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Enhancing Risk Management by Using Strategic Auditing: A study of Iraqi Banks

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Today, local and international banks face increasing risks from handling diverse transactions which may even include money laundering. There is an urgent need to enhance functional risk management so banks can take necessary measures to reduce potential risks. Audits are strategic tools that help reduce the potential exposure to risks. This research focuses on the strategic role of audits in risk management through a study and analysis of several Iraqi banks in the period of 2010–2015. The data used in this research includes information disclosed by government agencies and auditors' reports. This research identifies the strategic plans for two representative banks, revealing their policies and strategic decisions. It evaluates the results of the banks' financial performances, examining both the external and internal environments. Strategies are analysed and evaluated using strengths, weaknesses, opportunities, and threats (SWOT) analysis. The study concludes that strategic audits play an important role in banks' risk management to maximise companies' value.

Keywords: *Iraqi private banks, Strategic auditing, Risk management.*

Introduction

Every economic unit has a vision, a mission, and an aim with the intention to achieve its objectives. The board of directors establishes strategic and operational plans and the executive managers set policies for actions by the staff to achieve those plans. There are many risks that limit or impede the ability of an economic unit to achieve its objectives.

Today, many firms shave risk management departments to provide appropriate information to the firm to anticipate potential risks.

Research Problem

The problem of this research is the lack of interest in the strategic audit function, which would help economic units anticipate potential risks, and thereby, strengthen the work of the risk management department.

Research Importance

The adoption of a strategic audit function enhances a firm's risk management function, allowing it to anticipate potential risks and achieve the firm's objectives. This is important to many firms, especially banks, which are the cornerstone of economic prosperity.

Research Goals

The research aims to achieve the following objectives:

A. Enhancing and strengthening the risk management function with appropriate information to reduce and minimize potential risks.
B. Finding appropriate mechanisms to improve the future prospects of potential risks to economic units.

Research Hypothesis

This research is based on the premise that strategic auditing is an appropriate way to improve future expectations regarding potential risks to economic units.

Research Methodology

This research relies on a descriptive approach based on data collection, tabulation, analysis, and interpretation. This approach is a comprehensive analysis of the problem, followed by an interpretation of the influential variables relationships and their effects on the firm's expected results.

Strategic Audits

Strategic auditing plays a significant role in strengthening management. It provides information needed for managers to make decisions. Auditing ensures economic vigilance to achieve strategic objectives within an environment full of variables. Strategic auditing has

been defined as examining the strategy of an economic unit in transitional times or difficult and critical times as a means of verifying strategic business activities (Suncourt, 2014). Wheel and Hunger (2004) define the strategic audit as a tool to diagnose problems facing economic units in all fields to find appropriate solutions. The strategic auditor must be familiar with the conditions surrounding the economic unit, whether internal or external, to improve the current situation by addressing the potential risks of the economic unit (Bell et al., 1977). For example, strategic audits led the U.S. government to be more efficacious through improving government policy, creating many jobs, and developing official government services. A strategic audit helped to highlight the importance of growing the U.S. economy and increasing government transparency. Audits are seen as the key to successfully achieving the different goals of the U.S. government goals (Kent, Potok, and Wilmer, 2018).

Importance of the Strategic Audit

Strategic auditing is important for its contribution to discovering and reducing business risks that can affect an economic unit. In addition, it can improve the broad strategic direction in decision-making and the determination of appropriate regulatory measures for an organisation as a whole (Bell et al., 1977). Stockholders can get assurance about their investments when a strategic audit is applied. It can also assist in eliminating the ambiguity that results from the variables of the environment. Moreover, a strategic audit can help to develop future auditing procedures by providing relevant information about the entity (Pushkin, 2003).

Levels of Strategic Audit

The levels of strategic audits differ from one economic unit to another, according to the levels and stages of the strategic plans assigned to the unit. The levels can be broadly classified into the following stages as shown in Sections 2.2.1 through 2.2.3 (Murad, 2015).

Economic Unity

The strategic audit is concerned with the highest level of economic unity. It focuses on the extent of economic unity in the mission, a unit's distinguishing characteristics, and the evaluation of the units in terms of their cooperation and participation.

