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A Suggested Model to Measure the Quality of Financial Statements Using Balance Sheet Items with Empirical Study

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Abstract

Purpose – The main purpose of this thesis is to provide and test suggest model for measuring of the quality of financial statements and test it in a sample of Egyptian using balance sheet items for listed companies on Egyptian Stock Exchange financial statements provided annually by Egyptian corporations.

Methodology/Approach – The researcher depended upon the positive approach in analyzing the problem, explaining its causes, and predicting the behavior of this phenomenon in the future. The sample consists of 59 firms across 9 different sectors during the period from 2017 to 2020.

Findings – The results indicated that the that there is a negative relationship between both variables, it means the higher the firm Total Accruals based on Balance Sheet approach (TABS) the lower Stock Rate of Return (Return). Also shows that which shows a negative relationship between both variables, Total Accruals based on Income Statement approach (TAIC) and Stock Rate of Return (Return).

Research Scope – This study is applied on a sample of companies listed on the Egyptian Stock Exchange. All study and results for Egyptian companies only. The sample consists of 59 firms across 9 different sectors during the period from 2017 to 2020, and the study used regression analysis to test the main hypotheses.

Keywords – Quality of Financial Statements; Total Accruals Balance Sheet approach (TABS); Stock Rate of Return; Financial Statements Quality Measures & Total Accruals Income Statement approach (TAIC).
1. Introduction

The quality of financial statements is of interest to all stakeholders, especially equity investors. This interest increased after the recent global financial crisis and the collapse of some companies. In addition to what the global corporate fraud cases sparked from a great controversy among many users, which led to a decrease in confidence in the quality and reliability of the financial statements representation of the real reality of the company. This has resulted in the need for a reliable standard to judge the quality of financial statements. The quality of financial statements is linked to the quality of the information contained therein, in addition to taking into account the quality in all stages of preparing these statements. Investors need a high degree of quality in financial statements, which leads to achieving the required efficiency for investment. The quality of financial statements provides useful information to investors and creditors, especially on the quantity and timing of future cash flows, which lead to failure to manipulate earnings to ensure a minimum level of quality of accounting information. With regard to the concept of the quality of financial statements, opinions differed on this concept. Financial disclosure, which is concerned with appropriate timing, details and clarity, is the basis for the quality of financial statements. The quality of financial statements is that the accounting information contained in these statements is characterized by the credibility and the benefit they achieve for users.
The main purpose of this thesis is to provide an empirical study for measuring the quality of financial statements using balance sheet items for listed on Egyptian Stock Exchange financial statements provided annually by Egyptian corporations.

1.1. Research Problem:
Balance sheet quality and earnings quality are related. The balance sheet quality can accurately project what economic resources will generate the most future economic benefits. The earnings quality allows the ability to predict future earnings and performance, while also allowing the ability to make informed expectations. It is important that all information on the balance sheet is reported accurately, since earnings and balance sheet information are linked by financial statement articulation. In this case, the measurement of the quality of financial statements through the income statement is limited because the numbers in the income statement only reflect income and expenses only and are not reflected in a balance sheet only in retained earnings. As for the balance sheet, it contains the numbers of income statement and therefore the appropriate source for measuring of the quality of financial statements is through the balance sheet.

1.2. Research Objectives:
This main objective can be achieved through the following sub-objectives:
1. Suggest a model that can be used through Balance Sheet items to measure the quality of financial statements.
2. Test whether measuring of the quality of financial statements through the balance sheet items is better than the income statement.
1.3. Research Importance:

Research importance derives from both academic and practical point of view:

In the academic sense, provide a new measure of the quality of financial statements by using a balance sheet–based measure of the quality of financial statements that quantifies the in–formativeness of accounting assets in measuring firm–specific economic capital. The measure is motivated by the view that reported assets on a firm’s balance sheet are the primary measure of firm–specific economic capital.

In practical view, it is important to use the balance sheet as a measure of the quality of financial statements, which is great importance for measuring the quality of financial statements and as a major source of information on the company's economic capital for owners and other parties.

1.4. Research Methodology:

To achieve the objective of the research, the researcher will depend upon the positive approach in analyzing the problem, explaining its causes and predicting the behavior of this phenomenon in the future which means explaining, the behavior of managers when they are making accounting choices that determining effect of balance sheet as a measure of the quality of financial statements.

The remainder of this research is organized as follows: Section 2 Literature Review; Section 3 Theoretical Framework; Section 4 Empirical Study; section 5 Conclusion, Recommendation and Suggestions for Future Research.
2. Literature Review

2.1 Related Literature Review:

**Gharkaz et al. (2020)**

The purpose of this research is to provide a model for financial statements quality of financial information based on behavioral and value accounting of listed companies in Tehran Stock Exchange which is based on Structural Equation Modelling. The statistical population of this is including the sample of 128 listed companies in the Tehran Stock Exchange between 2007 and 2017. The results of this study indicate that there is a significant negative relationship between the behavioral characteristics of managers and the financial statements quality financial information. Also, there is a positive and significant relationship between value content of accounting information and financial statements quality of financial information.

