

# The Effect of Applying Balanced Scorecard on Earnings Quality among Banks Listed on the Palestine Exchange

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**Abstract**—This paper aims to verify the impact of applying balanced scorecard on earnings quality controlled by Firm (Bank) size of banks listed on Palestine Exchange during the 2011–2019 period. To achieve this objective, a panel model relating to the dependent variable (Earnings quality) and independent variables (Balanced Scorecard components) with the control variable (Firm Size) was estimated, the researchers used financial reports and disclosures of the banks listed on the Palestine Stock Exchange as a tool to collect data, in addition to books, articles, and the previous studies. Descriptive quantitative research design was employed because of the use of quantitative data as proxies for both independent and dependent variables. Panel research strategy was applied for obtaining the cross sectional and longitudinal dimensions. The relationships between the study variables (Earnings quality, BSC components, and Firm Size) were estimated using Eviews version 7 (a statistical software). The results showed statistically significant negative effect of Customer perspective (CUS) on Earnings Quality (EQ); statistically significant positive effect of Internal Business Process perspective (IBP) on Earnings Quality (EQ); and statistically significant positive effect of Firm Size (FS) on Earnings Quality (EQ). In addition, the results showed no statistically significant effect of financial perspective (FP), Social perspective (SP), Learning and Growth perspective (LG), and on Earnings Quality (EQ). Furthermore, the results demonstrated that Earnings Quality of banks listed on Palestine Exchange was not high. Furthermore, these banks did not utilize Balanced Scorecard (BSC). Banks need to rely on the consistency of balanced scorecard in its five perspectives and not be limited to financial indicators. Furthermore, users of financial statements of Palestinian banks should not to rely exclusively on the amount of net profit in the financial statements itself. In addition, the sources and components of net income should be identified, especially in terms of its dimensions, actual flows, and receivables. Relevantly, auditing offices, and companies play a key role in limiting the practice of earnings management or any manipulations that could mislead investor.

**Keywords**—Balanced scorecard, Control size, Earning quality, Palestine exchange.

## I. INTRODUCTION

Given the drastic and rapid development that the globalization era has witnessed at all levels and the severe competition among the business organizations in different markets, these organizations have become keen to develop their administrative and accounting systems, using modern work techniques and methods, and formulating successful strategies to achieve the goals and objectives of many parties. The past decade has witnessed the birth of a new philosophy in the field of evaluating the strategic performance of organizations. The business was represented by the Balanced Scorecard,

which came to measure the performance of organizations from a holistic point of view (Mio et al., 2021).

The development of the Balanced Scorecard (BSC) approach is perceived as a revolution against conventional dependence on managerial accounting. BSC is a set of both financial and non-financial indicators that indicate and specify the organization's success. BSC has become a vital strategic instrument for businesses to enhance their performance (Alsaadi et al., 2017).

According to Niven (2002), BSC is a tool that is important to help businesses to transmit their strategies

in the form of a set of operational goals to different parts of businesses and organizations. BSC helps to achieve the goals of the entire organization. While Horngren (2012) perceived BSC as an approach for explaining a business's mission and strategy in an integrated set of measures for performance measurement by offering a structure for adoption and implementation of the organization's strategy through focusing on achieving financial and non-financial goals. Thus, BSC is supposed as one of the modern methods and techniques that give the organization the opportunity to evaluate their performance in a comprehensive way through five perspectives, rather than depending only on one measure that is the financial measurement (Teichgräber et al., 2021).

The balanced scorecard presents the integration between financial and non-financial performance measures. The operational metrics (customers, internal processes, learning, and growth) are the guides for the future financial performance of the organization. The BSC also leads to the coherence of the relationship between the organization's strategic directions and its operational processes. The managerial BSC links strategic objectives, activities, events, and short-term plans (Sodan, 2015).

Earnings quality impression is one of the recent innovative concepts that give advantage to the users of the financial statements as well as the figure of the net profit is a vital information for creditors, investors, and stakeholders (Salvato and Moors, 2010). The researchers suggested numerous definitions for the concept of earnings quality and there is no specific general accepted definition for the concept of earnings quality. Instead, this concept was measured frequently statistical model (Sodan, 2015).

The information pertained to the business earnings is perceived as a measure and indicator of a firm's financial performance. When there is low information asymmetry, this indicates that earnings are sufficient, accurate, valid, and reliable. This means the firm has high earnings quality provided by the business to the financial market, and it informs and represents the accurate and precise firm's value. Earnings quality is perceived by researchers as an important valuation basis of the firm's value by investors and stakeholders because it plays an essential role in making optimal investment and financing decisions for the users of the financial statements (Teichgräber et al., 2021; Al Momani et al., 2021).

The five perspectives consist of the financial perspective that includes financial measures and objectives such as ROI, ROA, profitability, cash flow. The second is the customer perspective that creates value-added to clients and customers by providing the services and products with high quality. The third perspective is the internal business process perspective that is involved all internal activities and actions which characterize the business to accomplish customer satisfaction and realize the strategic objectives of the business (Dwivedi et al., 2021). The fourth one is the Learning and growth (LG) perspective that is considered the cornerstone for businesses to create the essential growth and developments to accomplish their strategic objectives, mission, and policies.

The last perspective is the social perspective that aims to define what initiatives the company undertakes toward the environment and society through providing services in social care, health, education, and infrastructure rehabilitation (Ben Yrbah, 2018).

Because banks play a crucial role in economic life, as they are the basis of the modern economic system, and the banks face a rapidly changing environment in requirements and resources, which impose on these banks a rapid response to develop their technologies and strategies to be able to face these changes in their various dimensions. To achieve this development efficiently and effectively, the importance of measuring and evaluating the performance of banks has emerged to identify the areas that are in urgent need of change, development, and continuous improvement (Mangestika et al., 2021).

