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# Examining the Efficiency and the Effectiveness of Islamic and Conventional Banking: Evidence from Indonesia

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***Abstract:*** *The paper attempted to shed the light on assessing the efficiency and the effectiveness of the Indonesian Islamic banks in the economy, through comparing the financial determinants of profitability of Islamic and conventional banks in short run. The authors carried out an empirical research as an attempt to find out if there is minor or major discrepancies in the financial factors and determining the types of operations affecting the profit generation of Islamic and conventional banks in Indonesia. The pattern conducted in the present empirical survey relies on monthly data about financial indicators of the banking sector of Indonesia. The data used in the research covered the period March 2010 to July 2011. The empirical investigation of the current paper enabled us to infer that Islamic finance could be considered as source of valuable economic contribution in the finance of developing countries, like bare out from the Indonesian pattern.*

***Keywords:*** *Islamic Finance, Conventional Finance, Efficiency, Effectiveness, Multiple Regressions*

**Classification JEL:** *G21, G3*

## I. INTRODUCTION

The prime objective of the present study was to compare the efficiency and the effectiveness of Islamic with conventional banks, through determining the financial factors that affect profitability of banks in Indonesia. The topic should stimulate reflection on the complementarity or substitution among their financial services targeting to stabilize and to develop the financial sector.

To reach the main object of the paper, we attempted to compare different theoretical approaches to the nature of banking while referring to Islamic and conventional banks. The diversity of ideas in the theoretical and the empirical researches suggest the lack of understanding in this matter. It raises questions about the extent of efficiency and effectiveness of Islamic and conventional banking systems. Hence, the central question of our research: Islamic finance is more effective and efficient than conventional finance, in short run.

There are various researches and studies in the literature focusing on the issue of efficiency of Islamic banking sector. We could note several empirical investigations carried out to measure efficiency and effectiveness of Islamic banks. For example: Samad and Hassan (2000), Hassan and Bashir (2003), Rosly et al (2003), Samad (2004) and Saleh and Rami (2006)

To reach the major objective of the study, we attempted to confront several theoretical approaches about the aspects of banking referring to the Islamic and traditional banks. The diversity of the advances developed in theory and empirical investigations obviously demonstrated the absence of agreement on the issue of better efficiency of Islamic banks. The findings of several empirical investigation underlined the effectiveness of the Islamic banking compared to the conventional banks.

The results obtained in the present research attempt to provide explanation for the question about the role of Islamic finance in contemporary economy: Is it a substitute or a complement to the conventional finance in short run? Therefore, to give an appropriate background for Islamic banks to the stakeholders, the financial behavior issue of Islamic banks gained the attention of several researchers and reviews, it was firmly discussed and analyzed in details. In the present survey, we conducted a rigorous empirical investigation, and ended by comparing the results found between Islamic with conventional banks sector in Indonesia.

In the present paper, we exerted the effort to provide an accurate answer to the question posed above. For this reason, we carried out an investigation that relies on identifying the determinants of performance of banking of the Islamic and conventional banks, over the period going from March 2010 to July 2011. The data used are monthly, they summarized the banking environment of Indonesia, and they are collected from the annual reports of the Indonesian central bank. The paper is made up of the following sections: section 2 provides a review of the literature related to the topic of Islamic bank performance and their determinants. Section 3 presents the rigorous methodology adopted and the data used in the present paper. Section 4 explains the findings resulted from the empirical investigation conducted, and section 5 contains the conclusions, as well as some suggestions for further studies.

## II. LITERATURE REVIEW:

The content of literature attempting to discuss the Islamic finance issue is valuable and abundant. According to Khan (2010): “There is now a sufficiently long history of Islamic banking to allow an in-depth analysis of Islamic compared to conventional banking”. For other researchers concerned about the topic of Islamic banking performance and efficiency, like Berger and Humphrey (1997) stressed that: “There is an abundant literature on the efficiency of banking institutions”.

### 2.1. THE ADVENT OF ISLAMIC BANKING:

Islamic banking is a recent aspect of banks that appeared in Arabic countries to be accommodated with Sharia laws. For the conventional banks, they make up the traditional institutions that provided financial services from several centuries. However, Islamic banking system has gained popularity rapidly, there are more than 300 Islamic financial institutions in the entire world. So, it seems that Islamic banking has grown rapidly in size and in number in several countries around the world (Sundararajan and Errico, 2002)1. The growth rate of multiplicity of Islamic banks is phenomenal especially in the Middle East and Southeast Asia (Karwowski, 2009). In some countries, Islamic banking and other Islamic financial institutions became systemically significant and are considered as “too big to be ignored” (Hasan and Dridi, 2010).

