Factors Affecting the Usage Level of Financial Analysis by Credit Officers in the Credit Decision in Libyan Commercial Banks

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Abstract

The study aims to give an idea about the usage level of financial analysis in Libyan state-owned commercial banks, and the factors affecting the process in the credit decision, since these banks owns almost 90% of Libyan banking sector assets. To collect the data a questionnaire were distributed to credit officers and analysts in all state-owned commercial banks operate in Tripoli. The data was analyzed using SPSS program. The analysis results show that there is a weak usage level of financial analysis in the decision making process of evaluating the eligibility of the credit applicants for accredits facility. These results caused for two major reasons, first poor qualification and professional credit officers and analysts, second the low confidence level of the financial information presented by credit applicants. The major recommendation is increase more attention to reform the whole process in this field.

Key words: Financial ratios, Credit facility, Credit decision, Libya.

1. Introduction

The banking industry is one of the most important contemporary economic industries because of their role and high impact in the development and management of the helm of the economy at the local and global level. Banking credit is considered to be the most important activities in the industry but also one of the most sensitive instruments, where its impact does not stop only at the bank level but directly linked to the national economy. Therefore, existing decision makers have to use good accuracy in the credit decision-making (Al-Zubeidi, 2002).
Since commercial banks play crucial role in developing countries because they are the major credit provider, due to the fact that capital markets is weak and limited and it lacks the ability to provide adequate sources of financing to investors (Saci, Giorgioni, and Holden, 2008), financial stability and security are the important and crucial components of the banking sector.

Essentially, banks originally emerged as deposit takers. They eventually transform intermediate´s of funds and thereby started assuming credit risk. Credit, thus, became the business of banking, and the primary basis on which a bank´s quality and performance are judged. Empirical studies of banking crises all over the world have shown that poor assets quality (predominantly loan) has been the most frequent factor in bank failures.

The Libyan financial institutions assumed the responsibility of promoting the national economy through financing the various sizes and types of production and service projects by loans and credit facilities.

According to a number of economic bulletins issued by the Central Bank of Libya (CBL), the Libyan commercial banks have granted huge amounts of money to individuals and firms (private and public) in the form of loans and credit facilities. However, data presented in these bulletins demonstrate that the Libyan state-owned commercial banks have become exposed to the emergence of non-performing loans.
In view of the crucial status of this industry, especially at the local level, it must for officials (financial decision makers), whether in the case of use of funds, or in the case of obtained these funds to uses the most important tools of analysis, namely, financial analysis for the purposes of the credit decision-making.

This study has been prepared to achieve the following objectives:

- Identify to what extent the Libyan commercial banks use the financial and accounting methods and models in rationalization of the credit decision, and the factors that affect that work on a vision to solve problems that impede the use of financial analysis as the basis for a decision Credit in the banks operating in Libya.
- Study the relationship between qualifications and capabilities of a credit decision makers and their dependence on financial analysis in rationalizing credit decision.

2. Related Literature

2.1. Previous Studies

According to researcher knowledge, there are no studies addresses the subject directly in the Libyan banking environment, but there are many studies addresses the subject in general or un like the Libyan banking environment. A study by (Mu´alla and Thahi, 1999) aimed to identify to what extent Jordanian commercial banks adopt subjective standards to evaluate the credit worthiness of borrowers. The results of the study was that the administration in Jordanian banks effectively use a range of financial criteria and accounting, marketing, trade, economic and administrative, as well as a range of other factors and standards, such as, central risk to assess the eligibility of the customer capacity for direct credit facilities.

A study by (Matar, 1988) aimed to explore the relative importance of audited financial statements issued by companies in Kuwait, as a source of information for decision makers for each of the investment and lending decisions, and to identify the major factors that increase reliability of the information that derive from them. The study found a group of results such that investors are paying attention to the audited financial statements of the largest lenders in obtaining appropriate information to make decisions; credit analysts in commercial banks often develop their own data upon their own decisions to grant loans to corporations, relying on other sources of information other than the published data; give investors priority to sources of historical information, unlike lenders who are paying more attention to the future information; the audited financial statements source of information in the appropriate investment decisions.

Another study by (Al-ghussein, 2004) aimed to find the most suitable financial ratios that can be used to predict the financial failure of companies in the construction sector in the Gaza Strip. The study concluded that financial ratios can be used to predict company´s financial position, the study also recommended to increase attention to the preparation of financial statements and the analysis of financial ratios for these statements. Most of studies mentioned above, concentrate on crucial economic sectors, and the importance of having financial information to make a financial, managerial, and credit decision free from risk of inaccuracy in the estimation. This study will attempt to address another aspect of analysis of the problem through an applied study, in which other previous studies did not address, to illustrate to what extent commercial banks operate in Libya rely on financial analysis in their credit decision.