Hence, this study came to explore the impact of adopting a balanced scorecard on earning quality of the Banks listed at the Palestine Exchange, and to extent of adopting and implementing the BSC perspectives in the bank sector. Moreover, to estimate and analyze the earnings quality of the Banks listed on the Palestine Exchange.

Because Palestinian organizations and businesses pass through uncertain economic, political, and social, conditions thus there is a great necessity to adopt and implement the BSC to enhance the earnings quality of businesses especially the banking system as this system acts an important role in achieving economic development in the country (Abu Anja, 2019; Al Momani et al., 2021).

With the inadequate role of accounting standards in dealing with management practices in manipulating profits, it was necessary to search for innovative ways could face the phenomenon of earnings management which leads to failure and bankrupt. This policy caused many companies to fall. Therefore, the problem of the study centered on adopting a model to measure performance through using the Balanced Scorecard which may enable organizations to limit the use of senior management of the flexibility of accounting standards to achieve personal purposes and to give misleading information about earnings, and harm the interests of shareholders and other parties related to the financial statements (Barata, 2021). Based on such analysis, there is a need to examine the effect of applying BSC on the earnings quality of the banks listed on the Palestine Exchange during the period (2011–2019). It is expected that the findings of this study will come to know the effect of applying BSC on the earnings quality for the Palestinian banks (Frederico et al., 2021; Nour and Al-Fadel, 2006).

The remainder of the study is organized as follows; the second section presents the literature review and the hypothesis development of the study, while the third section describes the data collection and methodology. The fourth and fifth sections, respectively, discuss the descriptive analysis, and regression outcomes while the sixth section discussed the conclusions and recommendations for future studies.

### A. Study Problem and Questions

Balance Scorecard is a great development in strategic management that gives the opportunity to integrate financial and nonfinancial measurements and indicators when measuring and evaluating the performance of businesses and institutions as it allows them to align their business activities and operations to the organization's vision and strategy so that improving the performance of the business. Especially, the practical experience approved the failure of the financial indications and financial analysis to evaluate the efficiency of businesses and institutions. Thus, there was a necessity to develop a performance tool that integrates financial and nonfinancial measurement to provide clear insight about the efficiency and sustainability of the organization. However, Palestinian organizations and businesses pass through uncertain economic, political, social, and economic conditions thus there is great necessity to adopt and implement the BSC to enhance the earnings quality of businesses especially banking system as this system acts an important role in achieving the economic development in the country.

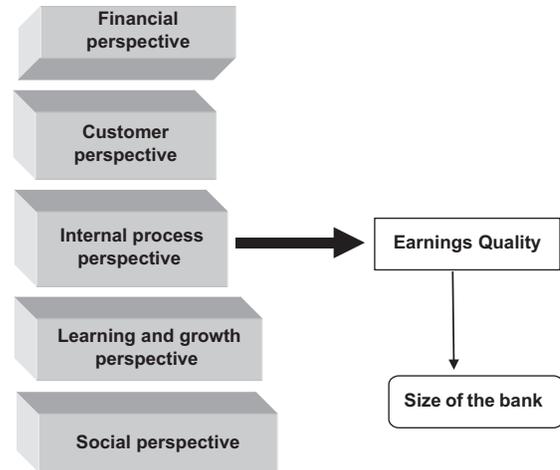
With the inadequate role of accounting standards in the face of management practices in manipulating profits, it was necessary to search for innovative ways through which the phenomenon of earnings management could be faced.

The researchers believe that there is an effect of applying the balanced scorecard in preventing earnings management. Furthermore, there is scarcity of studies in Palestine that dealt with the impact of BSC on the earnings quality of the banks sector.

Thus, the major problem of this study is to answer the following:

- 1 Up to what extent the Banks listed on Palestine Exchange adopt and implement BSC?
- 2 What is the quality of the declared earnings and profits in the financial reports that are issued by Banks listed on Palestine Exchange?
- 3 What is the impact of implementing the BSC on the earnings quality of the Banks listed on Palestine Exchange? Based on this major question the researcher developed the following sub questions:
  - a. What is the effect of implementing financial perspective of the BSC of the Banks listed on Palestine Exchange on earnings quality?
  - b. What is the effect of implementing customer perspective of the BSC of the Banks listed on Palestine Exchange on earnings quality?
  - c. What is the effect of adopting and implementing internal business process perspective of the BSC of the Banks listed on Palestine Exchange on earnings quality?
  - d. What is the effect of adopting and implementing learning and growth perspective of the BSC of the Banks listed on Palestine Exchange on earnings quality?
  - e. What is the effect of implementing social perspective of the BSC of the Banks listed on Palestine Exchange on earnings quality?
  - f. What is the effect of the size of the bank of the Banks listed on Palestine Exchange and earnings quality?

### B. Framework of the Study



## II. LITERATURE AND HYPOTHESIS DEVELOPMENT

### A. Literature Review and Previous Studies

A BSC is a vital framework that is executed to specify and enhance the internal processes and function of the organization. Furthermore, it is interesting to develop external consequences. BSC is used by organizations to provide evaluation, monitoring, and feedback for the business (Prochnik, 2016).

Abdeta (2019) defined BSC as strategic plan and management system that was established by Norton and Kaplan (1992) to help organizations and businesses to unify the efforts of all employees and departments to recognize and work towards achieving a specific shared vision and strategy. Sardjono et al. (2021) defined BSC as "A strategic planning and management system that is utilized by business and industry, government, and NGOs worldwide to create alignment between business activities to the organization's vision and strategy, enhance internal and external communications, and monitor business performance against strategic objectives.

