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A Comparative Study on the Performance of Gold ETF and Infrastructure ETF as Against CNX Nifty Index

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ABSTRACT

It is important to diversify a portfolio across different asset classes, since prices of all assets don't move in the same direction. Optimal diversification helps in reducing risk as well as creating wealth to an investor. Exchange Traded Funds (ETFs) are diversified mutual fund portfolios that trade like stocks on the stock exchange. As stock markets are highly volatile and stock picking is difficult for an investor, investing in an ETF is relatively safe. Gold products are considered a highly valuable means of investment in the present scenario of financial markets. Gold ETF have emerged as most successful source for investment in gold. Infrastructure sector in India, which holds the key to our country's fast growing GDP. Investors can participate in the rapidly growing Infrastructure sector through Infrastructure ETF. This paper attempts to compare the performance of Gold ETF and Infrastructure ETF as against market index, CNX Nifty. Return and risk of Gold ETF have been compared with the return and risk of Infrastructure ETF. Monthly Net Asset Values (NAVs) for the period, January 2011 to December 2014 are used for both the schemes. Closing prices of the CNX Nifty are considered. The study concluded that the Gold ETF have lesser variability as compared to the Infrastructure ETF. Gold ETF have performed better than market index and Infrastructure ETF have underperformed market index.

Introduction

Diversification is one of the basic tenets of investment planning, and therefore, is vouched by many investment advisors. It helps in reducing the risk of a portfolio, and thus makes it resilient. Unless portfolio is diversified effectively, it is meaningless and cannot add value to overall portfolio. It is important to diversify a portfolio across different asset classes, since prices of all assets don't move in the same direction. Having exposure in different asset classes- such as investing in equities, debt, mutual funds, infrastructure, gold and gold-backed products, and real estate, helps an investor to reduce the overall risk of wealth erosion from portfolio and thus can aid to cushion against the wild swings of the markets.

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Exchange Traded Funds (ETFs) are gaining popularity amongst investors as they are diversified mutual fund portfolios that trade like stocks on the stock exchange. As stock markets are highly volatile and stock picking is difficult for an investor, investing in an ETF is relatively safe.

Gold has served as a hedge against inflation and the erosion of major currencies. Out of all the options available in India in gold-backed investment, the investment in Gold ETFs has been more popular among the Indians (Priti Aggarwal, 2014). Gold proved itself that has beaten the losses during the period of inflation, economic crisis and during war times. It is always advised by the financial advisors to invest in gold when stock prices fall. Similarly at the time of boom, investments in gold are not preferred as the returns from investment in stock markets are comparatively higher (Kumar, 2011).

Developing economies have been stumbling, but infrastructure-related exchange traded funds could provide a more stable play on the emerging markets as countries update their basic transportation framework **(Max Chen, 2014)**. An investor, who is new to equity as an asset class, may consider investing in equity oriented ETFs that capture the movement of a broader market index. For instance, investing in Infrastructure ETFs tracks CNX infrastructure index in India. Such investments cover a wide spectrum of projects – from

economic infrastructure such as transport, to social projects such as hospitals – and involve different forms of financing (primary vs. secondary, debt vs. equity, private vs. listed, direct vs. indirect).

Review of Literature

Gallagher and Segara (2011), concluded that classical ETFs in Australia provide investors with returns commensurate with the underlying benchmark with lower tracking error relative to index managed funds. The variation between net asset value (NAV) and traded price for ETFs is small, and does not occur with high frequency.

Krishna Prasanna (2012), demonstrated that the ETFs have consistently outperformed the market index and have generated higher returns. The volatility of their returns was also found to be lesser than that of the returns of the benchmark index NIFTY in equity market. The study also found overseas fund of fund and Gold ETF as superior funds.

Snehal Bandivadekar and Saurabh Ghosh (2003), BSE Sensex incorporates only the market effects; the reduction in volatility due to "future's effect" plays a significant role in the case of S&P CNX Nifty.

Goyal and Joshi (2011) concluded that investors are investing in Gold ETFs for earning fair and sure profits in future. The prices of Gold ETFs have less variation than the index of NSE, hence investment in Gold ETFs is increasing over the time period. The investor confidence in Gold ETFs is increasing and therefore the future of Gold ETFs is bright in India.

