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Research Article

GOLD ETFs vs. EQUITY ETFs: COMPARATIVE ANALYSIS OF THEIR PERFORMANCE

Naveen Kumara R
Department of Commerce, Christ University, Bengaluru, Karnataka 560029, India
Email: naveenkumara.r@christuniversity.in

Abstract

Exchange-traded funds (henceforth, ETFs) are passive investment vehicles which have become increasingly popular in a relatively short period of time due the benefits they provide when compared to Mutual Funds and other similar investment avenues. This study has been carried out to analyze the points of distinction between the two very popular forms of ETFs namely Gold ETFs and Equity ETFs. These funds are similar in their functioning however it is necessary to understand the difference in their performance so as to be able to choose the right market instrument for investing our money. Our research project aims at understanding this difference because performance is one of the major factors affecting the popularity of any investment option.

Keywords: Gold ETFs; Equity ETFs; investment

Introduction and Research Background

Every investor has a different perception about the risk and return. Some wants to make higher profits and for it they are ready to take risk of any degree and there are such people also who do not want to make aggressive investments but prefer to make sensible decisions regarding investments. There are numerous investment options with different "risk & return" combinations, depending upon the investor's willingness and his or her risk profile and expectation of return. This research project has been carried out to help the investors make a decision as to which is the best investment option in the financial markets of India. Among the various investment avenues available Gold ETFs and Equity ETFs are currently on high demand. This project revolves around a comparative study on their performances in the past and future potential

This study on the performance of Gold ETFs in India clarifies that gold saving funds offer the option of Systematic Investment Plans (SIP) is suitable for those who want to invest in a disciplined manner on a long term basis. Gold ETF is an emerging option of the various investment alternatives available to the investor. In spite of the merits of holding Gold ETFs, the investment in the same is low due to the low awareness among the investors and the sentimental attachment of the investors towards holding gold in the physical form Vidhyapriya and Mohanasundari (2014) throws light on how Gold ETFs offer investors a convenient way and means of investing in gold as a security without the hassles of storage and safety concerns arising due to it. It also spares the investors from worrying about the purity and quality of gold. It also provides various other benefits such as electronic trading and dematerialized storage and providing a means to diversify one's investment portfolio. But at the same time, the research indicated that many of the gold ETFs currently available in the Indian market exhibit a large deviation from actual gold returns. This problem is more pronounced in India than in developed markets. This means that as gold prices rise or fall, the gold ETF value should also rise or fall to that extent. However, very often, the net asset value of the Gold ETF gives a skewed picture. (Jayanthi *et al.*, 2013).

In the current market scenario of high volatile, rapidly changing market place, this study throws light on various avenues for investment in gold and how these investment options are creating the confusion among Investors. As per various studies 16,000 tons of gold is there in Indian households predominantly in the form of jewellery. There are various alternatives available for investment in gold through options like jewellery, coins, bullions, ETFs, mutual funds, E-gold etc. The present study "A study on various forms of gold investment" tries to study forms of gold investment available to investors. The objectives of the study is to understand the various investment options for investors, factors needs to be aware of and know-how of investing in gold , pros and cons of various forms of Investments and to assist investors in creating awareness about various gold investment options. For the purpose of study the primary data and secondary data has been collected. Primary data consists of questionnaires and secondary data through website, research papers and magazines. Based on the research it was found that many investors still prefer jewellery, gold coins and gold bullion bars as a form of investment than to invest in ETF and Futures and Options which give more profit and easy form of investment. (Nawaz and Sudindra, 2013)

Objectives of the study

This research project would suffice the following objectives:

I. The study aims to analyze Gold and Equity ETFs which have outperformed or underperformed each other and their Benchmark Index.

II. It aims to find out as to which category of ETF would be a better investment avenue for the investors.

Scope of Research

Our research would take into consideration, the ETFs of Indian origin only. The research would cover the comparison of the returns generated by the stated two types of Exchange Traded Funds i.e. gold and equity with each other and the market returns of the Benchmark Index they follow.

Methodology

The research project would focus on the ETFs traded on the National Stock Exchange (NSE). The details regarding the daily-returns of these ETFs traded on the NSE for the period as stated in the scope is to be collected from the sources as mentioned earlier.