Kalender and Vayvay (2016) defined BSC as a methodology to integrate both financial and non-financial measurements into a specific performance management system. They argued that BSC is a several dimension methodologies to measure the management performance over aligning between the organizational strategies and operational performance of the business.

Bochenek (2019) argued that BSC is "A concept of the execution of business strategy which emphasizes translating the organization's mission, vision and the strategy into measures and quantitative objectives" (P. 7). BSC gives the organizations the opportunity to translate the organization's strategic objectives into detailed operational activities and duties. The essential purpose of BSC is to create alignment between financial performance of the business with perspective development and market growth and survival.

The researchers concluded from the previous definitions of the concept of the BSC that it is a comprehensive

management system, which links the strategic vision to the specific goals (Lufika and Sary, 2021). And it translates the goals into balanced indicators and measurements by relying on financial and non-financial measures, and they are distributed on the different dimensions of the BSC that are the financial perspective, customer perspective, internal processes perspective, learning, and growth perspective and the social perspective. The balanced scorecard aims to develop an action plan that translates the organization's strategy into operational actions considering the three thyme dimensions (yesterday, today, and tomorrow). Furthermore, from the above definitions, it can be said that the balanced scorecard is a strategic management method that contributes to achieve the goals of the strategic economic unit by translating its vision into an interconnected set of financial and non-financial performance measures and facilitates the process of evaluating the performance of the unit through these measures (El-Garaihy, 2021). Besides, it is considered a strategic tool works to improve and develop performance within any economic unit to reach it to the highest level of achieving strategic goals by giving a clear picture of performance in the present and the future (Sardjono et al., 2021).

According to Abueid (2020) internal business process perspective relies on internal business processes that lead to achieve both customer satisfaction through creating value added for customers that is essential objective for any business and so that maximizing the financial performance of the business.

learning and growth perspective indicators are attributed to creating continuous development and improvement in the firm's products, services, and processes. According to Kaplan and Norton (1992), organizations can increase innovation and development in order to perform the scorecard objectives through creating new products and services, increasing operating efficiency, and creating value-added for customers (Dinh et al, 2018).

The learning and growth perspective concentrates on the organization's intangible assets. Basically, this perspective focuses on the employees' internal skills and competencies that are needed to enhance and develop the internal processes that create value for customers. This perspective interests in specifying how human resources, technology, and organizational culture integrate to support a corporation's strategy. The learning and growth perspective measurements are vital indicators for achieving improvement in internal business processes, customer and financial perspectives, and measurements (Narayanamma and Lalitha, 2016). Organizations can adopt social responsibility initiatives through sponsoring social activities and ceremonies, adopting green practices that protect the environment, providing high quality products and services for customers and sponsoring the establishment of hospitals, care centers, youth organizations, and forums. Organizations can also adopt sponsoring national festivals, sporting women initiatives, preserving the health of the surrounding citizens and its employees by avoiding pollution risks as well as improving the performance of employees by meeting their needs and desires (Al-Ghabban and Hussein, 2009).

Singh, Llach et al. (2017) explored the correlation between adoption and implementation of BSC and organization's performance in the Catalan Association of Accounting and Management. The research results revealed that there is a positive association between the adoption and implementation of BSC and the financial performance of the organization. Correspondingly, Jabeen and Behery (2017) examined the influences of adopting and implementing the BSC in the nonwestern context to measure the firm's performance basically in the United Arab Emirates and Saudi Arabia. They also revealed that BSC is an interesting instrument to evaluate the performance of the organization. Besides, there is a positive perception relevant to using BSC in the organizations and this tool is compatible with the business practices and local culture in these countries.

The study of Abu Anja (2019) investigated the impact of using BSC on decreasing the cost of providing banking services in Sudanese banks. The study results demonstrated that BSC is important to create accurate financial information that can be utilized to decrease the cost of providing services. Furthermore, using the financial dimension scale decreases the cost of providing services. The necessity to utilize a measure after the internal processes as it is interesting metrics that also act an important role in decreasing costs of service delivery.

#### *B. The Extent of Implementing Balanced Scorecard*

Singh et al. (2018) confirmed that the key factors influencing the adoption of the BSC in the organization are management commitment in using BSC and adoption of open communication among the various departments in the organizations.

Furthermore, Llach et al. (2017) revealed that there is a positive association between adoption and implementation of BSC and the financial performance of the organization. Correspondingly, Tarurhor and Osazevbaru (2019) revealed that the usage of the four perspectives of the balanced scorecard affects positively the firms' performance. Likewise, AL-Dweikat and Nour (2018) argued that the most important critical success factors influencing the adoption of the BSC are top management support, strategic intent, HR aspects, systems, and techniques. In conclusion, the study results demonstrated that the financial perspective is the most used perspective to measure performance. In a study by Ibrahim (2015) the results demonstrated that the studied banks use the financial performance perspective in evaluating their performance. Thus, the following hypothesis is proposed:

Ha1: There is a high level of implementation and application of BSC in the Banks listed on the Palestine Exchange.

#### *C. Effect of Financial Perspective on Earnings Quality*

The empirical results revealed that there is an association between financial perspective and the quality of earning in companies listed on financial markets. According to Malagueño et al. (2018) and Jabeen et al. (2017), there is a positive association between financial perspective of

balanced scorecard and the quality of earnings. Teichgräber et al. (2021) confirmed that financial perspective is used to measure performance in banking sector institutions in Ghana. Furthermore, the second hypotheses I will examine in this study is:

Ha2: There is significant effect of the implementation of financial perspective of the BSC on earnings quality in the Banks listed on Palestine Exchange.