Business Unit Level

At the business unit level, strategic auditing focuses on the competitive environment of opportunities and threats by addressing the products and services offered by the economic units and looking at current and potential customers. Furthermore, it also focuses on planned

segments by attempting to create new opportunities with suppliers and to displaying economic unity to both customers and suppliers.

Activity Level

The focus of the strategic audit at this level is directed to the main activities carried out by the economic units as well as the activities that identify that the units' significant contributions to achieving the message of economic unity. Also, it focuses on the internal environment by identifying the strengths and weaknesses of various levels of management by identifying cooperation or conflict between them (Rashid and Jalab, 2008).

Reasons for Conducting a Strategic Audit

Strategic auditing is usually used when one or more of the following reasons exist:
1. The current strategy fails to achieve the expected results.
2. There are dramatic changes in the surrounding business environment.
3. A department desires to take preventive action against potential events (Schmidt, 2007).

Tools of Strategic Auditing

The tools of the strategic audit vary according to the nature of the economic units and their activities. Some of the important tools are described in Sections 2.4.1 through to 2.4.7.

Resource Analysis

The objective of the economic units is to achieve competitive advantages in such a way to enable it to continue to acquire various tangible and intangible resources including financial, human, equipment, and machine.

Value Chain Analysis

A value chain analysis examines the basic activities and supporting activities in an economic unit and reports on the relationships between these activities and their impact on its competitive strength. This helps to exclude activities that do not add value to the economic unit (Constant, 2010).

Core Competence Analysis

The objective of an administration is to focus on the competencies that lead to competitive advantages such as product or service quality, flexibility, and innovation. A basic analysis of competencies helps determine the strategic capabilities of companies.

Portfolio Analysis

A portfolio analysis looks at the budget and investments of the business unit. Most large companies contain several units and have operations in more than one market. It is important to ensure that the business portfolio is strong and that the units receive management and investment attention.

SWOT Analysis

The analysis of strengths, weaknesses, opportunities, and threats(SWOT) is a valuable tool in an audit of the overall strategic position of a company and its business environment. Figure 1 portrays the SWOT analysis of the two banks. (Davies, 1998).

Balanced Scorecard Analysis

The balanced scorecard method focuses on value engines such as customer service, financial performance, learning and growth, and internal business efficiency. The analysis takes the form of a series of matrices. Performance indicators are set for production processes and performance improvement through gaining a deep understanding of causes and effects and non-financial measures. Companies record and analyse these matrices to help them achieve strategic goals. The matrices connect the four perspectives (finance, customers, learning and growth, and internal processes) according to the relationship between cause and effect. The company's vision becomes a strategy for achieving its objectives.

Economic Value Added Analysis

Economic value added is defined as an accounting measure of a unit's current operating performance. It represents the residual income after investors receive the minimum return required to compensate them for the risks they face in investing their money in the unit.

The Stages of a Strategic Audit

There are three stages of strategic audit as described in Sections 2.5.1 through to 2.5.3.

Step 1: Diagnosis

(1) Diagnosis of basic documents.
Reviewing the strategic plan, the operations plan, and the organisational structure are the most important policies for resource pooling and performance measurement.
(2) Reviewing the functions (marketing, finance, operations, and human resources) using benchmarking.

(3) Accurately understanding the basic rules, responsibilities, relationships, decision-making processes, decision-makers, relationships between managers and subordinates, capital management, information management, and technology style.
(4) Identifying strategic applications (structure, systems, and processes) in the organisation and the relationship to the overall strategy.
(5) Identifying the internal perspectives of management. This can be done in two steps:

a) A survey of the higher and middle administrations to see if they are in line with the firm's strategy

b) A metric review of selected customer models and external relationships of the organisation.

(6) Identifying effective strategic features, formulating hypotheses, addressing existing problems, and identifying opportunities for improvement.

Step 2: Center Analysis

(1) Testing the hypotheses designed to address problems and opportunities for improvement, and identifying relationships affecting the strategic systems.
(2) Formulating conclusions on the vulnerability of the formulation and implementation of the strategy and the level of interaction between them.

Step 3: Recommendations

Recommendations can include the following: developing options for problem-solving and capitalizing on opportunities and developing recommendations for integration, adoption of benchmarks, and adoption of a time unit as the basis for the differentiation between strategic outcomes (Janabi, 2008).

