SHARIAH INDEX PERFORMANCE WITH BROADER INDICES

Author****

SARVA VENKATA SAI KUMAR
MBA II Year
MLR Institution of Technology,
Hyderabad.

PUCHAKAYALA NEHA REDDY
MBA I Year
Matrusri Inst of P.G. Studies,
Hyderabad.

K.V.GLORY ANGELENA
MBA I Year
St.Pious X P.G.(MBA) Clg. for Women,
Hyderabad.

RAMOLIYA POOJA B PATEL
MBA I Year
kasturba gandhi degree & pg clg. for women,
Hyderabad.

ABSTRACT: In India capital markets shariah investment index has been introduce in the year 2007 across the globe shariah investment had proven one of the best investment theories when it is compared with other conventional & modern investment portfolio theory. This analysis has been emphasized to measure the performance with Modigliani risk-adjusted method comparing with select broader indices. Johansen co integration test has been applied on augmented dickey fuller stationery data & observe that lix15 & lixmidcap50 were granger causing the shariah index. Linear regression model indicates that GDP, IIP & Inflation were having significant influence on shariah index. This analysis has found that shariah index performance from the inception date to present period is observe to be negative and failed to cross majority broader indices performance level. Investor has to be careful before making investment decision in Indian shariah segment. This analysis is useful to retailer, HNI, Mutual funds, portfolio managers & FII's.

Key words: Shariah-500, Lix-15, Lixmidcap-50, Defty, Nifty, Inflation & IIP

INTRODUCTION: Sharia-based capital investment is an investment for the investors, especially for the investor's community and those who have less time and skill to count the risks of their investments.

Shariah capital markets investments had given extra ordinary returns globally in the recession period when they were compared with modern portfolio methods of investments. Shariah investments in capital markets will not allow in gambling business, insurance, alcohol and interest oriented business. Indian capital market regulators started allowing the shariah investments because more than 15% of population in Indian following the shariah.

Islamic investments are investments which inclusively fall under the principles of Islamic banking. It follows the rules of shariah – the sacred law of Islam. In today's world, People are constantly being bombarded with arguments in support of dealing with interest. Many people have a negative influence to such pressure and supposedly rational arguments, leading them to accept the concept of interest. According to sacred law of Islam, taking interest is like blood sucking. Therefore as a

result, Islamic investment is far better than other investments. Most of the investors throughout the world are following shariah investment. As Islamic investment has its own unique challenges, investors are being attracted for what they are, until and unless they manage it right.

National stock exchange had introduced shariah related indices in collaboration with NSIIL in the year 2007. Our paper wanted to measure the performance of shariah index in comparison with rest of the broader indices of the bse and NSE exchanges. In global markets investor's fraternity is having a perception towards shariah as a risk free portfolio along with high returns. Our research mainly focused on performance of the index from the inception date to the present date along with high beta indices in both national level equity stock exchanges.

REVIEW OF LITERATURE:

1. **P. Natarajan and M. Dharani (Jan, 2012:** This study had focused on risk and return behavior of the selected Shariah Complaints stocks & bench mark indices. It results that the shariah index provides the same result. The time limited to 4 years only. Our analysis has done through 15 indices where it consists of only 2 indices.

2. **Sania Ashraf P. P &MalabikaDeo (Oct 2013):**This study is focused on the behavior, informational and market efficiency of Indian Shariah market with regard to Weak form efficiency of Efficient Market Hypothesis. Marketing is lacking in informational efficiency as it is violating the principles of Islam, it will help investors to adopt technical analysis. It doesn't violate principles of Islam.

3. **Mohsina Habib and Khalid ul Islam (2014):** This is focused on shariah compliant index i.e., DJIMI, FTSE. Dow Jones and Russell have conducted studies on performance of indices in comparison to their risk and return over a period of 11 years. To know the risk involved Beta, standard deviation was used. In those cases Islamic Index has outperformed.

4. **Ghousiya Begam, Kondaparthi Swetha, Sabbani Manoj (May 2014):** Over a period of 7 years shariah investments have done in India in comparison to modern investments. Phillips Peron test has done to find currency fluctuations on indices. This analysis is useful to investors who want less risk. From this analysis it has been proved that shariah returns is superior to the traditional market returns.

