

Can Palestine Banks Develop Credit Risk Management According to Basel III?

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This work is supported by the Nation Natural Science Foundation of China under number 71173060.

Abstract

In this paper, we investigated Palestine bank sector ability to develop credit risk management systems based on international standards (Basel Capital Accord). First, we evaluate the credit risk management systems and strategies that the operating bank in Palestinian banking system mandate. Second, we used the analytical description methodology to describe the new Basel accord for effective banking supervision. Our study showed that despite the banks prefer to use the Standardized Approach in measuring credit risk according to Basel committee approaches, it is still difficult for Palestinian banks to measure credit risks according to Basel III approaches.

Keywords: Basel III approach, capital adequacy, Risk management, Palestine Monetary Authorities (PMA)

1. Introduction

Bank risk management is one of the most important issues for bankers worldwide (Tobback, Martens et al. 2014). Particularly since the past few years, following the financial and banking crises; beginning with the financial crisis in Mexico at the end of 1994 and early 1995, Passing by the financial crises in southeast Asia (Vithessonthi 2014), Brazil, Russia and Turkey, and ending with the global financial crisis in 2008 (Geiger, Raghunandan et al. 2014, Pennathur and Vishwasrao 2014). The global financial crisis was the most critical crisis that influenced the global economy, especially finance and banking sectors (Milne 2014, Rosman, Abd Wahab et al. 2014, Hoque, Andriosopoulos et al. 2015).

Basel is considered one of the leading issues in the international and Arabic banking community. Since it compels the banks to develop risk management culture according to the new international standards (van Vuuren 2012, Mamatzakis and Bermpei 2014, Montes 2014). In addition it compels the banks also to conduct special internal financial arrangements to improve the quality of assets, building databases for their clients and their portfolios for previous years, and manage many kinds of banking and financial risks (Committee 2010, Teixeira, Silva et al. 2014). The Palestinian banking sector has demonstrated success and progress, despite the difficulties and the stumbling economy in general in Palestinian territories since the beginning of the uprising in September 2000 up to date. Since the banks were able to maintain its assets, recorded significant increases in assets, and provided variety of services and products to their clients. Banks in Palestine are facing some risks: 1- The presence of legislative vacuum "lack of specialized commercial courts." 2- Lack of political and economic stability in the Palestinian territories. 3- The non-application of the mortgage law in Gaza Strip, and pledge of transferred property in the Palestinian territories. 4- The lack of supportive financial institutions such as deposit insurance institutions. 5- Weakness of financial and accounting applications in the Palestinian business environment. 6- Lack of specialized investment banks. 7- The absence of national currency which led to transferring bank surpluses outside Palestinian territories, and depositing it in the form of assets in foreign banks. 8- Increasing bad debts in Palestinian banks, and rise of the value of doubtful debt provisions, which led to decrease in bank revenues. 9- Absence of the real competition between Palestinian banks, due to the focus on a limited number of foreign banks. 10- The absence of local credit rating agencies, which will limit the ability of banks to take advantage of the preferential weights that are given to customers who may have access to a high credit rating.

In light of technological and financial developments in risk management; safety and stability of the financial and banking systems depends on the bank's success in adopting sound and effective strategies and systems for different banking risk management (Ilie and Ungureanu 2014, Horvath and Huizinga 2015). In addition to policies that improve the quality of assets, particularly the loan portfolio, in order to reduce its risks and develop accounting systems, transparency, and disclosure, in accordance with international and local standards for accounting systems (Agenor, Alper et al. 2013, Dewally and Shao 2014). Moreover, developing customer information systems and credit portfolios of the previous years. Also, providing human resources so as to enhance the capital adequacy "bank solvency" (Haq, Faff et al. 2014, Heinemann, Osterloh et al. 2014). Since the strongly capitalized banks which are managed by good managements have the ability to face losses and grant credit to their clients and business facilities through business cycle "economic volatility," and this helps to strengthen public confidence in banking system. Hereby, the study addresses the reality of strategies and regulations adopted by credit risk managements and systems in Palestinian banks. In addition to the basics and

preparations required to develop those systems according to the international banking control standards and guidelines "Basel committee requirements for banking supervision." This raises a number of questions: 1- What is the current status of credit risk management strategies and systems adopted by Palestinian banks? 2- To what extent the Palestinian banks are ready to develop credit risk management strategies according to the international banking control standards and guidelines "Basel committee requirements for banking supervision"?

