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# Financial Performance Comparison of Islamic and Traditional Banks in Emerging Markets

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## Abstract

**Purpose** – This study aims to investigate the performance differences of Islamic and traditional banks in Egypt by using financial ratios.

**Design/methodology/approach** – This study analyzed 2 Islamic and 9 traditional banks for the periods of 2002–2010. Descriptive statistics and paired sample T-test were performed. Secondary data was obtained from the annual financial reports of the banks for the period under the study.

**Findings** – The performance of the Egyptian traditional banks shows supremacy and dominance over the performance of the Egyptian Interest free banks. The capital adequacy ratios, profitability level, quality of management, and liquidity proved to be significantly better for traditional banks. While the results of the study concerning the quality of assets showed no significant difference between Islamic and traditional banks.

**Research limitations/implications** – The major limitation of this paper is the sample size that may be judged to be small and this is due to the fact that this study is based on assessing the performance of the only two fully fledged Interest free banks operating in Egypt during the period of study. Moreover, Egypt is a distinctive case compared with other Muslim countries when it

comes to Islamic banking and finance due to the fact that Egypt is one of the few Muslim countries where the top religious establishment has approved and supported the interest-based banking system. Finally, the study totally depended on the financial measures to evaluate the performance of Islamic and traditional banks. Many other non-financial measures could be incorporated to assess the performance of banks other than the financial measures.

**Originality/value** – This is an original research that compares performance differences across Islamic and traditional banks by using financial ratios.

**Key words:** Egypt, Emerging markets. Interest free banks, Financial ratios, Traditional Banks, Profitability, Liquidity, Risk, Capital, Efficiency, Financial performance.

## ملخص البحث

**الهدف** - تهدف هذه الدراسة إلى دراسة الفروق في أداء البنوك الإسلامية التقليدية في مصر باستخدام النسب المالية.

**التصميم / المنهجية / المنهج** - قامت هذه الدراسة بتحليل البيانات الخاصة ببنكين إسلاميين و ٩ بنوك تقليدية لفترات ٢٠٠٢-٢٠١٠. تم إجراء الإحصاء الوصفي والعينة المقترنة T- الاختبار. تم الحصول على البيانات الثانوية من التقارير المالية السنوية للبنوك للفترة قيد الدراسة.

**النتائج** - يُظهر أداء البنوك التقليدية المصرية التفوق والهيمنة على أداء البنوك المصرية التي لا تتمتع بفوائد. أثبتت معدلات كفاية رأس المال ومستوى الربحية وجودة الإدارة والسيولة أنها أفضل بكثير بالنسبة للبنوك التقليدية. بينما أظهرت نتائج الدراسة المتعلقة بجودة الأصول عدم وجود فرق كبير بين البنوك الإسلامية والتقليدية.

**القيود المفروضة على الدراسة / الآثار البحثية** - يتمثل القيد الرئيسي لهذه الورقة في حجم العينة الذي يمكن اعتباره صغيراً ويرجع ذلك إلى حقيقة أن هذه الدراسة تستند إلى تقييم أداء البنكين الوحيدين اللذين يعملان بدون فوائد بالكامل وهما العاملان في مصر خلال فترة الدراسة. علاوة على ذلك ، تعد مصر حالة مميزة مقارنة بالدول الإسلامية الأخرى عندما يتعلق الأمر بالخدمات المصرفية والمالية الإسلامية نظرًا لحقيقة أن مصر هي واحدة من الدول الإسلامية القليلة التي أقرت فيها المؤسسة الدينية العليا ودعمت النظام المصرفي القائم على الفائدة. أخيرًا، اعتمدت الدراسة تمامًا على التدابير المالية لتقييم أداء البنوك الإسلامية والتقليدية. يمكن دمج العديد من التدابير غير المالية الأخرى لتقييم أداء البنوك بخلاف التدابير المالية.

**أصالة / قيمة البحث** - هذا هو البحث الأصلي الذي يقارن الاختلافات في الأداء بين البنوك الإسلامية والتقليدية باستخدام النسب المالية.

**الكلمات المفتاحية:** مصر، الأسواق الناشئة. البنوك بدون فوائد، النسب المالية، البنوك التقليدية، الربحية، السيولة، المخاطر، رأس المال، الكفاءة، الأداء المالي

## **1- Introduction**

The banking sector is one of the most important economic sectors and the most influential and responsive to change, whether on the international or domestic level. The banking sector is considered a major tool of the financial policy that affects economic growth. A well-established and profitable banking system is one of the key success factors of economic development. Yet, the repetitive financial crisis led to difficulties in many traditional banks all over the world, while in contrast, Interest free banks were largely protected against these crises (Johnes et al, 2014). It was argued that the nature of operations in Interest free banks which is highly regulated and guided by Islamic laws and Shariah principles totally prohibited investment in any type of financial products that adversely affected traditional banks and ultimately resulted in the financial crises. Therefore, Islamic banking has received increasing appeal and acceptance to more investors other than the traditional Muslims. Nowadays, there are more than 300 Islamic financial institutions spread across 70 countries all over the world (Johnes et al, 2014). Islamic banking is a financial system that works in consistent with principles of Islamic law or Shariah and guided by Islamic economics. In particular Islamic law prohibits usury or Riba, which is the collection and payment of interest. Moreover, Islamic law prohibits investing in businesses that are considered unlawful according to the Islamic law or Shariah. Recently, a number of Interest free banks have been established to respond to the growing demand to Islamic finance. This growing demand is driven by the globalization and the enormous wealth of some Muslim states in the Middle East and Southeast Asia. Islamic finance has moved from just being a niche position to becoming a mainstream component of the global banking system worldwide. Nowadays, Islamic banking worldwide is faced with many challenges. The major challenge that negatively affects Islamic banking is the socio-political instability. The so-called Arab Spring worsened the situation in the Middle East and Africa especially for those investors and businesses who are Shariah sensitive. Moreover, the absence of Islamic financial regulatory framework led to a slack in the progress

of Interest free banks especially in those countries where Interest free banks work within a traditional regulatory system. In addition, most Interest free banks are relatively small and their business is primarily concentrated within one or two markets at most (Nazim and Bennie, 2012).

Although Egypt is considered the birthplace of Islamic finance since its inception in 1963, yet, its growth has evidently lagged behind. There was a continuous suspicion whether those behind the formation of Islamic institutions also had a political agenda. The Egyptian government's policy towards Islamic finance has alternated between hostility, opportunism and an attempt to manipulate and control the movement for its own motives and goals. Although, there was a widespread popular support for Islamic finance, the government has been obstructive and has been quite willing to discredit the movement towards Islamic finance even though some members of the royal family in Saudi Arabia were involved, notably Prince Mohamed Bin Faisal the founder of Faisal Islamic Bank (Wilson, 2006). Since the ruling of Mubarak in the eighties, he sought to enforce a more secular financial system avoiding any Islamic or religious diacritics. In 2009, Islamic banking in Egypt accounted for 3 to 4% only of Egypt's \$193 billion banking system in comparison to 46% in the United Arab of Emirates. Nowadays, there are 14 Egyptian banks, with 211 Islamic branches. Three of them are totally Islamic, namely; Faisal Islamic Bank of Egypt, Al-Baraka Bank and Abu Dhabi National Islamic Bank. Furthermore, the current development of Islamic banking industry in Egypt is facing many challenges that hinder its progress and abstain its promising potential. Among these challenges, it could be mentioned that the actual practices of the Islamic banking industry in Egypt is revealing less than ideal assets-liabilities management. The Interest free banks have an inclination and tendency towards short-term financing and investment. Besides, Egypt has no Islamic money market to help Interest free banks in managing their liquidity levels other than the traditional windows such as government treasury bills or borrowing from the central bank or from other traditional banks which are all interest-bearing means of finance. Also, there are no sufficient trained per-

sonnel in the Islamic field; most of the bankers working in Interest free banks are not specialized in Islamic banking thus providing a weak customer service to Interest free banks' customers. Finally, the absence of a convenient Islamic regulative and taxation framework is considered a major obstacle facing Interest free banks in Egypt.

