

# Determinants of Retained Earnings in Profitable Pharmaceutical Companies in India: A Study of Pharmaceutical Sector

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**ABSTRACT:** *In this paper an attempt has been made to identify the important determinants of retained earnings in profitable pharmaceutical companies in pharmaceutical sector of India and which have impact on the retention of earnings of pharmaceutical companies under study. Multiple linear regression is used to identify the determinants of retained earnings for a period of sixteen years. Also the importance of retained earnings as a source of finance for pharmaceutical sector companies is also studied in the paper.*

**Key Words:** *Retained Earnings, PAT, DP, RES, CR, DER, INVS, INV, DEP.*

## Introduction

Retained earnings refer to that part of corporate's net profit after tax which is not distributed to the shareholders as dividend but is reinvested in the business. Retained earnings therefore, are the sum of a company's profits after dividend payments, since the company's inception. They are also called earned surplus, retained capital or accumulated earnings. Retained earnings are an important source of internal or self-financing by a company. The savings generated internally by a company in the form of retained earnings are ploughed back into the company for diversification of its business. Retention of earnings by companies reduces their dependence on funds from external sources in order to finance their regular business needs. Retained earnings is favourable for companies as issuing of new capital is inconvenient as well as involve floatation costs also if company raises debt, the financial obligation and risk will increase. Retained earnings not only give rise to growth in the value of the firm but also appreciate the value of its shares.

## Literature Review

The review of studies which studied the subject matter of retained earnings is presented under this heading. Rao (1977) analysed the financing practices of corporate sector from 1972 – 1975 using RBI statistics. His analysis showed that corporate gross saving was diverted to investment in fixed assets and a part of internal savings was used to finance inventory holdings.

Divatia and Shanker (1979) examined the capital formation and it's financing by the public and private limited companies. The result of their study revealed that internal sources played a dominant role in financing of capital formation for the period in between 1962 to 1976.

Rao and Vivekananda (1980) covered the period from 1950-51 to 1962-63, 1960-61 to 1970-71 and 1970-71 to 1974-75 to study the determinant of corporate savings. Their study was based on the aggregate manufacturing sector data of Reserve Bank of India. They concluded that the most important determinant of corporate savings was corporate income. In addition, they found that savings were positively related to investment demand and liquidity position.

Myers and Majluf (1984) concluded that investment decisions made by managers were subject to the pecking order of financing choices available. Managers preferred retained earnings to debt and debt to equity floatation to finance the available projects.

Mayer (1990) in his study found that two third on the average of investment financing in developed countries like USA, UK, Japan, Germany, France, Italy, Canada and Finland are mobilized through internal financing.

Donaldson (1961) in his study viewed and established the importance of retained earnings as the funds over which management has complete and independent control.

Mittal (1992) examined the determinants of retained earnings covering a period of ten years (1980 -1990) and the sample size consisted of 23 large textile public companies of the public sector. The study concluded that retained earnings decision was a residual one this was because of the variation in dividends payments which was very low in comparison to the variations in retained earnings in large sized textile companies. Current ratio had the most significant effect on retention ratio whereas debt equity ratio and corporate tax

rate had a depressing effect on retention ratio. The desire to hold more inventories and to avoid interest burden not significantly induced the managements to retain more profits.

Karak (1993) concluded that management in India, as a rule has recently followed conservative policies with regard to dividends. There was an increasing tendency on their part to finance the expansion out of internal resources as far as possible.

Athey and Laumas (1994) examined the importance of accelerator, internal funds and depreciation for investment by manufacturing firms in India covering a period from 1978 to 1986. Results of the study indicated that internal funds and depreciation had a significant explanatory power in a sales accelerator model of investment and that there existed heterogeneity among firms in the link between internal funds and investment. In particular internal funds were relatively more important for large firms and firms that produced luxury goods.

Bartram (2000) found that the availability of internal funds or retained earnings guarantee the realization of profitable investment projects and at the same time avoid higher capital cost.

Kumar (2001) examined the financing pattern in India for the period from 1956 to 1999 using RBI statistics, results of his study showed that internal funds were the major source of funds in the 1950s.

