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A Study on Selected Equity Diversified Mutual Funds in India

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Abstract: ***Mutual Fund is professionally managed trust that pools the money of various investors and further invests them, into different securities like shares, bonds and short term securities like certificate of deposit, commercial paper etc. In India the origin of Mutual Funds industry can be traced, since the enactment of UTI (Unit Trust of India) Act, 1963. The mutual funds industry grew successfully and brought about substantial returns to the investors and the public sector. Mutual funds provide opportunities for small investors, to participate in the capital market without assuming a very high degree of risk. An important principle of investment in capital market is that do not put all the eggs in one basket i.e. diversification. A small investor is not able to have a diversified portfolio mainly due to paucity of resources. However, a mutual fund pools together the savings of such small investors and invests the same in the capital market and passes the benefits to the investors. Thus, investors can indirectly participate in the capital market by subscribing to the units of mutual funds. Mutual funds employ professional fund managers to manage the investment activities. Therefore, investors also get benefits of professional expertise of these managers. Daily opening & closing NAV of different schemes have been used to calculate the returns from the fund schemes. BSES ensex has been used for market portfolio. The main aim of this paper is, to evaluate the performance of Indian equity diversified mutual funds. A subsidiary aim is to analyze the relationship between risk and return of these funds, based on total risk and systematic risk. The analysis was achieved, by assessing various financial tests like Average Return, Sharpe Ratio, Treynor Ratio, Standard Deviation and Beta. The data has been taken from various websites of mutual fund schemes and from bluechit.co.in. The analysis depicts that, majority of funds selected for study have outperformed, under Sharpe Ratio as well as Treynor Ratio.***

Keywords: Mutual Fund, Average Return, Standard Deviation, Beta, NAV, Performance Evaluation, Sharpe Measure, Treynor Measure

I. INTRODUCTION

A Mutual Fund is a trust that pools the savings of a number of investors who share a common financial goal. The money thus collected is invested by the fund manager in different types of securities depending upon the objective of the scheme. These could range from shares to debentures to money market instruments. The income earned through these investments and the capital appreciations realized by the scheme are shared by its unit holders in proportion to the number of units owned by them (prorate). Thus a mutual fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed portfolio at a relatively low cost. Anybody with an investable surplus of as little as a few thousand rupees can invest in Mutual Funds. Each Mutual Fund scheme has a defined investment objective and strategy.

A mutual fund is an investment vehicle, which pools money from investors with common investment objectives. It then invests their money in multiple assets, in accordance with the stated objective of the scheme. The investments are made by an 'asset management company' or AMC. A typical individual is unlikely to have the knowledge, skills, inclination and time to keep track of events, understand their implications and act speedily. An individual also funds it difficult to keep track of ownership of his assets, investments, brokerage dues and bank transactions etc.

A Mutual Fund is the answer to all these situations. It appoints professionally qualified and experienced Staff that manages each of these functions on a full time basis. The large pool of money is collected in the fund allows it to hire such staff at a very low cost to each investor. In effect, the mutual fund vehicle exploits economics of scale in all three areas- research, investments and transaction processing. While the concept of individuals coming together to invest money collectively is not new, the mutual fund in its present form is a 20th century phenomenon. In fact, mutual funds gained popularity only after the Second World War. Globally, there are thousands of firms offering tens of thousands of mutual funds with different investment objectives. Today, mutual funds collectively manage almost as much as or more money as compared to banks

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A. Scope of the Study

The period of the study is for 3 months. The study uses a sample of top 5 ranking mutual fund schemes comprising of all Equity Diversified Mutual funds.
The study uses the data of 3months of the six companies.

B. Objectives of the Study

1) To study the performance of Selected Equity Diversified Mutual Funds in India.
2) To compare the performance of Selected Equity Diversified Mutual Funds in India by using Sharpe and Treynor model.
3) To study the performance of equity using Sharpe model.
4) To study the risk & return of selected mutual funds.