Consequently, it can be concluded that there is a lack of knowledge concerning the current state of Interest free banks and their practices in Egypt. All the previous facts have highlighted the importance of having a comprehensive comparative study between Islamic and traditional banks performance.

## **2- Literature Review**

It is argued that the origin of Islamic finance dated back to the beginning of Islam, 1,400 years ago. During the first century of Islam, some forms of banking activities were similar to those used in modern banking transactions. Further, it was mentioned that Al-Zubair Ibn Al-Awam, one of the most famous personalities in Islam, was accepting deposits as a loan and investing the money. He had several branches across the Islamic Empire to return deposits to their owners, and this led some contemporary scholars to call the operation Al-Zubair Bank. Eventually, the collapse of the Ottoman Empire paved the way for traditional banks to spread in Islamic countries.

Samad and Hassan in 1999 conducted an exploratory study of Bank Islam Malaysia Berhad (BIMB). They based their methodology on the financial ratio analysis of major financial indicators to investigate the performance of BIMB in comparison to a group of 8 traditional banks for the period 1984-1997. The results suggested that, in general, the management's lack of knowledge was the main reason for the slow growth of loans under the interest-free banking regime. Despite that, the Islamic bank was found to perform better compared to their traditional counterparts in terms of liquidity and risk measurement. They found that BIMB is relatively more liquid and less risky compared to their counterparts.

Iqbal (2001) had compared the performance of Interest free banks to a group of traditional banks of equivalent size during the period from 1990–1998. He used trend and ratio analysis to do the comparison. He studied deployment efficiency, profitability, liquidity, risk and capital adequacy He discovered that, generally, Interest free banks have done fairly well during the period under the study. Based on the key financial ratios used in the study, he found that Interest free banks are well capitalized, profitable and stable. He also concluded that Interest free banks were not suffering from excess liquidity and exhibited more cost efficiency and profitability than their Traditional counterparts.

Samad (2004) compared the performance of Interest free banks and traditional banks during the post Gulf War period in Bahrain with respect to profitability, liquidity risk, and credit risk depending on the use of nine financial ratios. He concluded that there is no major difference in the performance of Interest free banks relative to traditional banks with respect to profitability and liquidity. In addition, Interest free banks are exposed to less credit risk compared to traditional banks. Their credit performance is superior to that of traditional banks.

Chapra (2008) argued that, the way the Islamic financial system has progressed and adopted the Islamic vision is only partly, but not fully. Interest free banks have not been able to fully get out of the stereotype modes of functioning as traditional banks. The use of equity and profit and loss sharing modes has been minimal compared to that of the debt-creating, sales- and lease-based modes. In addition, he argued that, all Interest free banks and branches or windows of traditional banks do not necessarily fulfill the conditions laid down by the Shariah. Yet, they try to adopt different legal strategies to transfer the entire risk to the purchasers (debtors) or the lessees unlike the Shariah base. The result is that the Islamic financial system, as it is being practiced, does not appear to be a genuine reflection of what it is expected to be. He also claimed that the Islamic financial system has so far been able to gain a very small share of the global financial market and, even if it operates perfectly

as desired by the Shariah, it may not be able to create a significant impact on the international financial system in the near futures. He believes that the only way to overcome this problem is for the Muslim nations to introduce the Islamic financial system clearly and rationally to create a conviction about its superiority. This will be more effective if Islamic countries themselves implement the system seriously in their own countries to practically establish the effectiveness in promoting financial health and stability.

In accordance with the above argument is the critique of Kamla (2009) who mentioned that Interest free banks' failure to significantly employ profit and loss sharing techniques is due to their recognition that they lack the skills to distinguish between good and bad opportunities. They fear that if they employ those techniques to lending, they will make bad choices and end up with more losses than profits.

In their study conducted in 2010, Kader et al. compared the performance of UAE Interest free banks with the performance of traditional banks for five years from the period 2000–2004. He used the financial ratios to measure banks' performance, namely, profitability, liquidity, risk and solvency, and efficiency of the banks. The study concluded that the financial performance of Interest free banks in the UAE is different from traditional banks. They also added that UAE Interest free banks are relatively more profitable, less liquid, less risky and more efficient compared to the UAE traditional banks.

Chong and Liu conducted a research in 2009 and concluded that Islamic banking, as it is practiced today, is very similar to traditional banking in Malaysia. Based on the results of their research, they also argued that changes in traditional deposit rates cause Islamic investment rates to change, but not vice versa. They believe that the reason behind these results is the fierce competition that Interest free banks face from the traditional banking practices. In accordance with this justification, Obaidullah (2005, p.17) argued that:

”It must be recognized however that Islamic financial institutions face a kind of “withdrawal risk” that mainly results from the competitive pressures

an Islamic financial institution faces from existing Islamic or traditional counterparts. An Islamic bank could be exposed to the risk of withdrawals by its depositors as a result of the lower rate of return they would receive compared to what its competitors pay.”

The same above results were reached previously by Haron and Ahmad (2000). Their study established evidence regarding the relationship between the amount of deposits placed in the Islamic banking system in Malaysia and returns given to these deposits. The findings confirmed that customers who place their deposits at saving and investment account institutions are guided by the profit motive solely. The negative relationship between interest rate of traditional banks and the amount deposited in interest-free deposit funds confirmed the existence of the utility maximization theory among Muslim customers. They argued that the only motive that should direct Muslims is the Islamic Shariah and not the profit maximization in dealing with Interest free banks.

While, Ariss (2010) argued that, there are no significant differences in profitability levels across Islamic and traditional banks. Also, he claimed that Interest free banks have lower financial risk due to their high dependability on equity and they exhibited lower competition too in comparison with the traditional banks, the fact that was previously ascertained by many studies before.

Awan (2009) has done a study to compare the asset quality of traditional banks and Interest free banks. He conducted this comparison by comparing the financial ratios of these banks. The results of the research showed that Interest free banks have more productive and efficient asset quality than traditional banks since Interest free banks have low default rate and healthier balance sheet.

Jaffar and Manarvi (2011) conducted a study to examine and compare the performance of Islamic and traditional banks operating inside Pakistan for the period 2005–2009 by analyzing the CAMEL factors. They concluded that Interest free banks performed better in possessing adequate capital and better

capital position while traditional banks outperformed in liquidity management and profitability. Both types of banks didn't show any remarkable differences concerning the asset quality. Unlike the study conducted by Rozzani and Abdul Rahman in 2013 in Malaysia using CAMELS rating too, they used a sample of 109 traditional banks and 16 Interest free banks covering the period from 2008–2011 and concluded that the levels of performance of Islamic and traditional banks in Malaysia are to a large extent very similar. No significant differences were detected between the performances of both types of banks. The above results of studies conducted in Malaysia were very much similar to the study conducted by Dodoev in 2018.

Hanif et al (2012) performed a comparative study to analyze the performance of 5 Islamic and 22 traditional banking in Pakistan. The study was conducted on two phases. The first phase consisted of financial analysis for five years (2005–2009) and included profitability, liquidity, solvency and credit risk. The second part of the study, they used a customer survey consisting of 200 questionnaires filled in by customers representing five Interest free banks and five traditional banks. The results showed that traditional banks outperformed Interest free banks in profitability and liquidity while Interest free banks showed superiority in credit risk and solvency. The qualitative part of the study conducted through the survey exhibited results that supported the ones of the quantitative study.

In an attempt to describe the common performance traits and characteristics of banks operating in a whole Islamic banking system in Sudan 2013, El-jelly and Elobeed selected a sample composed of nine Interest free banks representing the most active and large banks in Sudan. They applied factor analysis to a set of 19 financial ratios that are commonly used in banks covering the period from 1998–2007. The results of this study showed profitability, capital adequacy, liquidity risk, coverage, efficiency and control explained the variation of the financial ratios used; moreover, these variables displayed also stability over time.