**Kirowati et al. (2020)**

This study aims to determine the extent to which the implementation of Islamic Boarding School accounting guidelines in improving the quality of financial statements of the Al-Mujaddadiyyah Islamic Boarding School. This type of research is qualitative research, using descriptive methods. The results of the descriptive data analyzed by the study shows that the financial statements of the Al Mujaddadiyah IBS in Indonesia are managed by a foundation, namely the recapitulation of financial statement regarding income and expenditure for 1 year, from July 2019 to June 2020.
Gardi et al. (2021)
This study aims to identify factors that affecting on the quality of financial statements on investment decision making. The current research was focused on the city of Erbil, as a consequence of the results, a structured questionnaire was developed and sent to 100 respondents based on the convenience sample methodology and received around 87 responses. Therefore, this study came to conclude that political factor has significant relationship quality of financial statement accordingly the eight research hypothesis supported. This study found that the quality of financial statements overall difference could be measured by its variance.

Khotimah al. (2021)
This study aims to determine the impact of human resource efficiency, the use of information technology and public participation on the quality of the village's financial statements. This is a quantitative study that used the survey and questionnaire method. Furthermore, the samples were obtained using a dual sampling method with a total of 172 villages in Banyumas Regency. The results showed that human resource efficiency did not affect the quality of the village's financial statements, while the use of information technology and public participation had positive effects.

Machfuzh & Setiyawati (2022)
This study aims to examine the effect of understanding government accounting standards, accounting information systems and human resource competencies on the quality of financial statements and their
impact on the accountability of institutional performance. The sampling technique was purposive sampling and obtained a sample of 39 institutions. The results of the study conclude that government accounting standards have no significant effect on the quality of financial statements, accounting information systems have no significant effect on the quality of financial statements, human resource competence has a significant positive effect on the quality of financial statements, and the quality of financial statements has a significant positive effect on public accountability.

Tran (2022)

This study examines whether leverage is affected by the quality of financial statements. The quality of financial statements is measured by employing the results of the Vietnamese Financial Statements Awards and the quality of earnings. This study found that companies with higher financial statements quality have a lower degree of information asymmetry and lower debt ratios, consistent with point order theory and agency theory. The results also indicate that two aspects of financial statements quality, namely qualitative characteristics and quality of earnings are not alternative but complementary in the interpretation of the debt ratio. In addition, the study found that qualitative characteristics play a more important role in reducing information asymmetry than earnings quality.

Trinh et al. (2022)

This study examines the relationship between the quality of financial statements and the distribution of earnings in 76 countries. The study
found that the quality of financial statements increases the distribution of earnings after controlling the details of the company and the country. The study also look at different channels that improve the relationship between the quality of financial statements and the distribution of earnings. The study found that the positive correlation between high-quality financial statements and dividend distribution is more pronounced when companies face problems with free cash flow, face sharp information disparities, and are located in countries with weaker minority protection rights for shareholders. Interestingly, the study also found evidence that the high quality of financial statements enhances companies’ payment of dividends even when they already pay overpays their shareholders. However, the relationship becomes weaker when companies exceed the optimal level of dividend distribution.

3. Theoretical Framework

3.1. Financial Statements Quality Definitions

(Cheung et al., 2010) Stated that the quality of financial statements generally refers to how the financial statements are carried out according to the needs and objectives. The term quality in its general concept refers to the validity of the thing for the purpose for which it was prepared or conformed to the required specifications, so judging the quality of its goods or service requires relying on a framework that determines the specifications that must be available to achieve quality. Financial statements quality has been defined in many different ways:
One of the most commonly used definitions of financial statements quality is often quoted directly in academic literature, but it is more indirectly quoted through the concept of “information quality”. People think it is difficult to define a generally accepted definition (Dechow, Ge, & Schrand, 2010).

Financial statements quality is also defined as the accuracy of financial statements, which enables the financial statements to transmit information about the company’s business to the users of these financial statements, so that they can estimate the expected future cash flow (McDermott et al., 2012).

The researcher summarizes the above, to the lack of a specific agreed definition of the quality of financial statements. Although there are some overlapping aspects between the above definitions, the most comprehensive and consistent with the objective of the current study, which will be adopted by the study in its empirical aspect. Accordingly, the researcher proposes the definition of quality as accounting information prepared in accordance with the accrual quality approach for reducing opportunistic management practices and the preparation of applicable financial statements, and fulfilling their qualitative characteristics, fundamental and enhanced, reflecting the company’s economic situation, operational characteristics, financial integrity associated with the size of its future cash flows, and the sustainability of its earnings, thereby reducing uncertainties related to the inputs of stakeholder decision models.
3.2. Factors Affecting on Financial Statements Quality

Previous studies on the quality of financial statements focus on the accounting variables that reflect the quality of financial statements and factors that affect the quality of financial statements. There are five factors that affect the quality of financial statements is:

1. **Accounting standards applied**

(Jara et al., 2011) shows that the quality of accounting information varies with the quality of accounting standards adopted, that IFRS may limit profit management practices, and that the degree of information asymmetry may be higher than local standards.

2. **Management motivation**

Due to the flexibility of management in selecting existing accounting policies, Accounting estimates and business structure adopt a certain way in dealing with certain accounting items, which may be the abuse of these items to harm the personal interests of stakeholders, thus reducing accounting information quality (Ronen and Yaari, 2008).

3. **Audit quality**

Audit is an important part of financial statements structure, because it reviews the information in financial information in order to conduct independent and objective audit, so as to improve the reliability of financial information. One of the most important factors of audit quality is the efficiency and independence of audit, because the efficiency of audit depends on its ability to find errors and manipulate financial statements (Barua, p99, 2006).
4. Corporate governance structure

The concept of corporate governance refers to a set of laws, rules and standards to determine the relationship among corporate governance, board of directors, shareholders, stakeholders or related parties. This is to effectively control the company’s performance and success. (Jean and Haitao, 2012) show that the governance mechanism has a positive impact on the quality of sensitive information.

