

## Effect of Internet Banking on Financial Performance of Tier One Commercial Banks in Kenya

Alice Mwale Noah\*, Jagongo AO and Fredrick WS Ndede

Department of Accounting and Finance, Kenyatta University, Kenya

### Abstract

Financial performance of commercial banks dwells entirely on generated returns of assets from operations; loan portfolio falls as a critically valuable asset that unfortunately exposes the institution to financial risks. Commercial banks across the world have always embraced business process reengineering as a strategy to change on their business processes and procedures hence improve on their financial performance. Commercial banks in Kenya are faced by intense competition from money transfer platforms such as Mpesa. This study therefore sought to examine the effect of internet banking on financial performance of tier one Commercial banks in Kenya. The study adopted descriptive research design. The target population for this study was staff in Tier one Banks, with a keen aim on the business development managers within their headquarters in Nairobi. Census technique was used to incorporate the entire target population. The study used primary data. Data was collected by use of both structured and semi-structured questionnaires. The quantitative data was analyzed using the descriptive and inferential statistics using SPSS Version 24 software. The study indicated that there is a positive significant relationship between internet banking and financial performance of tier one Commercial banks with a regression coefficient of 0.24. From the study the researcher recommended banks should enroll more service through internet banking this will encourage more customers to adopt internet banking. Commercial banks also need to emphasize the use of internet banking as this will enhance banks growth and customers saving on much time which they could have wasted on queues to be attended the traditional way.

**Keywords:** Internet banking; Financial performance; Tier one banks; Commercial banks

### Introduction

#### Background of the study

Commercial banks across the world have always embraced business process reengineering as a strategy to change on their business processes and procedures hence improve on their financial performance. The changing dynamics of the banking sector is forcing the financial sectors to reengineer to meet the challenges associated with bank consolidation, rising operational costs, outsourcing, portfolio investment, payments and settlement systems. In India, the changing dynamics of Indian economy have brought many reforms in financial sectors especially in banking and insurance sector. To meet new competitive challenges due to technology introduction in banks and change in the customer's perspective has forced organizations to begin to reconsider about their ways of doing business operations [1].

Commercial banks in Ghana have been forced to undertake BPR in order to become competitive. The Ghana financial services sector has seen the entry of foreign multinational banks which have altered the banking environment [2]. The foreign banks come with new business models, technologies, processes, procedures, services and new ways of thinking necessitating the traditional and indigenous bank to reinvent them in order to remain competitive [3]. The acquisition of universal banking licenses by a majority of the banks implies that the banks are able to offer comprehensive range of services including those that were only limited to a select banks [4]. This has also increased competition in the sector.

Internet banking has become an important issue, not only to retain customers but also gaining a competitive advantage while maintain and growing overall effectiveness. In the present banking system, excellence in customer service is the most important tool for sustainable business growth [5] are of opinion that the use of internet in the banking institutions can give cost advantages by reducing financial transaction

costs. In the face of intense competition in service industry such as banking, there is often a need to enhance efficiency and effectiveness in order to ensure organizational survival and competitiveness [6]. The modern bank's customer segment is diverse, segmented, expectant of consultation, and change has become pervasive, persistent, and faster. The banks must therefore reengineer their processes with a view of meeting this new challenge.

Davenport [7] defines financial performance as the ability to operate efficiently, profitably, survive, grow and react to the environmental opportunities and threats. Financial performance is measured by how efficient the enterprise is in use of resources in achieving its objectives. Financial performance of commercial banks dwells entirely on generated returns of assets from operations; loan portfolio falls as a critically valuable asset that unfortunately exposes the institution to financial risks (credit risk, market risk and liquidity risks). As performance is majorly pinned on loan returns, credit risk begins when these loans are extended to the borrowers since the possibility of defaulting with interest is considered [8].

