THE POST WAR PERFORMANCE OF THE LEBANESE BANKS USING THE BALANCED SCORECARD: A CASE STUDY

Anis EL Khatib

Professor of Accounting and Auditing, and Head of the Anti-Money Laundering Compliance Department-Middle East Airlines, Lebanon.

Email: elkhatib@mea.com.lb

ABSTRACT

This study covers a 15 years period after the end of the Lebanese civil war, that is from 1990 to 2004. The importance of the period under study comes from the many Lebanese banking industry’s internal and external environmental changes. This period witnessed mainly the stabilization of the foreign exchange rate, the financing of the reconstruction process, the heavy subscription of banks in Lebanese T-bills, the unprecedented mergers and acquisitions among Lebanese banks, and the expanding of banking activities abroad, and toward retailing and banc-assurance. A balanced Scorecard is constructed using the four perspectives as developed by Kaplan and Norton in 1992. Five measures have been developed for each of the four perspectives, and the case study approach is employed. The determination of the measures is based upon those used in previous works, and the specific conditions and constraints related to the banking industry in Lebanon. The study concludes that the highest performing perspective is the Customer, followed by the Learning and Growth, and the Internal Process. The study recommends that Lebanese authorities start encouraging banks to adopt Performance Management Systems (PMSs) to reflect both the financial and the non-financial activities of banks. This is crucial since the Lebanese Banking Sector is anticipated to face a new era of challenges due to the expected extraction of gas resources, the reconstruction of Syria, and the development of the banking system in the Arab Gulf Area.

Contribution/Originality: This research seeks to empower the Lebanese banks, academics and researchers to follow the steps of many other countries in the MENA region and to start practicing the BSC model in a trial to improve the performance of banks and enhance economic growth in Lebanon.

1. INTRODUCTION

The Lebanese banking sector has a distinguished history, in the Middle East, and throughout the world. It has long been highly regarded for its openness, stability, and sophistication. Moreover, throughout Lebanon’s history, it has played an important role in the private sector, and in sustaining the public sector. The Lebanese liberal democratic system, coupled with a solid banking infrastructure, has made the country a haven deposit box, especially for petro-dollar funds from the Gulf countries. Open connections, and free trade, with both Arab and European nations, are only two of the features that Lebanon has exercised and practiced along its modern history. Consequently, this has made Lebanon develop as a country, with a free market economy, and with minimum state control. All of which have reinforced and further strengthened the monetary system of the country, which has significantly spilt over, creating a solid foundation for an efficient banking system.
The years from 1975 until 1990 are known as the hard years of the civil war. This period ended the nation’s economic glory, and had dramatic negative effects on tourism, infrastructure, migration and immigration, and divided the country into small separately controlled units. The outbreak of this war had a spectacular effect on various economic activities in Lebanon, and as a result, the banking sector was influenced. Deposits declined from LBP 9 billion in April 1975, to LBP 8.1 billion in December 1976. The banking sector deteriorated during this period, and the profitability and assets of the banks declined. The Lebanese currency experienced a sharp depreciation against foreign currencies. The Central Bank of Lebanon - Banque Du Liban (BDL) unsuccessfully tried to stop the depreciation of the Lebanese pound though it risked the loss of all of its foreign reserves. As a result, the Lebanese pound fell dramatically from 1982 until 1990. The exchange rate went from LBP 5.42 per dollar in 1982, to LBP 69.74 at the end of 1986, and to LBP 490.45 by the end of 1990. Consequently, the demand for domestic currency declined in favor of foreign currencies. The dollar dominated balance sheets, in order to perform daily transactions, leading to a severe reduction in domestic balance sheets (Osseiran, 1987).

During the Lebanese civil war, most of the social and economic structures of Lebanese society were destroyed (Mezher, 1997). Governmental expenditures were negligible and were limited to only financing the inevitable costs of the ministries, while revenue base was eroded due to the inability of the government to collect taxes (Neaime, 2004). The main role of the government was narrowed to just keeping operations at their lowest possible levels. Most of the sectors of the economy were suffering from losses or from a low level of activity. Despite all of the difficulties, the banking sector was able to perform. During the civil war, the banking sector continued to grow (Corn, 1995) hence played a vital role in protecting the wellbeing of Lebanon as a nation.

In 1992, the government launched an outstanding plan to reconstruct Lebanon (Dibeh, 2005). This plan covered all aspects of social and economic life. Between 1992 and 2004, billions of dollars were spent on reconstruction projects. Hundreds of kilometers of modern roads, that contained tunnels and bridges, were built and constructed. A new international airport was erected. Many new modern electricity stations and networks were established. New cable and wireless telephone networks were carried out. Many modern public hospitals were built and equipped, and billions of dollars were spent on health programs. Many additional public schools were constructed and outfitted. A large and centralized campus for the Lebanese University, the state university in Lebanon, with new facilities and colleges, started operations. The objective behind these spending was to rebuild the country’s physical, social and institutional infrastructure and to prepare the economy to confront the upcoming challenges. This recovery approach was adopted to first, restore and rebuild the capacity of existing physical infrastructure to enable the private sector to lead the recovery and, subsequently expanding the capacity through the construction of new facilities, and finally the economy would be developed and modernized through the utilization of the domestic potential (UNDP, 1997).

The Lebanese Banking Sector was deeply involved in most aspects of the reconstruction processes, and contributed extensively in the financing of reconstruction projects. At the same time, all governmental agencies and the Bank of Lebanon (BDL) enacted new decrees, circulations, and laws, to make the interaction between the banking sector and other sectors of the economy, more efficient. The banks were aware of the importance of the assumed projects on the welfare and the wellbeing of the country. The cooperation between the Lebanese government and the Association of Banks in Lebanon (ABL) led to remarkable improvements in many economic and financial indicators. Additionally, this cooperation helped to render many of the provisions that related to the development of the Lebanese banking and financial systems.

1.1. The After War Period

Despite the fact that the Lebanese economy has witnessed various difficulties and problems, the Lebanese Banking Sector has maintained its prosperity and remained one of the most successful and prosperous banking sectors in the Middle East (Haslem, 2003). Contrary to the situation that prevailed before 1975, and by the end the
period under study, banks controlled by Lebanese citizens dominated the scene. The Lebanese banks had succeeded in raising and expanding their infrastructure, diversifying their products, introducing modern information technology, and reinforcing their financial flexibility (ABL Annual reports; official websites of BLOM bank and Byblos bank). Being at the image of Lebanon’s economy and markets, the Lebanese Banking Sector was expected to benefit significantly from the wide economic opportunities lying on the horizon in 2004. The appropriate positioning of the Lebanese banks would allow them to benefit from a large-scale expansion potential, and to participate effectively in bridging the gaps in neighboring markets that were embarking on severe financial and banking reforms (Baz, 2007). The Lebanese Banking Sector maintained a high level of cash flow and solvency to ward off any risks in the volatile Lebanese and regional environments. The sector had passed the international test of cooperation in the struggle against money laundering, having adopted legislation, without the need to alter its system of banking secrecy.

Between 1992 and 2004, the Lebanese Banking Sector witnessed a trend towards concentration that reduced almost the number of commercial banks from 74 to 53. The main reason was the mergers and acquisitions that started in 1992. However, such concentration did not reduce the banking capacity in terms of bank branches, as the number of branches increased over that period. This growth in the number of branches reflected the need of the banks to gain market share, finding a close relationship with customers, and removing geographical limitations to the expansion of banks. The number of branches increased from 531 in 1992 to 799 in 2004, and the number of employees increased from 13,488 in 1990 to 15,493 in 2004 (ABL annual reports).

The commercial banks had been the main subscribers to the issuance of Lebanese treasury bills over the period 1991-2004 (ABL annual reports; Ministry of finance). Being aware of the monetary and fiscal situation at that time, the banks considered that their participation in financing the public debt was a national task, and one of their essential roles. The investments made by the Lebanese Banking Sector in T-bills was USD 822 million in 1990, peaked at USD 17,630 million in 2002, and recorded a USD 16,023 million in 2004. These investments represented between 15% and 42.21% of earning assets, and ranged from between 14.02% and 35.82% of total assets. The investments in T-bills dropped in 2003 and 2004 due to the failure of the Paris I meeting to produce any commitment (BDL Data, 2001; Lebanese Republic, 2002) that was reflected in the unwillingness of the commercial banks to increase their already large stock of treasury bills.

The government’s efforts, for improving the country’s political and economic environment, were not in vain, especially in terms of investment opportunities. In 1993, banking assets, customer deposits, loans, and the bank’s profits, increased by 40.3%, 41%, 35%, and 42%, respectively (BDL & ABL annual reports). Conversely, the Lebanese people did not have confidence in economic recovery, because of the continuous increase in the budget deficit. Consequently, in 1993 the dollarization of deposits was 69.5%, increased to 72% in 2001, and recorded 68.8% in 2004. On the other side the dollarization of loans was 53.1% in 1993 and reached 68.5% in 2004. More specifically, in 2002, and despite a suitable decrement in deficit to the GDP (from 27.6% in 1997 to 15.7% in 2002), and some improvements in the fiscal situation, the Lebanese government faced a highly sound speculation against the national currency; hence, a larger portion of deposits at the Lebanese banks were dollarized; from 60.8% in 1999, to 72% in 2001, and 68.66% in 2002.