Risk Management

Risk exists everywhere. Every day we face risk in all areas of our life. The banking industry has experienced several developments in financial innovation, technological progress, and the liberalization of financial markets. This has led to increased competition between financial institutes, as well as increased risks that threaten their existence and continuity. With increased and diversified risks, it is necessary for financial institutions and banks to focus on managing and minimizing risks, by creating new financial methods and techniques. Risk management is considered an important science in the field of project management because it ensures the identification and measurement of a unit's risks, whether industrial, commercial, or financial. Managing risks differs from one entity to another according to the nature and privacy level of the field. In the field of banking, risk management includes a range of methods and strategies that are commensurate with the nature of the risks faced by the

banking sector.

Risk management is a basis for business growth. By supporting the firm's purposes and values, it helps develop its sustainability and strength. For example, Bank of America has a Risk Management Subsection to reduce environmental and social risks under a policy to make financial lives better for all their employees, shareholders, clients, and the community (Bank of America, 2017).

Risk management is the domain that works to prevent risks and minimize losses when they occur. It works to eliminate a recurrence of risk by examining the causes of each risk to avoid them in the future. The management of risk extends to the necessary funds to compensate investments or economic projects for losses that occur to avoid stopping a project in production. When managing a business project or studying a bank's investments, studying risks and auditing their costs has become an important task. Risk management is undoubtedly a very serious aspect for Iraqi banks because most Iraqi banks do not have any risk department or responsible person with this very sensitive task. Economic units and banks face the general risks of the banking business in Iraq, such as the very high political risks and risk of rapid change in economic circumstance (fluctuations of interest rate, exchange rate, etc.)(Al-Sahrawardee, 2015) (Banks et al., 2007).

The aim of risk management is to put in place the most appropriate policy to protect against expected losses at the lowest cost and in a timely manner. The function of risk management aims to stabilise ***profits and losses*** by reducing risks to a minimum range. It also aims for ***continuity of growth*** (Heffernan, 2005) and to ***maximise bank value,*** which is the ultimate objective for banks or any organisation. A department of risk management performs a comprehensive and detailed examination and an analysis of each type of risk that arise using five basic steps: (1) definition of risk, (2) risk analysis, (3) risk assessment, (4) risk identification, and (5) follow-up and periodic monitoring of the risk (Abdulmoneim, et al. 2008).

Financial management is important to the effectiveness of the banks' activities to achieve its objectives. This can increase the value of the bank (Ghanyah, 2015). The importance of risk management lies in the following six points (Wheelen and Hunger, 2004):
(1) Maintaining existing assets to protect the interests of the depositors, creditors, and investors.
(2) Monitoring and controlling risks to activities.
(3) Identifying the remedy for each type of the risk.
(4) Eliminating or reducing losses to a minimum and handling loss by converting it to a third party or controlling it immediately.
(5) Preparing studies before a loss or after it occurs to prevent a recurrence.

(6) Protecting the bank by promoting trust between the bank and depositors, creditors, and investors—in other words, protecting the bank's ability to generate or create profits despite any losses that would lead to a reduction in profits or failure to achieve them.

The reason for the existence of risk management is to find opportunities and eliminate weaknesses. It imposes banks to look at events or weaknesses in terms of its objectives. Al-Sahrawardee states that "it also makes all institutions of finance and banks aware of its vulnerabilities and pushes it to do something about them" (, 2015).

Defining Risk

There are several definitions of risk. Heffernan (2005) stated, "risk is defined as the volatility or standard deviation (the square root of the variance) of net cash flows of the firm, or, if the company is very large, a unit within it".Gallati (2003) defined risk as "a condition in which there exists a possibility of deviation from a desired outcome that is expected or hoped for". Jeager et al. (2001) defined risk as "a situation or event in which something of human value (including humans themselves) has been put at stake and where the outcome is uncertain". Klinke and Renn(2002) define risk "as the possibility that human actions or events lead to consequences that harm aspects of things that human beings value". Aven (2010) said that it is also defined by expected values, and by the combination of eventualities and results. According to Crouhy et al. (2006), bank risk is related to an unexpected and sudden increase in costs or new kinds of expenditures that cause losses to a bank's reserves. Risk is different from aspect to aspect. Many define it by the possibility of loss or threats to the financial institution. Others deal with errors or the possibility of making mistakes. Some definitions concentrate on public reactions, such as stakeholder interests or political embarrassment. The Canadian Institute of Chartered Accounts defines risk as "the possibility that one or more individuals or organisations will experience adverse consequences from an event or circumstance". Holton (2004) defines risk as exposure to a proposition of which one is uncertain. In his view, exposure and uncertainty are two essential components of risk. Risk exists only when uncertainty can have a potential adverse effect, which is a possibility of loss (Bessis, 2002). Other definitions include the restriction that risk is based on real-world events, including a combination of circumstances in the environment (Gallati, 2003).

