

# IMPACT OF INTEREST RATE REGULATION ON COMMERCIAL BANKS PERFORMANCE IN KENYA: A CASE STUDY OF I & M BANK LTD, KITALE, TRANS NZOIA COUNTY

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**Abstract:** Interest rates offered by commercial banks globally and locally attract customers to purchase products and services of financial institutions. The magnitude of interest rate spread, however, varies across the world. It is inversely related to the degree of efficiency of the financial sector, which is an offshoot of a competitive environment. The purpose of this study was to evaluate the impact of interest rate regulation on the performance of Commercial Banks in Kenya. The specific objectives of the study were: To assess the effect of reduced profit on commercial banks performance of I & M Bank; and to evaluate the effect of diversification of revenue lines on performance of commercial banks in Transzoia County. The study was based on theories that included: Liquidity preference theory; market segmentation theory; expectations theory of interest rate; Irving Fisher's theory of interest rate and the Interest rate parity theory respectively. The study used a descriptive research design and the independent variables comprised of interest rate regulation, investment; increase of revenue lines and uniformity of interest rates while the banks performance formed the dependent variable. The target population for the study were all the staff members of I & M bank. The study adopted a descriptive research design where every staff was targeted using the interview schedule and questionnaires. Both primary and secondary data were sourced and used for analysis. The data was collected using both quantitative and qualitative and was analyzed using both statistical analysis and inference building. The collected data was first coded statistically and then analyzed using the Statistical Package for Social Scientists (SPSS). SPSS and Microsoft Excel enabled the researcher to compute descriptive statistics such as percentages, frequencies, and ranges. Finally, the presentation of the results was done by the use of graphs, charts, tables, cross-tabulations and pie charts for clarity and ease of understanding of the findings. Assessment of validity and reliability, data analysis and presentation was done using SPSS which includes Cronbach's Alpha, Correlation and Regression. The study aimed at establishing that interest rates have a positive influence on the financial performance of financial institution as it was the main determinant of interest income.

**Keywords:** Interest Rate Regulations, Banks Performance.

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## 1. INTRODUCTION

According to the World Bank report 2015, by the beginning of 2009 most countries across the globe were facing a recession due to the global debt meltdown. The GDP growth rate in all countries plummeted, with developed countries such as the US, Germany, and France registering negative growth in 2009. Simultaneously, unemployment rate, which

reached a five year high of 5.9% in the US during 2008, soared to over 9.4% by 2009. Additionally, the US registered negative inflation (deflation) of 0.3% in 2009. These were the major factors forcing the US government to slash interest rates to propel economic growth, spur spending, reduce unemployment rate, and keep inflation at a reasonable level. Interest rates in the US collapsed from 5.4% in June 2007 to lower than 0.2% by the beginning of 2009. Interest rates, since then have been near zero levels. Most other economies, both developed and developing, have mimicked the action by the Fed and reduced the interest rates. Developing countries started increasing the interest rates by the beginning of 2011, whereas developed countries continued to maintain lower interest rates. Countries such as Saudi Arabia that in order to maintain the peg have maintained the interest rates.

Historically, interest rates have been used as a tool to influence various economic factors as shown by the CBK report. For instance, by the beginning of 2009, major economies in the world were going through a recessionary phase. The GDP growth in all countries declined, while many countries witnessed high unemployment rate. Also, a few countries such as the US registered negative inflation (deflation). These factors forced the US government to cut down interest rates to boost economic growth, spur spending, reduce unemployment rates, and keep inflation at a reasonable level.

The banking environment is drastically unpredictable due to competition in the industry in the global market. The players are necessitated to offer attractive lending rates to their customers in order to survive in the industry as indicated by Salloum & Hayek, (2012). Financial institutions facilitate mobilization of savings, diversification and pooling of risks and allocation of resources. However, since the receipts for deposits and loans are not synchronized, intermediaries like banks incur certain costs according to Ngugi, (2001). They charge a fee for the intermediation services offered under uncertainty, and set the interest rate levels for deposits and loans. The difference between the gross costs of borrowing and the net return on lending defines the intermediary costs (information costs, transaction costs administration and default costs and operational costs). Interest rates offered by commercial banks globally and locally attract customers to purchase products and services of financial institutions. Commercial banks play a vital role as intermediary in the economic resource allocation of countries. They channel funds from depositors to investors continuously (Waweru, 2012). Depending on the market structure and risk management, the banking firm is assumed to maximize either the expected utility of profits or the expected profits. And, depending on the assumed market structure, the interest spread components vary. For example, assuming a competitive deposit rate and market power in the loan market, the interest rate spread is traced using the variations in loan rate. But with market power in both markets, the interest spread is defined as the difference between the lending rate and the deposit rate. The magnitude of interest rate spread, however, varies across the world. It is inversely related to the degree of efficiency of the financial sector, which is an offshoot of a competitive environment. The nature and efficiency of the financial sectors have been found to be the major reasons behind differences in spread in countries across the world. In economies with weak financial sectors, the intermediation costs which are involved in deposit mobilization and channeling them into productive uses, are much larger (Jayaraman & Sharma, 2003).