During the after war period, Lebanese banks instigated interest in entering the retail market through the development of many products. The banks started to promote the sale of cars and housing loans. Since then, the retail banking operations began to expand and offered a more diversified portfolio of products, such as wedding loans, travel loans, schooling loans, and personal loans. Diversification, along with innovation, vision, and the capabilities of the bankers, played a main role in enhancing the totals of the consolidated balance sheets of the banks, and that reached USD 67,760.2 million by the end of 2004, representing around 334% of the GDP (Association of Banks in Lebanon (ABL), 2004). Another facet of the diversification was the expansion of Lebanese banking activities beyond borders, mainly in the three regions of the MENA countries, being the Levant, the GCC,
and North Africa. Many of the top ranked banks launched operations in these regions, to improve their domestic franchises, to strengthen their immunity against local adverse conditions, and to enhance their activities through investments in value added markets (Baz, 2007).

The involvement of the commercial banks in retailing, led to an inevitable cooperation with the insurance business. The insurance companies found themselves before a new and large market segment that necessitated additional capitalization and regulations. On the other side, the inability of many insurance companies to coop with the new demands left no room for the banks, other than a direct involvement in the insurance business. This trend generated positive impacts on both the insurance companies and the banking businesses. The banks became efficient middlemen for insurance companies and brought significant business to the sector. The period of 1990-2004 witnessed a broad range of insurance products that were sold through more than ten leading commercial banks.

2. REVIEW OF LITERATURE

Ever since it was introduced by Kaplan and Norton in 1992, the Balanced Scorecard (BSC) - as a performance measurement tool - received much attention regarding its applicability in many industries. In both research and practice, the BSC has received much attention, particularly as a tool for driving unit level strategy within many industries, including hospitality, health, manufacturing and banking (Ashton, 1998; Kaplan & Norton, 2001). It is indicated that the Balanced Scorecard is applicable in the finance industry, particularly banking. Some international banks have successfully utilized Balanced Scorecard in order to improve their performance (Rillyan, Satria, Railhan, & Wibisono, 2016). The banking sector has started adopting the Balance Scorecard to exhibit to stakeholders that this sector provides performance information regarding financial and non-financial measures. Currently, the BSC is deemed as one of the most common frameworks of measuring performance. During the last two decades, many studies and articles related to measuring performance of banks using the BSC model were published.

The review of literature states a strong relevance to appraising banks performance through the BSC approach. The BSC has gradually gained popularity in the United States right after 1992 (Gupta & Sharma, 2016) then in Europe, Latin America and Australia (Janota, 2008). Since the start of the third millennium, many articles were published using the BSC as a measure of performance for banks in China, Indonesia, Pakistan, Ghana, Kenya, Jordan, India, Libya, Finland, Sweden, Japan, and other countries in Africa and Asia (Akter, 2015; Gupta & Sharma, 2016).

Singh (2018) in his paper “Devising a Balanced Scorecard to Measure HDFC Banks’ Performance: A Case Study”, used the Balanced Scorecard as a tool of performance measurement system of the HDFC bank, one of the top ranking private banks in India. The study was carried out to analyze the four perspectives of the BSC, and to increase the understanding about how the BSC may be developed and applied within the context of new private sector in India. The study also pointed out to the importance of the BSC in highlighting the deficiency of the sole dependence on the financial aspects to measure performance. Data was collected over five years (2009-2013), 22 performance indicators were established, and a BSC model was constructed using the case study method. The results showed that the HDFC performance declined during the first two years of the study, but in the next two years, the performance improved. With respect to performance on individual perspectives, it was observed that the scores achieved on the financial perspective were the highest. This finding coincides with the bank’s concentration on the financial performance as a measure of performance. The study concluded that designing and implementing a BSC model for banks, being financial service organizations, is not only a difficult task but also a complicated one. Nevertheless, the BSC stands out as an efficient tool to measure performance of banks. It helps in understanding the relation among different performance indicators, thus making strategy designing and implementation process more efficient. The study recommends that, with the inflow of more new national and multinational banks into the Indian economy, it is essential to adopt such a performance measurement (BSC) to ensure better performance in the future.
Abofaied (2017) conducted a study entitled “Evaluation of Bank’s Performance by Using Balanced Scorecard: Practical Study in Libyan Environment”. The aim of the study was to increase the understanding of how the Balanced Scorecard is developed and applied in evaluating the performance of a Libyan bank. The study employed the case study approach, and a BSC model has been constructed including 20 indicators to measure the performance of the assumed bank between 2007 and 2010. The analysis assisted the cause-effect relationships between the non-financial and the financial dimensions of BSC. The study concluded that the bank is still concentrating on the financial perspective as a measure of performance. The internal process perspective and the learning and growth perspective revealed no significant improvements. The scores of the customer perspective were the worst with zero average annual growth during the period of the study. This research highlighted the importance of viewing performance from other perspectives in addition to the financial perspective. Due to the lack of research work in this area in the banking sector in Libya, this study will contribute to the knowledge of how banks in Libya may apply the BSC to measure their performance. The author suggested that future researches in the banking sector in Libya in this domain are needed, and thus he considered this study as a trigger for policy makers and bankers to start using the BSC.

Rostami, Goudarzi, and Zaj (2015) in their article “Defining Balanced Scorecard in Banking Industry Using FAHP Approach”, examined the four perspectives of the Balanced Scorecard and their importance. To achieve the research objectives, Fuzzy Analytical Hierarchy Process (FAHP) was used. At the first stage of the study, 56 indicators were found based on prior studies and literature that were scrutinized by expert opinions through administering a questionnaire. Ultimately, 9 indicators were extracted. In the second stage, the weight of each indicator was investigated using a pair comparison questionnaire based on the FAHP approach. The findings of the study ranked customer perspective as the first cluster and financial perspective as the second, internal processes perspective as the third and the learning and growth perspective as the fourth in the balanced scorecard model. It was found that the “market rate” and the “growth rate of customer complaints” and “customer attract rate” are the most important indicators of customer aspect. “Revenues”, “P/E ratio” and “leverage” are the most important indicators of the financial aspect. The “electronic transaction share”, “performance management” and “research and development costs” are the most important indicators in the internal processes aspect whereas “employee stability”, “loan per capita” and “present reduction in disciplinary matters” are the most important indicators in the learning and growth aspect.

Kirandeep (2015) conducted a research project entitled “The Application of Balanced Scorecard as a Strategic Management Tool at National Bank of Kenya” to identify the extent of the adoption of the BSC at the National Bank of Kenya and the challenges involved in this adoption. The study employed a case study design to examine the application of the Balanced Scorecard as a strategic management tool at the National Bank of Kenya (NBK). Primary data was collected through in depth interviews with 19 employees at different managerial levels. Secondary data was obtained from the banks’ strategic plan, performance development articles, and the official website of the NBK. The study found out that applying the Balanced Scorecard as a strategic management tool had greatly influenced strategy formulation and implementation at the National Bank of Kenya. The most important factor is that the BSC has improved the understanding of strategy in the organization. The BSC provides guidance for action. Challenges faced in adopting the BSC included inadequate skills and knowledge of the BSC, cultural changes which lead to a lot of confusion within the bank and having KPI's that are too difficult when staff performance is appraised departmentally. The author suggested that all the above-mentioned challenges should be taken into consideration by any organization when adopting the BSC as a strategic management tool.

Tominac (2014) in his research paper “Possibilities of Balanced Scorecard Application in Commercial Banks”, investigated the Balanced Scorecard as a tool or methodology for managerial accounting. The aim of this study was to contribute to the understanding of how the Balanced Scorecard is developed, and how it is applied in banks in terms of their performance measurement. Tominac concluded that Financial Indicators are not enough for
reporting because they are not directly connected with the bank’s long-term goals. Balanced Scorecard engages all hidden resources in order to ensure a bank’s leading position in the market. It is important for implementing Balanced Scorecard in banks to appropriately balance all imperatives of the bank. Applying BSC also helps management to consider the strengths and weaknesses, areas in which profits and losses are made. Implementation of BSC is expensive and it requires times and effort. It also helps bank employees to better understand the strategies.

Ozturk and Coskun (2014) in their article "A Strategic Approach to Performance Management in Banks: The Balanced Scorecard", provided the literature with a theoretical background on the implementation of the Balanced Scorecard on strategic performance management in the banking industry. The main objective of the study was to reveal the Balanced Scorecard practices in literature. The authors concluded that BSC is a comprehensive method to offer quality and efficient financial services. It is important to adopt innovations in the banking sector especially for international competitiveness. They also found that it is more beneficial to prepare the Balanced Scorecard for the banks than to report financial performance only in terms of evaluating performance with a holistic approach. Moreover, this study contributes to the literature with examples from the different regions of the world.

