The Role of Information Technology Governance in Reducing Corruption of Digital Assets: COBIT5 Framework

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Abstract

This research aims to investigate the role of Information Technology Governance (ITG) according to the COBIT5 framework with its five dimensions (direction, evaluation and monitoring, alignment, planning and organization, build, acquisition and implementation, delivery, service and support, monitoring, evaluation, and assessment) in reducing corruption of digital assets. The study community represented a sample of accounting and internal audit department employees in banks operating in Karbala Governorate. The questionnaire was used to measure the relationship between the variables, and 196 forms were distributed. The research concluded that the banks of this study pay great attention to providing a suitable environment that is compatible with innovative methods of Information Technology (IT) and work to acquire and acquire the latest digital innovations in technical fields to enhance their ability to compete and provide banking operations, in addition to finding that ITG is an integral part of banking governance of information in general, and works to provide the best foundations and standards for its application to protect its digital systems and electronic operations. The build, acquisition, and implementation (BAI) has obtained the highest results among other COBIT5 fields, as it directly impacted the corruption of digital assets and prevented and reduced all internal and external risks and operations and hacking to which banking systems are exposed.

Keywords: COBIT5, IT governance, Digital assets, Corruption.

1. Introduction

In recent years, banks have witnessed a new phenomenon represented by digital transformation, as banking operations were limited to manual transactions between the parties benefiting from their services. After the emergence of digital transformation, banks began to provide their services digitally via the internet without requiring the customer to visit the bank (Al-Janabi, et al., 2024). Most banking transactions are now done through electronic applications. Digital transformation has contributed to the creation of new tools represented by technological innovation that has contributed to the enhancement and development of banking work. Digital transformations in the field of banking activities have led to enhancing the value of the bank by creating a new competitive value, and banks have become in a race to obtain this technology and develop it to obtain a competitive space between banks (Al-Taee & Flayyih, 2023). These digital transformations in banking services were accompanied by many internal and external threats represented by many various violations of the systems owned by banks, which led to damage and loss of their assets, which necessitated the emergence of international standards for governance of IT fields to reduce their risks and threats that support digital banking systems, and among these standards is the COBIT5 standard, which is considered one of the most famous technical standards adopted in banking work and its governance (Abass et al., 2023). The rapid use of technology and the internet during the last two decades has led to entry into the information society. Establishments have come to rely on digital information systems to implement their specialized tasks and functions effectively, and among the most important of these systems are electronic accounting information systems (digital assets) and what their results represent as a point of contact between the organization and the relevant parties (Salman et al., 2023). Digital assets face significant risks that can exploit known and unknown

weaknesses and loopholes in these systems. These risks include targeted attacks, disruption of work due to natural disasters and human error, system errors, structural failure, leakage of confidential data, and others. The seriousness of these risks is evident in that the value of cybercrime has become estimated at $105 billion annually, which exceeds the value of drug trafficking worldwide (Alyaseri et al., 2023). Risks associated with information security negatively affect organizations, their operations, assets, and employees and may threaten other organizations. In addition, the occurrence of these risks leads almost directly to a decrease in the organization's value in the markets, and it threatens the confidentiality, integrity, and availability of its accounting information that is processed, saved, sent, or disclosed by digital assets. Therefore, many organizations have resorted to applying the (COBIT5) standard, which aims to protect digital assets from various potential risks.

2. Research Methodology

2.1 Research Problem

Business organizations, especially the banking sectors, are witnessing a complex environment after digital transitions or transformations emerge. The concept of digital transition or digital transformations of businesses and automatic data processing by computer has posed a new challenge for these sectors. This challenge includes maintaining the confidentiality, reliability, and security of their stored information from being viewed by unauthorized parties. After data was kept in specific records and previously known persons were allowed to access and process these records manually, the information became available and is stored on the internet today.

These growing developments in rapid data processing technologies have been accompanied by many risks related to data loss, misplacement, and corruption. For this reason, many global standards have emerged for governance in the fields of advanced IT that support ending the corruption of this data as an accounting asset. Among these standards is the (COBIT5) framework. From this standpoint, the research problem attempts to answer the following questions:

1. What is the concept of digital assets, and what are the most prominent risks and threats to which they are exposed?
2. The extent to which internal auditors working in the banks surveyed are aware of adopting the COBIT5 framework.
3. Is there a statistically significant relationship between the application of the COBIT5 framework and the protection of the digital assets of the banks under investigation from internal and external risks and threats?

2.2 Research objectives

The intended objective of the research is to clarify the concept of digital assets as an asset of accounting assets and the most critical threats and risks at their internal and external levels that may be exposed to them and to identify the essential tools and mechanisms that enable the protection of these assets using the updated COBIT5 framework through its five dimensions, which are (guidance, evaluation and monitoring, alignment, planning and organization, build, ownership and implementation, delivery, service and support, monitoring, evaluation and assessment). The research also aims to unify the scientific concepts related to (electronic accounting information systems) and (accounting IT) and to place them under one scientific name, which is (digital asset), since the digital asset is a comprehensive collection of all these scientific concepts. The researcher believes in making the term digital asset a scientific reference as an alternative to other scientific terms that sometimes branch out and move away from accounting concepts, mainly since International Financial Reporting Standards referred to the concept of digital assets and made them a type of accounting asset.

2.3 The importance of the research

The researcher believes that the scientific importance of the research came from the research itself due to the lack of Arab and foreign studies that addressed shedding light on the concept of digital assets corruption and defining the potential risks that conflict with those assets and the possibility of preserving them and reducing risks (human, unauthorized access, viruses), in addition to identifying

the importance of the governance framework for IT according to its framework (COBIT5) and the ability of internal auditors to deal with the framework for technology governance and the available capabilities to apply it in a functional, practical reality. In addition, the practical importance of the research lies in highlighting a new concept for digital assets and giving a cognitive dimension to those assets, especially since the topic of digital assets is new in the scientific arena and needs more studies and research until an accounting concept is reached and it becomes one of the practical accounting assumptions.

