Risk Analysis of National Company of Cement(Libya): A case study of National Commercial Bank of Libya

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Abstract

Banks, with its special nature, are considered as institutions that face various types of returns and risks in the same time. One of the most important risks is credit risks which result from banking transactions banking transactions with customers and institutions, which are classified into different types that can be measured with sophisticated indicators, allowing the bank to identify them accurately and predict them in the future, which helped in control and minimize them. In this context, contemporary studies focus on how to manage and control the credit risk of the bank and make investment and financial decisions in the light of strict systems and methods of control and management to ensure the Bank's clearer identification and classification of these risks, and thus take appropriate decisions that lead to the achievement of its objectives better. Therefore, the current study was conducted to investigate that problem, namely; commercial banks suffer in their credit operations from their inability to grant credit or that the credit granted does not rise to achieve profits and raise the level of investment bank. Hence, the study aims to find out the role of banking risks and to identify the different types of banking risk. The study relied on the descriptive-analytical method and reached some results, namely; the loan of the National company of cement is considered within Non-risky loans and the study provided some recommendations assisting the bank to manage the risks.

*Keywords: Banking Risks, Credit Risks, Risks Management***.**

1.1 Introduction

Banks have an essential role in providing funds for the requirements of economic development through their ability to intermediate between domestic and external savings and between highly efficient investment fields, as well as the ability to efficiently carry out monetary and financial policies. (Patil Jaykar,2014). There is no doubt that the technical evolutions and the informatics revolution associated with the economic globalization have assisted in making many tremendous changes in the banking industry, resulted into the increase of various risks which affect the banks business activities. Therefore, the Second Basel Decisions came with more easy and flexible standards so as to comprehend such events and facilitate their implementation through the banks(Asha,2013)**.** With regards those risks that lead to failure of the banking sector's performance and regression of its financial safety, the study has concentrated   on analyzing and identifying the internal and external reason of the banking sector's failure, from through the focus on the credit risks, being the most serious banking risks, which are strongly prevailing all over the world or at the local level(Kanhaiya,2011).

1.2 Literature Review

Macaulay (1988) surveyed in the United States and found credit risk management is the best practice in banking and above 90% of the banks in the country have adopted this practice. Inadequate credit policies are still the main source of a serious problem in the banking industry, as a result, effective credit risk management has gained an increased focus in the recent years. The main role of an effective credit risk management policy must be to maximize a bank's risk-adjusted rate of return by maintaining credit exposure within acceptable limits. Moreover, banks need to manage credit risk in the entire portfolio as well as the risk in individual credit transactions.

Das and Ghosh (2007) found out that banks generally face various risks such as credit risk, market risk, operational risk, liquidity risk … etc. Of all the type of risks, credit risk is the most important one hence it underpinned the very existence of the banking system, since credit risk is all about loans and their defaults and loan transactions account for more than 50 percent of all banking activities. Credit risk must be carefully monitored by the banking sector. The implementation of the Basel II Accord was likely to lead to a sharper focus on the risk measurement and risk management at the institutional level. The Basel Committee through its various publications provided useful guidelines on managing the various facets of risk.

Ozturk and Aktan (2007) defined risk management as the process by which managers satisfied their risk-taking needs by identifying key risks, obtaining consistent, understandable, operational risk measures, choosing which risks to reduce and which to increase and by what means, and establishing procedures to monitor the resulting risk position. In other words, risk management was the process of assessing operational dangers of a particular position, measuring its magnitude, and mitigating such exposures in order not to deter the institutional aims of the banking firm.

1.3-Study Question

The credit risks form a twin structure of the banking credit which always impose the slogan: "No credit without risks", more accurately, that the grade of credit risks never reach zero level. This does not mean under any circumstances, to accept such reality at large, but should be dealt with actual and grounding classification, by alleviating such credit risks to the lowest rate and be subjected to the control and analysis, overcoming the various risks factors locally and abroad. Also, it is necessary to acknowledge the reasons and the results used for the credit operation, which are the sources of funds covering the total liquidity. In this context the following research question arises:
"How important is the study of Banking Risk Management?"

1.4-Significance of the study.

The world now is witnessing great economic and political changes in responding to the call for the economic opening and freedom called by the International Monetary Fund associated by the International Trade Organization for its implementation.

Such developments require that those banks be in possession of sufficient capitals, higher capabilities and modern technology at the level established by the Basel Committee for opening the service sector for each international competitive state. Based on our strong belief to the role made by the financial sectors concerning the support and strengthen the economic development , the study existed to take sharing, in the search and to identify the motives hidden behind the high, of the banking risks , and to concentrate on the credit risks, so as to provide a number of recommendations which can participate in solving such to reduce the credit risks, so that our banks may be in position to face the other big banks.

