Financial Economics

A Comparative Performance Evaluation of Islamic and Conventional Funds in South Africa

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Abstract: The study comparatively evaluated the performance of Islamic and Conventional funds that comprised of South African unit trusts listed on the Johannesburg Stock Exchange (JSE) vis-à-vis selected market benchmark indices. Whilst the study utilised descriptive statistical analysis for the non-risk adjusted performance analysis, several investment performance models were used for the risk adjusted performance analysis. Relevant statistical tests were performed to decipher relationships between the Islamic fund and the Conventional fund vis-à-vis the selected market benchmarks. Based on the non-risk adjusted performance analysis and absolute risk adjusted performance analysis, the empirical evidence suggests that the Conventional fund performed better than the Islamic fund. However, the relative risk adjusted performance analysis shows a mixed overall result during the entire period of the study. While the Modigliani & Modigliani measure and Jensen alpha showed that the Conventional fund performed better than the Islamic fund from a risk adjusted return perspective, the Treynor ratio showed that the Islamic fund performed better than the Conventional fund. More so, while the t-test analysis suggests that there is no statistically significant evidence to support that the Islamic fund under or outperforms the Conventional fund, the correlation analysis showed that both funds are more positively correlated and statistically significant with the South African market indices. The findings of the study imply that an investment in the Conventional fund would have offered a superlative non-risk adjusted return than the Islamic fund. Also, the relative risk adjusted performance imply that upon the diversification of unsystematic risks in some market indices, the Islamic fund may perform better than the Conventional fund.

Keywords: Islamic Funds; Conventional Funds; Performance Evaluation;, Risk Adjusted Measures; South Africa; JSE

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1. Introduction

In recent times, the rising popularity of Islamic banking and finance have precipitated a positive spill-over effect on Islamic investing. This effect is evident via the increasing demand for shariah compliant collective investment products (Islamic funds), which are currently regarded as the fastest growing niche of the Islamic financial system (Badr, 2016). The growth trajectory of the Islamic investment funds is crucial and can serve as a plausible gauge/indicator of the awareness, acceptance and growth of the broader Islamic financial system as well as its Shariah precepts globally.

With consideration to unit trusts, the upswing of unit trusts as a collective investment scheme offers individual investors the opportunity to invest in funds based on the specified fund objectives. These objectives serve as a policy statement for the fund which determines how the pooled capital is invested and allocated to financial products, businesses and projects that meets the shared perspective of the investors (Aziz, 2018; Aziz et al., 2019). This shared perspective is such that has necessitated the emergence and rise in the demand for unit trust funds that are shariah compliant among investors within the Muslim community.

Also known as Islamic unit trust fund, this fund is a financial product that is categorised as a Shariah-based investment product, which is managed by an asset management company or a unit trust agent (Yusuff et al., 2017). As a collective investment product, this unit trust is suitable for low and middle-income investors mainly from the Muslim community, who seek low to medium level of risk exposure upon diversification. Herein, the asset management company or the fund manager manages the pooled capital on behalf of risk averse investors who often have limited investing knowledge yet seek to invest in Shariah compliant financial products.

Unlike Conventional unit trust funds, Islamic unit trust funds are strictly built on Islamic principle and Shariah laws. They differ from the typical Conventional unit trust funds as they are faith-based funds who invest only in Shariah compliant financial assets (Badr, 2016; Billah, 2019). Hence, the underlying distinction between a Conventional unit trust fund and an Islamic unit trust fund is that the pooled funds of the latter are invested in a portfolio of Shariah approved financial assets (Aziz et al., 2019). These include equities of Shariah compliant companies, Islamic bonds (Sukuk), Islamic deposits and Islamic money market instruments.

This study comparatively analysed the performance of conventional funds vis-à-vis Islamic funds. To effectively achieve this, the objectives of this study were to: (1) compare the performance of the Islamic fund and Conventional fund based on non-risk adjusted performance measure, (2) compare the performance of the Islamic fund and Conventional fund based on absolute risk adjusted performance measures, (3) compare the performance of the Islamic fund and Conventional fund based on

relative performance measures, (4) evaluate if there is a significant difference between the performances of the Islamic fund and Conventional fund.

This research article is structured in the following sequence: The section two provides necessary explanation on mutual fund and Islamic fund. The third section of this research paper covers the data and research methodology. The fourth section of this research article discuss the results of the research findings. The last section provides the conclusion on the research study based on the research objectives.

2. Literature Review

2.1. Conceptualising Mutual Fund and Islamic Fund

A mutual fund is a collective investment company that pools money/funds from several investors for investment purpose (Alwi et al., 2019). These investors are bound by a mutually shared objective of investing the pooled funds in diverse financial assets and securities such as money market instruments, fixed income securities and equities (Anwar & Arif, 2017). This conglomeration of investments that make up the mutual fund are generally referred to as a portfolio. As an investment company, Gil-Bazo et al. (2019) assert that the legal framework of mutual funds allows it to sell ownership units to potential investors in the form of shares that offers income streams to holders of such shares.