C. Limitation of the Study

1) Time constraint.
2) Subject to changes in the future.
3) Data collection.

II. RESEARCH METHODOLOGY

It is the systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge and statistical tool used for analysis are sharpe, treynor.

A. Sources of Data

1) *Secondary Source:* To gain an overview of the current performance trends of the Indian mutual fund industry, secondary data have been used and collected from the fact sheets, newspapers, journals, books and periodicals. The data were also collected collected on monthly basis over a period of 3 months. BSE Sensex has been used as a benchmark for performance evaluation of different schemes and provides the time series data over a fairly long period of time.
2) *Statistical Tools:* To analyze whether mutual funds under-perform, or over perform the market index, the following statistical methods and techniques have been used:

B. For Risk Analysis

1) Standard deviation (Total Risk) = $\sqrt{\text{Variance}}$
2) Beta (Systematic Risk)

$$\text{Beta} = \frac{\text{Covariance}}{\text{Variance of market return}}$$

C. For Return Analysis

Average Return was calculated for analyzing return on mutual funds.

1) *Returns* $= \frac{\text{Todays closing price} - \text{Yesterdays closing price}}{\text{Yesterdaya closing price}}$ ***100**

2) *Average* $= \frac{\text{Sum of returns}}{\text{Number of returns}}$

D. Portfolio Measurement Methods

We are interested in discovering if the management of a mutual fund is performing well; that is, has management done better through its selective buying and selling of securities than would have been achieved through merely "buying the market" picking a large number of securities randomly and holding them throughout the period

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1) *Treynor Index:* As per Treynor index, systematic risk or beta is the appropriate measure of risk, as suggested by Capital Asset Pricing Model. The Treynor measure of fund relates the excess return on a fund to the fund beta. Hence, the Treynor measure reflects the excess return earned per unit of systematic risk (beta). Treynor Index =[(Return from the Fund - Risk-free Rate of Return)/Beta] i.e. [(Rp-Rf) / βp]
2) *Sharpe Index:* Sharpe Index is based on the scheme's total risk and is a summary measure of scheme's performance adjusted for risk. Hence the Sharpe index measure reflects the excess return earned on a fund per unit of total risk (standard deviation). Sharpe Index = [(Return from the Fund - Risk-free Rate of Return) /Total Risk of Fund] i.e. [(Rp-Rf)/σp]

III. LITERATURE REVIEW

A. *Literature*

The present study deals with the review of literature on 'Evaluating the Performance of Indian Mutual Fund Schemes'. Review of some of the studies is presented in the following discussion.

