment in current assets is imperative for the day-to-day operations of a business concern. It determines the liquidity and the profitability of the business concern. Financing current assets is a challenging task but this is one

of the significant aspects of working capital management. Financing of current assets has become the most crucial decision-making in the management of working capital. It refers to how current assets are financed i.e., the source from which it is financed. In other words, it is concerned with deciding the financing mix of working capital. It involves which component of working capital is financed by what source. Such a decision is taken in the light of risk and return associated with each source of finance.

Finally Research and development (R&D) investment comprise inventive work undertaken on a analytical basis in order to increase the quantity of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to create new applications. To maintain sustainable growth, pharmaceutical companies must increase income through a continuous delivery of new products and optimize expenditures (e.g., R&D expenditures, S&M expenditures) through increased productivity. Although this idea applies to other industries as well, there are major differences between these other industries and the pharmaceutical sector.

### **Present scenario of Pharmaceutical companies in India**

India is the largest provider of generic drugs globally. Indian pharmaceutical sector supplies over 50% of global demand for various vaccines, 40% of generic demand in the US and 25% of all medicine in the UK. India enjoys an important position in the global pharmaceuticals sector. The country also has a large pool of scientists and engineers with a potential to steer the industry ahead to greater heights. Indian pharmaceutical sector is expected to grow to US\$ 100 billion, while medical device market is expected to grow US\$ 25 billion by 2025. Pharmaceuticals export from India stood at US\$ 16.3 billion in FY20. Pharmaceutical

export includes bulk drugs, intermediates, drug formulations, biologicals, Ayush and herbal products and surgical. As of October 2020, India exported pharmaceuticals worth US\$ 13.87 billion in FY21. Pharmaceutical exports from India stood at US\$ 16.28 billion in FY20 and US\$ 2.07 billion in October 2020.

Medicine spending in India is projected to grow 9-12% over the next five years, leading India to become one of the top 10 countries in terms of medicine spending. Going forward, better growth in domestic sales would also depend on the ability of companies to align their product portfolio towards chronic therapies for diseases such as such as cardiovascular, anti-diabetes, anti-depressants and anti-cancers, which are on the rise.

The Indian Government has taken many steps to reduce costs and bring down healthcare expenses. Speedy introduction of generic drugs into the market has remained in focus and is expected to benefit the Indian pharmaceutical companies. In addition, the thrust on rural health programmes, lifesaving drugs and preventive vaccines also augurs well for the pharmaceutical companies.

In the present study the sample size is five pharmaceutical companies which consider to examine the impact of investment decisions on financial planning.

#### **Alkem Laboratories Limited**

Alkem Laboratories Limited is a leading Indian pharmaceutical company with global operations. The company is engaged in the development, manufacture and sale of pharmaceutical and nutraceutical products. The company produces branded generics, generic drugs, active pharmaceutical ingredients (APIs) and nutraceuticals, which it markets in India and international markets. With a portfolio of more than 700 brands in India, Alkem is ranked the fifth largest pharmaceutical company in India in terms of domestic sales. The company also has presence in more than 50 international markets, with the United States being its key focus market.

#### **Cadila Healthcare Ltd**

Cadila Healthcare Ltd is a well-known research-oriented, technology-driven pharmaceutical company focused on the research areas of biotechnology, formulations and Active Pharmaceutical Ingredients. They are an Indian based pharmaceutical company having their presence around the world. They are having their manufacturing facilities at Ahmedabad, Ankleshwar and Vadodara in Gujarat, Ponda in Goa, Raigad in Maharashtra and Solan in Himachal Pradesh. Cadila Healthcare Ltd, the flagship of Zydus Cadila Group was incorporated in May 1995 and they became a public limited company in July 1996. The company's operation includes pharmaceuticals, which includes human formulations, veterinary formulations and bulk drugs, diagnostics, herbal products, skin care products and OTC products.