Several authors assume that Islamic banks have lower efficiency than conventional banks for several reasons. At the first, the strict applying of Sharia rules means that many of the Islamic banking products are not suitable, thereby, it should tend to raise operational costs supported by Islamic banks relatively to conventional banks. Second, several surveys raised the statement that Islamic banks tend to be small compared with conventional banks. It enabled many authors to pose the problem of technical efficiency of Islamic banks, which increase with the institution’s size (Abdul-Majid et al., 2005a; Bhattacharyya et al., 1997; Chen et al., 2005; Drake and Hall, 2003; Drake et al., 2006; Isik and Hassan, 2002b; Jackson and Fethi, 2000; Miller and Noulas, 1996; Sathye, 2003). Third, Islamic banks are often domestically owned and the bulk of the evidences suggests that foreign-owned banks are more technically efficient than the domestically-owned institutions (Hasan and Marton, 2003; Isik and Hassan, 2002b; Jemric and Vujcic, 2002; Kasman and Yildrim, 2006; Matthews and Ismail, 2006; Mokhtar et al., 2008; Sturm and Williams, 2004; Weill, 2003).

[1] Sundararajan, V., & Errico, L. (2002). *Islamic financial institutions and products in the global financial system: key issues in risk management and challenges ahead* (Vol. 2). International Monetary Fund.

## 2.2. THE PROFITABILITY OF ISLAMIC BANKS:

Samad and Hassan (1999)2 analyzed the performance in terms of profitability, liquidity, risk exposure and solvency of a Malaysian bank, Bank Islamic Malaysia Berhad, during the period 1984-1997. The findings underlined that the bank Islamic Malaysia Berhad was comparatively less risky, less profitable and more solvent compared to conventional banks.

Iqbal (2001) analyzed the performance of Islamic and conventional banks through comparing both types made up of 12 banks of the same size, during 1990-1998. Profitability, liquidity, risk, capital adequacy and deployment efficiency are the major performance indicators analyzed. The author denoted that Islamic banks performed better than others in almost all years. Moreover, the study illustrated the outcome that Islamic banks are more cost effective and profitable than their conventional counterparts.

Hassoune (2002) found in his survey that Islamic banks were definitely more profitable than conventional banks, but they remain less efficient due to the high exposure to risk than other financial institutions. Hassan and Bashir (2003) examined the factors that affect the performance of bank. They gathered and utilized cross-sectional data about Islamic banks in 21 countries over the period of 1994-2001. According to the results, it seems that the profitability of Islamic banks was positively depending on capital and loan, underlining the pivotal role of the macro-economic environment.

Saleh and Rami (2006) carried out an empirical investigation to compare the performance of Islamic banks in Jordan. The author constructed a patter made up of two Islamic banks to assess the performance of Islamic banks, taking as indicators: profitability, capital structure and liquidity. The author found that Islamic and conventional banks recorded an improvement in their efficiency and that they attribute particular attention to their short-term investments. Kader and Asarpota (2007) conducted several financial ratios of a panel including three Islamic banks and five conventional banks in UAE, during the period 2000 to 2004, to measure the performance of each banking sector. These ratios relied on the profitability, liquidity, risk exposure and solvency, and efficiency. The findings reflected that Islamic banks of UAE seem to be source of more profits, needing less liquidity and less exposed to risk. Sufian (2007) attempted to explore the efficiency of domestic and foreign Islamic banks in Malaysia during the period 2001-2004. The survey enabled the author to infer that profit generation was statistically significant and positively joined to efficiency. It enabled the author to draw the conclusion that profitability highly depends on efficiency.

## 2.3. THE EFFICIENCY OF ISLAMIC BANKS:

Akkas (1996) relies on his paper on comparing the efficiency of Islamic banking with conventional banking in Bangladesh. The author underlined that the Islamic banks are relatively more efficient than conventional banks. Samad (1999) attempted to analyze the efficiency ratio of one Islamic bank from 1992-1996. The author also compared his ratio with the conventional banks of Malaysia. He found that Bank Islamic Malaysia Berhad operated more efficiently compared to its rivals in the conventional banking sector. It allowed him to denote that in Malaysia Islamic banks utilized their funds in a better way compared with conventional institutions.

[2] Samad, A., & Hassan, M. K. (1999). The performance of Malaysian Islamic bank during 1984-1997: an exploratory study. *International Journal of Islamic Financial Services*, *1*(3), 1-14.