1.5- Objectives of Study.

The study was guided by the following specific objectives:

- To find out the importance of Banking Risk Management.
- To understand the different types and sources of risks faced by the Banks.
- To find out the role performed though the financial analysis as a method to mitigate the credit risks level.

1.6-Definition of Terms

1.6.1- Banking Risks .

The bank may sustain unexpected and unplanned losses in the future which might destroy its planned objectives.

1.6.2- Reasons of the Banking Risks.

Reasons for the banking risks are the following:

• The financial globalization, liberation the banking and financial trends , no one is in isolation anymore are exempted from to the risks which might involve any party within the international economic and financial system

• Prominence of the engineering concept and the financial innovation.

•Kind of the monetary policy and the tools used to manage the monetary mass.

•Expansion of the banks business outside the budget and transformation from the traditional functions practiced in the past in the stock markets, which led exposure to liquidity crises.

1.6.3-Banking Risk Types :(Prasanna,2016).

1.6.3.1-Financial Risks.

- Credit risks are the possibility of a loss resulting from a borrower's failure to repay a loan or meet contractual obligations.

• The Market Risks are (the stock prices instability Risk, the exchange   prices, the interest prices, the commodities and services prices).

•The liquidity Risks are those raised out of the bank's inability to fulfill its obligations and the difficulty to provide the funds

1.6.3.2- Non- Financial Risks

- Risks due by the Banking Electronic Activity
- Strategic Risks
- Risks of the control and legal obligations
- Reputational Risks.

Amongst all the risks mentioned above, credit risk is most important for banks.

1.6.4 -credit risk.

The simplest definition of the credit risk is concentrated on the incapability of the borrower or the other party of the bank for the payment of his obligations according to the agreed-on conditions(Castern Olli,2009).

1.6.5-Factors leading to credit risks, among which: (Gopinath, 2006)

    A. Factors Relating to the Client.

•Recent experience of the client in his business along with the fund's management.

•Honesty inability of the client, which is using illegal ways of obtaining credit.

•Wrong estimation by the client to the markets and his exaggeration of the prices, not being able to calculate the competition factor.

    B. Factors Relating to the Bank.

• Risks due to estimation of the provide guarantees**..**

•Risks due to weekly financing management.

    C. Factors Relating to the General Risks.

- Monetary Policies Risks.
- Inflation Risks
- Commercial Courses Risks
- Financial Policies Risks

1.7- Methodology of the Study.

The study relied on the descriptive-analytical method, by collecting information from their various sources, from the books, and all other subject literature the published and unpublished in order to reach the study findings, and this paper will use the financial analysis of financial statements by using the Financial Ratios and the Predictability Models of Financial Failure, which are the following:

1.7.1-The Financial Ratios.

    A. Financial Ratios for the Analysis of the Availability of Payment Intention:

✓ Current Ratio =Current Assets/Current Liabilities.

✓ Creditors Turnover Ratio =Cost of Sales/Creditors

✓ Average Credit Period = 360/Creditors Turnover Ratio

B. Financial Ratios for the Analyzing of the Financial and Administrative Efficiency of the credit requesting client.
✓ Debtors Turnover Ratio =Sales/Debtors
✓ Average Collection Ratio = 360/Debtors Turnover Ratio
✓ Assets Turnover Ratio = Sales/Total Asset.
C. Financial Ratios for Analyzing the Availability of Sufficient Capital of the credit requesting client.
✓ Debt- Shareholders Owners Ratio =Debt/Shareholder Owners
✓ Debt- Fixed Assets Ratio = Debt/Fixed Assets
D. Financial Ratios to Analyze the Situation Experienced By the Client's   Activity and the National Economy.
✓ Gross Profit Ratio =Gross Profit/Sales
✓ Return of Shareholders Owners Ratio = Net Profit After Tax/Shareholders Owners

1.7.2-Predictability Models of Financial Failure.

Altman Model (1983).

This model relies on five financial ratios based on the following equation :
$Z=0.717X1+0.847X2+3.107X3+0.420X4+0.998X5$
According to the following details:
X1 =Working Capital/Total Assets
X2 = Retained Earning/Total Assets
X3 = Operating Profit/Total Assets
X4 = Equity- Book Value/Total Liabilities
X5 = Sales/Total Assets
If "Z":
Z<1.81= failure is expected
Z>2.99= failure is unexpected
2.99 > Z > 1.81   It is difficult to establish failure expectation

Kida Model (1981).