2. Literature

(Sutorova and Teply 2014); "The Level of Capital and the Value of Eu Banks under Basel III" The global financial turmoil was exacerbated by a low level of financial market regulatory coordination. Historical experience has shown that despite implementing regulations, supervision and macroeconomic policies, the financial industry regularly experiences crises. Consequently, a similar impact might be expected from the Basel III new bank regulatory framework. The aim of this paper is two-fold; in the first part dedicated to theory we describe the Basel III regulatory standards and argue that this regulation is not sufficient and will not prevent financial markets from experiencing future crises. Moreover, they discuss implementation of new banking regulation in Europe: The Capital Requirements Directive IV and stricter capital requirements for European banks set by the European Banking Authority in 2011. In the second part, they focus on an empirical analysis of the impact of stricter capital requirements as defined in the Basel III framework on the market value of European banks. They conclude that the impact of the Basel III regulation on the value of bank shares will probably be perceived negatively by the market, which could be reflected in a drop in the market value of the observed banks. (Wang 2014); "Financial Innovation, Basel Accord III, and Bank Value" This paper examined how financial innovation and Basel III capital requirements in Taiwan respond differently to banking crises and market competition. The result is there is a significant negative relationship between derivatives and the value of a bank and significant positive relationships among the capital adequacy ratio, bank-specific variables, and the value of a bank. Larger bank size and operational diversification tend to be positively associated with a bank's value, the holding of a relatively high amount of capital requirements, and nonperforming loans that are large. The latter result may simply reflect the scale of economy and improvement of efficiency in terms of financial innovation in the banking sector.

(Kiema and Jokivuolle 2014); "Does a leverage ratio requirement increase bank stability?" Basel III has introduced a non-risk-weighted leverage ratio requirement (LRR) which complements the internal ratings based (IRB) capital requirements. It provides a backstop against model risk which arises if some loans get incorrectly rated and become toxic. This paper study the effects of the LRR on lending strategies and its implications for banks' stability. And the result is the LRR might induce banks with low-risk lending strategies to diversify their portfolios into high-risk loans until the LRR is no longer the binding capital constraint on them. If the LRR is lower than the average bank's IRB requirement, the aggregate capital costs of banks do not increase. However, because the diversification makes banks' portfolios more alike the banking sector as a whole may become more exposed to model risk in each loan category. This may undermine banking sector stability.

(Sutorova and Teply 2013); "The Impact of Basel III on Lending Rates of EU Banks" In this paper focused on practical aspects of the new framework for banking regulation in the European Union as defined in Basel III and Capital Requirements Directive IV. They employ a simultaneous equations model where banks choose the optimal level of capital, which is seen as a call option. In their modeling. The results predict a modest drop in the level of loans provided of about 2% from the current level. The drop in loans is not expected to be large because first many European banks are already complying with the capital requirements even though they are not yet fully compulsory, second the impact of a one percentage point increase in the common equity ratio should lead to an increase in lending rates of only 18.8 basis points, and third the elasticity of demand for loans in the EU is reported to be relatively low. Taking into consideration the seven-year implementation period for the new capital requirements, the impacts should not be very perceptible for the EU economies.

Previous studies show the existence Basel III effectively and properly in some cases, but researchers pointed to the need to activate these systems more and more and try to understand the methods according to Basel III committee standard. Our research focused on banking risk management in Palestine banks sector according to Basel III committee standards. We investigated Palestinian bank sector ability to apply Basel III committee standards after the finance crisis in 2008.

3. Methodology

3.1. Data Collection Sources:

The researchers used primary and secondary sources to collect data. Data primary sources were represented in the survey. Palestine currently is hosting 16 banks including 7 national banks and 9 foreign banks with branches and offices reached 272. However, 32 offices were excluded due to lack of credit facilities employees in these offices. Hence, the number of branches in the society for the study is 240 branches in eastern governorates (West Bank) and southern (Gaza Strip).