Wasiuzzaman and Gunasegavan (2013) had done a study to analyze the differences that exist in bank characteristics of Islamic and traditional banks in Malaysia in terms of profitability, capital adequacy liquidity, operational efficiency and asset quality. They included the variables of corporate governance and economic conditions to test for their effect. Their sample consisted of a total of 9 traditional banks and 5 Interest free banks over the period of 2005–2009. The results showed supremacy of traditional banks in terms of ROA, bank size and board size, while Interest free banks outperformed traditional banks in operational efficiency, asset quality, liquidity, capital adequacy and board independence. The results were significant for all the variables included in the analysis except for profitability and board independence.

In addition, many studies were performed to test the efficiency of the Interest free banks like the ones of Sarker (1999), Sufian and Parman (2010), Brown (2003) and Hassan (2005). Sarker examined the performance and operational efficiency of Bangladeshi Interest free banks and concluded that Interest free banks can provide more efficient banking services if they are supported with appropriate banking laws and regulations. He also added that Interest free banks can survive within a traditional banking financial regime in which profit and loss sharing modes of finance is less dominated, yet, it cannot operate with its full efficiency level. The deterioration is not because of Interest free banks' own mechanical deficiencies; rather it is the high efficiency of the traditional banking system that puts many obstacles to more efficient functioning of Interest free banks.

In his study, Brown conducted a cross–countries research by measuring the performance of Interest free banks over a period that extends from 1998 to 2001 and he concluded that the number of fully efficient countries decreased from six in 1998 to 1 in 2001.

Sufian and Parman (2010) investigated the performance of the Malaysian Islamic banking sector and concluded that foreign banks in Malaysia have exhibited higher technical efficiency compared to their domestic peers. He argued that this is due to the foreign banks' small size, their lower market share

and consequently, their relatively lower problem loans. Moreover, he found that the window-based Islamic banking operations performed better than the full-fledged Interest free banks and this is due to the improving technical efficiency of the traditional banks offering Islamic banking products and services than for the full-ledged Islamic bank.

In addition, Hassan (2005) used a panel of interest-free banks from 22 countries and concluded that interest-free banks were relatively less efficient in controlling cost than traditional counterparts but they proved to be more efficient in generating profit. He used bank size, profitability and loan to asset ratios to measure efficiency. The reason of less efficiency of interest-free banks is that they often face regulation not favorable to Islamic transactions in most countries.

Typically, studies on Islamic banking efficiency have focused on theoretical issues and the empirical work has relied mainly on the analysis of descriptive statistics rather than rigorous statistical estimation as argued by El-Gamal and Inanolgu (2005). They used the stochastic frontier approach to estimate the cost efficiency of Turkish banks over the period 1990–2000. The study compared the cost efficiencies of 49 traditional banks with four Islamic special finance houses. Generally, they found that Islamic financial systems tend to be the most efficient. Moreover, they extended their earlier study in 2005 by providing an alternative method for evaluating bank efficiency scores and examined the cost efficiency of Turkish banks throughout the nineties. They distinguished between groups of banks that have different production technologies and concluded that the Islamic financial firms have the same production technology as traditional banks.

Nathan et al (2014) performed a study to determine the financial performance of Interest free banks and non-Interest free banks from 2003 to 2010 in Malaysia by applying the theory of Shariah Conformity and Profitability model. They used accounting ratios which included profitability ratio, liquidity ratio and credit risk ratio to measure the financial performance of the Malaysian banks. The results of the T-test revealed that traditional banks per-

form better in profitability, while Interest free banks perform better in liquidity and credit risk.

Also, Shawtari et al (2015) performed a study to examine the efficiency of the banking industry in Yemen. They conducted a comparison between all Islamic and traditional banks for the period 1996–2011. The sample constituted the 16 commercial banks working in Yemen which is composed of 4 Interest free banks and 12 traditional banks. The empirical results of the study showed that the efficiency of the banking industry in Yemen was decreasing in general accompanied with increasing instability during the later period of the research. Additionally, they concluded that traditional banks were characterized by stability though with inefficiency while Interest free banks proved to be more efficient over time. Moreover, the results showed that loan/financing and profitability are the common key determinants of efficiency for both types of banks. However, the other determinants of efficiency used in this study have different impacts for Islamic and traditional banks.

Milhem and Istaiteyeh in 2015 investigated the performance of 3 Interest free banks versus 13 traditional counterparts in Jordan over the period (2009–2013) using financial ratio analysis. A comparative study is undertaken to measure performance in terms of profitability, liquidity, risk and solvency, and efficiency through a T-test analysis to determine their significance. The results showed that there are differences in performance between Islamic and traditional banks in Jordan during the period of study. Interest free banks proved to be less profitable, more liquid, less risky, and less efficient comparing to traditional banks. However, no significant difference was found concerning the profitability ratios.

Khan et al (2017) performed a study to investigate the performance differences of Islamic and traditional banks in Pakistan by using financial ratios. They analyzed 5 Islamic and 19 traditional banks for the periods of 2007–2014 using sample t-test and logistic regression. Based on the findings of their research they concluded that Interest free banks are relatively better in profitability, efficiency, risk and liquidity management, while traditional banks are

superior in asset quality. They also argued that the higher efficiency of Interest free banks contradicts with previous studies conducted in Pakistan but they justified it due to the phenomenal expansion of Islamic banking industry and its broad appeal to customers in Pakistan.

Alshammari (2017) conducted a research in an attempt to recognize the possible performance differences between Islamic and traditional banking systems in the Gulf Cooperation Council (GCC) countries over the period from 2003 to 2015. The study documented for significant differences, specifically, traditional banks in GCC countries outperformed their Islamic counterparts in profitability. Moreover, bank specific factors such as liquidity, capital adequacy, bank size and growth all affect the profitability. More interestingly, he concluded that the GCC traditional and Interest free banks were isolated from the 2008 subprime crisis even though their profitability seems to be decayed differently over the period of the economic downturn. Khan et al, (2018) conducted a study to compare the performance of 5 Interest free banks versus 5 traditional banks for the period 2006- 2015. They conducted qualitative and quantitative analysis of both types of banks. They gathered primary data through conducting interviews and secondary data from the annual reports of the banks in study to conduct the research. They employed the profitability ratios, liquidity ratios, solvency ratios, capital ratios and efficiency ratios to measure the financial performance of both types of banks in the banking sector. Their results indicated that Interest free banks are less profitable, more liquid, less risky and less efficient. There is no significant difference in terms of capital between Islamic and traditional banks.

In 2018, Salman and Nawaz performed a study to empirically test whether there is any difference in the performance of the Islamic and traditional banking sector with respect to the customer deposits of each bank. The secondary data is taken from the annual reports of the traditional and Interest free banks. A descriptive analysis of both types of banks was performed using profitability, efficiency and liquidity ratios. The analysis of the data accepts the null hypothesis that states that the Islamic banking and the traditional banking are

different from each other in terms of their performance. However, most of the performance measures showed a positive superiority of the Islamic banking. Moreover, the study concluded that there is a growth of the Islamic banking industry, as the Islamic bank used in the study exhibited better performance than the traditional bank in the later years. In the meantime, they expected a better future of Islamic banking than that of the traditional banking as the results showed that the Islamic banking did not suffer from the global financial crisis as much as the traditional banking. The results of this study are in parallel to the study conducted by Nawaz and Bardai (2017) and Bukhari et al. (2014).

Ondes et al (2019) performed a research to compare the performance of three Interest free banks in Turkey and five Interest free banks in the United Kingdom over a period of 4 years from 2013 to 2016. Moreover, the research aims to investigate whether or not Interest free banks in Turkey are more profitable, less risky, liquid, operationally efficient, and have a good management quality compared to the Interest free banks in UK. They used time series data (pooled Least Squares) (PLS) as panel regression on nine financial ratios (CAMEL) to examine the financial performance of these banks according to their profitability, Capital adequacy, Asset quality (riskiness and solvency), Management quality, Earning diversification (operationally efficient), and Liquidity. Yet, the results were insignificant for UK and significant in Turkey and thus they couldn't conclude that Interest free banks in Turkey are better than those in the UK. However, the study predicted that Interest free banks in Turkey can perform better than Interest free banks in the UK in terms of risk and solvency and Management quality.

