THE IMPACT OF RECENT TECHNOLOGICAL ADVANCEMENTS ON THE CURRENT ACCOUNTING CONCEPTUAL FRAMEWORK FOR FINANCIAL REPORTING

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Abstract: The rapid pace of technological advancements in recent years has presented significant challenges to traditional accounting practices and raised concerns about the relevance and effectiveness of existing accounting conceptual frameworks. This research paper examines the failure of the current accounting conceptual frameworks to keep up with these technological advancements, identifying the key areas where inadequacies have been observed. Through a comprehensive analysis of available literature, case studies, and expert opinions, the paper explores the impact of technology on accounting processes, financial reporting, and the conceptual framework itself. The main objective of this research is to assess the impact of recent technology developments on the financial accounting conceptual framework for financial reporting in general and qualitative characteristics in particular on annual reports of Talaat Moustafa. Data were analyzed using financial health and performance ratios. The result of the study shows that all of the necessary ratios that are chosen to assess the firm's ability to meet the requirements of the qualitative characteristics of the accounting conceptual framework for financial reporting are decreasing. Thus, the study concluded that the current conceptual framework for financial reporting falls short to keep up with the emerging technologies.

Key words: Accounting conceptual framework, accounting nature, big- data, bitcoin, cloud-computing, data mining, emerging technologies.

JEL Classification: *M15, M41, O33*

1. Introduction

The current financial accounting conceptual framework, which serves as the foundation for financial reporting standards, was established with traditional business operations in mind. However, the advent of advanced technologies such as artificial intelligence, blockchain, and cloud computing has fundamentally changed the way businesses collect, process, and report financial data. The framework has failed to adequately address the complexities and nuances associated with these emerging technologies, leaving gaps in accounting practices and standards. One of the major challenges lies in the classification and measurement of intangible assets, such as intellectual

property and software development costs. With the increasing focus on technological innovation, companies are investing heavily in intangible assets that do not fit neatly within the traditional accounting framework. Additionally, the rapid development of new business models driven by technology, such as sharing economy platforms and subscription-based services, further complicates the allocation of revenues and costs.

Another challenge is the integration of emerging technologies into the financial reporting process. For example, blockchain technology has the potential to enhance the transparency and reliability of financial information through its distributed ledger system. However, the current conceptual framework lacks specific guidance on how to incorporate blockchain-based transactions and smart contracts into financial statements.

The failure of the current financial accounting conceptual framework to keep pace with technological advancements has several implications. Firstly, it undermines the relevance and reliability of financial information, as outdated standards may not capture the economic substance of transactions involving emerging technologies accurately. This, in turn, affects the decision-making process of stakeholders, such as investors and creditors. Secondly, the lack of specific guidance on accounting for emerging technologies creates inconsistency and ambiguity in financial reporting practices. This can lead to disputes, non-compliance with reporting standards, and challenges in auditable transparency. Lastly, the failure to address technological advancements may hinder the comparability of financial statements across different companies and industries. As organizations increasingly rely on technology to gain a competitive edge, the failure to account for these advancements erodes the ability to make meaningful comparisons and benchmark performance.

This paper aims to critically analyze the failure of the current accounting conceptual framework to keep up with most disruptive technologies for the accounting profession: cloud computing, Big Data blockchain and the cryptocurrency technology. The paper contributes to the literature on digitalization in accounting through conceptual and practical analysis of the implications of advent technology on current accounting conceptual framework of Talaat Mostafa. The research concluded that the nature of accounting would be greatly affected by recent technology advancements. It also concluded that the current accounting conceptual framework is inadequate for addressing current technological developments whereas the new proposals to the accounting conceptual framework are required to improve the quality of financial reporting in considering present technological developments.

In conclusion, the current financial accounting conceptual framework is struggling to keep up with the rapid advancements in technology. The limitations of the framework in adapting to emerging technologies pose significant risks and challenges for financial reporting. To ensure the relevance, reliability, and comparability of financial information, it is essential to update the conceptual framework to address the complexities and nuances presented by current and future

technological advancements. This would provide stakeholders with more meaningful and accurate information for decision making and improve the overall effectiveness of financial reporting practices.

The rest of the paper proceeds as follows. The coming section provides background about technologies that affect the accounting conceptual framework and an overview financial accounting conceptual framework. In section 3 it conducts a literature review on disruptive technologies for accounting. Specifically, it explains the advantages and limitations in exploiting cloud computing in accounting, implications of Big Data phenomenon, data mining and blockchain. We conclude section 3 with exploratory study of the blockchain and its potential impact on accounting conceptual framework through implementation of public distributed ledger and smart contracts. Section 4 concludes the paper with a case study analysis on Talaat Moustafa and discussion of the limitations and proposals for future research.

1.1 Objectives of the Study

With rapid technological advancements such as artificial intelligence, blockchain, and big data analytics, the traditional financial accounting framework has faced significant challenges in capturing, analyzing, and reporting financial information accurately and timely. This study aims to delve into the gaps and limitations that hinder the framework's effectiveness in addressing these technological changes.

1.2 Importance of the Study

This research is crucial as it aims at helping searchers in understanding the devastating role of the recent technological developments in changing the accounting practices Therefore, it leads the way for a new research area for researchers in the accounting field. It will be a significant endeavor in encouraging them to promote and introduce new suggestions that would aid in considering the need for updating and improving the current accounting conceptual framework. Moreover, this research will provide recommendations on how to enhance the presentation, measurement, and recognition processes of the present accounting framework in accordance with the recent IT developments.