5. Institutional factors

The institutional factors of the country determine to a great extent the responsibilities of the financial statements users and auditors to the report recipients. Therefore, they are the motivation of financial statements. There are many institutional differences between countries, so it is difficult to determine the main institutional factors on which the countries applying the standards are based.

3.3. The Role of IFRS on Financial Statements Quality

The adoption of international financial reporting standards (IFRS) has received increasing attention in recent years due to its positive impact on the quality of financial statements (FRQ) and, consequently, on the efficiency of capital markets. The increased adoption of IFRS worldwide reflects the importance of IFRS and their impact on the quality of profit (Iatridis, 2010; Zhang, 2011).

The researcher expects that mandatory approval of IFRSs will improve accounting quality if it is properly implemented. The quality of international financial reporting standards is lower than that of domestic generally accepted accounting standards, or if its implementation...
capacity is weakened (for example, by increasing discretion or flexibility), the researcher expects it to decrease. Therefore, the impact of international financial reporting standards (IFRSs) on accounting quality is an empirical problem. There are many reasons why the use of IFRSs can improve accounting quality.

The Financial Reporting Standards Committee of the European Accounting Association believes those accountings theories help explain the effects of the change in accounting standards on stakeholders' awareness of the quality of financial statements. In particular, market efficiency theory and disclosure theory through effective analysis of the effects of these standards on the specific characteristics of accounting information (European Accounting Association, 2011). As for disclosure theory, one of the IFRS requirements is additional disclosures related to economic conditions and key characteristics of the Company, as well as disclosure of assumptions used to prepare fair value estimates, and other borrowings related to applicable accounting policies, and compulsory disclosure, in addition to the fact that disclosures of financial statement elements, whether good or bad, make IFRS disclosures more comprehensive, appropriate, and result in the honest presentation of financial statements (Okafor, 2016).

In line with previous theoretical assumptions, the results of previous studies (Alkali, 2016; Okafor, 2016) indicate that IFRS have a significant impact on the quality of accounting information. In general, Houqe (2018) believes that IFRS build improves the quality of financial
statements, reflected in the benefit of this information to stakeholders (Lourenco and Branco, 2015), especially in the form of reducing asymmetry of information, enhancing investment efficiency, attracting foreign investment, reducing the cost of financing, reducing financial analysis costs and information acquisition costs, reducing forecast errors, and increasing the accuracy of financial analysts' predictions. The researcher concludes from the analysis of previous studies that their results are inconclusive, and there is a debate about the extent to which IFRS adoption affects the quality of financial statements, both in developed and developing countries. The results of these studies showed that the adoption of IFRS leads to fundamental changes in the quality of financial statements, but the direction of this change is determined, positively or negatively, based on a set of institutional factors and operational characteristics at the company level and measures of the quality of financial statements used and study periods, and whether the adoption decision is optional or compulsory, so the researcher expects that the adoption of IFRS will affect the quality of financial statements, without adopting a particular trend of relationship the subject of the study.

3.4. The Alternative Measures of Financial Statements Quality

As a result of the multiplicity of concepts of the quality of financial statements, the lack of a standard methodology applied by all studies related to the quality of accounting information, resulting in a variety of models used to measure this quality between quantitative models,
qualitative models, and models based on the specific characteristics of information (Abdullahi and Abubakar, 2020).

For quantitative models, these models are based on accounting figures contained in financial statements in calculating a set of determinants related to the quality of accounting information represented in earnings quality, where these models assume that high earnings quality limits the ability of the company's management to perform earnings management practices, and thus make accounting information more appropriate and timely from the perspective of stakeholders (Barth et al., 2007).

Value Relevance accounting information assessment models indicate the correlation between accounting figures and stock prices, which means that accounting figures reflect the impact of accounting figures on market reactions and their ability to make fundamental changes in stakeholder decisions, affecting the company's market value, indicating the appropriateness of accounting information for decision-making purposes (Krismiaji and Surifah, 2020).

The profit and loss recognition model includes one sub-measure, namely, the timing of recognition of gains and losses, where timely recognition of losses is assumed to positively affect the timing of accounting information (Bassemir and Farkas, 2018). In addition to previous measures, the maturity quality model is one of the quantitative models, as a reverse indicator of earnings management, where the depreciation of benefits indicates a higher accuracy of estimates and
lower opportunistic management practices, and subsequent high future returns, thereby increasing the quality of financial statements (Van Beest et al., 2009).

Although the majority of relevant studies rely on quantitative models, there are a number of major limitations that limit the reliability of the results of these models, including the fact that they do not include all factors that are expected to have an impact on the quality of the company's accounting information.

As for models that depend on Firm – Specific Attribute Model, the impact of a particular element of the company's financial, non-financial statements on the decisions of the stakeholders is assessed. These elements are income, expenses, assets, external audit number of branches, corporate governance, ownership structure, economic development and regulatory environment as a measure of financial statements quality (Chalaki et al., 2012).