As a collective investment scheme, Mutual funds are a type of open-end investment company like hedge funds and Exchange Traded Funds that issue and redeem share units directly to investors (Ben-David et al., 2017). Whilst the share units offered by open-end funds such as Mutual Funds are unlimited, the trading times of these shares are determined by the mutual fund managers. As a result of this, the price of mutual fund shares is fixed and determined once a day at based on their Net Asset Value which is an indicator of their performance. Determination of the Net Asset Value can be derived by deducting the mutual fund's total liabilities from its total assets on a daily basis.

On the other hand, some collective investment schemes have a close-end investment fund modus operandi. This type of fund operates like an investment company that sells limited share units to investors via an Initial Public Offering (Mishi & Chipote, 2014). Subsequent upon the Initial Public Offering (Mishi & Chipote, 2014), the shares of the closed-end investment fund are listed on an exchange and are traded on the secondary market using the services of brokers (Gil-Bazo et al., 2019). Unlike the open-ended fund, these funds can be traded at any time as long as the exchange is open. As a result of this, the shares of closed-end investment fund are traded at their market values rather than their Net Asset Value. Hence, closed-end investment funds are notable for being priced at a premium or at a discount relative to their Net Asset Value .

Islamic funds are widely referred to as Sharia compliant investments, as their investing basis must act in accordance with the principles of the Sharia law- the Islamic law, governing all aspects of a Muslim's life (Hasan et al., 2020). To understand the core of the fundamentals of Islamic investing correctly, it is essential to detail the beliefs of Islam that give rise to these economic and investment principles and to compare the differences between the current Conventional financial and investment system and an Islamic one.

2.1. Distinctive features of Sharia compliant investments

The distinctive features that make an investment to be Sharia compliant are discussed briefly below (Kholvadia, 2017; Hasan et al., 2020):

❖ *The Sharia investing approach promotes the use of profit sharing together with risk sharing and partnership schemes as interest commonly referred to as riba is forbidden in Islam. Hence, any business transaction or investment that has an element of interest inclusion will not be permissible. Some scholars allow a portion of non-permissible income, which will need to be given out as charity to purify the transaction, but this will be discussed in detail in the dissertation.*

❖ *There should be no speculation in a transaction as gambling is one of the features that would render the investment and transaction impermissible.*

❖ *The commodity must be owned by the seller and described in detail at the time of the transaction, as the sharia does not allow transactions to be vague and uncertain.*

2.2. Empirical Literature

Ahmed and Soomro (2017) in their study considered the performance of both Conventional and Islamic equity funds listed on the Karachi Stock Exchange in Pakistan. Findings of the study noted that Conventional funds outperform Islamic funds based on non-risk adjusted performance as measured via the fund average returns. However, with the utilisation of risk adjusted performance measures such as Sharpe and Treynor ratios, it was found that the Islamic funds exhibited better overall growth potential than their Conventional peers. Agussalim et al. (2017) sought to evaluate the performance between Conventional mutual funds and Sharia compliant mutual funds in Indonesia. In the assessment of the return performance, the study found the Conventional mutual funds to be better than the Sharia mutual funds as indicated by the average returns and Sharpe index. Howbeit, the risk performance analysis as measured by the Jensen Alpha and Treynor metrics, it was noted that the sharia mutual funds are less risky than the Conventional mutual funds. Regardless, the t-test results suggested that the differences in the return and risk analyses of the funds are not significant.

In a study conducted by Banani and Hidayatun (2017), the researchers comparatively explored the performance of Islamic and Conventional indices in developing economies such as Indonesia and Turkey. Based on the empirical results, it was found that the overall performance of Islamic indices is not significantly lower than the Conventional indices. This was based on evidence that explicated that while the Jakarta Islamic Index insignificantly outperformed the LQ45 index in Indonesia, the Dow Jones Islamic Market Turkey insignificantly underperformed the and the Dow Jones Turkey Titans 20 index in Turkey. Patel (2018) noted that South African Shariah indices underperformed Conventional market indices over a period 5 years ranging from 2012 to 2017. The study which further analysed Shariah compliant funds using the 5 investment categories highlighted by the Association for Savings and Investment South Africa (ASISA) further noted several findings. Amongst these notable findings include the underperformance of Sharia compliant multi-asset and income funds, and the outperformance of Sharia compliant REITs and global equity funds.

Alwi et al. (2019) evaluated the performance of Islamic and Conventional mutual funds in Malaysia from 2007 to 2015. The empirical findings of the study suggest that while the Islamic mutual fund slightly performed better than the Conventional fund, it was further found that both mutual funds (Islamic and Conventional) outperform their market benchmarks in both periods. Using both risk-adjusted performance measures as well as the Data Envelopment Analysis model, Arif et al. (2019) performed a comparative evaluation of Islamic and Conventional mutual funds listed on the Pakistani Stock Exchange. Upon analysis, the Sharpe and Treynor ratios evidenced that the Islamic mutual fund performed better than the Conventional mutual fund. However, from the Jensen Alpha standpoint, it was noted that the Islamic mutual fund underperformed in comparison to the Conventional mutual fund. Furthermore, results from the Data Envelopment Analysis model suggests that the Islamic mutual fund exhibited higher efficiency than the Conventional mutual fund.