Bank risk can also be categorized according to the way the bank deals with risk. Its actions help to identify the causes of the risk through studying internal and external factors which influence inside and outside the bank. In addition, it will help to identify their effects on the operation and success of the bank (Al-Sahrawardee, 2015). The reason for managing risk is to reduce the chance of default and to reduce the cost of financial distress (Crouhy et. al., 2006).

Characteristics of Bank Risk Management

In general, risk management is characterized by a range of characteristics as listed below:
(1) The majority of risks that banks are exposed to are financial risks, such as bankruptcy, or money laundering.
(2) Financial risks can vary, depending on the field of the specialized institution. Financial institutions commonly face three important types: market risks, credit risks, and liquidity risks.
(3) Risk management has a predictive ability, especially in the scope of identifying losses. It seeks the optimal choice to eliminate a loss or to reduce it as much as possible.
(4) Risk management finds solutions for financial institutions in facing and dealing with risks.
(5) A bank's activities facing risks will reflect on its rights and obligations positively or negatively (Crouhy et al., 2006). There is a correlation between risk management and other functions of a banking system, such as monitoring activities, and managing assets and liabilities.

Sources and Types of Risk

Business environments are exposed to many types of risks. Some have direct effects, and others have indirect effects. Risk comes from different areas, sometimes from an unexpected source, such as changing business environments, political deterioration, the economy, human error, employee mistakes, reputation, financial crimes, IT risks, or technology risks. In addition, we can categorise risks according to the cause of the risk. In general, banking risk can be classified into four major types: financial risks, operational risks, business risks, and events risks. Each of these major risks also includes serious sub-risks. Merna and Al-Thany (2008) mentioned several types of risks, such as market risk, interest-rate risk, equity price risk, exchange risk, commodity price risk, credit risk, credit spread risk, liquidity risk, operational risk, legal and regulatory risk, strategic risk, country risk, funding risk, payments risk, and capital or gearing risk. Moreddu (2000) mentioned ecological risks and institutional risksas well. A financial institution should recognise the root of each risk to avoid it in the future. Studying the sources of risk from internal and external factors will help economic units, banks, or any financial institution to understand the effects on operation and promote success.

Risk category

Whether the source of risk is the market's movement or borrowers' defaults on payment obligations, risk can be one of many types as listed below.

Financial risks

Credit risk is the most famous type of financial risk. Important in banking, credit risk can be defined as the risk of "defaulting on payment obligations" (Bessis, 2006). The components of credit risk consist of several types of risks: ***default risk*** is the borrowers' failure to fulfill their payment obligations, including bankruptcies and restructuring. ***Migration risk*** is a change in value**.** ***Exposure risk*** is risk from future events that may cause the default of loan repayments. ***Recovery risk*** refers to the uncertainty that arises at the time of default. ***Spread risk*** is "credit risk as viewed by the market and applies to capital market instruments, typically to bonds. Spread risk is also related to uncertainty and it also explains the spread between the risk yield of bonds and the risk-free rate" (Bessis, 2006).

Liquidity Risk

Chrouhy, et al. (2006) and Bessis (2010) mention that liquidity risk consists of two components: funding liquidity risks and assets liquidity risks. Both are related to liquidity risk. Funding liquidity risk depends on the funding policy of the bank or firm and the ability of the bank or firm to raise cash to meet its obligations, to meet the requirements of counterparties, and to supply the withdrawals of depositors. Asset liquidity risks come from alternate funding sources. Liquid assets should be mature in the short-term because market prices are more volatile in the longterm, exposing the firm to losses if sold. Therefore, banks should estimate the time when they would need assets to avoid asset liquidity risk. Also, liquidity risk includes the bank's ability to be ready to meet its funding obligations when demanded (Hanmanth and Shivaji, 2014).

