# Effect of Islamic Financial Literacy Training on the Financial Performance of Selected Islamic Banks in Kenya

*By*

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**Abstract**

**Purpose:** *The purpose of this study was to find out the effect of Islamic financial literacy training on the financial performance of selected Islamic banks in Kenya. The study was anchored on two theories; the reinforcement theory and the theory of human motivation.*

**Methodology:** *The study adopted a descriptive statistics methodology. Eight commercial banks offering Islamic financial services in Kenya were targeted, that is; ABC Bank Kenya, Barclays Bank of Kenya, Diamond Trust Bank, First Community Bank, Gulf African Bank, Kenya Commercial Bank, National Bank of Kenya, and Standard Chartered Bank. Secondary data was used in the study. Regression analysis was used to interpret the relationship between financial performance of Islamic banks and Islamic financial literacy training.*

**Findings:** *The study established that Islamic financial literacy training had a positive significant effect on financial performance of selected Islamic banks in Kenya.*

**Implications:** *The study recommended that commercial banks should establish more training facilities at the grass root level and subsidize attendance fees significantly or offer free financial training in order to increase Islamic financial literacy awareness, accommodate the majority poor and expand their customer base.  The study further suggested use of a larger sample size in order to reduce bias and increase accuracy in future studies. Use of primary data in future researches was also recommended as data collection methods such as questionnaires are more comprehensive and open-ended and their anonymity reduces biases in information given.*

**Key Words:** *Islamic Finance, Literacy, Financial Performance*

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## 1.1    Introduction

In Islamic banking, all financial transactions are geared towards achieving development of the society, and, (besides making profits), an all-inclusive system of ethics and moral values as enshrined in Islam, (Venardos, 2011). Islamic financial morals are defined by Kettell (2011) as operations that are shrouded in secrecy and whose outcomes cannot be determined with conviction such as interest (*Riba*), price speculation (*Gharar*), share of profits and losses (*Musharakah*), and transactions being asset backed (*Murabahah*).

Some of the emerging challenges facing Islamic finance (IF) penetration in the market are perception that IF is only for the Muslim faith populations. An idea held by both Muslims and non-Muslims, as opined by Saleh, Quazi, Keating and Gaur, (2017). Governments have also been blamed for not doing enough to support the growth of Islamic financial services in their respective countries. Suand, (2017) discovered lack of government policies and guidelines that regulate Islamic finance a major impediment, thus placing them at a disadvantage with the conventional banking which is well regulated. Lack of regulations leaves Islamic financial institutions (IFI) with little choices but to try and align their services with the demands of Shari'ah laws and in the same breath be careful not to flout government financial policies.

Many researchers have associated financial literacy with poverty eradication. In their 2008 review on the link of poverty, education and development in Kenya, Francis Godwyll and So Young Kang found out that education, more so, financial literacy helped respondents improve on financial management, choice of investment vehicles and market analysis which assisted them handle money in more productive ways, i.e. improved management and control of financial costs, gained business knowledge. Ability to perform financial analysis equipped them with skills to track financial performance at both individual and business levels. The ability of commercial banks and other financial institutions offering financial training to respondents boosted their confidence in finance. Financial institutions should therefore capitalize on this goodwill and attract more clients and broaden their customer base, (Godwyll & Kang, 2008).

Education and skills development are essential in improving human productivity and employment potential. Commercial banks provide financial training services to investors through

organizing seminars, bank visits and by acting as a filter in determining who gets allocated how much capital and for what investment vehicle. This enables banks in advising investors on the best available investment opportunities, according to market dynamics, their capital requirement levels and their ability to repay based on their accumulated assets through savings and collateral offered.

Poverty reduction through external financing by means of loans is a widely accepted concept but access to this service is limited by punitive interest rates, expensive collateral asked and unfavorable loan terms. Commercial banks should endeavor to offer more affordable loans to the poor. Islamic financial services become of benefit at this point in time with their interest free financing models and its attentiveness on uplifting social welfare. Financial training helps at great length in reducing poverty through elevating financial literacy standards of the poor which enables them manage finances more productively, by making informed choices on investments, market analysis and financial accountability and management.

Further, it can be noted that through savings, poor people can accumulate enough funds as capital and use it to uplift their living standards through investments in economically viable projects that can generate a consistent income, and that commercial banks need to broaden their operational terms on savings accounts or introduce special products (such as savings accounts with zero maintenance fees) to accommodate the low income earners of the society, and also *Murabahah* and *Musharakah* products of Islamic banking.

### 1.1.1 Islamic Bank

As mentioned by Yahia, (2014), Islamic finance originated as a savings bank. Its formation was influenced by the need to have an alternative financial system that protected individuals against excesses of capitalism and restoring morals and conviction. Elements not championed in the conventional banking system. For this to be achieved, a body (Islamic development bank) was formed to develop standards and procedures.

Persons of Islamic faith were the first to embrace Islamic banking services. Research supported by Ringim, (2014) shows that this behavior was majorly influenced by people perceptions on

spiritual and economic thoughts. However, with time, this changed and attracted persons of other faiths after awareness and public education that Islamic finance was open to all persons irrespective of their faith. This development led to a rapid growth of Islamic financial institutions and Islamic finance across the globe. In Kenya, the first Islamic bank to be established was Gulf African bank licenced on 1st November 2007. This is according to the central bank of Kenya report 2017. Thereafter other Islamic financial institutions have been licenced to operate in Kenya, and also, conventional commercial banks have created an Islamic window (department) in which they offer Islamic financial services.

Core at Islamic finance is investment, partnerships, the trustworthiness of the venture and financial morality that includes majorly prohibition of interest because of its uncertainty nature and speculation. Islamic investment projects are asset backed, i.e. there must exist a tangible asset and the Islamic financial institution acquires the asset first then sells it to an investor at a fixed predetermined profit. Full disclosure (to the purchaser) of transactions and costs that led to the acquisition of the asset is mandatory. This is meant to promote openness as commanded by Shari'ah laws.

### 1.1.2 Bank Performance

The major objective of the management of any financial institution is to meet the purposes of which they were formed. Shareholders, who are owners of the banks, expect capital growth and returns from their investments.  In order to achieve this, managers of banks charge a premium on services offered. This is a challenge still under research on Islamic financial institutions. Banks are caught in between the need to balance profit making, making a return to shareholder wealth and not feeding off the poor in the process as enshrined in Islam.