2.4 Research community and sample:

The community adopted in the study represents the banks operating in Karbala Governorate, and the adopted sample is a random sample targeting human resources in the accounting and internal auditing departments, which includes demographic elements (gender, age, job title, educational attainment, years of practical experience). The study community was determined through field visits and phone calls to banks operating in Karbala Governorate, and it became clear that the targeted sample consists of 196 individuals from the auditors and accountants.

2.5 Study hypotheses

2.5.1 Correlation hypotheses

H1: There is a statistically significant relationship between ITG according to the (COBIT5) framework and reducing the corruption of digital assets.

H1a: There is a statistically significant relationship between the variables of the field of evaluation, direction, and monitoring (EDM) and reducing the corruption of digital assets.

H1b: There is a significant statistical relationship between the alignment, planning, and organization (APO) domain axis and reducing digital asset corruption.

H1c: There is a significant statistical relationship between the build, acquisition, and implementation (BAI) domain variable and reducing digital asset corruption.

H1d: There is a significant statistical relationship between the delivery, service, and support (DSS) domain variable and reducing digital asset corruption.

H1e: There is a significant statistical relationship between the monitoring, evaluation, and assessment (MEA) domain variable and reducing digital asset corruption.

2.5.2 Impact Hypotheses

H2: There is a statistically significant impact relationship between ITG according to the COBIT5 framework and reducing digital asset corruption. To test this hypothesis, the following sub-hypotheses will be tested:

H2a: There is a statistically significant impact relationship between the evaluation, direction, and monitoring (EDM) domain variable and reducing digital asset corruption.

H2b: There is a statistically significant impact relationship between the variable of the Alignment, Planning, and Organization (APO) domain and reducing digital asset corruption.

H2c: There is a statistically significant impact relationship between the variable of the Build, Acquisition, and Implementation (BAI) domain and reducing digital asset corruption.

H2d: There is a statistically significant impact relationship between the Delivery, Service, and Support (DSS) domain variable and reducing digital asset corruption.

H2e: There is a statistically significant relationship between the variable of the field of monitoring, evaluation, and assessment (MEA) and reducing the corruption of digital assets.

2.6 Study limitations

Objective limits: The research is limited to studying the variables of the role of ITG using the COBIT5 framework and its role in protecting digital assets.

Spatial limits: Banks operating in Karbala Governorate were selected due to the extensive reliance of these banks on IT to manage their digital banking operations.

Time limits: The research will be implemented during the study period from 2024 until the end of its preparation.

3. Literature review

The study (Khalaf, 2019) aimed to demonstrate the impact of ITG according to the fields of (COBIT) in the areas of approved quality for internal auditing in a sample of banks. In order to achieve its goal, the theoretical framework of ITG and internal audit quality was presented. Then, the expected relationships between the (COBIT) framework and internal audit quality were presented. The researcher then conducted a field study in banks listed on the Iraq Stock Exchange, where a questionnaire was designed and distributed to internal auditors working in these banks. The study sample consisted of (168). The researcher found a strong and direct relationship between ITG represented by the fields of the COBIT framework and the expected quality of internal auditing. The study (Haouam, 2020) aimed to measure the extent of the impact of ITG on the ideal quality of reports in financial work using the (COBIT) framework. To achieve the objectives of this study, the researcher used the descriptive analytical approach to study theoretical and practical studies on the subject with an extrapolation of the main results and their presentation to raise the quality of financial reports. The study concluded that the application of governance contributes to improving and raising the performance of the organization as a whole, in addition to improving the quality of financial reports by eliminating duplication of tasks, reducing the paper-based accounting cycle, and increasing the level of security of the financial institution's information and reports. The study (Al-Taie, 2021) aimed to reduce IT risks according to the (COBIT5) framework and its impact on the targeted quality of internal auditing through the guiding procedures addressed by this framework and the extent of its impact on the auditing and accounting professions. The questionnaire was distributed to the Unified National Card Department in Wasit. It included the center, districts, and sub-districts for the departments and divisions represented by auditing, accounts, IT, human resources, and card affairs, and in surveying their opinions, as sixty-five questionnaires were distributed. The study reached a set of results, the most important of which is that adopting the application of the (COBIT5) framework according to the latest developments in IT management as a guiding reference model to achieve security, guarantee, and optimal exploitation of technology in the fields of information and improve business performance in the economic unit and the audit department. The study (Al-Shammari, 2021) aimed to clarify the cognitive foundations of the updated integrated (COBIT) framework for ITG. When applying the integration model between the (COBIT) framework and the balanced scorecard, it relied on data obtained from the records of the two sample banks, namely the National Bank of Iraq and the International Islamic Bank, and field experience in these two banks and personal interviews with officials and employees in them, in addition to the questionnaire. It reached several conclusions, the most important of which is that the integration between the (COBIT) framework and the balanced scorecard can contribute effectively to the possibility of evaluating IT management, as this integration increases precautionary measures for internal control and increases the effectiveness of implementing governance procedures in IT frameworks. The study (Al-Tamimi, 2021) aimed to identify the impact of ITG according to the updated (COBIT2019) framework in enhancing the efficiency and effectiveness of internal control work. The questionnaire was distributed to internal auditors in the control and internal audit departments and employees of the IT departments in the branches of the General Company for the Distribution of Petroleum Products. It was concluded that the variable (ITG) significantly affects the variable (efficiency and effectiveness of internal control). There is a positive relationship with statistical inference between the dimensions of governance related to IT, COBIT 2019 dimensions, and the efficiency and effectiveness of internal control. Despite the number of studies that discussed ITG in accounting frameworks in terms of measurement and disclosure, they did not agree on a unified concept of digital assets, as well as on a unified mechanism for how to link ITG to digital assets and clarify the extent of its impact on reducing internal and external risks and threats and electronic threats. The researcher will address the impact of applying the use of the (COBIT5) framework as one of the information governance mechanisms to reduce the risks of corruption of digital assets for banks in Iraq. It is a sample of them and maintains the confidentiality, reliability, and security of digital assets, as previous studies agreed on a common goal: to address the concept of ITG according to the international standard COBIT5 and its most important fields and