In their study, "Devising a Balanced Scorecard to Determine Standard Chartered Bank’s Performance: A Case Study", Panicker and Seshadri (2013) displayed how to use the Balanced Scorecard (BSC) as a tool which is applied to commercial banks’ performance management system. A Balanced Scorecard model including 20 measures was constructed to measure the Standard Chartered Banks’ Performance, using the case study approach. Utilizing the concepts of Kaplan and Norton, financial and non-financial data was derived to measure the performance of the assumed foreign bank during the period 2009-2012. The study highlighted the importance of viewing performance from other perspectives in addition to the financial perspective. With the increased demands from stakeholders, financial sector analysts, educators and practitioners, the BSC will be widely used in the banking sector in India. This study recommended that more studies are needed to identify the relevant measures of the BSC to the banking sector.

In their study "Bank’s Performance Evaluation Model on the Balanced Scorecard Approach, Fuzzy DEMATEL and Analytic Network Process", Eskandari, Roudabr, and Kamfiroozi (2013) presented a structural evaluation methodology to link Key Performance Indicators (KPIs) into a strategy map of the Balanced Scorecard for banking institutions. 23 KPIs for banking were chosen for the four perspectives of the Balanced Scorecard. The Fuzzy Decision Making Trial and Evaluation Laboratory (FDEMATEL) method, a multiple criteria analysis tool, was then employed to determine the causal relationships between the KPIs. Each of the four perspectives of the BSC was deemed as a cluster, and each indicator (KPI) was considered as a node in a cluster. The customer perspective was ranked first, then the financial perspective. The internal process perspective was ranked third while the learning and growth perspective was ranked fourth. The study concluded that the three most essential KPIs for banking performance are customer satisfaction (customer perspective), sales performance (internal process perspective), and customer retention rate (customer perspective).

Al-Najjar and Kalaf (2012) in their study entitled "Designing a Balanced Scorecard to Measure a Bank’s Performance: A Case Study", measured the performance of a large Iraqi bank using the BSC method. Data was collected for four years and a BSC model was constructed, including 20 measures. The analysis assisted the cause and effect relationship between the financial and the non-financial dimensions of the BSC. This study highlighted the importance of viewing performance from other perspectives in addition to the financial perspective. The bank’s management realized the importance of the BSC tool as a strategic and valuable performance management system, and expressed its interest and willingness to learn this approach and to apply it in the future. Top management of the bank should demonstrate its commitment in adopting the BSC for its successful implementation. The authors recommended that future researches in the banking sector in Iraq are needed and should focus on studying the contingent factors that facilitate or impede the implementation of the BSC such as organizational culture,
organizational structure and technology. They also said that further studies are needed to identify the relevant measures of the BSC to the Banking Sector.

Shaverdi, Akbari, and Fallah Tafti (2011) conducted a study “Combining Fuzzy MCDM with BSC Approach in Performance Evaluation of Iranian Private Banking Sector” to assess the performance of three nongovernmental Iranian banks. 21 performance indicators were selected as the proper banking performance indexes according to BSC perspectives. A Fuzzy Analytic Hierarchy Process (FAHP) was used to weigh each of the chosen indicators. The study concluded that the ranking order of banking performance was as follows: the Customer Perspective, the Financial Perspective, the Internal Process Perspective, and the Learning and Growth Perspective respectively. The top five ranking indicators are: customer satisfaction (Customer Perspective), ROA (Financial Perspective), customer retention (Customer Perspective), EPS (Financial Perspective), and profit per customer (Customer Perspective) correspondingly.

Abay (2010) conducted a research work titled “Performance Evaluation of Selected Ethiopian Commercial Banks Using Balanced Scorecard”. This study aimed at assessing performance of selected Ethiopian commercial banks using Balanced Scorecard as a framework. The study used both quantitative and qualitative research methods to gather data from primary sources (structured questionnaires) and secondary sources (annual reports). The researcher used quota and convenience sampling methods to select customers, employees and managers as respondents. Structured questionnaires and unstructured interviews were used as survey instruments. Data analysis tools such as descriptive statistics, correlation and regression analysis with the help of SPSS were used in this research. The research revealed that the Balanced Scorecard framework can be implemented to assess performance of commercial banks in Ethiopia, and the non-financial perspectives of the BSC affect the performance of commercial banks largely in Ethiopia. The BSC framework can also assist by providing additional information using measures in several dimensions to managers, shareholders and other interested stakeholders regarding the performance of the commercial banks. Any stakeholder who wants to know about and to evaluate the performance and competitiveness of these commercial banks will be better informed about multi-dimensional measures in terms of Customer Perspective, Internal Business Process Perspective, Learning and Growth Perspective; all of which affect the long term performance and survival of the banks than just looking at their financial performance alone. This will permit commercial banks to pay attention to the core strategies to create and deliver superior value and returns to their stakeholders. The result of the analysis also revealed that there is a clear and strong relation between the financial performance and the non-financial performance measures namely customer satisfaction, internal process/operation and employee satisfaction. Additionally, empirical findings suggested that the non-financial measures are significant explanatory factors of financial performance. More importantly, the findings of the study proved the cause-and-effect relationship between the financial and non-financial performance in these commercial banks.

Al-Mawali, Zainuddin, and Ali (2010) in their research paper “Balanced Scorecard (BSC) Usage and Financial Performance of Branches in Jordanian Banking Industry”, investigated empirically the extent of multiple performance measures usage and their effects on the financial performance of Jordanian banks at the branches level. The entire banks under the Jordanian Banking Industry were taken as a population size which includes 480 branches out of which 120 branches were selected on random basis as a sample. Questionnaires were framed for the collection of data. To test the effect of BSC, Multi-Dimensional Regression analysis was done. The authors found that there is a positive relationship between the branches of financial performance and the overall BSC measures usage. However, the results of this study show that the usage of non-financial measures, mainly, customer oriented indicators and product/ service oriented indicators appears to be important as it enhances firm performance. Remarkably, the findings reveal that there is a positive relationship between the usage of multiple performance measures using the BSC measures and financial performance at the branches level. The study suggested that the designers of control and performance measurement systems require highlighting the use of multiple performance measures that are essential to the success of branches.
Abu (2009) - in his research project - “Using Balanced Scorecard to Assess Performance of Banks in Ghana” concluded that the perspectives of the customer, those of internal business, and those of learning and growth affect the assessment of the performance of banks largely in Ghana. Abu found that the well performing banks based on financial measures only might not necessarily be the best banks in the industry when other perspectives or dimensions were taken into consideration. This study presents additional information regarding the performance of banks. Such information enables banks to focus on the core strategies in order to create and deliver superior values and returns to their shareholders. For this purpose, primary and secondary sources were used for data collection. Primary sources encompassed questionnaires and interviews that concentrated on the internal processes and learning & growth perspectives whereas secondary sources included banks' published financial statements. The author recommended that banks must implement the BSC as a performance measurement and strategic implementation tool to improve their operational performance and profitability. Banks should follow a well-planned methodology to harvest the full benefit of their investment.

Wu, Tzeng, and Chen (2009) evaluated banking performance based on the Balanced Scorecard. They used “A Fuzzy MCDM Approach Scorecard”, and identified 23 evaluation indexes from 55 indexes suitable for banking performance in terms of BSC perspective through expert opinions. They were able to rank them in terms of their relative importance. The Customer Perspective came first, followed by the Financial Perspective, and then by learning & Growth and the Internal Process using FAHP process. Customer satisfaction, ROA, EPS, customer retention rate and profit per customer were found as top five evaluation indexes. U bank, C bank and S bank respectively were ranked based on performance using MCDM analytical methods. They suggested that there is no one-performance evaluation index that can be used for all banks, but it should be tailored to meet the organization’s overall goals as well as the objectives of each individual bank. The performance evaluation indexes of the BSC perspectives may not be mutually independent, so other analytical methods can be employed to solve the interactive and feedback relations among indexes.

3. THEORETICAL FRAMEWORK

The term “performance” is often used in the banking industry; hence, its definition and measurement are still enduring. Despite the general attraction of bankers and financial analysts to the concept of “performance”; the term by itself is still ambiguous. It is easier said than done to quantify such a term, and one can identify imperfections within any methodology assumed for performance. One can candidly question many approaches as to the definition and measurement of performance. Is it related to the size (volume of deposits, total assets, number of branches, or employees, etc.), to the market value (market capitalization, EPS, P/E ratio, etc.), or to a bank’s operations (net interest income, net banking product, non-interest income ratio, etc.). Is it a synonym to profitability, efficiency, or leverage?