Over the years, banking system in Pakistan shown enormous growth and potential. The performance and stability indicators showed significant improvement in the profitability of banking system. But now a days banking sector going under pressure. Such as liquidity crunch and solvency problem have significant impact on the performance of banking sector and economy. The financial institution could have managed the situation without any trouble if they have sufficient amount of liquidity available to fulfill their obligation. Since they are operating in very tight market conditions. So, they are forces to pay attractive rates to depositors to attract liquidity. Although the State Bank of Pakistan reduced the Cash Reserve Requirement (CRR) and Statutory Liquidity Requirement (SLR) on demand and Time Liabilities to ease the liquidity in the market. The governments instead of developing their own recourses empower banks to generate money and then borrow from banks. The huge amount of borrowing from banks by the government it's disturbing the economy. The government not only curtails its borrowing from banks but also put some sort of check on power of money. All these factors have combined to set a stage where lending rates are high and having great amount of burden on banks financials. The amount of non-performing loans increased at rapid speed despite of heavy amount of provision created by the bank in recent years.

As financial intermediary, banks play a vital role in the operation of most economic development as mandated by the CBK requirements (CBK report, 2016). The efficiency of financial intermediation can also affect the economic growth. Banks are different from other firms in that they provide financial services, the reward to which is an interest rate, and the most of the funding are financed by the deposits or borrowing, the expense of which is also an interest rate. Interest

margin, the difference between what a bank has earned on its earning assets and what is paid to depositor as shown by Giovanni, (2006). It has been on upward trend during the last decade. An increase in the spread would affect the depositor or the borrower or both stand loose at same time. The lack of alternate avenues of financial intermediation aggravates the adverse impact of spread. For example, if the State Bank of Pakistan based on the monetary policy change the interest rate. Then the change in the interest rate influences the cost of capital that in turn affects the level of consumption and investment decision. If the increase in the spread is due to decrease the rate to depositors then this discourages the saving, and alternatively if due to increase the rate it would have adverse impact on investment. Therefore, these changes in the interest rate have important implication on the economy. Banks are more sensitive to interest rate changes than most of the other institutions. The effect of interest rate changes on banks profitability has been an important issue for banking system. It has been argued that bank exposure to interest rate risk perhaps the most important issue in participating the saving and investment crises.