Financial performance measures how well a firm can generate value for the owners. It can be measured through various financial measures such as profit after tax, Return on Assets (ROA), Return on Equity (ROE), earnings per share and any market value ration that is generally accepted [9]. The financial performance of financial

**\*Corresponding author:** Alice Mwale Noah, Department of Accounting and Finance, Kenyatta University, Kenya, Tel: +254 717 141814; E-mail: [alice.mwale@yahoo.com](mailto:alice.mwale@yahoo.com)

**Received** September 09, 2019; **Accepted** September 25, 2019; **Published** October 03, 2019

**Citation:** Noah AM, Jagongo AO, Ndede FWS (2019) Effect of Internet Banking on Financial Performance of Tier One Commercial Banks in Kenya. J Entrepren Organiz Manag 8: 272.

**Copyright:** © 2019 Noah AM, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

institutions can be measured using a combination of financial ratios analysis, benchmarking, and measuring performance against budget or a mix of these methodologies.

As financial intermediaries, commercial banks are critical in development and growth of economies. The banks must have adequate level of performance to play the intermediation role. Indicators of financial performance are return on equity, liquidity ratios, asset management ratios, profitability ratios, leverage ratios and market value ratios. Financial performance among commercial banks in the recent times has shown a general decline in performance. In 2012 the most profitable commercial banks in Kenya in terms of Profit before Tax (PBT) were Equity Bank (16.06 billion), KCB (15.75 billion), Barclays Bank (13.02 billion), Standard Chartered Bank (11.51 billion) and Cooperative Bank (9.57 billion).

The shifting market share and profitability amongst commercial banks has been linked to the hyper competition amongst commercial banks. The foreign owned multinational banks Barclays and Standard Chartered have had their profitability eroded by the indigenous banks such as Equity and KCB. The shifting market share is a clear indication that all commercial banks need to implement something different in their day to day processes to gain and specifically maintain a competitive edge in the financial sector in Kenya.

### Statement of the problem

Commercial banks in developed countries as well as developing economies like Kenya continue to play an important role of financial intermediation. Despite their importance, commercial banks still face several challenges. One such challenge facing commercial banks in Kenya is intense competition. To curb the competition, banks especially tier one banks have been adopting new ways of doing business which is the BPR. The launch of M-pesa money transfer services in Kenya in 2008 and Airtel money has even complicated further the competition for the commercial banks and similarly non-bank financial institutions such as SACCOs perform the same duties as banks. The trend in financial performance of commercial banks needs to be regulated since it can lead to more job losses and reduction in wealth creation. Already the banks have been reducing their workforce since the enactment of the capping interest rates. Keeping up with a slowing economy, growth in banks' profits is slowing as the main sources of revenues-interest income and transaction fees-dry up. The desperate measure by banks to keep profitability up in a slowdown has been curtailed by Central Bank of Kenya on the regulation on lending rates, inflation and operation factors. The study investigated how reengineering is linked to financial performance of commercial banks in Kenya. The policy reform taken by Central Bank of Kenya, 2013 even made the competition more intense by changing Microfinance institutions to microfinance banks. Other institutions competitions include Savings and Credit Cooperative Societies (SACCOs), self-help groups and unregulated money service providers such as shylocks. The competition can be linked to banks taking slow pace in business reengineering which can reduce their cost of operation, improvement of customer service, process efficient in order to maintain a competitive edge [10].

### Objectives of the study

To establish the effect of internet banking on financial performance of tier one Commercial banks in Kenya

### Research hypothesis

There is no significant statistical effect of internet banking on

financial performance of tier one Commercial banks in Kenya.

## Literature Review

### Theoretical review

The research was based and guided by diffusion theory, developed by Demircuc [11].