Research by Ghauri and Qambar done in 2012 found that Islamic banks grapple with the challenge of making profits and staying competitive. This was aggravated by high operational costs and poor or less effective risk management processes. This has forced Islamic financial institutions into innovative product structuring to attract investors, a move that may compromise on the intent and spirit of Islam as stated in the Quran.

The impact of shareholder expectation in Islamic banks and their performance is still a matter not yet settled on by researchers. If findings by Zarrouk, Jedidiah and Moualhi in 2016 are anything to go by, operational costs, asset quality and capitalization levels have a major impact on bank profitability. This problem is further compounded by systemic factors such as gross domestic product (GDP) and inflation.

Unfortunately, financial innovation is majorly in the favor of financial institutions and not customers. Such innovations aim at cutting operational costs while increasing income to the banks. This may be a good idea to financial institutions as it results in improved performance. Islamic banking main aim is to improve the welfare of the society and not just to make profits. This is a challenge to Islamic bank managers. Product innovation will therefore require a keen balance of benefits to the bank and also benefits to the customer.

Competition is a major hindrance to any business venture and Islamic financial institutions are not an option. The first Islamic financial institution being formed fifty six years ago (i.e. in Egypt, 1963), and conventional banking system having been in existence for over a century, Islamic banks catching up and even competing with conventional banks is a tall order. But a continuous and steady growth witnessed in the Islamic banking sector across the globe points to a system well received by the population. The success of Islamic banking can be attributed to awareness and overall Islamic financial literacy training. This was proved by Fang and Foucart (2014) who sought to find out the role of financial agents on accommodating Islamic moral values. Islamic financial services awareness generated interest mostly in non-Muslim individuals broadening the web of buyers, investors and banks in the Islamic financial system throughout the globe.

### 1.1.3 Islamic Financial Services

Services offered by Islamic financial institutions are defined by Shari'ah law provisions that emphasize on social welfare and discourage institutions from benefiting from the poor. Of importance to note is that many governments don't have clear policies that regulate the operations of Islamic finance. This is a major challenge to institutions that offer Islamic financial services as they are to rely mainly on provisions of Islamic law and also required to abide by the requirements of the central banks of their respective countries on monetary policy and systemic

risks such as inflation and taxation. Some of the major investment products offered by Islamic financial institutions are *Murabahah, Musharakah* and *Mudarabah*.

Islamic financial services are admired for their values and religion beliefs. Market and service providers are essential in building customer confidence and positive perceptions of Islamic financial services. This can only be achieved through rigorous and continuous training of staff in order to build a wider mass of Islamic financial literate population.

Persons of Islamic faith are persuaded to save more than expend more. This behavior determines how both Islamic and conventional banks receive customer deposits. Return on deposits being of concern to customers, conventional banks experience a fall in deposits during high economic growth seasons. This means that customers tend to spend more during high growth season. Expenditure may be in form of increased investments. The opposite is true to customers of Islamic banks. Islamic banks experience high savings during high growth seasons, meaning that, unlike conventional banking customers, they tend to invest less during high growth season, this contrasting behavior was supported by a research done by Akhtar, Akhter and Shahbaz in 2017.

Religious beliefs shape a person's character and Islamic banking is heavily influenced by this. The mention of Islamic bank insinuates a service meant for persons of Muslim faith. But this is not true as Islamic finance is open to all persons irrespective of their faith. Public education and awareness is important to counter this perception.

Lack of guidelines on Islamic finance from the government and central bank of Kenya is not only a challenge on the operations of the Islamic institutions but also on training of staff that are required to offer and market the services.

## 1.2 Research Problem

Employees are the pillar of any successful business venture. This is why any serious management should endeavour to have a resourceful financially literate work force. Islamic finance being a different system from the conventional banking system and operates on the

dictates of Shari'ah laws requires extensive awareness training especially on persons of non-Muslim faith.

The major challenge facing Islamic financial institutions is how to balance between legal requirements of the government and Shari'ah laws on one hand and the spirit of Islam on the other (which advocates for social justice). This problem is more compounded when it comes to staff training as there is no clear direction on how to merge legal requirements and meeting population social welfare without compromising profitability and economic performance of the banks, (Toutounchian & Kabir, 2011). Religious perceptions are also identified as a major challenge in the uptake of Islamic financial products as opined by Ringim, (2014). This shows the importance of undertaking a rigorous financial literacy training program on the population to enlighten it on the true intent and spirit of Shari'ah law on Islamic finance.

Many researches, empirical studies and theories on finance and Islamism, however, have not highlighted the trade-offs between the goals of Islamic commercial banks financial institutional service performance. The existing knowledge gap is a lack of research on specific services offered by Islamic commercial banks and how they influence performance which is the core of Islamism.

Islamists' journey is anchored on religion. By using ideology, Islamists make practical decisions that enable them to be good advocates. In a study for searching for authenticity in Islamism, Ahjum, (2018) determined that individuals turned to Islamism in order to restructure and reconnect their public identities. The historical human factor was and still is always in existence when navigating spiritual ethics. This shows that Islamists regarded ordinary encounters and abstruseness through the prisms of Islamism. This means that Islamic ideology is a core concern. Religion is understood as the endless search for what is assumed as virtuous and realistic. The study revealed a dualistic angle in Islamism, i.e. public and private versus ideal and lived experiences. These contraventions in understanding Islamism remains multifaceted and necessitates continuous reflection.

Unsatisfactory literature is available on the contribution of employees on financial performance of Islamic banks in Kenya. This study purposed to find out the effect of Islamic financial literacy training, more so on employees, on the financial performance of selected Islamic banks in Kenya.

## 1.3 Research Questions

In which way does Islamic financial literacy training affect the financial performance of selected Islamic banks in Kenya?

## 1.4 Significance of the study

An enlightened and resourceful work force is always an asset to the management. This is why this study benefit most the management of Islamic financial institutions. An informed employee will reduce operational costs through improved efficiency, sales and marketing.

This study provides literature review on Islamic financial literacy services that augments the writings of prospective academics in this field. Scholars and students benefit from this study through contemporary discernments on related zones.

## 1.5 Scope of the study

This study focused on the effect of Islamic financial literacy training on the financial performance of selected Islamic banks in Kenya. Financial performance was measured by profit before taxation. The study took twelve months starting January 2018 and ending December 2018. The study concentrated on eight commercial banks that offer Islamic financial services in Kenya, namely African Banking Corporation Bank, Barclays Bank of Kenya, Diamond Trust Bank, First Community Bank, Gulf African Bank, Kenya Commercial Bank, National Bank of Kenya, and Standard Chartered Bank,

## 2.0 Literature Review

This chapter explains the literature for this study. The main sections are the theoretical review and the empirical review.