This model relies on five financial ratios based on the following equation:
$Z = 1.042X1 +0.420X2 – 0.461X3 +0.463X4 +0.271X5$
Where:
X1 = Net Profit After Tax/Total Assets
X2 = Shareholders Owners/Total Liabilities
X3 = Cashes Assets/Current Assets
X4 = Sales/Total Assets
X5 = Cash/ Total Assets
If the value of Z<zero, failure is expected .

Sherrod Model (1987).

This model relies on six financial ratios, taking the following mathematical model:
$Z = 17X1 +9X2 +3.5X3 +20X4 +1.2X5 +0.1X6$
It is the following :
X1 =Net Working Capital/ Total Assets
X2 = Cashes Assets/ Total Assets
X3 = Shareholders Owners/ Total Liabilities
X4 = Net Profit Before Tax/ Total Assets
X5 = Total Assets/ Total Liabilities
X6 = Shareholders Owners/Total Fixed Assets
In view of this model , the loans were classified according to the risk level to five main categories , as follows :

First category	Non-risky loans	Z>25
Second category	lower risky loans	25>Z>20
Third category	middle risky loans	20>Z>15
Fourth category	higher risky loans	5>Z> - 5
Fifth category	loans of very high risks	Z<-5

1.8-Data Analysis and Interpretations.
The study uses Secondary Data for the financial statements of National Company of Cement of Libya from annual reports on 2018 for a company, data analysis and interpretation will be as following:

1.8.1-Financial Analysis of Data .
1.8.1.1- Financial Ratios:

Table(1): Shows the financial Ratios for the Analysis of the Availability of Payment Intention.

S/No	Name of Financial Ratio	Formula	Ratio Value
1-	Current Ratio	Current Assets / Current Liability	375,117,748 / 124,922,353 = 3 : 1
2-	Creditors Turnover Ratio	Cost of Sales / Creditors	127,567,758 / 39,566,580 3 Times
3-	Average Credit Period	360 / Creditors Turnover Ratio	360 / 3 = 120 Days

The table above showed that the current ratio was 3: 1, while the turnover of creditors was 3 times, and the average credit period was 120 days. Meaning that the liquidity risk in National Company of Cement is low, and we can say that when the turnover of creditors is lower, it will be better for the company, it means that increasing the length of credit period granted by the suppliers to pay the debt and this will increase the liquidity of the company.

Table(2): Shows the financial Ratios for the Analyzing of the Financial and Administrative Efficiency of the Client Requesting Credit.

S/No	Name of Financial Ratio	Formula	Ratio Value
1-	Debtors Turnover Ratio	Sales / Debtors	187,325,906 / 10,236,864 = 18 times
2-	Average Collection Ratio	360 / Debtors Turnover Ratio	360 / 18 =20 Days
3-	Assets Turnover Ratio	Sales / Total Assets	187,325,906 / 953,209,370 = 0.20 times

The table (2) shows the financial ratios that show the efficiency of the company of cement, where the turnover of debtors was 18 times, while the average collection period was 20 days, we can say that when the turnover of debtors is higher, it will be better for company, it means that the average collection period of debt will be low. The asset turnover is 20% times and the higher the rate, the greater the efficiency of the company in managing its assets.

Table(3): Shows the financial Ratios for Analyzing the Availability of Sufficient Capital of the Client Requesting Credit

S/No	Name of Financial Ratio	Formula	Ratio Value
1-	Debt- Shareholders Owners Ratio	Debt / Shareholder Owners	180,920,814 / 772,288,556 = 0.23:1
2-	Debt- Fixed Assets Ratio	Debt / Fixed Assets	180,920,814 / 267,699,210 = 0.68 : 1

The table number(3) shows the ratio of debt to Shareholders Equity was 23 %: 1, while the ratio of debt to fixed assets was 68 %: 1. Whenever higher these ratios, whenever increase the financial leverage risk for the company of cement. These financial ratios should be compared with other standard ratios To determine the extent of risk to the company.

Table(4): Shows the financial Ratios to Analyze the Situation Experienced By the Client's Activity and the National Economy

S/No	Name of Financial Ratio	Formula	Ratio Value
1	Gross Profit Ratio	Gross Profit Sales	59,758,148 187,325,906 = 0.3
2-	Return of Shareholders Owners Ratio	Net Profit After Tax Shareholders Owners	22,450,650 772,288,556 = 0.03

From the table number (4), we note that the gross profit ratio is 30 %, while the return on equity is 3 %. Whenever higher these rates, Whenever higher the company's ability to deal with the circumstances that result from falling product prices, falling sales size and high production costs. Should be compared these financial ratios with other standard ratios for similar companies to determine the company's ability to deal with prevailing economic circumstances.