1) M. Vijay Anand (2000) focused on the schemes of Birla Sun life and the competitor's schemes, available in the market. Author studied the analysis of Performance of Equity fund for 3 years and SWOT Analysis of Birla Sun life by Literature survey and Delphi technique. In depth financial review the author identifies among the selected equity funds that earns higher returns than benchmark and competitors and concluded that Birla Sun life performs well compared to the benchmarks and competitors.
2) Gupta &Agarwal (2009) found very little research on the construction of best mutual fund portfolio. Their objective of the research was to construct the best portfolio using cluster method, taking industry concentration as a Performance Evaluation of Mutual Funds: A Study of Selected Equity Diversified Mutual Funds in India 87 Impact Factor(JCC): 2.9867 - This article can be downloaded from www.impactjournals.us variable and compares the performance of two types of portfolios with selected benchmarks. Results are found to be encouraging, as far as risk mitigation is concerned. The results expected to help in the construction of best portfolio of mutual funds
3) Prajapati and Patel(2012) in their study evaluated the performance of various diversified equity mutual funds in India, from the period 2007 to 2011 and found that, overall mutual funds has given positive returns and the best performer are HDFC and Reliance mutual fund.
4) Annapoorna and Gupta (2013) in their study examined the performance of mutual fund schemes, ranked 1 by CRISIL and compare these returns with SBI domestic term deposit rates and found that, the most of the mutual fund schemes have failed to provide SBI domestic term deposit.
5) Rajput and Singh (2014) made an attempt to evaluate the investment performance of major funds, in terms of risk and return and to study the impact of stock market fluctuations, during April 2012 to March 2013. The sample consists of 120 different open-ended mutual fund schemes from public sector financial institutions, banks, private sector organizations and unit trust of India. 100 share based BSE national index has been used as proxy to find out the performance of the schemes in market. The study revealed that tax saving funds performed well in market with high variations in risk and return. Systematic risk and variability were higher in tax saving and equity schemes whereas risk was moderate under balanced and low in income schemes. Tax saving fund had outperformed when compared with market benchmark followed by balanced fund and equity fund.
6) Pala and Chandnib (2014) in their study examined the performance of the few income and debt mutual fund scheme, on the basis of their daily NAVs. from the period Oct 2007 to Oct 2012.The study finds that, the best scheme were HDFC Mid Cap Opportunity, Birla Sun Life MNC Fund and Quantum Long-Term Equity.
7) Dr. Shriprakashsoni, Dr. Deepalibankapue, Dr. maheshbhutada, (2015) comparative analysis of mutual fund schemes, available at Kotak mutual fund and HDFC mutual fund. The study conclude that, Kotak Mutual Fund schemes are more destructive in Large Cap Equity schemes and HDFC Mutual Fund schemes are more destructive in Mid Cap Equity schemes, whereas both the companies schemes are very well managed in debt market. Kotak Select Focus is the best scheme in Large cap Equity, HDFC.

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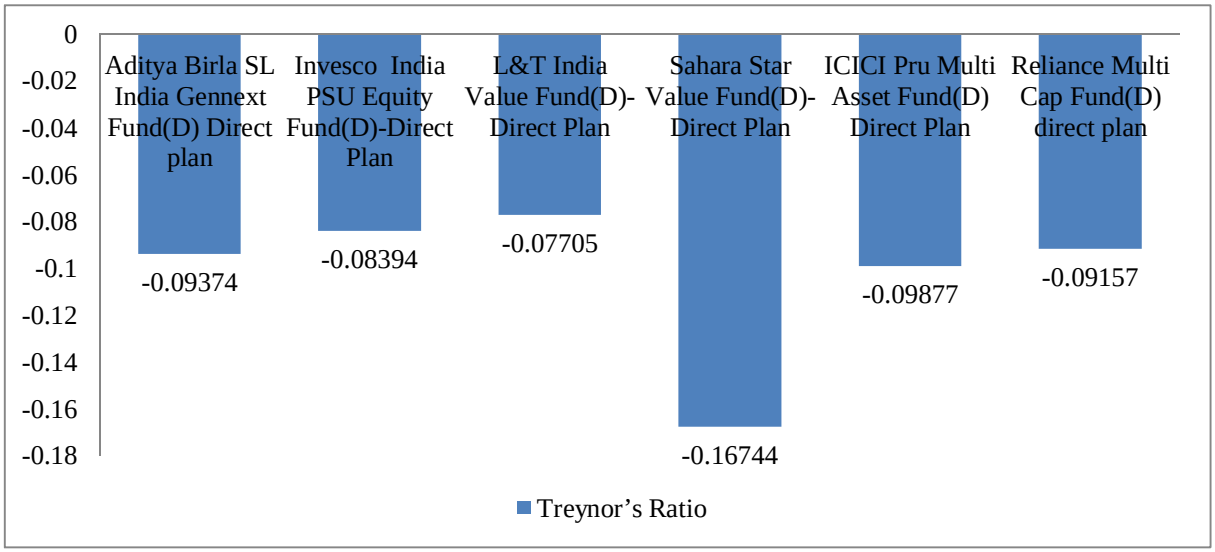
Mutual Funds performance measures for selected stocks.

