

A Study on Performance Evaluation of Gold Exchange Traded Funds in India: Pre & Post Covid Scenario



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ABSTRACT: For centuries, Indians have had a strong affinity for gold. However, it was only in the year 2007 when India launched its first gold ETF (Gold BeES). The underlying asset of these ETFs is gold. Also, gold ETFs give you exposure to the Indian gold market. Gold Exchange Traded Funds, or Gold ETFs, are open-ended mutual fund schemes based on the ever-fluctuating cost of gold. Physical gold, on the other hand, does not generate an income. Also, the making charges on physical gold are high. Gold ETFs give investors exposure to the gold market. They are an excellent choice of investment for investors looking to beat inflation in the long run.

This paper takes a look at the performance evaluation of gold ETFs in India all through the COVID-19 Pandemic Situation. An evaluation is achieved using overall performance assessment strategies inclusive of the Treynor Performance Index, the Sharpe Performance Index, and the Jensen Performance by measuring the alpha, beta, and preferred deviations of the selected ETFs traded on the NSE. Data for this examination was gathered from the NSE website over a two-year period, from December 1st, 2018 to November 30th, 2020. Gold Exchange Traded Funds, or Gold ETFs, are open-ended mutual fund schemes based on the ever-fluctuating cost of gold. Physical gold, on the other hand, does not generate an income. Also, the making charges on physical gold are high. Gold ETFs give investors exposure to the gold market. They have a look at suggests that the Quantum Gold Fund (ETF) plays moderately nicely in accordance with Sharpe's Model, Treynor's Model, and Jensen's Model.

KEYWORDS: Gold ETF, Sorting Ratio, Dematerialized, mutual fund, derivatives

INTRODUCTION

The Corona virus (COVID-19) pandemic commenced in Wuhan City, China's Hubei Province, and quickly engulfed the whole international on the last day of December 2019. There are so a lot of tremendous activities like this in world history, specifically at some point in 2002-03, extreme acute breathing syndrome (SARS) and the 1919 Spanish flu pandemic, which turned into an unforgettable occasion. This COVID-19 fatality charge is much lower than the above two sicknesses, but human beings worldwide nevertheless worry about this pandemic circumstance. This COVID-19 is notably contagious and has brought about financial and monetary uncertainty around the world. The fear generated by the virus has placed widespread pressure on monetary markets, where charge volatility has step by step multiplied. In terms of human tragedy, the heaviest toll is visible in the United States, Europe, and Asian countries. However, during periods of monetary uncertainty and volatility, buyers worldwide are shifting their portfolios from unstable asset types, consisting of risky stocks, to danger-loose belongings, which include government securities, gold, and so on.

They found gold heaven due to the fact that it's a liquid, counter-cyclical asset and a protracted-time period price store that could assist traders attain the middle desires of balance, liquidity, and go back. Traditionally, humans in India invest in physical gold and do not forget that it is one of the oldest and most valuable metals. It is an auspicious gift and one of the most lucrative investment avenues. According to various surveys, India has 16,000 tonnes of gold. According to the sector gold council, on March 2020, the Indian version suggested that because of the reason that since 1973, gold has generated an average yearly return blessing of 14.10 cents in rupee phrases, at some point in the pandemic scenario, gold price volatility is too excessive; it reached approximately 50 thousand rupees in keeping with 10 grams. This fee hick's major purpose is to force many world gold mines to temporarily close down their enterprises due to the pandemic, with the purpose of also affecting gold prices. Small buyers have trouble making investments in gold because of rising gold fees. To allow investors to invest in gold, the Gold Exchange Traded Fund (ETF) was released. It was discovered in the Americas for the first time in 1993. In India, ETF delivery changed in 2007. ETFs

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can also be had in other methods consisting of ETFs, International Index ETFs, etc. The Gold ETF is an inventory marketplace funding fund. It operates like mutual funds. The Gold ETF is indexed on stock exchanges like some other tools and is traded at the net asset costs of the underlying residences. A gold ETF may be bought or offered online and saved in a demat account. These Gold ETFs represent physical gold and are just like physical gold. ETFs are effortlessly traded in the marketplace, offering advantages like actual pricing, smooth accessibility, purity, balance, smaller denominations, and tax blessings.