Interest-Rate Risk

Because an interest rate is the price of money, it is a type of price risk. It is the opportunity cost of holding money. Heffernan (2005) Interest rate refers to the difference between the time of rate changes and cash flow. Interest-rate risk comes from the bank products (Comptroller's Handbook, 2012).

Foreign Exchange Risk

This type of risk affects the value of a bank's assets and liabilities because of changes in the value of foreign currencies (Hanmanth and Shivaji, 2014).

Non-financial risk: includes the following: strategic risk, which is the result of a shift in the political environment, a shift in the economy, new government economic policies, or human risk operational risk, which comes from processing and system errors or failures in compliance with different regulations; human risk arising from unintentional errors or neglect

by employees, reputation risk, which is important to banks, and country risk arising from events such as, crises, wars, or other uncertain events. Country risks may make it impossible to transfer currency from one country to another because of legal restrictions imposed by the government (Hanmanth and Shivaji, 2014; Bessis, 2006).

Risk control Strategies

There are four main strategies that most banks follow to protect their activities against any losses and reduce risk, as listed below:

Risk avoidance, it helps banks to eliminating the source of the risks which causes a threat to the bank through avoiding all business activities have high–risks (Gestel and Bart, 2009)
Risk reduction this type means how could the bank deal with a risk after its occurrence. In this case, the manager has several choices to reduce risk such asthe prevention, diversification, and loss reduction (Borghesi and Gaudenzi, 2003; Cade, 1999; Merna and Al-Thany, 2008).
Risk transfer is the third type of strategy that can be shifted to the third party such as the insurance company or financial institution (Gestal and Baesens).
Risk retention: because the risk is more easily accepted when it is well diversified, the firm makes investments in various sectors and countries. It is unlikely there will behave high losses in all economic sectors and all countries at the same time.

What is the Role of the Audit Function?

The risk management process supports better risk governance. The internal auditor plays a key role, providing the firm with assurances regarding the effectiveness of its risk management. The internal auditor reports on whether the main business risks are being managed and the internal framework and risk management processes are operating effectively (Florea, 2016).

The audit function provides an independent evaluation of “implementation of the bank's risk management”, to minimize legal and regulatory requirements. For instance, internal audit groups use regulatory guidelines to review the risk management process in general. This means reviewing documentation is adequate and effective. This will lead to the integrity and safety of the risk management system, which is “the organisation of the risk control unit, the integration of risk measures into daily risk management, and so on”. Also, internal auditors examine “the integrity of the management information system and the independence, accuracy, and completeness of position data”. After assessing for compliance with domestic regulatory requirements, the main objective of auditing should be to assess the model and

conceptual safety "of the risk measures (including the methodologies associated with stress testing)".

The internal auditor verifies the accuracy of methods and models to ensure their integrity, this is done through the back-testing process. In addition, the audit verifies the components of the risk management information system and assures the design and conceptual integrity of the financial rate database, including the parameters that are entered into the market value for risk (VaR) and credit VaR analytic engines. Examining documents relating to compliance with qualitative and quantitative standards is another audit function (Crouhy et. al., 2006).

Principles of Risk Management

There are several important principles. Each bank must have a risk management committee; this committee should take all principles into account that will help the bank or financial institution to hedge against risks. In order to function well, especially in auditing strategy, we clarify the essential principles as listed below (Alamiri and Alimam, 2012):

1- Each bank or economic unit should have an independent committee to prepare the general policy. The risk management team, as a specialized administration, however, should implement the policies and measure and monitor risks periodically.
2- There must be an assigned risk officer with a good background in banking.
3- The risk management team or risk officer should develop a specific risk measurement system and controls to determine the level of each risk.
4- A fundamental principle for measuring risk and profitability is evaluating assets and investments.
5- New, modern information systems for risk management and appropriate safety controls should be employed.
6- There is a need for independent internal auditing units in the bank directly reporting to the border of directors.
7- The board of directors should adopt a risk management strategy and encourage employees to accept and face risk rationally within the framework of the policies to avoid risks that are difficult to assess.
8- There should be a policy of security control for all major information systems to maintain information security and safety.
9- Finally, an emergency plan with preventive measurements against crises should be approved by the bank administration.