Omri et al. (2019) sought to comparatively explore the performance of mutual funds in Saudi Arabia using the Riyad Capital mutual funds as a proxy for analysis. Based on the empirical findings, the research evidence suggests that the Islamic fund outperformed the Conventional fund and market benchmarks. Although, this outperformance was only statistically significant in the local market. The scholars further assert that Islamic funds tend to slightly favour a contrarian investment strategy. Shaikh et al. (2019) comparatively evaluated the performance of Conventional and Shariah compliant equity and income mutual funds in Pakistan. The findings of the analysis suggest that the Islamic equity funds are better off with positive Sharpe and Treynor ratios. Its further evidence that the Islamic income funds underperform the market benchmark as a result of their strict shariah compliant

requirements. Regardless, the overall findings suggest that Islamic equity funds are slightly less risky than both the Conventional and market benchmarks.

In an empirical comparative study, Alam and Ansari (2020) evaluated the performance of both Conventional and Islamic indices in India. Based on the analysis, it was found that the Islamic indices provided superior return performance than the Conventional indices. Howbeit, it was further noted that the difference in the performance is not statistically significant. Whilst considering emerging markets in Asia, Latin America and Europe, Trabelsi et al. (2020) conducted a performance analysis of Islamic, Conventional and Mixed portfolios from 2002 to 2017. Upon analysis, the study found that the Islamic portfolio slightly offer superior performance than the Conventional portfolio. A further analysis of the mean difference test evidence that this superior performance is not statistically significant.

3. Research Hypotheses, Data and Methodology

3.1. Research Hypotheses

H_1: There is a difference between performance of Islamic fund and Conventional fund based on non-risk adjusted performance measure.

H_1: There is a difference between performance of Islamic fund and Conventional fund based on absolute risk adjusted performance measures (Sharpe ratio, Standard deviation, and Coefficient of variation).

H_1: There is a difference between performance of Islamic fund and Conventional fund based on relative performance measures (MM measure, Treynor ratio, Jensen alpha, Beta and R-squared coefficient).

H_1: There is a significant difference between performance of Islamic fund and Conventional fund (T-test Analysis and Correlation analysis).

3.2. Research Data

The relevant secondary data utilised for the purpose of this study was mainly obtained from the Infront Database. This robust financial database provided the researcher with the needful daily performance returns of the necessary unit trusts and indices. The daily performance returns for the Islamic unit trusts and the Conventional unit trusts were gotten from the Johannesburg Stock Exchange (JSE) market data. The research study sample included 8 Islamic funds and 27 Conventional funds that are listed on the Johannesburg Stock Exchange (JSE). For the indices, both the JSE Shariah All Share Index (J143) and the JSE All Share Index (J203) were gotten from the Johannesburg Stock Exchange (JSE) market data. However, the daily performance returns namely, the Dow Jones Islamic Market

World and the Morgan Stanley Composite Index Emerging Markets in Europe, the Middle East and Africa (MSCI EM EMEA) indices were sourced from the Dow Jones Index and Morgan Stanley Composite Index, which are global indices.

The research study considered a dataset that spanned over a period of ten consecutive years (120 months). The period ranged from 1st of November 2007 to 31st October 2017, was categorised into three phases of the pre-financial crisis (10 months), the Financial Crisis (17 months) and the post Financial Crisis (93 months). For standardization, the researcher ensured that the dataset timeframe of the selected unit trusts was comparatively suitable for both the Islamic and Conventional unit trusts.

3.3. Research Methodology

Model specification for portfolio performance evaluation

To evaluate the performance of a fund, both non-risk adjusted returns model and risk adjusted models can be utilised. These models are succinctly discussed in the following sections with the necessary mathematical equations.

The Non-Risk adjusted Model.

The non-risk adjusted returns model calculated the returns of a portfolio or fund by the summation of both the capital gains and the dividend incomes of the portfolio or fund (Merdad et al., 2010; AbdelHakem, 2012; Reddy et al., 2017). This is a simplistic and basic approach to calculating the return performance of a portfolio or fund, as it does not consider any variant of risk associated with the performance of the portfolio or fund. This method utilises the Net Asset Values (NAVs) of the portfolio or fund to compute the return performance of a portfolio or fund. Thus, the formula for calculating the non-risk adjusted returns is expressed in the mathematical equation below:

$$R_{i,t} = \frac{NAV_{i,t} - NAV_{i,t-1} + D_{i,t}}{NAV_{i,t-1}}$$

Where:

$R_{i,t}$ = Total return of an individual fund (i) at month (t)

$NAV_{i,t}$ = Net Asset Value of an individual fund (i) at month (t)

$NAV_{i,t-1}$ = Net Asset Value of an individual fund (i) at month (t-1)

$D_{i,t}$ = Cash disbursements or Dividends of an individual fund (i) at month (t).

The researcher constructed two portfolios based on defined time phases [Pre-Financial Crisis (10 months), the Financial Crisis (17 months), the Post Financial

Crisis (93 months) and the Entire period (120 months)] and category (Islamic fund, Conventional fund and Both).