#### *D. Effect of Customer Perspective on Earnings Quality*

According to the impact of the customer perspective of the BSC and its relationship with earnings quality, the researcher found from the literature review that there are several studies that emphasized the importance of the customer perspective in increasing the quality of the earnings in businesses and institutions (Mamabolo & Myres, 2020). A study by Tarurhor & Osazevbaru (2019) revealed that nonfinancial measurements such as customer satisfaction, employees training and development, and internal process design affect highly firm's financial performance of SMEs.

Ha3: There is a significant effect of the implementation of customer perspective of the BSC on earnings quality in the Banks listed on Palestine Exchange.

#### *E. Effect of Internal Business Perspective on Earnings Quality*

Fikriani (2019) confirmed that there is positive and insignificant relationship between internal business process perspectives and firm's quality of earnings in the studied bank. However, Aminus et al. (2015) revealed that deposit money banks in Nigeria do not take into consideration non-financial measures in assessing bank's performance. Besides, Ahmed et al. (2015) showed that internal business process perspective has very low level of adoption and implementation. Eventually, the study results demonstrated that banking sector institutions emphasized more on financial perspective and less focus and interest in internal business process. So, I will examine fourth hypotheses as:

Ha4: There is significant effect of adoption and implementation of internal business process perspective of the BSC on earnings quality in the Banks listed on Palestine Exchange.

#### *F. Effect of Learning and Growth Perspective on Earnings Quality*

Agyeman et al. (2017) revealed that the most used BSC perspectives are: The financial perspective, customer perspective, learning and growth perspective, and internal business process respectively. Furthermore, Babar (2016) revealed that there is a positive relationship between bank's performance and using learning and growth perspective. Fikriani (2019) revealed that there is positive impact for customer perspective and learning and growth perspective on the organization's performance and progress. Conversely, there is positive and insignificant relationship between financial and internal business process perspectives and the studied bank's performance. Abdul Zahra study (2016)

confirmed that that the studied banks there is very low of adopting and implementation internal business process perspective. So, I will examine fifth hypotheses as:

Ha5: There is significant effect of adoption and implementation of learning and growth perspective of the BSC on earnings quality in the Banks listed on Palestine Exchange.

#### *G. Effect of Social Perspective on Earnings Quality*

García-Sánchez et al. (2017) revealed that the commitment of the bank to CSR practices is important to enhance earnings quality as well as cash flow predictability. Furthermore, the research results demonstrated that the impact of CSR on earnings quality is high in countries that have high levels of shareholders and investor's protection and where there are efficient laws and regulations that value highly CSR initiatives. Thus, to summarize the existing of efficient laws and regulations. Besides, existence of environment that provide protection for investors boosts the earnings quality. Thus, I will examine sixth hypotheses as:

Fitriana and Islami (2018) revealed that organizations with a high level of CRS are more expected to have high earnings quality. Abedian et al. (2021) argued that business that exert great efforts and resources in creating ethical programs to protect and maintain stakeholders' interests are more expected to produce high reliable and valid information so that they have high earnings quality. According to Hong and Andersen (2011), there is positive correlation between involvement in CSR initiatives and reporting high earnings quality. Furthermore, they demonstrated that there is positive association between adopting CRS and high-quality accruals. Whereas, there is an inverse correlation between adopting CRS practices and real earnings management.

Ha6: There is significant effect of adoption and implementation of social perspective of the BSC on earnings quality in the Banks listed on Palestine Exchange.

#### *H. Firm Size*

Researchers usually measure the size of the firm through three main measures that are the size of total assets, the sales turnover and the number of the employees in the firm. In a study of Hamdan and Abu Ajila (2012) revealed that there is insignificant correlation between firm size and earnings quality Shtiwi (2009) and Hamad and Abu Nassar (2013) revealed that there is insignificant correlation between firm size and earnings quality. On the other hand, Hamdan (2012) argued that there is positive correlation between firm size and earnings management as the size of the firms gets larger this may motivate firm management to manipulate the accounting information of the organization through exercising earnings quality. Fitriana and Islami (2018) investigated the effect of Firm Size, CEO Ability, and tax aggressiveness on earnings quality of manufacturing firms in Indonesia during 2013-2014. The study results confirmed that there is positive correlation between firm size and earnings quality. Moreover, Hassan and Farouk (2014) revealed that increasing the size of the firms leads to greater level of agency cost and

agency problem that corporations may expose to. Whereas, Bassiouny (2016) confirmed that there is insignificant correlation between firm size and earnings quality. According to Agyeman et al. (2017) and Turegun (2016), there is direct and significant correlation between firm size and earnings management as large scale firms tend to exercise earnings management as these firms are under great pressure in order to achieve the financial analysts' expectations.

Ha7: There is significant effect of firm size on earnings quality in the Banks listed on Palestine Exchange.

#### *I. The Quality Level of the Profits Declared in Financial Reports Issued by the Banks Listed on Palestine Exchange*

Hamdan's study (2012) demonstrated that there is high level of quality in the declared profits in the listed industrial companies in Amman Stock Exchange. The results of Al-Sharif and Al-Sharif (2018) aimed to compare the quality of the declared profits in the industrial shareholding companies listed on the Palestine Stock Exchange and the Amman Stock Exchange. The results of the study showed that the industrial companies listed on the Amman Stock Exchange have a higher quality of profits than the industrial companies listed on the Palestine Stock Exchange. While the result of Abdul Zahra study (2016) that aimed to measure the quality of profits in Iraqi private commercial banks showed that there is an acceptable level of quality in the profits of these banks.

Ha8: There is high level of quality in profits declared in the financial reports issued by the banks listed in Palestine Exchange.