Only the ETFs listed on the NSE prior to 2013 have been taken to ensure availability of enough data. The period considered for research is January 2013 to December 2015 i.e. three calendar years (Table 1).

Table 1: Table showing average and market returns of ICICI Prudential Gold ETF

Period	Avg. Returns (Y)	Avg. Market Returns (X)
Jan - mar 13	-0.13471	-0.10274
Apr - June 13	-0.26873	0.37909
July - September 13	0.14459	0.16902
Oct - Dec 13	-0.02966	0.02058
Jan - mar 14	-0.04696	0.03802
Apr - June 14	-0.00237	-0.01729
July - September 14	-0.04466	-0.04695
Oct - Dec 14	-0.11336	0.06494
Jan - mar 15	0.05224	0.00952
Apr - June 15	0.02490	-0.02211
July - September 15	-0.11474	0.56503
Oct - Dec 15	0.04950	-0.03154

Gold ETFs were benchmarked against the domestic gold prices whereas the Equity ETFs against their respective indices. This comparison would be done using four of the wide variety of tools available. Application of these tools would be done using Microsoft Excel so as to gain a time benefit.

Volatility of the returns has been measured using Standard Deviation and Beta. The performance of the ETFs on the other hand has been evaluated using Sharpe ratio and Treynor ratio. We have assumed that the return on government bonds which is close to 7.81 percent to be the risk free rate of return for the purpose of calculation of Sharpe and Treynor ratio as the calculation of risk free return independently was not possible.

Results and Discussion

The UTI Gold ETF has been extremely volatile in terms of returns in past 3 years. The benchmark returns has also been excessively volatile. However, where the benchmark returns have been more or less positive throughout the sample period the ETF has given negative returns during a major period of the sample.

Table 2: Table showing average and market returns of UTI Gold ETF

Period	Avg. Returns (Y)	Avg. Market Returns (X)
Jan - Mar 13	-0.09188	-0.10274
Apr - June 13	-0.31207	0.37909
July – Sep 13	0.07574	0.16902
Oct - Dec 13	-0.27399	0.02058
Jan - Mar 14	-0.01037	0.03863
Apr - June 14	0.05092	-0.01729
July – Sep 14	-0.05799	-0.04695
Oct - Dec 14	-0.09529	0.06494
Jan - Mar 15	0.11981	0.00952
Apr - June 15	0.02835	-0.02211
July - Sep15	-0.31548	0.56503
Oct - Dec 15	0.02529	-0.03154

The Reliance Gold ETF has been comparatively less volatile than the above two ETFs. The returns have moved along with the benchmark in the direction in which the benchmark has changed. However, the returns of the ETF haven't experienced as drastic changes as that of the benchmark (Table 2).

SBI Gold ETF's returns have moved along with that of the benchmark. Between October 2013 and June 2014, the fund has generated overwhelming returns as compared to the benchmark. However, between April 2015 and December 2015 the fund has not been able to generate satisfactory returns and has underperformed the benchmark greatly (Table 3).

Table 3: Table showing average and market returns SBI Gold ETF

Period	Avg. Returns (Y)	Avg. Market Returns (X)
Jan - Mar 13	-0.19314	-0.10274
Apr - Jun 13	-0.31754	0.37909
July - Sep 13	0.13829	0.16902
Oct - Dec 13	-0.11677	0.02058
Jan - Mar 14	0.43492	0.03863
Apr - Jun 14	-0.03844	-0.01729
July - Sep 14	-0.09114	-0.04695
Oct - Dec 14	-0.06903	0.06494
Jan - Mar 15	-0.05482	0.00952
Apr - Jun 15	0.02665	-0.02211
July - Sep 15	0.05009	0.56503
Oct - Dec 15	-0.09697	-0.02121

Table 4: Table showing average and market returns Religare Gold ETF

Period	Avg. Returns (Y)	Avg. Market Returns (X)
Jan - Mar 13	-0.10513	-0.10274
Apr - June 13	-0.38891	0.37909
July - Sep 13	0.14130	0.16902
Oct - Dec 13	0.01998	0.02058
Jan - Mar 14	-0.00090	0.03802
Apr - June 14	0.08367	-0.01729
July - Sep 14	-0.17263	-0.04695
Oct - Dec 14	0.05371	0.06494
Jan - Mar 15	0.01921	0.00952
Apr - June 15	-0.33101	-0.02211
July - Sep 15	-0.16164	0.59501
Oct - Dec 15	-0.23648	-0.03154

Religare Gold ETF has not performed very well in the past three years. For a major part of the period, the ETF has underperformed the benchmark. Between September 2013 and March 2015 the fund has been able to perform on par with its benchmark. The fund has experienced its lowest returns during June 2013 (Table 4).

