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Accelerating Growth of Gold ETF in India

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Abstract:

Gold is one of the precious metals and has been of great significance to different cultures. Gold is one of the best way to diversify the portfolio and to protect the wealth of the investors. There are number of ways to invest in Gold i.e. buying Jewellery, Gold Coins, Bullions, Gold Funds of Funds as well as Gold ETFs. The objective of the current paper is to compare the performance of different investment alternatives i.e. Market(Nifty, NSE 500), Saving Deposits, Fixed Deposit and PPF from the period 2007 to 2014 by using absolute and relative performance measure. The findings of the study suggests that Gold ETFs are providing higher average returns at a lower risk as compare to the market. Also the systematic risk for the Gold ETFs are negative implying that inclusion of Gold stocks in the investor's portfolio will make it more diversified and riskless. Investment in Gold can be beneficial to both retail and the institutional investors.

Keywords: Gold ETFs, Performance measure, Institutional Investors

JEL CLASSIFICATION: G11, G23

1. Introduction

Gold is one of the best way to diversify the portfolio and to protect the wealth of the investors. No asset other than gold has a universal appeal in the world. Since it is negatively correlated assets to the other stocks in the portfolio it is being accepted as the best stock portfolio diversifier. It stabilizes the portfolio and protects it against the fluctuations in the market. In short term gold prices have been volatile but in the long run gold have maintained its value; historically gold has shown stability during the various crisis periods. There are various reasons for the investors to own gold in the portfolio as it has a strong history of holding its value over the years and it has maintained its intrinsic value intact, historically it has been the best hedge against inflation and erosion of various currencies, it enables investors to diversify their portfolios, not even this it also protects the geopolitical uncertainty therefore it is also known as crisis commodity. At the time of deflation purchasing power of gold soared when other prices dropped drastically.

Investors can make investment in gold in numerous ways i.e. by buying gold coins, jewellery, gold bullion, gold futures, gold ETF and gold funds of funds. The best investment choice in gold depends on the investment objective, amount of risk and the length of time for which investor intend to hold gold. Amongst all the above option Gold ETF is being realised as one of the smartest way to invest in gold in current years. Gold is considered as a global assets class and there are various reasons to invest in Gold ETF. Gold ETF are the transparent and the efficient source to invest in gold and to diversify portfolio for the small investors. Gold ETF are free from premium or making charges as investors has to pay on the purchase of gold coins and bars. Since with the Gold ETF gold is in demat form therefore there are no worries of theft, Gold ETF are easy to sell unlike physical gold as they are extremely liquid.

Gold ETF is an exchange traded fund that tracks the price of gold. Gold ETFs are the units that represent the physical gold that can be in paper or demat form. Gold ETFs enables investors to participate in Gold bullion through trading of security on a stock exchange without buying physical gold. The objective of the current paper is to examine the performance of Gold ETFs in India as compare to the market indices (NSE 500), saving bank Deposits, Fixed Deposits, PPF from period 2007-2014. The study strongly evidenced that investment in Gold ETF is highly beneficial as it is providing high returns at a lower risk as compare to other securities.

The rest of the paper is organized as follows Section 2 brief about the background and literature review Section 3 describes details about the data collection and methodology of the study Section 4 discusses the empirical results, while Section 5 provides the conclusion.

2. Background and Literature Review

During the time of world crisis gold has gained momentum and is also being accepted in the positive light by the investors especially in the developing countries-India, China and Russia. It is being found that gold has a strong intrinsic value and it has not lost its value even during the accounting scandals and market collapse. In India there has been a rapid growth of mutual funds market over the last

decade. Initially investors own gold in the form of jewellery but with the rising awareness of gold as financial assets the retail investors have started investing in gold online rather than buying them in physical form. First Gold ETF was launched in India on 15 February by Goldman Sachs followed by others like UTI Mutual Fund, Kotak Mutual Fund, and ICICI Mutual Fund mutual fund and so on. Following is the list of Gold ETFs in India.

Scheme	Symbol	Listing Date on NSE
GOLDMAN SACHS Gold ETF	GOLDBEES	19-Mar-07
UTI Gold ETF	GOLDSHARE	17-April-07
KOTAK Gold ETF	KOTAKGOLD	8-Aug-07
RELIANCE Gold ETF	RELGOLD	26-Nov-07
QUANTUM Gold ETF	QGOLDHALF	28-Feb-08
SBI Gold ETF	SBIGETS	28-May-09
RELIGARE Gold ETF	RELIGAREGO	22-Mar-10
HDFC Gold ETF	HDFCMFGETF	19-Aug-10
ICICI Prudential Gold ETF	IPGETF	2-Sep-10
AXIS Gold ETF	AXISGOLD	16-Nov-10
BIRLA SUN LIFE Gold ETF	BSLGOLDETF	23-May-11
IDBI Gold ETF	IDBIGOLD	17-Nov-11
CANARA ROBECO Gold ETF	CRMFGETF	27-Mar-12
MOTILAL OSWAL Gold ETF	MGOLD	27-Mar-12