**2.1 Theoretical Review**

In this section, the main theories that informed this study were discussed. The theories that were studied are the reinforcement theory and the theory of human motivation. Moral values are human behaviours which touch on social, emotional and cognitive behaviour. Most financial theories are premised on this fact. Efficiency of the financial system is determined by the depth, breath and efficiency of financial institutions' workforce.

**2.1.1 The Reinforcement Theory**

Burrhus Frederic Skinner invented the reinforcement theory to explain human behavior in 1957. Under this theory, it is stated that behavior is determined by its consequences or punishments. It explained four types of reinforcements, i.e. first, positive reinforcement where something is added in order to increase a response, e.g. praise and rewards; second, negative reinforcement where something is taken away in order to increase a response e.g. withdrawing pocket money to a disrespectful child; third, punishment is where something aversive is added in order to decrease behavior e.g. spanking a misbehavior child; fourth, extinction is where something is removed in order to decrease a behavior e.g. a cancellation of a holiday trip for a dis-respective child, (Skinner, 1957).

The reinforcement theory has been criticized for ignoring certain traits of human behavior. In 1996, Steve Booth-Butterfield noted that it is difficult to identify rewards or punishments because of the uniqueness of human beings. A reward that works for one person may not necessarily work for another, e.g. while some prefer praise, others prefer tokenism, a raise in pay, promotion or even a holiday break. Also, the reinforcement theory ignores internal motivation by focusing only on external motivation. Booth-Butterfield also noted that reinforcement becomes less desirable after a person gets used to it and the management is forced to look for another form of reward in order to motivate employees. Further, for the reinforcement to become more effective, it needs to be immediate, intense, unavoidable and consistent, (Booth-Butterfield, 1996).

Successful capacity building and training is majorly influenced by the manner in which it's done. Some approaches may work on some individual while others may not. This uniqueness in

reception of information among human beings affects the proper implementation of the reinforcement theory. This theory will help the researcher highlight possible solutions that will lead to the implementation of a successful financial literacy program that will boost employee morale and thereafter financial performance of Islamic banks in Kenya.

**2.1.2 The Theory of Human Motivation**

In 1943, Abraham Harold Maslow came up with a hierarchy of human needs and named them a theory of human motivation. The theory submits that people are motivated to fulfill basic needs before moving to other needs based on human innate curiosity. Human needs must be fulfilled in the order they appear i.e. lower needs must be satisfied before moving to higher needs. Maslow identified the five needs as physiological (food, clothing & shelter), safety, love and belonging, self-esteem and self-actualization. The order of these needs will hugely impact the uptake of behavioral motivation by individuals, (Maslow, 1943).

Maslow theory of human motivation has been criticized for ignoring the difference between social and intellectual needs of persons in individualistic societies and collectivist societies. Gerard Hendrik Hofstede supported this argument with the cultural dimensions theory in 1984. Hofstede described the effect of societal culture on human values and behavior. Four culture dimensions were identified as individualism-collectivism; uncertainty avoidance; power distance (strength of social hierarchy) and masculinity-femininity (task orientation versus person orientation) which cause problems in matters of participation, communication and other relational areas which can help the management in addressing them.

Despite Maslow's theory of human motivation having been challenged by other researchers in its hierarchical structure because of the uniqueness of human preferences, it offers the management a good point in understanding the motives and needs of individuals and how to motivate organizational members.

**2.2 Empirical Review**

This section revised previous studies on financial services and how they affected the performance of Islamic banks. The main sections were financial literacy training.

**2.2.1 Islamic Financial Literacy Training and Financial Performance**

Several authors are of the opinion that financial literacy enables people to understand their responsibility over social economic risk so that they can act responsibly and be held accountable for their actions, understand and alter economic system that promotes alienation, insecurity and exploitation (Arthur, 2012). Financial literacy is the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being (Hendriks, 2010). The ability to understand and apply the processes and tools associated with personal finances (Lucey, Agnello & Laney, 2015). While Claxton (2007), defines financial literacy as the ability to understand the implications of key financial decisions and to manage money through budgeting, saving, investing, and protecting assets.

Ford, Myrden and Jones (2015) in their research paper on understanding disengagement from knowledge sharing: engagement theory versus adaptive cost theory, sought to find out why employees become disengaged from knowledge sharing. Researchers used a descriptive design and employed a structured questionnaire as a data collection tool. The study established that job engagement is very motivational and impacts individual and organizational performance. But, there was the irony on the management wanting employees engaged in their jobs and also at the same time, sharing their knowledge. Focusing on employee health and job design (job meaningfulness) encouraged knowledge sharing thus reducing workplace stress and improves workplace conditions (environmental, physical and psychological engagements) which boost their self-confidence and consequently job performance.

These findings were consistent with Kariuki (2014) espousing the importance of employees on financial performance banks. Financial training is a twofold contribution to bank performance, on one hand, it improves employees' morale by boosting self-confidence and on the other hand, it saves company costs through increased efficiency and thereafter improving on profitability.

Mindra and Moya (2017) did a study on financial self-efficacy: a mediator in advancing financial inclusion, seeking to establish the relationships of financial attitude, financial literacy and financial inclusion, in Uganda. By using a quantitative approach and cross-sectional research

design methodology, research findings were that one of the major obstacles of financial inclusion is information illiteracy.  Further findings were that high levels of financial literacy stimulated positive attitude and greater feelings of empowerment and value judgments in making financial decisions in savings, credit, insurance and remittances. These findings are comparable to Kariuki (2014) and Ford, Myrden and Jones (2015) hence giving more credence to financial training as a prerequisite to financial performance of Islamic financial institutions.

A study about the effect of financial literacy on management of personal finances among employees of commercial banks in Kenya, by Onyango in 2014, using a descriptive survey approach and purposive sampling methodology, the researcher argued that financial training have a positive effect on employees' personal financial management, wellbeing, and also, by extension, productivity at their work place. Three quarters of the respondents admitted to having good personal financial management skills which were acquired through institutional training and job experience. This boosted their job satisfaction and in turn, improved the bank's performance (Onyango, 2014). Findings that were consistent with Mindra and Moya (2017) affirming the importance of financial training on the financial performance of banks.

