CAMELS Model and its Impact on the Evaluation of Banking Performance
A LITERATURE REVIEW

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Abstract

The study aimed at identifying the CAMELS model in evaluating the performance of banks and attempting to reveal the strengths and weaknesses that banks endure in order to reach at the level of raising the effectiveness and efficiency of the performance of banking work according to modern performance evaluation models. This is achieved by analyzing the previous study from (2010) until now, focusing on previous studies in the Arab world and Iraq. The CAMELS system is considered one of the most important classification systems used by the supervisory bodies in the world to assess the safety of the performance of banks. The study concluded that the use of the CAMELS model leads to shortening the inspection time by focusing on six main items and not dispersing efforts in examining items that are unnecessary or affecting the integrity of the financial position. It helps to implement the principle of transparency and disclosure and to make information available to market customers andthe public. In order to achieve the goal of comprehensive supervision with a high degree of efficiency, more openness should be made to global developments and follow-up, especially those related to the financial analysis of banks, especially specialized systems such as the CAMELS system or other global systems that lead to benefiting from the experiences of the world's countries in advanced banks. Therefore, work must be done to develop the main elements, and to introduce new equations and ratios that lead to enhancing the rates and ratios used in order to reach more accurate results about the elements used in the model.

Keywords: *Evaluation of Banking Performance; CAMELS Model; Assets Quality; Liquidity; Earnings; Management Quality; Sensitivity to Market Risk.*

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1.0. Introduction

Business organizations face great challenges and difficulties as a result of various reasons, some of which are due to internal and external environmental conditions, which lead to the occurrence of a type of crises that differ in their causes, levels and severity of impact according to the prevailing conditions, which forced many of these organizations to search for developing their performance and apply innovative methods to detect its weaknesses and strengths, aiming at re-evaluating the organization for itself and release its potential innovative capabilities. Banking institutions are considered one of the most sensitive organizations to these changes in view of their vulnerability to fluctuations in economic conditions and their repercussions on the efficiency and effectiveness of their performance (Saleh, 2006). The interest of financial institutions, especially banks classified under the CAMELS model, has increased in recent years, as it is one of the most important indicators of the financial performance of banks, it also provides important information to dealers in the financial markets. As a result, dealers in these markets determine their orientations with regard to investing in the shares of these banks or not, or abandoning the existing investment according to the degree of classification, since the components of the CAMELS classification express the two main factors that affect the market value of the common stock, namely, return and risk. Therefore, the effect of the classification should be greater than the impact of each of the rating factors individually, since the rating reflects all these factors together. So, a change in the rating, negatively or positively, is expected to be reflected on the prices of ordinary shares, negatively or positively as well (Al-Dahlaki, 2018).In light of the successive developments in the banking business, the safety and stability of the banking system depends on the success of banks in adopting sound and effective strategies and systems to manage their capital, management of various types of banking risks, and policies to improve the quality of assets in order to reduce the weights of their risks, and to develop accounting systems and practices of transparency and financial disclosure in line with what is imposed by international standards and agreements with the aim of enhancing capital adequacy in banks (Yahya, 2017).

2.0. Study Methodology

2.1. The Problem of the Study

Banks play an important role in financing economic development through their impact on the performance and effectiveness of deposit mobilization and other banking services. Thus, the financing of economic activity is affected, and therefore the performance of banks is considered as one of the important requirements for the growth and development of the national economy. The problem becomes clear by knowing how banks are evaluated using the CAMELS model, its suitability in evaluating banks, and whether it is possible for these criteria to be compatible with the financial services provided by banks.

2.2. The Importance of Study

The importance of this paper comes from the great influence of banks on the national economy and also to support the confidence of depositors and investors in banks that use modern and advanced systems for evaluation with the aim of revealing the strengths and weaknesses in the financial performance of banks through the use of the CAMELS model to achieve the goal of comprehensive control with a high degree of efficiency.