The number of employees that represented the society for the study reached 320 employees and they filled 5 surveys for main departments in each bank. The banks reached 16, in addition to a survey for each branch in the 240 branches. The comprehensive inventory method has been used. i.e. 80 surveys for main departments + 240 surveys for branches = 320 surveys (total society for the study). 197 surveys have been regained in a percentage of 61.56%, after excluding incomplete three surveys. Table 1 indicates Palestinian banks:

Table 1. Palestinian Banks

Serial	National Banks	Serial	Foreign Banks
1	Bank of Palestine	1	Arab Bank
2	Palestine Commercial Bank	2	Cairo Amman Bank
3	Palestine Investment Bank	3	Bank of Jordan
4	Arab Islamic Bank	4	Housing bank for trade & finance
5	Bank of Jerusalem	5	Jordan Commercial Bank
6	Palestinian Islamic Bank	6	Jordan Kuwait Bank
7	The National Bank	7	Jordan Ahli Bank
		8	Egyptian Arab Land Bank
		9	H.S.B.C

3.2. Statistical Method:

The statistical program “SPSS” was used for data processing and analysis of field study results. In addition, the following statistic has been used: Frequencies, averages and percentages. Pearson Linear Correlation Coefficient. Internal reliability and validity test for performing the study through Cronbach's alpha coefficient and Split –Half coefficient. Normal distribution test for data “One-Sample Kolmogorov Smirnov Test”. One sample t test.

4. Results

One sample t test was used to analyze the paragraphs of survey. The following tables include the arithmetic mean, mean relative weight and the value of t in addition to the significance level in each paragraph. The paragraph is considered positive, i.e. sample individuals agree about the content, if the calculated absolute value of t exceeds the tabulated t absolute value, that equals 1.98 at a freedom degree of “109” and intangible level of “0.05” (or the intangible level is less than 0.05 and the relative weight exceeds 60%). The paragraph is considered negative, i.e. sample individuals do not agree about the content, if the calculated absolute value of t is less than the tabulated t absolute value at a freedom degree of “109” and intangible level of “0.05” (or the intangible level is less than 0.05 and the relative weight exceeds 60%). The opinions of sample in the paragraph are considered neutral in case the intangible level exceeds 0.05.

4.1. Statistical Results of First Hypothesis Test (H1)

The existence of a statistically significant relationship between the developments of credit risk management systems according to Basel Capital Accord in Palestinian banks, and between the necessary basics needed in Palestinian banks to apply modern techniques mentioned in Basel III in order to identify and measure credit risk.

4.1.1. Difficulties encountered by the bank to measure credit risk according to Basel III approaches:

Table 2 indicates the analysis of third field paragraphs, where it is clear that the opinions of sample individuals are positive in all paragraphs, since the relative weight for each paragraph exceeds 60% and intangible mean of 0.05. i.e. individuals of sample agree that it is difficult to the bank to measure credit risk in accordance to Basel III approaches for the following prioritized reasons:

- The bank needs continuous training and learning to develop human capacities and skills. Especially in the areas of: credit internal rating systems, methods of measuring and reducing credit risks mentioned in Basel III accord and identifying capital adequacy. This reason was ranked first with a relative weight of 84.36%.
- The limited number of customers classified by external credit rating companies, as this reason was ranked second with a relative weight of 77.96%.
- The absence of local credit rating agencies. The fact that limited the bank’s ability to take advantage of preferential weights which are given to customers who may have high credit rating, as this reason was ranked third with a relative weight of 77.41%.
- Shifting to application of Basel III system, especially the most advanced techniques, requires changing the bank’s accounting system in accordance with international accounting standards, disclosure requirements and transparency, as this reason was ranked fourth with a relative weight of 74.13%.
- The absence of comprehensive archived data “low quality of credit information” which can help in measuring credit risk, as this reason was ranked fifth with a relative weight of 73.45%.
- The absence of appropriate resources to meet the needs of investment in advanced information

technology as well as risk management systems and data collection, as this reason was ranked sixth with a relative weight of 68.49%.

- The absence of internal credit rating systems for bank customers, as this reason was ranked seventh and last with a relative weight of 65.14%. The declination in the relative weight refers to the need of internal credit rating systems for bank customers, which accurately specifies the functions of each credit customer in addition to credit portfolio specifications, credit concentration, credit problems, adequacy of reserves for loans loss, credit pricing and capital adequacy.