The performance of commercial banks can be affected by internal and external factors (Aburime, 2005; Al-Tamimi & Hassan, 2010). These factors can be classified into bank specific (internal) and macroeconomic variables (external). The internal factors are individual bank characteristics that affect the bank's performance, and are under the control of the management. The external factors are sector wide or country wide factors which are beyond the control of a bank and affect its profitability (Ongore & Kusa, 2013). Most studies conducted in relation to bank performances focused on sector-specific factors that affect the overall banking sector performances (Chantapong, 2005; Olweny & Shipho, 2011; San & Heng, 2012).

Prior to the 1980s, management accounting control systems tended to focus mainly on financial measures of performance, where only those items that could be expressed in monetary terms were considered (Drury, 2004). Organizations used financial measures (ROI, net profit, return on equity etc.) to evaluate their performance (Namazi & Abhari, 2010). Financial data, as the sole source of performance measurements, has always been criticized for many reasons. First, financial measures deal with historical data, and are inherently of a backward-looking nature.
They do not reflect the future and the long-term consequences of managerial actions (Beechey & Garlick, 1999; Clarke, 1997; Hemmer, 1996). Second, financial statements embrace a considerable potential for subjectivity (Angus-Leppan, 1997; Brailsford, Heaney, & Bilson, 2004; Jones, 2002). Financial statements are management declarations that contain information required by law, institutional best practices, and any other supplementary information that the company wishes to disclose. Third, financial statements are the output of the accounting policies and methods being utilized. Such policies and methods may reflect the objectives of the management in a way that may not be aligned with the interests of the stockholders (mutual agency). Fourth, using financial indicators that are solely derived from financial statements as a sole measure for incentive purposes, may encourage the management to focus on short term perspectives, and may distort the decision-making process (Ittner & Larcker, 2003; Kalagnanam, 1997; Kaplan, & Norton, 1996). Fifth, financial statements have limited abilities to measure operational performance and are biased toward focusing on the short-term (Ittner., Larcker, & Rajan, 1997; Kaplan... & Norton, 2001). Sixth, financial measures give inadequate considerations to quantify difficult “intangible” assets such as intellectual capital (Mohobbot, 2004).

The French began using a measure called “the tableau de board”, or the dashboard of measure, which included both financial and non-financial measures (Stewart & Hubin, 2001). The emphasis on quality in the American continent during the 1980s drove Canadian companies also to include non-financial measures in evolving their business strategy. This was the initial conception of the Balanced Scorecard (Stewart & Hubin, 2001). The BSC arose out of the need to improve the planning, control and performance measurement functions of management accounting. Because of the rise in popularity of the BSC, and benefits attributed to its use, Atkinson, Waterhouse, and Wells (1997) stated that the BSC is a significant development in management accounting that deserves intense research attention. The French and the Canadians were the first to use the BSC in a different form. The BSC balances the financial indicators with non-financial drivers of performance. It allows measuring the business performance in a more balanced way by considering both financial and non-financial measures (Ishtiaque, Khan, Akhter, & Fatima, 2007). Within the BSC framework, four categories of measures are identified in order to achieve balance amid the financial and the non-financial, between internal and external factors and between current and future performance (Kaplan, & Norton, 1992). These perspectives are not mutually exclusive from each other; rather, they affect each other to a quite high degree. These perspectives are: Financial, Customer, Internal Processes, and Learning and Growth.

The BSC has been implemented by companies in both developed and developing economies cutting across various industries (Ibrahim, 2015). During the last two decades, Balanced Scorecard has been widely used for performance measurement in different disciplines (Epstein & Wisner, 2001; Idalina, Lucas, & Paula, 2007; Lawson, Stratton, & Hatch, 2006; Lau, Kim, Cao, & Park, 2008). It has been observed that most of the successful organizations are adopting BSC (Fernandes, Raja, & Whalley, 2006). In addition, increased use of BSC can be seen in recent researches like the ones related to: supply chain integration (Bhagwat & Sharma, 2007; Chang, 2009) research and development projects (Asosueh, Nalchigar, & Jamporazmey, 2010; Eilat, Golany, & Shhtub, 2008) university performance evaluation (Wu, Lin, & Chang, 2011) and banks (Abay, 2010; Abu, 2009; Akter, 2015; Al-Mawali et al., 2010; Al-Najjar & Kalaf, 2012; Dave & Dave, 2012; Kumar, 2015; Kumar., 2016; Ombuna, Omido, Garashi, Odera, & Okaka, 2013; Panicker & Seshadri, 2013; Rillyan et al., 2016; Rostami et al., 2015; Tariq, Ahmad, & Rafi, 2014; Tominac, 2014; Umar & Olatunde, 2011; Visalakshi & Kasilingam, 2016; Zhang & Li, 2009). According to Kuang-Hua (2005) BSC is the most influential managerial concept in the last 75 years.

A study prepared by Ozturk and Coskun (2014) entitled “A Strategic Approach to Performance Management in Banks: The Balance Scorecard”, found that it is more beneficial to prepare the balanced scorecard for the banks than to report financial performance only in terms of evaluating performance by following a holistic approach. Moreover, the study concluded that the BSC is a comprehensive approach to provide quality as well as efficiency of financial services. More importantly, comparing BSC with other performance management systems, Salem, Hasnan, and
Osman (2012) concluded that BSC has many advantages contrary to other performance systems. They also strongly shed light on the ability of BSC to incorporate the social and environmental issues, which can lay important groundwork for future studies to consider such issues.

3.1. Purpose of the Study

The BSC - as a performance measure - did not find its way to Lebanon in general, and to the Lebanese Banking Sector, in particular. This study provides background information to research organizations and scholars who may want to carry out further research in this area. They can also benefit from the findings of this study as it contributes to the existing literature by building the available theoretical frameworks. The study also allows individual Lebanese banks to understand the effect of the Balanced Scorecard on their respective organizations and the industry as a whole, and therefore prompts them to seek ways through appropriate and proactive policies and procedures to enhance the adoption and implementation of such a methodology in their banks and in the industry. Bankers can use the results of this study to apply integrated performance measurement tools to get the best financial and non-financial information for effective decision-making as well as to suit their managerial needs. The results also assist stockholders and investors in their understanding of performance measurements and the way in which to determine the progress of the companies.

The study also helps concerned government bodies in determining how well the companies operate, and how efficiently resources are utilized. Employees at Lebanese banks can benefit from the findings of this study as performance appraisal is used as an effective tool to improve performance, productivity, and career development. Finally, it would be helpful for academic studies on performance evaluation of the Banking Sector in Lebanon.

More specifically, the purpose of this study is to answer the following questions:

1- How can a Balanced Scorecard analysis be used to assess the performance of banks in Lebanon?
2- Does Balanced Scorecard provide more information with respect to the performance of commercial banks in Lebanon than the traditional financial metrics alone?
3- What is the rank of each of the four perspectives of the Balanced Scorecard?
4- What is the rank of the top performing measures?
5- What is the rank of the top performing years?
6- How can the development of BSC models help the Lebanese Banking Sector in facing the upcoming challenges?

4. DATA AND METHODOLOGY

This study employs the internal-based method using financial and non-financial measures. The market-based ratios cannot be adopted since most equity shares of the Lebanese banks are not traded in the marketplace. Although the Lebanese law requires banks to be in the form of joint-stock companies (corporations), most banks are privately owned, and only 15% to 20% of the stocks of a few banks (for example: BLOM Bank, Audi Bank, Byblos bank, BEMO Bank) are publicly traded (Credit Libanais, 2014; GA Consult, 2012). In Lebanon, the stock market is highly inefficient especially that the bank stock price is not known to the public as all stock transactions take place in the “over-the-counter” market.

The study adopts the case study design to examine the application of the Balance Scorecard. This design is deemed the most appropriate to satisfy the purpose of the study. The case study is considered suitable, as it will allow an in-depth study of subjects on investigating the application of Balanced Scorecard as a strategic management tool. According to Gerring (2007) case studies are analysis of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied holistically by one or more methods. Many studies measuring the performance of banks using the case study were conducted such as the research works of Abofaied (2017); Tominac (2014); Panicker and Seshadri (2013); Al-Najjar and Kalaf (2012).
The analysis to be utilized in this study is based upon secondary data mainly the consolidated financial statements of the Lebanese Banking Sector as published by the ABL and reported by the BDL during the period 1990-2004, non-financial data extracted from the annual reports of ABL (e.g., number of employees, number of banks), and statistical data gathered from the official website of BDL (e.g., interest rate on treasury bills, public debt figures, monthly balances of balance sheets items). To get more reliable results, the figures of the financial statements will be converted from the Lebanese currency to the USD based on the official exchange rate as of the end of each year.

The development of a Balanced Scorecard Model for the Lebanese Banking Industry is based upon the indicators and measures used in previous studies from one side, and the specific characteristics pertained to the Lebanese Banking Sector from the other side. This model can be applied to evaluate the performance of an individual bank, group of banks, or the whole banking sector. This Model is also flexible in terms of the method to be adopted by a researcher. It is appropriate for the case study method, descriptive statistics, regression analysis, and other methods.

