

A Study on Risk and Return Analyses on Pharmaceuticals Sector (Selected Stocks)

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ABSTRACT: An Investor in the stock market would be interested in analysing the stock price movements. Prices in the stock market fluctuate due to continuous buying and selling in the market. There are basically two approaches used in analysing the share price movements. They are fundamental approach and technical approach. Both these approaches have the same objective of buying at lower price and selling at a higher price to gain good return on investment. The aim of this study is to evaluate technical analysis from the Equity market in Pharmaceuticals sector and to find out its usefulness in Indian stock market.

KEYWORDS: INVESTOR, PRICES, EQUITY MARKET, RISK, RETURNS

I. INTRODUCTION

In the equity market, investors bid for stocks by offering a certain price, and sellers ask for a specific price. When these two prices match, a sale occurs. Often, there are many investors bidding on the same stock. When this occurs, the first investor to place the bid is the first to get the stock. When a buyer will pay any price for the stock, he or she is buying at market value similarly, when a seller will take any price for the stock, he or she is selling at market value.

An equity market is a market in which shares are issued and traded, either through exchanges or over-the-counter markets. Also known as the stock market, it is one of the most vital areas of a market economy because it gives companies access to capital and investors a slice of ownership in a company with the potential to realize gains based on its future performance.

Equity markets are the meeting point for buyers and sellers of stocks. The securities traded in the equity market can be either be public stocks, which are those listed on the stock exchange, or privately traded stocks. Often, private stocks are traded through dealers, which is the definition of an over-the-counter market.

II. REVIEW OF LITERATURE

Aswath Damodaran (2013)¹ conducted a study on "EQUITY RISK PREMIUM" Equity risk premiums are a central component of every risk and return model in finance and are a key input in estimating costs of equity and capital in both corporate finance and valuation. The objective of the study were to know the risk in equity market. This paper deals with looking at the economic determinants of equity risk premiums, including investor risk aversion, information uncertainty and perceptions of macroeconomic risk. In the standard approach to estimating the equity risk premium, historical returns are used, with the difference in annual returns on stocks versus bonds over a long time period comprising the expected risk premium. They concluded this paper by examining why different approaches yield different values for the equity risk premium, and how to choose the "right" number to use in analysis.

Stephen H. Penman (1995)² conducted a study on "A COMPARISON OF DIVIDEND, CASH FLOW, AND EARNINGS APPROACHES TO EQUITY VALUATION" Standard formulas for valuing equities require prediction of payoffs "to infinity" for going concerns but a practical analysis requires that they be predicted over finite horizons. The objective of the study were to know about the dividend discount techniques, discounted cash flow analysis. Valuations based on average ex post payoffs over various horizons, with and without terminal value calculations, are compared with market prices to give an indication of the error introduced by each technique in truncating the horizon. They concluded this paper by long forecasting horizons are identified and the performance of the alternative techniques under those conditions is examined

Abdulla Yameen (2001) delivered message, investors will need to be alert to any new development in capital market and take advantage

of the Investor Education and Awareness Campaign program which to be undertaken by the Capital Market Section to acquaint of the risks and rewards of investing on the Capital market. Speech was also focused on to create a new breed of financial intermediaries, which will deal on the market for their clients. These intermediaries have to be professionals with quite advanced knowledge on stock exchange operations, techniques, law and companies valuation. Investors depend to a large extent on their professional advice when investing on the market. Furthermore, these intermediaries must be men of integrity and honesty as they would deal with clients' money Confidence of investors in these professionals is a key to the success of the capital market.

Swarup K. S. (2003) empirically found that equity investors first enter capital market though investment in primary market. The main reason for slump in equity offering is lack of investor confidence in the primary market. It appeared from the analysis that the investors give importance to own analysis as compared to brokers' advice. They also consider market price as a better indicator than analyst recommendations. Accordingly number of suggestive measures in terms of regulatory, policy level and market oriented were suggested to improve the investor confidence in equity primary markets.

III. RESEARCH METHODOLOGY

SOURCES OF DATA: This study is based on the secondary data collected from NSE. The leading stocks in the Pharmaceuticals Sector has been collected through Internet. The monthly market prices are considered for the analysis in order to find out the short term fluctuations so that accuracy can be improved which helps in finding out accurate results.

SAMPLE SIZE: The monthly market prices are considered for the analysis in order to find out the short term fluctuations so that accuracy can be improved which helps in finding out accurate results.