### **3- Data and Methodology**

The principal goal of this research is to conduct a comparative financial performance analysis between Islamic and Traditional banks in Egypt.

The research sample is composed of two groups: Interest free banks and traditional banks. There are 2 Interest free banks in Egypt: Faisal Islamic bank

of Egypt and Al-Baraka bank. Currently, there is a third Islamic bank working in Egypt which is the Abu Dhabi Islamic Bank (ADIB). However, this bank started its Islamic activities and operations in Egypt in the last quarter of 2007 after it acquired the National Bank for Development (NBD) which was not performing as interest-free bank previously. That is why; this bank was excluded from the sample of study because it doesn't have any financial reports under the Islamic flag before 2007.

Concerning the sample of traditional banks, the sample chosen is composed of banks that are commercial, private and listed in the Egyptian stock exchange so that they can match the characteristics of the two Interest free banks included in the study and also to make sure that they are all subject to the same rules and regulations of listing in the stock exchange. The sample of traditional banks is composed of 9 commercial banks.

For the purpose of this investigation, the data of this research covers the period from 2002 to 2010. The data were collected from the annual financial reports of banks included in the study. Many sources have been consulted in order to check to the reliability and consistency of data on hand. The initial aim of the research was to cover 15 years-period, however, due to the shortage in data availability and documentation and in addition lack of access and time constraints and major political turbulences and instability, the researchers were forced to diminish the period of the research to 9 years. Generally, difficulty in obtaining data is common in third world countries; these difficulties in obtaining data in third world countries hamper efforts of serious research in those economies (Eljelly and Elobeed, 2013).

Different statistical techniques will be used in this research. The first analytical technique is the descriptive analysis which will be conducted to describe the characteristics of the two groups of banks under study (Norusis, 2000; Bowen and Starr, 1982; Connolly and Sluckin, 1971). The results of the descriptive statistics will be an attempt to describe the current situations of the Egyptian Islamic and traditional banks and to provide some answers concerning the performance of these banks. Finally, an association analysis will be

followed to assist in improving our understanding of the investigated phenomenon i.e. the paired sample t-tests will be performed.

The financial ratio method was early used in the 1970s by O'Connor (1973) and Libby (1975). Since banking firms are not equal in assets, market capital, deposits, and loans, the use of ratios removes any disparities and sets banks at par (AlKulaib et al., 2013). Therefore, financial ratio analysis compensates for bank disparities. Ratio analysis is a useful tool for business owners as it measures the health and performance of the business (whether it is a bank or a multinational corporation) in terms of profitability, asset utilization, liquidity, leverage, or market valuation to diagnose potential problems and to see how well it is doing over time (Najjar, 2013).

The research is concerned with checking the validity of the argument concerning the performance of Interest free banks being better than that of traditional banks. The researcher chose to use the application of CAMEL rating system to evaluate the financial strengths and soundness of Interest free banks in comparison to traditional banks. The criteria for performance comparison of Islamic and traditional banks under CAMEL ratings include capital adequacy, quality of assets, management standards, earnings and liquidity maintenance. The research is mainly concerned with investigating the assumption of whether there is a difference between the performance of Islamic and traditional banks. This argument can be investigated by developing the following hypothesis:

**There is a difference between the performance of traditional banks and the performance of Interest free banks.**

In order to be able to test this hypothesis using the CAMEL rating system, this hypothesis is split into five hypotheses:

**H1:** Capital adequacy of Interest free banks differs significantly from capital adequacy of traditional banks.

**H2:** Quality of assets of Interest free banks differs significantly from quality of

assets of traditional banks.

**H3:** Quality of management of Interest free banks differs significantly from quality of management of traditional banks.

**H4:** Earnings of Interest free banks differ significantly from earnings of traditional banks.

**H5:** Liquidity of Interest free banks differs significantly from liquidity of traditional banks.

Many studies predicted the bright future of Interest free banks and recorded that the performance of Interest free banks outperformed that of traditional banks (Hanif et al, 2011; Jaffer and Manarvi, 2011; Awan, 2009; Rosly and Abu Bakar, 2003; Iqbal, 2001). The literature review part of this research presented many studies that made a comparison between the performance of Interest free banks and a control group of traditional banks and it has been evaluated using both trend and ratio analysis. Generally, Interest free banks have done fairly well in comparison to traditional banks and the results showed that Interest free banks performed better in possessing adequate capital and a better liquidity position in comparison to traditional banks.

However, Fayed (2013) conducted a study on the Egyptian financial institutions during the period from 2008–2010 and argued that the performance of traditional banks, in general, was better than that of Interest free banks. She mentioned that Interest free banks still have a long way to go. In addition, Mouawad (2009) claimed that the Interest free banks in Egypt had a very low effect in pouring extra savings in the economy in comparison to traditional banks; she argued that the total Islamic share in deposits and savings in Egypt accounts only for 5% in the period from 2006 to 2009. Moreover, Kazarian (1993) and Mohieldin (1997), they both criticized the policies of Interest free banks in Egypt along with the governmental policies, which ended up benefiting the situation of the traditional banks, and left the Islamic financial institutions suffering from inefficient allocation of funds.

## 4- Results and findings

### 4-1 Descriptive statistics

The following tables (1) and (2) contain descriptive statistics for the different financial ratios used to measure the performance of the Islamic and traditional banks.

**Table (1): Descriptive Statistics of Interest free banks**

<b>Variable Description</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
CSTF/TA	59.4572	11.03618	25.59	68.31
TD/TA	89.9283	1.88544	86.58	93.12
OH/TA	.8650	.21457	.62	1.30
NIEA/TA	80.8906	20.83562	55.46	100.00
EQ/TA	5.4022	1.47289	2.97	8.93
TLO/TA	60.2072	18.37914	28.57	88.17
CCE/TA	11.4350	7.97281	4.79	37.80
TL/TA	94.5978	1.47289	91.07	97.03
PLOL/TLO	9.4883	4.32966	6.36	21.29
GDPPC	121.6667	22.28690	100.00	159.00
RIR	3.5544	3.76958	-.08	11.16
IR	9.3933	5.25440	2.40	17.32
GDPGR	5.1000	1.56356	3.10	7.20
GDP	124.2222	64.58151	27.00	224.00
SIZE	217.3333	115.90107	100.00	492.00
REQRESR	14.0000	.00000	14.00	14.00
CORTXR	26.6667	9.70143	20.00	40.00

The comparison study will be made starting from 2004 and excluding 2002 and 2003 because in this year the economic reform started in Egypt. Egypt began introducing economic reforms intended to increase trade, facilitating business startups and promoting growth. All these changes are directly related to banks' performance. That's why the researchers chose to make the comparison between profitability measures starting from 2004.

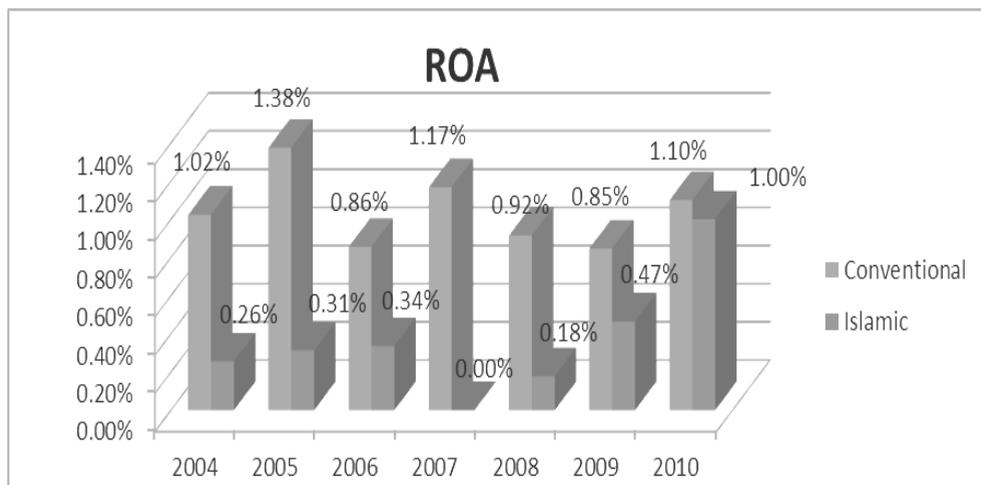
The first comparison between Islamic and traditional banks is concerned with the ROA ratios as shown in table (3) and graph (1). As it is clear from table (3), the ROA of traditional banks is higher than the ROA of Interest free banks all over the period from 2004–2010 and this is clearly shown in graph (1).