The following steps were used to develop a BSC model for the Lebanese Banking Sector during the period 1990-2004:

**Step one**: The authors identified the administrative activities and characteristics of Lebanese banks so that to develop cause-effect relationships to relate the common objectives of banks to the strategic goals. In this respect, the availability of data and other limitations were taken into consideration to choose the indicators and their measures that are related to each of the four BSC perspectives. Determining the indicators and their related measures was highly affected by the objectives of the study; consequently, it helped in answering the research questions.

The indicators and measures for each perspective are demonstrated in Table 1.

| Perspective             | Indicator                        | Measure(s)                                                                 |
|-------------------------|----------------------------------|----------------------------------------------------------------------------|
| Financial               | Accounting Profitability         | Growth in ROE                                                              |
|                         |                                  | Growth in ROA                                                              |
|                         | Economic Profitability           | Growth in EVA                                                              |
|                         | Liquidity                        | Growth in Cash & Cash Equivalent / Total Assets                            |
|                         | Solvency                         | Growth in Solvency Ratio (as per BDL& Basel Requirements)                  |
| Customer                | Customer Profitability           | Growth in Interest Income / Total Income                                   |
|                         |                                  | Growth in Gross Loans / Deposits                                           |
|                         | Customer Retention               | Growth in Resident Private Sector Demand Deposits                          |
|                         |                                   | Growth in Resident Private Sector Time & Saving Deposits                    |
|                         | Trust of Non-residents in Lebanese Banks | Growth in Non-Resident Sector Deposits (Private & Financial)                |
| Internal Process        | Operational Efficiency           | Growth in Operating Income/ Operating Expenses                             |
|                         |                                   | Growth in Net income/ Cost of Personnel                                   |
|                         | Employees' Productivity          | Growth in Net income /Number of Employees                                  |
| Asset Management        |                                  | Growth in P.F.D.D / Earning Assets                                         |
| Learning & Growth       | Financial Knowledge Management   | Growth in Lending Ability                                                  |
|                         | Credit Granted                   | Growth in Non-Interest Income                                              |
|                         | Effect of Merging                | Growth in Net Income / Number of Banks                                     |
|                         |                                   | Growth in Dollar Cost per Employee / Number of Banks                       |
Step two: A performance scale was established to weigh measures. The scale, which includes “Ten” scores, starts with 10 points and ends with 100 points. The annual growth rate attained was applied as a unified standard to score all measures. The annual growth rate for the 20 measures from 1991 until 2004 was calculated. The lowest annual growth rate of each measure received 10 points while the highest annual growth rate received 100 points. The annual growth rates that are between the lowest and the highest rates were allocated systematically to the grades between 20 points and 90 points. The four perspectives received the same scoring weight as each one of them contains five measures. That is the minimum score to be attained during the 14 years of study will be $10 + 100 + (10 \times 12) = 230$ points/measure and $1150$ (230x5) points/perspective. The maximum score to be attained will be $10 + 100 + (100 \times 12) = 1310$ points/measure and $6550$ (1310x5) points/perspective. The minimum score to be attained in a year will be 50 points/perspective and 200 points for the 4 perspectives. The maximum score to be attained in a year will be 500 points/perspective and 2000 points for the 4 perspectives. After doing that for all measures, a table is to be established showing how the growth rates attained are distributed among the established scale.

The annual growth rate attained was applied as a unified standard to score all measures. This unified standard, in addition to the use of five measures to evaluate performance of each perspective was established to get equitable criteria applied to all indicators and to all perspectives. It is noteworthy that the measures used in this study do not have an applied universal benchmark to be referred to, which further validates the necessity of using growth rates attained to measure performance. Moreover, this study referred strictly to the assessment of measures one by one, and year by year, instead of establishing criteria based on the perceptions of the bank’s managements and authorities; which will surely add to the objectivity of the results.

Step three: Based on the points attained in the second step above, each of the years under study will receive the points based on the growth rates and scores determined in the previous table for each of the 20 measures. The total sum for each year encompassing the points attained by each perspective, and consequently by the four perspectives will be summed up to determine the degree of performance achieved every year. The total points obtained by each measure will be summed up for the 14 years under study to rank measures. The total points attained by each of the four perspectives for 14 years will be determined to see which perspective was the most performing during the period of the study.

5. FINDINGS

The table below Table 1 summarizes the BSC results (points) attained by each perspective, measure, and year.
Table 2. Points attained by each measure, perspective, and year and % of maximum attained.

| Financial Perspective | Year | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Growth in ROE         |      | 20   | 100  | 20   | 70   | 10   | 30   | 30   | 20   | 20   | 30   | 20   | 40   | 40   | 40   | 490   |
| Growth in ROA         |      | 30   | 60   | 40   | 100  | 20   | 50   | 40   | 30   | 10   | 20   | 20   | 40   | 40   | 40   | 540   |
| Growth in EVA         |      | 100  | 50   | 60   | 80   | 30   | 40   | 40   | 30   | 20   | 20   | 10   | 90   | 50   | 40   | 660   |
| Growth in Cash/ Assets|      | 30   | 30   | 70   | 60   | 30   | 20   | 40   | 10   | 20   | 20   | 50   | 30   | 100  | 20   | 530   |
| Growth in Solvency    |      | 60   | 40   | 40   | 100  | 40   | 40   | 50   | 20   | 20   | 20   | 20   | 30   | 30   | 10   | 520   |
| Total Score: Financial Perspective | | 240 | 280 | 230 | 410 | 130 | 180 | 200 | 110 | 90 | 110 | 120 | 230 | 260 | 150 | 2740 |
| % of Maximum          |      | 48%  | 56%  | 46%  | 82%  | 26%  | 36%  | 40%  | 22%  | 18%  | 22%  | 24%  | 46%  | 52%  | 30%  | 42%   |

| Customer Perspective  | Year | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Growth in Non-interest Income / Total Income | | 20 | 40 | 10 | 60 | 30 | 50 | 50 | 40 | 40 | 70 | 60 | 50 | 100 | 60 | 680 |
| Growth in Total loans / Total deposits   | | 60 | 80 | 60 | 70 | 90 | 80 | 70 | 90 | 80 | 90 | 60 | 90 | 10 | 100 | 1030 |
| Growth in Demand Deposit    | | 100 | 10 | 40 | 50 | 30 | 40 | 50 | 40 | 30 | 20 | 30 | 50 | 40 | 30 | 560 |
| Growth in Time Deposit      | | 90 | 30 | 60 | 100 | 40 | 80 | 30 | 40 | 50 | 20 | 10 | 40 | 50 | 20 | 660 |
| Growth in Non-Resident Sector Deposit | | 40 | 10 | 70 | 70 | 70 | 100 | 90 | 90 | 30 | 40 | 20 | 20 | 60 | 70 | 780 |
| Total Score: Customer Perspective | | 310 | 170 | 240 | 350 | 260 | 350 | 290 | 300 | 230 | 240 | 180 | 250 | 260 | 280 | 3710 |
| % of Maximum               |      | 62%  | 34%  | 48%  | 70%  | 52%  | 70%  | 58%  | 60%  | 46%  | 48%  | 36%  | 50%  | 52%  | 56%  | 57%    |
| Year  | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Growth in Total Revenues/ Operating Expenses | 50 | 10 | 80 | 40 | 50 | 40 | 50 | 70 | 80 | 50 | 80 | 60 | 100 | 840 |
| Growth in NI / Cost of Employees | 40 | 70 | 50 | 100 | 20 | 50 | 60 | 40 | 10 | 30 | 20 | 50 | 50 | 50 | 640 |
| Growth in Net Income / No. of Employees | 40 | 50 | 50 | 100 | 20 | 40 | 40 | 30 | 10 | 20 | 20 | 30 | 40 | 50 | 520 |
| Growth in P.F.D.D / Interest Earning Assets | 20 | 90 | 40 | 20 | 60 | 50 | 30 | 30 | 50 | 100 | 40 | 50 | 80 | 10 | 670 |
| Growth in Net Lending Ability | 50 | 40 | 20 | 30 | 20 | 40 | 30 | 30 | 30 | 30 | 10 | 100 | 40 | 30 | 500 |
| Total Score: Internal Process Perspective | 200 | 260 | 240 | 290 | 170 | 220 | 210 | 200 | 180 | 230 | 170 | 310 | 270 | 220 | 3170 |
| % of Maximum | 40% | 52% | 48% | 58% | 34% | 44% | 42% | 40% | 36% | 46% | 34% | 62% | 54% | 44% | 48% |

| Year  | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Growth in Spread | 30 | 100 | 70 | 60 | 70 | 60 | 40 | 20 | 20 | 30 | 10 | 70 | 90 | 60 | 730 |
| Growth in Non-Interest Income | 30 | 10 | 30 | 100 | 50 | 60 | 40 | 40 | 30 | 60 | 30 | 30 | 70 | 40 | 620 |
| Growth in Total Loans | 90 | 40 | 100 | 90 | 70 | 90 | 70 | 80 | 50 | 50 | 30 | 50 | 10 | 60 | 880 |
| Growth in NI / Banks | 40 | 50 | 60 | 100 | 30 | 50 | 50 | 40 | 10 | 30 | 20 | 40 | 30 | 590 |
| Growth in Cost per Employee/ No. of Banks | 80 | 20 | 90 | 100 | 30 | 60 | 50 | 40 | 30 | 30 | 20 | 30 | 30 | 30 | 640 |
| Total Score: Learning & Growth Perspective | 270 | 220 | 350 | 450 | 250 | 320 | 250 | 220 | 140 | 200 | 110 | 220 | 240 | 220 | 3460 |
| % of Maximum | 54% | 44% | 70% | 90% | 50% | 64% | 50% | 44% | 28% | 40% | 22% | 44% | 48% | 44% | 53% |
The annual scores attained by the Balanced Scorecard model developed and their relative conversion on a 100% scale of the maximum annual growth rate attained are presented in the Table 3.