DATA COLLECTION METHOD: The stocks from the Pharmaceuticals sector are chosen based on the top market capitalization in BSE

METHOD OF SAMPLING: Systematic sampling is used where the stocks are taken in an orderly basis mentioned in the top market capitalization of stocks in the Pharmaceuticals Sector. The following Pharmaceuticals companies are taken for the study.

SL.NO	COMPANY
1.	GRANULES
2.	AUTOPHARMA
3.	CIPLA
4.	PFIZER LIMITED
5.	IPCA LABORATORIES

PERIOD OF STUDY: The period of study covers from January 2020 to April 2020

IV. CALCULATION

RETURN: The return is calculated based on the beginning and ending portfolio values. In this study the returns for each day is calculated for a period of 1 year and summed to get monthly returns.

RISK:

The fluctuations in price of a security or portfolio that happens beyond the investors control and that affects the overall market is called as risk

CORRELATION:

Correlation is a statistical technique that can show whether and how strongly pairs of variables are related. The main result of a correlation is called the correlation coefficient (or "r"). It ranges from -1.0 to +1.0. The closer is to +1 or -1, the more closely the two variables are related.

BETA:

The Beta coefficient is a measure of sensitivity or correlation of a security or investment portfolio to movements in the overall market.

ALPHA:

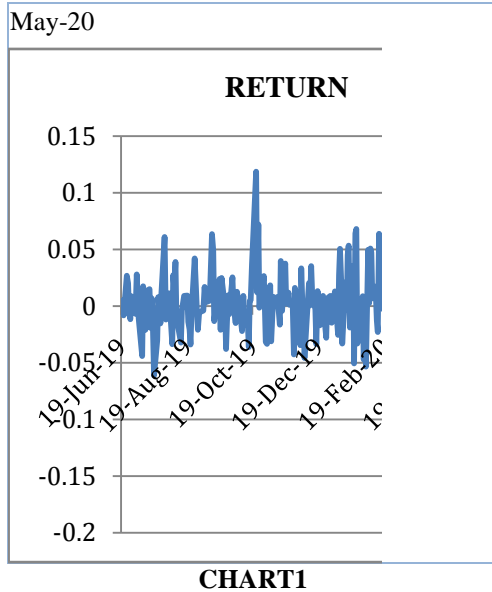
Alpha, also known as "excess return" or "abnormal rate of return," is one of the most widely used measures of risk-adjusted performance.

V. ANALYSIS AND INTERPRETATION

Return Analysis Of Granules India Limited

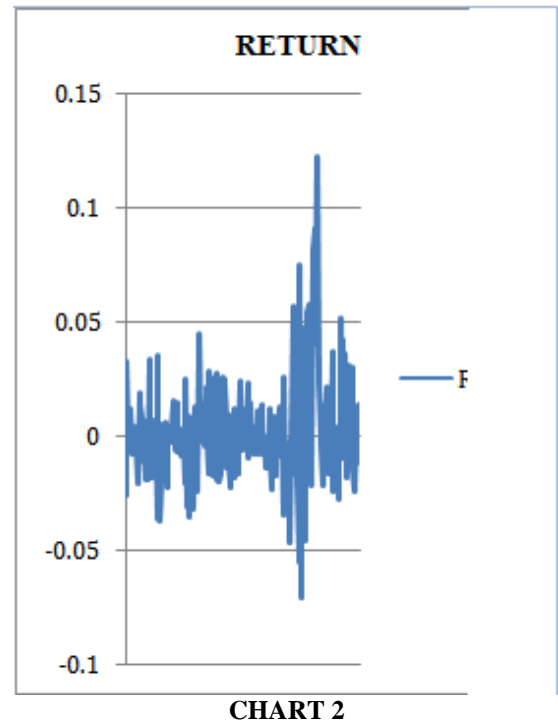
TABLE-1

DATE	RETURN
Jun-19	0.008
Jul-19	0.008
Aug-19	-0.020
Sep-19	0.025
Oct-19	-0.031
Nov-19	-0.012
Dec-19	-0.014
Jan-20	-0.001
Feb-20	-0.095
Mar-20	0.023
Apr-20	-0.038



Return Analysis Of Granules India Limited

From the above analysis, the return values are decreasing over the months and the most lowest return is -0.095 in January.