With regard to qualitative characteristics models are another method of measuring the quality of financial statements has been developed to overcome perceived deficiencies in quantitative and qualitative models for measuring the quality of accounting information, by activating the specific characteristics of accounting information as a whole in measurement models. These models are characterized by the fact that they depend on the different aspects of financial statements and the disclosure of all financial and non-financial information (Krismiaji and Surifah, 2020).
3.5. Comparison between IASB, 2018 and IASB, 2010 for the Framework:

The conceptual framework for the preparation and presentation of financial statements constitutes the general framework that guides the International Accounting Standards Board in the process of issuing new standards, in making amendments to existing standards, and in the process of addressing any of the accounting issues that are not directly covered in the current international accounting standards, where Establishes the concepts underlying the preparation and presentation of financial reports to external users.

Therefore, the International Accounting Standards Committee has taken care of developing and issuing a framework my concept was later adopted by the International Accounting Standards Board, and working on its review, and it was modified in 2010 by issuing an incomplete version of it, to be modified again in 2018 by issuing a complete version, which included substantial amendments.

In light of this, the fundamental differences between both the previous conceptual framework 2010 and the current adjusted framework 2018 for financial reports should be clarified, as follows:

First: The Main Objectives of the Conceptual Framework:

The previous framework IASB, 2010 aims to:

- The main objective of the conceptual framework comes from the concept of the facility prepared for the report, the specific characteristics of useful financial information and the elements of financial statements, measurement, presentation and disclosure.
• Assisting the Board of Directors of International Accounting Standards Board IASB in setting future international accounting standards, and in re-reviewing and developing international financial reports.

• Assisting the preparers of financial reports and financial statements in applying International Financial Reporting Standards and in dealing with topics that will be the subject of a New International Accounting Standard.

While the modified framework IASB, 2018 aims to:

• Assisting the International Accounting Standards Board IASB in improving and developing International Financial Reports Standards based on consistent and interconnected concepts.

• Assisting financial statements and financial reporting reporters in developing consistent and consistent accounting policies for other transactions and events in the absence of An International Accounting Standard, or in the absence of a standard allowing for accounting selection alternatives.

• Modified framework explained that the decisions made by users of financial reports are based on their expectations of returns, which in turn are based on assessing the value and timing of expected cash flows, and the uncertainty associated with them.

(Dennis, 2019) found that when adjusting or developing the conceptual framework for future financial reports, consideration must be taken into account the existence of the accountability objective and the extent to which it contributes to a marked difference in the issuance of financial standards and reporting.
Second: Qualitative Characteristics of Useful Financial Information:

The previous framework IASB, 2010:

When the information is clearly and fully provided and classified, the quality characteristics will increase the annual financial statements is well structured so that users can understand their own needs (Otusanya et al., 2013). When evaluating the quality of the annual financial statements, the time period from the end of the year to the date of issuing the audit report is used to evaluate the schedule. The financial statements are complete, free from bias and error. This means that the true statements must be complete, including all the information required to describe and explain, free from bias and manipulation, and free from error. This represents real and focused information at an early stage. The researcher will review the qualitative characteristics of useful financial information, as follows:

1. Fundamental Qualitative Characteristics:

The fundamental qualitative characteristics of quality such as relevance and faithful representation.

A. Relevance:

- Relevance refers to how helpful the information is for financial decision–making processes. Also it is referred to as the capability of making a difference in the decisions made by users in their capacity as capital providers.
- Relevance includes the following: Predictive value, Confirmatory value and Materiality.
Financial information with predictive value is used by users to make their predictions, financial information has a confirmatory value if it provides feedback on previous calendars, and the predictive value and the confirmed value of financial information are linked to each other, information that has a predictive value also has a confirming value.

B. Faithful representation:

Faithful representation is the concept that financial statements are produced that accurately reflect the condition of a business. In order to obtain reliable financial information expressed on financial operations and other events in the facility and the phenomena to express them and perception. Any useful financial information must be for representative phenomena.

Faithful representation includes the following:

1. **Completeness**: It means that financial information reflects all the necessary information to understand information users on the events expressed, including descriptive and clarification information. For example, the completion of transactions included in a financial statement means that all transactions included in the statement have occurred during the accounting period covering the phrase and that all transactions occurring during the declared accounting period is included in the statement.

2. **Neutrality**: Means that financial information is not biased, so that the financial statements are not prepared and presented to a certain party service users at the expense of other parties, or to achieve a specific purpose or goal, but for public use, for example, accounting information.
Income tax should not be hidden from a circle to serve the interests of the owners of the facility, and the lack of accounting processors to enlarge profits intentionally for management and improve performance assessment.

3. **Free From Error**: Means that there are no mistakes or deletion in the description and statement of economic events, and there are no mistakes in processing the advertised financial information. The annual report cannot be completely free of bias, because economic phenomena submitted in annual reports are often moving under uncertainty.

2. **Enhancing qualitative characteristics**

Enhancing qualitative characteristics such as comparability, verifiability, timeliness, and understandability in order to improve the efficiency of decision-making, as follows:

1) **Comparability**: Means that “the quality of information that enables users to identify similarities in and differences between two sets of economic phenomena” (IASB, 2018). The comparability of financial statements refers to the comparability between the financial statements of a certain financial period and those of the same enterprise in one or more previous periods, or the comparability between the financial statements of an enterprise and those of the enterprise the financial statements of another enterprise in the same period.

2) **Verifiability**: Means that it should be possible for an organization's reported financial results to be reproduced by a third party, given the
same facts and assumptions. When financial statements are verifiable, this assures the users of the statements that they fairly represent the underlying business transactions.