There is no doubt a theoretical link exists between interest rates and the financial structure of firms. Interest rates operate through their influence on the cost of capital to the investor, as well as on returns to various groups of savers. A change in the interest rates affects the debt-equity choice of a firm, the overall cost of capital and real interest rates, and thereby sets in motion a chain of responses influencing the desired level of the capital stock and its productivity as well as the availability of savings and consequent speed of adjustment of the actual capital stock to its desired level. Hualan (1992) found that interest rate is one of the most important factor that affect the bank financial performance. Interest rates are major economic factors that influence the economic growth in an economy. Control of the inflation or deflation in the economy is a major role entrusted to the CBK by the government. The rationale behind the need to control the interest charged on credit or any other financial instrument is based on the need to control economic patterns that has great effects to the society. Holding all factors constant, controlling and setting of rates has big economic implication to the economic growth hence creating for a need of a rational decision making process within the industry. Poor decisions on the rates can directly affect the economic performance in all industry but greatly on the financial sectors. Interest rate is a monetary tool used by CBK, if CBK increases its lending rate to financial institution it signal the same to financial institution, therefore financial institution do the same. Giovanni (2006) argued that high interest set by central bank means that other financial institution will have to charge also high because they are all profit motivated. The difference between the borrowed rate and the lending rate is called the spread. Spread is different from the rates because they are determined by the individual financial institution (Mlachila, 2002). Low rate or small spread helps the financial institution to remain competitive hence encouraged. In the Kenyan economy, it is free market central bank try to signal interest rate to be charged but it do not dictate to financial institution on what to charge. The difference is brought forth by the stakeholders customers interests and other factors hence been used as a tool to control and influence the market competition. As a market that operates freely, central bank does not have the right to determine the spread initiated on the loans given by the stakeholders. Since the establishment of the Central Bank of Barbados in 1972, commercial banks have been subjected to a wide variety of regulatory controls. From August 1978 to the present, the Central Bank has prescribed the minimum interest rate payable by commercial banks on savings deposits. This interest rate floor has been applied to every class of deposit from March 15, 1994. Ceilings were imposed on deposits, in accordance with maturity and size of deposit, from October 1973 to October 1982. A ceiling will also imposed on the average loan rate from May 1976 to August 1991. There will a floor on the prime lending rate from May 1976 to June 1984. Several restrictions have also been imposed on the composition of the assets portfolio of commercial banks. In addition to a minimum cash reserve ratio, commercial banks are required to hold a stipulated minimum amount of government securities, expressed as a proportion of deposits. Sectorial restrictions and other specific restrictions targeting the personal and distributive sectors have frequently been imposed. Commercial banks have also been subjected to foreign exchange restrictions, including Central Bank directives regarding the holding of foreign assets. The impact and efficacy of these regulatory measures have been investigated in Williams (1996) and Worrell (1997). The former focused on bank performance, as measured by profitability and market share, vis-a-vis other financial institutions. The latter addressed the impact of regulation on commercial bank interest rate and portfolio. In January 2013 Bank of Zambia (BOZ) introduced ceilings on the annual effective interest rate of loans charged by non-bank financial institutions (NBFI). In this context, NBFI include companies, building societies, microfinance institutions, development banks, savings and credit institutions, and *bureau de change*. The ceilings state that: (i) the maximum effective annual lending interest rate for NBFI designated as microfinance service providers by the Bank of Zambia shall not exceed 42% and; (ii) the maximum effective annual lending rate that will be charged by all other non-bank financial institutions will not exceed 30%. The main reasoning for

this offered by BOZ is that some NBFIs are charging their clients exorbitant interest rates. The measures taken are supposed to make loans more affordable and equitable to vulnerable borrowers.

In 2013, the West Africa Economic and Monetary Union, which includes eight francophone African countries, lowered the interest rate ceiling - initially established in 1997 – by three percent. According to the Council of Ministers, the new maximum effective interest rate banks can charge is 15%; MFIs can charge 24%. The Economic and Monetary Community of Central Africa, comprised of 6 countries (Cameroon, the Central African Republic, Chad, the Republic of Congo, Gabon, and Equatorial Guinea), set up an interest rate ceiling in October 2012. The interest rate ceiling specific to the microfinance sector is calculated by applying a margin of 33% to the average effective interest rate charged by microfinance institutions during the previous six months.

Lending remains the core business of all commercial banks across the world and this can be achieved through the process of intermediation. In this process of intermediation banks incur certain costs in order to offer the intermediation services to potential borrowers and depositors (Ngugi, 2001). They set interest rate levels for deposits and loans, and the difference between deposit rates and lending rates determines the interest rate spread which is the intermediation cost banks have incurred. Commercial banks would be interested in giving out loans and advances to their numerous customers bearing in mind that this will be the only way of increasing their interest income thus improving their profitability. Kenyan banks have not diversified their products to match with the needs of their customers, until the introduction of the finance bill of the year 2008 which gave room to conventional banks to offer “Sharia compliant products”, these products are similar to those offered by conventional banks but do not accrue interest. Even though small portion of conventional banks have introduced these Sharia products, they are faced with a challenge in that Sharia principles outlaw “interest”, consequently this will have impact on their interest income. Commercial banks in Kenya are licensed and regulated pursuant to the provisions of the Banking Act (Cap 488), regulations and the prudential guidelines issued by the Central bank of Kenya (CBK, 2013).

As at 31st December 2014 the banking sector comprised of the Central Bank of Kenya, as the regulatory authority, 44 banking institutions (43 commercial banks and 1 mortgage finance company). Out of the 44 banking institutions, 30 locally owned banks comprise 3 with public shareholding and 27 privately owned while 14 are foreign owned (Banking supervision report, 2014). Commercial banks in Kenya use interest rates as their pricing strategy to differentiate their credit products in market. The overall weighted average lending rate has been too high especially for personal loans. The increase in lending rates is attributed to low liquidity in the financial system due to increased Government borrowing (CBK, 2007). However Central Bank of Kenya has the responsibility to ensure that all commercial banks make a full disclosure of interest rates charged on loans and advances to enable potential borrowers to make wise decisions, however potential borrowers still complain of high interest rates charged by commercial banks.

