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COMPARATIVE ANALYSIS OF VANGUARD GROWTH INDEX FUND ETF SHARES (VUG) USA WITH DOW JONES (BENCHMARK INDEX)

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ABSTRACT

A drastic growth has been witnessed by Mutual Fund Industry in the past 20 years. In terms of Mutual Fund Schemes, they have increased rapidly and accelerated the mobilization of funds in the recent years. This has also provided benefits to the Mutual Fund Industry as well as the investors investing in the schemes. In order to reach the expectation levels of the investors, the Mutual Fund Industry is required to function in a successful manner as Institutional Investors. Investors are very cautious while investing in any of the schemes of Mutual Funds, in context of this proper assessment must be done of the varied schemes of Mutual Funds available and the comparison of the funds which will ultimately help the investors in investing decisions. This paper is an attempt to compare the fund namely Vanguard Growth Index Fund ETF Shares (VUG) with Dow Jones US (Benchmark Index) and to analyze its performance as well the returns generated by the scheme. Simple Statistical tools and methods have been used while doing the analysis keeping in mind the interests of retail investors. The results obtained from the study is that the fund taken into consideration is somewhat allied with the market but cannot be extremely relied upon.

INTRODUCTION

Mutual Funds act like a bridge or we can consider it as a financial intermediary in which a group of investors pool their money with a pre-determined investment goal/objective. There are available qualified and professional fund manager who then invest this money into varied securities, stocks, or bonds. Because of the characteristic of Mutual Fund, which is cost effectiveness and ease of investment, the mutual fund can be considered a best investment platform. Hence, the pooling of money into Mutual Funds can allow investors to purchase various stocks and bonds at a much lower trading cost then if they tried to purchase on their own.

There are different categories of Mutual Funds which are described below:

1. **Equity Funds**

   These are the kind of funds which invest the pooled money in the stocks of public companies. The fund managers of the equity category apply different kind of styles for stock picking when they make the investment decision for their portfolio. Some of the fund managers apply value approach technique for picking up the stocks that are undervalued when compared with the stocks of other companies. The second approach adopted by the fund managers is growth approach where the stocks are picked up which grow faster as compared to their competitors, or market as a whole. The Fund Managers also can buy both the kinds of stock, that means the combination approach can also be applied in order create a portfolio of value and growth stocks both.

2. **Debt Funds**

   It is a special kind of a fund category which is designed for the investors who want to be risk-free and whose main investment objectives are capital appreciation as well as earning decent return of investments.

   Debt funds are mainly designed for the following purposes

   - Capital Appreciation
   - Regular Income.

3. **Balanced Funds**

   As the name indicates, the special feature of the fund is combination of both, equity as well as debt funds. The fund managers invest the pooled money in equities and fixed income securities. These funds are aligned according to the pre-determined objectives of investment or the scheme. Both equity and debt play their role in this fund category i.e., equity part provides growth, and the debt part provides stability in returns.

These types of funds are meant to mitigate the risk involved into equity by giving exposure to the debt funds and helps in maintaining decent returns as well.

Funds with proven/good trach records offer no guarantee for the future performance. Investors on the one hand should very cautious while making investment decisions and on the other hand can look for the following elements of the fund. These are the quantitative measures which should be evaluated by the investors while planning for the investment.

Expense Ratio

Signifies the annual expenditure of the funds, also includes management fee and administration cost. The less the ratio, the better it is.

Meaning:

Expense ratio denotes the percentage of Total Assets that are expended to manage the Mutual Fund. The expense factor is an important element if we talk about the bond funds because the return from the funds tends to be similar.

The component majorly involved in the expense ratio is management and advisory fees, on the other hand SEBI has also stipulated a ceiling limit that a fund can charge.

Result

The Lower expense ratio always does not signify that the fund is managed in a better way rather a fund which delivers good returns, which aligned with the market and with minimum expense is an ideal fund.

Standard Deviation (SD)

The total risk which involves market risk, security-specific risk and the portfolio risk of a mutual fund is measured with the help of Standard Deviation (SD).

Meaning

If we talk about mutual funds, the standard deviation indicates the magnitude of returns deviating from the expected returns of the fund which is primarily based on historical performance. In nutshell, the method evaluates the volatility of the fund.

Result

The risk under Standard Deviation is measured by measuring the magnitude to which the fund is fluctuating in relation to its average returns of the fund over a period of time. The higher the deviation, the more is the volatility of the Net Asset Value and is considered risky than a fund with lower SD.

Sharpe Ratio

This ration measures the decision of investment that whether the returns earned is due to a good investing decision or is a result of excess risk. The higher the ratio, the better it is.

Meaning

This ratio is helpful in evaluating the returns generated by the fund relative to the risk taken. The ratio is also helpful in analyzing the investment decision by measuring the quantum of risk involved in the fund.

Result

The higher ratio is better as it depicts a fund's return relative to the risk taken. This implies that the fund has generated higher returns for every unit of the risk involved. On the other hand, the lower or the negative Sharpe ratio implies that a risk-free asset would be performing better than the fund being considered.

Beta

The Beta measures the volatility of a specific fund involved with the market as a whole.

Meaning

The beta value measures the volatility of the fund compared with a benchmark. It implies the swing of the fund and its magnitude when compared to a benchmark. A fund with 1 Beta Value implies that the fund will move as much as the benchmark.