**Table (2): Descriptive Statistics of Traditional banks**

<b>Variable Description</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
CSTF/TA	55.9385	20.55003	.00	80.54
TD/TA	73.3984	25.06617	.00	94.10
OH/TA	1.5081	.73593	.00	3.01
NIEA/TA	12.3232	5.61170	.00	28.78
EQ/TA	9.4381	5.23880	.00	23.22
TLO/TA	42.4417	18.22506	.00	67.61
CCE/TA	14.0354	9.70472	.00	50.08
TL/TA	80.5325	27.16045	.00	96.63
PLOL/TLO	15.0880	16.73028	.00	100.00
GDPPC	119.1605	28.78301	.00	159.00
RIR	5.8248	15.73382	-.08	103.00
IR	9.5401	5.04426	2.40	17.32
GDPGR	5.0914	1.54234	2.40	7.20
GDP	121.7074	65.86726	3.10	224.00
SIZE	216.7160	550.04125	-10.00	2603.00
REQRESR	14.0000	.00000	14.00	14.00
CORTXR	26.6667	9.48683	20.00	40.00

**Table (3) Comparing the ROA of Interest free banks and Traditional banks**

<b>ROA</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Conventional	1.02%	1.38%	0.86%	1.17%	0.92%	0.85%	1.10%
Islamic	0.26%	0.31%	0.34%	0.00%	0.18%	0.47%	1.00%



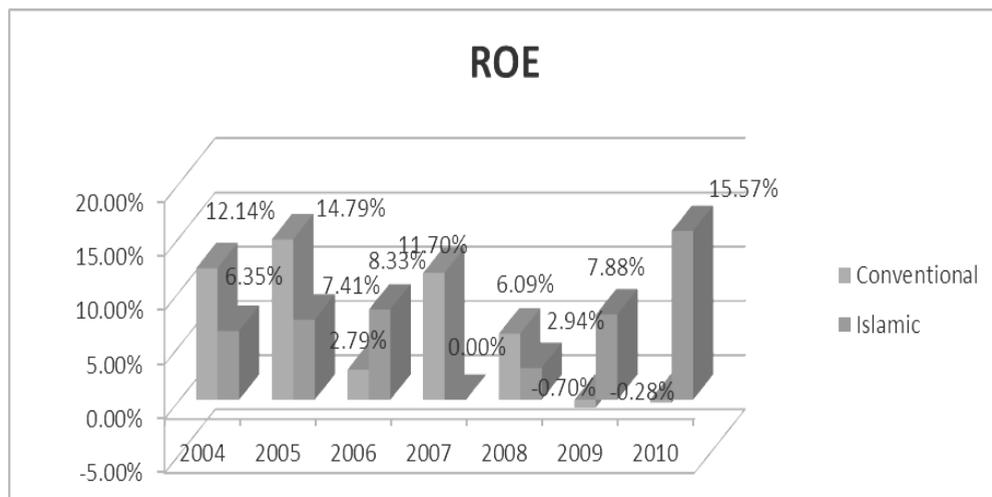
**Graph (1) Comparing the ROA of Interest free banks and Traditional banks**

Concerning the ROE, the comparison is shown in the table (4) and graph (2).

**Table (4): Comparing the ROE of Interest free banks and Traditional banks**

ROE	2004	2005	2006	2007	2008	2009	2010
Convention-	12.14%	14.79%	2.79%	11.70%	6.09%	-0.70%	-0.28%
Islamic	6.35%	7.41%	8.33%	0.00%	2.94%	7.88%	15.57%

From the table and the graph, it can be inferred that there is a fluctuation in the ROE of Islamic and traditional banks. In some years, the ROE of traditional banks is higher (2004, 2005, 2007, and 2008), while in other years, the ROE of Interest free banks is higher (2006, 2009 and 2010). These fluctuations in this ratio could be due to many factors like changes in equity levels in both types of banks, loan loss provisions or changes in net income and any of its determinants.

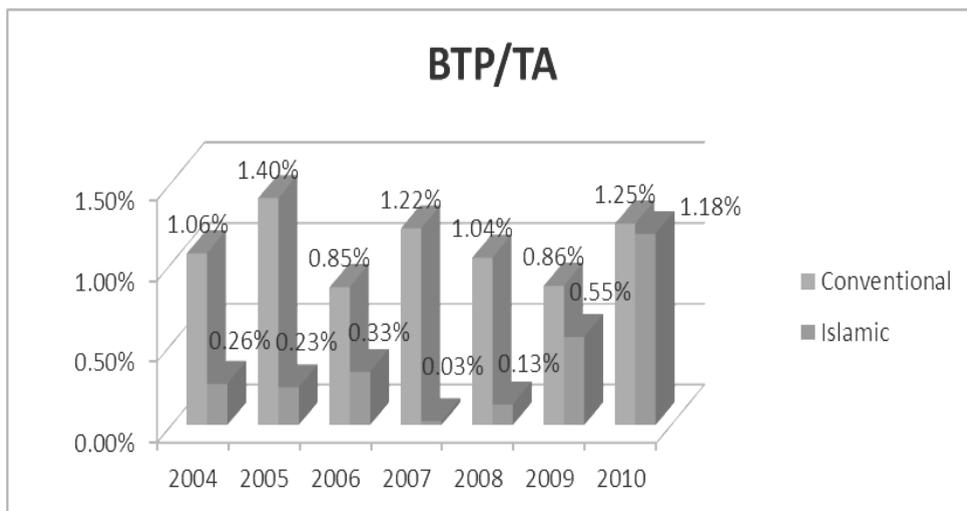


**Graph (2): Comparing the ROE of Interest free banks and Traditional banks**

Moving to the third profitability measure which is BTP/TA, it can be concluded that the comparison is in favor of traditional banks as it is higher over the period from 2004–2010. The results can be depicted from table (5) and graph (3). This result corresponds to the results from the ROA comparison as it shows the supremacy of traditional banks' performance over Interest free banks supporting the argument of the researcher that the performance of traditional banks in Egypt is better than that of Interest free banks.

**Table (5): Comparing the BTP/TA of Interest free banks and Traditional banks**

<b>BTP/T. Assets</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Conventional</b>	1.06%	1.40%	0.85%	1.22%	1.04%	0.86%	1.25%
<b>Islamic</b>	0.26%	0.23%	0.33%	0.03%	0.13%	0.55%	1.18%

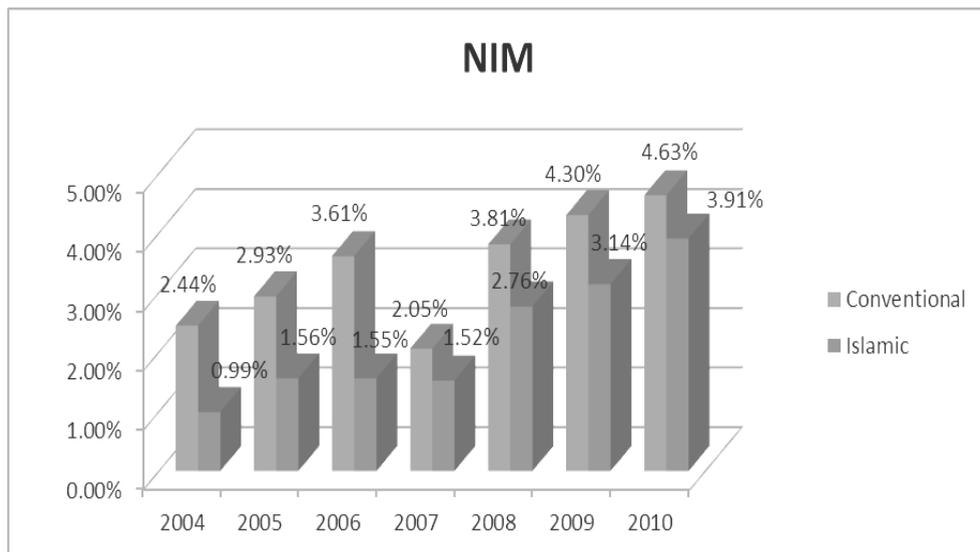


**Graph (3): Comparing the BTP/TA of Interest free banks and Traditional banks**

When it comes to NIM and NNIM, those variables were proven to be significantly better in traditional banks than in Interest free banks through the T-Test. The following table (6) and graph (4) show the results of the NIM in both types of banks.