#### *J. Research Gap*

There is tremendous number of researches and studies that have been carried out on the BSC in academic context. The researchers found that most of the previous studies concentrated on the importance of using BSC as performance evaluation tool especially in developed countries. However, there is very scarcity of studies that emphasized the effect of using BSC on earnings quality especially in developing countries such as the case of Palestinian context. To mark the efforts for this gap, the researcher performs this thesis of the effect of BSC on earnings quality in banks listed on Palestine Exchange. As there is great debate about the earnings quality in developing countries compared to earning quality in developed countries where there is great laws and regulations that manage and control the earnings quality of the reported profits and financial information since there is efficient markets in that countries in contrast to developing countries that are considered inefficient markets. Thus, it was interesting to bridge this gap and find implications based on Palestinian case.

### III. METHODOLOGY

#### *A. Collection Methods*

The researchers in this thesis used two types of data collection methods that are:

Secondary data: Through an intensive critical revision for articles, journals, books, and publications, to create a clear insight concerning the impact of the BSC perspectives on the earnings quality.

Primary data: The researchers after constructing the literature review of the study will collect the primary data through the annual reports and disclosures issued by the banks and published on the official website of Palestine Exchange during the years 2011-2019 ([www.pex.ps](http://www.pex.ps)) that were relied on to collect the required data to conduct this research.

Population: banks listed on Palestine exchange. The number of local banks is seven, and the number of employees in these banks is (6946) employees (Palestine Monetary Authority, 2019). Banks listed on the Palestine Stock Exchange in Table I.

The study sample will be all bank's institutions listed in Palestine exchange excluding Palestine Capital Market Authority because of its work nature and assets that are different from the other banks. The study period covered between 2011 and 2019, as the available data were obtained depending on the data listed on the Palestine Exchange during this period.

#### *B. Study Variables*

The study variables were represented by the Balanced Scorecard with its five perspectives (financial, customer, internal operations, education and growth, and the social perspective) as an independent variable and the earning quality as a dependent variable, and the size of the bank as a control variable.

#### *C. Empirical Model*

The research object is to estimate one panel regression model to determine the primary effects of Balanced Score Card components (BSC) on Earnings quality controlled by the Firm Size.

Earnings quality = f (Financial, customer, Internal business Process, Learning and Growth, Social perspective and Firm size).

Earnings quality =  $\beta_0 + \beta_1FP + \beta_2CUS + \beta_3IBP + \beta_4SP + \beta_5LG + \beta_6FS + E$

Where:

- FP= Financial perspective.
- CUS= Customer perspective.
- IBP= Internal Business Process perspective.
- SP= Social perspective.

TABLE I  
BANKS LISTED ON THE PALESTINE STOCK EXCHANGE

Bank name	Code
Arab Islamic Bank	AIB
Palestine Islamic Bank	ISBK
Palestine bank	BOP
Al Quds Bank	QUDS
Palestine Investment Bank	PIBC
National Bank	TNB

TABLE II  
DATA MEASUREMENT

Indicators of the Balanced Scorecard Perspectives	
Indicators that measure the financial perspective	<ol style="list-style-type: none"> <li>1. Percentage of cash that the company owns from total assets=cash/total assets</li> <li>2. The Company's Capacity to Collect Accounts Receivable=Cash collection of non-cash sales/Average Accounts Receivable</li> <li>3. Percentage of the company's dependence on creditors in financing=total liabilities/total equity Total liabilities.</li> <li>4. Rate of Return on Equity=Net Profit after Tax/Average Equity</li> <li>5. Rate of return on assets=Net Profit/Average Total Assets</li> <li>6. Revenue from services other than interest=total revenue - interest revenue.</li> </ol>
Indicators that measure the customer perspective	<ol style="list-style-type: none"> <li>1. (Loyal customers) Growth in Sales = (The size of the bank's revenues this year/The bank's revenues last year) * 100/100</li> <li>2. The contribution of marketing expenses that the company spends in achieving customer satisfaction = Marketing expenses/revenues</li> <li>3. Contribution of the quality of services provided by employees to customers in achieving operational profit=operational profit/number of employees</li> <li>4. The number of employees who contributed to provide services with the highest possible quality that enables the company to obtain the current assets needed to cover its short-term liabilities=current assets/number of employees</li> <li>5. Management's efficiency in utilizing its resources to achieve customer satisfaction=total revenues costs.</li> <li>6. The effect of customer satisfaction and loyalty to the company on reducing the volume of assets that have been financed by liabilities=assets/total liabilities.</li> <li>7. The increasing in % of customers numbers from one side and the volume of sales from another side for this year comparing with the same factors on last year</li> </ol>
Indicators that measure the perspective of operational processes	<ol style="list-style-type: none"> <li>1. Contribution of communication and communication expenses that the company spends to provide the product to the customer with the highest possible quality=communication expenses/administrative expenses</li> <li>2. The Contribution of Employee Efficiency Productivity in Achieving Operating Profit=Operating Cash Flow/Total Profits</li> <li>3. Contribution of bonuses that the company spends on employees in achieving their satisfaction = bonuses/administrative expenses</li> <li>4. Labor productivity in the bank=total assets/number of employees to use net profit/number of employees</li> </ol>
Indicators that measure the learning and growth perspective	<ol style="list-style-type: none"> <li>1. The impact of the bank's interest in developing employees 'capabilities on customer satisfaction=net profit after tax</li> <li>2. The impact of the bank's interest in the quality of audit offices and spending on their skills in obtaining sales=professional fees/sales revenues</li> <li>3. Efficiency of utilization of operational resources by employees in obtaining operating profit=Total Operating Costs/Operating Profit</li> <li>4. The costs of the training programs through which the capacity of the bank's employees is determined</li> <li>5. Staff Training Costs=Training Cost/Total Operating Cost * 100/100</li> <li>6. Growth in the number of new branches</li> </ol>
Indicators that measure the social perspective	<ol style="list-style-type: none"> <li>1. Resources allocated by the company to spend on the environment and society=the value of spending in the form of donations</li> <li>2. Growth in the percentage that the company allocates from the administrative expenses in spending on the environment and society=donations/general and administrative expenses</li> <li>3. Growth in the percentage allocated by the company and administrative expenses to spend on the environment and society through achieving employee satisfaction=employee expenses/general and administrative expenses</li> </ol>
Measures of earnings quality	<p>The quality of profits is measured using the continuity of cash flows and continuity of receivables measure and is measured through the following equation:</p> $NOI_{i,t+1} = \beta_0 + \beta_1 (NOI_{i,t} - TACCI_{i,t}) + \beta_2 TACCI_{i,t} + \epsilon_{it}$ <p>NOI<sub>i,t+1</sub> = The net operating profit of the company for the following year  NOI<sub>i,t</sub>=The net operating profit of the company for the current year  β<sub>1</sub>=Continuity of cash flows  β<sub>2</sub>=Continuity of receivables  TACCI<sub>i,t</sub>=The annual total dues of the company for the current year  ε<sub>it</sub>=The error  (NOI<sub>i,t</sub> - TACCI<sub>i,t</sub>) = The amount of cash flow generated from the net operating profit (cash earning)  Net operating profit=Revenue - (discounts, rebates and returns) = gross profit - (operating expenses) = Operating profit - (interest, taxes, and other unusual expenses).</p> <p>2) Profits free from profit management practices:  Total dues=voluntary+non-optional benefits</p>
Control variables	The book value of the bank's assets.
Company size	