Yudistira (2003) analyzed 18 Islamic banks in the world in the period of 1997-2000 with specific technique to estimate efficiency: "DEA approach". The author relied on intermediate approach, the results obtained pointed up that in all 18 Islamic banks, there is small inefficiencies observed at the level of 10 percent, which remains weak relatively to conventional banks. Samad (2004) attempted to examine the performance of Islamic and conventional banks in Bahrain during 1991-2001. The author analyzed the profitability, liquidity means and credit risk ratios as highway to measure the performance. The comparison of Bahrain's conventional banks with Islamic banks enabled the author to denote a glaring discrepancy in credit performance among the banks. However, the author raised the statement that the two sector are performing with the same manner according to the analysis focused on the indicators of profitability and liquidity.

Johnes et al. (2008) elaborated six financial ratios to evaluate the efficiency of Islamic and conventional banks. The outcome of their empirical investigation underlined that Islamic banks are more effective, from analyzing the costs supported compared to conventional banks. The author attempted also to assess the efficiency of the Islamic banks, using Data Envelopment Analysis (DEA) as non-parametric approach, they finished by finding that the efficiency of  they found conventional banks in overall is more important than Islamic banks.

Saiful Azhar Rosly and Mohammad Ashadi Mohd Zaini (2008) conducted a survey to evaluate the efficiency in Islamic and conventional banks. The authors found glaring discrepancy in financial ratios used to assess Islamic banks performance. The author mentioned a huge difference between the revenues Mudharabah (ROMD) and the Return on Equity (ROE). Jill Johnes, Marwan Izzeldin and Vasileios Pappas (2012) carried out an empirical investigation to evaluate the performance of Islamic and conventional banks, through a panel including 210 conventional and 45 Islamic banks across 19 countries during period 2004 to 2009. The outcome of the empirical investigation reflected the similarity of the gross efficiency of the conventional and Islamic banks of the survey. Their results contribute to bear out several other surveys (El-Gamal and Inanoglu, 2005; Bader, 2008 and Hassan et al 2009).

Abdul-Majid et al (2010) carried out survey to assess the net efficiency of Islamic banks compared to conventional banks, through gathering data from 10 countries, the survey relied on identify the determinants of net efficiency. The authors found that the dummy variable representing Islamic banks had not a significant impact on the efficiency and effectiveness of banks, rejecting the assumption that Islamic banks are more effective and efficient. Johns et al (2009) applied another methodology to assess efficiency and effectiveness of Islamic and conventional banks, through exploring their production. The authors found that global efficiency is significantly higher for conventional banks compared to Islamic banks in the Gulf Cooperation Council (GCC) countries. For the net efficiency, it seems that there is no significant discrepancies between the two banks.

The summary of previous studies are interesting and attempt to identify the causes of performance and efficiency of Islamic banks relatively to conventional banks. The huge number of papers and surveys attempting to explore in-depth the issue, participated to bear out the significance of the topic in the contemporary economy. The examination of the surveys enabled us to underline the absence of studies relying on evaluating the efficiency and the effectiveness of Islamic and conventional banks in Indonesia that will make up the major contribution of the present paper.

## III. EMPIRICAL INVESTIGATION

### 3.1. METHODOLOGY:

The empirical research makes up an attempt to explore the significance of the Islamic finance in the contemporary economy. In fact, in the last few years, the Islamic finance recorded a huge spread in developed countries and in Arab-Muslim countries, primarily, after amplifying the financial crises in the contemporary economy.

The present paper aims to identify the financial factors that affect the Islamic banks profitability, through analyzing from 2 different perspectives: effectiveness and efficiency, the two concepts were discussed deeply in the paper of Jaouadi et al (2014)[3]. The survey focuses on the Indonesian Islamic banking system as pattern to study.

In other terms, we could assume that the conducted investigation pose the question of significance of Islamic finance in international economy. Recently, the topic becomes the prime concern of many researchers as new finance that allowed sustained financial stability. Therefore, the aim of the paper relies on revealing the determinants of banks performance. Then, we carried out an empirical examination to find out the financial factors that affect the profit generation of the banks towards assessing the efficiency and the effectiveness of these financial institutions in the market.

The present paper relies on monthly data about the monetary and financial aggregates of Indonesian-banking sector. The data covers the period mars 2010 to July 2012 and we gathered the indicators from several annual reports of the monetary authorities of Indonesia.

In the last step of the present empirical research, we proceeded to compare the outcomes obtained from Islamic with conventional banks and to find out if there is glaring discrepancy and attempt to find an appropriate interpretation.