**Table (6): Comparing the NIM of Interest free banks and Traditional banks**

NIM	2004	2005	2006	2007	2008	2009	2010
Conventional	2.44%	2.93%	3.61%	2.05%	3.81%	4.30%	4.63%
Islamic	0.99%	1.56%	1.55%	1.52%	2.76%	3.14%	3.91%



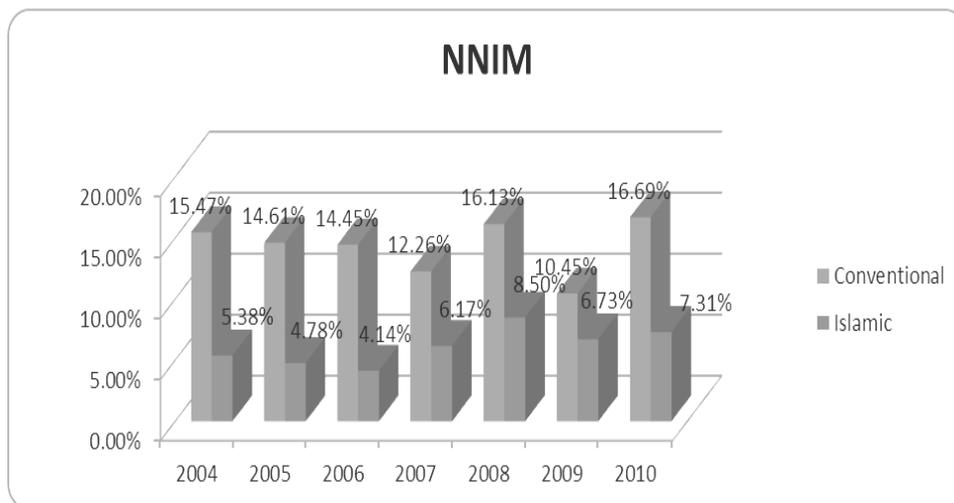
**Graph (4): Comparing the NIM of Interest free banks and Traditional banks**

Once again, it is clear that the NIM of traditional banks is superior to the NIM of Interest free banks. This result is proved by the T-Test and it was proven to be significant.

Lastly, the NNIM comparison is shown in table (7) and graph (5).

**Table (7): Comparing the NNIM of Interest free banks and Traditional banks**

NNIM	2004	2005	2006	2007	2008	2009	2010
Conventional	15.47%	14.61%	14.45%	12.26%	16.13%	10.45%	16.69%
Islamic	5.38%	4.78%	4.14%	6.17%	8.50%	6.73%	7.31%



**Graph (5): Comparing the NNIM of Interest free banks and Traditional banks**

From the above table and graph concerning the comparison of NNIM between traditional banks and Interest free banks, it can be concluded that traditional banks NNIM is higher than NNIM of Interest free banks all over the period from 2004–2010. This result is also proven from the T-Test and showed a significant lead of traditional banks.

It can be concluded from the above analysis that traditional banks in Egypt are more profitable than Interest free banks except for the measure of ROE. Though the two types of banks operate under the same regulations and legislative rules that govern their functionality in the Egyptian market, yet the profitability of traditional banks is better.

#### 4-1 The paired sample T-test

The paired sample T-test will be used to determine if the two sets of data are significantly different from each other. The null hypothesis is that the difference in the mean values is zero. The null hypothesis for the paired sample t-test is  $H_0: d = \mu_1 - \mu_2 = 0$ . Where  $d$  is the mean value of the difference. The null hypothesis is tested against one of the following alternative hypotheses, depending on the question posed:  $H_1: d = 0$ ;  $H_1: d > 0$  or  $H_1 < 0$ .

**H1: Capital adequacy of traditional banks differs significantly from capital adequacy of Interest free banks.**

Usually, better performing banks have larger capital adequacy ratio except for subordinated debt over capital funds. This ratio indicates the percentage of total capital provided in form of subordinated debts; the lower this ratio the better. Results in table (8) indicate rejecting the null hypothesis and accepting the alternative hypothesis. At 95% confidence level, there exists a significant difference between the capital adequacy of Interest free banks and traditional banks. The ratios show that the capital adequacy of traditional banks is significantly better than its counterpart at Interest free banks. Traditional banks are leading in the following ratio: equity to total assets, equity to net loans, equity to customer and short-term funding, equity to liabilities, capital funds to total assets, capital funds to net loans, capital funds to customer and short-term funding and capital funds to liabilities.

**Table (8): T-Test for Differences between Islamic and Traditional banks- Capital Adequacy**

	Levene's Test for equality of variances		T-test for equality of Means				
	F	Sig	t	Sig (P-Val)	Mean difference	95% confidence interval of the difference	
						Lower	Upper
<b>Capital Adequacy</b>							
EQ / TA	5.563	.024	-	0.000	-5.87601	-	-3.54270
EQ/NLO	7.094	.011	-	0.000	-15.91707	-	-8.11268
EQ/CSTF	3.455	.071	-	0.001	-10.28111	-	-4.49587
EQ/TL	6.343	.016	-	0.000	-7.28255	-	-4.08168
CF/TA	3.837	.058	-	0.005	-3.55799	-	-1.11422
CF/NLO	10.605	.002	-	0.005	-10.14465	-	-3.26386
CF/CSTF	2.185	.148	-	0.039	-6.14639	-	-.34218
CF/TL	4.581	.039	-	0.007	-4.55878	-	-1.31007
SD/CF	1.026	.318	1	0.229	4.54095	-	12.05513

This indicates that traditional banks are more proficient than Interest free banks in absorbing loan losses in Egypt and in reducing the financial risk. As Samad (2004) asserts high capital adequacy ratios will aid the bank in providing a strong cushion against unanticipated credit risks. The results of this research are consistent with the results of Fayed (2013) and Jaffar and Manarvi (2011) but inconsistent with most of the literature which asserts that Interest free banks have better capital adequacy ratios than traditional banks like Al-

Gazzar (2014), Madvari (2012) and Javaid et al (2011) whose studies found that Interest free banks are better in maintaining better capital adequacy ratios. Therefore, the researchers conclude that hypothesis 1 is accepted as it is supported by the results of the statistical analysis which proves that there is a difference between the performance of Interest free banks and the performance of traditional banks concerning their capital adequacy. The results are in favor of traditional banks which show better ratios than Interest free banks. Consequently, the traditional banks have stronger financial strength and viability in terms of capital. It can also be inferred from the results that traditional banks have better management in understanding and manipulating any shock jeopardizing the financial capability of the banks during times of risk.