5. **Shakeela Banu (2014):** This study is mainly on Islamic Banking in India. It is all about banking with Shariah laws, against the collection or payment of interest, commonly called 'riba'.It has a large market in India, third largest Muslim populated country in the world. 50% Muslims are financially excluded, RBI seeking possibility of establishment of Islamic Banking in India

6. **Dr.Anuj Kumar Tyagi & Mohd.Rizwan:** Under this study shariah investments should not be invested in industries like alcohol, tobacco, weapons.To enable Islamic financial world to invest in Shariah businesses across the world. Based on results, the study suggests investing in companies of shariah index to earn the equivalent gain like others.

7. **Dahlifah & Teguh Supriyanto (2014):** This is to show a positive and fairly stable the development of Sharia Mutual Funds in Indonesia. The problem of this study is limited to the analysis of the performance of Mutual Funds issued by 3 investment management companies. Limitation of the scope of this study is to select the best performance of Mutual Funds shares products both conventional and shariah with a performance analysis. Based on statistical tests it was concluded that there was no significant difference between the performance of shariah mutual fund shares and conventional mutual fund shares.

8. **Saleh Md. Arman (Nov 2013)** Islamic Financial Institutions have formed Shariah Supervisory Board (SSB), to comply with the Shariah rules and regulations. The duty of SSB is to monitor and regulate the ongoing activities of Islamic Financial Institutions in accordance with the Islamic laws and jurisdictions. The functioning of SSBs raises five main issues which are independence, confidentiality, competence, consistency, and disclosure. This study suggested some possible measures for the missing dimensions in the domain of shariah compliance features.

9. **Etim E. Okon 2013** Department of Religious/Cultural Studies University of Calabar – Nigeria Without some form of social control, Society cannot achieve peace and prosperity. The maintenance of law and order is the purpose of shariah like any other legal system. Its main focus and aim is the social and political dimensions and to evaluate the nature and content of Islamic jurisprudence. The study will assess the compatibility of implementing shariah law in a democratic and liberal society. They believe that Outlawry can only lead to social disequilibrium.

10. **Bikramaditya Ghosh , Dr. Padma Srinivasan (Dec 2013):** According to the study it was Islamic Financial Institutions (IFIs) assets worldwide in 2006 that were estimated at more than $300 billion, with another $400 billion in financial investments. The current growth rate of Islamic Banking & Investment is found to be 15% according to the study conducted by Consulting firm McKinsey & Co. And also estimated that the rate will rise to 20% in the coming 5 years. Riba ("extra" or interest) and usury (excessive interest) is prohibited in Islam as it leads to an inherent risk of the lender exploiting the borrower. Limitation is complex methods of operation; the formal introduction in Banking is delayed jointly by RBI and SEBI.

NEED: Indian capital markets were having more than 140 years of experience but regulators of this segments introduced shariah investments in the years 2007 by national stock exchange. Many investors in India who are followers of shariah are started looking at this segment to take the advantage and making the smart portfolio. Globally shariah investments had given superior returns but we want to know how Indian shariah had performed after the inception they were compare with other broader indices of NSE and BSE.

OBJECTIVES

1. To measure the returns performance of shariah index along with select broader indices.
2. To know the benchmark impact on highly performed broader indices returns.
3. To know the select economic variables impact on shariah index.

HYPOTHESIS:

- Shariah 500 index does not influence nifty midcap 50.

- Shariah 500 index does not influence lix15.

- Shariah 500 index does not influence Defty.

- Shariah 500 index does not influence bank.

SCOPE: This paper has been emphasis from Jan 2007 to Jun 2015. In this analysis various broader indices were consider from 2 exchanges such as NSE & BSE .shariah500 index has been consider as the base index for the shariah investments.

Empirical study:

Indices: Bse Sensex , CNX Commodities , CNX 100 , CNX 200 , CNX 500, CNX 500 Shariah , CNX Defty , CNX Midcap , CNX Nifty, CNX Nifty Jr, CNX Nifty Shariah , CNX Small Cap, India Vix, Lix15, Lix15 Midcap, Nifty Midcap 50, Bank.

Factors: GDP, IIP, & Inflation.

RESEARCH METHODOLOGY: This analysis has been done on secondary data by using descriptive statistical tools. The following formulas were considered for the analysis.

Source of data: Websites, books, news papers and journals.

1. **Augmented Dickey-Fuller Test:** Augmented Dickey-Fuller Test is a test for a unit root in a time series sample. It is an augmented version of the Dickey-Filler test for a larger and more complicated set of time series models.

   a. $$\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \delta_1 \Delta y_{t-1} + \cdots + \delta_{p-1} \Delta y_{t-p+1} + \varepsilon_t,$$

2. **Johensen Co-integration:** Co-integration is a statistical property of time series variables. Two or more time series are co-integrated if they share a common stochastic drift. If two time series x and y are co-integrated, a liner combination of them must be stationary.

   a. Y – Bx = u, Where u is stationary.