### Diffusion of innovation theory

Demircuc [11] developed the Diffusion of Innovation Theory (DOI) to explain ways in which innovation is espoused in the organizations in the same industry. The theory is built execution five major stages which encompasses knowledge, persuading, decision, implementation and confirmation. Knowledge encompasses the awareness of new innovation and its importance amid the potential stakeholders. Persuading is the formation of affirmative stances to the newly executed innovation [12]. The intendant beneficial of the innovation make a decision on whether to or espouse reject the new innovation whereas the last stage encompasses ratification on the advantages of the new innovation which will enhance the widespread adoption [13]. Therefore this theory is relevant to the study due to the fact that Business Process Reengineering is a response to changes in the operating environment through adoption of innovations.

### Resource based view

Birger Werner felt developed the Resourced Based View (RBV). A resource based view of the firm. According to the RBV a firm's competitiveness is its aptitude to engender superior values for its employees and shareholders depends on its competence to manage its bundle of resources. The competence is delineated as the capacity to a set of resources to undertake an activity. The competencies are divided into two sets that is operational competencies and dynamic competencies. The operational capabilities are delineated as a set of routines and their execution which facilitates the generation of substantial yield of any kind of process.

The dynamic competencies are delineated as the aptitude to create, integrate, or reconfigure operational competency. Alternatively, the resources are demarcated as the independent physical, human, and organizational assets which may be utilized to execute value developing stratagems. The resources are classified as tangible and non-tangible resources. The tangible resources encompass the physical assets that a firm possesses while intangible resources involve non-physical assets like intellectual properties, know-how, technology, culture, brand and reputation.

There are some assets that the resources ought to have including being rare, valuable, inimitable, non-tradable, and non-substitutable. The aptitude of a resource to be valuable implies that the resources have the capacity to empower firm effectual and effectiveness in an affirmative manner. Unique or non-tradable means that the resource is only accessible to the corporate. The unique quality of a resource implies that the competitors are not able to borrow the capacities of the resource. Lastly the non-substitutable aspects of a resource suggest that the competitors are not able to get an alternative resource performing the same thing.

This theory is appropriate to the study in that for a firm to grow and advance specifically in respect to its monetary image, and then it ought to manage its resources in manner where the most promising outcomes will be attained. When relating to the commercial banks they ought to be able to manage their resources in manner which the overall

shareholders and other beneficial will the banking as the most attractive place unlike the other financial institutions. For instance, the move by Cooperative Bank of Kenya to manage their queues in the banking hall by introducing automated bulk machines where customers drop their cash deposits and get an electronic receipt on the phone is more attractive than the long queues in other banks.

The critics of the RBV indicate that the theory fails to give the advancement of the resources and dynamic competencies limiting its relevancy. The theory has also been criticized for creating an illusion of total control of resources and the capacity of the managers to perfect forecast the future value of the resource's utilization

## Empirical literature

**Internet banking and financial performance of commercial banks:** Allen L [14] delineates internet banking as the process by which banks delivers information or services to its patrons, it encompasses the system which enables financial organization, patrons, individuals or business to access account, transact business or mine information on financial products and services *via* a public or private network.

A study by Malhotra [15] on the power of internet banking on bank profitability and peril in the Indian banking sector. Particularly the study sought to examine the power of Internet banking on banks' profitability and peril. The data was sourced from a survey of 85 scheduled commercial bank's websites, in the year 2013; the outcomes proved that 57 percent of the Indian commercial banks are delivering transactional Internet banking services. The univariate analysis indicates that Internet banks are larger banks and have better working effectual ratios and profitability unlike non-Internet banks. Internet banks rely more heavily on core deposits for funding than non-Internet banks do.

Al-samadi [16] sought to assess the impact of electronic banking on the Jordanian banks' profitability. The study was conducted in 15 Jordanian banks. The outcomes indicated that electronic banking has a negative but substantial effect on banks' profitability. Electronic banking does not ameliorate the profitability of these banks. Banks' patron in Jordan relies on traditional channels to carry out their banking operations. The outcomes proved that costs linked with adopting electronic banking are still higher than revenues from provision electronic services.