Salvary (2004) attempted to determine whether allocation of regional financial capital flow was efficient as suggested by the neo classical model, specifically the study attempted to ascertain whether the corporate retained earnings model was a good predictor of the regional flow of financial capital. The results of the study suggested that the corporate retained earnings model had an impact on the predictive ability of the neo classical model, that is regional flows of financial capital were influenced in part by corporate retained earnings.

Saggar S (2005) analyzed the financing and investment pattern of non-financial, non-government, public limited firms over the period 1971-72 to 1999-2000 of majority industry groups. On the source side, the financing pattern of Indian firms was found to be debt based but their share of internal sources increased markedly in the latter half of the 1990s which had an impact on share prices.

RBI (Reserve Bank of India, 2005) study observed that the corporate sector in India has mobilised a large share of resources from internal sources which accounted for 60.7% during 2000-01 to 2004-05.

Mahakud (2005) analyzed the trends and the determinants of retained earnings. For trends in the retained earnings, the study was conducted on public limited companies, private limited companies and foreign companies in India during the period 1966-67 to 2001-02. The determinants of corporate retained earnings were studied using panel data pertaining to 500 companies listed in S&P CNX 500 index for the period 1996-97 to 2003-04. Results of the study found that the corporate retained earnings in India were not increased much and remained at a low level throughout the period of study. As regards the determinants of retained earnings it was concluded that profit after tax, investment opportunities, availability of external funds, cost of borrowings, dividend policy and the shareholding patterns had been the major determinants of retained earnings.

Kaushik (2007) examined the factors that acted as determinants of retained earnings with a comparative study of domestic and multinational companies. Sample size consisted of 100 companies (50 domestic and 50 MNCs); the study covered a period of 15 years i.e. from 1990 to 2004. The study concluded that there existed a significant difference between domestic and multinational companies with regard to the manner in which retained earnings were managed and also the factors that determined retained earnings.

Salvary (2007) studied the problem of under investment, risk management and corporate earnings retention for a period from 1983 to 1990 consisting of 45 firms for purpose of study. Study concluded that risk management was viewed as the management of firm's operations activities and financing practices to produce a portfolio of risks which resulted in average pay off. The two most common forms of risk mitigation i.e. insurance and hedging does not addressed the under investment problem, corporate earnings retention by means of dividend policy provided a firm with an important means of risk mitigation.

Kamat (2008) investigated the trends in dividends across 20 industries to know how the private corporate sector of India appropriated its profits over period from 1961 to 2007. He also examined whether internal funds were a significant source of finance and the dynamics of relation between dividends relative to earnings across type of companies and industries. Results of the study showed that Indian corporate sector paid relatively more dividends, the paying of cash dividends decreased with shareholder concentration and regulated companies paid relatively larger dividends, dividend payouts for all type of companies declined after liberalization period thus, indicating a greater choice of internal financing by means of retained earnings.

Seppa (2008) showed that Estonian non-financial companies followed pecking order theory of financial hierarchy while making capital structure choices as they preferred internal funds to external funds. The results provided no or very weak supports that the tradeoff theory was followed in the long run.

Beena P L (2011) analysed the sources of financing pattern Indian private corporate sector for the period from 1999 to 2009. Result of the study found an increasing trend in internal finance since year 2000 and retained earnings contributed a major share of finance during the period of study.

As far as review of earlier studies on determinants of retained earnings, it is seen that a very few studies attempted to identify the determinants of retained earnings in India.

### Research Methodology

This part explains the scope, objectives, period of study, sample size, database, statistical tool, and development and testing of hypotheses.

#### Scope

The paper aims to identify the determinants of retained earnings in profitable pharmaceutical companies of pharmaceutical sector in India for a time period of sixteen years i.e. 1995-96 – 2010-11.

#### Objectives

The paper aims to meet the following objectives:

1. To identify the determinants of retained earnings in profitable pharmaceutical companies of pharmaceutical sector in India.
2. To study the importance of retained earnings as a source of finance for pharmaceutical companies.

#### Source of Data

The paper is based on the secondary data collected from the CMIE (Center for Monitoring of Indian Economy) Prowess Database.

#### Sample Selection and Period of Study

The sample size consists of 24 profitable pharmaceutical companies. The period of study ranges from 1995-96 to 2010-11, i.e. a period of 16 years.