Kariuki (2014) studied the effect of performance appraisal on employees' performance in Barclays bank of Kenya, using descriptive research design and systematic stratified sampling design methodology; the study findings showed that in-house job training programs such as on job training, seminars, and team building events had a positive effect on employee performance. Capacity building through training offered employees the opportunity to receive constructive and developmental feedback on their strength and weaknesses and growth potential in their careers. There was a link between employee career progression and growth and job performance at Barclays bank which further had a positive effect on the overall performance of the bank.

These and other similar studies provided evidence that financial training is important in boosting financial knowledge among individuals which further influences positively the attitude and feelings of individuals of self-empowerment. This enhances employees' progression through career growth, job performance and employee goals in the organization.

## 3.0 Methodology

This chapter presents the research design, target population, sampling procedure and sample size, research instrument, data collection, data analysis and presentation.

Research design ranges from hypothesis formulation to operational implications to data analysis in respect of skills of the research team and the researcher, objectives of the study, nature of the problem, means of obtaining information and the availability of time and monetary resources to undertake the study. The researcher used a descriptive research design.

The target population for this study was eight commercial banks that offer Islamic financial services in Kenya namely: ABC Bank Kenya, Barclays Bank of Kenya, Diamond Trust Bank, First Community Bank, Gulf African Bank, Kenya Commercial Bank, National Bank of Kenya, and Standard Chartered Bank. This study used purposive sampling technique to pick six years (i.e. 2012 to 2017) of the sample.

The researcher used secondary data obtained from published financial statements on the banks' websites, i.e. public financial statements. The researcher also used data collection forms as a research instrument to obtain additional information that was needed for the study.

The researcher used STATA software to aid in data analysis and presentation. Data was analysed by linear regression model. The researcher performed tests to choose the appropriate linear model for analysis between pooled OLS model, fixed effects model and random effects model.

***Pooled OLS***; this model has no unique attributes of individuals and no effects across time. It is represented by equation (1).

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_{it} \dots\dots\dots\dots\dots (1)$$

***Fixed effects model***; this model has unique attributes of individuals that do not vary across time (equation 2), or time related fixed effects that do not vary over individuals (equation 3) or both individual and time effects (equation 4) that may be analysed statistically but not accurately

predicted. These attributes are represented by $\mu_i$ for individuals and $\lambda_t$ for time in regression equations.

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \mu_i + \varepsilon_{it} \ldots\ldots\ldots\ldots (2)$$

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \lambda_t + \varepsilon_{it} \ldots\ldots\ldots\ldots (3)$$

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \mu_i + \lambda_t + \varepsilon_{it} \ldots\ldots\ldots\ldots (4)$$

***Random effects model***; this model has unique time constant attributes of individuals that are not associated with the individual regressors that may be analysed statistically but not accurately predicted i.e. the error term is assumed to have a random variation over *i* or t, as shown in equations 5 and 6.

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_i + \varepsilon_{it} \ldots\ldots\ldots\ldots (5)$$

Or,

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \omega_{it} \ldots\ldots\ldots\ldots (6)$$

Where; Y = Dependent variable (Islamic bank financial performance)

$\beta_0$ = Constant (financial services)

$\beta_1, \beta_2, \beta_3$ = coefficients of independent variables (i.e. Islamic financial literacy training)

X = independent (predictor) variable where;

$X_1$ = Islamic financial literacy training.

$\mu_i$ = observable individual dummy

$\lambda_t$ = observable time dummy

$\varepsilon_i$ = decomposed individual error term

$\varepsilon$ = random error term

$\omega_{it} = \varepsilon_i + \varepsilon_{it,}$ unobserved dummy

i = individual index, 1, 2, 3 ……..n

t = time index, 1, 2, 3 …….n

The researcher first identified the appropriate model for the study using the Hausman test. This test was used to choose between the fixed effects model and the random effects model. Taking random effect model as the null hypothesis ($H_0$) and fixed effect model as the alternative ($H_1$), If the result showed a p-value $< 0.05$ ($H_1$ is true) then the Fixed Effects model was to be appropriate to use while a p-value $> 0.05$ ($H_0$ is true), Random Effects model was to be appropriate to use.

After performing the Hausman test, the researcher was to perform further tests to choose an appropriate model between pooled OLS and either random or fixed effects models. In the event the random effect model was chosen, a Breusch-Pagan Lagrangian Multiplier (BPLM) test was to be used to choose between random effects model and pooled OLS model. Taking the null hypothesis ($H_0$) as random effect (when variance = 0) and alternative ($H_1$) as pooled OLS (when variance $> 0$);

In the event the fixed effects model was chosen, the researcher was to use the Wald F-test to compare the appropriate model between fixed effect and pooled OLS models. Taking the null hypothesis ($H_0$) as fixed effect (when F-value is less than F-critical) and alternative ($H_1$) as pooled OLS (when F-value is greater than F-critical);

The researcher was to further perform regression diagnostic tests to assess the validity of the chosen model. Such tests included multicollinearity, heteroskedasticity and homoskedasticity and autocorrelation.

The study was to conduct a multicollinearity test to test the relationship/correlations between variables. The researcher used the VIF tests, to gauge the relationship between variables. The multicollinearity test was gauged as follows;

VIF $< 5.0$, multicollinearity not a major problem
VIF $> 5.0$, indicates presence of multicollinearity
VIF $> 10.0$, indicates severe multicollinearity

The study also was to conduct heteroscedasticity test. This test measures the dispersion between dependent and independent variables where highly dispersions meant there was a problem of heteroscedasticity. The researcher used Breusch-Pagan / Cook-Weisberg test, to test for heteroscedasticity. A p-value > 0.05 show no presence of heteroscedasticity while a p-value < 0.05 show presence of heteroscedasticity.

Autocorrelation test was to be conducted to determine the relationship between variables and itself over time intervals. It measures the relationship over time lags of variables where presence of autocorrelation will indicate errors are not random and can be corrected. The researcher used Wooldridge test to test for autocorrelation. A p-value > 0.05 indicates no presence of first-order autocorrelation in the model (i.e. errors are random) while a p-value < 0.05 indicates presence of autocorrelation (i.e. errors are not random).

The researcher used descriptive statistical techniques and inferential analysis to present analyzed data to derive statistical and logical conclusions. Quantitative and qualitative data was presented by the aid of tables, graphs, charts and textual methods. Inferential analysis aided in qualitative data presentation.