Gayathri and Dhanabhakyam (2014) exhibited the co-integration and casual relationship between the Gold price and the NSE Nifty. There is a uni-dimensional relationship between the selected variables. The change in the gold price also changes the stock market indicator, NSE Nifty.

Vipin Kumar Aggarwal et al. (2013) demonstrated that the gold ETFs have lesser variability as compared to the physical gold and concluded that the performance of gold ETFs is better than the performance of physical gold.

Shefali Sinha and Mahua Dutta (2013) concluded that the Goldman Sachs Gold exchange traded fund is consistent in generating better performance, which is dependent on its lower tracking error.

Hundal et al. (2013) examined the perception of retail investors towards purchase of gold. The study provides a strong evidence that despite hike in taxes and depreciating rupee, unless the consumers get suitable alternatives which meet their respective needs, people don't want to shift away from gold, rather they are treating gold as a safety buffer. Another major advantage for gold being preferred is that it has multiple characteristics which very few other assets have - high liquidity: both in terms of ease of en-cashing it or availing a gold loan from bank but also the resale value (very small deduction while re-selling); conventional value and cultural values it holds for the consumers.

Prashanta Athma and Suchitra (2014) enunciated that the demat form of gold investment options viz. Gold Futures, Gold ETFs, Gold FoF and E-gold are better than the physical form of gold. An investor can make investment in any demat form of gold investment options as there is no significant difference in the return of the various demat form of gold investment options.

Statement of the Problem

An exploration into the existing literature reveals that most of the research is carried on Gold ETFs in standalone or its performance is compared with Gold and/or with stock market indices but there is no research on Gold ETFs in comparison with other ETFs. Though total ETF industry is growing and becoming popular, there is nearly no research on other ETFs and more specifically on Infrastructure ETFs. Therefore, this study is undertaken to compare the performance of Gold ETFs and Infrastructure ETFs against the market index, CNX Nifty, to find out which of these two have performed better than the other in the given period of study.

Need and Importance of the Study

Gold ETF has emerged as a strong asset due to fluctuating equity market, weakening of Indian rupee against US dollar and growing uncertainty of global economy. Gold ETFs provide the opportunity to institutional investors as well as to small investors, to make investment in gold through ETF scheme (Vidhyapriya and Mohanasundari, 2014). As per the data available from Association of Mutual Funds in India (AMFI), the scheme of Gold ETFs has shown a growth of 1858% since its inception in 2007. This product has shown an immense growth since its respective year of inception in India.

Infrastructure sector in India, which holds the key to our country's fast growing GDP. As per the 11th Five Year Plan Report of the Planning Commission Government of India, the average GDP growth of 7.7% achieved in the tenth five year plan period has been the highest in any Plan period so far. Further according to the report, the average GDP growth of 9% or above can be achieved and sustained only if infrastructure deficit is overcome. The CNX Infrastructure index includes companies belonging to Telecom, Power, Port, Air, Roads, Railways, Shipping and other Utility Services Providers. Investors can participate in the rapidly growing Infrastructure sector through infrastructure ETFs, as ETFs as an investment category are gaining popularity amongst investors as they are diversified mutual fund portfolios that trade like stocks on the stock exchange (Financial Express, 2010).

The need for investment in infrastructure continues to grow, private sector financing for infrastructure projects has developed around the world, given the long-term growth and (potentially) low correlation aspects of infrastructure investments (Inderst, 2009).

The purpose of this study is to analyze the performance of Gold ETFs and Infrastructure ETFs as against the broad market index, CNX Nifty. The study is designed to facilitate investors in constructing an optimal and well diversified portfolio, which can help in reducing risk as well as create wealth.

Objective of the Study

The objective of the study is to compare the performance of Gold ETF and Infrastructure ETF with reference to CNX Nifty Index.

Research Methodology and Data Analysis

This study is based on the secondary data. The data has been collected from various published sources, which include research articles, Association of Mutual Funds in India (AMFI) reports, website of National Stock Exchange (NSE), relevant company websites and other relevant sources. In terms of risk and return, the performance of Gold ETFs and Infrastructure ETFs is compared as against NSE market index, CNX Nifty. Simple statistical tools like Average, Standard Deviation and Co-efficient of Variation are used. Risk ratios, Alpha and Beta, are also deployed.