applications. Previous studies differed in the dependent variable, as the study (Al-Taie, 2021) indicated the impact of the (COBIT) framework on the quality of internal audit operations, and the study (Al-Shamri, 2021) explained the relationship between the COBIT5 framework and the balanced scorecard and proposed a business model. The study (Al-Tamimi, 2021) addressed the impact of the COBIT framework in enhancing the efficiency and effectiveness of internal control. It concluded that there is a statistical and significant inference between the two variables. The study (Khalaf, 2019) also participated with the study (Al-Taie, 2021) in searching for the quality of internal control and the impact of the COBIT5 framework on it, except for the research community and sample. Finally, the study (Haouam, 2020) addressed the potential impact of ITG through the COBIT5 framework on the quality of financial reports. It concluded that applying ITG improves and raises the organization's overall performance, enhancing the quality of its financial reports.

4. Theoretical Framework

4.1 The concept of ITG:

The concept of ITG emerged in 1988 through the ITG Institute (ITGI-IT Governance Institute) in the United States of America to organize and improve work in organizations and institutions and effectively control technology in them (Hadi et al., 2023). Governance in the field of IT is reflected in reducing risks and adding value related to IT. ITG requires a high investment cost, leading to high risk and simultaneously providing alternative development and renewal opportunities (Al-Tamimi & Al-Tamimi, 2021). Technical governance is one of the main axes of governance in companies. This concept has received great importance from organizations and their management due to what research and studies have revealed of its advantages and benefits (Hasan et al., 2023). Especially those that use technology due to its application of the rules, principles, and governance standards. Several attempts have been made to establish the foundations of corporate governance, which resulted in the importance of An important aspect of corporate governance, what is called ITG, which is the good application of its rules and principles and an entry point to protect information security. In addition, ensuring the protection of electronic systems and their information outputs has led to the necessity of seeking to implement the procedures that ensure that management reaches the effectiveness of the technical systems used (Al-Zubaidi, 2019). The importance of ITG stems from companies following it in a way that supports them in achieving their goals using technology, as it leads to enhancing investments in the field of technology and information and deepens the achievement of control over technology and managing its risks. In addition, ITG links the economic unit and customers, suppliers, and all internal and external categories dealing with it worldwide. In addition, its importance lies in the fact that it allows for openness in new markets and keeping pace with all developments in the field of technology, as the importance of ITG is that it has become an important factor in achieving success for companies by providing information through the application of technology. Undoubtedly, more economic units rely on technology as a driver for adding value to their businesses (Al-Tamimi & Al-Tamimi, 2021). The importance of ITG also lies in the fact that it is necessary for the effective management of information related to the activities of the economic and social unit. These activities depend on full cooperation between them to achieve their success, in addition to the fact that technical governance leads to achieving compatibility in strategies related to companies' activities and reasonable measurement of performance, and it is also a complementary element to corporate governance that helps them make various decisions about the best use of technology. This includes securing external relations to obtain IT, including control, authority, and responsibilities that lead to appropriate operations and decision-making methods (Al-Shamri, 2021). There are several major challenges in managing information and its technologies, namely managing complex systems, continuing the operation of information systems and information security, compliance with regulatory and legal requirements, and compatibility of IT with business plans and costs. The concept of information systems governance can be explained as an essential and inseparable part of the institution's governance consisting of leadership styles and organizational structures (Rabea'Hadi et al., 2023). Moreover, the procedures ensure the continuity of work with technology and support its strategies and objectives, enhancing its value and effective management of risks, managing its

resources, and measuring its performance and strategic alignment. The responsibility for managing information systems falls within the responsibilities of the company's board of directors and its executive management (Haddad, 2014). Failure to provide information or a defect in the processing process will have a negative impact on the company's capabilities and reputation and undermine the leadership's confidence in it. (Al-Janabi et al., 2024) Furthermore, its work teams require its leaders to pay attention to the importance of dealing accurately with its approved electronic system as one of the assets with a strategic dimension and the importance of supporting it by providing technical, technical and administrative support requirements and realizing the importance of maintaining it and protecting it from various risks. As investments and their value grow in the field of technology and the importance of information for companies, they are obligated to work to provide technical requirements and human support for them and to allocate high financial budgets, as these investments are increasing day after day, which requires increasing their levels of protection through the necessary policies and mechanisms to monitor investments that represent value for the company in addition to the importance of the need for scientific and applied foundations that support decisions and provide explanations for the expected value of investments for companies' businesses and their impact on their strategic objectives (Al-Jawhar & Hamoudi, 2015).