Additionally, Finally, the importance of this research from the financial accounting standards setters' perspective comes from influencing regulatory bodies and standard setters to update the accounting standards and adapt to the changing business environment. Understanding the gaps in the current framework can inform the development of new guidelines that accommodate technological advancements. This can help ensure that financial reporting remains relevant, reliable, and consistent for all stakeholders, including regulators, investors, and businesses.

1.3 Problem of the Study

One problem with the study of the inability of the current financial accounting conceptual framework to keep pace with recent technology advancements is that technology is evolving at a rapid pace, making it difficult to keep up with the latest advancements. This creates a constant challenge for researchers to stay updated and accurately assess the impact of technology on financial accounting. Additionally, the current conceptual framework was developed without considering the potential technological advancements that have occurred in recent years. As a result, it may not adequately address the complexities and nuances that arise from new technology, such as cloud computing, blockchain, and big data analytics. Another problem is that technology advancements have also brought about new business models and ways of conducting transactions, which may not fit within the existing conceptual framework. This creates challenges in accurately measuring and reporting financial information for these innovative business models.

Furthermore, the lack of clear guidelines and standards for incorporating technology advancements into financial accounting practices can lead to inconsistencies and discrepancies in financial reporting. This creates difficulties for comparability and reliability of financial information across different entities and industries. The study of the inability of the current financial accounting conceptual framework to keep pace with technology advancements also faces the challenge of predicting future technology trends and their potential impact on financial accounting. As technology continues to evolve rapidly, it becomes increasingly difficult to anticipate the next big technological breakthrough and its implications on accounting practices. Overall, the problem lies in the need for a dynamic and adaptable financial accounting conceptual framework that can effectively embrace and incorporate technology advancements. Without this, financial accounting may struggle to provide accurate, relevant, and transparent information in the fast-paced, technologically advanced business environment of today.

In the light of the above stated research gap, the research had attempted to find out the answers to the below question:

"To what extent the current accounting conceptual framework for financial reporting can't keep pace with the emerging technology advancements?

1.4. Research Hypothesis

To achieve the prior stated research objective, it became necessary to test whether the current Egyptian accounting framework can cope with the Emerging technology developments in the business environment. Accordingly, the research hypothesis is formed as follows:

H1: The current financial accounting conceptual framework fails to incorporate wh the recent technological advancements.

2- Technological advancements and their impact on accounting

Accounting is the process of recording, classifying, and summarizing financial transactions and events, enabling businesses to measure their financial performance. Information technology (IT) is used to gain a competitive advantage in today's competitive world. Technologies have had a significant impact on the accounting conceptual framework, shaping how financial information is captured, processed, and reported. These advancements have enhanced the efficiency and accuracy of financial accounting processes, leading to improvements in financial reporting and decision-making. Thus, the next part section will briefly discuss the major technological developments that affect business enterprises and its relationship to the contemporary business world.

2.1. Emerging technologies that affect the accounting processes

2.1.1. Big data. Big Data is defined as a data analysis methodology enabled by a new generation of technologies and architecture that enable high-velocity data capture, storage, and analysis. It was also defined by Miklos, et. al (2015), as large-scale, fast-flowing, and highly diverse information assets that necessitate economically feasible and innovative processing methods. The proliferation of big data has enabled organizations to analyze large volumes of structured and unstructured data to gain insights and make informed decisions. However, the use of big data analytics can introduce challenges to the accounting conceptual framework. The vast amount of data available can make it difficult for accountants to identify relevant information and determine its reliability. Additionally, the use of predictive analytics could potentially lead to biased or subjective financial reporting, as it relies on assumptions and predictions (Rashwan 2018).

2.1.2. Data Mining: Recent technological advancements have paved the way for the use of big data to assist businesses in making decisions. Data mining is one of the methods used by management to take advantage of the massive amount of available information. Data mining is the process of discovering meaningful patterns in large databases (Chen and Du, 2009). It is also referred to as the process of extracting or mining knowledge from large amounts of data. The use of data mining techniques effectively and efficiently provides significant competitive advantages in the decision-making process (Huang et al., 2008)

2.1.3. Cloud computing: According to Linthicu, (2017), the Cloud is a system that allows information devices to share common information together Cloud computing allows for the storage and processing of vast amounts of data, providing cost-effective solutions for businesses. However, storing financial data on the cloud raises concerns about data security and privacy, as well as the potential for unauthorized access or data breaches. These challenges can undermine the reliability of financial information and impact the trustworthiness of financial reporting.

2.1.4. Blockchain technology: While blockchain technology can provide transparency and security to financial transactions, it can also pose challenges to the accounting framework. Blockchain transactions are recorded in a decentralized and immutable ledger, which contradicts the fundamental accounting principle of verifiability. Additionally, the widespread adoption of

blockchain could potentially result in the reduced need for intermediaries, such as auditors, which could raise concerns about the reliability of financial statements (Celebi, 2010).

2.1.5. Artificial intelligence (AI) and automation: AI and automation have the potential to revolutionize the accounting profession by automating repetitive tasks and improving decision-making processes. However, the reliance on AI and automation can also undermine the human judgment and professional skepticism that are critical to the accounting conceptual framework. The complexity of AI systems, including machine learning algorithms, can make it challenging for accountants to understand and interpret the results, potentially leading to errors or misinterpretations (Rob, 2013).