#### **Divi's Laboratories Ltd**

Divi's Laboratories Ltd is an India based manufacturer of Active Pharmaceutical Ingredients (APIs) and Intermediates. The company is engaged in manufacture of leading generic compounds, Nutraceutical ingredients and custom synthesis of APIs and intermediates for global innovator companies. Divi's is among the largest pharmaceutical companies in India with a portfolio of 120

products across diverse therapeutic areas. The company has four manufacturing facilities and market presence across several countries. Divi's Laboratories Ltd was established in the year 1990 as Divi's Research Center (DRC) with Research & Development as their prime fundamental. During the year 1991-93, the company successfully developed several commercial processes for intermediates and bulk actives and supplies to manufacturing majors. In the year 1994, they changed their name to Divi's Laboratories Ltd to reflect their growing area of operations.

#### **Sun Pharmaceutical Industries Ltd**

Sun Pharmaceutical Industries Ltd. is the fifth largest speciality generic pharmaceutical company in the world. The company manufactures and markets a large basket of pharmaceutical formulations covering a broad spectrum of chronic and acute therapies.

It includes generics, branded generics, complex or difficult to make technology intensive products, over-the-counter (OTC) products, anti-retrovirals (ARVs), Active Pharmaceutical Ingredients (APIs) and intermediates. The product portfolio of over 2000 high quality molecules covers multiple dosage forms, including tablets, capsules, injectables, inhalers, ointments, creams and liquids. The products cater to a vast range of therapeutic segments covering psychiatry, anti-infectives, neurology, cardiology, orthopaedic, diabetology, gastroenterology, ophthalmology, nephrology, urology, dermatology, gynaecology, respiratory, oncology, dental and nutritionals.

#### **Torrent Pharmaceuticals Ltd**

Torrent Pharmaceuticals Ltd, the flagship company of the Torrent Group, was incorporated in the year 1972. In the year 1980, they started their first manufacturing facility at Vatva and they received their first export order in the year 1983. In the year 1986, they started their second manufacturing plant at Chhatral. In the year 1995, Torrent Gujarat Biotech Ltd plant was commissioned.

#### **Review of Literature**

Prior studies reported that investment decisions may have an important effect on the financial planning.

Oduor (2003) <sup>[2]</sup>. Carried out a study on the effect of financial planning strategies on the financial performance of the local commercial banks in Kenya analyzing the manner in which financial strategies have impacted the high financial performance of the local commercial banks in Kenya.

Mohammed (2008) <sup>[4]</sup>. Determined the importance of financial planning in micro finance firms. The study was addressing the need for such firms to apply financial planning in the management of its resources to enhance efficiency and minimize costs in the micro finance firms in Kenya.

Geroski, Machin and Van Reenen (1993) <sup>[5]</sup>. Employ the Arellano and Bond estimator to evaluate effects of corporate profitability from major innovations. They find positive direct effects spread over a period of seven years for a sample of 721 large, quoted U.K. firms and indirect effects up to three times larger than the direct effects.

Eriotis *et al.* (2000) <sup>[6]</sup>. Investigated the relationship between debt to equity ratio and firm's profitability taking into consideration the level of a firm's investment and the degree of market power.

They concluded that firms which prefer to finance their investment activities through self-finance are more profitable than firms which finance investment through borrowed capital.

Ibam (2007) [7]. Argued that a company’s investment in fixed asset is dependent, to a large degree, on its line of business. Some businesses are more capital intensive than others. According to Ibam (2007) [7]. Fixed asset turnover ratio looked at asset over time and compares the ratio to that of competitors.

This gives the investor an idea of how effectively a company’s management is using fixed asset.

Okwo *et al.* (2012) [8]. Studied the investment in fixed assets and firm profitability, evidence from the Nigerian Brewery Industry. A cross sectional data was gathered for the analysis from the annual reports of the sampled brewery firms for a period of 1995 to 2009.

The result of the tested hypothesis showed that the level of investment in fixed assets does not strongly and significantly impact on the level of reported profit of breweries in Nigeria.

