Assessment of Gold Exchange Traded Funds in India

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Abstract:

This study primarily contributes to our understanding of gold as an investment tool and gold ETFs as a novel approach of gold investing. The study has only focused on retail investors in India and the introduction of gold exchange-traded funds (ETFs) as a new investment option in the Indian Securities Market, in addition to actual gold and gold jewelry. With the aid of literature and an analysis of the performance of gold exchange traded funds, the study aims to clarify this concept. This study aims to comprehend Gold ETF as a cutting-edge and alluring alternative to traditional gold as an investment vehicle. By analyzing their performance, it attempts to determine the most practical investment option for small investors. The analysis of five Gold ETFs has been done. The chosen schemes are some of the most well-known ones. The analysis is performed through the means of comparing Returns, Standard deviation, Beta, Sharpe Ratio, Jensen Ratio and Treynor Ratio. These are some of the statistical techniques employed in India by investors. In India, it has been a long-preferred form of wealth. Gold is a dependable inflation hedge, a superb store of value, and it diversifies a portfolio.

Keywords: *Investment, Gold, Exchange Traded Funds, Gold Exchange Traded Funds*

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INTRODUCTION

Any marketplace where buyers and sellers engage in the exchange of assets including stocks, bonds, currencies, and derivatives is referred to as a financial market. Financial markets have open pricing, fundamental trading rules, expenses and fees, and market forces dictating the prices of traded securities, aiding in corporate expansion and investor profit. Investment is the act of investing money or capital into a project or business with the goal of making a profit over the amount invested. Investing in finance is placing money into something with the hope of earning a profit that, after careful consideration, has a high degree of security for both the principal amount and the security of return within an anticipated time frame. The most common precious metal investment among Indian retail investors is gold.

This study primarily contributes to our understanding of gold as an investment tool and gold ETFs as a novel approach to gold investing. Open-ended mutual funds that specialize in gold investing are known as gold exchange-traded funds (ETFs). Different ETFs are

- Stock ETFs
- Bond ETFs
- Commodity ETFs
- Sector ETFs
- Currency ETFs
- Leveraged ETFs
- Inverse ETFs

The study has only focused on retail investors in India and the introduction of gold exchange-traded funds (ETFs) as a new investment option on the Indian Securities Market in addition to actual gold and gold jewelry.

With the aid of literature and an analysis of the performance of gold exchange traded funds, this study aims to clarify the concept. Open-ended mutual funds that specialize in gold investing are known as gold exchange-traded funds (ETFs). An exchange-traded fund (ETF) that tracks the domestic physical gold price is known as gold ETF. They are passive investment tools that invest in gold bullion and are based on gold prices. In a nutshell, Gold ETFs are securities that reflect physical gold, either in the form of paper or in a dematerialized form. One gram of gold is equal to one unit of the Gold ETF, which is backed by extremely pure actual gold. Gold ETFs combine the simplicity of gold investing with the flexibility of stock investing. They are available for purchase and sale in the stock market. A commodity ETF called a “gold exchange traded fund” has gold as its sole major asset. Even when gold

ETF is redeemed, the investor does not receive any precious metal. An investor is given the cash equivalent in its place. Given the variety of instruments available for investing, making investment decisions is a challenging undertaking for ordinary investors. Gold has historically been regarded as a haven for investors in whatever economic climate. A priceless component of Indian culture is actual gold. Indians have long utilized gold for a variety of cultural purposes and because of the significance, it holds as a store of value. Due to its capacity to offer liquidity and price discovery transparency, gold has served as a significant investment channel. Currently, we have another option for investing in gold; that is to buy gold exchange-traded funds (ETFs) and gold mutual funds. Today, financial advisors all over the world place a high value on gold as an investment product. The main reason for this is that gold's value has been rising and hit an all-time high. Gold Exchange Traded Funds (ETFs) are those straightforward financial instruments that combine the simplicity of buying gold with the flexibility of investing in stocks. Additionally, Gold ETFs are bought and sold at the National Stock Exchange (NSE) or the Bombay Stock Exchange, just like stocks (BSE).

A gold ETF is backed by an equal number of units of very high purity gold when one purchases a particular number of its units. The only difference is that one doesn't actually receive the gold. In essence, one is buying dematerialized gold merely on paper. One will still get the cash equivalent of the gold at the on-going gold rate even if one redeems the Gold ETF. Because an ETF has lower cost than investing in actual gold, there is greater transparency regarding the holding of an ETF.