For the banks to balance their main objectives of liquidity, profitability and solvency, lending interest rates must be handled effectively and the banks must behave in a way that their potential customers are attracted and retained (Kadri, 2012). However, deposit money banks’ decisions to lend out loans are influenced by a lot of factors such as the prevailing interest rate, the volume of deposits, the level of their domestic and foreign investment, banks liquidity ratio, prestige and public recognition to mention just but a few (Moosa and Bhatti, 2010). Lending interest rates which may be on short, medium or long-term basis is one of the services that deposit money banks do render to their customers. In other words, banks do grant loans and advances to individuals, business organizations as well as government in order to enable them embark on investment and development activities as a means of aiding their growth in particular or contributing toward the economic development of a country in general (Kadri, 2012). The financial systems of most developing nations have come under stress as a result of the economic shocks of the 1980s. The economic shocks largely manifested through indiscriminate distortions of financial performance of commercial banks (Gertz, 2008).

Performance of Commercial Banks Interest income from loans is the major source of revenue for commercial banks but the loan book and deposit book are not the only determinants of financial performance (Aboagye, Q, Akoena, T., Antwi, A & Gockel et al., 2008). Total bank assets and total deposits facilitate huge loan books and interest revenues but other factors that affect cost efficiency must be controlled for the high revenue figures to translate into high levels of financial performance (Beck and Hesse, 2006). Large institution size banks have greater access to large wholesale deposits and have greater power to control cost of deposits and lending rates but these advantages can only be translated into good financial performance with accompanying cost efficiency. Ahokpossi, (2013) argues that there is a positive relationship between interest lending rates and performance of Commercial Banks in the financial markets globally. Profitability

indicators such as ROE and ROA tend to summarize performance in all area of the company. Margarida (2000) found out that the net interest margin reacts positively to operating cost and hence changing market condition would have an impact on the market interest rate which would have a direct impact on profit. Maher (1997) found out that the availability of more advance risk management techniques have resulted in smaller amount of interest rate sensitivity for banks.

The banking sector will slackened in 1995 and exchange controls lifted. The CBK, which falls under the Cabinet Secretary for the National Treasury docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. The Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK, 2012), governs the Banking industry in Kenya. The CBK publishes information on Kenya's commercial banks and non-banking financial institutions, interest rates and other publications and guidelines. The banks have come together under the Kenya Bankers Association (KBA), which serves as a lobby for the banks' interests and addresses issues affecting its members (CBK, 2012). According to the Central Bank of Kenya, there are 43 licensed commercial banks in Kenya. Three of the banks are public financial institutions with majority shareholding being the Government and state corporations. The rest are private financial institutions. Of the private banks, 27 are local commercial banks while 13 are foreign commercial banks. Commercial banks in Kenya play a major role in Kenya. They contribute to economic growth of the country by making funds available for investors to borrow as well as financial deepening in the country. Commercial banks therefore have a key role in the financial sector and to the whole economy (CBK, 2014).

The Central Bank of Kenya has been continuously encouraging the commercial banks in the country to cut down its lending rates to borrowers to be able to drive progress on bank loans. In July 2014, the Kenya Banks Reference Rate (KBRR) will introduced by Central Bank of Kenya as a uniform base lending rate across the banking sector to enable consumers compare the pricing of loan products. Central Bank of Kenya introduced this new credit pricing framework after noting that the lack of comparable information in the past on pricing of loan products in the banking sector had exposed borrowers to high interest rates. The Central Bank Rate (CBR) which will at high from 18% three years ago will reduced to only 10% recently during the month of June 2015. The 91-day Treasury Bill rate similarly will at high 17.8% 3 years ago has also fallen down to only 8.2% recently. This has resulted to the average lending rates for commercial banks of Kenya reducing from 20.3% three years ago to 15.2% as at May 2015. Despite these moves made by the Central Bank of Kenya to reduce the average lending rates for commercial banks, there are still some commercial banks that charge up to 34.54 % interest on micro loans. The major banks in the country are charging interest rates between 15% and 20% for unsecured loans. Equity Bank, the country's commercial bank that holds about 50% of the overall banking population in Kenya is charging an interest rate between 15% and 19%. The CBK is continuously urging all commercial banks of Kenya to lower down its interest rates for further development.

There are various banking laws in Kenya that govern and regulate the way banks are formed, operate and are managed in the country. Some of these laws include but not limited to the appropriation act, Banking act, Bankruptcy act, Barclays of Kenya limited act, Capital markets act, Central bank of Kenya act, Central depositories act, Cheques act, general loans and stock act among other laws (Mutai, 2010).The laws are divided and partitioned to cover the different aspects in the banking industry (CBK, 2012).