RETURN ANALYSIS OF CIPLA

From the above analysis, the return values are Fluctuating over the months and the most lowest return is -0.046 in FEBRUARY.

RETURN ANALYSIS OF CIPLA
TABLE 2

DATE	RETURN
Jun-19	0.002
Jul-19	0.002
Aug-19	0.015
Sep-19	-0.032
Oct-19	0.003
Nov-19	0.000
Dec-19	-0.003
Jan-20	-0.009
Feb-20	-0.046
Mar-20	-0.020
Apr-20	-0.011
May-20	0.031

RETURN ANALYSIS OF AUTOPHARMA
TABLE 3

Date	RETURN
Jun-19	0.006
Jul-19	-0.034
Aug-19	-0.016
Sep-19	0.013
Oct-19	-0.014
Nov-19	-0.000
Dec-19	0.018
Jan-20	-0.002
Feb-20	0.027
Mar-20	-0.058
Apr-20	-0.000
May-20	-0.043

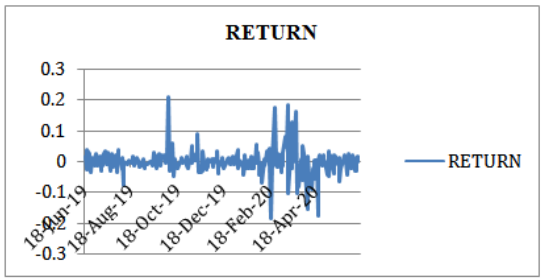


CHART 3

RETURN ANALYSIS OF AUTOPHARMA

From the above analysis, the return values are decreasing over the months and the most lowest return is -0.058 in MARCH

RETURN ANALYSIS OF PFIZER

TABLE 4

Date	Return
Jun-19	0.021
Jul-19	-0.037
Aug-19	0.008
Sep-19	0.024
Oct-19	0.039
Nov-19	0.030
Dec-19	0.003
Jan-20	-0.023
Feb-20	0.008
Mar-20	0.039
Apr-20	-0.00
May-20	-0.03

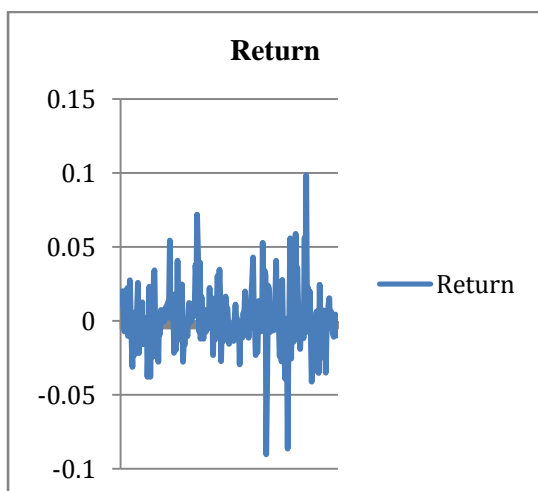


CHART 4

RETURN ANALYSIS OF PFIZER

From the above analysis, the return values are decreasing over the months and the most lowest return is -0.037 in JULY

RETURN ANALYSIS OF IPCALAB

TABLE 5

DATE	RETURN
Jun-19	-0.007
Jul-19	-0.003
Aug-19	0.021
Sep-19	-0.022
Oct-19	0.006
Nov-19	0.012
Dec-19	0.000
Jan-20	-0.014
Feb-20	0.009
Mar-20	0.071
Apr-20	0.016
May-20	-0.036

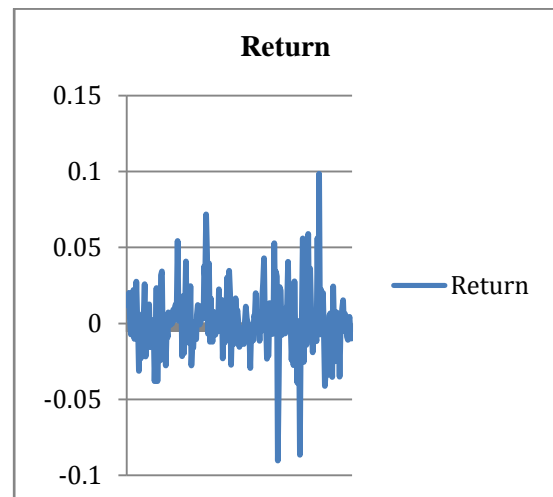


CHART 5

RETURN ANALYSIS OF IPCALAB

From the above analysis, the return values are Fluctuating over the months and the most lowest return is -0.036 in MAY