**Objectives of the study**

The study has been carried out with the aim of analyzing the investment decisions with financial planning of the selected companies in the pharma sector. The aim of the study has been carried out with the following specific objectives:

1. To study the present scenario of pharmaceutical companies in India.
2. To study the impact of investment decisions on Financial Planning

**Research Hypotheses**

To study the impact of investment decisions, the following hypotheses have been proposed:

**H<sub>0</sub>:** Investment Decisions has no significant impact on financial planning.

**H<sub>1</sub>:** Investment Decisions has significant impact on financial planning.

**Research methodology**

The study is based on the secondary sources of data collected from selected company’s annual reports. In this study the sample of ten years data from 2011 to 2020 of five Indian pharma companies which listed on National Stock Exchange has been taken.

The variables used in this research are fixed assets decisions, current assets decisions, research and development decisions and financial planning extracted from annual reports of the selected companies. Financial planning is taken as Dependent variables while fixed assets decisions, current assets decisions, and research & development decisions are taken as Independent variables.

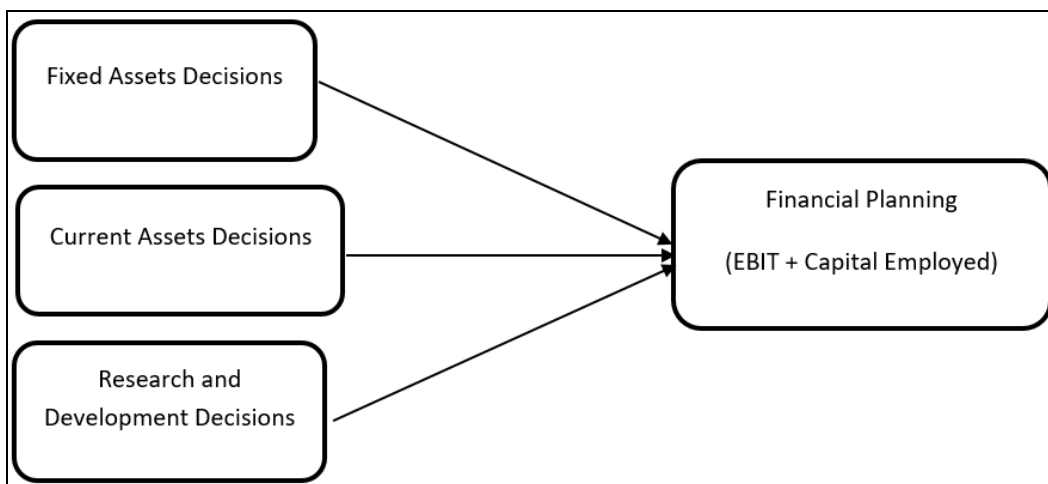
**Variables measurement**

Fixed assets decisions – The amount of investment spend on acquiring fixed assets.

Current assets decisions- The amount of investment spend on acquiring current assets.

Research and Development decisions- The amount of expenditure made on research and development activities.

Financial planning- Financial planning in the pharmaceutical companies was mainly measured by earnings before interest and tax and the capital employed which comprises of fixed assets plus working capital in a particular period.



**Fig 1:** Conceptual Framework of impact of investment Decisions on Financial Planning

**Robust Regression**

Robust least squares refer to a variety of regression methods designed to be robust or less sensitive to outliers. Robust regression is an alternative to least squares regression when data exist with outliers and it can also be used for the purpose of detecting influential observations. The methods of robust regression are M-estimation, S-estimation and MM-estimation.