To effectively compare the performance of these portfolios based on these distinctions, the researcher utilized the following formula:

$$R_{p,t} = \sum_{i=1}^{n,t} \frac{R_{i,t}}{n,t}$$

Where:

$R_{p,t}$ = Return at month (t) for an individual portfolio (P: Islamic or Conventional)

$R_{i,t}$ = Total return at month (t) of an individual fund (i) that belongs under either: The Conventional category if p= Conventional or Islamic category if p= Islamic.

n, t = The number of individual funds under each category (Conventional or Islamic) at month (t).

To effectively assess the non-risk adjusted returns performance of the portfolios or funds comparatively, the researcher computed the average return. Minimum return, maximum return and cumulative return for the individual portfolios or funds (Islamic fund or Conventional fund).

The Risk Adjusted Models

Unlike the non-risk adjusted model discussed above, these are a set of models that have been developed by renowned scholars and Nobel Laurates in the field of finance and economics to improve performance evaluation. The crux of these models revolves around the inculcation of risk in performance evaluation of securities, portfolios, or funds. Hence, these models are widely dubbed as risk adjusted models. The notable risk adjusted models adopted in this research study are discussed succinctly below.

Sharpe ratio

The Sharpe ratio was invented by the Nobel Laurate William F Sharpe in the year 1966, as a measure for calculating risk adjusted returns in absolute terms. This ratio helps an investor to determine the excess return that will be received by the investor for taking additional risk (Bodie et al., 2019). This is done via the computation of the average net return of the risk-free return that is earned by the investor for each unit of total risk borne by the investor. Hence, as an absolute measure, the Sharpe ratio is a suitable indicator of how well an investor is being compensated for taking additional risk, as determined by the standard deviation of the portfolio. Ideally, the greater the Sharpe ratio, the better the portfolio risk adjusted return in comparison to

other portfolios being evaluated. The formula for the Sharpe ratio is explicated below:

$$S = \left(\frac{R_p - R_f}{\sigma_p} \right)$$

Where:

S = the Sharpe ratio

R_p = the return on a single portfolio

R_f = the return on the risk-free rate (90-day T-bills)

σ_p = standard deviation of returns for on a single portfolio.

Treynor ratio

Jack Treynor developed the Treynor ratio as a relative measure for computing risk adjusted returns of portfolios using the systematic risk. Unlike Sharpe who calculated risk adjusted return based on total risk, Treynor distinguished risk in two categories of systematic and unsystematic risk. While the unsystematic risk is such risk that is specific to a company and can be diversified by the portfolio manager or investor via asset allocation and securities selection, the systematic risk is an inherent market risk that cannot be diversified by the portfolio manager or investor via asset allocation and securities (Reddy et al., 2017; Ahmad & Alsharif, 2019).

According to the Treynor ratio, the performance of a portfolio is better evaluated using the systematic risk which is represented by the "beta". As a relative risk adjusted performance model, the Treynor ratio measures the performance of a portfolio as a return per unit of systematic risk. This reflects the ability of a portfolio manager or investor to effectively diversify the unsystematic risks in comparison to other portfolio managers or investors. Hence, as a performance evaluation tool, the portfolio fund that provides a higher Treynor ratio is preferred to a portfolio fund that provides a lower Treynor ratio.

The formula for the Treynor ratio is explicated below:

$$T_A = \frac{R_a - R_f}{\beta_a}$$

Where:

T_A = the *Treynor ratio*

R_a = the return on a single portfolio

R_f = the return on the risk-free rate (90-day T-bills)

β_a = the beta as measured by the volatility of a single portfolio in relation to the JSE index.

Jensen Alpha

The Jensen Alpha measure is a relative risk adjusted performance return measure that was developed by American Financial Economist, Michael Jensen in 1968. As a risk adjusted performance measure, the Jensen alpha seeks to determine the abnormal return of a security, portfolio or fund in comparison to its theoretical expected return as calculated using the CAPM technique (Chandra, 2017; Ahmad & Alsharif, 2019). In practical computational terms, the ascertained abnormal return could either be a positive or negative alpha based on the excess or deficit of the portfolio return in comparison to the CAPM return.

Within this context, a positive alpha i.e. the portfolio or fund return exceeds the CAPM return, indicates that the portfolio or fund has outperformed its benchmark market return as denoted by the CAPM return. Likewise, a negative alpha i.e. the portfolio or fund return falls below the CAPM return, indicates that the portfolio or fund has underperformed its benchmark market return as denoted by the CAPM return. The formula for the Jensen Alpha is explicated below:

$$\alpha = Rp - [Rf + \beta(Rm - Rf)]$$

Where:

α = *Alpha*

R_p = the return on a single portfolio

R_f = the return on the risk-free rate (90-day T-bills)