2.1.6. Enterprise Resource Planning (ERP) Systems: ERP systems integrate various business functions, including accounting, finance, sales, and inventory management. By using a centralized database, these systems streamline data entry and facilitate seamless communication and data sharing between departments. Consequently, financial information is more accurate, reliable, and readily available, enabling better decision-making and financial reporting (Cong et al, 2018).

As technology continues to advance and more data sources become available, the accounting profession will need to adapt and embrace these changes to ensure financial reporting remains relevant and reliable. Overall, while these technologies offer significant benefits to the accounting profession, they also present challenges that need to be carefully addressed in the following literature review section to ensure that the accounting conceptual framework is not compromised.

2.2. Implications of emerging technologies for accounting processes, efficiencies, and automation

Blockchain, big data analytics, cloud computing, and automation have the potential to revolutionize accounting processes, improve efficiencies, and enable automation in several ways.

Firstly, blockchain brings trust and transparency to accounting. Its decentralized and immutable nature ensures that accounting records are secure and auditable, reducing the risk of fraud and error. By eliminating the need for intermediaries and manual reconciliations, blockchain saves time and costs in the accounting process. Secondly, auditing can be streamlined with blockchain. Its tamper-proof and time-stamped record of transactions simplifies the auditing process. Auditors can directly access and verify blockchain-based financial data, reducing the need for manual data collection and verification. This can lead to faster and more accurate audits.

Furthermore, big data analytics combined with cloud computing enables real-time financial reporting. By analyzing large volumes of financial and non-financial data in real-time, organizations can gain immediate insights into their financial performance. This allows for quicker decision-making and proactive management of financial risks. In addition, cloud computing offers cost savings for organizations. It eliminates the need for expensive on-premises infrastructure and allows smaller organizations to access sophisticated accounting tools and technologies without

upfront investments. Cloud-based accounting solutions also reduce IT maintenance costs and storage expenses.

Moreover, big data analytics enhances data analysis in accounting. It can process vast amounts of accounting data and identify patterns, trends, and anomalies that may go unnoticed. By analyzing this data, organizations gain deep insights into their financial health, customer behavior, and market trends. This aids in making data-driven business decisions and identifying cost-saving opportunities. Lastly, automation technologies like robotic process automation (RPA) result in the automation of manual tasks in accounting. RPA streamlines repetitive tasks such as data entry, transaction processing, report generation, and reconciliation. This improves efficiency and reduces the risk of human errors while allowing accountants to focus on more complex and value-added activities.

However, there are challenges and considerations with these advancements related to data quality assurance, privacy concerns, and managing cybersecurity risks are essential. Accountants also need to acquire new skills to effectively use these tools and interpret the insights generated. Successful implementation requires careful planning, investment, and organizational readiness. Nonetheless, these technologies have the potential to transform accounting processes and pave the way for improved efficiencies and automation, yet the current accounting conceptual framework fails to provide comprehensive guidance on these emerging issues.

2.3. Challenges Faced by the Current Accounting Conceptual Framework:

The current accounting conceptual framework refers to the set of principles, standards, and guidelines that guide the preparation and presentation of financial statements. It provides a foundation for the development and application of accounting rules, ensuring consistency and comparability in financial reporting. (IASB, 2018). Advancements such as cloud computing, blockchain technology, artificial intelligence, and the Internet of Things have significant implications for financial reporting. These technologies introduce complex transactions, new data sources, and challenges in maintaining data integrity and security. The current accounting conceptual framework fails to provide comprehensive guidance on these emerging issues.

4.1. Recognition and measurement:

According to the traditional accounting conceptual framework most assets are categorized as tangible assets, such as cash, fixed and current assets, etc., whereas the proportion of intangible assets is much smaller. Resources like reputation, human capital, and data that were previously ignored and excluded from asset reporting may now need to be disclosed on the balance sheet because of the growing relevance of information technology (IASB, 2018). Consider using data assets as an illustration. Traditional accounting does not allow for the recording of data as an asset since it is difficult to determine its costs and benefits precisely and consistently. In the era of

cutting-edge information technology, big data technology will be able to accurately measure the advantages and disadvantages associated with data. Thus, the researcher against that the phrase 'as a result of past events' remains in the definitions of an asset and a liability; and the continuous existence of the term past events as it may result in many intangible assets not included in the balance sheet.

4.2. Presentation and disclosure:

There is a growing need for companies to enhance their presentation and disclosure practices to provide investors and stakeholders with a clearer understanding of the risks and opportunities associated with emerging technologies. Emerging technologies generate vast amounts of data, requiring improved frameworks to effectively disclose relevant information to users. Current financial statements may not adequately reflect the impact of technology-driven disruptions on business models. One key challenge in presenting and disclosing information related to emerging technologies is the lack of established accounting standards and guidelines. Many emerging technologies, such as artificial intelligence, blockchain, and Internet of Things, have unique characteristics that make it difficult to apply traditional accounting frameworks to measure their impact on financial statements.

Overall, enhancing presentation and disclosure practices related to emerging technologies is crucial for investors and stakeholders to make informed decisions about companies' financial health and prospects. Accordingly, Companies have a responsibility to keep up with the latest advancements in accounting standards and guidelines and actively inform their stakeholders about how emerging technologies may affect their business.