Bosson and Jog-Ken (2003) found out that profitability of Ghanaian banks is skewed towards large banks and that there is correlation between bank size and profitability. Related studies that have been carried in Kenya by Ng'etich (2011) argued banks which perform well manages to keep interest spread wide. The profit of banks has come down due to narrowing margin and extreme rivalry among competing players in the banking industry (Mwega and Ndung'u, 2008). Mbai (2006) found out that proper interest rates management reduced bank exposure to risk and provided an opportunity to stabilize and improve the net income. During the year 2014, Central Bank introduced a new credit pricing framework, the Kenya Banks reference rate (KBRR) aimed at increasing transparency in the pricing of credit by commercial banks. The average commercial bank lending rate declined to 15.99 percent in December 2014 from 16.99 percent in December 2013. During the month of May 2015, the average lending rate for commercial banks reduced further to 15.26%. Despite the short term interest rates and commercial banks' average lending interest rates generally declining in 2014 the Kenyan banking sector recorded improved performance with the net profit before tax standing at Kshs 37.3 billion as at 31st March 2015 which will an increase of 2.7 per cent from Ksh 36.32 billion registered in the quarter ending December 2014 (CBK, 2015). Morgan (2008) on determinants of interest rates of Commercial Banks in Europe indicated that liquidity is the problem and a key challenge which has affected the inter-banking interest rate. Despite of higher interest rate provided

by commercial bank in the deposits, it still fails to attract the depositors. Beside decline in deposits, another problem that banking sector are facing is to recover the loans given or provided to the Commercial Banks.

According to customer surveys that have been carried out on customer satisfaction, clearly indicate that quality service delivery to customers by Commercial Banks in Kenya still has remained a challenge due to inappropriate strategies adopted. Adoption of effective strategies by Commercial Banks in Kenya in managing service quality will enhance organizational performance and market competitiveness based on quality (CBK, 2012). Financial measures of organizational performance commonly used by commercial banks include; return on assets (ROA), return on sales (ROS), return on equity (ROE), return on investment (ROI), return on capital employed (ROCE) and sales growth (SG). Accounting measures have several strengths. They are widely available because governments require firms to publish accounting data and the fact that they are subject to internal controls within firms enhances their reliability (Bergen, 2010).

The study examined the impact of interest rate regulation on commercial banks performance in Kenya: a case study of I & M bank Ltd, Kitale, Transzoia County and more specifically how the amendment to the Bank Act 2011 would regulate bank interest rates otherwise liberalized in Kenya since 1991. The study analyzed how this regulation affected the profitability of I & M Bank Ltd and the general banking industry. The Bank draws 80% of its total revenue from interest income on loans and advances. The industry led by KBA has vigorously lobbied against the amendment of the Bank Act without success. The latest published I & M's Bank financial statements (2012) shows that loans and advances account for 56% of the total assets, while 80% of the total revenue stream stems from interest income. The amendment has a significant impact on the Bank's bottom line as it impairs the top line, and therefore a study on the likely impact and possible solutions for I & M Bank Ltd and the industry in general is very necessary.

As defined by Hardwick Langmead and Khan (1999), commercial banks are deposit-taking institutions, which make profit by lending at a higher rate of interests than the rate they pay on deposits. In Kenya, the banking sector plays a dominant role in the financial sector, particularly with respect to mobilization of savings and provision of credit. The main source of income for banks is through charging of interests on provision of credit and monetary advances. Interest rates in Kenya has been liberalized since 1991 but with the amendment to the Banking Act in 2011, that put a cap on maximum interest chargeable has put banks in precarious position with meeting its operational costs and profitability. The main purpose of this study was to research on banks' profitability before and after the introduction of maximum interest chargeable. I & M Bank Ltd which like majority of other banks generate over 60% of its revenue from interest income was therefore greatly affected by this amendment to the Bank Act. It was therefore critical to analyze this impact to I & M Bank and the industry at large.