The technique of selecting the sample of number of companies for selected pharmaceutical sector companies is judgmental sampling. The number of sample companies is given below as obtained from the CMIE Prowess database.

**List of Sample Companies in Selected Sector**

Sr. No.	Sector	No. of Companies
1-	Pharmaceutical	24
<b>Total</b>		<b>24</b>

The number of sample companies selected for pharmaceutical sector is based on the following criteria.

- a) The necessary financial data required for study is available throughout the period of study i.e. from 1995-96 to 2010-11.
- b) The number of sample companies selected for pharmaceutical sector are profitable during the period of study.
- c) The companies are listed on BSE (Bombay Stock Exchange).
- d) The data required for study is available with the CMIE Prowess database (Centre for Monitoring of Indian Economy).

#### Technique of Data Analysis

The data collected relating to the sample pharmaceutical companies for pharmaceutical sector is analyzed using the statistical technique of multiple linear regression using SPSS version 19 (Statistical Package of Social Sciences). The technique of multiple linear regression has been applied primarily to minimize the problem of multi collinearity. This technique of multivariate analysis is used because it is the most appropriate tool for evaluating the individual and combined effect of a set of independent variables on dependent variable.

The significance of the coefficient of various explanatory variables is tested at 99% and 95% level of significance by computing beta ( $\beta$ ) and t values.

### Variables of the Study

A large number of variables, such as profit after tax, reserves, investments, depreciation etc.; affects or impacts the retained earnings of companies or retention of their earnings. All the possible variables that are believed to impact retained earnings have been incorporated in the model.

**Retained Earnings (RE):** Retained Earnings (RE) has been considered as the dependent variable and assuming a linear relationship, the following variables have been identified as independent variables. To be specific, the following have been considered as independent variable for the present paper.

- **Profit after Tax (PAT):** Profit after Tax is the net profit earned by the companies after deducting all expenses like interest, depreciation, taxes. It is the PAT that is divided between dividend and retained earnings.
- **Dividend Paid (DP):** Dividend is the portion of the profit after tax which is distributed to the shareholders. Dividend payment though increases the market price of share of companies but payment of dividends reduces the amount of after tax profits from which the companies can retain earnings.
- **Reserves (RES):** Creation of reserves enables companies to overcome difficult financial periods in future as such, they retain from profits to have adequate level of reserves to meet different financial obligations. Reserves of the organization also have an effect on the retention policy.
- **Current Ratio (CR):** Current ratio is the ratio of current assets to current liabilities, this ratio denotes how much liquid or liquidity companies have to meet their financial obligations within short period of time usually one year.
- **Debt Equity Ratio (DER):** Debt Equity Ratio is worked out to ascertain the soundness of the long term financial policies of the companies. Debt is considered to be a cheap source of finance as tax liability goes down with the payment of interest. In order to take full advantage of tax shield, the equity base needs to be strengthened by retaining the profits.
- **Investment (INVS):** Investments by companies also affect the retained earnings decision of companies and companies with high increase in investment in fixed assets in the current year are likely to retain more.
- **Inventory (INV):** Inventory consists of raw materials, finished goods, etc. To maintain sufficient level of inventories company's needs funds as such retained earnings of companies is internal and cheap source of funds which can be used in maintaining an adequate level of inventories for companies.
- **Depreciation (DEP):** Depreciation being a charge on profit that does not result in the outflow of cash is also likely to affect the retention behavior of companies. The higher the amount of depreciation, the lower is likely to be the retained earnings.
- Thus, the general model that has been considered for determination of relative role of each independent variable is:

$$RE = PAT + DP + RF + CR + DER + INVS + INV + DEP$$

This model has been run using multiple linear regression in SPSS Version 19 (Statistical Package for Social Sciences).

### Formation and Testing of Hypotheses

As the objective is to identify the determinants of retained earnings for selected pharmaceutical sector companies as such, a total of eight (8) hypotheses have been framed and tested.

In order to identify the determinants of retained earnings, the hypotheses have been framed on the basis of impact of independent variables on dependent variable i.e. retained earnings. The second objective of the paper which aims at studying the importance of retained earnings as source of finance for pharmaceutical sector companies has been answered on the basis of review of literature of earlier previous studies carried out.