Variables	Aditya Birla SL India Gennext Fund(D) Direct plan	Invesco India PSU Equity Fund(D)-Direct Plan	L&T India Value Fund(D)-Direct Plan	Sahara Star Value Fund(D)-Direct Plan	ICICI Pru Multi Asset Fund(D) Direct Plan	Reliance Multi Cap Fund(D) direct plan
Rp	0.03%	0.07%	0.01%	-0.04%	0.03%	0.02%
Rf	0.065	0.065	0.065	0.065	0.065	0.065
SD	0.007605	0.010809	0.009335	0.006245	0.006311	0.010904
Beta	0.69	0.77	0.84	0.39	0.65	0.71
Treynor's Ratio	-0.09374	-0.08394	-0.07705	-0.16744	-0.09877	-0.09157
Sharp Ratio	-8.51083	-5.94823	-6.95687	-10.4678	-10.248	-5.9467

a) *Interpretation:* The Ttreynor's ratio for the selected mutual funds is shown in the graph. The all mutual funds show negative values for the study period. By presenting the ratio values in the highest values to lowest values, L&T India Value Fund(D)-Direct Plan is ranked top and Sahara Star Value Fund (D)-Direct Plan is the lowest ranked. The graph of all mutual funds and ranking of the funds is shown below.

Graphical representation of treynor's measure



B. *Fund Performance Based on Treynor's Measure*

Fund Name	Treynor's Measure	Rank
L&T India Value Fund(D)-Direct Plan: Treynor's Ratio	-0.07705	I
Invesco India PSU Equity Fund(D)-Direct Plan: Treynor's Ratio	-0.08394	II
Reliance Multi Cap Fund(D) direct plan: Treynor's Ratio	-0.09157	III
Aditya Birla SL India Gennext Fund(D) Direct plan: Treynor's Ratio	-0.09374	IV
ICICI Pru Multi Asset Fund(D) Direct Plan: Treynor's Ratio	-0.09877	V
Sahara Star Value Fund (D)-Direct Plan: Treynor's Ratio	-0.16744	VI

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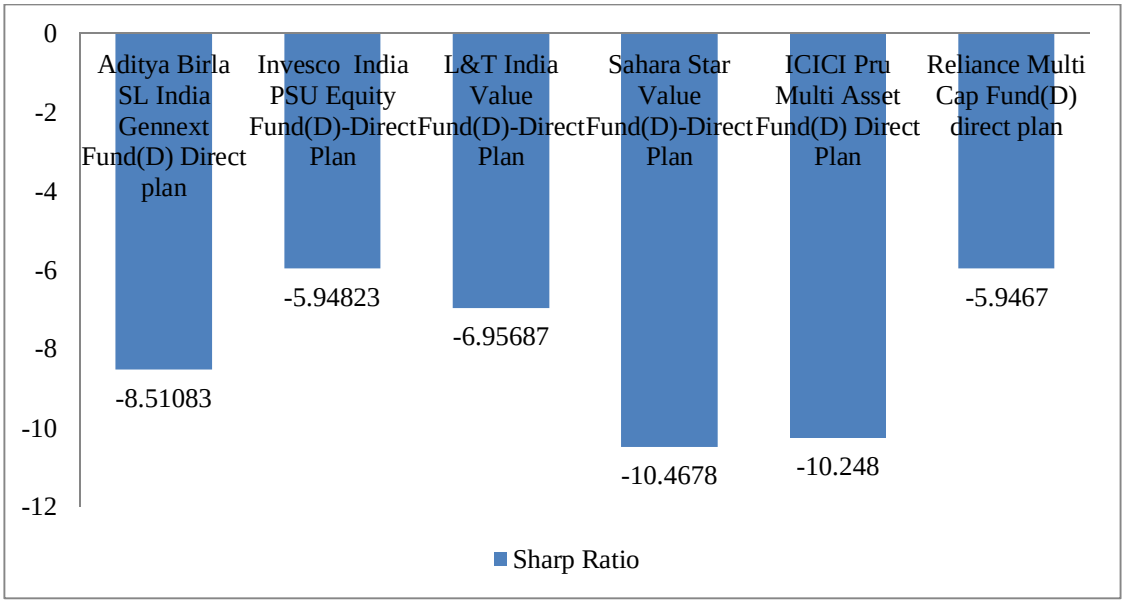
C. Fund Performance based on Sharpe Measure

By examining the sharp values of the funds, Aditya Birla SL India Gennext Fund (D) Direct plan is ranked the top and Sahara Star Value Fund (D)-Direct Plan is ranked the lowest value. The all mutual funds have negative sharp measures and graphically represented below.