## 2. REDUCED PROFIT

Commercial banks' activities greatly rely on their intermediation services, filling the gap between suppliers and demanders of funds. Their profitability is partly due to the difference in interest rates charged on loans and what is paid to suppliers of funds, i.e., the interest rate spread. Banks' balance sheets' maturity structure of 'borrowing short and lending long' is argued to be the main source of the interest rate risk faced by commercial banks. While commercial banks accurately matched the maturity of assets and liabilities, different degrees of market interest rate elasticities between assets and liabilities components could still exert significant effects on banks' profitability. Different degrees of elasticity lead to non-proportionate changes in the value of assets and liabilities as market interest rates change, which then affect the value of the banking firm. Dietrich and Wanzenried (2011) examined the effect of profitability components (industry particular, macroeconomic & banks particular) before and after emergency in Switzerland amid 1999-2009 for 372 business banks. It will viewed as that from 1999-2006 will pre-crisis time and 2007-2009 will well thought-out to be as emergency time, averages of ROA, ROE and Net interest margin have been used as profitability indicators as average values are utilized to catch the progressions amid the time. Sufian (2011) stated the effect of banks inside aspects and macroeconomic components on the banks' profitability during 1992-2003 in Korea. Liquidity has negative effect on banks profitability with minor liquidity level, to establish superior profitability. Banks who focused more towards diversification has positive effect on profitability. Size depicted positive where as there is a negative effect of financial crisis on the profitability of Korean banks. Banks in Korea showed extra profitability during the period of before-crisis as compared to after crisis. As reveals in the study of English (2002) and Hanweck & Ryu (2005), the fluctuations of the interest rate have significant effect on bank's net income incurred by interest. Furthermore, slope of the yield curve also

have a positive impact and it is a most famous over view in the financial market observation including. The short term interest rate is closely related to the return on the bank's liabilities which will quickly adjust with the changes by interest rate in financial market. With that part of the discussion, returns on assets of the bank are more likely to be closed with long term interest rate and slowly get adjusted with the changes in the market rate. In the sustaining period, when the yield curve is steeper, one can expect the net interest margin to be higher. Moreover given the slope of yield curve, whenever there happens an increase in short and long term interest rate is always subjected to reduce the income for the time being, signifies that the maximum adjustment of the asset and liability yields. According to the study of English (2002) the margin of net interest of commercial banks and rates of market interest found supportive in the view of relationship among the slope of the curve and market interest rate on net interest margin of the banks. Interest rate movements affect the net interest margins of the banks. A net interest margin refers to difference between interest on deposits and interest on advances. When interest rates increase, the impact is immediate on the advances, which reduces the demand for advances and reduces the profits of the banks. The change in interest rates are exposed to interest rate risks and asset liability mismatches, which calls for Asset Liability Management. Low interest rates prove beneficial to lenders for a short span of time, given the higher lending activity. However the deposit rates are decreased at a much slower rate, as the banks try to attract more depositors, to take advantage of the high lending activity, consequently resulting in lower NIMs. This shrank the net interest margins (NIM) for banks in the US from around 4.0% in 2008 to around 3.2% in 2013. According to the World Bank report of 2016, countries such as Saudi Arabia and Qatar that have their currencies pegged against the USD are directly impacted by the changes in interest rates because these countries have very limited options and have to change interest rates in tandem with the US to maintain the currency peg. Consequently, the NIM in Saudi Arabia declined from 3.3% in 2008 to about 2.7% in 2013. The changes in the US interest rates do not impact the emerging economies directly, but it impacts indirectly through capital markets. As the interest rates in the US and other developed economies decrease, investors seeking higher returns move to the emerging markets. Furthermore, the NIM in different countries did not showcase any direct relation due to other factors such as competition among banks, different business models for banks, and proportion of interest income to the total income earned by banks. The direct impact of the hike in interest rate by the US Fed would be limited on Saudi Arabia's economy. The liquidity of banks and other financial institutions in Saudi Arabia would factor in the impact of the hike in interest rates by the US Fed. Moreover, the rate hike will likely be gradual and provide some time to the economy and the banking sector to adjust. In the short term, the rate hike would increase the interest rates in Saudi Arabia and make investments costlier. However, the dynamic of the banking sector in terms of economic activity, the fiscal expenditure and the competition amongst the banks will play a vital role in deciding in the lending rate.

Changes in interest rates would have a mixed effect on the banking sector. The increase in interest rates would decrease domestic credit in the economy and reduce consumption and output, yet it would improve foreign investment and balance of trade. It is also expected to improve the net interest margins of banks. According to an Annual Report, CBK Chou, W. (2000), Chirwa & Mlachila, (2004), it will clearly indicated that higher interest rates would discourage consumption and investments. This could decrease the demand for local credit and ultimately reduce the potential growth in the non-oil sector. This would reduce the aggregate demand, and thus the output. A report by a parliamentary committee pointed out its concern on the regulation of interest rate in its report in 2014 where they stated that they are of the view that capping interest rates might solve the high interest rate spreads in the banking sector but will lead to other challenges such as locking out of SMEs and other "high risk" borrowers from accessing credit as banks will prefer to loan to the government; Straining small banks who effectively have been shut out from their inter-bank market and now have to mobilize funds at rates higher than what they are getting now and can only lend out within the stipulated margins; thirdly, it is based on an unreasonable premise that the highest extra risk premium in the Kenya market is 4%.; may lead to banks colluding so as to push up the yields on the treasury instruments, and the emergence of shadow banking systems which may results into inefficiencies in terms of transmitting the effects of policy decision into the economy.