A study on the impact of electronic banking on the financial performance of commercial banks in Kenya, the study sought to find out if there is an affiliation amid the dependent variable, for instance, performance measured by profit after tax and the independent variables comprising of number of ATMS, number of debits and credit cards issued to patrons, number of point of sales terminals and the usage levels of Mobile banking, Internet banking and Electronic funds transfer, as an aspect of e-banking. The outcomes of the study revealed that e-banking has a firm and substantial impact on the profitability of commercial banks in the Kenyan banking industry. The significance

test indicated that the power of bank innovations on bank profitability had a significant statistically substantial on the combined power of the bank innovations in this research is statistically significant in explaining the profits of commercial banks in Kenya.

Maiyo [17] sought to examine the effect of electronic banking on financial profitability of commercial banks in Kenya. The purpose of the study was to establish the effect of electronic banking on financial profitability of commercial banks in Kenya. Particularly, the study sought to establish the level of e-banking adoption and the effect of this adoption on financial profitability of commercial banks in Kenya. A descriptive research design was employed in the study. First-hand information was gathered by use of questionnaires which were sent to the respondents of commercial banks. The first hand was enhanced by the secondhand materials collected from published financial statements of the respective commercial banks and central bank of Kenya supervision reports. Suitable frequency tables and charts were employed. Multiple regression analysis was employed to explain the affiliation amid the variables and present the findings. The study uncovered that fees and commission from debit cards, credit cards and mobile banking has a substantial power on returns on asset while fees and commission from internet banking and the amount of money that commercial banks invest in electronic banking to install, train staff and maintain the platforms has no or minimal effect on return on assets. The adoption of e-banking banking has improved the performance of commercial banks due to snowballed efficiency, effectual and engender.

Another study by Cheruiyot [18] on impact of internet banking on financial performance of commercial banks in Kenya. He weighed the internet variable by the mean of banking intensity as derived from a web feature data collected from bank websites. He weighed performance through the ROA and ROE variables. The study espoused multiple regression analysis. The findings uncovered that the profitability and offering of Internet banking has a minute substantial affiliations Figure 1.

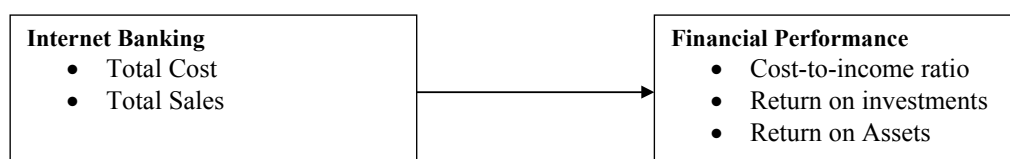
## Research Methodology

### Research design

The study adopted the descriptive research design. This method was considered appropriate because the researcher collected the data of the phenomenon under study in its natural environment and without any manipulation of the variables. The study also adopted explanatory research design which focuses on explaining the aspects of your study in a detailed manner.

### Target population

The target population for this study was business development managers in Tier One Commercial Banks within their headquarters in Nairobi. According to the Central Bank of Kenya there are about 6 banks under the category of Tier One Banks. The target population was examined in the view of the unit of observation and unit of analysis. The unit of analysis was Tier One Banks in Nairobi. The unit of observation



**Figure 1:** Conceptual framework.

was the financial Managers in the targeted Tier One Banks in Nairobi. Table 1 shows the distribution of Business Development Managers from the targeted Tier One Banks in Nairobi.

### Sampling technique and sample size

The researcher used census technique to incorporate the entire target population. Therefore, the researcher considered all the 51 Business Development Managers in Tier One Banks within their headquarters in Nairobi. Census is mostly preferred when the target population is less than 100.