Like any other stock of a company, gold ETFs are listed and traded on the National Stock Exchange of India (NSE) and Bombay Stock Exchange Ltd. (BSE). Like any other firm stock, gold ETFs can be bought and sold continually at market rates on the cash segment of the BSE and NSE.

Investing in Gold ETFs entails buying gold electronically. ETFs that track gold can be bought and sold just like equities. When one actually redeems a Gold ETF, one receives the cash equivalent rather than actual gold.

It is incredibly convenient to invest in gold electronically by using gold ETFs which may be traded through a dematerialized account (Dematerialized) and a broker. The holdings of a Gold ETF are completely transparent due to its direct gold pricing. The ETFs also have significantly lower costs compared to investments in actual gold because of their distinct structure and formation method.

BENEFITS OF GOLD ETFS:

1. **Trading is simple:** It's quite simple and convenient to invest in gold ETFs. One can purchase as few as or as many units of a Gold ETF as one choose through a stockbroker or an ETF fund manager because one unit is equal to one gram of gold. The Gold ETF can be bought and sold on a daily or hourly basis, much like stocks.

2. **Liquidity:** Due to their quick redemption during a trading session at the stock exchange and their low transaction costs, gold ETFs are very liquid investments. If one requires liquid cash quickly, investment liquidity is crucial, and gold ETF can assist one in doing so.

3. **Increased adaptability:** ETF funds for gold offer extremely flexible investing options. Large sums of money are needed to purchase gold straight from a shop for investment purposes. However, since gold ETFs offer this level of flexibility, one is free to purchase any amount of it as one prefers to.

4. **Low danger:** Investment in Gold ETF is regarded as a relatively low-risk investment because the gold market is not as volatile as the stock market.

5. **Transparency:** Every hour of every day, the public can view the gold prices on the stock market. There is therefore nothing taking place behind closed doors that one is unaware of. As a result, one of the most transparent investing options is the gold ETF.

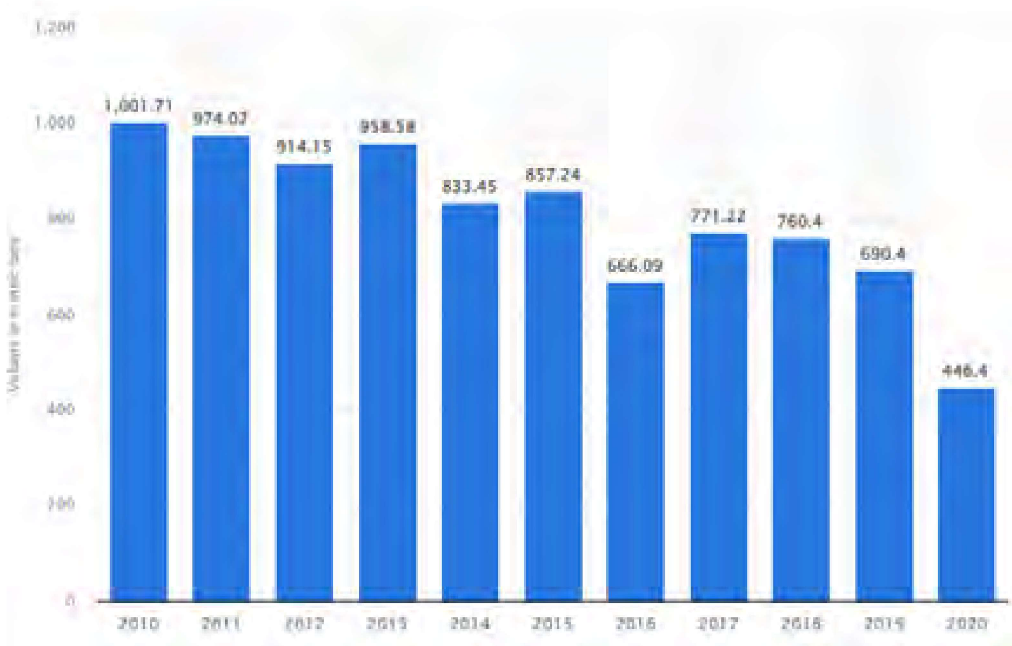
WHY GOLD ETF INVESTING:

Comparing the Exchange-Traded Fund (ETF) with an Open-Ended Mutual Fund, to identify which is a more effective indexing vehicle While flow-induced trading hurts OEF investors financially, it also benefits the investors who initiate the flow because it is, after all, a zero-sum game. The OEF structure is advantageous for risk-averse investors since it can be seen as offering insurance for investors facing liquidity shocks (Rambabu & Rao). But an investor can store their gold in an electronic format with gold ETF, similar to a bank, avoiding the risks and problems associated with holding real gold. When compared to physical gold, gold ETFs provide a number of advantages. Here are a few of them:

1. Investing in Gold ETFs carries no danger of fraud, mixing, physical imperfections, or chemical, contaminants.

2. Due to the fact that gold is present in its purest form in gold ETF, the issue of quality concern is not there. However, these impurity risks are always present when purchasing actual gold. When purchasing actual gold, storage is a major concern.