4.2 ITG According to the (COBIT5) Framework for Internal Control.

COBIT was developed by ISACA (the International Information Systems Auditing and Control Association), an international professional membership association for IT professionals and IT auditors with over 100,000 members worldwide. COBIT originated in the mid-1990s from the (financial) auditing community (Abass et al., 2023). These audit professionals increasingly encountered automated environments. To guide their work in these IT environments, COBIT was initially developed as a framework for performing IT audit engagements. It was built around a comprehensive framework of control objectives for technical processes. Based on this information audit foundation, the COBIT framework was developed into a broader ITG framework (Van Grembergen & De Haes, 2009). The first version of COBIT was released in 1996 as a set of IT control objectives to help the audit community improve the development of IT environments. In 1998, ISACA released its second version of COBIT, which expanded the framework for application outside the audit community (Thabit, 2021). The third version of the framework (COBIT 3) was released in 2000. It included success metrics and factors, IT maturity models, and guidelines for IT systems management. The fourth version of the framework was released in 2005, and the fourth version (COBIT4) was updated in 2007. It included many concepts that clarify management and governance mechanisms, such as tasks, responsibilities, and the relationship between IT operations. At the same time, the fifth edition of the framework (COBIT5) was confirmed in 2012. The concept of ITG within the unit, considering the internal and external stakeholders who benefit from it, and the fifth edition was updated twice. The first update to the fifth edition in 2018 added ISACA to the issue of a framework for the added value of IT and a framework for managing its risk. The second update to the fifth edition of the COBIT framework in 2019 was developed due to the progress made in technology and information. It was built on the best practical practices, meaning that this framework combines taking from scientific research and the existing application and operation of current governance on the ground for economic units, which made the framework the most acceptable and relied upon by most units and companies in the world (Al-Taie, 2021).

4.3 Digital Assets

There are many definitions of the concept of digital assets. A digital asset is an entity owned by an individual or an organization. It includes digital images, videos, songs, etc. These assets are intangible, meaning they do not have a physical existence. They can also be defined as files created electronically and saved as data on a digital storage drive or computer. Researchers have indicated that a digital asset is any content in binary environments that is self-contained, measurable, and usable. When the term appeared in the mid-1990s, digital assets were items such as videos, images, audio, and documents. On the other hand, a digital asset exists in binary form that an organization

can control, is authorized to use, and is expected to generate future development benefits. A digital asset can be any content in any format stored digitally. This digital file can be considered an asset when it contains information that can be used outside the file, which is valuable, useful, usable, and easily accessible (Abu Al-Ala, 2022). It is also known as ownership of any data in binary form stored on your computer or over the internet in a cloud somewhere (Shahata, 2022). The researcher believes that digital assets are non-material economic resources, in addition to those accounting programs that were designed in one of the known computer programming languages, which are electronic databases that operate with an (ERP) system that includes an integrated accounting information system that includes the accounting cycle in addition to the document cycle. It is stored on the computer in digital form, where through these programs, data can be entered and processed automatically and converted into accounting information using the outputs that have been processed automatically. Based on what has been mentioned, the researcher believes that at the theoretical level, digital accounting assets can be divided into four sections: digital office assets, digital network assets, digital cloud assets, and digital shared assets. Digital assets are accounting information systems composed of several elements that interact with each other to achieve a specific goal for which they were designed. Therefore, accounting systems are originally digital and consist of six elements: human system resources that use digital assets and through which they perform their functions, automatic and manual procedures and instructions used to collect and process data, digital software used to process various data, the basic technology structure represented by computers and communication networks through which data and information can be collected, saved, and processed, and internal auditing and security measures that include data security for digital accounting information systems (Al-Tatar, 2015). The characteristics of digital assets are that they do not have a tangible, measurable, and identifiable physical existence, are not cash assets, are purchased from software companies or manufactured internally with the help of specialized human resources capabilities, and their productive life extends for more than one financial period and are in the form of electronic files and are operated by a computer. As for the elements of protection and information security in digital assets, information security, and integrity mean the existence of a set of procedures and methods that aim to protect the digital assets system from future events that threaten the system. The concept of information security and integrity includes adopting important procedures to verify the identity of customers to whom services are provided using the internet and determining their specific authorizations, using different methods of mechanisms to verify the validity of transactions, and determining accountability for these digital transactions, focusing and paying attention to the controls related to the powers to obtain information and enter the electronic system and databases by specific parties, emphasizing the availability of procedures and controls for credibility and protection of data, information, and customers in registration and information exchange processes, the importance of defining clear paths for the transfer and conduct of transactions in their electronic form (Abdullah, 2021). To ensure the confidentiality of information, this path includes the necessary measures to prevent unauthorized persons from accessing sensitive information (Zuhairi, 2015) and ensuring the integrity of information, which is taking measures to protect information from intentional or unintentional change or modification (Eissa & Shahata, 2013). As for the risks related to digital assets, they are the risk of sabotage of intentional acts (of software and data), the risk of obsolescence in technology and failure to keep pace with the development and continuous updating of digital assets, the risk of unauthorized access to systems and sites, the risk of natural disasters, the risk of malware, analysis, and systems, the risk of information security and equipment management, the risk of security precautions. The risk of hacking, the risk of tampering with data and the main files of the system and the risk of theft or sabotage of data and information, the risk of disrupting networks that change information, the risk of data leakage across communication networks, the risk of data loss (Karm, 2022) and others.

5. Results

5.1 Analysis (correlation and multiple linear regression) of the study hypotheses:

The relationship between the two variables was tested using the Pearsons CORRELATION test to calculate the relationship between the study variables of the numerical or quantitative type, assuming

that the relationship between the two variables is linear. Its hypotheses have zero significance, H0, meaning there is no relationship between the variables in the research field. In contrast, the alternative hypothesis H1 means that there is a relationship between the two variables. **Table 1** shows the correlation coefficient between the dimensions of ITG according to the COBIT5 framework and the dimension of reducing digital asset corruption.

Table 1. The correlation coefficient between the dimensions of ITG according to the COBIT5 framework with the dimension of reducing digital assets corruption.