4.3. Going concern assumption:

The going concern assumption is a fundamental accounting principle that assumes a business will continue operating for the foreseeable future. This assumption is important because it allows financial statements to be prepared on the basis that the company will continue to operate and generate revenue. [IASB,2018]. However, the rapid pace of technological advancements is challenging the validity of this assumption in certain industries. Technological advancements can disrupt entire industries and render existing business models obsolete. For example, the rise of e-commerce has significantly impacted traditional brick-and-mortar retail businesses.

With these rapid changes, it is becoming increasingly difficult to predict the future viability of businesses. Even well-established companies can find themselves struggling to adapt to these technological changes. This raises the question of whether the going concern assumption is still valid in certain industries. Accounting standards bodies and regulators are aware of this issue and are working towards addressing it. For example, the International Financial Reporting Standards

(IFRS) Foundation has issued a discussion paper on the topic, seeking input from stakeholders on how to improve financial reporting in the context of technological advancements.

In the meantime, companies and auditors need to carefully assess the impact of technological advancements on the going concern assumption. This may involve considering factors such as industry trends, competitive pressures, and the ability of the business to adapt and innovate. Companies may also need to disclose any significant uncertainties or risks related to technological advancements that could impact their ability to continue as a going concern.

Overall, the rapid pace of technological advancements does require a reassessment of the going concern assumption. It is important for companies and auditors to carefully evaluate the impact of these advancements on the future viability of businesses and make appropriate adjustments in financial reporting.

2.4. The Need for a Robust Conceptual Framework:

In today's digital age, technological advancements have significantly transformed the accounting industry. With the emergence of artificial intelligence, blockchain, and cloud computing, traditional financial reporting practices are being revolutionized. As a result, there is a growing need for a robust conceptual framework that can integrate these technological advancements into financial reporting processes.

One of the primary reasons for merging recent technology advancements with financial reporting is the need for real-time and accurate financial information. Traditional financial reporting practices often rely on manual data entry and calculations, which can be time-consuming and prone to errors. By leveraging technology, financial reports can be generated in real-time, providing stakeholders with up-to-date and reliable data for decision-making. Furthermore, the use of technology can enhance the transparency and integrity of financial reporting. Blockchain, for example, provides a decentralized and secure platform for recording financial transactions, ensuring that financial information is tamper-proof and auditable. This can help mitigate fraud risks and enhance investor confidence in financial reports. (Moll and Yigitbasioglu, 2019)

Additionally, technological advancements can improve the efficiency and effectiveness of financial reporting processes. Automation tools and artificial intelligence algorithms can streamline repetitive and mundane tasks, allowing accountants to focus on value-added activities such as data analysis and interpretation. This not only saves time and resources but also enables accountants to provide more meaningful insights to stakeholders. Moreover, merging technology with financial reporting can facilitate standardization and comparability of financial information. By adopting common data formats and reporting frameworks, financial reports from different entities can be easily analyzed and compared. This enhances the ability of users to make informed decisions and improves the overall quality of financial reporting. (Moll and Yigitbasioglu, 2019)

However, to effectively merge recent technology advancements with financial reporting, a robust conceptual framework is crucial. This framework should provide guidance on how to adapt existing accounting principles to the digital environment and address the challenges and risks posed by emerging technologies. It should also consider the ethical implications of using technology in financial reporting, ensuring that data privacy and security concerns are adequately addressed. In conclusion, the integration of recent technology advancements with financial reporting in accounting is essential in today's digital era. It enhances the accuracy, transparency, efficiency, and comparability of financial information. However, to fully leverage these technological advancements, a robust conceptual framework is needed to guide the implementation and ensure compliance with accounting principles and ethical standards.

3. Literature review

The accounting conceptual framework serves as a guiding tool for financial reporting, providing a basis for standard-setting and decision-making in the field of accounting. However, with the rapid advancements in technology, questions have emerged regarding the extent to which the existing framework is able to adapt and accommodate these changes. Numerous scholars have delved into this issue, addressing the challenges posed by rapidly evolving technologies and the limitations of traditional accounting practices. This literature review aims to explore the insights and arguments presented in previous studies on this subject matter to shed more light on the failure of the current accounting conceptual framework in keeping pace with these advancements.

A conceptual framework serves as the foundation for developing accounting standards and ensures consistency and comparability in financial reporting. However, the current conceptual framework seems inadequate in addressing the unique complexities and implications of emerging technologies. According to Warren et al. (2015), the framework's focus on traditional accounting methods limits its ability to incorporate the transformative power of technological advancements, thus hindering progress.

Many scholars have highlighted the transformative potential of emerging technologies, such as artificial intelligence (AI), blockchain, and big data analytics, on financial reporting. Gartner (2016), argue that these technologies have the ability to streamline accounting processes, enhance data accuracy, and improve decision-making. By automating routine tasks, AI can free up accountants' time for more strategic analysis. However, some researchers caution that integrating these technologies into financial reporting can also introduce new risks, including cybersecurity threats (Yermack,2017).

Technological advancements often introduce new ethical considerations and risks within accounting practices. The failure of the current accounting conceptual framework to address these issues has been highlighted by scholars like Gupta and Roberts (2017). They argue that the framework lacks clear guidance on issues such as privacy, data security, and the ethical

implications of automation. This deficiency hampers the profession's ability to adapt to the changing ethical landscape and undermines stakeholders' confidence in financial reporting.