Result

The investors with the low-risk appetite should always focus on low beta mutual fund schemes, on the other hand the aggressive investors should focus on the higher beta value mutual fund schemes.

R-Squared

The test measures the percentage of investment's movement that are allocable to the movements in its benchmark index. A mutual fund should maintain a balance in R-square and ideally it should not be more than 90 and less than 80.

Meaning

The value of R-square ranges between 0 and 100, where 0 value represents no correlation and 100 represents full correlation. If a fund which is taken into consideration here and its beta has an R-squared value that ranges between 80 and 90, then the beta of that fund should be trusted. If on the other hand if the R-squared value is less than 80, then the beta of the fund is not particularly useful, the reason being that the fund is being compared with an inappropriate benchmark index. The lower the R-squared value, the less reliable is the Beta and vice versa.

Result

The Beta value and the R-squared are based on the historical data of the fund. These tests or the ratio provides adequate information of the risks involved to be evaluated by the investors before investing.

The parameters which can be considered while selecting the best mutual fund to invest in are:

- Expense Ratio
- Standard Deviation
- Returns

Objectives of the Study

- Comparative Analysis of the selected Mutual Fund, Vanguard Growth Index Fund ETF Shares (VUG) USA with Dow Jones and analyzing the performance of the same.
- The motive is to analyze the performance of the selected fund and its stability under the study

Review of Literature

The Wharton School of Finance and Commerce (1962) carried out the first comprehensive study covering performance evaluation aspects of U.S. mutual fund industry for the period 1953-1958. The study reported that the smallest funds had the highest turnover rate in the five-year period of the study. The average performance by mutual funds was not appreciably better than what would have been achieved by a completely unmanaged portfolio with the same distribution between common stocks and other assets. About half the funds performed better and the other half worse than the unmanaged portfolio. When funds were grouped by the number of years in which they topped the average performance, the results appeared completely random.

Treynor (1965) developed a methodology for evaluating mutual fund performers that is popularly referred to as reward to volatility ratio. This measure has been frequently used both by researchers and practitioners and performance evolution of mutual funds. The approach developed by trainers takes beta or systematically risk to assess the premier per unit of risk.

RESEARCH METHODOLOGY

Research Methodology can be described as a process of decision making relative to the framing of Research design. The tools, techniques and methods or the combination of these can be coined as research framework. In nutshell we can describe research methodology as collection and analysis of data with the help of varied tools and techniques as well as methods and their arrangement in such a way to achieve the pre-determined objective in a prescribed manner which then leads to combine the relevance to the purpose of study. This study conducted is an analytical one and for the period (Period 01/01/2013 to 30/09/2020).

Vanguard Growth Index Fund ETF Shares (VUG) USA with Dow Jones

(Period 01/01/2013 to 30/09/2020)

	Mutual Fund	Index
	Vanguard Growth Index Fund ETF Shares	Dow Jones
Average	0.051384	0.02924
Sum	100.1467	59.39433
SD	1.153389	1.125462
Variance	1.330305	1.266665
Annualized SD	3.995455	3.898715
Beta	0.947606	
Annualized Return	0.616603	0.350876
sharpe Ratio	0.150347	
Treynor Ratio	0.633917	
Jensen Ratio	0.022843	
R Square	0.855001	
Total Return	0.387481	
G sec (T Bill 10 Years) Rate	1.563	

Analysis & Findings

The table given above shows a comparison between Vanguard Growth Index Fund ETF Shares (VUG) performance with Dow Jones US (Benchmark Index) compared for the period *01/01/2013 to 30/09/2020*

The scheme's average return is above than that of benchmark (0.051384 to 0.02924). Also, total return is above of benchmark (100.14 to 59.39). Standard Deviation of the returns for the scheme is above and not stable as compared to benchmark (1.15 to 1.12). Variance is also high for the scheme than it is with benchmark (1.33 to 1.26). Annualized Standard Deviation is also high and not stable in the scheme in contrast to benchmark (3.99 to 3.89). Annualized returns of the scheme are also higher as compared to the benchmark (61% to 35%)

The Sharpe's count for the scheme is 0.15 which is not performing as per the peer. Treynor's metric is 0.63 which means the investment is not performing very well with regard to systematic risk. Jenson's alpha measure is 0.02, which indicates the fund manager could not have skills to invest in diversified way. R^2 measure is lower than 1 (it is 0.85). It specifies fund is somewhat allied with the market.

Total returns are 0.38 which is not a good indication when risk-free rate of interest is taken in the US as 1.56 (T bill for 10 years period)

Scope of the Study

- The study conducted is restricted to the financial performance, returns and stability of the selected Mutual Fund, in this study referred to as_Vanguard Growth Index Fund ETF Shares (VUG) USA with Dow Jones (Period 01/01/2013 to 30/09/2020) and the findings or results and interpretation of the published financial data acquired from the secondary sources combining with the research tools and techniques as well as methods applied to successfully achieve the set goal/objective.

Conclusion

The Investment world in recent years has undergone a significant change and so is the Mutual Fund Industry in terms of the number of schemes introduced, the fund with the top notch returns as well as their stability and performance in the long run. With the introduction of new and varied schemes, there are now more investment avenues existing for the investors, hence, it has now become important for every investor to analyze the returns, stability, and the performance of the selected investment avenue for the long run which ultimately results in lowering of losses or mitigating it. This study conducted establishes that the Vanguard Growth Index Fund ETF Shares is not considered to be stable one and is low on performance compared to the Benchmark Index.

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