Variables	Pearson Correlation	Sig	N (sample)
Evaluation, Direction, and Monitoring (EDM)	0.566**	.000	122
Alignment, Planning, and Organizing (APO)	0.404**	.000	
Build, Acquisition, and Implementation (BAI)	0.524**	.000	
Delivery, Service, and Support (DSS)	0.723**	.000	
Monitoring, Evaluation, and Assessment (MEA)	0.614**	.000	

Source: Prepared by the researcher based on the results of the statistical program (SPSS v.22)
**: This symbol indicates that the correlation is significant at (0.01)
*: This symbol indicates that the correlation is significant at (0.05)

5.2 The hypotheses for the variables will be tested as follows:

H1: There is a statistically significant relationship between ITG according to the (COBIT5) framework and reducing the corruption of digital assets.

To test this hypothesis, the following sub-hypotheses will be tested:

H1a: There is a statistically significant relationship between the variables of the field of evaluation, direction, and monitoring (EDM) and reducing the corruption of digital assets.

The correlation coefficient was extracted to know the impact of governance on its information aspect according to the COBIT5 framework for the axis of the areas of evaluation, direction, and monitoring (EDM) and reducing the corruption of digital assets. It became clear from **Table 1** that the correlation coefficient is equal to (0.566), and the significance value is (0.000), which is less than (0.05). This proves that there is a positive direct relationship between the governance of IT according to the COBIT5 framework and the axis of the areas of evaluation, direction, and monitoring (EDM) and reducing the corruption of digital assets according to the significance level (0.05). This means that the axis of the areas of evaluation, direction, and monitoring (EDM) and all its paragraphs have a strong influence on protecting digital assets from corruption represented by the nature of threats inside and outside the institution and that this relationship is reliable, and based on the results shown by the statistical analysis that confirm the validity of H1a, this means that there is a statistically significant relationship between the variable of the area of evaluation, direction and monitoring (EDM) and reducing the corruption of digital assets.

H1b: There is a statistically significant relationship between the axis of the area of alignment, planning, and organization (APO) and reducing the corruption of digital assets.

The correlation coefficient was extracted to determine the impact of ITG according to the COBIT5 framework, focusing on alignment, planning, and organization (APO) and reducing the corruption of digital assets. It became clear from Table 1 that the correlation coefficient is equal to (0.404), and the significance value is (0.000), which is less than (0.05). This proves that a positive and direct relationship exists between ITG according to the COBIT5 framework and the fields of alignment, planning, and organization (APO) and reducing the corruption of digital assets, according to the significance level (0.05). This means that the axis of the field of alignment, planning, and organization (APO) and all its paragraphs have a strong influence on protecting digital assets from corruption represented by threats of internal and external scope and that this relationship is reliable and based on the results of the statistical analysis that confirm the validity of H1b, this means that there is a statistically significant relationship between the field of alignment, planning and organization (APO) and reducing the corruption of digital assets.

H1c: There is a statistically significant relationship between the variables in the field of build, acquisition, and implementation (BAI) and the reduction of the corruption of digital assets.

The correlation coefficient was extracted to determine the impact of ITG according to the COBIT5 framework, the axis of the field of build, acquisition, and implementation (BAI), and reducing the corruption of digital assets. It was clear from **Table 1** that the correlation coefficient is equal to (0.524), and the significance value is (0.000) less than (0.05). This proves the positive relationship between ITG according to the COBIT5 framework, the axis of the build, acquisition, and implementation (BAI) field, and reducing the corruption of digital assets according to the significance level (0.05). This means that the axis of the field of build, acquisition, and implementation (BAI) and all its paragraphs strongly influence protecting digital assets from corruption and threats internally and externally, and that this relationship is reliable. Based on the extracted statistical results, the validity of the third sub-rejection is confirmed, indicating a statistically significant relationship between the build, acquisition, and implementation (BAI) variables and the reduction of the corruption of digital assets. Sub-hypothesis Four: There is a statistically significant relationship between the variables of the field of delivery, service, and support (DSS) and the reduction of the corruption of digital assets. The correlation coefficient was extracted to determine the effect of technical governance of information according to the framework (COBIT5) field of delivery, service, and support (DSS) and reducing the corruption of digital assets. It was clear from **Table 1**. The correlation coefficient is equal to (0.723), and the significance value is (0.000) less than the level (0.05). This proves that the positive relationship is directly proportional between the governance of IT according to the framework of COBIT5 field of delivery, service, and support (DSS) and reducing the corruption of digital assets according to the significance level (0.05). This means that the axis of the field of delivery, service, and support (DSS) and all its paragraphs strongly influence protecting digital assets from corruption, which poses an internal and external threat, and that this relationship is reliable. Based on the results of the statistical analysis that indicate the validity of H1d, there is a statistically significant relationship between the variables of delivery, service, and support (DSS) and the reduction of the corruption of digital assets.

Sub-hypothesis five: There is a statistically significant relationship between the variables in monitoring, evaluation, and assessment (MEA) and the reduction of the corruption of digital assets.

The correlation coefficient was extracted to determine the impact of ITG according to the COBIT5 framework for the axis of monitoring, evaluation, and assessment (MEA) and reducing the corruption of digital assets. It was clear from **Table 1** that the correlation coefficient is equal to (0.614), and the significance value is (0.000) less than (0.05). This proves the positivity and direct relationship between ITG according to the COBIT5 framework, the field of monitoring, evaluation, and assessment (MEA), and reducing the corruption of digital assets at a significance level of (0.05). This means that the axis of monitoring, evaluation, and assessment (MEA) and all its paragraphs strongly influence protecting digital assets from corruption and internal and external threats, and this relationship is reliable. According to the extracted results that confirmed the H1e, there is a statistically significant relationship between the monitoring, evaluation, and assessment (MEA) variables and the reduction of corruption of digital assets.