The effectiveness and the efficiency are two different principles mostly adopted in several papers and focused on firm management. The efficiency summarizes the concept to produce with the best manner, we can also suppose that efficiency is concentrated on the use of minimum inputs to provide the most effective production. It is reached by the optimized utilization of the assets to generate the best production while spending the lowest amount costs. In management, we can judge efficiency as the research on the optimized utilization of internal factors in the firm. But, the effectiveness concept summarizes the yield of factors and the reach of goal, without considering the manner as well as the optimized use of the assets. Therefore, we can consider that effectiveness has strategic meaning in firm administration, and attempt to reflect the impact of external factors in the firm creation.

## 3.2. THE DETERMINANTS OF PERFORMANCE OF ISLAMIC BANKS IN INDONESIA:

### 3.2.1. MODEL:

We conducted the empirical research as an attempt to assess the effectiveness and the efficiency of Islamic banks in Indonesia. We used the time series and we estimated the pattern using the method of OLS:

[3] Jaouadi, S., & Zorgui, I. (2014). Exploring Effectiveness and Efficiency of Banks in Switzerland. *International Journal of Academic Research in Business and Social Sciences*, *4*(4), 313-325.

ordinary least squares. We could put forward the conducted model to examine the efficiency of the Islamic banking in Indonesia, as in accordance with the following equation, linearized through passing by natural logarithm: because we assume that the model is in accordance with the production function of cobb-Douglas, as presented by Jaouadi et al (2014)[4]:

$$\log(profit)t = C + \alpha_1 \log(capital)_t + \alpha_2 \log(profitability)_t + \alpha_3 \log(average\ assets)_t + \alpha_4 \log(expenseOp/incomeOp)_t + \alpha_5 \log(short\ assets)_t + \alpha_6 \log(short\ liabilities)_t + \delta_t + \epsilon_t \qquad (1)$$

For the model that summarizes the effectiveness perspective to assess the acting of the bank, we could put it forward in these lines:

$$\log(profit)_t = C + \alpha_1 \log(profit)_{t-1} + \alpha_2 \log(capital)_t + \alpha_3 \log(op.expense)_t + +\alpha_4 \log(average\ assets)_t + \alpha_5 \log(op.income)_t + \alpha_6 \log(liquidity)_t + \alpha_7 \log(classified.earnings)_t + \alpha_8 \log(financing)_t + \mu_t \qquad (2)$$

### 3.2.2. THE VARIABLES:

The estimated pattern relies on a sample of endogenous and some explanatory variables that we could present as following:

- « *Profit* » it is the endogenous variable of the model, it is made up of the profit recorded by the Islamic banking in Indonesia.
- « *Capital* » represents the value of the banking capital.
- « *Profitability* » is a ratio, it was compiled using the following formula: $\frac{Opertions\ net\ income}{Average\ assets\ gain}$.
- « *Average Assets* » is the average value of assets of the banks in Indonesia.
- « $expenseOp/incomeOp$ » is a ratio calculated by dividing the expenses supported by banks by the income of their financial operations.
- « $short\ assets$ » represents the assets detained by the banking sector in short run.
- « $short\ liabilities$ » are the liabilities of the banking sector calculate in the short run.
- $\delta$ is the inefficiency term.
- $\epsilon_t$ $and$ $\mu_t$ are the error terms of the estimated model.

In fact, we assumed that banks are performing in the market in accordance with the production function of Cobb-Douglas. The data are collected from the annual reports of Indonesian monetary authorities. For the efficiency perspective, the estimation was executed under the hypothesis that the function to estimate is a

[4] Jaouadi, S., & Zorgui, I. (2014). Exploring Effectiveness and Efficiency of Banks in Switzerland. *International Journal of Academic Research in Business and Social Sciences*, *4*(4), 313-325.

production because in econometric literature, we also advanced an empirical approach for the cost function efficiency.

### 3.2.3. THE FINDINGS:

After estimating the models according to the efficiency and the effectiveness approaches, thoroughly discussed above, we found very interesting results that endorse the Islamic banks. We could put forward the outcome of the empirical investigation in the following table.