There is a very limited research available in this area. Few studies on the related topic have been summarized as follows:

- **Dellva (2001)** compared the ETFs with that of the traditional mutual fund in terms of trading, creation and redemption, cost comparisons and tax efficiency. The study finds that ETFs are attractive to investors because of low expense ratio than those of mutual funds but of little advantage to the tax deferred long term investors.
- **Kostovetsky (2003)** in his study examined the reason for differences between ETFs and Mutual funds and finds that the key differences between them arises due to managerial fees, Transaction fees of the shareholders, Tax Efficiency and other qualitative differences.
- **Gallagher and Segara (2004)** examined the performance and trading characteristics of ETF in Australia. They examined the ability of index oriented ETF to track the underlying equity benchmarks on ASX and compared the tracking error volatility between market traded instruments and equity index funds operated off the market. The study finds that the tracking error is significant for ETFs thereby making it attractive for the investors with a long term investment objective as they will be able to receive investment returns similar to index returns.
- **Gastineau (2004)** in his study compared the performance of ETFs with the conventional mutual fund. The study finds that the reasons for underperformance of ETFs can be improved with a little structural change in their operating policy that will enable ETFs to perform in tune with conventional mutual funds.
- **Guedj and Huang (2008)** in his study examined the performance of ETFs and open ended mutual fund. In their study they found that ETFs are better suited to narrow and less liquid underlying assets and for the investors with long term investment objective.
- **Agapova (2009)** examined the substitutability of conventional index fund and ETF. They examined that ETFs are not the perfect substitutes to the conventional mutual fund. The study supported tax clientele, suggesting that ETF is preferred for tax sensitive investors.
- **Goyal and Joshi(2011)** in their study examined the performance of selected Gold ETFs from the period March 2008 to December 2010. The study find strong evidence that the Gold ETFs are good for investors as they are having less variations as compare to the other investments. Confidence of investors is increasing and hence the future of gold is bright in India.
- **Garg and Singh (2013)** in their paper examined the performance of two competitive financial instruments i.e. ETF and Index Funds over the period June 2006 to December 2009. The study finds ETFs performs better in term of their replication strategy, tracking ability as well long term performance.
- **Vidhyapriya and Mohanasundari (2014)** in their study examined the performance of Gold ETF in India. The study Provide a strong evidence for the investment in Gold for the institutional and long term investors through ETFs.

3. Data and Methodology

The Present study evaluates the performance of different investment alternatives i.e. Gold ETFs (Gold bees), Market Index (NSE500, Nifty), Saving Bank Deposits, Fixed Bank Deposits and PPF from the period Oct, 2007 to Oct,2014. The first Gold ETF (Goldman Sochs Gold ETF) was launched on NSE on 19 March 2007 by the benchmark Mutual Fund Goldman Sachs Mutual Fund followed by UTI Mutual Fund (17th April 2007), Kotak Mutual Fund (8th August 2007), Reliance Mutual Fund (26th Nov 2007) and others. S&P CNX Nifty which is a portfolio of stocks of leading and nationally owned companies and S&P CNX 500 which a portfolio of widely diversified has been used as a proxy for market.

Annual adjusted share prices of the respective index from the period 9 Oct 2007 to 9 Oct 2014 are collected from NSE India website. Total return is calculated as the average of the simple percentage returns which is calculated as $(P_t - P_{t-1})/P_{t-1}$. Annual Average of Implicit Yield on 91 days T-bills rate is used as a proxy for risk free rate. Return on savings bank Deposit, Fixed Deposit and PPF are collected from RBI website. Descriptive statistics, Karl Pearson's coefficient of correlation, absolute and various risk adjusted measure are used to compare the performance of different indices as follows:

3.1. Sharpe ratio

Sharpe ratio also known as Sharpe index, Sharpe measure and reward to variability ratio. The ratio measures the performance of an investment by adjusting it for the risk (standard deviation). The ratio measures the excess return per unit of risk. It is calculated as follows:

$$\text{Sharpe ratio} = (AR_P - R_F) / \sigma_P \quad (1)$$

AR_P = Average Return on Portfolio

R_F = Risk Free Rate

σ_P = Standard deviation of Portfolio

3.2. Treynor ratio

Treynor ratio also known as reward to volatility ratio or treynor measure. It is risk adjusted measure which is based on systematic risk. It is similar to Sharpe ratio with a difference that it uses beta as a measure of volatility. The higher the ratio the better the performance of a portfolio. It is calculated as follows:

$$\text{Treynor ratio} = (AR_P - R_F) / \beta_P \quad (2)$$

AR_P = Average Return on Portfolio

R_F = Risk Free Rate

β_P = Portfolio Beta

3.3. Jensen Measure

It is risk adjusted performance measure that represents average return on a portfolio above that is predicted by the Capital Assets Pricing Model (CAPM), given the portfolio beta and average market return. This is portfolio Alpha, therefore this ratio is also known as Jensen alpha. It is calculated as follows:

$$\text{Jensen ratio} = AR_P - (R_F + \beta_P(AR_m - R_F)) \quad (3)$$

AR_P = Average Return on Portfolio

R_F = Risk Free Rate

β_P = Portfolio Beta

AR_m = Average return on Market

Positive alpha is a good indicator whereas negative alpha is a bad indicator of the portfolio performance. The study also used the T-test to check the mean returns of the portfolios differ significantly or not.