- LG= Learning & Growth perspective.
- FS = Firm size.
- β<sub>0</sub>: Regression Constant.
- β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub>, β<sub>4</sub>, β<sub>5</sub>, β<sub>6</sub>: Regression Coefficients.
- E: Error term.

As shown in table 2 above, Log transformation (log(x)) was used in the analysis of all variables except (FP) since some values of this variable is originally negative.

The components of BSC were assumed as latent variables, this means that they need to be computed from original variables and elements. The main BSC components were

computed by the Principles Component Data Reduction Method to extract the most important elements and variables forming each component.

The following table shows the results of Principle Component Data Reduction Method:

After applying the Principles Component Data Reduction Method, the Latent Variables can be computed from the linear combination of the extracted variables and their coefficients resulted from the Principles Component Method as the following:

$$FP = -0.846058584418362*FP_2 + 0.9473070983117*FP_3 + 0.844372401578221*FP_4$$

$$\begin{aligned}
 \text{CUS} &= 0.942056552018383 * \text{CUS3} + \\
 &0.912868757708854 * \text{CUS4} + 0.894808409524452 * \text{CUS5} \\
 \text{IBP} &= 0.956173328364669 * \text{IBP1} + \\
 &0.95617332836467 * \text{IBP3} \\
 \text{SP} &= 0.860249898553795 * \text{SP1} + 0.860249898553795 * \text{SP2} \\
 \text{LG} &= 0.965736854140537 * \text{LG1} + \\
 &0.965736854140536 * \text{LG4}
 \end{aligned}$$

The dependent variable which is Earnings quality is the absolute value of ANACCI<sub>t</sub>: Voluntary dues to company (i) in year (t). This variable was computed by applying the equations of (Total dues = voluntary + non-optional benefits).

#### D. Descriptive Analysis

Table III provides summary statistics of the collected study variables data covering 6 Banks for the period from year 2011 to year 2019.

The mean of Earning Quality was 37796248.72 with highest value computed at 226980464.00 and lowest value computed at 1618940.80. Regarding Financial perspective, the mean was -2.62 with highest value computed at 10.22 and lowest value computed at -35.82. Regarding the Customer perspective, the mean was 34478012.00 with highest value computed at 150472384.00 and lowest value computed at 5782519.00. Regarding Internal Business Process perspective, the mean was 26.64 with highest value computed at 91.56 and lowest value computed at 0.13. Regarding Social perspective, the mean was 611799.43 with highest value computed at 3355542.20 and lowest value computed at 14984.57. Regarding Learning and growth perspective, the mean was 12892244.81 with highest value computed at 99138224.00 and lowest value computed at 488847.34. Finally, regarding bank size, the mean was 1174765910.74 with highest value computed at 5264944640.00 and lowest value computed at 243475131.00. The corresponding high standard deviation values indicate high variations of the observations across the years. In addition, the corresponding highly Skewness and Kurtosis indicators indicate that the distribution of observations is far from normal.

### IV. DATA ANALYSIS

#### A. Panel Multicollinearity Test

A multicollinearity diagnostic test is used to calculate Variance Inflation Factors (VIF) for the study model based on the method of Panel Least Squares. The problem of Multicollinearity is assumed to be severe when having VIF

values greater than 10, Gujarati & Porter (2009). The results of VIF are as follows:

The results of the Table IV show values of VIF exceeds 10 with values 21.366 and 16.568, these values which are not far too much from ten indicate mild Multicollinearity Problem. Gujarati & Porter (2009) recommended applying variable centering approach to eliminate the problem of severe Multicollinearity between explanatories. Variable centering approach transforms the series variable by subtracting the sample mean. Since we do not have severe Multicollinearity, we will not use any transformation method.

#### B. Hypotheses Analysis and Panel Model Regression Results

The study overall objective was to study the impact of implementing the BSC on the earnings quality in banking sector in Palestine. This was achieved by estimating the panel equation under fixed effects as guided by Redundant Fixed Effects Test results.