β = Beta

R_m = Market return

MM or M^2 Measure

Often referred to as the MM or M^2 measure, the Modigliani & Modigliani relative risk-adjusted performance measure was developed in 1997 by Nobel-prize winner Franco Modigliani and his granddaughter, Leah Modigliani. As a risk adjusted performance measure, this measure is widely perceived as an extension of the Sharpe ratio which assess performance of a portfolio or fund in relative terms (Chandra, 2017). The MM or M^2 measure does this by calculating the risk adjusted performance of a portfolio or fund vis-à-vis a market benchmark in percentage terms. This computation helps to reveal the difference in risk adjusted performance of a portfolio or fund and the market benchmark using the same standard deviation as a common risk adjustment basis. The formula for the MM or M^2 measure, is explicated below:

$$M^2 = [\ SR_P * SD_{m]} + Rf$$

Where:

$M^2 = M^2 \ RAP$

SR_p = Sharpe ratio of the portfolio

SD_m = Market Standard Deviation

R_f = the return on the risk-free rate (90-day T-bills)

Risk Measurement Models

Standard deviation

The standard deviation is a statistical measure that is widely used in quantitative professions such as Finance and Investments to measure the risk of a security, portfolio or fund. The standard deviation does this by measuring the level of dispersion or variation among a set of values (Chandra, 2017). As a measure of risk, a low standard deviation indicates a low level of risk in a security, portfolio or fund as the values tend to cluster closely around the mean, or the expected value of the number set or historical returns. Conversely, a high standard deviation indicates a high level of risk in a security, portfolio or fund as the values tend to spread out over a wider range around the mean, or the expected value of the number set or historical returns. Thus, the formula for the standard deviation, is explicated below:

$$S_p = \sqrt{\frac{\sum |X - \bar{X}|^2}{n}}$$

Where:

S_p = Standard Deviation of the portfolio

N = Size of the portfolio

X = Individual returns of the portfolio

$\bar{X}$ = Mean return of the portfolio

Coefficient of variation

The coefficient of variation is a statistical measure that measures variability and dispersion of numbers within a number of series or dataset around the mean or expected value. In contrast to the standard deviation, the coefficient of variation offers the benefit of comparing levels of risks across different datasets with varying means and standard deviations (Chandra, 2017). This is done via calculating the ratio of the standard deviation to the mean. When applied in the field of finance and investment, the coefficient of variation helps an investor to determine the level of

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risk per unit of the average return that is expected from an investment in a security, portfolio, or fund. As a performance evaluation measure, a lower coefficient of variation is preferred to a higher coefficient of variation. Hence, the formula for the coefficient of variation, is explicated below:

$$CV = \frac{SD}{\bar{X}}$$

Where:

CV = Coefficient of variation of the portfolio

SD= Standard Deviation of the portfolio

$\bar{X}$ = Mean return of the portfolio

Beta

While both the standard deviation and coefficient of variation are absolute risk measures, the beta coefficient is a relative risk measure that considers risk as a coefficient of market performance benchmark. This coefficient measures the volatility of a security, portfolio, or fund in simulation with general market volatility (Chandra, 2017; Nofsinger, 2017). As a variable in the Capital Asset Pricing Model, the beta helps in the determination of the cost of equity via the estimation of the perceived risk in the determination of the rate of return. As a performance indicator, a beta coefficient that is higher than one, implies that the security, portfolio, or fund is more volatile than the overall market. Conversely, a beta coefficient that is less than one, implies that the security, portfolio, or fund is less volatile than the overall market. Thus, the formula for calculating beta is explicated below:

$$\beta = \frac{cov(r_p \, r_m)}{var(r_m)}$$

Where:

β = Beta of the portfolio

r_p = Return on the portfolio

r_m = Return on the market

$cov(r_p \, r_m)$ =covariance of the portfolio and the market

$var(r_m)$ = variance of the market

4. Data Analysis and Research Discussions

4.1. Hypothesis 1: Islamic fund Vs Conventional fund based on non-risk adjusted performance measures.

Based on the computation of the non-risk adjusted returns in terms of the average returns, minimum returns, maximum returns and cumulative returns, the empirical evidence showed that the Conventional fund performed better than the Islamic fund. This is evident has the Conventional fund offered superlative returns than the Islamic fund over the entire period of the study in both average and cumulative returns terms.

The findings of this research study are in alignment with existing studies such as Agussalim et al. (2017) sought to evaluate the performance between Conventional mutual funds and Sharia compliant mutual funds in Indonesia. The research inquiry which considered a data over a time period of seven years (2007-2014), utilised stock mutual funds that are listed on the Indonesia Stock Exchange. Likewise, Ahmed and Soomro (2017) in their study considered the performance of both Conventional and Islamic equity funds listed on the Karachi Stock Exchange, Pakistan. The study which considered twenty-one Conventional funds and four Islamic funds that have survived the 2009 Global Financial Crisis was done over a five-year period from 2009 to 2013. Both separate international studies found that Conventional funds performed better than Islamic funds.