## 4.0    Data Analysis, Findings and Discussions

## 4.1    Introduction

This chapter represents analysis, findings and discussions as set out in research methodology. It demonstrates descriptive statistics, study variables, diagnostic tests and model fitting.

## 4.2 Descriptive statistics

Descriptive statistics was used to define the general nature of data under study. Table 4.1 shows the descriptive summary statistics obtained from the study represented by mean, standard deviation, minimum and maximum values as performed on bank performance (represented by profit before taxation) and financial literacy training (represented by staff costs in the model).

**Table 4.1: Summary Descriptive Statistics**

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Bank Performance | 48 | 5.909223 | 6.66032 | -1.684397 | 23.44462 |
| Financial Literacy Training | 48 | 3.687793 | 3.683006 | 0.047 | 12.10736 |

The findings indicate that bank performance had a mean of 5.909223 and a standard deviation of 6.66032. Financial training had a mean of 3.687793 and a standard deviation of 3.683006. This indicates that bank performance was the most centered and also the most widely spread observation across the entire observations of the data set, while financial literacy training was the least centered and also the least spread observation.

The researcher further used Skewness to test for asymmetry in normality of the data distribution with a threshold of data distribution falling between -1 and +1 being acceptable. Kurtosis was used to measure the tailed-ness of the probability distribution comparative to a normal distribution with a threshold of data distribution falling below +3 being acceptable. Table 4.2 indicates study results.

**Table 4.2:  Skewness/Kurtosis Tests for Normality**

| Variable | Obs | Pr (Skewness) | Pr (Kurtosis) | Chi2(2) | Prob > Chi2 |
|---|---|---|---|---|---|
| Bank Performance | 48 | 0.0175 | 0.8873 | 5.44 | 0.0658 |
| Financial Literacy Training | 48 | 0.0130 | 0.3684 | 6.42 | 0.0404 |

Findings indicate that bank performance had a skewness of 0.0175 and a kurtosis of 0.8873. Financial training had a skewness of 0.0130 and a kurtosis of 0.3684. The Skewness results indicate that the data falls within -1 and +1 hence it is not highly tilted/ skewed. Kurtosis results show that data falls below +3 indicating that data has fewer and less extreme outliers. Skewness and Kurtosis results indicate that the data was fit for the model.

**4.3 Study variables**

The researcher sought to establish the relationship and trends on each study variable on each bank, i.e. ABC Bank Kenya (FIRM1), Barclays Bank of Kenya (FIRM2), Diamond Trust Bank (FIRM3), First Community Bank (FIRM4), Gulf African Bank (FIRM5), Kenya Commercial Bank (FIRM6), National Bank of Kenya (FIRM7), Standard Chartered Bank (FIRM8). The independent variables of the study was financial literacy training (represented by staff costs in the model), while the dependent variable was bank performance (represented by profit before taxation in the model).

**4.3.1 Islamic Financial Literacy Training**

This was measured by staff costs of banks under study. FIRM 1 to FIRM 8 represents the eight banks under study as illustrated in Figure 4.1. From the findings, ABC Bank Kenya (FIRM1), Barclays Bank of Kenya (FIRM2), Diamond Trust Bank (FIRM3), First Community Bank (FIRM4), Gulf African Bank (FIRM5), National Bank of Kenya (FIRM7), Standard Chartered Bank (FIRM8) appears to have a fairly consistent trend. This shows that it had a steady management of its operations. While Kenya Commercial Bank (FIRM6) had a constant trend from year 2012 to 2015, thereafter a sharp decrease to year 2016 then a flat curve to year 2017. This may be explained by factors both within and without the financial markets affecting its operations such as political heat due to elections and changes in legislation on the banking sector in the country, but for Kenya Commercial Bank (FIRM6), this trend may be explained by its radical cost cutting restructuring plan that involved staff layoff.
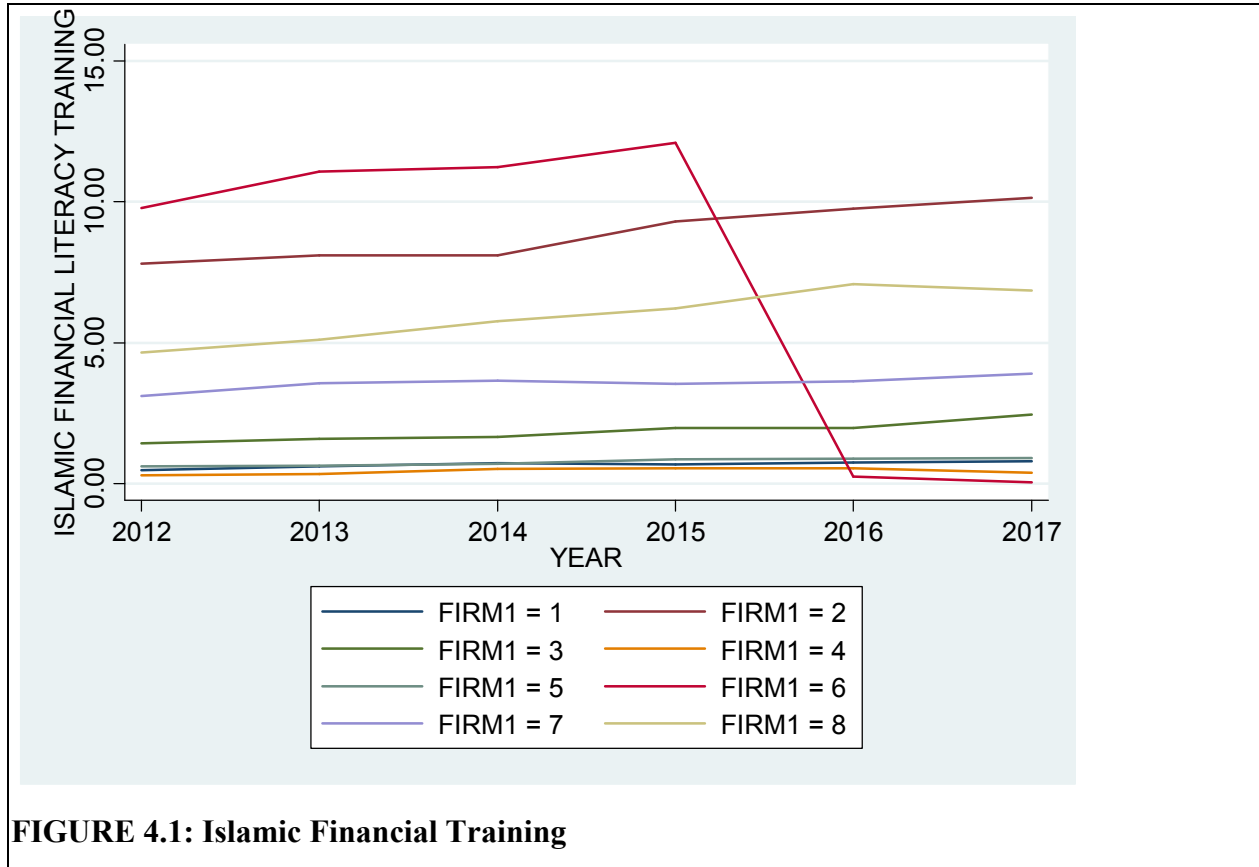
**FIGURE 4.1: Islamic Financial Training**