To test the first hypothesis, the one sample T test will be used to compare the averages of BSC components for the 6 banks among the years of the study. The maximum value of each component of BSC has taken and assumed as base to compute the test value (cut point) by dividing each value for each component in each year on the maximum, then the values transformed to be percentages. After that, the cut point of 0.6 or 60% assumed to be test value of application for each component. If the value of the average is significantly lower than 60%, it will be assumed that there is no application for the component. The following Table V shows the results of the one sample T test for each component and for the total of BSC:

The results of the one sample T test for application of BSC in the Table V show that there are differences between the averages of BSC components with the cut point (test value) of 60%. All averages are significantly lower than 60%, indicating that there is no application of BSC in banking sector in Palestine, so we reject H<sub>01</sub> stated that there is application of BSC in banking sector in Palestine at 0.05 level since the significance levels of the test are lower than 0.05.

The results of Table V indicate that the coefficient of determination (R<sup>2</sup> = 0.965) indicates that approximately 96.5% of the variation in the earning quality can be explained by the variation in the studied explanatory variables entered to the regression model shown in Table VI. Furthermore, the F-statistic of model estimation was significant (Prob(F-

TABLE III  
PANEL VARIABLES SUMMARY STATISTICS

	EQ	FP	CUS	IBP	SP	LG	FS
N	54	54	54	54	54	54	54
Minimum	1618940.80	-35.82	5782519.00	0.13	14984.57	488847.34	243475131.00
Maximum	226980464.00	10.22	150472384.00	91.56	3355542.20	99138224.00	5264944640.00
Mean	37796248.72	-2.62	34478012.00	26.64	611799.43	12892244.81	1174765910.74
Std. Deviation	50938050.76	14.35	31953914.34	20.19	877638.96	17534688.57	1196840527.35
Skewness	2.41	-1.06	1.87	0.89	1.81	2.84	2.14
Kurtosis	5.46	-0.36	3.29	0.95	2.30	10.35	4.20

statistic) = 0.00000), this ensures appropriateness of regression model used for panel data.

The results in Table VII exhibit that there is statistically significant negative effect for Customer perspective (CUS) on the Earnings Quality (EQ). The corresponding P-value (0.0000) is <0.05, and its coefficient (-0.844202) is negative which indicates that for every 10% increase in Customer perspective (CUS), the Earnings Quality (EQ) decreases by about 8.4%, so the hypothesis Ha3 is accepted.

Furthermore, the results exhibit that there is statistically significant positive effect for the Internal Business Process perspective (IBP) on the Earnings Quality (EQ). The corresponding P-value (0.0000) is <0.05, and its coefficient (0.329340) is positive which indicates that for every 10% increase in the Internal Business Process perspective (IBP),

the Earnings Quality (EQ) increases by about 3.3%, so the hypothesis Ha4 is accepted.

The results also show that there is statistically significant positive effect for the Firm Size (FS) on the Earnings Quality (EQ). The corresponding P-value (0.0000) is < 0.05, and its coefficient (1.789647) is positive which indicates that for every 10% increase in the Firm Size (FS), the Earnings Quality (EQ) increases by about 18%, so the hypothesis Ha7 is accepted.

On the other hand, the results in Table VII demonstrate that there is no statistically significant effect for financial perspective (FP), Social perspective (SP), and Learning and Growth perspective (LG) on the Earnings Quality (EQ), the corresponding P-values (0.5958, 0.7959, and 0.1768) are < 0.05, so the corresponding hypotheses Ha2, Ha5, and Ha6 will be rejected.

Ha8: There is high level of Earnings Quality in banking sector in Palestine.

This hypothesis will be tested based on profits' equation:

$$NOI_{i,t+1}/Tasi_{i,t+1} = \beta_0 + \beta_1 CNOI_{i,t}/Tasi_{i,t} + \beta_2 TACCI_{i,t}/Tasi_{i,t} + \epsilon_{it}$$

The results of profits' equation estimation are shown in the following table:

The results of Table VII show that the difference between the estimated coefficients  $\beta_1$  and  $\beta_2$  ( $\beta_1 - \beta_2 = 0.345854 - 0.345954 = 0.000100$ ), this value will be assumed as a cut point or test value to test levels of Earnings Quality in banking sector. The estimation of profits' equation was repeated for each one of the 6 banks (cross-sections), the results are shown in the following table:

The results in Table VIII exhibit that all banks in the sample have low Earning Quality except two banks.

To test the hypothesis, the one sample T test will be used to compare the averages of Earning Quality Levels (B1-B2)

TABLE IV  
VIF RESULTS

Explanatory Variables	VIF
FP	1.337
CUS	21.366
IBP	2.026
SP	6.211
LG	4.811
FS	16.568

TABLE V  
ONE-SAMPLE T TEST FOR BSC COMPONENTS WITH TEST VALUE=60%

Component	N	Mean	Std. Deviation	t	Sig.
Financial Perspective	54	43.484	36.786	-3.299	0.002
Customer Perspective	54	22.913	21.236	-12.834	0.000
Internal Business Process Perspective	54	29.095	22.055	-10.297	0.000
Learning And Growth Perspective	54	13.004	17.687	-19.525	0.000
Social Perspective	54	18.233	26.155	-11.735	0.000
Total BSC	54	25.346	14.806	-17.199	0.000

TABLE VI  
SUMMARIZES THE PANEL FIXED-EFFECT REGRESSION RESULTS OF THE ESTIMATED STUDY PANEL EQUATION

Dependent Variable: LEQ				
Method: Panel EGLS (Cross-section weights)				
White cross-section standard errors & covariance				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.589020	1.426171	-3.217721	0.0025*
FP	-0.005651	0.010574	-0.534455	0.5958
LCUS	-0.844202	0.165084	-5.113788	0.0000*
LIBP	0.329340	0.029391	11.20560	0.0000*
LSP	-0.034614	0.132976	-0.260299	0.7959
LLG	-0.105986	0.077145	-1.373854	0.1768
LFS	1.789647	0.118148	15.14749	0.0000*