However, some recent studies have evident that an Islamic fund can offer better returns than a Conventional fund (Alwi et al., 2019; Omri et al., 2019; Alam and Ansari, 2020; Trabelsi et al., 2020). Alwi et al. (2019) evaluated the performance of Islamic and Conventional mutual funds in Malaysia from 2007 to 2015. The inquiry divided the study period in sub periods of financial crisis and whole periods, which were compared with the performance of the MSCI Malaysia Islamic Index and Kuala Lumpur Composite Index benchmarks. Also, in an empirical comparative study, Alam and Ansari (2020) evaluated the performance of both Conventional and Islamic indices in India. These indices comprised of four Conventional indexes and three Islamic indexes which spanned from 2006 to 2018. Both separate international studies found that Islamic funds can offer better returns than Conventional funds.

4.2. Hypothesis 2: Islamic fund Vs Conventional fund based on absolute risk adjusted performance measures.

Based on the computation of the Absolute risk adjusted performance measures in terms of the Sharpe ratio, Standard deviation and Coefficient of variation, the empirical evidence showed a mixed overall result in the Entire period of the study. Whilst the Sharpe ratio showed that the Conventional fund is slightly better than the Islamic fund from a risk adjusted return perspective, both the Standard deviation and

Coefficient of variation showed that the Islamic fund is riskier than the Conventional fund.

The findings of this research study are consistent with existing studies (Merdad et al., 2010; Agussalim et al., 2017). In a study conducted in Saudi Arabia, Merdad et al. (2010) examined in comparative terms the performance of both Conventional and Islamic mutual funds that are managed by HSBC. The study considered a seven-year period, from 2003 to 2010, which were divided into four categories of bull period, financial crisis period, bear period and full period for the purpose of in-depth comparative analysis. The comparative study found the Conventional fund to be better than the Islamic fund.

However, some recent studies have evident that Islamic funds have better Sharpe ratio performance than a Conventional funds (Omri et al., 2019; Shaikh et al., 2019; Trabelsi et al., 2020). Shaikh et al. (2019) comparatively evaluated the performance of Conventional and Shariah compliant equity and income mutual funds in Pakistan. The analysis utilised both non-risk adjusted performance and risk adjusted performance measures such as the NAV, MM, Standard deviation, Sharpe ratio, MM, Information ratio, Jensen Alpha, and Treynor measurements to analyse a total of 60 funds over a twenty-year period 2006-2016. The findings of the analysis suggest that the Islamic equity funds are better off with positive Sharpe ratio than the Conventional equity funds.

4.3. Hypothesis 3: Islamic Fund Vs Conventional Fund Based on Relative Risk Adjusted Performance Measures.

Based on the computation of the relative risk adjusted performance in terms of the MM measure, Treynor ratio, and Jensen alpha the empirical evidence showed a mixed overall result in the Entire period of the study. Whilst the MM measure and Jensen alpha showed that the Conventional fund performed better than the Islamic fund from a risk adjusted return perspective, Treynor ratio showed that the Islamic fund performed better than the Conventional fund.

Likewise, based on the computation of the relative risk performance, the research study utilised both the Beta and the R-squared coefficients. Upon computation, the study found that the Conventional fund performed better than the Islamic fund when benchmarked against the JSE Shariah Index, the JSE ALSI Index and the Morgan Stanley Composite Index Emerging Markets in Europe, the Middle East and Africa. However, when benchmarked against the Dow Jones Islamic Market World Index, it was found that Islamic fund performed better than the Conventional fund in terms of riskiness.

The findings of this research study are in alignment with existing studies (Banani & Hidayatun, 2017; Arif et al., 2019; Omri et al., 2019; Shaikh et al., 2019; Alam & Ansari, 2020).

Using both risk-adjusted performance measures as well as the Data Envelopment Analysis model, Arif et al. (2019) performed a comparative evaluation of Islamic and Conventional mutual funds listed on the Pakistani Stock Exchange. The study which was conducted over a eight year period (2010-2017), considered 30 Islamic and Conventional mutual funds. This was done using risk adjusted performance measures such as Sharpe ratio, Jensen Alpha, and Treynor ratio as well as the Data Envelopment Analysis model. Upon analysis, the Treynor ratio evidenced that the Islamic mutual fund performed better than the Conventional mutual fund. However, from the Jensen Alpha standpoint, it was noted that the Islamic mutual fund underperformed in comparison to the Conventional mutual fund. Furthermore, results from the Data Envelopment Analysis model suggests that the Islamic mutual fund exhibited higher efficiency than the Conventional mutual fund.

However, some recent studies have evident that an Islamic fund can offer better returns than a Conventional fund (AbdelHakem, 2012; Ahmed and Soomro, 2017; Alwi et al., 2019; Alam and Ansari, 2020). In an empirical comparative study, Alam and Ansari (2020) evaluated the performance of both Conventional and Islamic indices in India. These indices comprised of four Conventional indexes and three Islamic indexes which spanned from 2006 to 2018. The analysis utilised both non-risk adjusted performance measures, risk adjusted performance measures as well as factor models. Amongst the computations done were the Average returns, Standard deviation, Coefficient of variation, Sharpe ratio, MM, Information ratio, Jensen Alpha, Treynor measurements, Fama-French and Carhart factor models. Based on the general analysis as well as the MM measure, it was found that the Islamic indices provided superior return performance than the Conventional indices.

4.4. Hypothesis 4: To Evaluate if There are Significant Differences between the Performances of the Islamic fund and Conventional Fund.