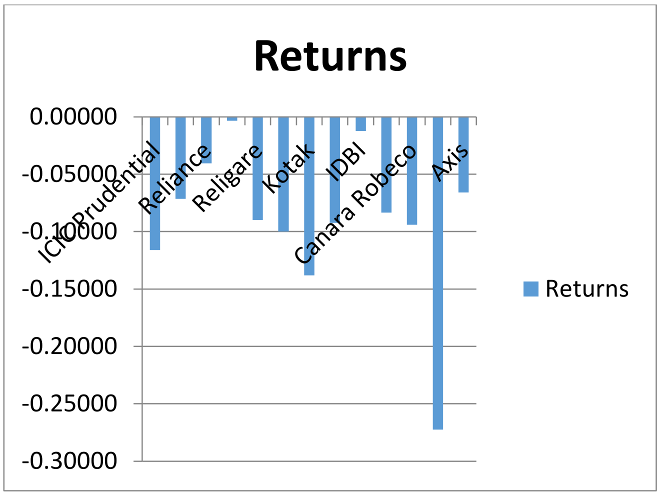

Fig. 1: Graph showing comparative returns of different Gold ETFs

The Fig. 1 clearly shows that all the Gold ETFs have generated negative returns during the last three years. Against this, the benchmark (domestic gold price) has given a positive average return of 0.085% in the past three years. Birla Sun Life has given the least returns and SBI Gold ETF has given the highest returns which still doesn't make a difference as the returns are not positive anyways. Thus, in terms of returns the GOLD ETF market has not been a great investment option in the past three years.

Table 5: Comparision of Standard deviation of Gold ETFs

ETF	Standard Deviation
ICICI Prudential	0.25327
UTI	0.14603
Reliance	0.10354
SBI	0.17825
Religare	0.16262
Quantum	0.19020
Kotak	0.25450
HDFC	0.14084
IDBI	0.16871
Goldman Sachs	0.08369
Canara Robeco	0.18295
Birla Sun life	0.18720
Axis	0.15782

The returns of Kotak Gold ETF and ICIC Prudential Gold ETF have been the most volatile with a Standard Deviation of close to 0.25. On the other hand Goldman Sachs Gold ETF and Reliance Gold ETF have experienced the least deviation in its returns from the average returns. They have a Standard Deviation of just 0.08 and 0.1 respectively. All other funds have a Standard Deviation ranging between 0.15 and 0.2. Thus, the level of fluctuation of returns of most ETFs has been somewhat close to each other (Table 5).

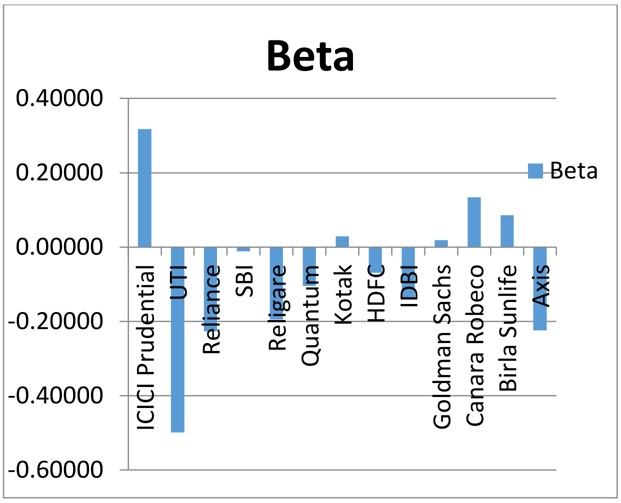

Fig. 2: Graph showing comparison of Beta of Gold ETFs

UTI Gold ETF has the highest beta value of close to -0.5. This means it the benchmark returns increase by 100 the returns of UTI Gold ETF will go down by 50. Also, ICICI Prudential has a very high Beta value of close to 0.3 which means the returns of the ETF will increase by 30 for every 100 increase in the returns of the benchmark. On the other hand, SBI Gold ETF and Goldman Sachs ETF have the least Beta value of about -0.01 and 0.01 respectively (Fig 2).