### 4.3.2 Bank Performance

This was measured by profit before taxation of the banks over the study period. FIRM 1 to FIRM 8 represents the eight banks under study as illustrated in Figure 4.2. From the findings, the profitability of ABC Bank Kenya (FIRM1), Barclays Bank of Kenya (FIRM2), Diamond Trust Bank (FIRM3), First Community Bank (FIRM4), Gulf African Bank (FIRM5), National Bank of Kenya (FIRM7), Standard Chartered Bank (FIRM8) had a similar trend. There was a steady growth in profitability from 2012 to 2016 thereafter a slump to 2017 as demonstrated by the graph. However, Kenya Commercial Bank (FIRM6) experienced a loss of Kshs. 90 million in 2016 then recovering with a profit of Kshs. 12.29 billion in 2017. The slump may be explained by Kenya's political situation as it approached elections which may have caused a tumble in economic growth, while Kenya Commercial Bank (FIRM6) profit may be due to its radical cost cutting measures adopted.
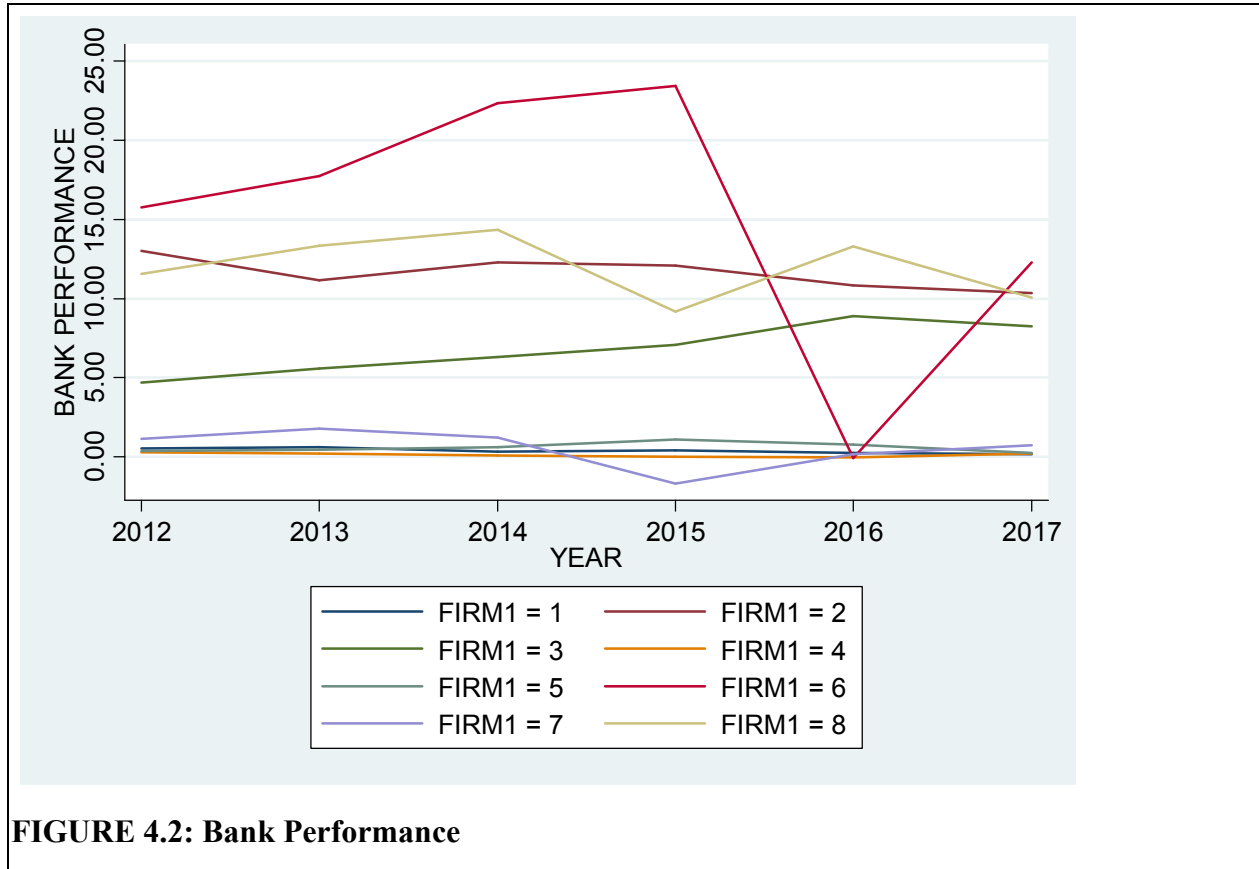
**FIGURE 4.2: Bank Performance**

### 4.3.3 Diagnostic tests

The researcher employed several tests to choose the appropriate model for the study and also to test whether the model is a good fit.

### 4.3.3.1 Choosing the Appropriate Model

The researcher first identified the appropriate model for the study by using the Hausman test to choose between the fixed effects model and the random effects model. Taking random effect model as the null hypothesis ($H_0$) and fixed effect model as the alternative ($H_1$), the result showed a p-value > 0.05 ($H_0$ is true) of 0.2477 as presented in table 4.3, Random Effects model was chosen. The researcher further performed a Breusch-Pagan Lagrangian Multiplier (BPLM) test to choose between pooled OLS and random effects model. Taking the null hypothesis ($H_0$) as random effects model (when variance = 0) and alternative ($H_1$) as pooled OLS model (when variance > 0); Findings as demonstrated in table 4.3 showed a p-value of 0.0000 and random effects model was chosen to be appropriate to use.