According to the Fama model, the IDBI Gold Exchange Traded Fund is better off. Using the sorting ratio, the ICICI Prudential Gold Exchange Traded Fund should perform well. The Quantum Gold Fund has finished the first class of the gold ETFs selected for the analysis. These studies will allow market analysts and buyers who find the fine outlook inside the gold ETFs. A gold ETF, or exchange traded fund, is a commodity-based mutual fund that invests in assets like gold. These exchange-traded funds perform like individual stocks and are traded similarly on the stock exchange. Exchange-traded funds represent assets, in this case, physical gold, both in dematerialized and paper form. An investor invests in stocks instead of the actual metal, and once it is traded, they are credited with the unit's equivalent in cash instead of actual gold. This research paper's objective is to analyze the gold ETF's success in the course of India's COVID-19 pandemic.

REVIEW OF LITERATURE

A variety of scientific studies have been performed concerning gold ETFs and their COVID-19 impacts. The following studies with their results are mentioned below to investigate the previous studies that have studied the effects of Spanish influenza on economic growth in the USA. They found a higher income growth rate between 1919–21 and 1930 and that this positive impact was statistically significant. They also discovered the adverse effects on the Chinese JES and Vietnam stock exchange due to the SARS outbreak. They analysed the SARS epidemic's impact on the Taiwan stock market and showed a negative correlation between the disease's outbreak and the hotel's returns, as well as those of tourist, wholesale, and retail companies. On the other hand, the biotechnology industry has shown a positive relationship with Taiwan's epidemic stock returns. This study indicated that gold ETFs had experienced significant flows as institutions, consultants, and investors sought a hedge against precious metals' volatile currency and inflation. This study shows that the ancient mode of investment and ETFs are substitutes for each other, but not an exact one. Both can be used as one of the vehicles of investment avenues. The findings show that gold prices are less volatile than the stock market, which has encouraged investor trust in gold and proven to be a strong asset class. If gold ETF were included in the portfolio, the portfolio risk would be diversified. The output of foreign currency and index funds was empirically evaluated using tracking error, current returns, and Jensen's Alphas. In the sample, index funds have been shown to perform better than ETFs. The ETFs performed well on active returns. Evaluated the relationship between the H7N9 outbreak of influenza and the stock output of China. Their findings show that the number of cases in the market overall and related industries, including Chinese traditional medicine, biological development, and biomedicine, increased dramatically and had a negative effect on inventory prices. The analysis demonstrates the essence of the relationship between the standard overall case variables and the stock market results of COVID-19. Thus, investors in Italy, France, and Germany may also consider that they are not psychologically affected, but rather that they have responded to death rates. Measured the effect on the stock market indices of 45 countries of the COVID-19 lock-up and social isolation. The authors investigate a negative relationship between the lockdown and the foreign stock markets' operations in the sense of the COVID-19 lockdown of the stock market results. However, the literature review shows several elements of the existing research body on gold ETFs' existence. This analysis explores the market impacts of COVID-19 and the ETFs' success on the National Stock Exchange.

Vardhani RN & Naupal Reddy N, (2021) the study's aim is to determine the performance of gold ETFs in India. Investment is a fantastic way to boost liquidity and improve market efficiency. The prices of 11 gold exchange-traded funds (ETFs) that were traded on the National Stock Exchange were looked at and analyzed. The study uses Sharpe, Treynor, and Jensen performance evaluation measures/ratios to look at the performance of gold ETFs. The Sharpe performance measure aids investors in determining the level of volatility in each gold ETF, the Treynor measure aids investors in determining whether to assess risk over the rate of return through systematic risk or market risk, and the Jensen measure indicates whether the funds have outperformed or underperformed the market index. These three performance indicators will aid investors in making informed choices.

Ram Raj.G and Sathish Kumar.B (2019). This illustrates that gold ETFs outperform actual gold in terms of returns. It conducted a correlation analysis between actual gold and gold exchange-traded funds and discovered a strong positive association between the two. So, instead of keeping real gold, which is thought to be more risky, an investor might choose to invest in an ETF.

J.K. Raju, et al. (2018), the selected gold ETFs in India were analysed using performance evaluation approaches such as Sharpe, Treynor, and Jensen. The study ranks ETFs based on their performance metrics, allowing investors to make more informed decisions about fund investments.

Sudindra V. R. (2015) According to Sharpe's and Treynor's models, ICICI and Religare Gold ETFs are performing fairly well,

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according to their study. According to the research, Jensen's alpha is positive exclusively for the Religare Gold fund, implying that the Religare Gold ETF fund has been able to outperform the spot gold market. Overall, the study says that investing in ETF funds is not a good idea because only two out of nine gold ETFs did better than the market.