Table 2. A table indicates the answers of sample individuals on the paragraphs of first field part 1

N	Paragraph	Mean	V.R	t	Sig.
A	It is difficult to the bank to measure credit risk in accordance to Basel III for the following reasons:				
1	The absence of local credit rating agencies. This limit the bank's ability to take advantage of preferential weights which given to customers who may have a high credit rating.	3.87	77.41	9.167	0.000
2	The limited number of customers classified by external credit rating companies.	3.90	77.96	10.542	0.000
3	The absence of internal credit rating systems to the customers.	3.26	65.14	2.366	0.020
4	The absence of comprehensive archived data "low quality of credit information" which can help in measuring credit risk.	3.67	73.45	6.833	0.000
5	Shifting to Basel III system, especially the most advanced techniques, requires to change the bank's accounting system in accordance with international accounting standards and disclosure requirements and transparency.	3.71	74.13	7.567	0.000
6	The bank needs continuous training and learning to develop human capacities and skills. Especially in the areas of: credit internal rating systems, methods of measuring and reducing credit risks mentioned in Basel III accord and identifying the adequacy.	4.22	84.36	16.575	0.000
7	The absence of appropriate resources to meet the needs of investment in advanced information technology as well as risk management systems and data collection.	3.42	68.49	3.564	0.001
	All paragraph	3.72	74.31	10.182	0.000

In general, it is clear that the arithmetic mean for all paragraphs of the third field equals 3.72 and the relative weight equals 74.31%, which exceeds 60%, and the calculated t value equals 10.182, which exceeds the value of tabulated t that equals 1.98, and an intangible value of 0.000 which is less than 0.05. The fact that indicates the presence of difficulties encountered by the banks in measuring credit risks according to Basel III approaches. This means the rejection of this hypothesis, i.e. Palestinian banks do not have the necessary basics. This is compatible with the challenges encountered by Arabian banks to apply Basel III, (Union of Arab Banks, 2014).

4.1.2. The approach to be applied by your bank to measure credit risk in accordance with Basel III.

Table 3 indicates the opinions of individuals of sample in the methods followed in their banks to measure credit risk in accordance with Basel III. There is a consensus regarding the use of Standardized Approach, as it was ranked first with a relative weight of 86.6%.

This is compatible with the trend of Arabian banks to apply the Standardized Approach to calculate credit risks. Hence, shifting to the application of modern approaches, after banking supervision committee verifies the ability of relevant bank to do so (Union of Arab Banks, 2014).

Individuals of the sample rejected the application of Foundation Internal- rating Based Approach, since there is a lack in necessary basics for applying such approach.

Table 3. Indicates the answers of sample individuals on the paragraphs of first field part 2

N	Paragraph	Mean	V.R	t	Sig.
B	What is the approach that will be applied by your bank to measure credit risk in accordance with Basel III?				
1	Standardized Approach	1.73	86.6	50131	0.000
2	Foundation Internal- rating Based Approach	1.59	79.47	1.763	0.081
3	Advanced Internal Rating Based Approach	1.57	78.38	1.165	0.248
	All paragraph	1.7	85.17	6.076	0.000

4.1.3. Does the Palestinian Monetary Authority (PMA) identified an appropriate approach for the Palestinian banks to deal with credit risk?

Table 4 indicated that sample individuals have accepted that Palestinian Monetary Authority did not approve the

appropriate approach to identify credit risk. This is indicated by the results of t, as all t values are negative and have statistical intangibility.

Table 4. Indicates the answers of sample individuals on the paragraphs of first field part 3

N	Paragraph	Mean	V.R	t	Sig.
C	Does the Palestinian Monetary Authority (PMA) identified an appropriate approach for the Palestinian banks to deal with credit risk?				
1	Standardized Approach	1.46	73.04	0.971-	0.431
2	Foundation Internal- rating Based Approach	1.33	66.67	3.335-	0.001
3	Advanced Internal Rating Based Approach	1.32	66.11	3.589-	0.001
	All paragraph	1.41	70.51	2.147	0.034

4.2. Statistical Results of Second Hypothesis Test (H2):

The existence of a statistically significant relationship between the development of credit risk management systems according to Basel Capital Accord in Palestinian banks, and between information systems and analysis techniques which support processes and systems of credit risk management in Palestinian banks, and help the management in identifying and measuring credit risks accurately and efficiently.