The first Gold ETF (Gold BeES) and first Infrastructure ETF (INFRABEES) were launched in March 2007 and September 2010 respectively, by Goldman Sachs Asset Management Company

(erstwhile Benchmark Asset Management Company) in India. These two schemes are considered for the study. Monthly Net Asset Values (NAV) for the period January 2011 to December 2014 are used for both the schemes and closing prices of CNX Nifty index are used for the same period.

The study is limited only to the Indian mutual fund industry. As Infrastructure ETF was introduced almost in the end of 2010 (i.e. September 2010) in India, therefore the study covers a period of 4 years from January 2011 to December 2014.

Modus Operandi of Gold ETF, Infrastructure ETF and CNX Nifty Index

Gold ETF

A Gold Exchange Traded Fund (ETF) is an exchange traded fund that aims to track the price of gold. Gold ETFs are units representing physical gold which may be in dematerialized form. These units are traded on the exchange like a single stock of any company. Gold ETF's are intended to offer investors a means of participating in the gold bullion market without the necessity of taking physical delivery of gold, and to buy and sell that participation through the trading of a security on a stock exchange (National Stock Exchange).

The concept of Gold ETFs in India was first introduced by Benchmark Asset Management Company (AMC), in India. The first Gold ETF (Gold BeES) was launched in March 2007 by Benchmark AMC in India.

Infrastructure ETF

Infrastructure Exchange Traded Fund (ETF) invests in the securities in the same proportion as represented by the CNX Infrastructure Index. They are like stocks, listed on NSE, liquid, tradable throughout the day, priced continually and in dematerialized form.

The investment objective of the Scheme is to provide returns that, before expenses, closely correspond to the total returns of the securities as represented by the CNX Infrastructure Index. However, the performance of scheme may differ from that of the underlying index due to tracking error.

CNX Infrastructure Index includes companies belonging to Telecom, Power, Port, Air, Roads, Railways, shipping and other Utility Services providers. The Index comprises of 24 companies listed on National Stock Exchange of India (NSE). CNX Infrastructure Index can be used for a variety of purposes such as benchmarking fund portfolios, launching of index funds, ETF's and structured products.

Infrastructure Benchmark Exchange Traded Scheme (Infra BeES), India's first Index Exchange Traded Fund (ETF) on Infrastructure sector from Benchmark Asset Management Co. Pvt. Ltd. was launched in September 2010 and was listed on the National Stock Exchange on October 5, 2010. This is the first Infrastructure sector fund which mirrors CNX Infrastructure Index.

CNX Nifty

CNX stands for the Credit Rating Information Services of India Limited (CRISIL) and the National Stock Exchange of India (NSE). A stock index endorsed by Standard & Poor's and composed of 50 of the largest and most liquid stocks found on the National Stock Exchange (NSE) of India (Investopedia, 2015). It is commonly used to represent the market for benchmarking Indian investments. Similar to other major stock indexes like the S&P 500, companies must meet certain requirements in terms of market capitalization and liquidity before they can be considered for inclusion in the index. Also known as "Nifty 50".

The CNX Nifty is a well diversified 50 stock index accounting for 23 sectors of the economy. It is used for a variety of purposes such as benchmarking fund portfolios, index based derivatives and index funds.

CNX Nifty is owned and managed by India Index Services and Products Ltd. (IISL).IISL is India's first specialized company focused upon the index as a core product (National Stock Exchange).

Empirical Results and Discussion

Table 1 exhibits the results of the study in terms of the Return, Risk, Coefficient of Variation, Beta and Alpha investment measures.

Table-1: Performance of Gold ETF, Infrastructure ETF & CNX Nifty for the period 2011 – 2014

Portfolios	Returns	Risk	Coefficient of Variation	Beta	Alpha
Gold ETF	0.27	1.97	7.3	-0.56	0.68
Infrastructure ETF	0.05	2.7	54	1.75	-1.25
CNX Nifty	0.74	1.5	2	1	--

Source: Compiled from the Data given in www.amfiindia.com, www.gsamc.com and www.nse.com