M. Jayanthi et al. (2013) Returns, AUM, and NAV were used to analyse the performance of gold ETF funds. At the same time, the study found that many of the gold ETFs currently on the market diverge from actual gold returns. This means that as gold prices rise or fall, the value of the gold ETF should rise or fall in proportion. The NAV of gold ETF, on the other hand, frequently presents a misleading picture. As a result, gold ETFs are a great investment option for people who want to protect their money from the uncertain global market environment.

CURRENT SCENARIO

Currently, thirteen gold exchange-traded funds are listed on the Indian National Stock Exchange. Of these, four ETFs were released in 2007, and four ETFs were introduced in 2010. For the current analysis, eight ETFs are used to regularly track their efficiency for two years, 2018–2020. Each gold ETF unit is approximately equivalent to the price of 1 gramme of gold, except for Kota Gold and QGOLDHALF, which are 1/10th of a gramme and 12 gram, respectively. And it's easy to buy each unit at a time, so a good gold portfolio can be developed over time. These units are exchanged like any other stock in a company on exchanges. Gold ETFs are built to provide investors with the means to participate in the gold bullion market without the need for physical delivery of gold. Table 1 offers a brief description of the gold exchange-traded funds selected for the NSE. Table 1-List of Gold Exchange Traded Funds in India List of Gold Exchange Traded Funds in India ISSUER NAME & SYMBOL Mutual Fund Axis Gold ETFAXISGOLD Birla Sun Life Mutual Fund. Birla Sun Life Gold ETF BSLGOLDETF HDFC Mutual Fund. HDFC The Gold Exchange Traded Fund HDFCFMGETF ICICI ICICI Prudential Mutual Fund Prudential Gold Exchange Traded Fund IDBI AMC IPGETFIDBI Gold Exchange Traded Fund IDBIGOLD Mutual Fund Kotak Gold Exchange Traded Fund. KOTAKGOLD Quantum Mutual Fund Quantum Gold Fund (an ETF) QGOLDHALF UTI Mutual Fund The term "UTI" refers to aGOLD ETF (exchange traded fund) GOLD.

OBJECTIVE OF THE STUDY:

1. The objective of this paper was to examine the risk and return of gold exchange-traded funds.
2. To examine the gold ETFs' financial performance,
3. To analyze the relationship between the price of gold and gold exchange-traded funds (ETFs) in India.

RESEARCH METHODOLOGY

For the period of December 2018 to November 30, 2020, various scientific studies were conducted on gold ETFs (493 Daily Observations) received from the National Stock Exchange. The sampling period has been chosen in such a way that the maximum number of gold ETFs can be included in the analysis. Second, because of the COVID-19 pandemic, there has been a significant increase in demand for gold ETFs and gold. This analysis was conducted using a variety of economic methodologies. Mean, broad deviation, skewness, and kurtosis are examples of descriptive statistical approaches that have been calculated. To compute, the alpha and beta risk coefficients were used. The budget was researched using a variety of portfolio evaluation metrics, including Sharpe's, Treynor's, and Jensen's fashions. For this analysis, the chance-loss hobby price is zero.84 as of November 30, 2020 (RBI Database Source).

PERFORMANCE EVALUATION

Sathishkumar & Ramraj, (2019) aspects based on the findings, following tools were employed in this investigation, after making the necessary risk adjustments, Alpha Alpha calculates the portfolio's excess return over the market. It also discusses how a portfolio manager selects securities for a portfolio. A positive alpha number indicates that the portfolio outperformed the market on a risk-adjusted basis. A negative alpha number indicates that the fund underperformed the market. $\alpha = \sum R_{pi} n - \beta \sum R_{mi} n$

- i. R_{pi} represents the excess return of the portfolio (portfolio return minus risk-free return), n represents the number of observations, β the sensitivity of the portfolio's return rate to the market, and R_{mi} represents the excess return of the market (market return minus risk-free return). Beta Beta (systematic) undiversifiable risk checks. It also demonstrates how the cost of defence responds to demand. It analyses the degree to which the demand affects the return on investment. $\beta = \frac{\sigma_p \sigma_m}{\sigma_m^2} \times r$
- ii. Where, σ_p and σ_m this reflects the standard deviation, respectively, of the mutual fund scheme's returns and the benchmark index. R demonstrates the connection between the return of the mutual fund and the index of reference. Sharpe Index is one of the methods used to assess the output of the portfolio. A Sharpe Ratio is calculated by dividing the expected return per unit of risk. Surplus return of the mutual fund by its standard deviation. Here, the surplus return is determined

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by subtracting the real return from the risk-free rate. It is considered more comfortable to have a higher Sharpe index.