3) **Timeliness**: Means that information can be used for decision-making when it has an impact on decision-making. As we all know, information quickly loses value in business, finance and price fields. However, as time goes on, when the future becomes the present, the information of the past becomes more and more unfavorable for decision-making.

4) **Understandability**: Understandability of accounting information means that the classification and presentation of information must be clear and accurate, and it is assumed that the users of accounting information have reasonable knowledge level on accounting and enterprise operation. The presentation of financial information must also be far away from complexity and difficulties, but this does not mean that accounting information related to complex businesses and events, such as in certain financial instrument businesses, is not presented (Cheung et al., 2010).

**While the modified framework IASB, 2018**:

- Modified framework kept the qualitative characteristics of the information as stated in the conceptual framework of the financial reports 2010, but he again restored the concept of accounting conservatism, stating that neutrality can be supported by accounting conservatism in the light of uncertainty when preparing personal judgments and taking professional care when assessing.
A neutral depiction is supported by the exercise of prudence. Prudence is the exercise of caution when making judgements under conditions of uncertainty.

(Mora and Walker, 2015) explained that the conceptual framework for financial reporting 2010 has eliminated the concept of accounting conservatism, which was part of the property of reliance on information because the concept is inconsistent with neutrality.

(Hsieh and Novoselov, 2019) found that the commitment to apply a concept with accounting conservatism in the preparation of financial reports leads to the rise in the value of the establishment and its profits, especially increased uncertainty under the uncertainty faced by the establishment as it is a means of addressing mistakes resulting from different sources and in particular the bias of decision makers.

Third: Recognition and Derecognition:

The previous framework IASB, 2010:

- Recognition: Recognition is the process of incorporating in the balance sheet or income statement an item that meets the definition of an element and satisfies the following criteria for recognition:
  It is probable that any future economic benefit associated with the item will flow to or from the entity; and the item's cost or value can be measured with reliability.

- Derecognition: The conceptual framework for financial reports 2010 did not provide guidance on derecognition of assets and obligations, as the criteria were the ones that defined the cancellation requirements.
While the modified framework IASB, 2018:

 ❖ Recognition: The modified conceptual framework 2018 explicitly indicates that the elements of financial statements are recognized if they meet the definition of the item and result in appropriate information about these elements, and that they are faithful represented to provide useful information, which is the primary objective of preparing and presenting financial statements the criteria for recognition are as follows: Recognition should provide useful information to users of information characterized by the characteristics of relevance, faithful representation, and even if the appropriateness feature is available when recognizing a financial statement item, recognition of those items must achieve the property of faithful representation, which may be affected by the following: (uncertainty in the measurement process, non–conformity in recognition, requirements for presentation and disclosure).

 ❖ Derecognition:

 ▪ Derecognition of the asset is made when the facility loses control of all or part of the recognized origin.

 ▪ Derecognition of the liability is made when the enterprise no longer has a current liability for each or part of the recognized liabilities.

 (Barker and Penman, 2020) provided a proposed introduction to the inclusion of the concept of uncertainty of the conceptual framework, bearing in mind that this will not result in the conceptual framework abandoning the budget input approved by the International Accounting
Standards Board, while this will lead to better recognition of assets and liabilities as well as will lead to improved accounting for revenues and expenses in the light of the matching principles.

Fourth: Presentation and disclosure:

The previous framework IASB, 2010:

IASB, 2010 did not provide any guidance on presentation and disclosure, as it was the criterion for displaying financial statements and other criteria that determined the requirements for presentation and disclosure without a theoretical reference to the conceptual framework.

While the modified framework IASB, 2018:

- Modified framework added a new chapter on the offer of presentation and disclosure. Information about assets, liabilities, equity, income and expenses is communicated through presentation and disclosure in the financial statements. Effective communication of information contained in financial statements makes that information more relevant and contributes to a faithful representation of an entity’s assets, liabilities, equity, income and expenses.

4. Empirical Study

The purpose of empirical study is to find evidence whether measuring the quality of financial statements using Balance Sheet approach for a sample of the Egyptian firms listed in the Egyptian Stock Exchange is better than measuring the quality of financial statements using Income Statement approach. Empirical study includes hypotheses.
development, sample selection, data collection, study variables, statistical analysis of data and discussion of empirical results.

4.1. Research Hypotheses:

This study will be formulated using the following alternative forms:

H1: The quality of financial statements measured according to balance sheet provides information more useful than income statement approach.

H2: The quality of financial statements measured according to income statement provides information less useful than balance sheet approach.

4.2. Variables Study Models:

First Step: Calculate Variables:

Independent Variables:

There are two approaches to calculate total accruals using Balance Sheet approach and Income Statement and Cash Flow approach.

Balance Sheet approach: (Ilia D, 2008) represented that Total Accruals can be measured by using Balance Sheet approach using suggested model as follows:

\[
T \text{ Acc}_{i,t} / Total \text{ Assets}_{i,t} = [\Delta \text{ Recei}_{i,t} + \Delta \text{ Inventory}_{i,t} + \Delta \text{ ORecei}_{i,t} + \Delta \text{ OC Assets}_{i,t} - \Delta \text{ Payable}_{i,t} - \Delta \text{ OPayable}_{i,t} - \Delta \text{ Provision}_{i,t} - \Delta \text{ OC Liabilities}_{i,t} - \text{ Depreciation & Amortization}_{i,t} - \text{ Impairment}_{i,t} ] / Total \text{ Assets}_{i,t}
\]
Where:

$T \text{Acc}_{i,t}$: Total accruals for firm $i$ for period $t$.