### Data collection instruments and procedure

The study used a structured questionnaire to collect primary data from the respondents. A questionnaire is the most appropriate tool of collecting primary data in survey research [19]. The questionnaire was structured in a way that it was understood by the respondents with clarity and depth in response. Data collection was preceded by obtaining of the necessary permits and consents. The structured questions were used to conserve time and money as well as to facilitate an easier analysis as they are in immediate usable form [20]. The questionnaire's reliability was statistically measured by measuring the internal consistency. In turn, internal consistency was measured by use of Cronbach's Alpha. The questionnaire was discussed with the supervisor to ensure relevance of the content. Thus, content validity was used as the supervisors acted as experts in assessing the questionnaire's content. Data was gathered using the drop and pick later method. In this method, the consent statement was issued, and the questionnaire administered. The respondents were allocated at least two weeks to fill the questionnaire. Arrangement was made to collect the questionnaire later at pre-agreed time.

### Data analysis and presentation

Data was entered and analyzed using SPSS version 24 statistical software. The use of the SPSS software is considered appropriate due to the use of the structured questionnaire hence presenting an easy way to analyze the data. The extracted data was quantitative in nature which was presented in tables to simplify the analysis process. The study used both descriptive and inferential statistics. Descriptive statistics constituted of means and standard deviations. The inferential statistics was scrutinized using the principal of multiple linear regressions. Pearson correlation was used to determine the relationship between various independent variables on the dependent variable. A linear regression model was used to depict the connection between the various variables.

## Research Findings and Discussions

### Response rate

The study thus administered 51 questionnaires for data collection. However, 50 questionnaires were properly filled and returned. This represented 98 percent overall successful response rates. The 98

Bank	Business Development Managers
Kenya Commercial Bank	11
Cooperative Bank	8
Equity Bank	12
Barclays Bank of Kenya	6
Standard Chartered Bank	8
Commercial Bank of Africa	6
Total	51

**Table 1:** Target Population (Source: Survey (2019)).

percent response rate was attributed to the use of self-administered questionnaire Table 2.

### Background information

**Market coverage:** Regarding the market coverage, majority (50%) of the banks had a national representation, 44% were regional while 13% were international. Table 3 implies that majority of the banks had a national representation.

**Number of employees in the bank:** Regarding the number of employees in the banks, Table 4 shows that 24% of the bank had between 51-100 employees while 76% of the banks employed above 100 staff. Organizations can be classified as small, medium or large based on the number of employees, sales turnover or capital. SMEs range from very small micro-firms run by one or two persons with very slow growth or no growth at all, to fast growing medium businesses earning millions of dollars and majority employing as many as 250 employees. For developing countries (Africa included), a business with more than 100 employees is termed as large, while a small business could have one to five employees. Nevertheless, the most recently agreed definition from numerous researches defines SMEs as those with less than 250 employees although very small businesses may have less than 50 employees while micro-enterprises have between 5 and 10 workers.

## Descriptive Findings and Discussions

### Internet banking and financial performance of tier one commercial banks

The first objective of this study was to determine how internet banking has affected financial performance of tier one Commercial banks in Kenya. The findings revealed that majority of the respondents admitted (mean=4.333; std dev=0.909) that the use of internet banking reduces the transaction cost. The researcher further agreed (mean=3.824; std dev=0.654) that internet banking leads to distinctive competence and enhanced control of banking activities. In addition, the respondents agreed (mean=3.961; std dev=1.058) that customer feel a sense of security while using internet banking as opposed to counter transactions. The respondents also agreed (mean=3.882; std dev=1.506) that internet banking leads to strategic advantage against competitors and increase the likelihood of customer loyalty due to round the clock banking services. It was further agreed (mean=4.058; std dev=0.988) that internet banking saves time through efficiency in operations. Finally, majority of the respondents agreed (mean =3.863; std dev=1.249) that the use of internet banking enhance the control. The standard deviation ranged between 1.50609 to 0.65440 indicating

	Frequency	Percentage
International	7	13
Regional	21	44
National	25	50
Local	0	0
Total	50	100.0

**Table 2:** Market coverage (Source: Survey Data (2019)).

Employees	Frequency	Percentage
Less than 10	0	0
11 -50	0	0
51-100	12	24
Above 100	38	76
Total	50	100.0

**Table 3:** Number of employees in the bank (Source: Survey Data (2019)).



that the dispersion of the respondents from the mean was moderate. This implies that the variance of the highest respondents and the lowest respondents was moderate. The study agrees with a study by Farell and Salomer who argued that internet banking facilitate and speed up bank procedure to accomplish standardized and low value-added transaction such as bill payment and balance inquiries process through online network Table 5.