3. **Granger causality test:** Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another. A time series X is said to Granger-cause Y if it can be shown, usually through a series of t-tests and F-tests on lagged values of X (and with lagged values of Y also included), that those X values provide statistically significant information about future values of Y.

- **Null hypothesis:** The null hypothesis refers to a general statement or default position that there is no relationship between two measured phenomena. Rejecting or disproving the null hypothesis- and thus concluding that there is a relationship between two phenomena.

- **Alternative hypothesis:** In statistical hypothesis testing, the alternative hypothesis is applicable when probability is > 0.5. Alternative hypothesis is that the quality is poorer in the second half of the record.

4. **Linear regression:** Linear regression is a statistical tool used to predict future values from past values. In the case of security prices, it is commonly used to determine when prices are overextended. A Linear Regression trend line uses the least squares method to plot a straight line through prices so as to minimize the distances between the prices and the resulting trend line.

$$y = a + bx$$

$$a = \frac{\sum y - b \sum x}{n}$$

$$b = \frac{n \sum (xy) - (\sum x)(\sum y)}{n \sum x^2 - (\sum x)^2}$$

x = The current time period

n = The total number of time periods

LIMITATIONS:

1.   Defty data of 2015 has not been considered.

2.   Inflation calculation method has been changed 2 times during the study period.

DATA ANALYSIS:

Analysis of data is a process of inspecting, cleaning, transforming, and modeling data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making.

1.   **To measure the returns performance of shariah index along with select broader indices.**

Indices	D	S.D.(D)	sharpe rat	S.D.(B)	Rf(Mean)	M2
BSE Sensex	-7.1314	1.469917	-5.81304	1.445532	7.190471	0.145876
CNX COMMODITIES	-7.1563	1.099846	-71.9477	7.190471	7.190471	-68.3223
CNX200	-7.13941	0.991784	-30.0489	1.388281	7.190471	-29.1856
CNX100	-7.13693	1.050964	-42.2433	1.400254	7.190471	-33.4362
CNX500	-7.14468	1.002871	-30.9898	1.375549	7.190471	-29.9291
CNX DEFTY	-7.13471	1.296928	-28.5676	1.595981	7.171125	-38.5853
NIFTY MIDCAP 50	-7.24769	2.280909	-4.52414	1.981466	7.190471	0.549495
CNX NIFTY Jr	-7.10425	1.593727	-5.37291	1.52028	7.070857	0.321914
CNX SMALL CAP	-7.15209	1.403591	-5.79794	1.420086	7.070857	-0.06297
INDIA VIX	-6.9543	5.046363	-1.4441	3.680532	7.012	-3.27377
LIX15	-6.94272	1.57895	-4.89394	1.477407	7.012	0.615584
LIX 15MIDCAP	-6.92509	1.768211	-4.3172	1.5881	7.012	0.860222
CNX MIDCAP	-6.93902	1.514465	-5.26765	1.385857	7.012	0.347603
CNX SHARIAH	-7.14909	1.392421	-6.61719	1.379376	7.190471	-0.20717
CNX 500 SHARIAH	-7.14312	1.300583	-7.25024	1.338179	7.190471	-0.57475
BANK	-7.11597	1.932416	-4.26399	1.69588	7.190471	0.990816

Interpretation: The above table depicts the performance measure of select broader indices along with shariah index. Modigliani risk-adjusted performance measure tool has been applied from 2007 onwards out of 16 indices 7 indices performance is observed positive but during the same period rest of indices including CNX 500Shariah has been observe negative.

2.   **To know the benchmark impact on highly performed broader indices returns.**