| Year | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | Average |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|----------|
| Total Points | 1020 | 930 | 1060 | 1500 | 810 | 1070 | 950 | 830 | 640 | 780 | 580 | 1010 | 1050 | 870 | 934 |   |
| % of the Maximum | 51% | 47% | 53% | 75% | 41% | 54% | 48% | 42% | 32% | 30% | 29% | 51% | 52% | 44% | 47% |

It seems evident that the highest performing year was 1994 with a score of 1500/2000 and a percentage of 75% of the maximum rate attained, followed by the year 1996 Table 3. The average score of the BSC model measured by the annual growth rate of all measures was 934/2000 that is equivalent to an average percentage of 47% of the maximum attained. The lowest performing years were 1999, 2000, and 2001 Table 3. With respect to the performance on perspectives, it can be observed that the scores achieved on the Customer Perspective was the highest (3710), followed by the Learning & Growth (3460) and Internal Process (3170) Perspectives respectively. The Financial Perspective showed the lowest percentage of the maximum attained, followed by the year 1996.

On the 100% scale, the Customer Perspective attained 57% compared to 53% and 48% for Learning & Growth and Internal Process Perspectives respectively. The highest performing perspective (Customer) scored 42% Table 2. Below is a presentation of the performance of indicators.

1) The indicators of the highest performing perspective (Customer) scored the following:
   a- Customer Profitability measured by Growth in Non-Interest Income/Total Income and Growth in Total Loans /Total Deposits attained 65.5% of maximum Table 4.

| Measure | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|-----------|
| Non-Interest Income / Total Income | 20 | 40 | 10 | 60 | 50 | 50 | 40 | 40 | 70 | 60 | 50 | 100 | 60 | 680 | 52% |
| Total Loans / Total Deposits | 60 | 80 | 60 | 70 | 50 | 90 | 80 | 90 | 90 | 60 | 90 | 10 | 100 | 1030 | 75% |
| Customer Profitability | | | | | | | | | | | | | | | 65.5% |

b- Trust of Non-Residents in Lebanese Banks measured by Growth in Non-Resident Sector Deposits attained 60% of maximum Table 5.

| Measure | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|-----------|
| Non-Resident Sector Deposit | 40 | 10 | 10 | 70 | 70 | 90 | 100 | 90 | 90 | 30 | 40 | 20 | 20 | 60 | 70 | 780 | 60% |

c- Customer Retention measured by Growth in Demand Deposits and Growth in Time and Saving Deposits attained 46.5% of maximum Table 6.

| Measure | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|-----------|
| Demand Deposit | 100 | 10 | 40 | 50 | 50 | 40 | 50 | 30 | 20 | 30 | 50 | 40 | 30 | 560 | 42% |
| Time Deposit | 90 | 30 | 60 | 100 | 40 | 80 | 30 | 40 | 50 | 20 | 10 | 40 | 50 | 20 | 660 | 50% |
| Customer Retention | | | | | | | | | | | | | | | 46.5% |
2) The indicators of the second highest performing perspective (Learning and Growth) scored the following:

a- Growth in Credit measured by the Growth in Loans attained 67% of maximum Table 7.

Table 7: Points and % of Maximum attained by the measure of Growth in Credit.

| Measure          | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------------|
| Total Loans      | 90   | 40   | 100  | 90   | 70   | 90   | 70   | 80   | 50   | 50   | 50   | 50   | 10   | 60   | 880   | 67%        |

b- Financial Knowledge Management measured by the Growth in Spread Ratio and Growth in Non-Interest Income attained 51.5% of maximum Table 8.

Table 8: Points and % of Maximum attained by measures of Financial Knowledge Management.

| Measure                    | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------------|
| Spread                     | 30   | 100  | 70   | 60   | 70   | 60   | 40   | 20   | 20   | 30   | 10   | 70   | 50   | 60   | 730   | 56%        |
| Non-Interest Income        | 30   | 10   | 30   | 100  | 50   | 60   | 40   | 40   | 30   | 60   | 30   | 70   | 40   | 620   | 47%        |
| Financial Knowledge Management | 51.5% |      |      |      |      |      |      |      |      |      |      |      |      |      |       |            |

c- Effect of Merging and Acquisition measured by the Growth in NI/Number of Banks and Growth in Cost per Employee/No. of Banks attained 47% of maximum Table 9.

Table 9: Points and % of Maximum attained by measures of Effect of Merging and Acquisition.

| Measure                  | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------------|
| NI / Banks               | 40   | 50   | 60   | 100  | 30   | 50   | 50   | 40   | 10   | 30   | 20   | 10   | 40   | 30   | 550   | 45%        |
| Cost per Employee/ No. of Banks | 80   | 20   | 90   | 100  | 30   | 60   | 50   | 40   | 30   | 30   | 20   | 30   | 30   | 30   | 640   | 49%        |
| Effect of Merging and Acquisition | 47% |      |      |      |      |      |      |      |      |      |      |      |      |      |       |            |

3) The indicators of the third highest performing perspective (Internal Process) scored the following:

a- Operational efficiency measured by the Growth in the Operating Income/Operating Expense attained 64% of maximum Table 10.

Table 10: Points and % of Maximum attained by the measure of Operational efficiency.

| Measure                                | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|----------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------------|
| Operating Income / Operating Expenses | 50   | 10   | 80   | 40   | 50   | 40   | 50   | 70   | 80   | 50   | 80   | 50   | 60   | 100   | 840   | 64%        |

b- Employees’ productivity measured by the growth in NI/Cost of Employees and growth in NI/ Number of Employees attained 44.5% of maximum Table 11.
Table-11. Points and % of Maximum attained by measures of Employees' Productivity.

| Year | Measure                                      | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|------|---------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|-------------|
|      | Net / Cost of Employees                      | 40   | 70   | 50   | 100  | 20   | 50   | 60   | 40   | 10   | 30   | 20   | 50   | 50   | 50   | 640   | 49%         |
|      | Net Income / No. of Employees                | 40   | 50   | 50   | 100  | 20   | 40   | 40   | 30   | 10   | 20   | 20   | 30   | 40   | 30   | 520   | 40%         |
|      | Employees' Productivity                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 44.5%   |             |

- Asset Management measured by the Growth in P.F.D.D./Interest Earning Assets and Growth in Net Lending Ability attained 44.5% of maximum Table 12.

Table-12. Points and % of Maximum attained by measures of Asset Management.

| Year | Measure                                      | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|------|---------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|-------------|
|      | P.F.D.D /Interest Earning Assets             | 20   | 90   | 40   | 20   | 60   | 50   | 30   | 30   | 50   | 100  | 40   | 50   | 80   | 10    | 670   | 51%         |
|      | Net Lending Ability                          | 50   | 40   | 20   | 30   | 20   | 40   | 30   | 30   | 30   | 10   | 100  | 40   | 30   | 500   | 38%         |
|      | Asset Management                             |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 44.5%   |             |

4) The indicators of the lowest performing perspective (Financial) scored the following:

a- Economic profitability measured by the growth in Economic Value Added (EVA) attained 50% of maximum Table 13.

Table-13. Points and % of Maximum attained by the measure of Economic Profitability.

| Year | Measure                                      | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|------|---------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|-------------|
|      | EVA                                         | 100  | 50   | 60   | 80   | 50   | 40   | 40   | 30   | 20   | 20   | 10   | 80   | 50   | 40    | 600   | 35%         |

b- Solvency measured by the growth in Solvency Ratio as per BDL attained 40% of maximum Table 14.

Table-14. Points and % of Maximum attained by the measure of Solvency.

| Year | Measure                                      | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|------|---------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|-------------|
|      | Solvency                                    | 60   | 40   | 40   | 100  | 40   | 40   | 50   | 20   | 20   | 20   | 20   | 30   | 30   | 10    | 520   | 40%         |

- Liquidity measured by the growth in Cash and Cash Equivalents/Total Assets attained 40% of maximum Table 15.