The hypotheses developed for pharmaceutical sector companies are as follows.

**H0 1(PH):** There is no significant impact of profit after tax (PAT) on retained earnings (RE) of pharmaceutical sector companies.

**HA 1(PH):** There is a significant impact of profit after tax (PAT) on retained earnings (RE) of pharmaceutical sector companies

**H0 2(PH):** There is no significant impact of dividend paid (DP) on retained earnings (RE) of pharmaceutical sector companies.

**HA 2(PH):** There is a significant impact of dividend paid (DP) on retained earnings (RE) of pharmaceutical sector companies.

**HO 3(PH):** There is no significant impact of reserves (RES) on retained earnings (RE) of pharmaceutical sector companies.

**HA 3(PH):** There is a significant impact of reserves (RES) on retained earnings (RE) of pharmaceutical sector companies.

**HO 4(PH):** There is no significant impact of current ratio (CR) on retained earnings (RE) of pharmaceutical sector companies.

**HA 4(PH):** There is a significant impact of current ratio (CR) on retained earnings (RE) of pharmaceutical sector companies.

**HO 5(PH):** There is no significant impact of debt equity ratio (DER) on retained earnings (RE) of pharmaceutical sector companies.

**HA 5(PH):** There is a significant impact of debt equity ratio (DER) on retained earnings (RE) of pharmaceutical sector companies.

**HO 6 (PH):** There is no significant impact of investment (INVS) on retained earnings (RE) of pharmaceutical sector companies.

**HA 6 (PH):** There is a significant impact of investment (INVS) on retained earnings (RE) of pharmaceutical sector companies.

**HO 7(PH):** There is no significant impact of inventory (INV) on retained earnings (RE) of pharmaceutical sector companies.

**HA 7(PH):** There is a significant impact of inventory (INV) on retained earnings (RE) of pharmaceutical sector companies.

**HO 8(PH):** There is no significant impact of depreciation (DEP) on retained earnings (RE) of pharmaceutical sector companies.

**HA 8(PH):** There is a significant impact of depreciation (DEP) on retained earnings (RE) of pharmaceutical sector companies.

### **Profile of Pharmaceutical Industry**

The Indian pharmaceutical industry today is in the front rank of India's science based industries with wide ranging capabilities in the complex field of drug manufacture and technology. Indian pharmaceuticals industry is a highly organized sector. Indian pharmaceutical sector plays a key role in promoting and sustaining development in the vital field of medicines. It boasts of quality producers and many units are approved by regulatory authorities in USA and UK. International companies associated with this sector have stimulated, assisted and spearheaded this dynamic development in the past 53 years and helped to put India on the pharmaceutical map of the world.

The pharmaceutical industry sector has grown from mere US \$ 0.3 billion turnover in 1980 to about US \$ 21.73 in 2009-10. The country now ranks third in terms of volume of production (10 percent of global share) and 14<sup>th</sup> largest by value (1.5 percent of global share). Indian pharmaceutical sector growth has been fuelled by exports and its products are exported to a large number of countries with sizeable share in the advanced regulated markets of USA and Western Europe.

The pharmaceutical sector in India is highly fragmented with more than 20,000 registered units. It has expanded drastically in the last two decades. The leading 250 pharmaceutical companies control 70% of the market with market leader holding 7% of the market share. It is an extremely fragmented market with severe price competition and government price control.

The pharmaceutical industry in India meets around 70 percent of the country's demand for bulk drugs. There are about 250 large units and 8000 small scale units which form the core of pharmaceutical industry in India (including 5 public sector units) which produce complete range of pharmaceutical formulations.

Following the de-licensing of the pharmaceutical industry, industrial licensing for most of the drugs and pharmaceutical products has been done away with as manufacturers are free to produce any drug duly approved by drug control authority. Technologically strong and totally self reliant the industry in India has low costs of production, low R&D costs, innovative scientific manpower, strength of national laboratories and an increasing balance of trade.

The pharmaceutical industry, with its rich scientific talents and research capabilities, supported by intellectual property protection regime is well set to take on the international market.