Table 5 indicated the analysis of fourth field paragraphs, since it is clear that the opinions of sample individuals in all paragraphs are positive, as the relative weight for each paragraph exceeds 60% and an intangible level less than 0.05. i.e. sample individuals agree that “credit risk estimations are based on high quality credit information” in a relative weight of 77.60%, in addition to that “the structure and type of credit portfolio help the bank’s management to evaluate and identify the level of credit risks faced by the bank, especially, identifying credit portfolio risk” in a relative weight of 77.61%. Moreover, they agree that “data of information management systems enable board of directors and all levels of management, to perform monitoring process and capital requirements” in a relative weight of 79.63%, in addition to that “the executive management check periodically the adequacy of scope and quality of information, to ensure its efficiency to manage credit risks”, in a relative weight of 78.5%. At the same time, they agree that “the bank needs to perform some fundamental changes in the internal systems, to ensure the flow of information between executive departments from one side, and its transition from operational levels to the highest level from the other side” in a relative weight of 77.04%.

Table 5. Indicates the answers of sample individuals on the paragraphs of second field

N	Paragraph	Mean	V.R	t	Sig.
1	Credit risk estimations are based on high quality credit information “reliability of information.	3.85	77.06	11.425	0.000
2	The structure and type of credit portfolio help the bank’s management to evaluate and identify the level of credit risks faced by the bank. Especially, identifying credit portfolio risk.	3.88	77.61	11.997	0.000
3	Data of information management systems enable board of directors, and all levels of management, to perform monitoring process and capital requirements.	3.98	79.63	13.990	0.000
4	The bank needs to perform some fundamental changes in the internal systems, to ensure the flow of information between executive departments from one side, and its transition from operational levels to the highest level from the other side.	3.85	77.04	10.393	0.000
5	The executive management check periodically the adequacy of scope and quality of information, to ensure its efficiency to manage credit risks.	3.93	78.5	12.375	0.000
	All paragraph	3.90	77.97	17.550	0.000

Tabulated t value at a freedom degree (109) and intangible level of 0.05 equals 1.98

In general, it is clear that the arithmetic mean for all paragraphs of the fourth field equals 3.9 and the relative weight equals 77.97%, which exceeds 60%, and the calculated t value equals 17.55, which exceeds the value of tabulated t that equals 1.98, and an intangible value of 0.000 which is less than 0.05. The fact that indicates the acceptance of the hypothesis that states “The existence of a statistically significant relationship between the development of credit risk management systems according to Basel Capital Accord in Palestinian banks, and between information systems and analysis techniques which support processes and systems of credit risk management in Palestinian banks, and help the management in identifying and measuring credit risks accurately and efficiently”. This in turn affirms the compliance of banks to principles no. (11,8) of credit risk management principles mentioned in Basel document 2011. Moreover, American Services Committee (1999)

affirms this result through its issued bank risk management principles, which states that the effective framework to manage risks needs the presence of effective management information system that includes the flow of information from the operational levels to the highest administrative levels.

5. Conclusion

This study aims to evaluating reality, strategies and systems of credit risk management that are adopted by Palestinian banks. In addition to evaluating the procedures and measures taken in order to develop these systems, according to international supervision principles and guidelines “new Basel committee requirements for banking supervision Basel III”, and preparing a comprehensive framework for credit risk management in banks according to the modern management of bank risks. Moreover, the contents of this study focus on achieving these aims. Accordingly, the results of study are mentioned in respect to aims of study, whereas the efficiency of credit operations were clear from studying the environment of credit risk in Palestinian banks, through approving a strategy by bank Board of directors for managing credit risk that includes setting the credit policies, identifying credit, methods of measuring and monitoring these risks and controlling it. Moreover, Board of Directors review credit policies and perform appropriate adjustments in order to be suitable with the bank internal and external environment changes. In addition, Board of Directors is keen about the executive management’s commitment to manage credit activities in the bank, in accordance with the approved strategies and policies and following up the application of these policies efficiently and effectively. Further, credit facilities management is concerned to study credit risk, the fact that showed the presence of effective control on credit, through the keenness of banks to adequate the financial allocation for the potential risks in the credit portfolio, as well as the compliance to the requirements of capital adequacy. Fifth, the absence of appropriate resources to meet the needs of investment in advanced information technology as well as risk management systems and data collection. The results showed that banks prefer to use the Standardized Approach in measuring credit risk according to Basel committee approaches, other than using internal evaluation system. In addition, PMA did not approve the appropriate approach to identify credit risk.

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