**Table 4.3: Model Selection**

|  | GLS Model | Fixed Effect Model | Random Effect Model | Hausman Test | BPLM Test |
|---|---|---|---|---|---|
| Prob. – values | 0.0000 | 0.0000 | 0.0000 | 0.2477 | 0.0000 |
| F – test | 114.44 | 54.76 |  |  |  |
| Wald chi2(3) |  |  | 72.20 | 1.34 |  |
| chibar2(01) |  |  |  |  | 45.15 |

**4.3.3.2 Test for Multicollinearity**

The researcher conducted a multicollinearity test to examine the relationship between variables. The researcher used the VIF test, to gauge the relationship between variables. A VIF mean of below 5 is considered suitable. The VIF mean of 1.00 was obtained as indicated in table 4.4. This showed no presence of multicollinearity as it was below a mean of 5 hence multicollinearity could not affect regression results.

**Table 4.4: Variance Inflation Factor (VIF) Test**

| Variable | VIF | 1/VIF |
|---|---|---|
| Financial Literacy Training | 1.00 | 1.000000 |
| Mean VIF | 1.00 |  |

### 4.3.3.3 Test for Heteroskedasticity

The researcher also conducted a heteroskedasticity test to evaluate model appropriateness. A p-value above 0.05 indicates no presence of heteroskedasticity. The researcher used Breusch-Pagan / Cook-Weisberg test, to test for heteroskedasticity. Results of a p-value of 0.7862 which was greater than p-value of 0.05 indicated no presence of heteroskedasticity hence the model was okay as shown in table 4.5.

### Table 4.5: Breusch-Pagan / Cook-Weisberg Test

| |
| --- |
| Ho: Constant variance |
| Variables: fitted values of Bank Performance |
| |
| chi2(1)    =    0.07 |
| Prob > chi2  =   0.7862 |

### 4.3.3.4 Test for Autocorrelation

Autocorrelation test was performed to determine the relationship between variables over time intervals. The researcher used Wooldridge test to test for autocorrelation. A p-value above 0.05 is considered appropriate and indicates no presence of autocorrelation. A p-value of 0.3420 was obtained which was greater than a p-value of 0.05 indicated no presence of first-order autocorrelation in the model (i.e. errors are random) as shown in table 4.6. Results indicated that the data was fit for the model.

### Table 4.6: Wooldridge Test for Autocorrelation

| |
| --- |
| H0: no first-order autocorrelation |
| |
| F( 1,     7) =   1.039 |
| |
| Prob > F =    0.3420 |

### 4.3.3.5 Correlation Analysis

The researcher used Karl Pearson correlation to establish the degree of relationship between variables. Table 4.7 shows the results. The relationship ranges from -1 (perfect negative) to +1

(perfect positive), while a 0 (zero) means there is no relationship between variables. Findings indicate that financial literacy training had a strong positive relationship with bank performance at 0.8446.

**Table 4.7: Correlation Matrix**

|  | Bank Performance | Financial Literacy Training |
|---|---|---|
| Bank Performance | 1.0000<br>48 |  |
| Financial Literacy Training | 0.8446<br>0.0000<br>48 | 1.0000<br>48 |

## 4.3.3.6 Model fitting

When fitting the model, the researcher carried out a multiple regression analysis based on the identified random effects model of equation (6) as shown;

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \omega_{it} \ldots\ldots\ldots\ldots (6)$$

## 4.3.3.7 Model Summary

The model summary of the study is explained in table 4.8. It shows that the coefficient of determination, R-squared is 0.7133. This indicates that 71.33% of the variation in the dependent variable (bank performance) is explained by independent variable (financial literacy training) while 28.67% of the variation is explained by other factors and the error term. This was also explained by a strong correlation between variables with findings indicating that financial training had a strong positive relationship with bank performance at 0.8446.

**Table 4.8: Model Summary for Performance of Selected Banks in Kenya**

| R-squared | = | 0.7133 |
|---|---|---|
| Adj R-squared | = | 0.7071 |
| Root MSE | = | 3.6048 |

_____

### 4.3.3.8 Analysis Of Variance (ANOVA)

Analysis of variance (ANOVA) was used to estimate the model fitness as shown in table 4.9. The results show that independent variable (Islamic financial literacy training) has a statistically significant effect in explaining the performance of Islamic banks as demonstrated by a p-value of 0.0000 which is less than the critical p-value of 0.05. This indicates that the model is a good predictor of the effects of Islamic financial literacy training services on the financial performance of selected Islamic banks in Kenya.

**Table 4.9: ANOVA for Performance of selected Banks in Kenya**

| Source | SS | df | MS |
|---|---|---|---|
| Model | 1487.1508 | 1 | 1487.1508 |
| Residual | 597.762784 | 46 | 12.9948431 |
| Total | 2084.91358 | 47 | 44.3598635 |

Number of obs = 48
F( 1, 46) = 114.44
Prob. > F = 0.0000

### 4.3.3.9 Regression Analysis

Table 4.10 shows regression coefficients as calculated by the statistical software, STATA while table 4.11 shows regression results summary that explain the independent variable (Islamic financial literacy training). The results show that Islamic financial literacy training was statistically significant in explaining bank performance.

**Table 4.10: Regression Coefficients**

| Bank Performance | | Coef. | Std. Err. | z | P>\|z\| | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|---|
| Financial Literacy Training | \| | 1.25853 | 0.148115 | 8.50 | 0.000 | 0.9682298 | 1.54883 |
| _cons | \| | 1.268025 | 1.299376 | 0.98 | 0.329 | -1.278705 | 3.814756 |

Table 4.11 explains the regression results. Islamic financial literacy training had a positive coefficient of 1.25853 and a standard deviation of 0.148115. Bank performance had an intercept (constant) of 1.268025 with a standard deviation of 1.299376.

**Table 4.11: Regression Results of Bank Performance against Predictor Variables**

| Dependent Variable: Bank Performance (Profit before taxation) | |
|---|---|
| Independent Variables | Results |
| Financial Literacy Training (*Staff Costs*) | 1.25853 (0.148115) |
| Constant | 1.268025 (1.299376) |
| Observations | 48 |
| R-Squared | 0.7133 |

The model summary as represented by the equation;

$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \omega_{it}$

Thus; Bankperfor~$e_{it}$ = 1.268025 + 1.25853Financialt~$g_{it}$ + $\omega_{it}$

Where; Y = Dependent variable (Selected Islamic bank financial performance)

$\beta_0$ = Constant (Islamic financial services)

$\beta_1, \beta_2, \beta_3$ = coefficients of independent variables (i.e. Islamic financial literacy training)

X = independent (predictor) variable where;

$X_1$ = financial literacy training.