**TABLE 1. THE EFFICIENCY AND THE EFFECTIVENESS OF THE ISLAMIC BANKS IN INDONESIA.**

| **Method** | **Efficiency perspective** | **Effectiveness perspective** |
|---|---|---|
| **Endogenous variable** | **Profit** | **Profit** |
| Constant | 20.79***<br>(6.24) | 21.23***<br>(7.04) |
| Log (capital) | 0.54***<br>(3.36) | 0.53***<br>(3.7) |
| Log (profitability) | -0.06<br>(-0.48) | -0.77<br>(-0.77) |
| Log (average assets) | 1.56***<br>(9.94) | 1.55***<br>(9.58) |
| Log(expense/income) | -4.95***<br>(-7.19) | -5.07***<br>(-8.7) |
| Log (short assets) | -0.56**<br>(-2.16) | -0.55***<br>(-2.7) |
| Log (short liabilities) | -0.82***<br>(-2.75) | -0.8***<br>(-3.5) |
| | $R^2$=99% | DW=2.2 |

## IV. Interpretation:

According to the table 1, the capital of the bank tends to raise the profit recorded by Islamic financial institutions in Indonesia, the effect is statistically significant at 1%. It enabled us to denote that Islamic banks are targeting more opportunities to increase their commercial operations and to invest in other areas. According to Osborne, M. et al (2012): “the relationship between capital and profitability may become positive during bank sector distress”[5]

From the variable “profitability”, the impact of the variable is not statistically significant, it reflects the short-run profit and we found that its coefficient is not statistically significant. The present finding authorizes us to infer that Indonesian Islamic banking is not concerned about generating profits of short-term and represented the opportunity cost that face Islamic banks to offer their financial services according to the Islamic foundations.

[5] Osborne, M., Fuertes, A. and Milne, A. (2012), “Capital and profitability in banking: evidence from US banks”, working paper.

According to the results, it appears that the profit of Indonesian Islamic banks highly depends on the average of the assets, as demonstrated by the coefficient (greater than 1.5 and statistically significant at 1%). It indicates that decisions of financial investments defined by the banks, focuses on sound and solid financial standards, holding into account the mid-term financial aggregates. In support for the present statement, we could note the argument raised in the paper of Mirzaei, A. (2012): "profitability ratio (return on assets) in Islamic banks increased significantly during the period 1999-2008".[6]

Considering the coefficient and the statistical significance of the ratio (cost of operations / revenue operations), it appears that an increase in the costs tends to affect negatively the profit generation of Islamic banks in Indonesia. The finding remains plausible given that bank like any lucrative business, seek to maximize their profit and prefer to invest their money in high-yield operations. According to several surveys, including the paper of Maudos, J. et al (2000)[7] could not deny the possibility of negative correlation between cost and revenues of European banks. For the variables "short liabilities" and "short assets", it seems that these two short-term aggregates affect negatively the profits of Islamic banks. Because their financial services depend primarily on mid-term funds, like the aggregate "average assets" illustrated above. It enabled us to consider that short-term aggregates make up the opportunity costs and not the financial funds that stimulate profitable operations of Islamic banks.

At the end of the present empirical investigation, we will put forward a figure to illustrate the efficiency and the effectiveness of the Indonesian Islamic banks. It demonstrated the predicted values related to the efficiency and effectiveness perspectives and the recorded profit by the Islamic banks in Indonesia.

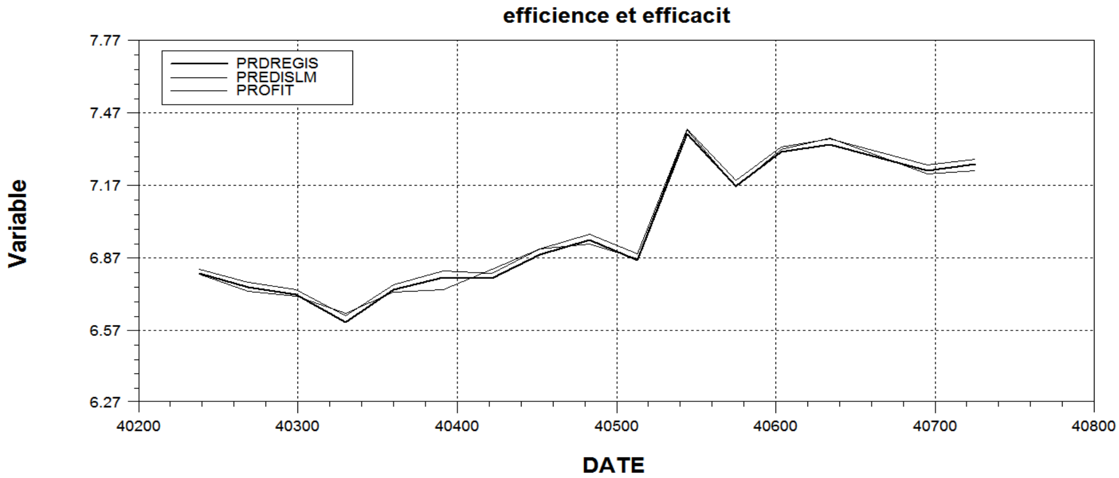


**Fig 1: Efficiency and effectiveness of Indonesian Islamic banking.**

Referring to figure 1, it is obvious to identify the same evolution of the optimal profit to generate by the Islamic banks and the current operating analyzed in the present empirical investigation. The curves slopes enabled to infer that Indonesian Islamic banks are operating in the market efficiently and effectively. It is significant to underline that the difference between the two curves constitutes the inefficiencies of the banks, which remain very weak.