2.2. Financial Analysis in Rationalizing Credit decision

Financial analysis is the selection, evaluation, and interpretation of financial data along with other pertinent information, to assist in investment and decision-making. Financial analysis may be used internally to evaluate issues such as employee´s performance, the efficiency of operations, and credit policies, and externally to evaluate potential investments, and the credit-worthiness of borrowers among other things. The analysis of creditworthiness involves preliminary study of the factors and prerequisites which can affect adversely the duly repayment of credit (Stoyanov, 2008). Financial analysis is considered to be one of the major tools used by the credit analyzer or financial decision maker, and they must be careful in choosing the financial instruments, knowing advantages and limitations of each tool (Carey, 1998).

Credit departments as one of the most important users of financial information, interested in financial analysis of the client to reach a significant results when assessing the financial position of clients, as these results is one of the aspects that credit department depend on, when making a credit decision, can be described as rational decision (Al-zubedi, 2002). Financial statements is the most important sources of information used by credit departments in commercial banks, to assess the financial situation of the clients, and their ability to generate profits and cash, and provide a true reflection of that to some extent about the solvency of the clients, and their ability to fulfil their obligations, towards the bank, which gave them the credit. Also credit departments often use financial analysis methods as a tool to convert these statements into good ratios and indicators used in credit decision (Matar, 2003).

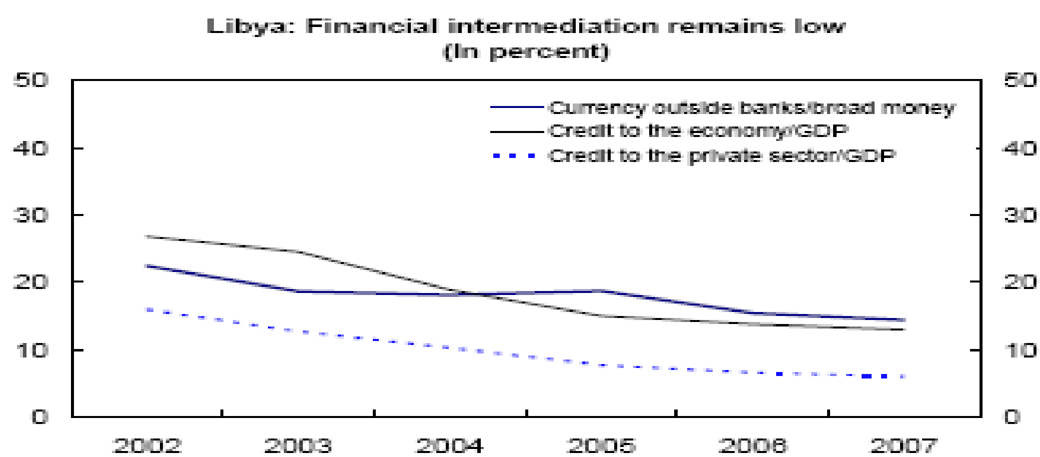
2.3. Overview of the Libyan banking sector

According to the Central Bank of Libya, there are sixteen banks in Libya. Libya´s banking system is dominated by four banks which are owned in full or in the majority by the Libyan Central Bank (Jamahiriya Bank, Wahda Bank, Sahara Bank, Umma Bank and the National Commercial Bank). These banks constitute almost ninety percent of Libya´s banking sector assets. All of these banks have capital of at least 10 million Libyan Dinars, and two of them (Wahda Bank and Sahara Bank) were in the process of being privatized in 2006. France´s BNP Paribas acquired 19% of Libya´s Sahar Bank in July 2007, and took operational control of the bank. The deal also includes an option allowing BNP Paribas to purchase additional shares up to 51% of Sahara´s capital over the next three to five years. In November 2007, five foreign banks were short listed for the privatization of Wahda Bank, including French, Italian, Jordanian, Bahraini and Moroccan institutions; Arab Bank (of Jordan) was selected. They bid on a 19% of the share of Wahda Bank, with the option to increase their ownership to 51% in three to five years. The Central Bank announced in October 2007 that it would merge Umm bank and Jamahiriya bank into a single entity; that process was completed in year 2000, although there are still branches open under the banner of each bank.

Libyan Banks get most of their funding from customer deposits, which were 83% of their liability base as of Nov. 30 2008. They reinvest most of these funds with the Central bank of Libya in the form of demand and time deposits. Also, loan/deposits ratio has been consistently decreasing going from 41% on Jan 31 2007 to 23% on Nov. 30/2008 (Libyan central bank, 2009).