Figure 1: Annual demand volume of gold across India (2010 to 2020) in metric tons



Data Source: Statista Database.

In order to protect gold from the risk of theft, bank lockers have become a popular alternative to home storage. However, because the gold is kept electronically in this scenario, investment in gold ETFs is very secure. During the sale and purchase of actual gold, investors lose a sizeable amount of their holdings. However, because gold ETFs are in electronic form and do not incur making costs, there is no such risk of financial loss. Modest investors can purchase gold in small quantities, even as little as 1 gram, thanks to the emergence of gold ETFs, which is a huge benefit for them. However, purchasing gold on such a tiny scale from the physical market is not any simpler. Gold is used to secure wealth during periods of excessive inflation because creating more of it is much more difficult than issuing new money and because its worth is independent of the health of any specific government. The regularity of price offered by gold ETFs is a significant advantage. The cost of real gold, however, varies from market to market and occasionally from vendor to vendor. Also, Gold ETFs are cost-effective as it has no holding costs or additional costs. In terms of Liquidity, Gold ETFs can be sold anywhere.

INVESTMENT RISKS WITH GOLD ETFS:

Alterations in price are the biggest risk exposure in Gold ETFs. The Net Asset Value (NAV) of the units issued under a gold ETF might increase or decrease in line with changes in the economy, just like in any equities instrument. One cannot overlook the market dangers associated with gold ETF investments. It's crucial that one examines the ETF's performance before deciding to invest in gold ETF.

Less overall Return: When compared to selling actual gold, a gold ETF's total return may be lower due to additional expenses for fund management, brokerage, or commissions. One cannot overlook the annual maintenance fee and dematerialized account costs while trading in gold ETF. An investor has a chance to get exposed to the performance or price changes of gold through the use of gold ETF.

MARKET OF GOLD ETFS:

Investors wishing to diversify their portfolio with exposure to the gold market might consider gold ETFs. It is a low-risk investment that is appropriate for cautious investors. The money invested buys standard, 99.5 percent pure gold bullion. Even though they are traded on stock exchanges, gold ETFs are a low-risk investment. People can choose gold ETFs if they do not want to pay money for storage or additional taxes, as is the case with actual gold. Exchange-traded funds (ETFs) that invest primarily in gold can be purchased and sold in the market. In essence, open-ended mutual fund plans that are centered on the constantly shifting price of gold are what gold ETFs are. Since gold ETFs ensure one's investment in the yellow metal and also offer the stability, liquidity, and tax efficiency that come with stock investments, they have proven to be more valuable than real gold. The only requirements for investing in gold ETFs are a dematerialized account and a trading account with an online account for trading stocks. Once an account is set up, all one has to do is to select the Gold ETF and place an order via a broker's online trading platform. The orders are forwarded to the exchange where the sale and purchase orders are matched and executed. One will receive a confirmation in return. To sell gold ETFs in the stock market through a broker, a dematerialized account and a trading account are necessary. Because one invests in an ETF that is backed by actual gold, ETFs are best used as a way to profit from the price of gold rather than to acquire access to genuine gold. As a result, when one liquidates Gold ETF Units, they are paid according to the local gold market price. AMCs also provide redemption of Gold ETF Units in the form of actual gold in "Creation Unit" size if one possesses the equivalent of 1 kilogram of gold in ETFs, or multiples thereof. If an investing portfolio contains assets that are vulnerable to a decline in the value of the dollar, buying gold ETF could help one reduce that risk. Gold tends to increase when the currency is weak. If a portfolio is exposed to the upside, on the other hand, selling gold ETF can serve as a hedge. In comparison to a diversified equities fund and market portfolio approach to examine the performance of the gold Exchange-Traded Fund (ETF) in terms of risk and return. Gold might reduce the risk associated with equities investments. As compared to a diversified equities data, the study demonstrates that gold ETF has provided a good return. For ages across the world, investing in gold has been a highly significant factor (Mukul, Kumar, & Ray, 2012) . It is extremely important to a nation's foreign exchange, financial security, and ability to combat inflation. For small and medium-sized investors, it is also convenient and well regarded by the market to invest in gold exchange-traded funds. However, the majority of investors are unaware of gold exchange traded funds. Around the globe, recent developments in gold ETF marketing has been witnessed greatly corroborated with scenario of China depicting a growing product for investing in gold is the gold exchange traded fund (Wang , Hussain, & Ahmed, 2010). Gold ETF is a type of commodities exchange-traded fund that can be used to reduce the risk associated with the price of gold or expose investors to its swings. Owning gold ETF might assist minimize risk in a position if an investor's portfolio assets have become riskier as gold's price rises? Understanding the tracking faults of leveraged exchange-traded funds (LETFs) on gold and demonstrating enhanced tracking performance via dynamic portfolios of gold futures are the goals of this study (Guedj & Huang, 2013) .