**H2: Quality of assets of traditional banks differs significantly from quality of assets of Interest free banks.**

**Table (9): T-Test for differences between Islamic and Traditional banks - Asset Quality**

	Levene's Test for equality of variances		T-test for equality of Means				
	F	Sig	t	Sig (P-Val)	Mean difference	95% confidence interval of the difference	
						Lower	Upper
<b>Asset Quality</b>							
PLOL/TLO	.599	.444	1.188	.242	.49519	-	1.33943
PLOL/NIR	.709	.405	1.888	.067	6.11446	-	12.67605
PLOL / ILO	.952	.336	.597	.554	89.34764	-	392.67551
ILO/TLO	3.174	.083	-.023	.982	-.01389	-	1.19967
NCO/TLO	.174	.679	-	.113	-.57340	-	.14282
NCO/NIBPL	.104	.749	-.925	.361	-8.50957	-	10.12121
LOLR/ILO	1.005	.323	-.405	.688	-3346.890	-	13393.688

Since high performing banks tend to restrain their credit risk, they tend to have lower loan-loss provision ratios. Poor asset quality indicators are perceived to cause capital erosion and increase credit and capital risks (Hassan and Bashir, 2003). The quality of assets depends to a large extent on the quality of credit evaluation, monitoring and collection procedures within each bank. Results in table (9) indicate accepting the null hypothesis and rejecting the alternative hypothesis. At 95% confidence level, there is no proven significant difference between the assets quality of Interest free banks and traditional banks. The ratios show that the assets quality of traditional banks is not significantly better than its counterpart at Interest free banks.

The result of this research corresponds with the results of Rozzani and Rahman (2013) which concluded that asset quality for both modes of banking was almost the same and also with the results of Imtiaz and Merchant (2012), Ansari and Rehman (2011) and Jaffer and Manavri (2011). While in Fayed (2013) and Alkassim (2005), the results showed superiority of traditional banks' quality of assets over Interest free banks. While the study of Al-Gazzar (2014) shows that the quality of assets of Interest free banks is better than traditional banks same as the studies of Hanif et al (2011), Awan (2009), and Hassan and Bashir (2003). Hence, the researchers reached a conclusion that the hypothesis 2 is rejected as there is no evidence from the statistical analysis that shows any difference between the quality of assets of Interest free banks and the quality of assets of traditional banks operating in Egypt. This result could be due to the strong supervision of the central bank of Egypt over banks and requesting the submission of monthly financial statements by banks to closely monitor the banks' performance in order to make sure they are adopting sound banking practices and financial stability.

### **H3: Quality of management of traditional banks differs significantly from quality of management of Interest free banks.**

Normally, better performing banks have larger operations ratios and better quality of management. Except for the cost to income ratio, the lower is this ratio the better. Results in table (10) indicate partial acceptance of the alterna-

tive hypothesis and partial rejection of the null hypothesis. At 95% confidence level, there is a significant partial difference between the operations of Interest free banks and traditional banks. The results show that the following ratios are significantly higher and better in traditional banks than Interest free banks: net interest revenue to average assets, other operating income to average assets, return on average assets, return on average equity and income net of distribution to average equity. On the other hand, the following ratios are significantly higher and better in Interest free banks than traditional banks: non-interest expenses to average assets, pre-tax operating income to average assets and non-operating items to net income. Concerning the cost to income ratio, it is significantly lower for traditional banks and consequently this is an indicator of a better performance.

**Table (10): T-Test for differences between Islamic and Traditional banks- Management (Operations ratios)**

Operations Ratio (Management)	Levene's Test for equality of variances		T-test for equality of Means				
	F	Sig	t	Sig (P-Val)	Mean difference	95% confidence interval of the difference	
						Lower	Upper
NIR/AGGA	.247	.622	-	0.013	-1.21829	-2.16351	-.27306
OOI/AVGA	4.074	.051	-	0.039	-0.13062	-.25398	-.00727
NIE/AVGA	3.605	.065	8.20	0.000	4.83087	3.63806	6.02368
PTOI/AVGA	3.922	.055	-	0.000	4.15821	-4.86975	-3.44666
NOIT/AVGA	1.522	.225	.422	0.676	0.10467	-.39814	.60749
ROAA	27.199	.000	-	0.000	-1.30962	-1.82073	-.79851
ROAE	2.397	.130	-	0.008	-8.34959	-14.35293	-2.34625
INOD/AVGE	2.397	.130	-	0.008	-8.34959	-14.35293	-2.34625
NOI/NI	26.218	.000	2.63	0.013	1195.3873	273.32225	2117.452
CTIR	30.072	.000	2.53	0.016	797.12097	158.92493	1435.317
REP	14.299	.001	-	0.103	-1.09622	-2.42461	.23217

These results are consistent with, Merchant (2012), Jaffer and Manarvi (2011), Safiullah (2010) and Hassan and Bashir (2003); while differ from Al-Gazzar (2014), Wasiuzzaman and Gunasegavan (2013), Siraj and Pillai (2012), Ansari and Rehman (2011) and Iqbal (2001) which proved that the operations of Interest free banks are better than those of traditional banks. Accordingly, the researchers conclude that the hypothesis 3 is accepted based on the statistical results reached. There is a difference concerning the operational ratios and the quality of management. It can be deduced from these ratios that traditional banks' management are better able to manage their assets, generate revenues and control costs. It follows that traditional banks are more efficient in managing to get more deposits from trustworthy and financially strong depositors and reduce the risk of defaults by borrowers by granting loans to creditworthy customers.

#### **H4: Earnings of traditional banks differ significantly from earnings of Interest free banks.**

It is generally known that the higher the earnings and profitability ratios the better the performance is. Results in table (11) indicate accepting the alternative hypothesis and rejecting the null hypothesis. At 95% confidence level, there is a significant difference between the earnings of Interest free banks and traditional banks. The ratios show that the net non-interest margin and the net interest margin ratios are significantly higher in traditional banks than Interest free banks. This result shows that the profitability of traditional banks is better than the profitability of Interest free banks. The result of this research goes with the results of many previous studies like the ones performed by Fayed (2013), Hanif et al (2012) and Samad and Hassan (1999), while it differs from Al-Gazzar (2014), Rozzani et al (2012), Usman and Khan (2012), Safiullah (2010), Hassan (2005) and Iqbal (2001).

**Table (11): T-Test for differences between Islamic and Traditional banks- Earnings ratios**

	Levene's Test for equality of		T-test for equality of Means				
	F	Sig	t	Sig (P-Val)	Mean difference	95% confidence interval of the difference	
						Lower	Upper
<b>Earnings</b>							
ROA	9.191	.003	-	0.111	-0.63907	-1.42862	.15048
ROE	2.414	.124	.014	0.989	0.08840	-	12.62890
BTP/TA	7.850	.006	-	0.149	-0.67710	-1.60200	.24780
NNIM	5.957	.016	-	0.000	-8.76302	-	-3.97659
NIM	7.692	.007	-	0.043	-1.03451	-2.03725	-.03176

Consequently, the researchers conclude that the hypothesis 4 is partially supported by the results of the analysis as the difference exists in only two ratios which are NIM and the NNIM while the other ratios show no significant difference between traditional and Interest free banks in Egypt. The results of this part prove that traditional banks' profitability is higher than the profitability of Interest free banks. This result is proved as well by the ratio of cost to income ratio analyzed in the sub hypothesis of operating efficiency which proves that management of traditional banks pioneer in cost control and revenues generation than the management of Interest free banks in Egypt.

**H5: Liquidity of traditional banks differs significantly from liquidity of Interest free banks.**

**Table (12): T-Test for differences between Islamic and Traditional banks- Liquidity ratios**

	Levene's Test for equality of variances		T-test for equality of Means				
	F	Sig	t	Sig (P-Val)	Mean difference	95% confidence interval of the difference	
						Lower	Upper
<b>Liquidity</b>							
<b>INTBR</b>	7.128	.011	1.191	0.241	838.88989	-588.86041	2266.64019
<b>NLO/TA</b>	16.578	.000	2.498	0.017	10.36019	1.95537	18.76501
<b>NLO/CSTF</b>	9.426	.004	2.314	0.026	18.69117	2.32740	35.05494
<b>NLO/TDB</b>	14.727	.000	1.321	0.195	5.98821	-3.19524	15.17165
<b>LIQA/CST</b>	1.113	.298	.100	0.921	1.62609	-31.18189	34.43407
<b>LIQA/TDB</b>	.313	.579	-1.959	0.058	-11.94212	-24.29254	.40830

Mostly, liquidity is not a major problem for sound banks working in a reasonably competitive banking system. However, liquidity can change rapidly and consequently, requiring frequent updates of relevant indicators. Results in table (12) indicate accepting the alternative hypothesis and rejecting the null hypothesis. At 95% confidence level, there is a significant difference between the liquidity of Interest free banks and traditional banks. The ratios show that the net loans to total assets and the net loans to customer and short term funding are significantly higher in Interest free banks than traditional banks. The results of this researcher are compatible with the results of Al-Gazzar (2014), Fayed (2013) and Hanif et al (2012), and contradict with the results of Rozzani and Rahman (2013) and Haron and Abdul Rahman (2012).