Indian pharmaceutical companies have been getting international regulatory approvals for their plants from agencies of USA, UK, Australia, South Africa etc. Some of the leading pharmaceutical companies in India are Cipla, Ranbaxy, Sun Pharma, Abott, ZydusCadila, Alkem Laboratories, Pfizer, GSK India, Piramal Healthcare and Lupin.

Department of Pharmaceutical, Ministry of Chemicals and Fertilizers, Government of India).

The future of pharmaceutical sector in India is expected to reach US \$ 55 billion in 2020 from US \$ 12.6 billion in 2009. Due to the increase in the population of high income group, there is very likelihood that they will open a potential US\$ 8 billion market for multinational companies selling costly drugs by 2015 as estimated in a report by Ernst & Young. The domestic sector companies are estimated to touch US\$ 20 billion by 2015. The healthcare market in India is expected to reach US\$ 31.5 billion by 2020. The sale of all types of pharmaceutical drugs is expected in the country which stands at US\$ 9.61 billion which is expected to reach around US\$ 19.22 billion by 2012.

Though, the pharmaceutical sector of India has achieved a lot both at national and international level however steps are still needed to strengthen the pharmaceutical industry therefore Indian pharmaceutical companies need to attain the right product mix for sustained future growth. Core competencies will play an important role in determining the future of many Indian pharmaceutical companies in post product patent regime after 2005. Indian companies in effort to consolidate their position will have to increasingly look at merger and acquisition options of either companies or products. This would help them offset loss of new product options, improve their R&D efforts and improve distribution to penetrate markets.

Research and development has always taken the back seat amongst Indian pharmaceutical companies therefore in order to stay competitive in the future, Indian companies will have to refocus and invest heavily in R&D.

The Indian pharmaceutical sector also needs to take the advantage of the recent advances in biotechnology and information technology. The future of the industry will be determined by how well it markets its products to several regions and distributes risks, its forward and backward integration capabilities, its R&D, its consolidation through mergers and acquisitions, co marketing and licensing agreements.

### Analysis and Interpretation

On the basis of hypotheses developed for pharmaceutical sector companies and testing each of the hypotheses for each independent variable with dependent variable i.e. retained earnings by using technique of multiple regression in SPSS version 19, following analysis and interpretations are made which are given below. The independent variables cash flows, corporate tax and interest were dropped from the analysis due to the problem of multi collinearity for pharmaceutical sector companies. The results of multiple regression for pharmaceutical sector have been given in Table 1.

#### 1.1 Profits after Tax (PAT) with Retained Earnings (RE)

**Null Hypothesis: H0 1(PH):** There is no significant impact of profit after tax (PAT) on retained earnings (RE) of pharmaceutical sector companies.

**Alternate Hypothesis: HA 1(PH):** There is a significant impact of profit after tax (PAT) on retained earnings (RE) of pharmaceutical sector companies.

Multiple regression test indicates a positive impact of profit after tax on retained earnings for pharmaceutical sector companies as the regression coefficient (beta value) is positive with a value of 1.003. To check the statistical significance of this impact the t and significant values are obtained which are 102.179 and 0.000, as the significant value is less than 0.01 (99%) and less than 0.05 (95%) level of significance it means statistically this impact is highly significant therefore, the null hypothesis H0 1(P) is rejected and the alternate hypothesis HA 1(P) is accepted.

#### 1.2 Dividend Paid (DP) with Retained Earnings (RE)

**Null Hypothesis: H0 2(PH):** There is no significant impact of dividend paid (DP) on retained earnings (RE) of pharmaceutical sector companies.

**Alternate Hypothesis: HA 2(PH):** There is a significant impact of dividend paid (DP) on retained earnings (RE) of pharmaceutical sector companies.

Regression test analysis is done to find the impact of dividend paid on retained earnings for pharmaceutical sector companies, it is found that there is a negative impact of dividend paid on retained earnings in case of pharmaceutical sector companies as the regression coefficient (beta) value is - 1.030. In order to assess whether this impact is statistically significant or not the t and significant value are obtained which are - 47.037 and 0.000. As the significant value is less than 0.01 (99%) and less than 0.05 (95%) level of significance it means statistically this impact is highly significant therefore, the null hypothesis H0 2 (PH) is rejected and the alternate hypothesis HA 2 (PH) is accepted.