Determining the Effect of a Strategic Audit on Risk Management

This study was based on a SWOT analysis and financial analysis of the data extracted from the annual reports of two representative banks in Iraq. The study focuses on the two Iraqi

private banks in a five-year period between 2010 to 2015. The data was extracted from the published annual reports when analysing the indicators of those banks. Table 1 depicts an overview of the Commercial Bank of Iraq and the *Dar Es-Salaam Investment Bank*. Both banks are almost in the same size in terms of the number of branches. Furthermore, both banks have not been established for longer than 25 years.

Overview of the Two Banks

Table 1: Summary of the Cases in the Study

Name of the Bank	**Commercial Bank of Iraq**
Year of established	02-11-1992
Capital when establishment	66, 000,000,000 Iraqi Dinar (ID)
Branches	10
Mission	To create an unrival ability to meet customer needs, provide fulfillment and development the staff and deliver outstanding shareholder value
Objectives	Maximise shareholder value on a sustainable basis Maintain the highest international standards of corporate governance and regulatory compliance as well as solid capital adequacy and liquidity ratios Entrench a disciplined risk and cost management culture Optimize staff development through business-driven training and profit related incentive
Dar Es-Salaam Investment Bank	
Year of establishment	7-12-1998
Capital when established	75,000,000,000 Iraqi Dinar (ID)
Branches	11
Mission	To be a leading local and global investment bank with strong and profitable private clients
Objectives	Providing the best quality products and excellence in banking services to customers and maximising owner equity. Providing the best services dealing with the Iraqi Stock Exchange

Source: Prepared by the researchers based on data from annual reports and the Iraqi Stock Exchange. http://www.isx-iq.net/isxportal/portal/companyGuideList.html

Strength, Weakness, Opportunities, and Threats (SWOT) Analysis

Table 2: Portrays the SWOT analysis for both banks.

Table 2: SWOT Analysis					
Sequence	**Axes according to SWOT Analysis**	**Commercial Bank of Iraq**		**Dar Es-Salaam Investment Bank**	
		Strength	Weakness	Strength	Weakness
	Bank legacy	×		×	
	Bank reputation	×		×	
3.	Accounting system used	×			×
4.	Hedging procedures against bank risks	×		×	
5.	Banking services provided	×			×
6.	Technology used in service delivery	×			×
7.	Banking coordination	×			×
8.	Potential risks		×		×
9.	Branch distribution		×		×
Axes based on SWOT Analysis		Opportunities	Threats	Opportunities	Threats
10.	Social, cultural, and demographic factors	×		×	
11.	Level of banking sector	×			×
12.	Conflicts of interest		×		×
13.	Domestic production structure		×		×
14.	Crisis and recession		×		×
15.	Political stability		×		×
16.	Competition	×		×	

Source: Prepared by the researchers based on data from annual reports and the Iraqi Stock Exchange. http://www.isx-iq.net/isxportal/portal/companyGuideList.html

(1) Based on SWOT analysis, the main strengths, weaknesses, opportunities, and threats are listed below.

The Commercial Bank of Iraq and the Dar Es-Salaam Investment Bank are the leading private banks in Iraq, compared with other newly established local banks. The Commercial Bank of Iraq is a family owned business. Dar Es-Salaam Bank uses a system from Orion Finance, Ltd; this is different from the Commercial Bank of Iraq. Both of the banks using Oracle and UNIX system. The system operates using an Oracle database system and the standard operating system (UNIX). It provides many high-quality services to the bank's customers to enable them to complete their banking transactions through any branch of the bank, using an integrated communications network and ATMs. Customers can pay bills from the place of service, hotels, restaurants, and shops and have access to banking through electronic calculators and smartphones.

Both banks have a special risk management department to address potential risks. Weaknesses in both banks are due to a lack of coordination between the banking sector and the rest of the business sectors. Both banks have a small number of branches in comparison with the population. For instance, each bank covers about 46,632 people, compared with the banking density required by law for each bank to cover 10,000 people. This reflects a weakness in both banks.

The banking sector is undergoing structural and functional changes, mainly due to the adaptation of advanced technologies and increased competition for customers; this is an opportunity for Dar Es-Salaam Investment Bank to utilize a high-technology banking system. The most important threat facing the banks is the conflicting objectives between the government and the banks.