WHAT ARE TYPES OF ETFS? STOCK ETFS

- Bond ETFs
- Commodity ETFs
- Sector ETFs
- Currency ETFs
- Leveraged ETFs
- Inverse ETFs

Gold is considered as an investment tool and gold ETFs is a novel approach to gold investing. In India, the introduction of gold exchange-traded funds (ETFs) as a new investment option on the Indian Securities Market in addition to actual gold and gold jewelry. For Indian retail investors, understanding gold ETF funds and the differences between investing in gold and gold ETFs are essential (Anand, 2017) .

RESEARCH OBJECTIVES:

1. To understand the gold ETFs as an investment option and the new method of investing in gold.
2. To evaluate the performance of various Gold ETFs available in India.
3. To understand the advantages and reasons for investing in Gold ETFs and to conduct a comparative analysis of it.

DATA SOURCES AND ANALYSIS:

In the study, secondary research has been done. The Money Control website offered useful information on Gold ETFs and their use, and because it is often updated with fresh findings about gold and its use, it is regarded as a trustworthy source. The empirical results were reached through secondary data, not surveys or questionnaires, which were never administered. Data was gathered from databases that included recorded historical data. On numerous websites, like Yahoo Finance, Money Control, and Google Finance, historical data is widely accessible.

TIME PERIOD:

Data was gathered between January 1, 2020, and December 31, 2021.

SAMPLE:

Five Gold ETFs have been selected, and each has been examined. The selected schemes are some of the most well-liked ones, and the categories are the market innovators for Gold ETFs in India.

- Axis Gold Exchange Traded Fund
- HDFC Gold Exchange Traded Fund
- Invesco India Gold ETF
- SBI ETF Gold
- Aditya Birla Sun Life Gold ETF

Table 1: Funds, Issuers and Market Capitalization

Fund	Issuer	Market Capitalization
Axis Gold ETF	Axis Mutual Fund	3.36
HDFC Gold ETF	HDFC Mutual Fund	6.91
Invesco India Gold ETF	Invesco Mutual Fund	52..28
SBI Gold ETF	SBI Mutual Fund	3.44
Aditya Birla Sun Life Gold ETF	Birla Sun Life Mutual Fund	1.06

The performance assessment of gold ETFs in India can be easily measured by Ratios. By computing the alpha, beta, and standard deviation of the chosen ETFs, analysis is done utilizing performance evaluation approaches including Treynor's performance index, Sharpe's performance index, and Jensen's performance index. This will concentrate on gold exchange-traded funds (ETFs) as a reliable and alluring investing choice. Gold ETFs were introduced primarily to promote market efficiency by increasing liquidity. A mutual fund is a trust that invests money by pooling it from a number of individuals who have similar financial objectives whereas this tries to identify and evaluate risk in the newly-emerging Gold ETF securities on the stock market (Jayanthi & Malathy, 2013). Statistics used for assessing each fund are as per their respective Returns, Standard Deviation, Beta, Sharpe Ratio, Jensen Ratio and Treynor Ratio. After its computation, a comprehensive ranking matrix will be used.

RESULTS AND FINDINGS:

It is a way to compare securities or portfolio's volatility or systematic risk against the market as a whole. The stock must be tied to the benchmark used in the calculation for the beta to have any significance. Investors can determine whether a stock moves in the same direction as the market by using the beta calculation. Additionally, it offers information on how hazardous or volatile a stock is in comparison to the rest of the market. Volatility is a gauge of an asset or portfolio's price swings. Because a stock's volatility might fluctuate, beta is less beneficial for long-term investing than it is for assessing a security's short-term risk and studying volatility to arrive. It depends on the company's stage of growth and other circumstances from year to year.