Sharpe's index = $\frac{R - R_f}{S}$

- iii. Where, R = average return, R_f = Risk-free rate of return, S = Standard deviation. Treynor's Index According to the "Treynor index", this mutual fund has come out on top. The beta measures your exposure to firmspecific risk. Treynor ratio = $\frac{r_i - r_f}{\beta_i}$
- iv. Where, r_i = portfolio i 's return, r_f = risk free rate of return, β_i = portfolio i 's beta Jensen's Index Jensen's performance index is based on the model of capital asset pricing. Performance ratio tests the performance of the fund directly. The performance is measured and compared to the norm. The formula is calculated on the basis of the predictive price capacity of the portfolio manager. Security price forecasts can help investors earn higher returns than ordinary investors expect to earn at a given risk level. $R_p = \alpha + \beta_i (R_m - R_f)$
- v. Where, R_p = average return of portfolio, R_f = riskless rate of interest, α = the intercept, β_i = a measure of systematic risk, R_m = average returns of market. The Sortino ratio quantifies the returns of the portfolio or the asset after the risk has been adjusted. The updated version of the Sharpe factor is called the Sortino Index. It considers only the negative cost and neglects the favourable cost. $Sortino\ Ratio = \frac{R - T}{D}$
- vi. Where R = Return of a portfolio, T = Required Rate of Return, D = Downside Risk. Fama's Measure Fama's model tests the performance of mutual funds through different aspects of portfolio risk and returns. In the Capital Asset Pricing Model, the portfolio's return comprises the risk-free return and the risk premium. The risk premium is a mixture of all of these incentives and rewards. The reason for choosing a portfolio is to boost the efficiency of the portfolio. It's the return on the portfolio, besides what we've won. The reward for systemic risk is very high, while the reward for non-systematic risk is low. $F_p = R_p - R_f - \{\sigma_p \sigma_m\} (R_m - R_f)$
- vii. Where R_p represents the return of a portfolio, R_f is the risk-free rate of return. R_m represents the market return, σ_m , and σ_p representing the standard deviation of market and portfolio return.

EMPIRICAL STUDY

The central value of the variable (the mean of the variable) and the data diversion from the central value are provided by descriptive statistics (i.e., variance and standard deviation). The statistical characteristics of the data on the eight variables employed in the current investigation are summarized in Table 2. The following values are reported: mean median, standard deviation, skewness, Kurtosis, and range. The standard deviation (SD) of a distribution explains its volatility. Sleekness indicates whether or not the distribution is normal. If not, whose side is heavily skewed? This information allows us to determine whether a data point is greater or lower than the mean. Skewness with a value of zero is defined as normal distribution. Kurtosis shows us how the data points plotted on a graph are trending in the chart. With a high kurtosis value, we get a flat and even distribution with fat tails, while with a low kurtosis value, we get a peak distribution with narrow tails. The range is also a statistical technique for determining the difference between the lowest and highest values of the variables under consideration.

Table: 1 Summary of the descriptive statistics

	Mean	Coefficient of Variation	Std. Dev.	Skewness	Kurtosis	JB (Prob)
AXIS GOLD	0.000112	7.816156	0.000878	0.307483	.246903	0.6587 (0.7193)
BSLGOLDEF	0.000108	7.429168	0.000800	-0.24119	.319526	0.5021 (0.7779)
GOLDSHARE	0.000103	6.668462	0.000689	0.137350	.488450	0.5057 (0.7765)
IPGETF	-0.00117	-6.34567	0.007436	-5.66795	33.44134	1582.76 (0.0000)
IDBIGOLD	9.65E-05	7.769921	0.000750	0.393622	2.627886	1.1373 (0.5662)
KOTAKGOLD	0.000105	6.993207	0.000737	-0.09835	2.932436	0.0648 (0.9680)
QGOLDHALF	8.36E-05	7.965481	0.000666	0.124894	3.428290	0.3687 (0.8316)
RELGOLD	8.36E-05	7.965481	0.000666	0.124894	3.428290	0.3687 (0.8317)
HDFCFMGETF	9.65E-05	7.543434	0.000706	0.221604	2.945015	0.2991 (0.5988)
SBIGETS	9.56E-05	7.388733	0.000728	0.408147	2.868561	1.0254 (0.5988)
GOLD (R)	0.000117	6.825807	0.000798	0.757550	3.472551	3.7782 (0.1512)

Source: Author's Calculation.