$\omega_{it}$ = unobserved dummy

## 4.4 Summary and Interpretation of Findings

Descriptive research design was adopted and a purposive sampling technique was used to select eight commercial banks that offer Islamic financial services in Kenya, i.e. ABC Bank Kenya, Barclays Bank of Kenya, Diamond Trust Bank, First Community Bank, Gulf African Bank, Kenya Commercial Bank, National Bank of Kenya, and Standard Chartered Bank. Data for the study was obtained from all the eight Banks. Data was obtained from banks' annual reports and financial statements and a data collection form was also used to collect additional secondary data. Analysis was done using linear regression analysis framework and descriptive statistics were employed and presentation of results was done using figures, tables and graphs.

### 4.4.1 Islamic Financial Literacy Training on Performance of Selected Banks in Kenya

Financial literacy training was measured by staff costs of banks. Financial training had a positive relationship with profitability i.e. an increase in costs resulted in a decrease in profitability. ABC Bank Kenya (FIRM1), Barclays Bank of Kenya (FIRM2), Diamond Trust Bank (FIRM3), First Community Bank (FIRM4), Gulf African Bank (FIRM5), National Bank of Kenya (FIRM7), and Standard Chartered Bank (FIRM8) appeared to have a fairly consistent trend. Kenya Commercial Bank (FIRM6) had a constant trend from year 2012 to 2015, thereafter a sharp decrease to year 2016 then a flat curve to year 2017.

A positive relationship to bank performance was also demonstrated by Ford, *et al.*, (2015) who established that employee training encouraged knowledge sharing, reduced workplace stress and improves workplace conditions which boost their self-confidence and consequently job performance through reduced operational costs. Also, Onyango (2014) found that financial training had a positive effect on employees' productivity at their work place through job satisfaction and in turn, improved the bank's performance. Consequently, Kariuki (2014) established that employee performance had a positive effect on the overall performance of the bank.

### 4.4.2 Performance of Selected Banks in Kenya as effected By Islamic Financial Literacy Training

Bank performance was measured by profit before taxation of banks in the study. From the findings, the profitability of ABC Bank Kenya (FIRM1), Barclays Bank of Kenya (FIRM2), Diamond Trust Bank (FIRM3), First Community Bank (FIRM4), Gulf African Bank (FIRM5), National Bank of Kenya (FIRM7), Standard Chartered Bank (FIRM8) had a steady trend. Kenya Commercial Bank (FIRM6) experienced a loss in 2016 then recovering with a profit in 2017.

Thomi (2012) determined occurrence of a positive effect on bank performance from Islamic products such as *Mudarabah, Murabahah, Musharakah* and *Ijarah* at 91.30%. Similar findings were supported by Ghauri and Qambar (2012) who concluded that innovative product structuring is the major determinant for investors' attraction and that Islamic bank has higher operational costs and need to improve on risk management as these impacts negatively on their financial performance.

Zarrouk, *et al*., (2016) also established that profitability is positively affected by bank cost-effectiveness, asset quality and level of capitalization, and that non-financing activities such as gross domestic products (GDP) and investment allow Islamic banks to earn higher profits. These findings are in agreement with this study finding.

### 5.0 Summary, Conclusions and Recommendations

### 5.1 Summary

This study sought to determine how Islamic banks' financial performance was affected by Islamic financial services such as Islamic financial literacy training. Eight banks that offer Islamic financial services were studied i.e. ABC Bank Kenya, Barclays Bank of Kenya, Diamond Trust Bank, First Community Bank, Gulf African Bank, Kenya Commercial Bank, National Bank of Kenya, and Standard Chartered Bank. Data was obtained from banks' annual reports and financial statements. Data analysis was done using linear regression analysis framework.

Islamic financial literacy training was measured by staff costs of banks. Financial training had a positive relationship with bank performance. All banks except Kenya Commercial Bank had a fairly consistent trend throughout the period under study. Kenya Commercial Bank had a constant trend from year 2012 to 2015, thereafter a sharp decrease in year 2016 then a flat curve in year 2017.

These findings explain why bank performance of all banks had a steady growth trend from 2012 to 2017 except Kenya Commercial Bank which experienced a loss in 2016 despite a significant reduction in staff costs in the same year. It can be concluded that financial training had a positive relationship with bank performance of 1.25853.

Similar findings were demonstrated by Ford, *et al*., (2015) who established that employee training encouraged knowledge sharing, reduced workplace stress and improves workplace conditions which boost their self-confidence and consequently job performance through reduced operational costs. Also, Onyango (2014) and Kariuki (2014) concurred with these findings and stressed the positive effect of financial training of employees and its contribution to banks' financial performance.

## 5.2 Conclusions

The study concludes that Islamic financial literacy training reduces operational costs through reduced staff costs and improves performance. This is exhibited through a positive relationship between bank financial performance and staff costs. Financial training creates awareness and lowers operational costs resulting in an improved financial performance of banks.

## 5.3 Recommendations

The study established that elevating financial literacy positively influenced bank performance. The study recommends that commercial banks that offer Islamic financial services establish more training facilities at the grass root level and subsidize attendance fees significantly or offer them for free in order to accommodate the majority poor and expand their customer base.

**5.4 Limitations of the study**

Kenya has a total of 42 commercial banks as per 2017 central bank of Kenya annual report. A sample size of eight banks represents a nineteen percentage of the total banking industry. This shows a lesser penetration of Islamic financial services compared to conventional banking system. The sample may not be a true representative of the population as compared to if the study could include other financial institutions that offer Islamic financial services such as microfinance institutions. Therefore, it cannot be established with certainty if the findings will be the same if more institutions would have been considered in the study.

**5.5 Suggested Areas for Future Research**

This study suggests use of a larger sample size in order to reduce bias and increase accuracy in future studies. Use of primary data in future researches is also recommended as data collection methods such as questionnaires are more comprehensive and open-ended and enable respondents to reveal their opinions and perceptions. Questionnaires should be designed in a simple language for ease of understanding by respondents.

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