**S-Estimation Method**

The regression estimators associated with M-scales is the S-estimators which proposed by Yohai (1987), S-Estimation method is based on residual scale of M-estimation method. Susanti and Pratiwi (2014) discussed this method uses the residual standard deviation to overcome the weaknesses of median, the S-estimator is defined by

$$\hat{\beta}_s = \min_{\beta} \hat{\sigma}_s(e_1, e_2, \dots, e_n).$$

with determining minimum robust scale estimator  $\hat{\sigma}_s$  and satisfying

$$\min \sum_{i=1}^n \rho \left( \frac{y_i - \sum_{i=1}^n x_{ij}\beta}{\hat{\sigma}_s} \right)$$

where

$$\hat{\sigma}_s = \begin{cases} \frac{\text{median}|e_i - \text{median}(e_i)|}{0.6745} & ; \text{iteration} = 1 \\ \sqrt{\frac{1}{nk} \sum_{i=1}^n w_i e_i^2} & ; \text{iteration} > 1 \end{cases}$$

$$\sum_{i=1}^n x_{ij} \psi \left( \frac{y_i - \sum_{i=0}^k x_{ij}\beta}{\hat{\sigma}_s} \right) = 0 \quad , j = 0, 1, \dots, k$$

$\psi$  is a function as derivative of  $\rho$ :

$$\psi(u_i) = \rho'(u_i) = \begin{cases} u_i \left( 1 - \left( \frac{u_i}{c} \right)^2 \right)^2, & |u_i| \leq c \\ 0 & , |u_i| > c \end{cases}$$

Fig 2

The Robust regression equation with S-Estimation designed to examine impact of investment Decisions on Financial planning as follows:

Financial planning = constant + (fixed assets Decisions)  $\beta_1$  + (current assets Decisions)  $\beta_2$  + (R&D)  $\beta_3$

**Results and Discussion**

Table 1: Descriptive Statistics

Parameters	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
fixed assets decisions	484.31	7922.73	2810.4	2038.948	0.953	0.115
current Assets decisions	1201.75	11941.12	3526.36	2297.6	2.086	5.179
R&D decisions	159.809	10202.9	3560.53	3049.317	0.73	-0.626
financial Planning	-1884.56	10311.42	4641.58	3054.46	0.38	-0.678

Table 1 represents the results of descriptive statistics of the dependent variable and independent variables employed in the present study. The descriptive statistics revealed by minimum, maximum, mean, standard deviation, Skewness

and Kurtosis. Owing to high variability in the values, variables such as financial planning variable, current assets decisions and R&D decisions have high mean and standard deviation values.

Table 2: sales CAGR for 3 years, 5 years and 7 years

Company	3 years CAGR	5 years CAGR	7 years CAGR
Alkem labs Ltd.	13.60%	17.40%	18.80%
Cadila Health Ltd.	15.00%	10.50%	12.30%
Divis Labs Ltd.	9.90%	11.70%	14.10%
Sun Pharmaceuticals Ltd.	1.60%	3.70%	16.50%
Torrent Pharmaceutical Ltd.	10.90%	11.30%	13.80%

Table 2 explains sales compounded annual growth rate (CAGR) for the period of 3 years, 5 years and 7 years. In case of 3 years sales CAGR, Cadila Health Ltd. Sales growth rate is more than that of other companies and sun pharmaceutical Ltd. Sales CAGR is very low because during the period sales declines. For 5 years sales CAGR, Alkem labs Ltd. is good performer with comparison of other

companies and sun pharmaceutical Ltd is lowest sales CAGR. The 7 years sales CAGR of Alkem labs Ltd. is highest with comparison of other companies and lowest is cadila Health Ltd. results in achievable growth rate. Sales growth is important because it suggests that demand for a company's products or services will be sustained or increasing in the future.

Table 3: Results of Average research and Development to sales ratio

Companies	Avg. R&D to sales ratio (%)
Alkem labs Ltd	53.73643
Cadila Health Ltd	125.3196
Divis Labs Ltd	10.18106
Sun Pharmaceuticals Ltd.	96.78269
Torrent Pharmaceuticals Ltd.	70.45334

Table 3 depicts results of average R&D to sales ratio of

select pharma companies. The average investment in R&D

is highest by cadila health Ltd.i.e., 125% which spends more than sales and average low investment in R&D is divis Labs Ltd .i.e., 10% which less fraction of sales. It is not as

effective when looking at companies in different industries because different industries spend different percentage of amount on R&D.