The results show that during the period 2011 to 2014, broad market index, CNX Nifty has generated higher returns (0.74) followed by Gold ETF (0.27) and Infrastructure ETF (0.05).CNX Nifty has lower risk (1.5) than Gold ETF (1.97) and Infrastructure ETF (2.7). To determine the amount of volatility/risk/variability relative to the mean, coefficient of variation (CV) is employed. Lower the CV ratio better is the risk-return trade-off. CV is less in case of CNX Nifty (2) compared to Gold ETF (7.3) and Infrastructure ETF (54). Gold ETF has generated more returns with less risk than Infrastructure ETF with less returns and high risk, i.e. Gold ETF has generated relatively more returns than Infrastructure ETF. CV is also less for Gold ETF than Infrastructure ETF. This signifies that the returns of Gold ETFs have lesser volatility/variability than Infrastructure ETF; hence performance of Gold ETF is better than that of Infrastructure ETF. The reasons could be increase in gold prices and greater participation of retail investors in Gold ETF.

The performance of Gold ETF and Infrastructure ETF is compared as against NSE market index, i.e., CNX Nifty, through Beta and Alpha risk ratios. Beta and Alpha are part of modern portfolio theory. These ratios help to differentiate between relatively good and relatively poor investments over a given period of time.

Beta gauges the volatility of a specific security by comparing it to the performance of a benchmark over a period of time. Alpha is a risk-adjusted measure of an investment's performance. It takes the volatility of an individual investment and compares its risk-adjusted performance to a benchmark index. The baseline number for beta is one, but the baseline number for alpha is zero.

Gold ETF has a negative beta of -0.05, this indicates the investment in Gold ETF is less volatile than the CNX Nifty and there is a negative correlation between Gold ETF and market returns. This suggests that Gold ETFs are effective risk diversifiers, when introduced in a portfolio. The beta of Infrastructure ETF is 1.75, this indicates investment in this security is more volatile than the market, i.e. it is 75% more volatile than the CNX Nifty and there is a positive correlation between Infrastructure ETF and market returns. This

signifies that Infrastructure ETFs are highly risky investment. Hence, Gold ETF is less volatile/ risky than Infrastructure ETF.

Alpha of Gold ETF and Infrastructure ETF is 0.68 and -1.25 respectively. As Gold ETF's alpha is over zero/positive, it connotes that Gold ETF has generated excess returns to that of CNX Nifty and it has performed better than CNX Nifty. This connotes that Gold ETF has outperformed the market index, CNX Nifty. On the other hand, Infrastructure ETF has underperformed CNX Nifty, as it has a negative alpha.

Suggestions

1. As Gold ETFs are gradually gaining popularity, there should be extended efforts from the mutual fund houses to increase the awareness among investors about other ETFs existing in the market.
2. There should be new policies from SEBI and new schemes from fund houses to monetize idle gold held by the households. Regulators should ease pledging of gold and gold-backed securities in banks/financial institutions.
3. Mutual Funds should offer such schemes which allocate assets in combination of different types of ETFs, so that investors can seek optimal diversification.

Conclusion

Gold may be used as hedged investment and hedging instrument. It should be a part of any financial portfolio and basket of assets (Vishal Sood et al 2014). Gold investment is quite safe for the investors and could be categorized as safe haven. This is also supported by the previous research that identified gold as a good portfolio diversifier and a hedge against stocks as well as a safe haven in extreme stock market conditions (Mulyadi MS and Anwar Y 2012). Gold ETF is the only investment with a higher and a positive alpha implying that investment in Gold provide higher abnormal returns. 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 (Goyal M.M. 2014).

This study has compared the performance of Gold ETFs and Infrastructure ETFs as against broad market index, CNX Nifty. The empirical results conclude that as Gold ETF has lesser variability than Infrastructure ETF, Gold ETF is a better performer than Infrastructure ETF. Investment in Gold ETF is less volatile or less risky whereas investment in Infrastructure ETF is more volatile or highly risky than the market index, CNX Nifty. Gold ETFs are risk diversifiers, as it has negative correlation with the market index, it will effectively diversify an investment portfolio. Gold ETF has performed better than market index and Infrastructure ETF has underperformed market index.

Scope for further Research

This study has compared the performance of Gold ETF and Infrastructure ETF as against the market index, CNX Nifty. Academic researchers can foray their studies into other ETFs. New studies can also be undertaken with respect to other market indices, in conjunction with the performance of Gold ETFs and other gold-backed products.