Smith et al. (2018), investigate the role of Big Data analytics and its impact on financial reporting. The authors argue that the current accounting framework falls short in capturing and analyzing the vast amounts of data available to organizations today. They propose the integration of advanced analytics techniques into accounting practices to improve decision-making and reporting accuracy.Also, Moll and Yigitbasioglu (2019),examine the challenges posed by emerging technologies, such as artificial intelligence and blockchain, to the current accounting conceptual framework. They argue that these technologies have the potential to revolutionize accounting practices, but the existing framework fails to address their unique characteristics and implications.

Gepp et al., (2018), examine the consequences of the current accounting conceptual framework's inability to adapt to advancements in cloud computing. The study outlines the challenges faced by accountants in appropriately recording and reporting cloud-based transactions and suggests the need for revised guidelines to address these issues comprehensively.

Kruskopf et al., (2019), explores the impact of technological advancements on financial reporting practices. The study emphasizes the need for the accounting profession to adapt and adopt new methodologies to capture and accurately report the financial implications of emerging technologies. It highlights the potential discrepancies between traditional accounting approaches and the realities of technology-driven businesses.

Schmitz and Leoni, (2019), emerging technologies enable more accurate and real-time data collection, processing, and analysis. However, the current framework primarily relies on historical cost and conservatism, neglecting the potential benefits of innovative valuation approaches. This limitation hampers the ability to reflect the true value of digital assets and intangible assets, restricting meaningful financial reporting. Besides, Vaidyanathan (2017) argue that the framework's emphasis on historical cost accounting may not adequately capture the value of emerging intangible assets, such as intellectual property and customer relationships. This limitation may result in the understatement of firm value and hinder informed decision-making.

The rapid emergence of technologies like blockchain and smart contracts has raised significant challenges for financial reporting. Researchers such as Appelbaum et al., (2017) argue that the current conceptual framework fails to account for the complex transparency, auditability, and verifiability requirements generated by these innovations. This omission compromises the integrity and relevancy of financial statements, potentially leading to inaccuracies and misunderstandings among stakeholders.

Standard setting bodies play a crucial role in developing and updating accounting standards. However, several studies, including the work of Wong, Michael & Valer, Davinder (2019), suggest that these bodies struggle to keep pace with the rapid technological advancements. Delayed responses to technological changes, conservative approaches, and limited collaboration with technology experts limit the ability of standard setters to address the issues raised by emerging technologies.

These studies contribute to the ongoing debate regarding the failure of the current accounting conceptual framework to adapt to the rapidly evolving technological landscape. They highlight the need for updating the framework to address the complexities and unique challenges posed by emerging technologies. By incorporating these studies, it becomes evident that there is a growing consensus among scholars regarding the shortcomings of the current framework and the urgency to revise it for the digital age.

The in-depth review of the current technological advancements in the current economy, it became apparent that it has radically changed the perception of accounting profession and the accounting conceptual framework including; the expected impact on the objective of the general purpose of financial reporting , the qualitative characteristics of useful financial information, financial statements and the reporting entity ,the elements of financial statements ,recognition and de-recognition, measurement ,presentation and disclosure, concepts of capital and capital maintenance. This situation surely dominates researchers to take many endeavors towards examining the magnitude of the influence of IT developments on the current state of accounting, and the extent to which the present conceptual framework falls short in dealing with these developments.

4. Empirical review

The existence of many users of accounting information requires it to be viewed from different perspectives, which has created difficulty in measuring the QCs of financial information. The determinants influencing financial reporting quality are related to certain attributes of the firm, such as type of industry, leverage, firm size, firm age, profitability, liquidity, type and size of the Other determinants that influence financial reporting quality include the features of corporate governance, such as board size and composition, the duality of CEOs, board meetings and ownership structure (Fathi, 2013)

The absence of earnings management is one common description of earnings quality. The relevance and reliability of financial statements as regarded by the consumers can be used to explain EQ. Although there isn't a consensus definition of EQ at this point, it is evaluated using a number of parameters, including accrual basis, quality, predictability, smoothness, persistence, timeliness, conservatism, and earnings uncertainty. Jing (2007) discovered an insignificant relationship between conservatism and stock price synchrony and a positive association between

accrual quality and synchronicity. EQ may be broadly divided into two categories: accountability, also known as decision usefulness and stewardship, is based on accrual quality and conservatism, and it is the type where EQ is assessed based on the likelihood that current profits will continue to be generated in the future. The second factor is value relevance, which measures how well earnings and equity's book value accurately reflect stock returns.

Earning quality (EQ) can be measured in a variety of ways. An easy way to quantify EQ is the operating cash flow to income ratio, which makes the assumption that a high ratio indicates good quality. Leuz et al. (2003) calculated the variance of earnings between cash and accrual by comparing the standard deviation of operating cash flow to the standard deviation of income from operations. Comparing the beginning balance of net operating assets to sales revenues was the basis for the earnings surprise technique used by Barton and Simko in 2002. By dividing the standard deviation of operating earnings by the standard deviation of cash from operations, Leuz et al. (2003)'s method for measuring the variability of earnings between cash and accrual assesses the variability of earnings.