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Table 2 Return values (α) of various ETF's

Alpha (Return Values)									
AXIS GOLD	BSL GOLD ETF	GOLD SHARE	IPG ETF	IDBI GOLD	KOTAK GOLD	QGOLD HALF	REL GOLD	HDFC MFG ETF	SBI GETS
-0.0133	-0.1029	-0.1346	-2.2553	-0.0824	-0.1433	-0.1446	-0.1447	-0.0758	-0.1021

Source: Author's Calculation.

Table 3 Risk values (β) of various ETF's

Beta (Risk Values)									
AXIS GOLD	BSL GOLD ETF	GOLD SHARE	IPGETF	IDBI GOLD	KOTAK GOLD	QGOLD HALF	REL GOLD	HDFC MFG ETF	SBI GETS
0.9788	0.8369	0.7868	-2.569	0.8694	0.773	0.7709	0.7709	0.8799	0.8382

Source: Author's Calculation.

Table 4 Gold ETF's Performance evaluation

	Sharpe's Index	Treynor's Index	Jensen's Index	Fama's Measure	Sortino Ratio
AXIS GOLD	-7.06288	-0.00634	-0.00014	0.00062	-1.99843
BSLGOLDETF	-7.7617	-0.00742	-0.00102	0.000005	-2.00017
GOLDSHARE	-9.01148	-0.0079	-0.00133	-0.00086	-2.00016
IPGETF	-1.00702	0.002915	-0.02342	0.050278	-1.99801
IDBIGOLD	-8.29262	-0.00715	-0.00083	-0.00039	-2.00015
KOTAKGOLD	-8.42679	-0.00803	-0.00142	-0.00049	-2.00017
QGOLDHALF	-9.35555	-0.00808	-0.00145	-0.00106	-2.00013
RELGOLD	-9.35555	-0.00808	-0.00145	-0.00106	-2.00013
HDFCMFGETF	-8.54409	-0.00707	-0.00076	-0.00056	-2.00015
SBIGETS	-8.80872	-0.00742	-0.00102	-0.00073	-2.00015

Source: Author's Calculation.

PERFORMANCE EVALUATION CALCULATION

Numerous portfolio evaluation methods are shown in table 5. A fund with a higher Sharpe index has a better track record. Equation 3 is used to calculate it. Because gold ETF returns are lower than the risk-free rate of return, the majority of the values are negative, implying that the funds are underperforming. Except for the ICICI Prudential Gold Exchange Traded Fund, all of the ETFs in Treynor's index have a negative value. Jensen's index assesses a fund manager's capacity to deliver a higher return on investment. All of the ETFs in this category have a negative value. When compared to other funds, the Axis Gold ETF outperforms them all. The Sortino ratio is a modified version of Sharpe's index that depicts a portfolio's downside risk. All ETFs have a negative value since their returns are lower than the risk-free rate of return. When compared to other ETFs, the ICICI Prudential Mutual Fund performs better, according to Fama's performance evaluation model.

PERFORMANCE EVALUATION RANKING CALCULATION

Table 6 indicates the score of the selected ETF based on several performance metrics. The average ranking is also used to compute the overall rating. When compared to other ETFs, the Axis Gold ETF performs better. The Quantum Mutual Fund and Reliance Mutual Fund had the least in the Jensen model, despite the fact that the ICICI Prudential Gold Exchange Traded Fund fared better on four portfolio evaluation measures. A gold ETF, or exchange traded fund, is a commodity-based mutual fund that invests in precious metals. These exchange-traded funds behave similarly to individual stocks and are exchanged on the stock exchange in the same way. Physical gold is represented through exchange-traded funds in both dematerialized and paper form. An investor invests in stocks rather than gold, and when the stock is traded, they are given the unit's equivalent in cash rather than gold.