According to the World Bank, financial intermediation continues to be low in Libya compare to other comparable countries. Commercial banks´ credit has been decreasing over the past few years because it´s being crowded out by credit from specialized credit institutions. In 2007, it reached 13 percent of GDP.

The availability of financing on the local market is weak. Libyan banks offer limited financial products, loans are often made on the basis of personal connections (rather than business plans), and public bank managers lack clear incentives to expand their portfolios. Lack of financing acts as a brake on Libya´s development is hampering both the completion of existing projects and the start of new ones. This has been particularly damaging in the housing sector, where particularly small-scale project often languish for lack of steady funding streams.



Source: IMF Country Report No. 08/302

Table 1: Percentage of Non-performing Loans to Total Loans granted

Year	Total granted Loans	Non-performing loans (NPLs)	Non-performing loan to Total loans ratio
2003	6775.1	2313.3	34.15%
2004	6510.3	2686.6	41.30%
2005	6166.6	949.6	15.40%

Source: Libyan Central Bank, 2006b

2.4. Hypothesis of study

According to the theoretical framework of study, and in light of the objectives of study, the hypotheses of the study can be drawn up as follows:

H_o1: Libyan commercial banks do not use financial and accounting methods, and models in judging the eligibility of the applicants for credit facilities when decisions are taken on granting credit facilities.
H_o2: There exists no correlation between the reliability of financial statements and the degree of reliance on financial analysis when decision is taken on granting credit facility.
H_o3: There exists no correlation between the qualifications and capabilities of credit officers and analyst and the degree of dependence on the financial analysis as an instrument of rationalization of the decision to grant credit.
H_o4: There exists no correlation between the degree of reliance on financial analysis and the practical experience of the credit analyst.
H_o5: There exists no correlation between the degree of reliance on financial analysis and the degree of authorization granted to the credit officers and analysts.
H_o6: There are no obstacles limiting the use of financial analysis methods at the Libyan commercial banks when the customers´ financial position is studied for taking decisions on granting them credit facilities.

3. Methodology and Research Design

3.1. Sample of the study

The Libyan state-owned commercial banks has been chosen for conducting this study in view of the effective role played by the commercial banks in activating the investment movement and in facilitating the capital formation processes along with their capacity for stimulating the trade exchange operations, in view of the statements and information needed by these banks to help the management take decisions in a wise and rational manner especially in the field of granting credit facilities, besides the fact that it is necessary to analyze the customers´ financial position in order to ascertain their sound position and capacity for repaying their obligations and also to respond rapidly on the part of the commercial banks to the technological developments and environmental changes for retaining their international competitiveness.

So the study population consists of the four Libyan state-owned commercial banks credit department officers and analysts at the beginning of 2012. 95 questionnaires were distributed to all of those officers and analysts, 79 questionnaires were returned for the purpose of analysis (83% questionnaires distributed and these represent the study sample).

3.2. Methods of Collecting Data

References were made to numerous researches and studies published in the scientific periodicals and magazines related to the subject matter of this research. Besides, researchers designed a questionnaire for the study on the basis to achieve the objectives mentioned before.

The questionnaire consisted of seven sections which can be summarized along with the questions designed to measure each one of the study variables as indicated in the following table

Table 2: Questionnaire sections and questions designed to measure the study variables

Questionnaire sections	Variable	Questions measuring the variable
Section one	− Academic qualification − Educational specialization − Number of years of experience in credit department − Degree of participation in credit decision making	(1) (2) (3) (4)
Section two	Measuring to what extent credit officers and analysts use financial and accounting methods and models in credit decision	(5-10)
Section three	Measuring the degree of reliability of the financial statements and the usage of financial analysis in credit decision.	(6-11)
Section four	Measuring the relationship between the credit officers and analysts´ qualifications and capabilities and the usage level of financial analysis in credit decision.	(12-17)
Section five	Measuring the relationship between the practical experience of credit officers and analysts and the usage level of financial analysis in credit decision.	(18-23)
Section six	Measuring the relationship between the degrees of authorization granted to the credit officers and analysts and the usage level of financial analysis in credit decision.	(24-30)
Section seven	Identifying the obstacles limiting optimal use of the financial analysis methods when the customers´ financial position is studied for taking decisions on granting them credit facilities	(31-36)

In order to test the degree of reliability underlying the questionnaire results and the consistency of the written questions, these were submitted to a group of university professors at the departments of economics and finance along with some specialists in the banking sector to judge them and express their views on the sound drafting of the questionnaire and consistency of its Paragraphs. Besides, the reliability analysis was also used to work out the Cronbach´s Alpha Coefficient whose value turned out to be around 82.3%. As this value exceeds the acceptable ratio amounting to 60 % (Zikmund, et. al., 2010), this means that the questionnaire results are reliable and their reliability can be trusted towards realizing the objectives of this study.