### Financial performance

From the findings the respondents admitted that the bank has improved on its cost-to-income ratio after business process reengineering (mean=4.745; std dev=0.440). The respondents further agreed that the bank has posted better financial results after the implementation of the business process reengineering (mean=3.177; std dev=1.352). In addition, the respondents agreed that the bank has posted better profitable on revenue streams that were not profitable (mean=4.333; std dev=0.683). The respondents agreed that the bank has been able to reduce the cost bank operational processes after business process reengineering (mean=4.510; std dev=0.579). The respondents further agreed that the bank has improved on its return on investment after business process reengineering (mean=3.941; std dev=1.103).

### Correlation analysis

The researcher undertook a Pearson correlation analysis to establish the underlying relationships between the independent variable and the dependent variable.

### Correlation between internet banking and financial

**Performance of tier one commercial banks:** The study sought to establish the correlation between internet banking and financial performance of tier one Commercial banks. The findings of the study are as shown in Table 6.

As indicated in Table 6, the study indicates that there was a moderate positive and statistically significant correlation between internet banking and financial performance of tier one commercial banks ( $r=0.605$ ;  $p=0.011$ ). This implies that enhanced adoption of internet banking improves the financial performance of 1<sup>st</sup> tier Commercial banks. The findings of the study agree with the findings which revealed that utilization of information technology has increased in service industries particularly the banking industry as it assists financial organizations deliver high quality service to client with less effort

### Conclusion and Recommendations

The findings indicated that the use of agency banking increases the amount of deposits and withdrawal which in turn improves financial performance of commercial banks. It was also clear that there is increased number of transactions facilitated by bank agents. According to the results, the hypothesis that: There is no significant statistical effect of agency banking on financial performance of tier one commercial banks in Kenya was rejected. This implies that internet banking has a significant influence on financial performance of tier one commercial banks in Kenya. The findings are in agreement who found out that agency banking enable banks to serve more customers which consequently affect the financial performance of banks.

The study concluded that internet banking leads to strategic advantage against competitors and increases the likelihood of customer loyalty due to round the clock banking services. It was also concluded that internet banking saves time through efficiency in operations. The use of internet banking enhances the control. The findings indicated that there is a positive significant relationship between internet banking and financial performance of tier one Commercial banks with a regression coefficient of 0.241.

	N	Min	Max	Mean	Std.
The use of internet banking reduces the transaction cost	50	1	5	4.333	0.909
Internet banking leads to distinctive competence and enhanced control of banking activities.	50	1	5	3.824	0.654
Customer feel a sense of security while using internet banking as opposed to counter transactions	50	1	5	3.961	1.058
Internet banking leads to strategic advantage against competitors and increase the likelihood of customer loyalty due to round the clock banking services.	50	1	5	3.882	1.506
Internet banking saves time through efficiency in operations.	50	1	5	4.058	0.988
The use of internet banking enhances the control	50	1	5	3.863	1.249

**Table 4:** Internet banking on financial performance of tier one commercial banks (Source: Survey Data (2019)).

	N	Min	Max	Mean	Std.
The bank has improved on its cost-to-income ratio after Business Process Reengineering	50	1	5	4.745	0.440
The bank has posted better financial results after the implementation of the Business Process Reengineering	50	1	5	3.177	1.352
The bank has posted better profitable on revenue streams that were not profitable	50	1	5	4.333	0.683
The bank has been able to reduce the cost bank operational processes after business process reengineering	50	1	5	4.510	0.579
The bank has improved on its return on investment after Business Process Reengineering	50	1	5	3.941	1.103

**Table 5:** Financial performance of tier one Commercial banks (Source: Survey Data (2019)).

Internet Banking	Pearson Correlation	Financial performance of tier one Commercial banks
	Sig. (2-tailed)	0.605**
	N	50

\*\*Correlation is significant at the 0.05 level (2-tailed).