Weighted Statistics

R-squared	0.964711	Mean dependent var	52.18918
Adjusted R-squared	0.955469	SD dependent var	82.82263
S.E. of regression	0.724680	Sum squared resid	22.05678
F-statistic	104.3808	Durbin-Watson stat	2.171529
Prob (F-statistic)	0.000000	Jarque-Bera test P value	0.832995

The asterisk \* represent significance at 5% level

TABLE VII  
THE RESULTS OF PROFITS' EQUATION ESTIMATION

Dependent Variable: NOI <sub>i,t+1</sub> /Tas <sub>i,t+1</sub>				
Method: Panel EGLS (Cross-section weights)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.032158	0.001431	22.46765	0.0000
CNOI <sub>i,t</sub> /Tasi <sub>i,t</sub>	0.345854	0.041818	8.270524	0.0000
TACCI <sub>i,t</sub> /Tasi <sub>i,t</sub>	0.345954	0.041966	8.243703	0.0000
R-squared	0.855376	F-statistic		33.79691
Adjusted R-squared	0.830066	Prob (F-statistic)		0.000000

TABLE VIII  
THE RESULTS OF MEASUREMENT OF EARNING QUALITY FOR THE SAMPLED BANKS

Bank	B1	B2	B1-B2	Level of earning quality
1	0.312329	0.310234	0.002095	High
2	0.493369	0.511235	-0.017866	Low
3	0.265203	0.265262	-0.000059	Low
4	1.136701	1.136819	-0.000118	Low
5	-0.060180	-0.045081	-0.015099	Low
6	0.361297	0.356099	0.005198	High
All	0.345854	0.345954	-0.000100	Low

TABLE IX  
ONE-SAMPLE T TEST WITH TEST VALUE=0.0001

	N	Mean	Std. Deviation	t	Sig.
B1-B2	6	-0.00430817	0.009666826	-1.117	0.315

for the 6 banks with the cut point (test value) of 0.0001, the following table shows the results of this test:

The results of the one sample T test in the Table IX show that there is no difference between the averages of Earning Quality Levels(B1-B2) for the 6 banks with the cut point (test value) of 0.0001. Therefore, we reject Ha8 stated that there is high level of Earnings Quality in banking sector in Palestine at 0.05 level since the significance level of the test is higher than 0.05.

## V. CONCLUSION AND RECOMMENDATIONS

From the study results, several deductions can be made. First and foremost, the study found that the profits of banks listed on the Palestine Exchange cannot be considered as of high quality. This result contradicted the finding by Abdul Zahra (2016) and Al-Maeni (2011) and Noor and Matar, (2007) and Zwelef and Nour (2005).

The researchers opined that the rejection of the hypothesis is attributed to the fact that the administration of the banks listed on the Palestine Exchange resorted to practicing earning management that is considered as a form of accounting manipulation in the financial data and statements without going beyond the accounting standards. Another factor that may lead to the practice earning management is the need to develop certain financial situation to gain the necessary financing from lending institutions. Some companies, by the executive management, work to improve their image to obtain more incentives and compensation, and this includes the practice of earning management with the aim of raising the value of the share.

The rejection of the hypothesis is attributed to the banks' unawareness of BSC as a tool usable in measuring and improving performance. In addition, bank administrations were clueless about the value of this tool as a strategic and valuable performance management system. It is important to assure that the successful application of BSC does not happen fixed; rather, top management of the bank should demonstrate its commitment to its adoption. Also, top management needs to identify the contingent factors that ease or deter BSC implementation. Among the factors to be considered in this context include organizational structure, organizational culture, private organization versus public organizations, environment, cost, employee training, and technology.

Given the findings obtained by this study, the following recommendations are worth considering:

1. The securities commission in the field of organizing accounting policies and increasing the requirements of accounting measurement and disclosure and decisions that support and try to explain investment and credit decisions.
2. Earning quality is of informational content that enhances the capabilities of stakeholders, investors, and users of

financial reports in making rational financial decisions and in directing their investments towards the appropriate economic environment, to ensure the highest return that can be obtained from this investment.

3. Users of financial reports in general, and investors in particular, should be educated on the implications of earnings management practices on their investment decisions.
4. Companies should not be limited to utilizing financial indicators in measuring earnings quality, rather, they should utilize the balanced scorecard and its five dimensions that are more holistic.
5. Users of financial statements of Palestinian companies should be educated so that they do not solely depend on the amount of net profit in the financial statements itself. They should understand the sources and components of net income including its actual flows and receivables. Such understanding could be acquired from recurring operations and not from infrequent or exceptional operations.
6. Similar studies should be carried out in other sectors in the Palestine Stock Exchange, especially the banking sector, as it is the backbone of the economy in any country, with the inclusion of more crucial variables.
7. Top Management should improve their storing knowledge in comprehensive database.
8. The banks should implement the Balanced Scorecard system through the following procedures:
  - a. Allocate sufficient allowances in the banks' budget for the purpose of developing and approving the balanced scorecard system.
  - b. Engage relevant specialized employees in training workshops in the banks that implement the balanced scorecard system and train them on how to design and operate the system and link it to the rest of the bank's work systems.
  - c. Organize courses and preparation programs run by specialized individuals for the bank's employees to train them on how to design and operate BSC and make them aware of the advantages of implementing it.
  - d. Determine a time plan to schedule the tasks and activities that will be performed for the purpose of implementing BSC.
9. Adopt a single and specific measurement method based on the Palestine Stock Exchange as an indicator of the quality of profits that all companies apply to ensure the quality of their profits, to facilitate comparison among companies listed in the same market or among financial markets in more than one country. The researchers recommend using the operating cash flow ratios analysis method since it depends on the actual receipts and not accruals which reflect the real situation of the companies.

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