VI. STANDARD DEVIATION STANDARD DEVIATION OF GRANULES INDIA LIMITED

TABLE 6

DATE	STANDARD DEVIATION
Jun-19	0.034
Jul-19	0.035
Aug-19	0.036
Sep-19	0.037

Oct-19	0.038
Nov-19	0.040
Dec-19	0.042
Jan-20	0.044
Feb-20	0.047
Mar-20	0.034
Apr-20	0.032
May-20	0.040

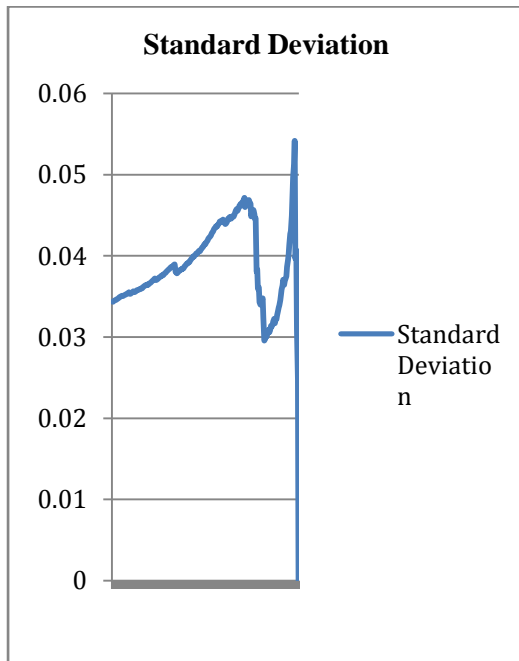


CHART 6

STANDARD DEVIATION OF GRANULES INDIA LIMITED

From the above analysis, the return values are decreasing over the months and the most lowest return is -0.095 in January

STANDARD DEVIATION OF CIPLA
TABLE 7

DATE	STANDARD DEVIATION
Jun-19	0.022
Jul-19	0.023
Aug-19	0.023
Sep-19	0.024
Oct-19	0.025
Nov-19	0.026
Dec-19	0.028
Jan-20	0.031
Feb-20	0.034
Mar-20	0.030
Apr-20	0.020

May-20	0.016
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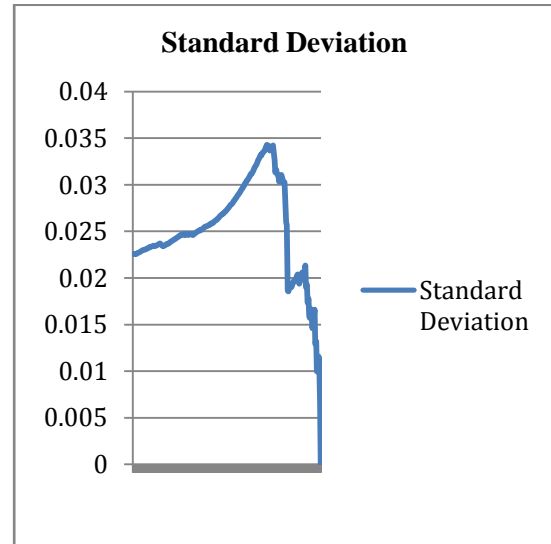


CHART 7 STANDARD DEVIATION OF CIPLA

From the above analysis, we can see highest standard deviation in the Month of February with a value of 0.034

Standard Deviation Of Autopharma
TABLE 8

Date	STANDARD DEVIATION
Jun-19	0.041
Jul-19	0.043
Aug-19	0.045
Sep-19	0.047
Oct-19	0.046
Nov-19	0.048
Dec-19	0.052
Jan-20	0.057
Feb-20	0.056
Mar-20	0.042
Apr-20	0.024
May-20	0.022