Table-15. Points and % of Maximum attained by the measure of Liquidity.

| Year | Measure                                      | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total | % of Maximum |
|------|---------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|-------------|
|      | Cash/Assets                                 | 30   | 30   | 70   | 60   | 30   | 20   | 40   | 10   | 20   | 20   | 50   | 30   | 100  | 20    | 530   | 40%         |

d- Accounting profitability measured by the growth in ROE and the growth in ROA attained 39% of maximum Table 16.
The tables below summarize the top five ranking indicators and measures Table 17 & Table 18.

### Table 17. The top 5 ranking indicators.

| Indicator | Perspective | Measure(s) | % of Maximum |
|-----------|-------------|------------|--------------|
| Growth in Credit | Learning & Growth | Growth in Total Loans | 67% |
| Customer Profitability | Customer | Growth in Non-Interest Income / Total Income | 65.50% |
| Operational Efficiency | Internal Process | Growth in Operating Income / Operating Expenses | 64% |
| Trust of Non-Residents in Lebanese Banks | Customer | Growth in Non-Resident Sector Deposit | 60% |
| Financial Knowledge Management | Learning & Growth | Growth in Spread | 51.50% |
| | | Growth in Non-Interest Income | | |

### Table 18. The top five ranking measures.

| Measure(s) | Indicator | Perspective | Total Score | % of Maximum |
|------------|-----------|-------------|-------------|--------------|
| Growth in Total Loans / Total Deposits | Customer Profitability | Customer | 1030 | 79% |
| Growth in Total Loans | Growth in Credit | Learning & Growth | 880 | 67% |
| Growth in Total Income / Operating Expenses | Operational Efficiency | Internal Process | 840 | 64% |
| Growth in Non-Resident Sector Deposit | Trust of Non-Residents in Lebanese Banks | Customer | 780 | 60% |
| Growth in Spread | Financial Knowledge Management | Learning & Growth | 730 | 56% |

### 6. CONCLUSION

Lebanese banks are still measuring and evaluating the performance of their business using only financial measures. Until our days, the idea of introducing non-financial measures and/or performance management systems to measure the performance of banks is still away from the strategies of Lebanese bankers. This is mainly noticed in the various types of reports issued by banks.

The purpose of this study was to highlight the importance of the BSC approach to measure the performance of Lebanese banks. It can, also, provide guidelines to Lebanese banks when they consider methods of performance evaluation. Despite the fact that Lebanese banks are still concentrating on financial measures to judge their performance, this study highlighted the importance of viewing performance from other perspectives in addition to the financial perspective. Regardless of the results obtained from this study, it is intended to open the room for various future studies on the performance of banks in Lebanon. Future researches in the banking sector in Lebanon...
are needed in this domain, and should focus on studying the contingent factors that facilitate or impede the implementation of the BSC model such as organizational culture, organizational structure, environment, and technology. More studies are, also, needed to identify the relevant measures of the BSC for the Lebanese Banking Sector. Future researchers can compare the performance of large banks with that of small banks, the performance of domestic and foreign banks, and the performance of the top leading banks. As the BSC is a systematic approach to measure performance, we believe that with the increased demands of the different banks’ stakeholders, the BSC shall be widely used in the banking sector in Lebanon.

It is highly recommended that the BDL and ABL start encouraging banks to adopt performance management systems that reflect both the financial and the non-financial activities of banks. It is highly believed that this is crucial since the Lebanese Banking Sector is anticipated to face a new era of challenges due to the expected extraction of gas resources, the reconstruction of Syria, and the development of the banking sectors in the Arab Gulf Area.

Funding: This study received no specific financial support.
Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

REFERENCES
Abay, S. (2010). Performance evaluation of selected Ethiopian Commercial banks using balanced scorecard. Paper presented at the Department of Accounting and Finance, College of Business and Economics, Mekelle University. Mekelle, Ethiopia
Abofaied, A. (2017). Evaluation of bank’s performance by using balanced score card: Practical study in Libyan environment. International Journal of Business and Management, 5(1), 1-14. Available at: https://doi.org/10.20472/bm.2017.5.1.001.
Abu, Y. (2009). Using balanced scorecard to assess performance of banks in Ghana. Blekinge, Sweden: School of Management, Blekinge Institute of Technology.
Aburime, U. (2005). Determinants of bank profitability: Company-level evidence from Nigeria. Enugu Campus: University of Nigeria.
Akter, S. (2015). Exploring the scope of adopting multidimensional performance measurement models in banking sector of Bangladesh. Journal of Business and Management (IOSR-JBM), 17(2), 25-34.
Al-Mawali, H., Zainuddin, Y., & Ali, N. (2010). Balanced scorecard (BSC) usage and financial performance of branches in Jourdanian banking industry. International Scholarly and Scientific Research & Innovation, 4(6), 1161-1168.
Al-Najjar, S. M., & Kalaf, K. H. (2012). Designing a balanced scorecard to measure a bank's performance: A case study. International Journal of Business Administration, 3(4), 44-51.
Al-Tamimi, H., & Hassan, A. (2010). Factors influencing performance of the UAE Islamic and conventional National banks. Paper presented at the Department of Accounting, Finance and Economics; College of Business Administration, University of Sharjah.
Angus-Leppan, P. (1997). Financial reporting in the pacific Asia region. Singapore: World Scientific.
Ashton, C. (1998). Balanced scorecard benefits Nat West bank. International Journal of Retail and Distribution Management, 26(10), 400-407.
Asosheh, A., Nalchigar, S., & Jamporazmey, M. (2010). Information technology project evaluation: An integrated data envelopment analysis and balanced scorecard approach. Expert Systems with Applications, 37(8), 5931-5938. Available at: https://doi.org/10.1016/j.eswa.2010.02.012.
Association of Banks in Lebanon (ABL). (2004). Annual reports of 2001 & 2004. ABL.
Atkinson, A. A., Waterhouse, J. H., & Wells, R. B. (1997). A stakeholder approach to strategic performance measurement. MIT Sloan Management Review, 38(3), 25-38.
Baz, F. (2007). Bilanbanques 1993-2007. Beirut: Bankdata.
BDL Data. (2001). Extracted from the official web site of BDL. Retrieved from: WWW. bdl.gov.lb.
Beechey, J., & Garlick, D. (1999). Using the balance scorecard in banking. The Australian Banker(133), 28-30.
Bhagwat, R., & Sharma, M. K. (2007). Performance measurement of supply chain management: A balanced scorecard approach. Computers & Industrial Engineering, 53(1), 43-62.

Brailsford, T., Heaney, R., & Bilson, C. (2004). Investments Concepts and applications (2nd ed.). Southbank, Victoria, Australia: Thomson.

Chang, H. H. (2009). An empirical study of evaluating supply chain management integration using the balanced scorecard in Taiwan. The Service Industries Journal, 29(2), 185-202.Available at: https://doi.org/10.1080/02642060802294961.

Chantapong, S. (2005). Comparative study of domestic and foreign banks performance in Thailand: The regression analysis. The Office of Macroeconomic Policy and Analysis, Monetary Policy Group (MPG), The Central Bank of Thailand.

Clarke, P. (1997). The balanced scorecard. Accountancy Ireland, 29(6), 25-26.

Corn, G. (1995). Reconstruction and development Issues in lebanon. Economic reaearch forum: Workshop on "Strategic Vision for The Middle East and North Africa. Gammarth, Tunisia: World Bank.

Dibeh, G. (2005). The political economy of postwar reconstruction in lebanon. Helsinki: World Institute for Development Economic Research (WIDER).

Drury. (2004). Management and cost accounting [6th ed.]. London: Thomson Learning.

Epstein, M., & Wisner, P. (2001). Using a balanced scorecard to implement sustainability. Environmental Quality Management, 11(2), 1-10.Available at: https://doi.org/10.1002/txm.1300.

Eskandiari, M., Roudab, N., & Kamfiroozi, M. H. (2013). Banks' performance evaluation model based on the balanced scorecard approach, Fuzzy DEMATEL and analytic network process. International Journal 0f Information, Security and System Management, 2(2), 191-200.

Fernandes, K. J., Raja, V., & Whalley, A. (2006). Lessons from implementing the balanced scorecard in a small and medium size manufacturing organization. Technovation, 26(5-6), 623-634.Available at: https://doi.org/10.1016/j.technovation.2005.03.006.

Gerring, J. (2007). Case study research: Principles and practices. New York: Cambridge University Press.

Gupta, A. K., & Sharma, S. (2016). Application of balanced scorecard in banking industry: A review of literature. International Journal of Economic and Business Review, 4(11), 135-144.

Haslem, J. (2003). A statistical analysis of member bank profitability differences. Banking Journal, Accessed via the JSTOR Academic Database.

Hemmer, T. (1996). On the design and choice of” modern” management accounting measures. Journal of Management Accounting Research, 8(1996), 87-116.