Cointegration

Series	Data Trend:	None	None	Linear	Linear	Quadratic		
	Rank or	No Intercept	Intercept	Intercept	Intercept	Intercept		
	No. of CEs	No Trend	No Trend	No Trend	Trend	Trend	AIC	SIC
DSHARIAH NIFTYMIDCAP5	LLR value	-393.0452	-393.0452	-393.0104	-393.0104	-392.718	25.61582	25.80085
	1	-382.3549	-382.1209	-382.0874	-380.5156	-380.244	25.18419	25.55425
	2	-382.3398	-378.3426	-378.3426	-376.1426	-376.143	25.44128	25.99637
DSHARIAH DLIX15	0	-311.2297	-311.2297	-311.0411	-311.0411	-310.859	27.41128	27.60875
	1	-305.8895	-305.8677	-305.75	-305.498	-305.449	27.29474	27.68969
	2	-301.6754	-301.3965	-301.3965	-300.8901	-300.89	27.27612	27.86855
DSHARIAH DLIXMIDCAP50	0	-310.8101	-310.8101	-310.6451	-310.6451	-310.508	27.37479	27.57227
	1	-305.7956	-305.6903	-305.6381	-305.3917	-305.383	27.28658	27.68153
	2	-301.6271	-301.4372	-301.4372	-301.1141	-301.114	27.27192	27.86435
DSHARIAH DEFTY	0	-297.678	-297.678	-297.6721	-297.6721	-297.663	26.23287	26.43035
	1	-289.1107	-288.8771	-288.8713	-288.519	-288.517	25.83571	26.23067
	2	-288.9943	-285.0536	-285.0536	-284.6894	-284.689	26.17342	26.76585
DSHARIAH DBANK	0	-333.1603	-333.1603	-333.145	-333.145	-333.122	29.31828	29.51576
	1	-325.8705	-324.2385	-324.2252	-324.2073	-324.206	29.03222	29.42718
	2	-321.1853	-319.2484	-319.2484	-319.214	-319.214	28.97264	29.56507

Interpretation: The above analysis Johansen co integration test has been applied on the selected broader indices which were having superior performance comparing with shariah index. All the

indices such as Nifty Midcap50, lix15, lixMidcap50, Defty & Bank Index. The analysis reflects the long likelihood rank values of respective broader indices with shariah observe in decreasing trend in both quadratic models along with the 2 alpha levels. This result unveils the co integration is existing with all select indices to shariah index.

Granger Causality Tests

| Null Hypothesis:	Obs	F-Statistic	Prob.
NIFTYMIDCAP50 does not Granger Cause DSHARIAH	31	2.49483	0.1021
DSHARIAH does not Granger Cause NIFTYMIDCAP50		0.7672	0.4745
DLIX15 does not Granger Cause DSHARIAH	23	0.4714	0.6316
DSHARIAH does not Granger Cause DLIX15		0.03338	0.9672
DLIXMIDCAP50 does not Granger Cause DSHARIAH	23	0.23258	0.7948
DSHARIAH does not Granger Cause DLIXMIDCAP50		0.6181	0.55
DEFTY does not Granger Cause DSHARIAH	23	4.16185	0.0327
DSHARIAH does not Granger Cause DEFTY		0.64218	0.5378
DBANK does not Granger Cause DSHARIAH	23	1.5936	0.2306
DSHARIAH does not Granger Cause DBANK		2.7941	0.0877

Interpretation: The above table of granger causality test has been applied on the stationery data with Johansen co integration tested values. The null hypothesis of granger causality test has been accepted to shariah index with Nifty midcap50, Defty & Bank index and reject the alternate hypothesis. This indicates that these 3 indices were not having any kind of effect on shariah index performance. But lix15, lixmidcap50 null hypothesis is rejected because the probability value is observe non significant and accept the alternative hypothesis. This result these two indices were having stronger influence on shariah index returns performance.

3.   To know the select economic variables impact on shariah index

Model Summary and Parameter Estimates:

Dependent Variable : GDP								
		Model Summary					parameter estimates	
	R Square	F	df1	df2		sig	Constant	b1
Linear	0.132	5.006	1		33	0.032	1.20E+04	-404.326
Growth	0.145	5.593	1	Equation33		0.024	9.383	-0.036

Interpretation: The above analysis of linear regression indicates that economic factors such as GDP, Inflation & IIP for having significant impact on shariah index returns because the probability value is found to be less than 0.5 i.e., 0.024.