[6] Mirzaei, A. (2012), "The effect of market power on stability and performance of Islamic and conventional banks", Islamic economic studies, volume 18, N° 1 & 2.

[7] Maudos, J., Pastor, J. M. and Perez, F. (2000), "Cost and profit efficiency in European banks", journal of international financial markets, institutions and money 12, pp: 33 – 58.

## 4.1. THE DETERMINANTS OF THE PERFORMANCE OF CONVENTIONAL BANKS IN INDONESIA:

### 4.1.1. MODEL :

We carried out the following model to find out the efficiency of the conventional banks in Indonesia. The term $\delta$ makes up the inefficiency component.

$$\log(profit)_t = C + \alpha_1 \log(profit)_{t-1} + \alpha_2 \log(capital)_t + \alpha_3 \log(op.expense)_t + +\alpha_4 \log(average\ assets)_t + \alpha_5 \log(op.income)_t + \alpha_6 \log(liquidity)_t + \alpha_7 \log(classified.earnings)_t + \alpha_8 \log(financing)_t + \delta_t + \epsilon_t \quad (3)$$

For the model conducted to estimate the determinants of profit generation of conventional banks in Indonesia, we could represent it in the following equation:

$$\log(profit)_t = C + \alpha_1 \log(profit)_{t-1} + \alpha_2 \log(capital)_t + \alpha_3 \log(op.expense)_t + +\alpha_4 \log(average\ assets)_t + \alpha_5 \log(op.income)_t + \alpha_6 \log(liquidity)_t + \alpha_7 \log(classified.earnings)_t + \alpha_8 \log(financing)_t + \epsilon_t \quad (4)$$

### 4.1.2. THE VARIABLES:

The variables used in the model estimation are presented as following:

- *Profit* : describes the endogenous variable of the model, it measures the profit recorded by the bank.
- *Capital* : is the value of the capital of the Indonesian conventional banks.
- *Op.expense*: represents the expenses supported during the financial services provided by the conventional banks in Indonesia.
- *Average assets* : is the average value of the assets of the conventional banks.
- *Op.income* : describes the value of returns generated from the banking operations.
- *Liquidity* : makes up the liquidity available in the banks, the indicator is calculated as following : $\text{Assets of short term} / \text{liabilities of short term}.$
- *Classified earnings* : describes a banking performance ratio, it is calculated in accordance with the following equation: $\text{Assets generating losts} / \text{overall gains of assets}.$
- *Financing*: represents the quantity of credits provided by Indonesian conventional banks.

### 4.1.3. FINDINGS:

The outcome of the investigation to find out the efficiency and the effectiveness of Indonesian conventional banks led us to obtain the following results:

**TABLE 2. THE OUTCOME OF ESTIMATING THE EFFICIENCY AND THE EFFECTIVENESS OF INDONESIAN CONVENTIONAL BANKS.**

| **Method** | **Efficiency** | **Effectiveness** |
|---|---|---|
| **Endogenous variable** | **Profit** | **Profit** |
| *Constant* | -149.7<br>(-0.83) | -114<br>(-1.3) |
| *Log (profit)* $_{t-1}$ | -0.27<br>(-0.98) | -0.35<br>(-1.39) |
| *Log (capital)* $_t$ | -0.15<br>(-0.39) | -0.41<br>(-1.05) |
| *Log (average assets)* $_t$ | 24.16<br>(0.72) | 23.34<br>(1.73) |
| *Log (op.expense)* $_t$ | 1.05***<br>(2.8) | 0.94**<br>(2.58) |
| *Log (op.income)* $_t$ | 0.42<br>(0.24) | 0.64<br>(1.11) |
| *Log (class.earnings)* $_t$ | 0.62**<br>(2.2) | 0.64<br>(0.29) |
| *Log (liquidity)* $_t$ | 2.04<br>(0.26) | 5.4<br>(1.04) |
| *Log (financing)* $_t$ | -15.2<br>(-0.58) | -17.05<br>(-1.59) |
| | $R^2$=73% | DW=2.3 |

### 4.1.3. INTERPRETATION:

According to the table 4 illustrating the determinants of the performance of Indonesian conventional banks, it appears that generating profit is highly correlated with expenses of operations and services provided by these banks.