Figure no:8-Graphical representation of Sharp Measure



Fund Performance Based on Sharpe Measure

Fund Name	Sharp Measure	Rank
Aditya Birla SL India Gennext Fund(D) Direct plan: Sharp Ratio	-8.51083	I
Reliance Multi Cap Fund(D) direct plan: Sharp Ratio	-5.9467	II
Invesco India PSU Equity Fund(D)-Direct Plan: Sharp Ratio	-5.94823	III
L&T India Value Fund(D)-Direct Plan: Sharp Ratio	-6.95687	IV
ICICI Pru Multi Asset Fund(D) Direct Plan: Sharp Ratio	-10.248	V
Sahara Star Value Fund (D)-Direct Plan: Sharp Ratio	-10.4678	VI

D. Findings

1) The performance of selected funds is evaluated using average return, standard deviation, beta.
2) NAV and Market index of 3months of six companies has been used in calculation
3) Return include the risk taken by the fund manager because different funds will have different levels of risk attached to them.
4) Risk associated with a fund, in a general, can be defined as variability or fluctuations in the returns generated by it.
5) The higher the fluctuations in the returns of a fund during a given period, higher will be the risk associated. The return of the fund is not stable.
6) In treynor's measure' L&T India Value Fund(D)-Direct Plan is ranked top and Sahara Star Value Fund (D)-Direct Plan is the lowest ranked.
7) Sharp measure, Aditya Birla SL India Gennext Fund (D) Direct plan is ranked the top and Sahara Star Value Fund (D)-Direct Plan is ranked the lowest value.
8) Invesco India PSU Equity Fund (D)-Direct Plan has the highest growth rate of 0.06% and the Sahara Star Value Fund (D)-Direct Plan is showing negative and lowest return among the all mutual funds.

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E. Suggestions

1) It is observed that during the study period the all mutual funds performance is not performing the well.
2) More over the funds were produced negative returns, it indicates the market is fluctuated during the study period.
3) Investment should be made in various funds so that one is exposed to all market capitalization.
4) Fund measures like, Treynor's and Sharpe were produced negative values, indicates that funds were not up to the mark.
5) Investment in mutual funds are not risk free.
6) It is suggested that every investor should revise his investment plans before investing in to it.

IV. CONCLUSION

The study has compared the various equity diversified mutual funds. Summary of results is presented in different tables. In India, innumerable mutual fund schemes are available to general investors which generally confound them to pick the best out of them. This study provides some insights on mutual fund performance so as to assist the common investors in taking the rational investment decisions for allocating their resources in correct mutual fund scheme. The data employed in the study consisted of monthly NAVs for the open-ended schemes. The study utilized benchmark portfolios according to the scheme objective such as BSE Sensex, for all growth/equity schemes. The performance of sample mutual fund schemes has been evaluated in terms of return and risk analysis, and risk adjusted performance measures such as Sharpe ratio and Treynor ratio. In nut shell, the performance of mutual fund in terms of Average returns, thirty percent of the diversified fund schemes have shown higher and superior returns and remaining have shown inferior returns. In terms of standard deviation, ninety percent of the selected schemes are less risky than the market. four funds out of six funds have beta less than one and positive, which imply that they were less risky than the market portfolio and in terms of coefficient of determination (R2), all six funds were near to one which indicates higher diversification of portfolio. One out of six funds have shown superior performance, under the Sharpe ratio and four out of six in case of Treynor Ratio have showed higher performance