Structural weaknesses, such as a fragmented industry structure, restrictions on capital availability and deployment, lack of institutional support infrastructure, restrictive labor laws, weak corporate governance, political pressure, and ineffective regulations can have a negative effect on both banks. Recession is a major threat to the country's financial system, in general, and to both banks, particularly. Political stability and non-intervention of politics in the economy are one of the most crucial factors affecting the economy, in general, and banks in particular.

There is some lack of support from the current legal regulations of banking. Some of the laws related to the activity of the banking system contribute significantly to reducing the contribution of the banking sector to the development process and make its activity limited to providing banking and routine banking services. Therefore, these two banks provide 15 out of the 51 services in accordance with the provision of Iraqi Banking Law No. 94 in 2004.

There are about 5.6 trillion dinars in some branches operating in the Kurdistan Region that cannot be withdrawn due to "the fiscal crisis suffered by the region" (http://www.cbi.iq).

Competition from non-bank financial corporations, such as insurance companies and mutual fund companies, can threaten the business of both banks.

Measuring the adequacy of capital

Using 2010 as the base year, the researchers measured and analysed the capital adequacy and the changes of capital during the years of the research. Table 3depicts the rate of change in capital.

Table 3: Capital Adequacy and Developments index

Years	2010	2011	2012	2013	2014	2015	Average change
Commercial Bank of Iraq							
Capital adequacy	57%	56%	41%	48%	76%	71%	58%
Minimum capital reserve	15%	15%	15%	15%	15%	15%	
Capital (in Billion ID)	66	100	150	150	250	250	172%
Change index		51%	127%	127%	278%	278%	
Dar Es-Salaam Investment Bank							
Capital adequacy	106%	66%	75%	139%	122%	127%	106%
Minimum capital reserve	15%	15%	15%	15%	15%	15%	
Capital (in Billion ID)	75	100	100	155	155	250	102%
Change index		33%	33%	106%	106%	233%	

Source: Prepared by the researchers based on data from annual reports and the Iraqi Stock Exchange. http://www.isx-iq.net/isxportal/portal/companyGuideList.html

For both banks, the following observations are made regarding capital adequacy and capital change. Both banks maintain a capital adequacy rate higher than that required by the Central Bank of Iraq, which is 15% as well as by the Basel decision, which is 8%. This indicates the following:

a. They maintain banking efficiency, which provides cash balances that enable them to cope with emergency conditions and uncertain market situations. Thus, liquidity risk is lower. This is a point of strength for both banks.
b. A weak point for both banks is the non-investment of cash and the resulting loss of additional opportunities to achieve higher returns.

Both banks maintain high capital because of the following:
a. Both maintain profitability.
b. Before 2013, shareholders and owners raised capital. Moreover, the share price in the stock market increased 4 times for the Commercial Bank of Iraq and 2.5 times for the Dar Es-Salaam Investment Bank during the study period. This is considered a point of strength for both banks.

Measuring Banking Efficiency Using the Return on Equity (ROE) Model

The ROE model was adopted as an assessment of the efficiency of the banks' profit and expense, using the indicators in Section 4.4.1 in the analysis.

The first contribution of this paper is to measure the risks associated with bank efficiency by examining the following indicators, as shown in Table 4.
a. Profit margin index (PM)
b. Asset benefit index (AU)
c. Equity multiplier index (EM)
d. Return on Equity (ROE)
e. Return on Assets index (ROA)

Table 4: Calculation of Efficiency Index Based on the ROE Model (First Contribution)

Commercial Bank of Iraq					
Years	PM%	AU%	ROA%	EM%	ROE%
2010	1.088%	5.9%	2.22%	2.159%	14%
2011	3.785%	0.7%	9.3%	1.830%	5.3%
2012	1.826%	2.4%	5.3%	2.049%	9.2%
2013	7.989%	0.3%	2.7%	1.703%	4.5%
2014	25.223%	0.08%	1.1%	1.579%	3.2%
2015	6.97%	0.78%	0.9%	1.434%	2.9%
Average	7.813%	1.693%	3.586%	1.792%	6.516%
Dar Es-Salaam Investment Bank					
Years	PM%	AU%	ROA%	EM%	ROE%
2010	1.769%	0.1%	8.1%	7.004%	1.6%
2011	3.522%	0.3%	2.8%	7.196%	9.8%
2012	30.915%	0.07%	2.1%	5.466%	12.7%
2013	39.738%	0.05%	2.8%	4.251%	9.7%
2014	75.353%	0.018%	6.2%	4.620%	6.4%
2015	20.187%	0.012%	5.9%	4.459%	5.9%
Average	28.580%	0.091%	4.65%	5.499%	7.683%

Source: Prepared by the researchers based on data from annual reports and the Iraqi Stock Exchange. Profit margin index: PM Asset benefit index: AU, Equity multiplier index: EM, Return on equity: ROE, Return on assets index: ROA http://www.isx-iq.net/isxportal/portal/companyGuideList.html.