Theoretically less satisfactory, but easier to apply, is the assumption of adaptive expectations; this replaces expected inflation in the future by actual inflation in the present. Inflation is very important, because when there is increased inflation over a long period of time, economic agents recognize the actual value of money, stop suffering from money illusion and accept increased nominal rates. Therefore, investment as the main link between the interest rates and the real economy is considered a function of the real interest rates, as standard (Bencik; 2009). Banks have been accused of charging astronomically high interest and exploiting the consumers. This therefore brought into a legislation a law to cap

the interest rates charged on loans or credit with an aim of protecting the consumers. Capping interest rates has great impact on bank's profitability as it affects the banks' willingness to lend out credit at lower interest rates. For example in 2006, Japan's Financial Services Agency sharply reduced the ceiling on consumer loan interest rates and a decrease of more than 30% of the loan acceptance ratio will observed between years 2006 and 2007. Reduced lending by banks means reduced income since the interest spread is reduce and therefore profitability. When a bank in not profitable, its stability becomes uncertain. Additionally, interest rate restrictions have an impact on the ability of credit providers to adapt their pricing to borrowers' repayment risk , and this can result to increase of loan non-performance since in ideal circumstances, the higher the risk posed by an applicant borrower, the higher the cost for lenders to grant them credit. The rising of non-performing loans (NPLs) makes banks to switch their attentions to rehabilitating the non-performing loans (NPLs) in their books. This prevents viable businesses from obtaining funds to generate economic activities and hence banks profitability.

### 3. DISCUSSION

From the table above, 6.25% strongly agreed that the interest rate regulation has resulted to increase on the number of loans issued to customers, while 12.5% agree; 31.25% were not sure with 37.5% disagreeing with the statement. Only 12.5 % strongly disagreed with the statement. It was evident that the regulation of interest rate had a negative impact on the number of loans taken by customers in the banking sector.

Respondents were asked to state if the banks' portfolio has grown for the last five years whereby 12.5% strongly agreed with the statement, 37.25% agreed fully with the statement, 12.5% were not sure; 25% disagreed with only 12.5% strongly disagreeing with the statement. The banks' portfolio growth was as a result of other investment and strategic policies set by the bank hence increasing its portfolio.

The response of respondents on the increase of lending services since the enactment of regulation of interest rate registered 12.5% agreeing, 15% were not sure; 52.5% disagreed with the statement while 20% strongly disagreed with the statement. This indicated that majority of the commercial banks have witnessed a reduction in the lending desk as a result of the regulation policy. This is as a result of various strict measures put across by the commercial banks.

The total earnings of the bank have reduced as a result of interest rate reported the following response; 11.25% strongly agreed, 30% agreed; 40% were not sure while only 18.75% disagreed with the statement. Interests earned on loans formed the major source of income among the commercial banks, thus, the regulation policy has resulted to a reduction in the total earning of the bank which affects the overall earnings.

On the response of Interest rate regulation resulting on strict analysis of customers indicated that 20% strongly agreed, 40% agreed; 25% were not sure while only 15% disagreed with the statement. The idea of restriction was a valid item as all the commercial banks have been forced to institute strict requirements for one to qualify for a loan. This is in order to ensure that the client has the ability to service the loan within the stipulated time frame.

**Table 1: Reduced profits as an influencing factor on the performance of I & M Bank**

Reduced profits	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Interest rate regulation has led to increase on number of loans issued to customers	6.25	12.5	31.25	37.5	12.5
The Banks' portfolio has grown for the last five years	12.5	37.25	12.5	25	12.5
Lending services of the bank has increased since the enactment of regulation of interest rate	-	12.5	15	52.5	20
Total earnings of the bank have reduced as a result of regulation of Interest Rates	11.25	30	40	18.75	0
IR regulation has resulted to strict analysis of customers before being given loans	20	40	25	15	0



### 3.1 ANOVA

#### 3.1.1 Analysis of Variance

Analysis of variance (ANOVA) can determine whether the means of three or more groups are different. ANOVA uses F-tests to statistically test the equality of means. The test of ANOVA was also carried out as shown above to test the influence of interest rate regulation on performance of I & M Bank in Transzoia County.