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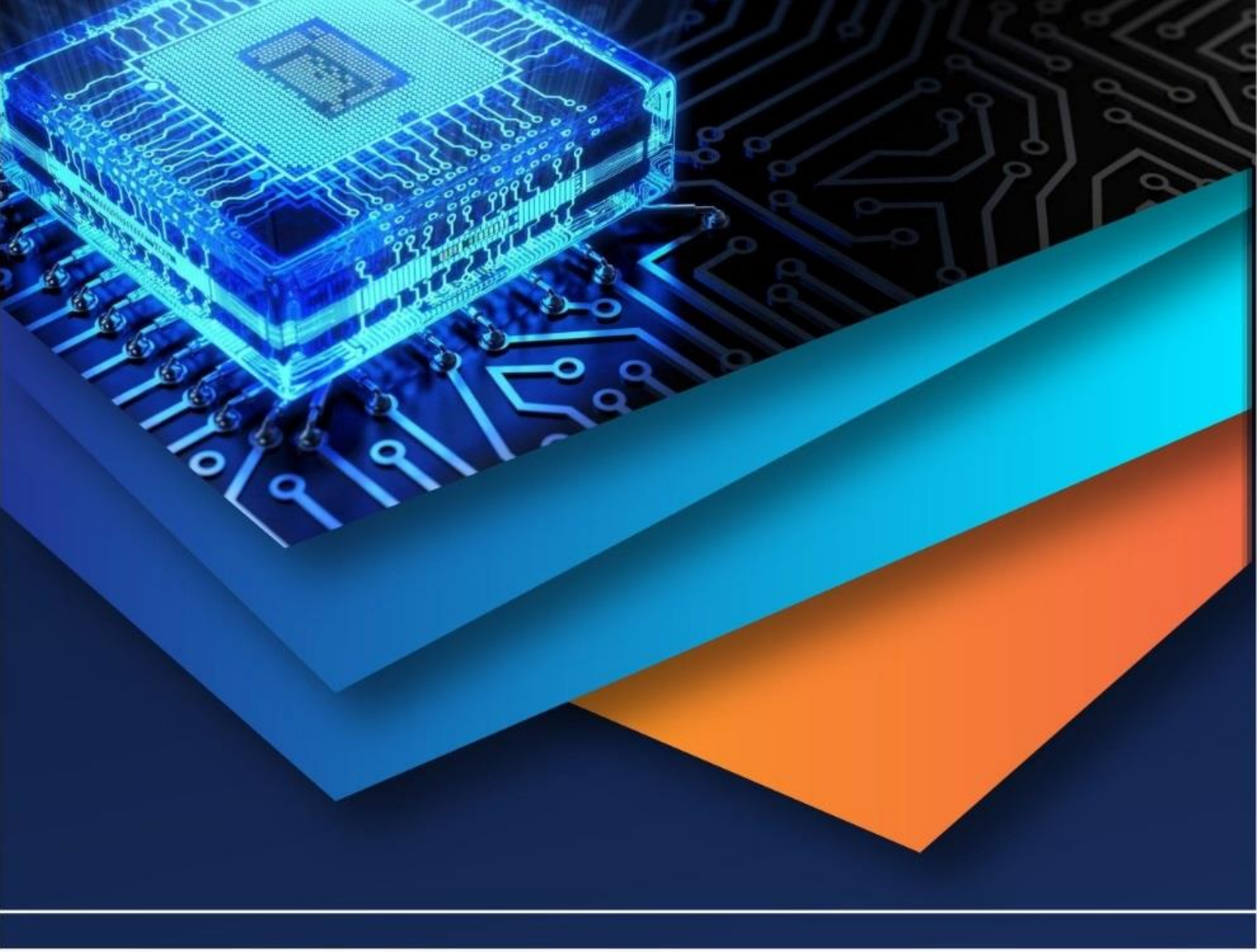

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