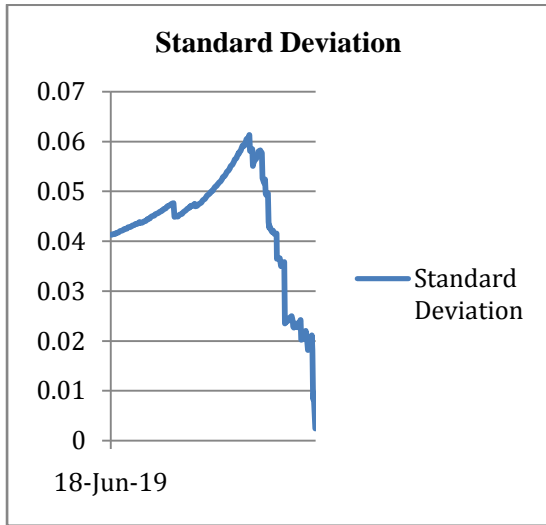


CHART 8
STANDARD DEVIATION OF
AUTOPHARMA

From the above analysis, we can see highest standard deviation in the Month of JANUARY with a value of 0.057.

STANDARD DEVIATION OF PFIZER
TABLE 9

Date	STANDARD DEVIATION
Jun-19	0.021
Jul-19	0.022
Aug-19	0.022
Sep-19	0.022
Oct-19	0.022
Nov-19	0.023
Dec-19	0.024
Jan-20	0.026
Feb-20	0.025
Mar-20	0.024
Apr-20	0.016
May-20	0.012

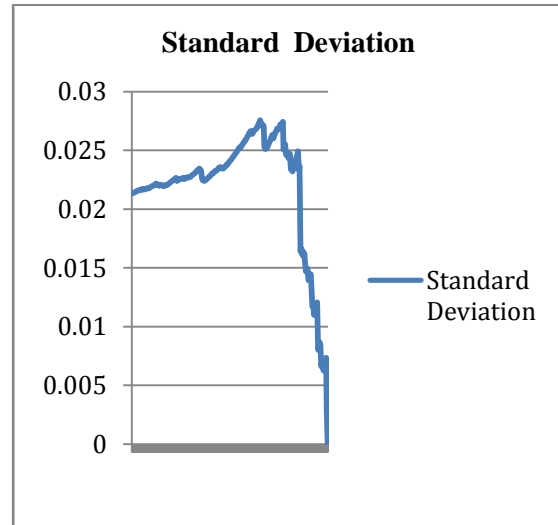


CHART 9
STANDARD DEVIATION OF PFIZER

From the above analysis, we can see highest standard deviation in the Month of JANUARY with a value of 0.031.

STANDARD DEVIATION OF IPCALAB
TABLE 10

DATE	STANDARD DEVIATION
Jun-19	0.024
Jul-19	0.025
Aug-19	0.025
Sep-19	0.026
Oct-19	0.027
Nov-19	0.028
Dec-19	0.029
Jan-20	0.031
Feb-20	0.031
Mar-20	0.027
Apr-20	0.018
May-20	0.019

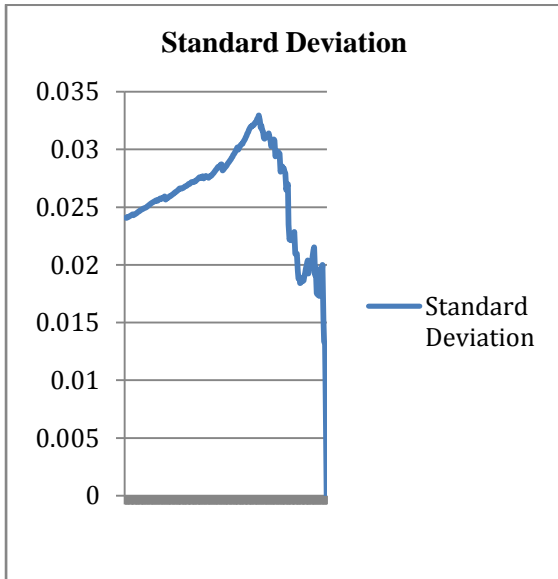


CHART 10

STANDARD DEVIATION OF IPCALAB

From the above analysis, we can see highest standard deviation in the Month of JANUARY and FEBRUARY with a value of 0.031.