The last column of Table 4 shows the banks' efficiency based on the return to equity index. The return of equity for the Commercial Bank of Iraq decreased during the years 2010 to 2015. This indicates that the bank had a decreasing ability to generate profit. Also, it indicates that the Commercial Bank of Iraq was managed with less efficiency. On the other hand, the return to equity for Dar Es-Salaam Investment Bank increased during the same years. This indicates that Dar Es-Salaam Investment Bank was more able to generate profits and thereby, had more efficient bank management than the Commercial Bank of Iraq.

The second contribution of this paper is to measure the risks associated with bank efficiency by using the following indicators:

a. Credit risk
b. Liquidity risk
c. Capital risk
d. Operational risk

Table 5 shows the value of these four indicators in 2010–2013 and their effect on banking efficiency.

Table 5: Calculation of Efficiency Index Based on the ROE Model (Second Contribution)

Commercial Bank of Iraq				
Years	Credit risk	Liquidity risk	Capital risk	Operational risk
2010	9%	39%	4.6%	40%
2011	42%	33%	5.4%	90%
2012	18.6%	38%	4.8%	200%
2013	11.7%	28%	5.8%	400%
2014	4.8%	26%	6.3%	590%
2015	6%	28%	6.9%	600%
Average	15.35%	32%	5.6%	320%
Dar Es-Salaam Investment Bank				
Years	Credit risk	Liquidity risk	Capital risk	Operations risk
2010	5%	8%	1.4%	290%
2011	2.5%	82%	1.3%	300%
2012	1.94%	76%	1.8%	200%
2013	6%	70%	2.3%	500%
2014	2.376%	52%	2.1%	290%
2015	2.6%	49%	1.9%	270%
Average	3.40%	56.16%	1.8%	308%

Source: Prepared by the researchers based on data from annual reports and the Iraqi Stock Exchange. http://www.isx-iq.net/isxportal/portal/companyGuideList.html

As the chart indicates, both banks tended to provide credit in proportion to the deposits received. This is considered a serious indicator for both banks. Also, the liquidity risk for Dar Al-Salaam Bank increases significantly, whereas the commercial Bank of Iraq Bank still maintains almost the same percentage.

Conclusion

(1) The implementation of strategic auditing by banks leads to the enhancement of the risk management function. It provides the necessary information about potential risks.

(2) The Commercial Bank of Iraq has much strength, namely, a good banking reputation and accounting systems that are used in accordance with modern technology along with the necessary banking coordination to provide a full range of services. However, adequate banking, According to Basel III, the capital adequacy ratio that banks must maintain should be a minimum 8%. This is because it measures the capital adequacy ratio a

bank's capital in relation to its risk, also, the non-proliferation of branches is one of its greatest weaknesses.

(3) There are many weaknesses evident in Dar Es-Salaam Investment Bank, including the accounting systems used, the technology used, the banking coordination, the number of banking services provided compared with the available banking services, and the non-proliferation of branches.

(4) Dar Es-Salaam Investment Bank has recently moved away from the field of investment and is focusing on providing regular banking services, because of the current situation and accompanying threats due to the security instability of Iraq.

(5) The decline in the market value of the stock for Dar Es-Salaam Investment Bank to below the nominal value is because of a lack of clarity in its economic vision and policies to unite and coordinate its monetary and financial policies. This represents a threat to banking in general.

Recommendations

(1) Encourage banks to conduct a strategic audit of their impact in strengthening the risk management function.

(2) Enhance the accounting systems used and advance technology for Dar Es-Salaam, which will contribute to the achievement of additional opportunities.

(3) Expand banking activity for both banks to include banks outside of Iraq, and make agreements with insurance companies to reduce expected risks.

(4) Invest surplus funds in foreign financial markets.

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