4. Empirical Results

Table 1, 2, and 3 shows the results of the study. Table 1 of Karl Pearson coefficient of correlation among the different investment alternatives for an investor. Gold ETF is found to be negatively related with all the other investment alternatives which show that including Gold ETF in a portfolio will make the portfolio riskless and more diversified and it will provide better option for a risk adverse investor.

Table 2 shows the risk, return and other relative investments measures like sharp ratio, Treynor ratio, Jensen alpha. The results shows that Gold ETF is providing much higher return i.e. 16.396% as compare to others. Standard Deviation and coefficient of variations is also less in case of Gold ETF as compare to the market (Nifty and NSE 500). Beta (measure of volatility of a stock as compared to the market) of Gold ETF is negative which is good for the investors with a low risk tolerance. Negative beta coefficient of a stock would mean that investment will move in the opposite direction in response to the stock market. The results are in support of the theory that Gold stocks are more secure store of value for investors than currencies especially in the time of market crisis because at that time people sold their stock to either convert them into cash or buy gold stocks. Sharpe ratio (Measure of excess return per unit of total risk) is highest for Gold ETFs as compare to the market. Treynor ratio (Measure of excess return per unit of systematic risk) is negative for gold ETF because of negative beta as gold stocks are moving opposite against the market move thus making the portfolio riskless. Jensen alpha is highest for Gold ETF as compare to all other investment alternatives which means that they are proving higher abnormal return to the investors.

Table 3 shows the result of the T-test among the Gold ETF and other investment avenues. The result shows that the return on Gold ETF is higher as compare to all other investment though not significant.

Portfolios	Nifty	NSE 500	GOLD ETF	Saving Deposits	Fixed Deposits	PPF
Nifty	1	.997**	-.650	.220	-.114	.241
NSE 500		1	-.630	.183	-.112	.210
GOLD ETF			1	-.768*	-.315	-.794*
Saving Deposits				1	.630	.995**
Fixed Deposits					1	.133
PPF						1

Table 1: Cross Correlation Matrix

**Correlation is significant at 0.01 level of significance

*Correlation is significant at 0.05 level of significance

Portfolios	Average (%)	Standard deviation (%)	Coeff of variation	Beta	Sharpe ratio	Treynor ratio	Jensen ratio
Nifty	9.718	30.3	3.118	0.737	0.084	3.463	-0.072
NSE 500	10.726	35.14	3.276	1	0.101	3.56	0
GOLD ETF	16.396	19.978	1.218	-0.307	0.462	-30.065	10.323
Saving Deposits	3.714	0.267	0.072	0.001	-12.929	-3452	-3.456
Fixed Deposits	8.429	0.91	0.108	-0.002	1.388	-631.5	1.266
PPF	8.271	0.34	0.041	0.002	3.25	552.5	1.098

Table 2: Return, Risk, Sharpe Ratios and Treynor and Jensen Ratios of Portfolios

Pairs	Mean difference	T value
Nifty and Gold ETF	-6.678	0.635
NSE and Gold ETF	-5.670	0.717
Saving Bank Deposit and Gold ETF	-12.682	0.119
Fixed Deposit and Gold ETF	-7.968	0.313
PPF and Gold ETF	-8.125	0.303

Table 3: Result of T-Test

5. Conclusion

Gold always has been of great significance, viewed by most culture as a sign of wealth and prosperity. It also has been considered as an important investment option by the investors. Most of the Investors buy gold to diversify risk. The objective of the current study is to examine the performance of gold ETF as compare to other investment alternatives like Market (Nifty, NSE 500), Saving Deposits, Fixed Deposit and PPF from the period 2007 to 2014 by using absolute and relative measure. Correlation results shows that Gold ETF are negatively correlated with other investments and since it is not correlated with the market investors can include it in their portfolio to make it riskless and more diversifiable. Absolute Performance measure shows that the average return is highest for the Gold ETF with a less amount of total and systematic risk as compare to the Market. Sharpe ratio is also higher for Gold ETF as compare to that of the market; Treynor ratio is lower because of the negative beta as gold stocks are moving opposite in response to that of the market moves. Also Gold ETF is the only investment with a higher and a positive alpha implying that investment in Gold provide higher

abnormal returns. The results of the study are consistent with the theory that investment in Gold is one of the best ways to diversify the portfolio and to protect the wealth of the investors. No asset other than gold has a universal appeal in the world.

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