5.3 Multiple Logistic Regression Test

The null hypothesis indicates that the regression between the study variables is not significant (there is no effect of the independent variables on the dependent variable). The alternative hypothesis indicates that the regression is significant between the variables (there is an effect of the independent variables on the dependent variable). **Table 2.** Multiple linear regression test.

Table 2. Multiple linear regression test.

Variables	T	Sig	F	R Square
Evaluation, Direction and Monitoring (EDM)	7.52	.000	56.66	0.321
Alignment, Planning, and Organizing (APO)	4.83	.000	23.33	0.163
Build, Acquisition, and Implementation (BAI)	6.73	.000	45.41	0.275
Delivery, Service and Support (DSS)	11.46	.000	131.39	0.532

Monitoring, Evaluation, and Assessment (MEA)	8.52	.000	72.63	0.377

Source: Prepared by the researcher based on the results of the statistical program (SPSS v.22)

The hypotheses for the variables will be tested as follows:

The second main hypothesis: There is a statistically significant influence relationship between ITG according to the COBIT5 framework and reducing the corruption of digital assets. To test this hypothesis, the following sub-hypotheses will be tested:

H2a: There is a statistically significant influence relationship between the variable of the field of evaluation, direction, and monitoring (EDM) and reducing the corruption of digital assets.

It is clear from **Table 2**. The independent variable was the evaluation, direction, and monitoring (EDM) field variable. The dependent variable is the reduction of corruption of digital assets, where the results of the regression analysis model showed that it is an equal model according to the value of (F) which reached (56.66) with a statistical significance level of (0.01), as its results are interpreted that the independent variables affect by (32.1%) the dependent variable which is the reduction of corruption of digital assets, considering the coefficient of determination (R2) and returning to the hypothesis related to the governance of IT according to the COBIT5 framework (the axis of the evaluation, direction and monitoring (EDM) field and the reduction of corruption of digital assets, we find that the value of (T) became (7.52) which is much more than (2). The value of (sig) became (0.000), which is less than (0.05). Based on the results shown by the statistical analysis that confirm the validity of H2a, there is a statistically significant influence relationship between the evaluation, direction, and monitoring (EDM) domain variable and reducing the corruption of digital assets.

Second Sub-Hypothesis: There is a significant statistical inferential relationship between the Alignment, Planning, and Organization (APO) domain variable and reducing the corruption of digital assets.

It is clear from **Table 2**. The alignment, planning, and organization (APO) field was considered an independent variable. The dependent variable is the reduction of corruption of digital assets; the results of the analysis of the regression model showed that the value of (F) was (23.33) at a significance level of (0.000) less than the significance level of (0.01). The results indicate that the independent variable affects by (16.3%) the dependent variable, which is the reduction of corruption of digital assets, considering the coefficient of determination (R2) and returning to the hypothesis related to governance of IT according to the COBIT5 framework (field of alignment, planning and organization (APO) and the reduction of corruption of digital assets, we find that the value of (T) became (4.83), which is much more than (2). The value of (sig) became (0.000), which is less than (0.05). Based on the results of the statistical analyses indicating the validity of H2b, there is a statistically significant influence relationship between the variable of the field of adaptation, planning, and organization (APO) and reducing the corruption of digital assets.

Third sub-hypothesis: There is a statistically significant effect relationship between the variable of the field of build, acquisition, and implementation (BAI) and reducing the corruption of digital assets.

It is clear from **Table 2**. The build, acquisition, and implementation (BAI) variable was considered an independent variable. The dependent variable was the reduction of corruption of digital assets, as the results of the regression model analysis showed that the value of (F) was (45.41) at a significance level of (0.000) lower than the level of (0.01). The results explain that the independent variable affects by (27.5%) the dependent variable, which is the reduction of corruption of digital assets, considering the coefficient of determination (R2) and returning to the hypothesis related to governance of IT according to the COBIT5 framework of the field of build, acquisition and implementation (BAI) and the reduction of corruption of digital assets, we find that the value of (T) became (6.73), which is much more than (2). The value of (sig) became (0.000), which is less than (0.05). The results of the statistical analyses indicate the validity of H2c, which means that there is a significant relationship between the variables of the field of build, acquisition, and implementation (BAI) and the reduction of the corruption of digital assets.

It is clear from **Table 2.** The delivery, service, and support (DSS) field variable was considered an independent variable. The dependent variable was the reduction of digital assets corruption; the

results of the analysis of the regression model showed that the value of (F) was (131.39) with a significance level of (0.000) lower than the level of (0.01). The results indicate that the independent variable affected by (53.2%) the dependent variable, which is the reduction of digital assets corruption, considering the coefficient of determination (R2) and returning to the hypothesis related to governance of technology according to the COBIT5 framework for the delivery, service and support (DSS) field and the reduction of digital assets corruption, we find that the value of (T) became (11.46), which is much more than (2). The value of (sig) became (0.000), which is less than (0.05). Based on the statistical analysis results confirming the validity of H2d, there is a statistically significant relationship between the variable of the field of delivery, service, and support (DSS) and the reduction of corruption of digital assets.

H2e: There is a statistically significant relationship between the variables in monitoring, evaluation, and assessment (MEA) and the reduction of corruption of digital assets.