**Table 4:** Robust Regression analysis with S-Estimation results of Investment Decisions and financial planning

Variable	Coefficient	Std. Error	z-Statistic	Probability
Constant	-483.356	269.7064	-1.792156	0.0731
fixed assets decisions	0.889819	0.09288	9.580304	0.0000*
current Assets decisions	1.396834	0.090261	15.47556	0.0000*
R&D decisions	-0.272217	0.06482	-4.199563	0.0000*
R-squared	0.767918	Adjusted R-squared		0.752782
Scale	723.7051	Deviance		523749.1
Rn-squared statistic	811.7939	Probability		0.0000

Note: Here \*p<0.05

Financial planning = -483.356 + 0.889(fixed assets Decisions) + 1.396(current assets Decisions) -0.272(R&D) The study showed the statistical significance of the relationships between the dependent and the independent variables which was measured at a confidence interval of 95%. The hypothesis is to determine the effect of investment decisions on financial planning. If the P value of the model was less than the level of significance (0.05) then the independent variables would be taken as having an effect on the dependent variable. The table 4 above shows the effect of Investment Decisions on financial planning. A unit increases in investment of fixed Assets will maximize the utilization of financial planning strategies. This shows the positive effect of fixed Assets decisions on financial planning of pharma companies. Also, a unit increase in investment of current Assets will maximize the utilization of financial planning strategies. This also shows the positive effect of current Assets decisions on financial planning of pharma companies. A unit declines in Research and development expenditure will be effectively utilization of financial planning strategies. This indicates that there is negative effect of Research and development decisions on financial planning of pharma companies. If the investments in fixed assets and current assets increases, then financial planning strategies would be optimum. Even an existing concern may require fixed capital and current Assets or working capital for making improvements or expanding the business and managing day to day affairs. Given the coefficient of determination (R<sup>2</sup>) as 0.7679 which is 76% supported by high value of adjusted R<sup>2</sup> 75%, it presumes that the independent variables incorporated into this model have been able to explain the variation of financial planning strategies to 74%. The study showed that investment Decisions had a significant effect on financial planning.

**Conclusion**

Investment decision is an important decision from the three decisions in financial management since investment decision directly affects the amount of investment profitability and cash flow of the company in the future. Investment decision is one of the factors that affects the corporate value, in which the investment decision is associated with the decisions about the allocation of funds, in terms of sources of financing as well as the use of funds for the short-term and long-term purposes. Every year Billions of money is spent in R&D over worldwide. But Indian pharmaceutical companies have long been criticized for their low level of investment in R&D, both in India and

other parts of the world. In India, most companies spend a fraction of their sales, less than 1%, on R&D except pharma and software companies. There is a significant negative impact of research and Development decisions on financial planning because pharma companies invest more amount on Research and Development. Therefore companies should focus on investing optimum amount in research and development expenditure and maintaining minimum level of profit as they have the highest contribution to performance. The study concluded that investment decisions had a significant effect on financial planning.

**References**

1. Khan MY. Basic financial management, 2nd edition, Tata McGraw-Hill Education, New Delhi, 2005.
2. Oduor G. "Impact of financial planning strategies in the growth of the banking industry in Kenya", Kenyatta University, 2003.
3. Pandey IM. Financial management, India, New Print India Ltd, 2012.
4. Mohammed A. "The importance of financial planning in micro finance firms in Kenya", Kenyatta University, 2008.
5. Geroski P, Machin S, Van Reenen J. 'The profitability of innovating firms', RAND Journal of Econometrics. 1993; 24(2):198-211.
6. Eriotis NP, Frangouli AZ, Neokosmides ZV. Profit margin and capital structure: An empirical relationship. The Journal of Applied Business Research. 2000; 18(285):1-3.
7. Ibam. How to evaluate a company before investing, 2007. Stock exchange news sat. Available from freemanskriekesblogspot.com/.../how-to evaluate-compa NY-be, 2007.
8. Okwo IM, Ugwunta DO, Nweze AU. Investment in fixed assets and firm profitability: Evidence from the Nigerian brewery industry. European Journal of Business and Management. 2012; 4(20).