**Table 6:** Correlation between internet banking and financial performance of tier one Commercial banks (Source: Survey Data (2019)).

From the study the researcher recommended banks should enroll more service through internet banking this will encourage more customers to adopt internet banking. Commercial banks also need to emphasize the use of internet banking as this will enhance banks growth and customers saving on much time which they could have wasted on queues to be attended the traditional way. Banks should embark on educating and creating awareness among their customers on the benefits if electronic banking and the charges involved. The researcher suggested that further studies should be conducted on business process re-engineering on financial performance of other financial institutions such as Microfinance institutions and Saccos in Kenya.

## References

1. Stanley R, Khong KW (2003). Business process reengineering in Malaysian banks and finance companies. *Managing Service Quality: An International Journal* 13: 54-71.
2. Amanquah K, Safo G (2013) Reengineering the procurement process: reducing cycle time through EDI and various automation techniques. *EDI World* 46-48.
3. Chase R (2014) *Operations Management for Competitive Advantage*. McGraw-Hill/Irwin, New York.
4. Thomas HD, James ES (1990) *The New Industrial Engineering: Information Technology and Business Process Redesign*. MIT Sloan Management Review.
5. Gaffney JE, Albrecht AJ (2013) Software function, Source lines of code, and Development Effort Prediction: A Software Science Validation. *Journal of IEEE Transactions on Software Engineering* 9: 639-648.
6. Gitonga LW (2010) The role of board capital on strategic turnaround in Kenya Commercial Bank Limited.
7. Davenport HT (1993) *Process Innovation: Reengineering work through Information Technology*. Harvard Business School Press Boston.
8. Chinoda T (2014) The Determinants of Commercial Banks Profitability in Zimbabwe (2009-2014). *IOSR-JEF* 5: 69-80.
9. Pandey M (2015) *Financial Management*. Vikas Publishing.
10. Olawumi DA, Isaac OO (2014) Assessment of Critical Success Factors of Business Process Re- Engineering in Nigerian Oil and Gas Industry. *Interdisciplinary Journal of Empirical Finance, Research Academy of Social Sciences* 3: 104-120.
11. Demirguc K (1999) Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence. *The World Bank Economic Review* 13: 379-408.
12. Gerald PD, Hafer RW (1988) Is Money Irrelevant? *Federal Reserve Bank of ST. LOUIS* 70: 3-17.
13. Disyatat P, Vongsinsirikul P (2003) Monetary Policy and Transmission Mechanism in Thailand. *Journal of Asian Economics* 14: 389-418.
14. Allen L (1988) The Determinants of Bank Interest Margins: A Note. *JSTOR* 23: 231-235.
15. Malhotra P, Singh B (2014) The Impact of Internet Banking on Bank Performance and Risk: The Indian Experience. *Eurasian Journal of Business and Economics* 2: 43-62.
16. Al-Smadi M, Al-Wabel S (2014) Impact of electronic banking on the performance of Jordanian banks. *Journal of Internet Banking and Commerce* 16: 34-45.
17. Maiyo J (2013) The impact Of Electronic Banking on Financial Performance of Commercial Banks in Kenya. Research Project, University of Nairobi.
18. Cheruiyot SK (2010) Impact of internet banking on financial Performance of commercial banks in Kenya. Research Project, University of Nairobi.
19. Mugenda O, Mugenda G (2003) *Research Methods, Quantitative and Qualitative Approaches*. ACT, Nairobi.
20. Kothari CR (2004) *Research methodology: Methods & Techniques*. New Age International Publishers, New Delhi.