$\Delta \text{Total Assets}_{i,t}$: Total Assets for firm $i$ for period $t$.

$\Delta \text{Recei}_{i,t}$: Change in accounts receivable for firm $i$ for period $t$.

$\Delta \text{Inventory}_{i,t}$: Change in inventory for firm $i$ for period $t$.

$\Delta \text{OR recei}_{i,t}$: Change in other receivable for firm $i$ for period $t$.

$\Delta \text{OC Assets}_{i,t}$: Change in other current assets for firm $i$ for period $t$.

$\Delta \text{Payable}_{i,t}$: Change in accounts payable for firm $i$ for period $t$.

$\Delta \text{OP payable}_{i,t}$: Change in other payable for firm $i$ for period $t$.

$\Delta \text{Provision}_{i,t}$: Change in Provision firm for firm $i$ for period $t$.

$\Delta \text{OC Liabilities}_{i,t}$: Change in any other current liabilities for firm $i$ for period $t$.

$\text{Impairment}_{i,t}$: A permanent decline in the value of asset for firm $i$ for year $t$.

**Income Statement and Cash Flow approach:** (Bartov et al., 2000) represented that Total Accruals can be measured by using Income Statement and Cash Flow approach as follows:

$$\frac{T \text{Acc}_{i,t}}{\text{Total Assets}_{i,t}} = \frac{[\text{NI}_{i,t} - \text{CFO}_{i,t}]}{\text{Total Assets}_{i,t}}$$

Where:

$T \text{Acc}_{i,t}$: Total accruals for firm $i$ for period $t$.

$\text{NI}_{i,t}$: Net Income for firm $i$ for period $t$.

$\text{CFO}_{i,t}$: Operating Cash Flow for firm $i$ for period $t$.

**Dependent Variable:**
Return$_{i,t}$: Stock rate of return, (the price of company at period $t$ – the price of company at period $t-1$) ÷ the price of company at period $t-1$.

Second Step: A comparison between both approaches Balance Sheet approach and Income Statement and Cash Flow approach: To determine which approach is better in measuring the quality of financial statements the researcher will compare between two approaches.

4.3. Sample and Data Collection:
Based on the above criteria, the study is applied to a sample of the Egyptian firms that are listed on the Egyptian Stock Exchange, 100 firms. This results in a final sample of 59 firms with 236 firm–year observations over fiscal years 2017 to 2020. The sample was distributed across 9 different sectors.

The required data are mainly collected from the annual reports and investor relations portion throughout the formal website of the firms, financial statements, and its footnotes published on the following sites:
2) Mubasher: http://www.mubasher.info/countries/eg
3) Investing: http://www.Investing.com

4.4. Statistical Analysis of Data:
Data analysis aims to analyze the data of the selected firm–year observations in order to test the hypotheses. To test study hypotheses four statistical procedures have been used: Descriptive statistical analysis, Pearson correlation test, $T$–test and regression analysis. Statistical Package for the Social Sciences (SPSS, ver. 26.0) has been employed to analyze the sample data.
4.4.1. Descriptive Statistics of Total Sample Study:

This section provides descriptive statistics for the variables that have been used to test the hypotheses. In the next table (2), descriptive statistics for variables are displayed. Descriptive statistics make it possible to summarize the central tendency of the data (the minimum and maximum values that each variable can take as well as the mean and the standard deviation) of the variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Observations</th>
<th>Mean</th>
<th>St. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABS</td>
<td>236</td>
<td>.0798439</td>
<td>.10836075</td>
<td>-.00018</td>
<td>1.0167</td>
</tr>
<tr>
<td>TAIC</td>
<td>236</td>
<td>.2347138</td>
<td>.74346218</td>
<td>-.00002</td>
<td>8.6755</td>
</tr>
<tr>
<td>Growth</td>
<td>236</td>
<td>-42.6495</td>
<td>47.597</td>
<td>.01674</td>
<td>4.58047</td>
</tr>
<tr>
<td>ROA</td>
<td>236</td>
<td>-123.373</td>
<td>14.007</td>
<td>-.7694</td>
<td>8.4985</td>
</tr>
<tr>
<td>Size</td>
<td>236</td>
<td>7.6313</td>
<td>11.067</td>
<td>9.292</td>
<td>.6949</td>
</tr>
<tr>
<td>Leverage</td>
<td>236</td>
<td>-.2511</td>
<td>11.3146</td>
<td>.6511</td>
<td>.91949</td>
</tr>
<tr>
<td>Return</td>
<td>236</td>
<td>.1766976</td>
<td>.76980975</td>
<td>-.9978</td>
<td>6.1386</td>
</tr>
</tbody>
</table>

Where:

TABS\text{\textsubscript{i,t}}: Total Accrual divided by total assets based on Balance Sheet approach for firm i for period t.

TAIC\text{\textsubscript{i,t}}: Total Accrual divided by total assets based on Income Statement approach for firm i for period t.

Growth\text{\textsubscript{i,t}}: Percentage change in sales for firm i for period t.

ROA\text{\textsubscript{i,t}}: Net income divided by end of year total asset for firm i for period t.
Size_{i,t}: The natural logarithm of the end of year market value of equity for firm i for period t.