It is clear from Table 2. The variable of the field of monitoring, evaluation, and assessment (MEA) was considered to be an independent variable. The dependent variable is the reduction of corruption of digital assets, as the results of the analysis of the regression model showed that the value of (F) was (72.63) at a significance level of (0.000) and less than (0.01). The results indicate that the independent variable affects by (37.7%) the dependent variable, which is the reduction of corruption of digital assets, considering the coefficient of determination (R2) and returning to the hypothesis related to governance of IT according to the COBIT5 framework of the field of monitoring, evaluation and assessment (MEA) and the reduction of corruption of digital assets, we find that the value of (T) became (8.52), which is much more than (2). The value of (sig) became (0.000), which is less than (0.05). Based on the results of the statistical analyses confirming the validity of the fifth sub-survey, this indicates a statistically significant influence relationship between the monitoring, evaluation, and assessment (MEA) variables and the reduction of corruption of digital assets.

6. Results discussion

Based on the results shown by the researcher in the conclusions section, it became clear that the fourth area of the COBIT5 framework, represented by delivery, service, and support (DSS), is the least interesting among the other areas, as it appeared with a general arithmetic mean of (4.07). The researcher believes that the area of delivery, service, and support is one of the five most important areas related to the COBIT5 framework, as it is the first area responsible for the (examination) process, as it includes (13) processes and (126) control objectives specific to examining systems related to ITG. In conclusion, we recommend that work be done to increase attention to the fourth area of the COBIT5 framework, represented by delivery, service, and support (DSS), and intensifying examination and auditing operations on digital systems to prevent hacking risks. Individuals working in control and auditing activities and auditing digital systems, as well as employees specialized in IT management, should be involved in training courses specialized in cybersecurity. It is necessary to follow up on updates and developments related to digital assets, obtain the latest versions of these programs, address vulnerabilities, and address the need for continuous maintenance of IT devices and equipment. It is necessary to follow up and monitor the operations related to access to digital assets and verify users' identities and the powers granted to them. Work on implementing (encryption) operations for data and information, using secure networks to transfer and exchange data, and preparing secure places for storage equipment (servers) and data retrieval systems. Develop a strategic plan to restore service and retrieve data in the event of hacking and unauthorized access. Provide financial and moral support to elements working in the fields and windows of developing technology and information, and its applications by enrolling them in training courses to obtain a professional certificate in information security and activities related to technology governance for information systems.

7. Conclusions

One of the important conclusions reached by the researcher in both the theoretical and applied aspects of the study is that the banks pay great attention to providing an appropriate environment that is

compatible with innovative methods of IT and work to acquire and acquire the latest digital innovations in technical fields to enhance their ability to compete and provide banking operations, in addition to finding that ITG is an integral part of banking information governance in general, and works to provide the best foundations and standards for its application to protect its digital systems and electronic operations. The build, acquisition, and implementation (BAI) have obtained the highest results among other COBIT5 fields, as it directly impacted the corruption of digital assets and prevented and limited all internal and external risks and operations and hacking to which banking systems are exposed. The field of evaluation, direction, and monitoring (EDM) and the results of the practical aspect have a significant impact on protecting digital assets through monitoring, evaluating, and assessing IT operations and digitization operations of banks. The results of the study showed that the areas of monitoring, evaluation, and assessment (MEA) and the area of delivery, service, and support (DSS) had equal results, which represent the minimum level of impact among the areas in terms of the level of influence on the protection of digital assets. The area of alignment, planning, and organization (APO) significantly impacted the protection of digital assets through planning, organizing, and harmonizing electronic banking transactions processed using IT.

References

1. Abass, Z. K., Al-Abedi, T. K., & Flayyih, H. H. (2023). INTEGRATION BETWEEN COBIT AND COSO FOR INTERNAL CONTROL AND ITS REFLECTION ON AUDITING RISK WITH CORPORATE GOVERNANCE AS THE MEDIATING VARIABLE. International Journal of Economics and Finance Studies, 15(2), 40–58. https://doi.org/10.34109/ijefs.202315203
2. Abdullah, N. M. A. M. (2021). The role of information technology governance in reducing electronic banking risks, unpublished master's thesis, Benha University, Faculty of Commerce - Department of Accounting, Egypt.
3. Al-Janabi, A. S. H., Almado, A. A. G., Mhaibes, H. A., & Flayyih, H. H. (2024). THE ROLE OF STRATEGIC AGILITY IN PROMOTING ORGANIZATIONAL EXCELLENCE: A DESCRIPTIVE ANALYTICAL STUDY. Corporate and Business Strategy Review, 5(2), 129–138. https://doi.org/10.22495/cbsrv5i2art11
4. Al-Janabi, A. S. H., Hussein, S. A., Mhaibes, H. A., & Flayyih, H. H. (2024). THE ROLE OF ENTREPRENEURIAL LEADERSHIP STRATEGY IN PROMOTING ORGANIZATIONAL SUSTAINABILITY: A DESCRIPTIVE AND ANALYTICAL STUDY. Corporate and Business Strategy Review, 5(3), 62–71. https://doi.org/10.22495/cbsrv5i3art6
5. Al-Jawhar, Karima Ali Kazim and Ahmed Jassim Hamoudi (2015). Information Technology Governance Procedures - A Proposed Model in Light of the Objectives of the COBIT Framework -, Journal of Administration and Economics, Al-Mustansiriya University, Issue 102, 2015.
6. Al-Shammari, Nahla A. T. (2021). Integration between the COBIT framework and the balanced scorecard to evaluate the performance of information technology management in business organizations - a proposed model, unpublished doctoral thesis, University of Karbala, College of Administration and Economics, Karbala-Iraq.
7. Al-Shammari, Nahla Abis Talal and Salah Mahdi Al-Kawaz (2022). Integrating the updated COBIT framework and the balanced scorecard to achieve strategic performance evaluation, Al-Warith Scientific Journal, Volume 4, Issue 9.
8. Al-Taee, S. H. H., & Flayyih, H. H. (2023). IMPACT OF THE ELECTRONIC INTERNAL AUDITING BASED ON IT GOVERNANCE TO REDUCE AUDITING RISK. Corporate Governance and Organizational Behavior Review, 7(1), 94–100. https://doi.org/10.22495/cgobrv7i1p9
9. Al-Taie, Hiba A. H. (2021). Reducing information technology risks according to COBIT5 and its impact on the quality of internal auditing, published master's thesis, Al-Qadisiyah University - College of Administration and Economics, Al-Qadisiyah - Iraq.
10. Al-Tamimi, Amal Muhammad Salman and Dhaher Mohsen Al-Tamimi (2021) Information Technology Governance and its Impact on Enhancing the Efficiency of Internal Control - An Applied Research in the General Company for the Distribution of Petroleum Products, Al-Warith Scientific Journal, Volume 8, Issue 3, 2021.
11. Al-Tamimi, Z. M. M. (2021). The impact of information technology governance on enhancing the efficiency and effectiveness of internal control - an analytical study in the General Company for the Distribution of Oil Products, unpublished master's thesis, University of Karbala, College of Administration and Economics, Karbala-Iraq.
12. Al-Tatar, M. M. (2015). The role of computerized accounting information systems on the quality of the outputs of the accounting system of cooperative insurance companies, published master's thesis, Islamic University, College of Commerce, Gaza-Palestine.
13. Alyaseri, N. H. A., Salman, M. D., Maseer, R. W., Hussein, E. K., Subhi, K. A., Alwan, S. A., zwaid, J. G., Aned, A. M., Jawad, K. K., Flayyih, H. H., Bachache, N. K., & Abed, R. A. (2023). EXPLORING THE MODELING OF SOCIO-TECHNICAL SYSTEMS IN THE FIELDS OF SPORT, ENGINEERING AND ECONOMICS. Revista Iberoamericana de Psicologia Del Ejercicio y El Deporte, 18(3), 338–341.