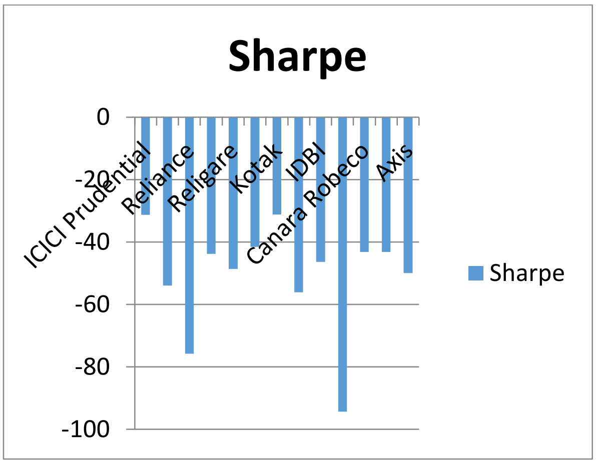

Fig 3: The Sharpe ratio of Gold ETFs

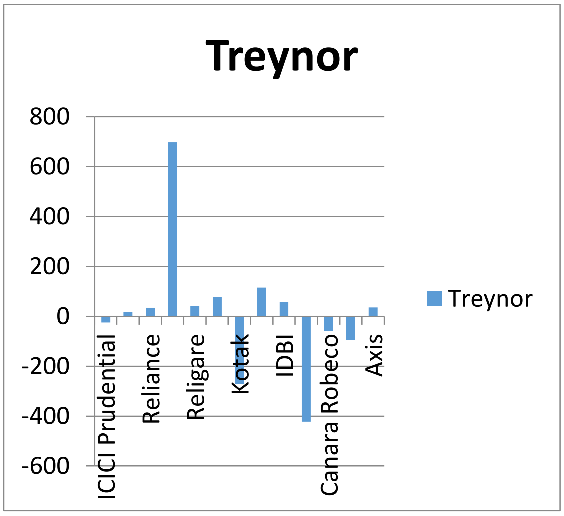

Fig. 4: The treynor's ratio of Gold ETFs

The Sharpe Ratio for all the Gold ETFs has been negative (Fig. 3). This means that the returns provided does not cover up the additional risk taken up by the investor in terms of variation of the periodical returns from its average returns. However, SBI has a high positive Treynor Ratio (Fig.4). It shows that SBI Gold ETF is capable of providing close to 697 units of return over and above the risk-free return for the additional risk taken of bearing the impact of fluctuations in the benchmark returns on the ETF. On the other hand Goldman Sachs has the least Treynor Ratio which means the ETF provides 422 units of less return than the risk – free investment for each unit of beta risk assumed

Table 6: Comparision of Returns of Equity ETFs

ETF	Returns
Goldman Sachs	0.01204
Kotak	0.17341
Motilal Oswal	-0.21381
Quantum	-0.44995
Religare	-0.06323
Birla Sunlife	-0.29987
Goldman Sachs Bank	-0.15620
Reliance Bank	-0.08221
Goldman Sachs Infra	-0.44793
Motilal Oswal Midcap	-0.74317
Goldman Sachs Junior	-0.18881
Goldman Sachs PSU Bank	-0.51371
Kotak PSU Bank	-0.13757
Goldman Sachs Shariah	-0.52271