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GOLD VS. GOLD ETF ANALYSIS

ETF	Gold
▪ It is a form of investment	▪ Idle wealth
▪ For a short-term or long-term financial goal	▪ Personal use, loan collateral
▪ No need to store. Hence, no risk	▪ Must be stored away safely
▪ Same value as that of physical gold	▪ Subject to market rate fluctuations
▪ Traded on the stock exchange	▪ Purchased from a retailer/jeweller
▪ Fund management expense (expense ratio)	▪ High making charges

INVESTORS IN GOLD ETFs:

Gold ETFs are suited for anyone who wants to use gold as an investment option rather than for personal usage. Gold ETFs can be used as a hedge against any kind of volatility. It supports the diversification of your assets and the maintenance of a well-balanced portfolio. Whether gold prices fall or rise, you may adjust your asset allocation plan to ensure that risk is reduced and rewards are maintained.

PROCEDURE TO INVEST IN GOLD ETFs:

- Open a Demat account; these platforms frequently allow you to open a demat and trading account online.
- Some basic documents, like a PAN card and proof of your address and ID, may be needed to get a job.
- After you've created an account, you can choose and purchase gold ETF.
- Demat account is credited with the units.

Investors will receive the cash equivalent of the gold value when they redeem the ETF. Gold exchange-traded funds (ETFs) are perfect for those who want to invest in gold. Physical gold is difficult to store and secure against theft. Dematerialized gold is simple to sell or buy, and it is quite safe. Gold ETFs are transparent and can be purchased in small increments, as little as one gramme of gold. All investors need to do to start trading gold ETFs is open a demat account. You can trade on any of your smart devices with a demat and trading account, and you can also get research and analysis to help you make better decisions.

Table: 5 Summary of Performance of Evaluation Rank

	Summary of Performance Evaluation Rank						
	Sharpe's Index	Treynor's Index	Jensen's Index	Fama's Measure	Sortino Ratio	Average Rank	Mean Rank
AXIS GOLD	2	2	1	2	2	1.8	1
BSLGOLDETF	3	6	5	3	10	5.4	5
GOLDSHARE	8	7	6	8	8	7.4	8
IPGETF	1	1	10	1	1	2.8	2
IDBIGOLD	4	4	3	4	6	4.2	3
KOTAKGOLD	5	8	7	5	9	6.8	7
QGOLDHALF	9	9	8	9	3	7.6	9
RELGOLD	9	9	8	9	3	7.6	9
HDFCFMGETF	7	5	4	7	5	5.6	6
SBIGETS	6	3	2	6	7	4.8	4

Source: Author's Calculation.

CONCLUSION

Throughout the COVID-19 Pandemic, this study looked at the performance of eight gold ETFs listed on the NSE. Investor's interest towards gold has grown over time as gold costs have risen throughout the COVID-19 Pandemic, and as gold costs have climbed, investors have invested in these ETFs. In terms of the quantity of return for the risk, the ETFs' returns were below average. These assessments provide the information needed to make an investment decision at some point during India's pandemic situation. Gold ETFs are a great alternative for people who want to invest in gold. Despite being a commodity-based traded fund, gold ETF funds can be used as an industry exchange-traded fund as well. It is an excellent investment strategy for diversifying a financial

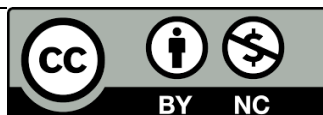
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portfolio and gaining exposure to a wide range of industries, such as gold mining, manufacturing, transportation, and so on. The closing prices of 11 gold ETFs listed on the National Stock Exchange have been studied and analyzed. The study examines the Sharpe, Treynor, and Jensen performance evaluation measures and ratios are used. The trading in gold The popularity of ETFs has been increasing over recent years as the price of gold is regularly touching new highs, so investors are investing in these ETFs. The Sharpe performance measure helps investors analyse the volatility level of each Treynor Measure, a gold ETF, and will assist an investor in determining risk versus rate of return through systematic risk. The Jensen measure shows the investor whether the funds have outperformed or underperformed the market index. These three performance measures will help investors make effective decisions. From the study, I can say that gold exchange-traded funds have scope in the market for investment.

The study concludes that an investor can choose the best gold ETFs for investment. The investor makes a choice by taking into consideration the return and risk and also based on the performance evaluation measures. From Sharpe's measure, the SBI Gold ETF is the top performer with a higher margin. For this reason, the investor needs to take a higher risk as well. From Treynor, Invesco, and Quantum Gold ETFs are recommended. For investors when considering market risk aspects, the Jensen measure shows that all 11 gold ETFs have positive values. As a result, all funds outperformed the market index.

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