#### 1.3 Reserve (RES) with Retained Earnings (RE)

**Null Hypothesis: H0 3(PH):** There is no significant impact of reserves (RES) on retained earnings (RE) of pharmaceutical sector companies.

**Alternate Hypothesis: HA 3(PH):** There is a significant impact of reserves (RES) on retained earnings (RE) of pharmaceutical sector companies.

It is inferred from tests result that the impact of reserves on retained earnings for pharmaceutical sector companies is negative as multiple regression gives a negative regression coefficient (beta value) of - 0.004. To check statistical significance of this impact the t and d significant values are obtained which are - 2.038 and 0.038, as the significant value is greater than 0.01(99%) but less than 0.05 (95%) level of significance, it means the impact is statistically significant at 95 % level of significance therefore, the null hypothesis H0 3(PH) is rejected and the alternate hypothesis HA 3(PH) is accepted.

#### 1.4 Current Ratio (CR) with Retained Earnings (RE)

**Null Hypothesis: H0 4(PH):** There is no significant impact of current ratio (CR) on retained earnings of pharmaceutical sector companies.

**Alternate Hypothesis: HA 4(PH):** There is a significant impact of current ratio (CR) on retained earnings of pharmaceutical sector companies.

Data analysis with the help of multiple regression shows a positive impact of current ratio on retained earnings for pharmaceutical sector companies as the regression coefficient (beta value) is positive with value 0.023. Assessing statistical significance of this impact the t and significant values are obtained which are 4.688 and 0.000, as the significant value is less than 0.01(99%) and also less than 0.05 (95%) level of significance it means this impact is statistically highly significant as such, the null hypothesis H0 4(PH) is rejected supported and the alternate hypothesis HA 4(PH) is accepted.

#### 1.5 Debt Equity Ratio (DER) with Retained Earnings (RE)

**Null Hypothesis: H0 5(PH):** There is no significant impact of debt equity ratio (DER) on retained earnings (RE) of pharmaceutical sector companies.

**Alternate Hypothesis: HA 5(PH):** There is a significant impact of debt equity ratio (DER) on retained earnings (RE) of pharmaceutical sector companies.

Multiple regression tests gives a positive regression coefficient (beta) of 0.040, it means there is a positive impact of debt equity ratio on retained earnings for pharmaceutical sector companies. To assess whether this impact is statistically significant or not the t and significant values are obtained which are 4.861 and 0.000. As the significant value is less than 0.01(99%) and less than 0.05 (95%) level of significance, that indicates the impact is highly significant statistically. Hence, the null hypothesis H0 5(PH) is rejected and the alternate hypothesis HA 5(PH) is accepted.

#### 1.6 Investment (INVS) with Retained Earnings (RE)

**Null Hypothesis: H0 6(PH):** There is no significant impact of investment (INVS) on retained earnings (RE) of pharmaceutical sector companies.

**Alternate Hypothesis: HA 6(PH):** There is a significant impact of investment (INVS) on retained earnings (RE) of pharmaceutical sector companies.

Result of regression test indicates a positive impact of investment on retained earnings as the regression coefficient (beta value) is positive with value of 0.013. To check whether the impact is statistically significant or not the t and significant values are obtained that are 1.496 and 0.136, since, the significant value is greater than 0.01(99%) and also greater than 0.05 (95%) level of significance, it indicates that this impact statistically is not significant therefore, the null hypothesis H0 6(PH) has failed to be rejected.

#### 1.7 Inventory (INV) with Retained Earnings (RE)

**Null Hypothesis: H0 7(PH):** There is no significant impact of inventory (INV) on retained earnings (RE) of pharmaceutical sector companies.

**Alternate Hypothesis: HA 7(PH):** There is a significant impact of inventory (INV) on retained earnings (RE) of pharmaceutical sector companies.

Finding of the regression test gives a positive regression coefficient (beta value) of 0.106, which indicates that the impact of inventory on retained earnings is positive. To find the statistical significance of this impact the t and significant values are obtained which are 4.195 and 0.000, as the significant value is less than 0.01 (99%) and also less than 0.05 (95%) level of significance it indicates that statistically the impact is highly significant therefore, the null hypothesis H0 7(PH) is rejected and the alternate hypothesis HA 7(PH) is accepted.