14. Al-Zubaidi, Z. R. M. (2019). Evaluation of information technology according to COBIT5 and its impact on the quality of internal auditing, unpublished master's thesis, University of Karbala, College of Administration and Economics, Karbala-Iraq.

15. Haddad, Hussam Bassem Y. (2013). The level of IT governance and its impact on the financial performance of banks operating in Jordan/A field study using the objectives of information control and related technology COBIT5, published master's thesis, College of Graduate Studies and Scientific Research, Zarqa University, Jordan.

16. Hadi, A. H., Abdulhameed, G. R., Malik, Y. S., & Flayyih, H. H. (2023). THE INFLUENCE OF INFORMATION TECHNOLOGY (IT) ON FIRM PROFITABILITY AND STOCK RETURNS. Eastern-European Journal of Enterprise Technologies, 4(13(124)), 87–93. https://doi.org/10.15587/1729-4061.2023.286212

17. Haouam, D. (2020). IT governance impact on financial reporting quality using COBIT framework. Global Journal of Computer Sciences: Theory and Research, 10(1), 1–10.

18. Hasan, M. F., Hadi, M. R., Flayyih, H. H., & Al-Obaidi, W. K. O. (2023). A Comprehensive Review of Financial Frictions: Causes, Consequences, and Policy Implications. Ishtar Journal of Economics and Business Studies, 4(2), 1–13.

19. Issa, Samir Kamel and Shehata Al-Sayed Shehata (2013). Accounting Information Systems in the Information Technology Environment - An Introduction to Systems Analysis and Design, Dar Al-Taalim Al-Jami'i, Egypt.

20. Karam, Mohsen Hashim and Asaad Muhammad Ali (2022). The Role of Internal Audit Practices in Reducing the Risks of Computerized Accounting Information Systems and Their Impact on Strategic Decisions "A Survey Study," Journal of the College of Administration and Economics / University of Karbala, Volume 11, Issue 41.

21. Khalaf, A. N. (2019). The impact of IT governance according to the COBIT framework on the quality of internal auditing in the Iraqi environment, published master's thesis, Tikrit University - College of Administration and Economics, Salahuddin - Iraq.

22. Rabea'Hadi, M., Hasan, M. F., Flayyih, H. H., & Hussein, M. K. (2023). Green banking: A literature review on profitability and sustainability implications. Ishtar Journal of Economics and Business Studies, 4(2), 1–6.

23. Salman, M. D., Alwan, S. A., Alyaseri, N. H. A., Subhi, K. A., Hussein, E. K., Sharaf, H. K., Bachache, N. K., Jawad, K. K., Flayyih, H. H., Abed, R. A., zwaid, J. G., & Abdulrasool, T. S. (2023). THE IMPACT OF ENGINEERING ANXIETY ON STUDENTS: A COMPREHENSIVE STUDY IN THE FIELDS OF SPORT, ECONOMICS, AND TEACHING METHODS. Revista Iberoamericana de Psicologia Del Ejercicio y El Deporte, 18(3), 326–329.

24. Shahata, Shahata Al-Sayed and Hiba Allah Abdul Salam Badawi (2022). A proposed program for reviewing digital and encrypted assets classified as intangible assets, the fifth scientific conference of the Department of Accounting and Auditing Challenges and prospects of the accounting and auditing profession in the twenty-first century (March 10-11, 2022), Faculty of Commerce - Alexandria University.

25. Van Grembergen, W., & De Haes, S. (2009). Enterprise governance of information technology: achieving strategic alignment and value. Springer Publishing Company, Incorporated.

26. Zuhairi, M. F. (2015). Risks of electronic accounting information systems security and strategies to confront them - a descriptive study in Syrian banks, Tishreen University - Faculty of Economics, Syria.