T-test Analysis

In summary, based on the mean difference testing using t-test, the empirical findings suggest that there is no statistically significant evidence to support those Islamic funds under or outperform the Conventional fund across all the periodical phases of economic cycles. This finding is further applicable in the context of both the Islamic and Conventional fund, as well as the selected market indices across all periods of the research study.

This finding is in consistency with similar relevant studies (Merdad et al., 2010; AbdelHakem, 2012; Agussalim et. al., 2017; Banani & Hidayatun, 2017; Alam &

Ansari, 2020; Trabelsi et al., 2020). In a study conducted by Banani and Hidayatun (2017), the researchers comparatively explored the performance of Islamic and Conventional indices in developing economies such as Indonesia and Turkey. The study which adopted a purposive sampling technique, compared the performance of Islamic Indices such as the Jakarta Islamic Index and the Dow Jones Islamic Market Turkey vis-à-vis Conventional indices such as the LQ45 index and the Dow Jones Turkey Titans 20 index. This comparative analysis was done over a four-year period (2010-2014), using risk adjusted performance metrics such as the Sharpe, Jensen Alpha and Treynor measures. Based on the empirical results, the risk adjusted performance metrics evidenced that the Jakarta Islamic Index insignificantly outperformed the LQ45 index in Indonesia, the Dow Jones Islamic Market Turkey insignificantly underperformed the and the Dow Jones Turkey Titans 20 index in Turkey.

Whilst considering emerging markets in Asia, Latin America and Europe, Trabelsi et al. (2020) conducted a performance analysis of Islamic, Conventional and Mixed portfolios from 2002 to 2017. The dataset which consisted of MSCI Islamic stock indices as well as their American counterparts, utilised a Markov regime-switching model and Sharpe ratios to evaluate and analyse the performance of the portfolios vis-à-vis the selected market benchmarks. Upon analysis, the study found that the Islamic portfolio slightly offer superior performance than the Conventional portfolio. A further analysis of the mean difference test evidence that this superior performance is not statistically significant.

Correlation Analysis

However, based on the correlation analysis, it was evident that the portfolios are more positively correlated and statistically significant with the South African market indices (especially the JSE All Share Index) than they are with the foreign market indices. This implies that their performance is largely influenced by the performance of the JSE All Share Index. Furthermore, the low/weak and negative correlation shown in the foreign market indices can offer a room for more diversification depending on investment objectives and investors' appetite.

This finding is consistent with the similar relevant study by (Omri et al., 2019). Omri et al. (2019) sought to comparatively explore the performance of mutual funds in Saudi Arabia using the Riyad Capital mutual funds as a proxy for analysis. The researchers adopted both absolute and relative risk adjusted measures as well as single and multifactor models to analysis the dataset which spanned from 2009 to 2014, against both local and global market benchmarks. Based on the empirical findings, the research evidence suggests that the Islamic fund outperformed the Conventional fund and market benchmarks. Although, this outperformance was only statistically significant in the local market. The scholars further assert that Islamic funds tend to slightly favour a contrarian investment strategy.

5. Conclusions and Recommendations

In conclusion, the research evidence noted that the Conventional fund offered superlative returns than the Islamic fund over the entire period of the study in both average and cumulative returns terms. This conclusion implies that in the study period, an investment in the Conventional fund would have offered a superlative non-risk adjusted return than the Islamic fund.

Based on the computation of the Absolute risk adjusted returns the empirical evidence showed a mixed overall result in the Entire period of the study. Whilst the Sharpe ratio showed that the Conventional fund is slightly better than the Islamic fund from a risk adjusted return perspective, both the Standard deviation and Coefficient of variation showed that the Islamic fund is riskier than the Conventional fund. This implies that from an investing standpoint, Conventional fund would have offered an investor with a better absolute risk adjusted return at a lower risk than the Islamic fund. Likewise, from a relative risk perspective, the study found that the Conventional fund performed better than the Islamic fund when benchmarked against the JSE Shariah Index, the JSE ALSI Index and the Morgan Stanley Composite Index Emerging Markets in Europe, the Middle East and Africa. However, when benchmarked against the Dow Jones Islamic Market World Index, it was found that Islamic fund performed better than the Conventional fund in terms of riskiness. The findings from the relative risk adjusted performance imply that upon the diversification of unsystematic risks in some market indices, the Islamic fund may perform better than the Conventional fund in some markets. Based on these contributions, the research study recommends that a Conventional fund is preferred over an Islamic fund when investing in South African market using a risk adjusted performance basis.

In general, based on the mean difference testing using t-test, the empirical findings suggest that there is no statistically significant evidence to support that the Islamic funds under or outperform the Conventional fund across all the periodical phases of economic cycles. However, based on the correlation analysis, it was evident that the portfolios are more positively correlated and statistically significant with the South African market indices (especially the JSE All Share Index) than they are with the foreign market indices. Based on this contribution, the research study recommends that investment in foreign indices can be an effective strategy for diversifying South African funds.