The current finding remains controversial that we could explain by the fact that the study period is recent and recorded major reductions of transactions costs owing to the spread of high technology in banking services. The improvements in the costs supported by banks had direct positive impact on profit generation of

Indonesian conventional banks. Mohammad, S. et al (2009) stress that: "both conventional and Islamic banks try to maximize profits by raising revenues and reducing costs."8

For the variable (classified earnings), it seems that it positively correlated with stimulating the profit creation in conventional banks in Indonesia. The finding enabled us to infer that a rise in losses of assets tends to increment the gain of the conventional banks.

It seems that the profit of conventional banks in Indonesia do not depend on the average of assets, the result demonstrates that the bulk of the financial activity of conventional banks relied on short-term aggregates, these banks are making short run investments, it appears that they are more motivated by short term benefits. The identified behavior could affect the financial stability of the banking sector towards the stability of the entire country. The reinforcement of the present argument is relevant to the statement raised in the paper of Jaffar, M. and Manarvi, I. (2011) argue that: "conventional banks pioneered in management quality and earning ability".9

At the end of the empirical investigation that we conducted in the present paper, we finished by representing the figure, the last is reflecting the efficiency and effectiveness of the conventional banks in Indonesia.

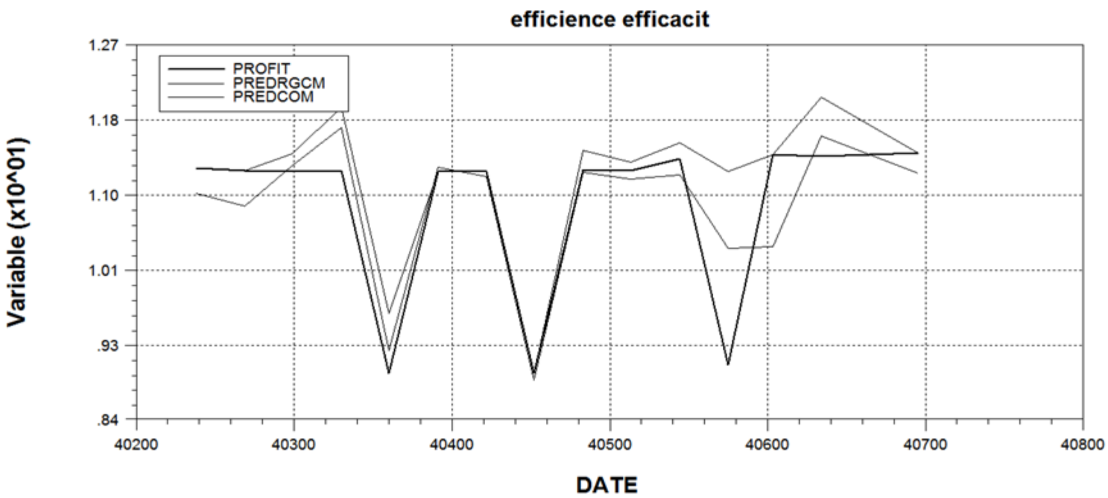


**Fig 2: Efficiency and effectiveness of conventional banks in Indonesia.**

Observing the figure 2, we could assess that conventional banks of Indonesia are not operating with efficiency and effectiveness. From the content of the figure, it seems obvious to point out several deviations in the curves that put forward the observed profit recorded and the optimal profit to generate, from the two perspectives: "the effectiveness" and "the efficiency" discussed thoroughly below.

Although, the behavior of Indonesian conventional banks is inconsistent with the Islamic financial institutions of the same country. The curves of the figure 2 are not varying in the same level like the figure 1.

[8] Mohamad S., Hassan, T. and Bader, M. K. I. (2009), "Efficiency of conventional versus Islamic banks: International evidence using the stochastic frontier approach: SFA", Journal of Islamic economics, banking and finance, pp: 107 – 130.
[9] Jaffar, M. and Manarvi, I. (2011), "Performance comparison of Islamic and conventional banks in Pakistan", Global journal of management and business research, volume 11, issue 1, pp: 61 – 66.

The major deviations of curves reflects the high inefficiency and the less effectiveness of traditional banks in Indonesia.

## V. CONCLUSION:

At the end of the empirical investigation conducted in the present paper, we ended the research by collecting new evidences about consolidating the Islamic banking establishment. In overall, it appears that Islamic financial institutions of Indonesia are operating with efficiency and effectiveness. The present manuscript attempted to illuminate the reality about the financial behavior of Islamic banks in Indonesia. The Islamic financial institutions decided to invest relying on monetary aggregates of long term, which contributed to consolidate the financial soundness and stability of the monetary market in Indonesia.