RETURNS:

The average return is the straightforward mathematical average of several returns produced during a given time period. The method used to get a basic average for any set of numbers also applies to calculating an average return. The numbers are combined to create single sum, which is then divided by the total number of numbers in the set. The average return is the straightforward mathematical average of several returns produced during a given time period. A security's or portfolios historical performance can be gauged using the average return.

Average Return equals Number of Returns / Sum of Returns

BETA:

The benchmark Sensex returns must be higher than the average returns of Gold ETF Funds for them to be considered outperformers. When the beta is more than 1, the risk is greater, and when it is less than 1, the risk is lower. None of the funds mentioned above have a beta value greater than 1, making them less risky.

Average Return Underperformance is defined as when the average returns of Gold ETF Funds are lower than the benchmark Sensex returns. As an illustration, if an investor invests in a stock with lower predicted returns than the market, his stocks will underperform. Compared to the Sensex's typical returns, Axis Gold Exchange Traded Funds, HDFC Gold Traded Fund, and Aditya Birla Sun Life Gold have all underperformed.

Table 2: Descriptive statistics of Fund Profiles

Fund	Beta	SD	Average Return
Axis Gold ETF	0.221	0.099	-0.00782
HDFC Gold ETF	0.220	0.099	-0.00753
Invesco India Gold ETF	0.203	0.032	0.00179
SBI Gold ETF	0.063	0.026	0.00181
Aditya Birla Sun Life Gold ETF	-0.004	0.1	-0.00723

INDEX OF SHARPE PERFORMANCE:

Among the performance markers, This performance indicator's crucial component takes the portfolio's risk into account. The return to variability is demonstrated. The performance of the Fund will be better in terms of returns for the risk taken if the ratio is higher, and investors will hold the fund for higher returns. Comparing similar portfolios with higher levels of diversification against lesser levels of diversification should result in an increase in the Sharpe ratio. Investors must also agree to the logical, but maybe too limited, premise that risk and volatility is equal in order for this to be true.

SR (p) = (Rp – Rf)/ Sd (p)

Where, Rp – Returns of the portfolio, Rf – Risk free rate and Sd (p) – Total risk

Table 3: Sharpe Ratio Ranking

Fund	Sharpe Ratio	Rank
Axis Gold ETF	-0.083	5
HDFC Gold ETF	-0.08	4
Invesco India Gold ETF	0.04	2
SBI Gold ETF	0.049	1
Aditya Birla Sun Life Gold ETF	-0.077	3

The Study above relates to the Sharpe performance index, which provides a single figure that can be used to rank the performance of different funds. According to Sharpe, SBI ETF Gold (0.049) and Invesco India Gold ETF (0.04) are the two ETFs with the best performance. Their top performance has less variation. Aditya Birla Sun Life Gold ETF is an average performer with (-0.077) Rank 3, whereas axis Gold Exchange Traded Fund (-.083) has Rank 5 and HDFC Gold Exchange Traded Fund (-0.08) has rank 4. Investors should choose gold exchange-traded funds (ETFs) with lower volatility and more alluring returns.

TREYNOR PERFORMANCE INDEX:

It is a measurement of an investment's volatility, with risk being represented by the beta of comparable portfolios. This considers the portfolio's systematic risk as well as the investor's likely extensive asset holdings. A risk-adjusted return assessment based on systematic risk is the Treynor ratio. It shows the return on investment (ROI) for the level of risk taken by an investment, such as a stock portfolio, mutual fund, or exchange-traded fund. A performance indicator for calculating how much excess return was produced for each unit of risk taken on by a portfolio is the Treynor ratio, also known as the reward-to-volatility ratio.

Treynor ratio: Tn (p) = (Rp – Rf)/ βp

Where, Rp = Return on Portfolio, RF=Risk Free Rate and βp =Portfolio Beta

Table 4: Treynor Ratio Ranking

Fund	Treynor Ratio	Rank
Axis Gold ETF	-0.038	5
HDFC Gold ETF	-0.037	4
Invesco India Gold ETF	0.006	3
SBI Gold ETF	0.021	2
Aditya Birla Sun Life Gold ETF	1.736	1

The Returns with less sensitivity to market gives the fund which stands more profitable one. Aditya Birla Sun Life Gold ETF has the highest ratio of 1.736 which illustrates the best of the five, followed by SBI Gold ETF, Invesco India Gold ETF, HDFC Gold ETF and Axis Gold ETF stands the last.