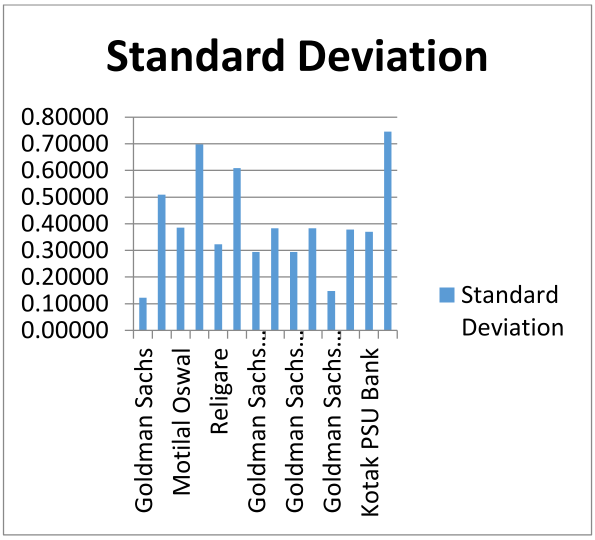

Fig. 5: Graph showing standard deviation of Equity ETFs

Fig. 5 shows the deviation of the returns of Equity ETFs from the periodical returns is fairly high. This clearly states that the returns of equity ETFs are highly volatile investment avenues in terms of their returns.

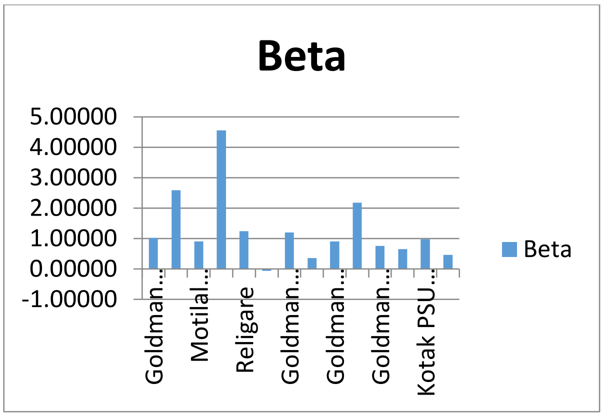

Fig 6: Graph showing the Beta of Equity ETFs

The Beta value of most of the Equity ETFs is positive. This clearly answers the question as to why most of the equity ETFs has outperformed their indices in the direction of the movement of the indices' returns (Fig 6).

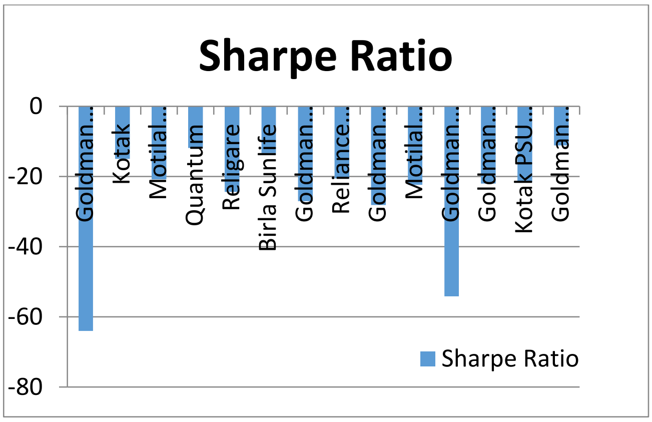

Fig. 7: Graph Showing the Sharpe ratio of Equity ETFs

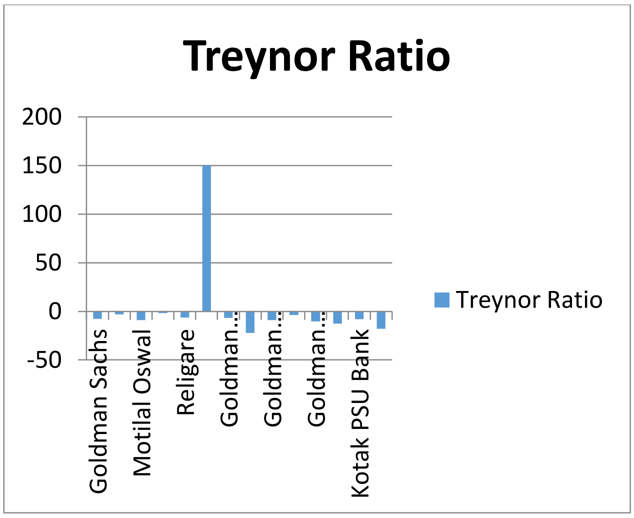

Fig. 8: Graph showing Treynor's ratio of Equity ETFs

The Sharpe Ratio for all the Equity ETFs is negative. This, in simple terms, means that the returns provided by the ETF are less than what the Risk-Free investment avenues provide. Therefore, for every unit of risk that you take up by investing in an Equity ETF you lose a return amount equal to the Sharpe Ratio (**Fig 7**). Also Treynor Ratio has remained negative for most of the Equity ETFs except for Birla Sun Life Nifty ETF. This implies that in terms of beta as well, the investor doesn't stand to gain much (Fig. 8).