References

AbdelHakem, A. (2012). The Performance of Islamic and Conventional Egyptian Mutual Funds: A Comparative Study. *Journal of Modern Accounting and Auditing*.

Agussalim M.; Limakrisna N. & Ali H (2017) Mutual Funds Performance: Conventional and Sharia Product. *International Journal of Economics and Financial Issues* 7(4).

Ahmad, S. & Alsharif, D. (2019). *A Comparative Performance Evaluation of Islamic and Conventional Mutual Funds in Saudi Arabia*.

Ahmed, SF. & Soomro, RH. (2017). Analyzing Performance of Islamic and Conventional Funds Listed In Karachi Stock. *KASBIT Business Journals (KBJ)* 10(Special Issue), pp. 6-30.

Alam, M & Ansari, VA (2020). Are Islamic indices a viable investment avenue? An empirical study of Islamic and conventional indices in India. *International Journal of Islamic and Middle Eastern Finance and Management*.

Alwi, S.; Ahmad, R; Hashim, IZA; et al. (2019). Investigating the Islamic and conventional mutual fund performance: Evidence from Malaysia equity market. *Journal of Modern Accounting and Auditing* 15(7), pp. 371-384.

Anwar, SR. & Arif TMH (2017). Evaluation of mutual funds performance in Bangladesh: Investors and market perspective. *Global Journal of Management and Business Research*.

Arif M.; Samim; MM; Khurshid MK, et al. (2019). Islamic Versus Conventional Mutual Funds Performance in Pakistan; Comparative Analysis Through Performance Measures and DEA Approach. *European Online Journal of Natural and Social Sciences* 8(1): pp. 76-94.

Aziz JA (2018). Islamic Banking in Global Economic Context (Critical Studies of Operational System and Performance of Islamic Banking). *Al-Ihkam: Jurnal Hukum dan Pranata Sosial* 12(2), pp. 343-361.

Aziz RA, Hassan R, Salman SA, et al. (2019). The Public Perception on Knowledge of Islamic Unit Trust in Malaysia. *International Journal of Business and Social Science* 10(5).

Badr MA (2016). *Factors Affecting the Financial Performance of Investment Funds a Comparative Study: Islamic versus Conventional Funds*. Available at SSRN 2953925.

Banani A and Hidayatun NA (2017). Performance of Islamic indices: Risk adjusted returns of Sharia compliant stocks on Jakarta Islamic Index and Dow Jones Islamic Turkey. *Journal Economics & Business Atmajaya Indonesia* 1(1), pp. 1-18.

Ben-David, I.; Franzoni, F. and Moussawi R (2017). Exchange-traded funds. *Annual Review of Financial Economics* 9, pp. 169-189.

Billah MMS (2019). Islamic Unit Trust (Micro-Saving). *Islamic Financial Products*. Springer, pp. 369-377.

Bodie, Z.; Kane, A. & Marcus, AJ. (2019). *Essentials of investments*. McGraw-Hill/Irwin Taipei.

Chandra P (2017). *Investment analysis and portfolio management*. McGraw-hill education.

Gil-Bazo J.; Hoffmann P. and Mayordomo S. (2019). Mutual funding. *Available at SSRN 2541458*.

Hasan AN, Abdul-Rahman A and Yazid Z (2020). Shariah governance practices at Islamic fund management companies. *Journal of Islamic Accounting and Business Research*.

Kholvadia F (2017) Islamic banking in South Africa–form over substance? *Meditari Accountancy Research*.

Merdad H, Hassan MK and Alhenawi Y (2010) Islamic versus conventional mutual funds performance in Saudi Arabia: a case study. *Journal of King Abdulaziz University: Islamic Economics* 362(3061), pp. 1-75.

Mishi S and Chipote P (2014). *Impact of financial literacy in optimising financial inclusion in rural South Africa: Case study of the Eastern Cape Province*.

Nofsinger, JR. (2017). *The psychology of investing*. Routledge.

Omri, A.; Soussou, K. & Ben Sedrine Goucha, N. (2019) On the post-financial crisis performance of Islamic mutual funds: the case of Riyad funds. *Applied Economics* 51(18), pp. 1929-1946.

Patel Y (2018). *The Performance of Shariah Compliant Investment Funds in South Africa*. University of Johannesburg.

Reddy K.; Mirza. N.; Naqvi, B. et. al. (2017) Comparative risk adjusted performance of Islamic, socially responsible and conventional funds: Evidence from United Kingdom. *Economic Modelling* 66, pp. 233-243.

Shaikh, SA.; Ismail, MA; Ismail, AG; et al. (2019) Comparative analysis of Shari'ah-compliant portfolios: evidence from Pakistan. *Journal of Islamic Accounting and Business Research*.

Trabelsi; L.; Bahloul, S. & Mathlouthi, F. (2020) Performance analysis of Islamic and conventional portfolios: The emerging markets case. *Borsa Istanbul Review* 20(1), pp. 48-54.

Yusuff, N.; Mansor, F. & Hamed AB (2017) The Measurement Of Islamic Unit Trust Investment Decision In Malaysia: An Exploratory Factor Analysis. *IJIB* 2(1), pp. 38-45.