1.8.1.2-Predictability models of financial failure:

Altman Model(1983).

$$Z=0.717X1+0.847X2+3.107X3+0.420X4+0.998X5$$

Table(5) Shows the Results of Analysis of Altman Model

S/No	Ratio	Ratio Value	Ratio Rate	Result
1-	Working Capital Total Assets	250,195,395 953,209,370 = 0.262	0.717	0.188
2-	Retained Earning Total Assets	34,198,156 953,209,370 = 0.036	0.847	0.113
3-	Operating Profit Total Assets	27,296,058 953,209,370 = 0.029	3.107	0.090
4-	Equity- Book Value Total Liabilities	600,000,000 180,920,814 = 3.316	0.420	1.393
5-	Sales Total Assets	187,325,906 953,209,370 = 0.200	0.998	0.200
	Total Z			1.901

In the above analysis we noted that the value of Z = 1.901and where 2.99>1.901>1.81, Thus, the company of cement is considered difficult to establish failure expectation.

Kida Model (1981).

$$Z = 1.042X1 +0.420X2 – 0.461X3 +0.463X4 +0.271X5$$

Table (6) Shows the Results of Analysis of Kida Model

S/No	Ratio	Ratio Value	Ratio Rate	Result
1-	Net Profit After Tax Total Assets	22,450,650 953,209,370 = 0.024	1.042	0.025
2-	Shareholders Owners Total Liabilities	772,288,556 180,920,814 = 4.269	0.420	1.792
3-	Cashes Assets Current Assets	149,433,,377 375,117,748 = 0.398	- 0.461	-0.183
4-	Sales Total Assets	187,325,906 953,209,370 = 0.197	0.463	0.091
5-	Cash Total Assets	149,433,377 953,209,370 = 0.157	0.271	0.043
	Total Z			1.768

Table number(6) shows the results of an analysis of Kida model, we note that the value of Z = 1.768 and the value of Z is considered positive, thus, the company of cement is considered financially successful and the probability of bankruptcy is low.

Sherrod Model (1987).

$$Z = 17X1 +9X2 +3.5X3 +20X4 +1.2X5 +0.1X6$$

Table (7) Shows Results of Analysis of Sherrod Model.

S/No	Ratio	Ratio Value	Ratio Rate	Result
1-	Net Working Capital / Total Assets	250,195,395 / 953,209,370 = 0.262	17	4.454
2-	Cashes Assets / Total Assets	149,433,377 / 953,209,370 = 0.157	9	1.413
3-	Shareholders Owners / Total Liabilities	772,288,556 / 180,920,814 = 4.269	3.5	14.942
4-	Net Profit Before Tax / Total Assets	29,540,339 / 953,209,370 = 0.031	20	0.620
5-	Total Assets / Total Liabilities	953,209,370 / 180,920,814 = 5.269	1.2	6.323
6-	Shareholders Owners / Total Fixed Assets	772,288,556 / 267,699,210 = 2.885	0.1	0.289
	Total Z			28.041

Table number(7) shows the results of the analysis of Sherrod Model, we note that the value of Z = 28.041, thus, the loan of the cement company is considered within Non-risky loans.

1.9-TheFindings of the Study.
 (i) -The credit risk management is very important in banks and it is considered one of the methods to mitigate risks in banks.
(ii) - Of the various types of risks faced by the banks, credit risk,
   market risk and operational risk are the major risks to the banks.
(iii) - The liquidity risk of the National Company of Cement is considered low, the current ratio of company (liquidity Ratio) = 3: 1.
(iv) -The company of cement is considered financially successful and the
    probability of bankruptcy is low; The value of (Z) in Kida Model is positive for the company of cement, Z = 1.768.
(v) - The loan of the cement company is considered within Non-risky loans;
    The value of (Z) in the Sherrod Model is (28.041) for the company of cement, Z >25.

1.10-Th e recommendations
(i)- Attempt to sensitize all dealers and make them aware of the credit process, the nature and source of the funds, as well as the damages raised
    out of the credit risks affecting the bank the economy as a whole and the society with the short and long term.
(ii)- The focus on the financial analysis of the client's centers, in particular, estimation of the cash flows and how it can be sufficient to pay the
    credit facilities.
(iii)- Taking strong and sufficient guarantee from the clients seeking a loan, and not to excessively rely on the guarantees, as this will neglect
    other indicators of the credit merit.

(iv)- Credit portfolio diversification and not to focus on one single way, sector or guarantee to grant bank credit.

(v) - The researcher calls the financial and banking institutions to cooperate and coordinate with the official and unofficial authorities so as to set
    up a program for formulating plans and strategies more efficient to achieve perfect management for granting credit.

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