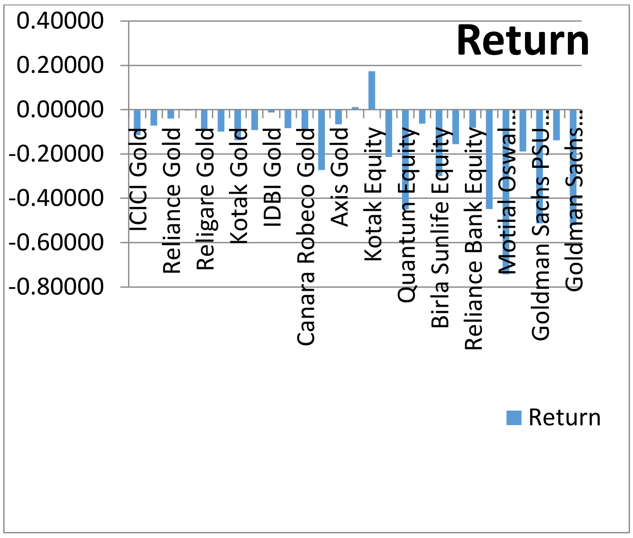

Fig. 9: showing the Returns of Equity and Gold ETFs

Findings

- Birla Sun Life Gold ETF has given least returns among all the ETFs in the past three years with an average of -0.27239%
- SBI Gold ETF has given the best returns among all the Gold ETFs with an average of -0.00336%
- In the Equity market, Kotak Nifty ETF has provided the best returns with an average of 0.17341%
- Motilal Oswal Midcap has provided the least returns in the Equity ETF market with an average of -0.74317%
- ICICI Prudential Gold ETF has recorded the highest S.D. of 0.25327 in the Gold ETF market
- Goldman Sachs Gold ETF has recorded the least S.D. of 0.08369 in the Gold ETFs market
- Highest S.D. in the Equity ETF market has been recorded by Goldman Sachs Shariah with a value of 0.74557
- Goldman Sachs Nifty ETF has the least S.D. of 0.12187 in the Equity ETFs market.
- In the Gold ETF market, UTI Gold ETF has recorded the highest Beta of -0.49865
- SBI Gold ETF of the same market has exhibited the least Beta of -0.01120
- Quantum Index Fund of the Equity ETF market has the highest Beta of 4.55412
- Birla Sun Life on the other hand is an Equity ETF with a Beta value of -0.05413
- Goldman Sachs Gold ETF has the least Sharpe Ratio of -94.321 in the Gold ETF market

- ICICI Prudential Gold ETF has the highest Sharpe Ratio of -31.294 in the Gold ETF market
- Goldman Sachs Shariah ETF has the highest Sharpe Ratio in the Equity market with a value of -11.176
- Goldman Sachs Nifty ETF on the other hand belongs to the same market and has a Sharpe Ratio of -63.987
- SBI Gold ETF from the Gold ETF market has the highest Treynor Ratio of 697.541
- UTI Gold ETF on the other hand has the least Treynor Ratio of merely 15.806
- Birla Sun Life Nifty ETF belongs to the Equity ETF market and has the highest Treynor Ratio of 149.831

Conclusion

- As Gold and Equity ETFs, both have failed to produce overwhelming returns, however, a lot of Equity ETFs have managed to provide extremely high returns for at least a couple of quarters contrary to that of their benchmark indices. One the other hand, most of the Gold ETFs have remained in the negative returns (loss) category for maximum of entire part of the three years period.
- Being an Equity ETF the high S.D. and Beta does follow as a part of the risk involved in equity investment. Hence, this is no criteria to prove the superiority of one ETF category over the other.
- Coming to performance evaluation in terms of Sharpe Ratio and Treynor Ratio, both the ETF markets have exhibited tremendously low ratios showing that none of ETFs, barring a few exceptions in each market have a return which is higher than the risk free rate of return to compensate for the risk involved in such investment.

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