gdp

inflation

iip
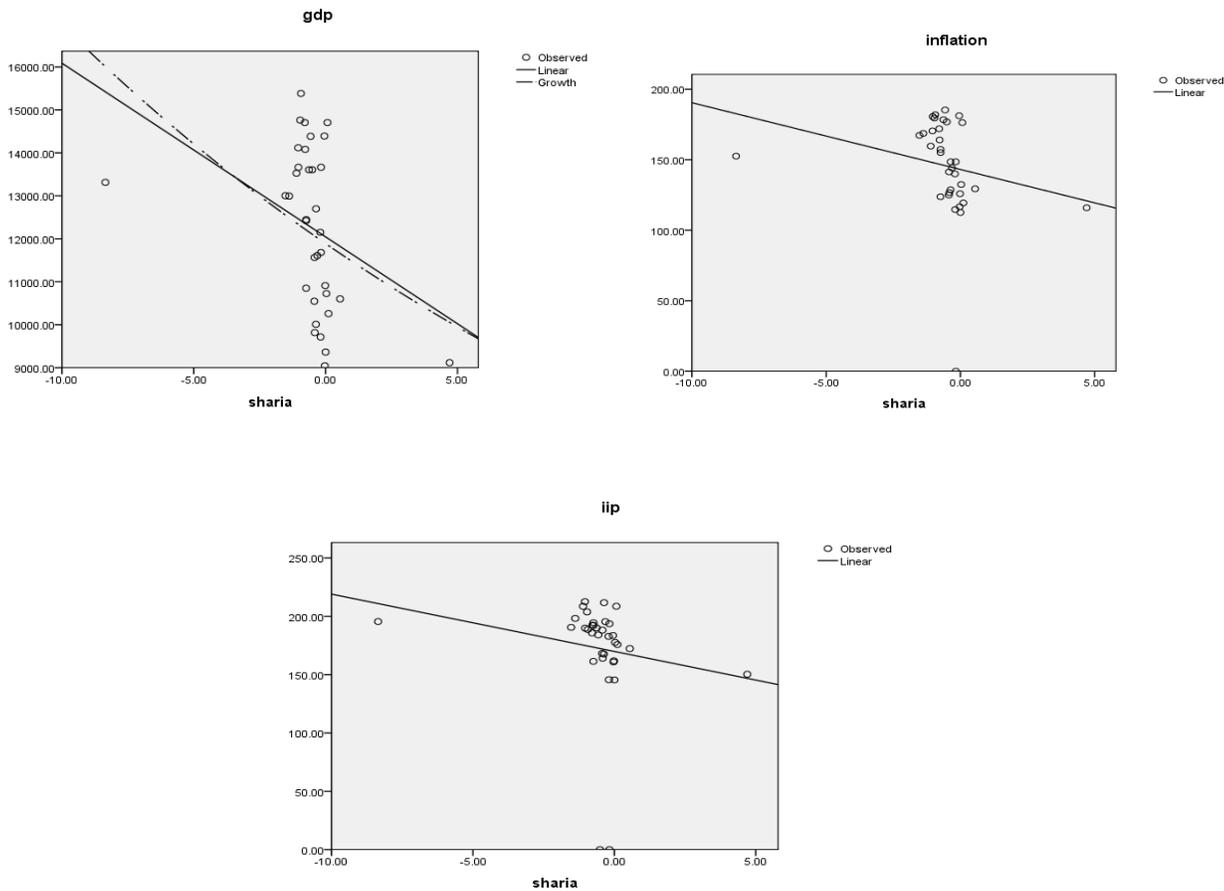
Interpretation: The above graphs of linear regression trend line indicates that influence is found to be more on GDP and More /less same effect is observe by inflation &IIP. In all 3 Graphs the trend line is falling downwards from left to right direction.

FINDINGS:

1. The banking index is found to be top performance index when it is compare with all other select broader indices.
2. CNX 500Shariah index performance since inception to till date (2007-2015) performance is observed in negative.
3. The economic factors GDP, Inflation & IIP were having influence on shariah returns growth during the study period.

CONCLUSION: We conclude the analysis of shariah index performance with select broader indices performance from the period of Jan 2007 to Jun 2015. Our analysis has been proven that shariah return were not superior when it is compared with other indices performance. In fact India's base equity sensex had given superior performance than the CNX 500 Shariah index. The economic factors which were selected for the analysis such as GDP, IIP & Inflation is observed

influence on shariah index returns growth rate among the investors fraternity. There is a notion that shariah investment of equity gives higher returns than the modern portfolio investment theories but this perception got vanished away with this paper. Hence there is the further scope is there to do research in this area by considering various parameters through which investor can take inform decision like technical fundamental & sentiment investment factors.

BIBLOGRAPHY:

Websites:

   i.   http://www.nse-india.com

  ii.   http://www.bseindia.com

 iii.   http://www.tradingeconomics.com

 iv.   https://www.rbi.org.in

  v.   http://www.inflationdata.com

Books:

 vi.   Maqasid Al-Shariah as Philosophy of Islamic Law: A Systems Approach By Jasser Auda.

 vii.   Shariah Principle Management in Practice By Hendri Tanjung.

viii.   Shariah relationship between religion and politics in Islam: a speech delivered by Mirza Tahir Ahmad at the inter-religious consults.

 ix.   Guide to Understanding Islamic Investing in Accordance with Islamic Shariah

     By Virginia B. Morris, Brian D. Ingram