The firm's performance measures are taken from the financial reports, which must be of good quality for investors to find them relevant. Business performance is measured either in absolute terms, such as net income, or in different ratios, such as profits as a percentage of equity, assets, or revenues. Profit margins and peer quality have a substantial correlation, according to Bill Francis et al. (2016). assets or income. Profit margins and peer quality have a substantial correlation, according to Bill Francis et al. (2016). Other research revealed a favorable connection between businesses' growth prospects and the quality of their earnings disclosure. (Fathi 2013)

Determining how information technology improvements have affected the QCs and EQs of the accounting conceptual framework for financial reporting is the goal of this study. This case study was created to empirically evaluate the following main hypothesis based on the discussion of the prior literature that was previously provided:

H1. The current financial accounting conceptual framework fails to incorporate with the recent technological advancements.

5. The Methodology

5.1. Data Collection and Analysis

This case study operationalizes and measures the impact of recent technology developments on maintaining the qualitative characteristics of the conceptual framework for financial reporting. The operationalizing method of the QCs of accounting and financial information is the foundation of this study, despite the fact that numerous measurement methodologies have been used to evaluate the quality of financial reporting in the literature. The independent variable of the study is the

overall recent technological developments, while the dependent is the conceptual framework of accounting in general and the six elements of the QCs as prescribed in particular.

5.2. Qualitative Characteristics of Accounting Information

The qualities of useful accounting information and the basic principles applied to judge its quality are referred to as the QCs of accounting information. The definition of these characteristics should help the organisations in charge of establishing the accounting standards, as well as accountants who prepare financial statements, evaluate the financial data generated by alternative accounting methods and distinguish between disclosures that are required and those that are not. In addition to Yurisandi and Puspitasari (2015) and Mbobo and Ekpo (2016), other studies emphasise the value of QCs for determining the accuracy of the information contained in financial reports

5.3. Results

Based on the above discussion of the previous literature, the study adopts the earning quality, earning surprise and profitability ratios to assess the impact of the recent technology advancements on the accounting conceptual framework for financial reporting.
Based on the above discussion of the previous literature, the study adopts the earning quality, earning surprise and profitability ratios to assess the impact of the recent technology advancements on the accounting conceptual framework for financial reporting.

Table (1): Table of measures of the ongoing case study

Item	Qualitative characteristics	Measure	equation
Earnings quality (EQ)	Relevancy and faithful Representation & reliability	Operational cash flow ratio	= Operating cash flow/ income
Earning surprise	Verifiability	Operating asset turnover ratio	Beginning balance of net operating assets /sales revenues.
Company's financial health	Comparability	Operating profit margin	Net profit margin/ net sales
Company's performance	Financial reporting quality	Return on asset	firm's net income by the average of its total assets.

		Return on equity	Net income divided by shareholder equity

Table (2): Ratios calculation from (2017 till 2019)

The following table displays the calculations that had to be done in order to use Talaat Mostafa's recommended ratios before adopting modern technological advances.

Where:

- **Net profit margin** = (Revenue – cost) / revenue

- **Total operating assets** = Cash + prepaid expenses + accounts receivable + inventory + fixed assets.

- **Total operating liabilities**= Accounts payable (A/p) + accrued expenses + deferred revenue + trade payables+ loan payables+ debt payable + interest payable + rent and lease payable+ taxes payable

- **Net operating balance** = Operating assets – Operating liabilities

OPERATING ASSETS	TOTAL OPERATING ASSETS					TOTAL OPERATING ASSETS
	CASH	PREPAID EXPENSES	A/R	INVENTORY	FIXED ASSETS	
2017	3,33,95,65,205	3,46,08,41,996	18,32,92,43,039	5,79,74,867	2,78,53,42,593	27,97,29,67,700
2018	4,87,32,37,376	7,11,45,34,400	26,52,51,76,570	9,77,26,835	3,16,98,65,846	41,78,05,41,027
2019	4,21,16,95,693	5,30,67,29,793	30,77,28,12,679	1,00,20,34,248	4,09,28,23,582	45,38,60,95,995
OPERATING LIABILITIES	TOTAL OPERATING LIABILITIES					TOTAL OPERATING LIABILITIES
	ACCRUED EXPENSES	ACCRUED INCOME TAX	DIV. PAYABLE	CREDITORS	DEFFERED TAX	
2017	5,85,18,84,421	51,51,48,715	25,05,68,197	3,72,03,97,457	10,83,04,599	10,44,63,03,389
2018	7,75,44,35,267	67,11,22,747	38,52,19,685	14,65,97,23,945	12,00,83,542	23,59,05,85,186
2019	92,48,06,669	92,48,06,669	34,12,46,915	15,82,64,02,114	45,96,022	18,02,18,58,389

Table (3):

The computations for the net operating assets ratio are shown in the table below.

Year	Net operating assets		
	Opearing assets	operating liabilities	Net operating asssets
2017	27,972,967,700	10,446,303,389	17,526,664,311
2018	41,780,541,027	23,590,585,186	18,189,955,841
2019	45,386,095,995	18,021,858,389	27,364,237,606

Table (4):

The calculations for the net profit margin ratio are shown in the table below.