4. Data Analysis and Testing the Hypothesis

Testing of First Hypothesis

H_o1: “Libyan commercial banks do not use financial and accounting methods and models in judging the eligibility of the applicants for credit facilities when decisions are taken on granting credit facilities”.
For testing the hypothesis, the “T-test” was used for one sample in the sense that the mean and the standard deviation to find out the extent of using the financial and accounting methods, indicators and models when studying the financial position of the customers applying for credit facilities.

Table 3: Shows the results of testing the first hypothesis

Variable	Mean	Standard deviation	T	Sig
Using financial and accounting methods and models in assessing the eligibility of the applicants for credit facilities in credit decision	3.45	0.932	3.539	0.001

Table (3) shows that the mean of answers to the questions which measure to what extent the financial and accounting methods, and models are used in assessing the eligibility of the applicants for credit facilities in credit decision is (i.e. 3.45) which is larger than the presumed mean (i.e. 3), and the (T) value has reached the statistical significance level at a reliability level of 82.3% ($\alpha = 0.05$) and less. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, in which credit officers and analysts use financial and accounting methods and models at low levels in assessing the eligibility of applicants for credit facilities in their credit decision.

Testing the Second Hypothesis

H_o2: "There exists no correlation between the reliability of financial statements and the degree of reliance on financial analysis when decision is taken on granting credit facility."

For testing the hypothesis, the "T-test" was used for one sample in the sense that the mean and the standard deviation to find out the reliability of financial statements and the degree of reliance on financial analysis when decision is taken on granting credit facility.

Table 4: Results of testing the second hypothesis according to the (T-Test) for one sample

Variable	Mean	Standard deviation	T	Sig
Reliability of the financial statements and the usage of financial analysis in credit decision.	4.19	0.652	3.270	0.000

According to Table (4), the mean of the answers to the questions which measure the correlation between the reliability of financial statements and the degree of reliance on financial analysis when the applicants financial position is studied is (4.19) which is higher than the presumed mean (3), and the (T) value has reached the statistical significance level at reliability level of 82.3% ($\alpha = 0.005$) and less. Therefore the null-hypothesis is rejected, and the alternative hypothesis is accepted. In which there is highly significant correlation the reliability of the financial statements and the usage level of financial analysis when assessing the applicant´s eligibility for credit in credit decision.

Testing the Third Hypothesis

H_o3: "There exists no correlation between the qualifications and capabilities of credit officers and analyst and the degree of dependence on the financial analysis as an instrument of rationalization of the decision to grant credit". For testing the hypothesis, the "T-test" was used for one sample in the sense that the mean and the standard deviation to find out the correlation between the qualifications and capabilities of credit officers and analysts and the degree of dependence on financial analysis when assessing the applicant´s financial position for credit.

Table 5: Shows the results of testing the third hypothesis according to T-test for one sample

Variable	Mean	Standard deviation	T	Sig
The correlation between the credit officers and analysts´ qualifications and capabilities and the usage level of financial analysis in credit decision	4.08	0.675	11.598	0.000

Table (5) shows that the mean of answers to the questions which measure the relationship between the analysts qualifications and capabilities and the usage level of financial analysis to evaluate the credit worthiness of credit applicants is (4.08), which is higher than the presumed mean (3), and the (T) value is has reached the statistical significance at reliability level of 82.3% ($\alpha = 0.005$). Therefore the null-hypothesis is rejected, and the alternative hypothesis is accepted. In other words there is highly significant correlation between the capabilities and qualifications of credit officers and analysts and the usage level of financial analysis when credit worthiness for credit applicants is assessed.

Testing the Fourth Hypothesis

H_o4: "There exists no correlation between the degree of reliance on financial analysis and the practical experience of the credit analyst".

For testing the hypothesis, the (T-Test) has been used for one sample. Both of the mean and standard deviation were calculated to find out the correlation between the practical experience of credit officers and analysts and the degree of reliance on financial analysis to assess the eligibility of credit applicants for granting credit.