According to the empirical investigation, it appears that the profit of Islamic banks in Indonesia do not depend on assets and liabilities of short term. The finding authorized us to denote that monetary and financial evolutions did not affect the investment decisions and the financial operations of Islamic banking sector in Indonesia.

The facts contribute to denote that Islamic banks in Indonesia did not generate profits relying on short-term financial and monetary aggregates. The result consolidate the role of Islamic finance as plausible solution to promote the efficiency and the effectiveness of the banking sector in developing countries. The Islamic finance could also participate in preserving the international financial stability. Hence, it could eradicate the risk of financial crises and their harmful impact on economic standards of several countries.

From comparing the outcome obtained for the commercial banking sector in Indonesia, it enabled us to denote that Indonesian conventional banks are not operating with efficiency and effectiveness, the evidence become more consolidated by the content of the figure 2. In fact, it enabled to deduce the prime economic contribution of the Islamic banking sector compared with conventional banks.

The outcome of the empirical investigation furthers implementing the Islamic finance that could contribute to generate the economic prosperity and a sustained development, owing to the stable financial environment provided. The Islamic finance allows to rehabilitate the confidence of economic actors in monetary and financial institutions, primarily emerged after the multiplicity of financial crises and their significant harmful effects.

## REFERENCES:

[1]. V. Sundararajan,, & L. Errico, (2002). *Islamic financial institutions and products in the global financial system: key issues in risk management and challenges ahead* (Vol. 2). International Monetary Fund.
[2]. A. Samad,, & M. K. Hassan, (1999). The performance of Malaysian Islamic bank during 1984-1997: an exploratory study. *International Journal of Islamic Financial Services*, *1*(3), 1-14.
[3]. M. H. Akhtar, X-efficiency analysis of commercial banks in Pakistan: A Preliminary Investigation. *The Pakistan Development Review. 41(4),2002, 567-580*.
[4]. Al-Jarrah, and P. Molyneux, Efficiency in Arabian banking». *Paper presented at the International Conference on Financial Development in Arab Countries, 2003, Abu Dhabi, UAE.*
[5]. M. Ariff, Islamic banking, a variation of conventional banking. *Monash Business Review, 4 (3), 2006.*
[6]. A.-H. M. Bashir, Risk and Profitability Measures in Islamic Banks: The Case of Two Sudanese Banks, *Islamic Economic Studies, 6, 1999, 1–24.*
[7]. M. K. Hassan, and A. M. Bashir, Determinants of Islamic banking profitability, *ERF paper, 2003.*
[8]. M. K. Hassan, M. Samad, and M.M. Islam, The performance evaluation of the Bahraini banking system, *University of New Orleans: Working Paper, 2003.*
[9]. M. Jaffar, and I. Manarvi, Performance comparison of Islamic and conventional banks in Pakistan, *Global journal of management and business research, vol 11, issue 1, 2003, pp: 61 – 66*.
[10]. J. Maudos, J. M. Pastor, and F. Perez, Cost and profit efficiency in European banks, J*ournal of international financial markets, institutions and money 12, 2000, pp: 33 – 58.*
[11]. Mirzaei, The effect of market power on stability and performance of Islamic and conventional banks, *Islamic economic studies, volume 18, N°1 & 2, 2012.*
[12]. S. Mohamad, T. Hassan, and M. K. I. Bader, Efficiency of conventional versus Islamic banks: International evidence using the stochastic frontier approach: SFA, *Journal of Islamic economics, banking and finance, 2009, pp: 107 – 130.*
[13]. Samad and M. K. Hassan, The Performance of Malaysian Islamic Bank during 1984-1997: An Exploratory Study, *International Journal of Islamic Financial Services, 1999.*

[14]. M. A. A. Sarker, Islamic Banking in Bangladesh: Performance, Problems, and Prospects, *International Journal of Islamic Financial Services, 1999.*
[15]. H. Shahid, U. Ramiz, G. Shabbir, , K., Niazi and A. Raoof, Efficiencies Comparison of Islamic and Conventional Banks of Pakistan, *International Research Journal of Finance and Economics, Issue 49, 2010.*
[16]. D. Yudistira, Efficiency in Islamic Banking: an Empirical Analysis of 18 Banks, *2003*.
[17]. D. Yudistira, The Impact of Bank Capital Requirements in Indonesia, *Economics Working Paper Archive at WUSTL, 12, 2002.*
[18]. S., Khemiri, and S., Jaouadi, Financial Instability in Tunisia, *Global advanced research journal of management and business studies, 2013. pp: 44 – 49.*