4.4.2. Pearson Correlation Test:

The second statistical technique used in this study is Pearson correlation test, this technique enables us to test the strength and direction of the relationship between variables, this technique measures the correlation between study variables either between the dependent and independent variables or between the independent variables themselves.

Table (3): Pearson Correlation Test

<table>
<thead>
<tr>
<th></th>
<th>TABS</th>
<th>TAIC</th>
<th>Growth</th>
<th>ROA</th>
<th>Size</th>
<th>Leverage</th>
<th>Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABS</td>
<td>1</td>
<td>.925*</td>
<td>-.553*</td>
<td>-.745*</td>
<td>.167*</td>
<td>-.003</td>
<td>-.458*</td>
</tr>
<tr>
<td>TAIC</td>
<td>.925**</td>
<td>1</td>
<td>-.652*</td>
<td>-.856*</td>
<td>0.069</td>
<td>-.016</td>
<td>-.267*</td>
</tr>
<tr>
<td>Growth</td>
<td>-.553*</td>
<td>-.652*</td>
<td>1</td>
<td>.705*</td>
<td>-.069</td>
<td>0.04</td>
<td>.481*</td>
</tr>
<tr>
<td>ROA</td>
<td>-.745*</td>
<td>-.856*</td>
<td>.705*</td>
<td>1</td>
<td>-.084</td>
<td>0.019</td>
<td>.372*</td>
</tr>
<tr>
<td>Size</td>
<td>.167*</td>
<td>0.069</td>
<td>-.069</td>
<td>-.084</td>
<td>1</td>
<td>-.057</td>
<td>-.283*</td>
</tr>
<tr>
<td>leverage</td>
<td>-.003</td>
<td>-.016</td>
<td>0.04</td>
<td>0.019</td>
<td>-.057</td>
<td>1</td>
<td>0.024</td>
</tr>
<tr>
<td>Return</td>
<td>-.458*</td>
<td>-.267*</td>
<td>.481*</td>
<td>.372*</td>
<td>-.283*</td>
<td>-.024</td>
<td>1</td>
</tr>
</tbody>
</table>

Table (3) presents the correlations between study variables with a two tailed significance test for the total study sample. It is apparent from this table that there is a negative correlation between Total Accruals based on Balance Sheet approach and Stock Rate of Return as the person correlation coefficient is −0.458 and is statistically significant at .01 level. Also Table (3) shows that there is a negative correlation
between Total Accruals based on Income Statement approach and stock rate of return as the person correlation coefficient is −0.267 and a negative correlation between control variables (Growth–Size–Leverage) and Stock Rate of Return, also apparent appositive correlation between control variable ROA and Stock Rate of Return is statistically significant at .05 level.

4.4.3. T–test:
In this study, the researcher will use a paired t–test to determine the difference between two variables for the same subject (Total Accruals) which are separated by balance sheet approach and income statement approach. Paired Samples Correlations shows the bivariate Pearson correlation coefficient for each pair of variables entered.

<table>
<thead>
<tr>
<th>Table (4): Paired t–test.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Pair 1</td>
</tr>
</tbody>
</table>

The results show that there is a significant difference between based on balance sheet approach and income statement approach (t = −3.691, P = .000 which is smaller than .05), with an average of −.15486992, with 95 % confidence limits of (−.23753452, −.07220531).
5.4.4. Regression Analysis:

Regression analysis examines the relationship between a dependent variable (predicted variable) and an independent variable (predictors). Further, this analysis is used to discover the significance and the predictive power of a regression model and to assess the extent of variation in the dependent variable that is explained by the independent variable variation.

To Test the First Hypothesis:

H1: The quality of financial statements measured according to balance sheet provides information more useful.

To test this hypothesis, the following regression model was used.

\[ \text{Return}_{i,t} = \alpha_0 + \beta_1 \text{TABS}_{i,t} + \beta_2 \text{Growth}_{i,t} + \beta_3 \text{Size}_{i,t} + \beta_4 \text{ROA}_{i,t} + \beta_5 \text{Leverage}_{i,t} + \epsilon_t \]

Table (5): Regression analysis for the effect of TABS on Return

<table>
<thead>
<tr>
<th>Variable</th>
<th>R Square</th>
<th>F</th>
<th>Sig.</th>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABS</td>
<td>.343</td>
<td>24.006</td>
<td>.000</td>
<td>-2.358</td>
</tr>
</tbody>
</table>

In model summary, this table shows that values of R square and adjusted R², it can be noticed that the R-square is 0.343 which means that 34.3% of the variance in Stock Rate of Return (Return) is explained by the independent variable (TABS). The table shows that this model as a whole has a significant explanatory power since the significance is 0.000. This significance is called the P-value. The P-
value of the test has to be smaller than or equal the acceptable significance level (5%). In this case the P–value of 0.000 is smaller than 0.05 so the model is statistically significant. It was found that the TABS has a significant relationship with the Return with a significance level of 0.000 in addition, the coefficient is equal to −32.58, which shows a negative relationship between TABS and Return. Leading to the first hypothesis of the study to be accepted.

To Test the Second Hypothesis:

H2: The quality of financial statements measured according to income statement provides information less useful.