JENSEN’S PERFORMANCE:

The index assesses the performance of a hedge fund manager and is based on the capital asset pricing model. A good indicator of the performance of a portfolio is positive alpha, while a terrible sign is negative alpha. The Jensen ratio calculates, after accounting for market risk, the portion of the portfolio’s rate of return that may be attributed to the manager’s capacity for above-average returns. The risk-adjusted returns are better the larger the ratio. While a portfolio with a consistently negative excess return will have a negative alpha, the opposite is true for one with a consistently positive excess return. This index evaluates investment managers’ performance while taking portfolio risk into account. Ratio of Jensen’s Performance:

Alpha = R (i) – [R (f) + B x (R (m) - R (f))]

Table 5: Jensen Ratio Ranking

Fund	Jensen Ratio	Rank
Axis Gold ETF	9.44	1
HDFC Gold ETF	9.13	2

Invesco India Gold ETF	8.7	3
SBI Gold ETF	2.96	4
Aditya Birla Sun Life Gold ETF	0.016	5

In terms of Jenson Ratio, Axis Gold ETF ranks the best with the ratio as 9.44 followed by 9.13 ratios of HDFC Gold ETF, Invesco India Gold ETF, SBI Gold ETF and Aditya Birla Sun Life Gold ETF with ratio of 0.016. **Comprehensive Ranking Matrix:**

Table 6: Ranking Matrix

Fund	Sharpe Rank	Treynor Rank	Jensen Rank
Axis Gold ETF	5	5	1
HDFC Gold ETF	4	4	2
Invesco India Gold ETF	2	3	3
SBI Gold ETF	1	2	4
Aditya Birla Sun Life Gold ETF	3	1	5

A summary of the performance matrix rank list for the chosen funds according to Sharpe, Treynor, and Jensen. None of the funds mentioned above have a beta value greater than 1, making them less risky. According to the results of the Sharpe ratio, Invesco India Gold ETF and SBI ETF Gold were Treynor and Jensen's best performing funds. Compared to the Sensex's typical returns, Axis Gold Exchange Traded Funds, HDFC Gold Traded Fund, and Aditya Birla Sun Life Gold have all underperformed. According to Sharpe, SBI ETF Gold (0.049) and Invesco India Gold ETF have the best ETF performance (0.04)According to Treynor, SBI ETF Gold (0.021) is ranked second, and Aditya Birla Sun Life Gold ETF (1.736) is ranked first.

The top-performing Funds, according to Jensen, were Axis Gold Exchange Traded Fund (9.44) and HDFC Gold Exchange Traded Fund (9.13).

CONCLUSION:

With the aid of performance measuring methods like Sharpe, Treynor, and Jensen performance measures, this article analyses the performance of gold ETFs funds. As gold prices consistently reach new heights and investors participate in these ETFs, the trading in gold ETFs has increased over time. Measures of portfolio performance ought to play a significant role in the selection of investments.

These tools will give investors the necessary data to make an informed decision about where to put their money. Investors cannot properly examine an investment representation without measurement of risk-adjusted returns. Investors can use the Sharpe performance measures to analyse portfolio performance volatility, the Treynor performance measure to evaluate how much risk to take vs. potential returns, and the Jenson performance measures to assess the performance of the fund management.

These three performance indicators will enable investors to make smart financial decisions. These three performance tools help investors make wise decisions on how to allocate their cash among various funds that would boost their returns. Investors find it challenging to evaluate funds due to market volatility, thus this historical data and analysis will provide them with important information. Studying the market performance of funds invested in ETFs is possible.

With gold ETFs, investors have an easy method to buy gold as a security without having to worry about storage issues or other security issues. Additionally, it saves the investors from having to worry about the gold's purity and quality. It also offers a number of additional advantages, like electronic trading, Dematerialized storage, and a way to diversify one's investing portfolio.

Indians have long preferred gold as a form of wealth. Gold is a dependable inflation hedge, a superb store of value, and it diversifies a portfolio. However, owning physical gold is difficult. The ideal answer to this issue is gold exchange-traded funds (ETFs). Impurities or adulteration is not a concern. Electronically stored, it may monitor the current value of an investments Extremely Liquid

- No worry on adulteration or impurities
- Held in Electronic Form
- Can track an investment value in real time
- Extremely Liquid

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