Year	Net profit margin		
	Revenue	Cost	Net profit margin
2017	6,406,397,355	4,067,050,279	0.365
2018	7,495,498,565	4,661,699,447	0.378
2019	8,151,602,281	5,023,344,181	0.384

Table (5):

The following table gives an overview of the general ratios that the case study for Talaat Moustafa recommends:

	Item	2017	2018	2019
Earnings quality (EQ)	**Operating cash flow**	2,115,945,679	2,753,689,061	3,284,836,453
	net income	1,377,752,364	1,769,663,317	1,901,666,940
	Ratio	**1.536**	**1.556**	**1.727**
Earning surprise	net operating assets	17,526,664,311	18,189,955,841	27,364,237,606
	sales revenues.	6,406,397,355	7,495,498,565	8,151,602,281
	Ratio	2.736	2.427	3.357
Company's financial health	Net profit margin RATIO	**0.365**	**0.378**	**0.384**
	Net profit	1,326,833,010	1,704,780,713	1,901,666,940
	Total assets	73,119,438,572	96,273,549,410	103,881,234,614
Company's performance	Ratio	**0.0181**	**0.018**	**0.018**

Net profit	1,326,833,010	1,769,663,317	1,901,666,940
Total equity	29,152,922,995	30,497,490,228	32,230,944,828
Ratio	0.05	0.06	0.06

The QE ratio in above table shows that the reliability of the company's reported net income is increasing over years from 1.536 in (2017) reaching to 1.727 in (2019), which means that the company's ability to meet relevancy and faithful representation as qualitative characteristics are increasing too prior to the adoption of recent technology developments. According to the above table's earning surprise ratio, the ability of the company's disclosed information to be regarded as verifiable has increased over time, rising from 0.046 in 2017 to 0.059 in (2019)

The company's financial health as a measure of the ability of the reported information to be considered as comparable appears in the above table to be almost the same over the three years, while the company's net profit margin ratio is increasing from 0.365 in (2017) to 0.384 in (2019).In the above table, the company's performance ratio, which serves as an indicator of the overall quality of financial reporting, appears to be rising from 0.046 in 2017 to 0.059 in 2019.

To sum up, before adopting the recent advances in technology, all of the necessary ratios that are chosen to assess the firm's ability to meet the requirements of the qualitative characteristics of the accounting conceptual framework for financial reporting are increasing over the three years from 2017 till 2019.

Talaat Mostafa's health and performance ratios from 2020 to 2022 will be shown in the following section so that they can be compared with those ratios from prior to the implementation of current technological improvements. It will be possible to assess from this comparison whether the current conceptual framework for financial reporting i is unable to keep up with modern technological improvements.

Table (6): Ratios calculation from (2017 till 2019)

Operating assets	Total operating assets					Total operating assets
	cash	prepaid expenses	A/R	inventory	fixed assets	
2020	2,705,091,404	6,403,884,294	8,393,001,058	1,119,398,991	11,614,154,600	30,235,530,347
2021	3,293,464,398	5,773,079,655	4,029,242,525	1,095,952,748	14,015,276,720	28,207,016,046
2022	5,829,807,839	6,220,759,829	469,214,796	971,586,075	16,877,143,587	30,368,512,126

The table below outlines the calculations needed for the recommended ratios of Talaat Mostafa after the adoption of recent technological advancements so that they can be used in comparison with the ratio findings that were achieved prior to the application of contemporary IT.

operating liabilities	Total operating liabilities					Total operating liabilities
	accrued expenses	accrued income tax	div. payable	creditors	Deffered tax	
2020	10,874,917,402	996,166,500	198,201,179	10,604,451,296	5,084,141	**22,678,820,518**
2021	11,530,049,431	1,135,591,523	183,809,310	7,775,393,539	192,820,440	**20,817,664,243**
2022	14,096,826,348	1,057,570,763	98,402,635	16,197,742,386	351,853,244	**31,802,395,376**

Table (7):

The computations for the net operating assets ratio are shown in the table below.

	Net operating assets			
Item	Year	Opearing assets	operating liabilities	Net operating asssets
Net Operating assets 2020 =	**2020**	30,235,530,347	22,678,820,518	**7,556,709,829**
Net Operating assets 2021 =	**2021**	28,207,016,046	20,817,664,243	**7,389,351,803**
Net Operating assets 2022 =	**2022**	30,368,512,126	31,802,395,376	**-1,433,883,250**

Table (8):

The calculations for the net profit margin ratio are shown in the table below.

	Net profit margin			
Item	Year	Revenue	Cost	Ratio
Net profit margin 2020 =	**2020**	11,817,795,879	8,178,632,633	**0.308**
Net profit margin 2021 =	**2021**	12,107,503,280	8,098,579,606	**0.331**
Net profit margin 2022 =	**2022**	14,671,464,755	10,446,379,129	**0.282**

Table (9):

For the case study of Talaat Moustafa, the researcher has advised the following overall ratios, which are summarized in the above table:

Item		2020	2021	2022
Earnings quality (EQ)	**Operating cash flow**	2,688,366,054	3,287,302,954	3,825,800,436

	net income	1,650,409,373	1,785,344,367	2,357,307,398
	Ratio	**1.629**	**1.841**	**1.623**
Earning surprise	**net operating assets**	7,556,709,829	7,389,351,803	-1,433,883,250
	sales revenues.	11,817,795,879	8,178,632,633	14,671,464,755
	Ratio	**0.639**	**0.903**	**-0.098**
Company's financial health	**Net profit margin ratio**	**0.308**	**0.331**	**0.282**
	Net profit	1,650,409,373	1,785,344,367	2,357,307,398
	Total assets	117,895,485,655	138,717,841,483	162,718,070,268
Company's performance	**Ratio**	**0.014**	**0.012**	**0.014**
	Net profit	1,650,409,373	1,785,344,367	2,357,307,398
	Total equity	33,616,283,570	35,043,495,375	36,928,331,767
	Ratio	**0.04**	**0.05**	**0.06**