To test this hypothesis, the following regression model was used.

\[ \text{Return}_{i,t} = \alpha_0 + \beta_1 \text{TABIC}_{i,t} + \beta_2 \text{Growth}_{i,t} + \beta_3 \text{Size}_{i,t} + \beta_4 \text{ROA}_{i,t} + \beta_5 \text{Leverage}_{i,t} + \varepsilon_{i,t} \]

Table (6): Regression analysis for the effect of TABS on Return

<table>
<thead>
<tr>
<th>Variable</th>
<th>R Square</th>
<th>F</th>
<th>Sig.</th>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABIC</td>
<td>.315</td>
<td>15.447</td>
<td>.000</td>
<td>−.280</td>
</tr>
</tbody>
</table>

In model summary, this table shows that values of R square and adjusted R\(^2\), it can be noticed that the R–square is 0.314 which means that 31.4% of the variance in Return is explained by the independent variable (TAIC). The table shows that this model as a whole has a significant explanatory power since the significance is 0.000. This significance is called the P–value has to be smaller than or equal the acceptable significance level (5%). In this case the P–value of 0.000 is smaller than 0.05 so the model is statistically significant. Regarding the significance level between the independent variable and the dependent variable, it was found that the TAIC has a significant
relationship with the Return with a significance level of 0.000 in addition, the coefficient is equal to −.280 (negative), which shows a negative relationship between TAIC and Return. Leading to the second hypothesis of the study to be accepted.

4.4.5. Discussion of Empirical Results

The empirical study and aims to empirically examine the study hypotheses by using a sample consists of 59 firms across 9 different sectors during the period from 2017 to 2020. There are different statistical procedures that have been used to test the study two hypotheses; this sector exhibits four techniques; the descriptive statistical analysis, Pearson correlation test, T–test and regression analysis. The study shows that there is a negative relationship between both variables, it means the higher the firm Total Accruals based on Balance Sheet approach (TABS) the lower Stock Rate of Return (Return). Also shows that which shows a negative relationship between both variables, it means the higher the firm Total Accruals based on Income Statement approach (TAIC) the lower Stock Rate of Return (Return). Also the study shows that Total Accruals based on both regression models Balance Sheet approach (TABS) and Income Statement approach (TAIC) has a significant relationship with the Stock Rate of Return (Return), it can be noticed that the R–square based on Balance Sheet approach is 0.343 of the variance in Stock Rate of Return (Return) is greater than R–square based on Income Statement approach is 0.315 of the variance in Stock Rate of Return (Return), so the suggested model based on Balance Sheet approach (TABS) is better than model based on Income Statement approach (TAIC), leading to the first hypothesis of the study to be accepted and leading to the second hypothesis of the study to be accepted.
5. Conclusion, Recommendation and Suggestions for Future Research.

5.1. Research Conclusion:

This study aims to provide a suggested model to measure the quality of financial statements based on Balance sheet items. To achieve such objective, this study includes five sections are Section1 Introduction, Section2 Literature Review; Section3 Theoretical Framework; Section4 Empirical Study; section5 Conclusion, Recommendation and Suggestions for Future Research.

The researcher displays a general understanding of financial statements quality. Different definitions of financial statements quality were discussed because there is no one specific definition until now. In general the researcher found that financial reporting quality can be defined as the characteristics of a company's financial statements. The main criterion for judging the priority of financial reporting in accordance with generally accepted accounting principles (GAAP) is within the jurisdiction of the company's operations. High quality financial reporting must be useful for decision making. The experts in the two financial reports that are useful to the reporter are the relevant experts and insurance representatives. Then the researcher explained various definitions of quality include accounting information quality and financial reporting quality. that there are many factors that affect the quality of financial statements are accounting standards applied, management motivation, audit quality, corporate governance structure and institutional factors. Reviewed the importance of the financial
statements and the information contained therein to owners, investors, lenders and other users of accounting information.

The empirical study is implemented and the study hypotheses are empirically examined by using a sample of 59 Egyptian firms. In order to analyze the data and test the study hypotheses, the study has employed four statistical techniques. First, the descriptive analysis summarizes the main features of the data set. Second, Pearson's correlation test is employed to test and determine the strength and significance of the relationship between the study variables. Third, T–test is statistical technique which is used to compare between averages of values of date sets. Finally, Regression analysis aims to explore the relationship between a dependent variable and a group of independent variable.

5.2. Recommendations:

According to findings presented by this study, it can be concluded that the result of this study should be the interest of annual reports preparer and other related categories that use annual reports in the process of decision making.

In general, the following recommendations may contribute to improving the quality of financial statements:

1. The researcher recommends that the measurement of the quality of financial statements through the income statement is limited because the numbers in the income statement only reflect income and expenses only and are not reflected in a balance sheet only in retained earnings. As for the balance sheet, it contains the numbers of income statement
and therefore the appropriate source for measuring of the quality of financial statements is through the balance sheet.

2. It is necessary to have a database for Egyptian joint stock companies that includes all financial reports for companies for a series of years, and the prices of the shares in them in the Excel file, such as: net profit, cash dividends, total assets, total liabilities, property rights, number of traded shares, current assets, traded liabilities, Cash flows, and other items, which make it easier for researchers to conduct such studies easily and over a long time series and the impact of scientific research.

5.3. Suggestion for Future Research:

The researcher believes that there are some related future research aspects, the most important of which are the following:

1. Conduct studies on a trade–off between models measuring earnings management practices.

2. Conducting the study on a sample of companies of a private nature such as banks and insurance companies.

3. Study the relationship between the rate of return on shares and discretionary disclosure.

4. Study the relationship between the rate of return on shares and the asymmetry of information.
References