As a consequence, the researchers conclude that the hypothesis 5 is supported by the results of the statistical analysis. The liquidity of the traditional banks differ from the liquidity of the Interest free banks in favor of the traditional banks which showed a lower ratio level and hence a better liquidity position and less risk to face liquidity squeezes or defaults.

The previous results are observed as they all have a large t-value and a very small significant value ( $P$ -value  $< 0.05$ ), with respect to the 2-tailed. This means that the variables previously mentioned differ in Interest free banks than in Traditional banks.

## **5- Conclusion**

The paired sample t-test was used to compare the performance of the two Interest free banks working in Egypt along with a sample of nine traditional banks listed in the Egyptian stock exchange during the period 2002–2010. The researchers attempted in this part of the study to deepen the understanding of the financial soundness indicators that are more relevant for the analysis of the financial stability in the Egyptian economy. To facilitate the comparison, the sample of the commercial banks and Interest free banks are similar in size, where size is measured in terms of total assets. The comparison of the financial measures expressed in terms of the CAMEL financial ratios indicates the superiority of Egyptian traditional banks over Islamic ones in capital adequacy, quality of management, earnings and liquidity. While the findings indicate no significant difference exists among the two groups of banks concerning the quality of assets. The findings show that the Egyptian experience in Islamic banking is considered a deviation from the theoretical framework of Islamic finance and a clear aberration from its objectives.

From the above analysis, it can be clearly stated that the performance of the Egyptian traditional banks shows supremacy and dominance over the performance of the Egyptian Interest free banks and this is due to the flaws that exist in the Egyptian banking regulations that favor and encourage the traditional banking theme more than the Islamic one. As Kazarian mentioned in his

study (1993, p.285): “One wonders what is Islamic about Interest free banks in Egypt other than their Islamic terminology”. He argued that Interest free banks in Egypt; namely Faisal and Al-Baraka banks use round about methods to perform the traditional banking practices. The gap between the practical results of this study and the theoretical foundations could be a result of the shortage of experts in Islamic banking and the absence of Islamic accounting and auditing standards.

The gap that exists between the performance of Interest free banks and the performance of traditional banks can be attributed to a set of barriers and obstacles that Interest free banks face, namely:

1. Absence of accounting and auditing standards in Egypt tailored specifically for Interest free banks to function through.
2. Shortage of experts in Islamic banking and finance in Egypt since dealing within the Islamic banking framework requires specific qualifications and expertise.
3. Conflict between Islamic and traditional banks specially that the financial environment in Egypt is in favor of interest based system.
4. Possible conflict with the central bank since the rules and regulations set are in support of traditional banking system.
5. The Profit and loss sharing finance system is unpopular with Interest free banks customers.
6. More than 80% of financing in Interest free banks in Egypt is short-term while the profit and loss sharing system is best suited for long-term finance.
7. There aren't any kinds of Islamic financial products and markets to help Interest free banks manage their liquidity shortage or excess, moreover, the Interest free banks find themselves forced to deal with treasury bills with interest and loans from other banks in order to manage their liquidity issues.
8. Lack of knowledge of Islamic financial products available abroad since there are not enough experienced Islamic bankers.

9. Although the Islamic religion prohibits dealing with traditional banks due to the fact that they deal with interest in all kind of transactions, however, the Egyptian government showed a tendency towards limiting and suppressing the activities of Interest free banks in Egypt specially after the crisis that happened in Egypt during the eighties with Islamic money management companies that led to a severe control of the central bank of Egypt over the practices of all banks and set heavy rules and regulations concerning the expansion of Interest free banks. In addition, Sheikh Tantawi's fatwa (advice) on interest, a top-government appointed Sunni religious authority, he said that bank customers could deposit funds for predetermined profits, in essence allowing interest and thus challenging the basis of Islamic finance.

For all the reasons mentioned above, it can be concluded why the traditional banks' performance defeat the performance of Interest free banks in Egypt.

Finally, it must be mentioned that, throughout the data collection process, differences were found in figures related to financial statements in the first two years of the period of analysis, 2002 and 2003, that's why the researchers did the best to find the most reliable data in order to be used in the analysis. In addition, the study covered the period from 2002 to 2010 only and this may lead to classifying its results as outdated. Yet, the period included in the study led to results that are possible to be generalized over the current period starting from 2014. The researchers skipped the period from 2011 to 2013 due to the abnormal political, economical and financial turbulences that characterized this period as a result of the political unrest and uprising which took place during two consecutive revolutions. As a consequence, the data for this period was excluded from the study so as not to distort the results or weaken the inferential power and generalization of this study.

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### List of Abbreviations

BTP/TA	Before Tax Profit/Total Assets
CAMEL	Capital Adequacy, Asset Quality, Management Quality, Earn-
CCE/TA	Cash and cash Equivalent/Total Assets
CF/TA	Capital Fund/Total Assets
CORTXR	Corporate Tax Rate
CTIR	Cost to Income Ratio
CSTF/TA	Customer and Short Term Funding/Total Assets
EQ/NLO	Equity/Net Loans
EQ/TA	Equity/Total Assets
GDP	Gross Domestic Product
GDPGR	Gross Domestic Product Growth rate
GDPPC	Gross Domestic Product Per Capita
ILO/TLO	Impaired Loans/Total Loans
INFR	Inflation Rate
INOD/AVGE	Income Net of Distribution/Average Equity
INTBR	Interbank Ratio
LIQA/CSTF	Liquid Assets/Customer & Short Funding
LIQA/TDB	Liquid Assets/Total Deposits & Borrowing
LOLR/ILO	Loan Loss reserve/Impaired Loans
NCO/TLO	Net Charge Off/Total loans
NCO/NIBPLOL	Net Charge Off/Net Income Before Provision for Loan Losses
NIE/AVGA	Non Interest Expenses/Average Assets
NIEA/TA	Non Interest Earning Assets/Total Assets
NIM	Net Interest Margin
NIR/AVGA	Net Interest Revenue/Average Assets
NLO/CSTF	Net Loans/Customer & Short Term Funding
NLO/TA	Net Loans/Total Assets
NLO/TDB	Net Loans/Total Deposits & Borrowing
NNIM	Net Non Interest Margin
NOI/NI	Non Operating Items/Net Income
NOIT/AVGA	Non Operating Items & Taxes/Average Assets
OH/TA	Overhead/Total Assets

OLS	Ordinary Least Square Model
OOI/AVGA	Other Operating Income/Average Assets
PLOL/ILO	Provision for Loan Losses/Impaired Loans
PLOL/NIR	Provision for Loan Losses/Net Interest Revenue
PLOL/TLO	Provision for Loan Losses/Total Loans
PLS	Profit and Loss Sharing
PTOI/AVGA	Pre-Tax Operating Income/Average Assets
REP	Recurring Earning Power
REQRESR	Required Reserve Ratio
RIR	Real Interest Rate
ROA	Return on Assets
ROAA	Return on Average Assets
ROE	Return on Equity
ROAE	Return on Average Equity
SD/CF	Subordinated Debt/Capital Fund
SIZE	Total Assets
SPSS	Statistical Package for the social Science
TD/TA	Total Deposits/Total Assets
TL/TA	Total Liabilities/Total Assets
TLO/TA	Total Loans/Total Assets