**Table 2: Analysis of Variance**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77.816	3	25.939	173.168	.000 <sup>b</sup>
	Residual	11.384	76	.150		
	Total	89.200	79			
a. Dependent Variable: Performance of the bank between 2012 to 2016						
b. Predictors: (Constant), Diversification of revenue lines, Reduced profits, Investment						

The result of the ANOVA shows an F result of 173.168. Analysis of Variance showed that F-calculated was greater than the F critical (173.168 > 2.7). The strength of the model used in analyzing the relationship between independent variables and financial performance of commercial banks play an important role in establishing the relationship. Majority of the factors in most cases are interrelated leading to the challenges of multi-colinearity. From the table, the significance value was 0.0125 at 5% hence depicting that the study relationship was significant. A significantly high F-value like the results achieved shows that the result is significant. When the test was run at 0.05 significance level, the p value was 0.00. If P is less than  $\alpha=0.05$  then the result is significant. This means that the researcher will reject the null hypothesis for all variables.

the independent and dependent variables of the study.

#### 3.1.2 Coefficients

**Table 3: Coefficient**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.527	.128		-4.116	.000		
	Reduced profits	.291	.065	.319	4.476	.000	.331	3.017

When all independent variable in the research are 0 then dependent variable are -0.527. It can also be seen that if other variables are 0, all the variables are increasing towards the same direction where by reduced profits is 0.291

#### 4.1.3 Regression Analysis

From the Coefficients table (Table 3) the regression model can be derived as follows:

##### Standardized Y-equation

$$Y = (0.527) + 0.319X_1 + 0.128$$

##### Unstandardized Y-equation

$$Y = (0.527) + 0.291X_1 + 0.128$$

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.934 <sup>a</sup>	.872	.867	.38703	.872	173.168	3	76	.000

a. Predictors: (Constant), Reduced profits

From the table above 86.7% (adjusted R Square) of the relationship between interest rate regulation and the performance of commercial banks is explained by the independent variable namely Reduce profits. The remaining 13.3% reflects the relationship with other variables aside from those on study. The value of R square is 0.872 as in table above. This indicates that the independent variables explain 87.2% of the variance in the dependent variable.

### 3.1.4 Hypothesis Testing

#### H<sub>02</sub>: Reduced profit does not influence commercial banks performance

The hypothesis, reduced profits does not influence performance of commercial banks revealed that a reduction in profits affect the overall performance of the commercial banks in the county. Table 4.11 above shows the coefficient of reduced profits at  $\beta = 0.291$  which is a positive relation. Statistically,  $t=4.476$ ,  $\rho>0.05$  resulted in the rejection of the null hypothesis - H<sub>02</sub>. It was evident that a reduction in the profits of the bank affected the overall performance of commercial banks.

## 4. CONCLUSION AND RECOMMENDATION

From the findings on the coefficient of determination, the study found that there was great variation in the financial performance of commercial banks in Kenya could be accounted to changes in interest rate regulation in the banking industry at 95% confidence interval. From the findings on the R correlation the study found that there was a strong relationship between financial performance of commercial bank and reduced profits among the commercial banks. From the coefficient result the study revealed that there is a positive relationship between financial performance of commercial banks and the variable reduced profits. The study further revealed that that there was a statically significant relationship between financial performance of commercial banks and the rate of interest rate charged in the market. The introduction of the regulation of the interest rate has revolutionized the ways banks operate in the market. Loans form bulk of revenue for the commercial banks in Kenya and the regulation has impacted on the returns realized from the loans thus forcing the banks to venture into other sources of revenue for the bank. So the banks, be it domestic or foreign are investing more on providing customers with other options apart from the issuing of loans that facilitate more earnings to the bank in the long run.

The study recommends that commercial banks need to diverse in other revenue line in order to increase their portfolio which in turn play a vital role on the banks' financial statement. The findings clearly suggested that interest rate regulation has an impact on the profitability of the bank as the interest earned from loans was key to banks' on its financial performance. The only way to increase the banks' profitability by way of having good quality portfolio in terms of assets, investments and proper diversification of other sources of revenue lines.

The study also recommends that commercial banks should embrace opportunities to invest in government securities. This is because, government securities are less risky compared to other avenues that commercial banks might chose to invest in. Also, it is recommended that commercial banks should invest on other assets such as building that they would use as their premises and lease out the rest to gain an income. Further the study recommends that the commercial banks also invests in assets that they could sell at a profit to boost their income.

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