#### 1.8 Depreciation (DEP) with Retained Earnings (RE)

**Null Hypothesis: H0 8(PH):** There is no significant impact of depreciation (DEP) on retained earnings (RE) of pharmaceutical sector companies.

**Alternate Hypothesis: HA 8(PH):** There is a significant impact of depreciation (DEP) on retained earnings (RE) of pharmaceutical sector companies.

Multiple regression tests shows that there is a negative impact of depreciation on retained earnings of pharmaceutical sector companies as the regression coefficient (beta value) is negative with value of -0.849. To assess whether this impact is statistically significant or not the t and significant values are obtained which are 41.760 and 0.000. As the significant value is less than 0.01 (99%) and less than 0.05 (95%) level of significance, it indicates that statistically the impact is highly significant therefore, the null hypothesis  $H_0$  is rejected and the alternate hypothesis  $H_A$  is accepted.

The value of R Square (coefficient of determination) in Table 5.3.9 for pharmaceutical sector is equal to 0.86 which indicates that 86% variance in the dependent variable i.e. retained earnings is explained by the independent variables. Table is given on next page.

**Table 1. Analysis of Pharmaceutical Sector**

Variable	Beta ( $\beta$ )	t	Sig.	R Square
(Constant)		- 24.672	0.000	0.86
PAT	1.003	102.179	0.000**	
DP	- 1.030	-47.037	0.000**	
RES	- 0.004	- 2.080	0.038*	
CR	0.023	4.668	0.000**	
DER	0.040	4.861	0.000**	
INVS	0.013	1.496	0.136	
INVN	0.106	4.195	0.000**	
DEP	- 0.849	- 41.760	0.000**	

\*\* Represents Significant at 99% level of significance

\* Represents Significant at 95% level of significance

### Conclusion

On the basis of analysis in the present paper it is concluded that following variables have been found to be the important determinants of retained earnings of pharmaceutical companies of pharmaceutical sector in India under study with their impact on retained earnings.

**PAT** showed positive impact on the retained earnings and is statistically significant. **DP** showed negative impact on the retained earnings and is statistically significant. **RES** showed a negative impact on retained earnings and is statistically significant. **CR** has a positive impact of on retained earnings and is statistically significant. **DER** has a positive impact on retained earnings and is statistically significant. **INVS** showed a positive impact on retained earnings and is statistically not significant. Impact of **INV** on retained earnings is positive and is statistically significant. Impact of **DEP** on retained earnings is negative and is statistically significant.

The present paper also concludes that importance of retained earnings as a source of finance for pharmaceutical companies is immense and of significant importance. The importance of retained earnings is established by the fact that retained earnings is an internally generated source of finance by companies from their after tax profits. The management of companies has complete and independent control regarding the decision to retain earnings after paying reasonable dividends to their shareholders. The conclusion for this objective are supported by the studies of Beena (2011), Bhayani (2009), Salvary (2007), Sagar S (2005), RBI (2005), Bartram (2000).

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**Annexure:**Name of Pharmaceutical Companies selected in Pharmaceutical Sector.

Aarti Drugs Ltd.
Abbott India Ltd.
Alembic Ltd.
AnuhPharma Ltd.
Arvind Remedies Ltd.
AstrazenecaPharma India Ltd.
AurobindoPharma Ltd.
Aventis Pharma Ltd.
BalPharma Ltd.
Cipla Ltd.
Coral Laboratories Ltd.
Dr.Reddy'S Laboratories Ltd.
East India Pharmaceutical Works Ltd.
F D C Ltd.
Glaxosmithkline Pharmaceuticals Ltd.
Ipca Laboratories Ltd.
J B Chemicals & Pharmaceuticals Ltd.
Jenburkt Pharmaceuticals Ltd.
Lupin Ltd.
Merck Ltd.
Piramal Healthcare Ltd.
Sun Pharmaceutical Inds. Ltd.
Torrent Pharmaceuticals Ltd.
Unichem Laboratories Ltd.