References

Krishna Prasanna, P. (2012). Performance of Exchange-Traded Funds in India. *International Journal of Business and Management; Vol. 7, No. 23; 2012, Published by Canadian Centre of Science and Education, pp. 122-143.*

Gallagher, R. David and Reuben Segara. (2011). The Performance and Trading Characteristics of Exchange-Traded Funds. *working paper, The University of New South Wales. http://wwwdocs.fce.unsw.edu.au/banking/workpap/wp%2011%202004.pdf, retrieved on 08/02/2013*

Goyal, M. M. (2014). Accelerating Growth of Gold ETF in India. *International Journal of Innovative Research & Development, Vol. 3 (10), pp. 206-210.*

Snehal Bandivadekar and Saurabh Ghosh. (2003). Derivatives and Volatility on Indian Stock Markets. *Reserve Bank of India, Occasional Papers, Vol. 24, No. 3, Winter 2003, pp. 187-201.*

Kumar, K. S. (2011). Study on Dynamic relationship among Gold Price, oil price, exchange rates and stock market returns. *International Journal of Applied Business and Economic Research, Vol. 9, No. 2, 145-165.*

Gayathri, V. and Dhanabhakyam. (2014). Cointegration and Causal Relationship between Gold price and Nifty – An Empirical Study. *Abhinav International Monthly Refereed Journal of Research in Management & Technology, Volume 3, Issue 7, July, 2014, pp. 14-21.*

Vidhyapriya, P. and Mohanasundari, M. (2014). A Study on the Performance of Gold ETF in India. *Indian Journal of Applied Research, Vol. 4, No. 8, pp. 414-417.*

Vipin Kumar Aggarwal et al. (2013). Gold vs. Gold ETFs: Evidences from India. *International Journal of Scientific Research and Management, IJSRM, Volume 2, Issue 4, April 2013, pp. 758-762, [www.ijsrm.in] (e): 2321-3418.*

Shefali Sinha and Mahua Dutta. (2013). Performance Analysis of Returns of Goldman Sachs Gold Exchange Traded Fund. *Global Journal of Management and Business Studies, Volume 3 (7), pp. 793-800,* http://www.ripublication.com/gjmbs.html

Inderst, G. (2009), "Pension Fund Investment in Infrastructure", OECD Working Papers on Insurance and Private Pensions, No. 32, OECD publishing, © OECD. doi:10.1787/227416754242, www.ssrnpapers.com.

Hundal, B. S. et al. (2013). Herd Behaviour and Gold Investment: A Perceptual Study of Retail Investors. *IOSR Journal of Business and Management (IOSR-JBM) e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 15, Issue 4 (Nov. - Dec. 2013), pp. 63-69,* www.iosrjournals.org.

Priti Aggarwal. (2014). Investment in Gold in Indian Scenario. *The International Journal of Business & Management, Vol. 2 (6), June, 2014, pp. 65-69,* www.theijbm.com.

Mulyadi, M. S. and Anwar, Y. (2012). Gold vs. Stock Investment: An Econometric Analysis. International Journal of Development and Sustainability, Vol. 1(1), pp. 1-7. www.isdsnet.com/ijds

Vishal Sood et al. (2014). An Econometric Analysis of Gold Price: A Paradigm Change in Indian Capital Markets in Dynamic Business Environment. *Altius Shodh Journal of Management & Commerce,* http://altius.ac.in/pdf/1.pdf, retrieved on 11/09/2014.

Goyal, A. and Joshi, A. (2011). Performance appraisal of Gold ETFs in India. *Elixir International Journal, Elixir Fin. Mgmt, 32 (2011), pp. 2057-2060,* available online at www.elixirpublishers.com.

Prashanta Athma and Suchitra, K. (2014) Gold Investment Options: An Analysis. *International Journal of Research in IT, Management and Engineering, Vol.3, Issue 5, 2014.*

Max Chen. (2014). *Global Infrastructure ETFs for Increased EM Spending*. http://www.etftrends.com/2014/02/global-infrastructure-etfs-for-increased-em-spending/, retrieved on 24/11/2014.

www.nse.com

www.amfiindia.com

www.gsamc.com

www.personalfn.com/knowledge-cente

www.benchmarkfunds.com

http://archive.financialexpress.com

www.investopedia.com

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