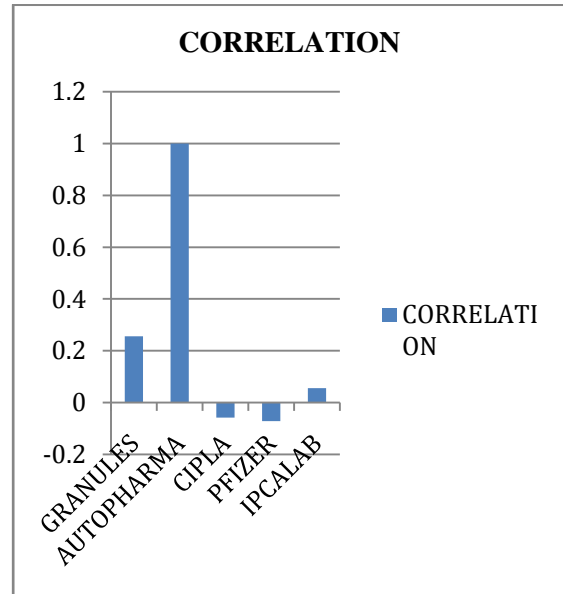


CHART 11

CORRELATION OF COMPANIES

The above graph shows a positive correlation for the company Granules, Autopharma, Ipcalab. And the Negative Correlation for the company Cipla and Pfizer.

**VII. CORRELATION
TABLE 11**

COMPANY	CORRELATION
GRANULES	0.25618
AUTOPHARMA	1
CIPLA	-0.05813
PFIZER	-0.07157
IPCALAB	0.05628

**VIII. BETA
TABLE 12**

COMPANY	BETA OF JUNE 2019-MAY 2020
GRANULES	0.0158
AUTOPHARMA	0.0907
CIPLA	-0.0218
PFIZER	0.1553
IPCALAB	0.0074

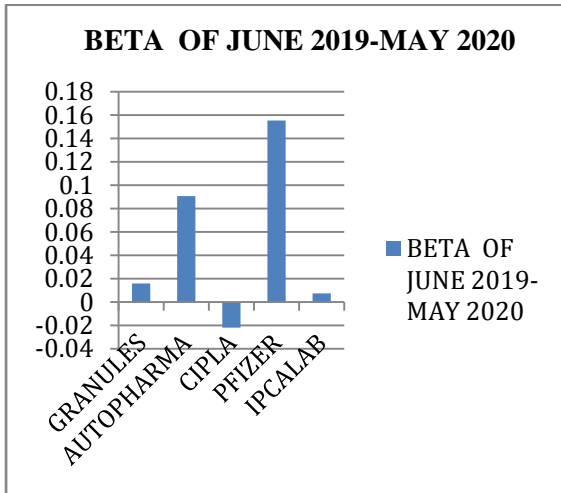


CHART 12

From the above analysis, the BETA value of Cipla gets negative

IX. ALPHA
TABLE 13

COMPANY	ALPHA OF JUNE 2019-MAY 202
GRANULES	0.00085
AUTOPHARMA	0.00216
CIPLA	0.00085
PFIZER	-0.00027
IPCALAB	0.00037

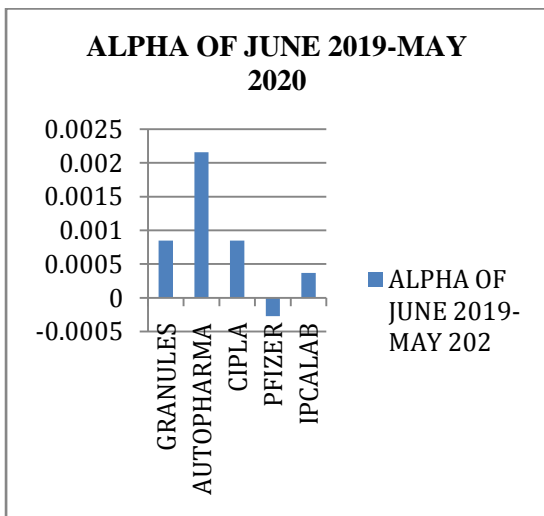


CHART 13

From the above analysis, the ALPHA value of PFIZER gets negative

X. CONCLUSION

Indian pharmaceutical sector is expected to grow to US\$ 100 billion and medical device market expected to grow US\$ 25 billion by 2025. The country accounts for around 30 per cent by volume and about 10 per cent value in the US\$ 70-80 billion US generics market.

India enjoys an important position in the global pharmaceuticals sector. The country also has a large pool of scientists and engineers who have the potential to steer the industry ahead to an even higher level. Presently over 80 per cent of the antiretroviral drugs used globally to combat AIDS (Acquired Immune Deficiency Syndrome) are supplied by Indian pharmaceutical firms.

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