Ibrahim, M. (2015). Investigating the use of the four perspectives of balanced scorecard (BSC) as technique for assessing performance by Nigerian banks. Journal of Accounting and Taxation, 7(1), 62-70.

Idalina, D., Lucas, R., & Paula, A. (2007). Developing sustainability balanced scorecards for environmental services: A study of three large portuguese companies. Environmental Quality Management, 16(4), 13-34.Available at: https://doi.org/10.1002/tqem.20139.

Ishtiaque, A. N. A., Khan, M. H. U. Z., Akhter, S., & Fatima, J. K. (2007). Perception analysis of balanced scorecard: An application over a multinational corporation of Bangladesh. Dhaka University Journal of Business Studies, 28(2), 238–268.
Ittner, C. D., & Larcker, D. F. (2003). Coming up short on nonfinancial performance measurement. *Harvard Business Review*, 81(11), 88-95.

Ittner, C. D., Larcker, D. F., & Rajan, M. V. (1997). The choice of performance measures in annual bonus contracts. *The Accounting Review*, 72(2), 231-255.

Janota, R. (2008). *The balanced scorecard in a pharmaceutical company*. Instituto Superior de Ciencias do Trabalho e da Empresa: PhD Thesis.

Jones, C. (2002). *Investments: Analysis and management* (8th ed.). New York: Wiley & Sons.

Kalagnanam, S. (1997). *The use of non-financial performance measures and their relationship to strategy*. Wisconsin: University of Wisconsin.

Kaplan, R. S., & Norton, D. P. (2001). *The strategy focused organization: How the balanced scorecard companies thrive in the new business environment*. Boston, Massachusetts: Harvard Business School Press.

Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard-measures that drive performance. *Harvard Business Review*, 70(1), 71-79.

Kaplan, R. S., & Norton, D. P. (1996). *The balanced scorecard: Translating strategy into action*. Massachusetts: Harvard Business School Press.

Kaplan, R. S., & Norton, D. P. (2001). Transforming the balanced scorecard from performance measurement to strategic management. *Accounting Horizons*, 15(1), 87-104. Available at: https://doi.org/10.2308/ach.2001.15.1.87.

Kirandeep, S. (2015). *The application of balanced scorecard as a strategic management tool at National Bank of Kenya*. School of Business, University of Nairobi. MBA Thesis.

Kuang-Hua, H. (2005). Using balanced scorecard and fuzzy data envelopment analysis for multinational research & development project performance assessment. *Journal of American Academy of Business, Cambridge*, 7(1), 189-196.

Kumar, S. (2015). Management motivation for implementing the balanced scorecard in Indian banking sector. *International Journal of Trade & Commerce*, 4(1), 147-159.

Kumar, S. (2016). Awareness regarding contemporary performance measures for measuring performance of Indian banking sector. *International Journal of Engineering and Management Research*, 6(8), 1-7.

Lawson, R., Stratton, W., & Hatch, T. (2006). Scorecarding goes global. *Strategic Finance*, 87(9), 34-41.

Lebanese Republic. (2002). *Beyond reconstruction and recovery, Towards sustainable growth, A Request for International Support*, Lebanon: Beirut: Lebanese Republic.

Luu, T., Kim, S., Cao, H., & Park, Y. (2008). Performance measurement of construction firms in developing countries. *Construction Management and Economics*, 26(4), 373-386. Available at: https://doi.org/10.1080/01446190801918706.

Mezher, T. (1997). Sustainable development strategies for Lebanon. *Sustainable Development*, 5(2), 55-64. Available at: https://doi.org/10.1002/sid.1099-1719(199708)5:2<52::aid-sid68>3.0.co;2-l.

Mohobbot, A. (2004). The balanced scorecard (BSC)–A critical analysis. *Journal of Humanities and Social Sciences*, 18, 219-232.

Namazi, M., & Abhari, H. (2010). An investigation of the balanced scorecard’s applications for performance measurement of the firms accepted in the Tehran securities exchange market. *Journal of Applied Sciences Research*, 6(8), 943-955.

Neaime, S. (2004). Sustainability of budget deficits and public debt in Lebanon: A stationarity and co-integration analysis. *Review of Middle East Economics and Finance*, 2(1), 43-61. Available at: https://doi.org/10.2202/1475-3693.1019.

Olweny, T., & Shipho, T. M. (2011). Effects of banking sectoral factors on the profitability of commercial banks in Kenya. *Economics and Finance Review*, 1(5), 1-30.

Ombuna, D. S., Omido, K., Garashi, H. M., Odera, O., & Okaka, O. (2013). Impact of balanced scorecard usage on the performance of commercial banks. *International Journal of Information Technology and Business Management*, 10(1), 40-48.

Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International Journal of Economics and Financial Issues*, 3(1), 237-252.

Oseirian, F. (1987). *Currency substitution in Lebanon*. Beirut: BDL Bulletin Trimestriel.

Ozturk, E., & Coskun, A. (2014). A strategic approach to performance management in banks: The balanced scorecard. *Accounting and Finance Research*, 3(3), 151-158. Available at: https://doi.org/10.5430/af.v3n3p151.
Panicker, S., & Seshadri, V. (2013). Devising a balanced scorecard to determine standard chartered Bank's Performance: A case study. *International Journal of Business Research and Development, 2*(2), 35-42. Available at: https://doi.org/10.24102/ijbrd.v2i2.286.

Rillyan, N. R., Satria, G., Raihan, A. M., & Wibisono, D. (2016). *A study on linkages among balanced scorecard perspectives: The case of Indonesian local banks*. Paper presented at the First International Conference on Advanced Business and Social Sciences (ICABSS), Bali: Asia Pacific Institute of Advanced Research (APIAR).

Rostami, M., Goudarzi, A., & Zaj, M. (2015). Defining balanced scorecard aspects in banking industry using FAHP approach. *International Journal of Economics and Business Administration, 1*(1), 25-38.

Salem, M. A., Hasnan, N., & Osman, N. H. (2012). Balanced scorecard: Weaknesses, strengths, and its ability as performance management system versus other performance management systems. *Journal of Environment and Earth Science, 2*(9), 1-9.

San, O. T., & Heng, T. B. (2012). Factors affecting the profitability of Malaysian commercial banks. *African Journal of Business Management, 7*(8), 649-660.

Shaverdi, M., Akbari, M., & Fallah Tafti, S. (2011). Combining fuzzy MCDM with BSC approach in performance evaluation of Iranian private banking sector (Vol. 2011): Hindawi Publishing Corporation.

Singh, H. (2018). Devising a balanced scorecard to measure HDFC bank’s performance: A case study. *International Journal of Engineering Technology Science and Research (IJETSR), 3*(1), 1746-1752.

Stewart, A., & Hubin, J. (2001). The balanced scorecard: Beyond reports and rankings. *Planning for Higher Education, 29*(2), 37-42.

Tariq, M., Ahmad, S., & Rafi, S. K. (2014). Investigating the impact of balanced scorecard on performance of business: A study based on the banking sector of Pakistan. *Journal of Business Studies (Formerly Journal of Management & Social Sciences, 9*(1), 125-136.

Tominac, S. B. (2014). Possibilities of balanced scorecard application in commercial banks. *International Journal of Scientific Research, 3*(10), 119-121.

Umar, G., & Olatunde, O. J. (2011). Performance evaluation of consolidated banks in Nigeria by using non-financial measures. *Interdisciplinary Journal of Research in Business, 1*(9), 72-83.

UNDP. (1997). Economic development and reconstruction. The lebanese economy prior to 1975. *In UNDP, Impact of The War on The Lebanese Economy. Evolution of The Lebanese Economy in The 1990's, 1-19. UNDP.*

Visalakshi, S., & Kasilingam, R. (2016). Balanced scorecard approach to measure performance of banks. *NCRD's Business Review: e-Journal, 2*(2), 1-9.

Wu, H.-Y., Lin, Y.-K., & Chang, C.-H. (2011). Performance evaluation of extension education centers in universities based on the balanced scorecard. *Evaluation and Program Planning, 34*(1), 37-50. Available at: https://doi.org/10.1016/j.evalprogplan.2010.06.001.

Wu, H.-Y., Tzeng, G.-H., & Chen, Y.-H. (2009). A fuzzy MCDM approach for evaluating banking performance based on balanced scorecard. *Expert Systems with Applications, 36*(6), 10135-10147. Available at: https://doi.org/10.1016/j.eswa.2009.01.005.

Zhang, Y., & Li, L. (2009). *Study on balanced scorecard of commercial banks in performance management system*. Paper presented at the Proceedings of the 2009 International Symposium on Web Information Systems and Applications (WISA'09), P.R.China.

*Views and opinions expressed in this article are the views and opinions of the author(s), International Journal of Management and Sustainability shall not be responsible or answerable for any loss, damage or liability, etc. caused in relation to/arising out of the use of the content.*