The QE ratio in above table shows that the reliability of the company's reported net income is increasing over years from 1.629 in (2020) reaching to 1.623 in (2022), which means that the company's ability to meet relevancy and faithful representation as qualitative characteristics are decreasing over years after the adoption of recent technology developments and also less than the results of the three years period (2017 to 2019) before the adoption of the recent technology advancements.

According to the above table's earning surprise ratio, the ability of the company's disclosed information to be regarded as verifiable has decreased over time from 0.639 in 2020 to -0.098 in (2022) and also less than the results of the three years period (2017 to 2019) that was before the adoption of the recent technology advancements. The company's net profit margin as a measure of the ability of the reported information to be considered as comparable appears in the above table to be increasing from 0.308 in (2020) reaching to 0.064 in (2022), however, its lower than three years period (2017 to 2019) that was before the adoption of the recent technology advancements.

The company's calculated retune on assets ratio as a measure of the company's overall financial health appears in the above table to be the same from (2020 to 2022), however, its lower than three years period (2017 to 2019) that was before the adoption of the recent technology advancements. In the above table, the company's performance ratio, which serves as an indicator of the overall quality of financial reporting, appears to be rising from 0.05 in (2020) to 0.06 in

(2019), however, its same as the average ratio of the three years period (2017 to 2019) that was before the adoption of the recent technology advancements.

5.4. Discussion of findings:

The study evaluated the impact of the emerging technologies over accounting conceptual framework for financial reporting. To sum up, after adopting the recent advances in technology, all of the necessary ratios that are chosen to assess the firm's ability to meet the requirements of the qualitative characteristics of the accounting conceptual framework for financial reporting are decreasing over the three years from 2020 till 2022, and all calculated ratios all lower than the three years period (2017 to 2019) that was before the adoption of the recent technology advancements.

6. Conclusion and recommendations

Considering the previously discussed IT developments and their effects on the accounting practices and profession, it became clear that, despite all of the proposed efforts by conceptual framework setters in improving the principles and concepts identified with these recent technological developments through big data, cloud accounting, block chain, and bitcoin, each of these trials fails to provide a genuine solution for the never-ending complication. As a result, the researcher believes that technological advancements will have a substantial impact on the future of financial reporting and the evolution of generally accepted accounting standards, particularly in the areas of asset recognition, measurement, disclosure, and fair value accounting

On the other hand, although many businesses are aware that they want IT developments, they do not fully comprehend the extent of the problem and how to solve it. Owing to several changes in the business world over the last decade, the difficulties of singleness and lag in traditional accounting have gotten worse with the rapid emergence of a new generation of information technology. Furthermore, managers and investors began to seek a better economic framework that better reflected the worth and profitability of their organization.

To increase the accounting conceptual framework's robustness and widen its applicability in a continuously changing technological world, it became critical to reconstruct the traditional accounting conceptual framework. The next generation of information technology optimizes the process of gathering, storing, analyzing, and utilizing data. As a result, the researcher proposes the design and growth of "efficient, diverse, and intelligent" accounting to better gain a proper debate of the needed adjustments to the existing accounting conceptual framework. This thesis utilized the conventional accounting conceptual framework combined with a new generation of information technology to create an intelligent accounting conceptual framework based on accounting process, elements, and quality characteristics.

In the light of the recent technological advancements, numerous loopholes continue to exist with recently issued accounting standards and the existing accounting conceptual framework. In order to eliminate the weaknesses that persist and permit business enterprises to adopt the recent IT developments smoothly, it is recommended for the Egyptian accounting standards board to consider the below:

1. Reintroducing the term (relevant and immediate financial and non-financial information) in the objective of financial reporting, as financial information only cannot provide all the information that users may need to make economic decisions in the light of the ongoing technological developments

2. With recent virtual firms it's better to define faithful representation as the extent to which information accurately reflects a company's resources, obligatory claims, transactions, and will result in improved risk prediction for the company, achieving consensus among stakeholders, reveals hidden data in financial reports to reduce information asymmetry, and improves the integrity of financial reports

3. To give managers timely and useful decision-making information, the accounting cycle should be combined with the company's own development needs, and necessary adjustments should be made in accordance with changes in the entire production and business cycles

4. it's essential to switch to a multiple measurement system to replace the current currency measurement. The multiple measurement system uses both monetary and non-monetary indicators, as well as qualitative rather than quantitative indicators, in addition to the current currency measurement system.

5. The proportion of historical cost measuring features should decrease while the proportion of other measurement methods, such as net realizable value, should increase.

Although the conceptual framework for intelligent accounting has been established in this thesis, additional research and testing are still needed because the term intelligent accounting has a hazy definition in terms of institutional norms and the new generation of information technology is still in its infancy. It is advised to continue researching intelligent accounting application scenarios, intelligent accounting and corporate process reengineering, and intelligent accounting and corporate value.

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