Table 6: Shows the results of testing the fourth hypothesis according to T-Test for one sample

Variable	Mean	Standard deviation	T	Sig
The correlation between the practical experience of credit officers and analysts and the usage level of financial analysis in credit decision.	3.64	0.682	6.848	0.000

Table (6) shows that the mean of answers to the questions measuring the correlation between the practical experience of credit officers and analysts and the usage level of financial analysis in credit decision is (3.64), which is larger than the presumed mean (3), and the (T) value has reached the statistical significance level at reliability level of 82.3% (α = 0.005) and less. Therefore the null hypothesis is rejected and the alternative hypothesis is accepted, in which there is moderately correlation between the practical experience of credit officers and analysts at Libyan commercial banks and the usage level of financial analysis when assessing the eligibility of credit applicants in credit decision.

Testing the Fifth Hypothesis

H_o5: "There exists no correlation between the degree of reliance on financial analysis and the degree of authorization granted to the credit officers and analysts".

For testing the hypothesis, the (T-Test) has been used for one sample. Both of the mean and standard deviation were calculated to find out the correlation between the reliance on financial analysis and the degree of authorization granted to credit officers and analysts for the assessment of credit applicants in credit decision.

Table 7: Shows the results of testing the fifth hypothesis according to T-Test for one sample

Variable	Mean	Standard deviation	T	Sig
The correlation between the degree of reliance on financial analysis and the degree of authorization granted to credit officers and analysts.	4.34	0.586	16.629	0.000

Apparently, Table (7) shows that the mean of the answers to the questions measuring the correlation between the degree of reliance on financial analysis and the degree of authorization granted to credit officers and analysts to evaluate the credit worthiness of credit applicants is (4.34), which is larger than the presumed mean (3) and the (T) value has reached the statistical significance level at reliability level of 82.3% (α = 0.005) and less. So the null hypothesis is rejected and the alternative hypothesis is accepted, in other words there is highly significance correlation between the degree of authorization and the reliance on financial analysis when evaluating the financial position of credit applicants in credit decision.

Testing the Six Hypothesis

H_o6: "There are no obstacles limiting the use of financial analysis methods at the Libyan commercial banks when the customers´ financial position is studied for taking decisions on granting them credit facilities".
For testing the hypothesis, the (T-Test) has been used for one sample. Both of the mean and the standard deviation were calculated in terms of obstacles limiting use of the financial analysis methods when the financial position of the customers applying for credit facilities is studied. Table No. (8) Shows the results of testing the fifth hypothesis

Table 8: Shows the results of the six hypotheses according to T-Test for one sample

Variable	Mean	Standard deviation	T	Sig
Obstacles limiting use of financial analysis methods when customers´ financial position is studied for taking a decision on granting them credit facilities.	4.23	0.383	23.422	0.000

According to Table (8), the mean of the answers to the questions measuring the obstacles limiting use of the financial analysis methods when the customers´ financial position is studied amounts to (4.23) which is larger than the presumed mean (3), and the (T) value has reached the statistical significance level at a reliability level of 82.3% (α = 0.05) and less.

Therefore the null hypothesis is rejected and accepts the alternative hypothesis, in other words the credit officers and analysts at Libyan commercial banks emphasizing large obstacles limiting the use of financial analysis in the process of evaluating the credit worthiness of credit applicants in credit decision.

5. Conclusions and recommendations

The study aimed to identify to what extent Libyan commercial banks use financial analysis to evaluate the credit worthiness of applicants for credit facilities in credit decision and the factors affecting the process. Through the analysis of study data the following conclusions can be drawn:

- Significance weakness in using financial analysis in evaluation the credit worthiness of applicants for credit facilities in their credit decision, related to:
- Most of credit officers and analysts did not receive training courses in the field of financial analysis, indicating a low level of professionalism, and a distinct lack of the banks management in raising the scientific level credit analysts.
- Most of credit officers and analysts don´t have authorization to grant credit facility, which proves the centralization in the decision making process in Libyan commercial banks.
- A statistically significant relationship between the reliability of financial statements, and the degree of dependence on the financial analysis when making a financial decision to grant credit.
- There is significant relationship between the degree of reliance on financial analysis and the degree of authority granted to the credit officers and analysts.
- There is appositive relationship between training courses for credit officers and analysts and the degree of reliance on financial analysis, where the degree of reliance on financial analysis increases with the increase in training courses.
- Credit officers and analysts, who have long experience in the field, do not tend to rely on financial analysis at credit decision-making more than those who has short experience.

In the light of the study results, researcher´s recommendations are:

- The need for increased attention to financial analysis by increasing the capacity of existing credit officers and analysts through training and continuing education.
- The need to increase the degree of authority granted to the branches and officials of the facilities.
- The need for companies to compel banks to provide credit officers´ financial information is reliable, and not to hide any information concerning the financial situation of the company that will influence the decision to grant credit, and to provide financial information for more than one financial year, audited and accompanied by the report of the auditor.

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