2.3. Purpose of the Study

This paper aims at identifying the CAMELS model in evaluating the performance of banks and trying to reveal the strengths and weaknesses that banks have in order to reach at the level of raising the effectiveness and efficiency of banking performance according to modern performance evaluation models.

2.4. Method

The study depended on the analytical descriptive approach, by reviewing the concept of the CAMELS model and the criteria constituting the model in addition to the levels of classification of the model, through the analysis of previous studies from the period of (2010) until now, with the aim of identifying the importance, advantages and disadvantages of the CAMELS model and its effects on evaluating banking performance.

3.0. Theoretical Framework

3.1. CAMELS Model Concept

In order to follow up the performance of banks and ensure the soundness of their financial position, the level of their performance and the financial results that they achieve are measured periodically, and there are many commissions that conduct this mission, such as central banks and accounting bodies, and each of them uses different models from each other in measurement methods, but these models share almost the same the results. The first country to use such models is the US, after the repeated collapse and bankruptcy that occurred to its banks, and the most famous of these models is the CAMELS performance evaluation model (Mohammed, 2007). The CAMELS system is considered one of the most important rating systems used by the supervisory bodies in the world to assess the soundness of banks. Its history dates back to November 1979 when it was first used by the American Federal Council for the examination of financial institutions, after which this system was approved by the Federal National Council for the management of banks credit NCUA in the USA in October 1987 (Milligan, 2002).

This model is used for the purpose of evaluating the financial performance of institutions and banks by examining the final accounts and financial statements on the basis of each component (de young et al., 2001). It represents a preventive dimension to the bank's financial position, as it senses the problems that the bank or financial institution may face if they continue with the existing administrative and financial policies, and therefore the supervisory authorities can issue appropriate directives before a sufficient period so that the financial institution is not exposed to the problem that was previously predicted (Rahim, 2014).

3.2. CAMELS Model Standards

3.2.1. Capital Adequacy:

Capital adequacy can be defined as the amount of capital at which a balance is achieved between the size of the capital and the risks that the bank expects. Technically, capital adequacy refers to the size or level of capital that can face risks and attract deposits, and thus the bank's profitability starts. The interest in the adequacy of banking capital has increased significantly until it has become one of the contemporary issues at the present time, especially after the rapid technological development. The interest in this issue reached its peak in the report of the Basel Committee on Banking Systems and Regulatory Practices issued in 1988, which focused on restoring the role of the importance of capital adequacy again and confirming the sufficiency of the bank as a cornerstone of banking work (Assaad, 2018).

3.2.2. Assets Quality:

The quality of assets is analyzed through the quality of the stock portfolio, which is measured through the index of the portfolio risk and the policy of debt abandonment, as well as the stock portfolio ranking system, which includes budget analysis and evaluation of the bank's policy in assessing the level of portfolio risk, and finally the fixed assets, where the quality of assets shows the level of the risks of loans, investments and fixed assets as well as off-balance sheet operations. Therefore, the bank is supposed to have the ability to define, measure and control risks, in order to assess the quality of assets, taking into account the level of provisions for untrustworthy debtors, and the quality of assets is classified according to the following (Yahya, 2017):

- The size and severity of non-performing assets in relation to the total capital.
- The size and trends of loan repayment periods that are past due, and the measures taken to reschedule them.
- Large credit concentrations and the risks of a single borrower or related borrowers.
- The size and management of employee loans.
- The level of provisions made to meet loan losses.

3.2.3. Management Quality:

The quality of management as one of the components of the CAMELS evaluation model, which reflects the ability of the board of directors and the bank's management to take the role entrusted to them, to identify, measure and control risks in order to ensure that the bank practices and manages its activities in a safe and sound manner in line with internal regulations and supervisory laws (Brochure of 2010). According to (Ferrouhi, 2014) and (Al-Taie & Ali, 2019), management depends on the level and quality of control and support for all the activities of the institution by the board of directors, management and the bank as well as the ability of the board to take a course in the planning process and respond to risks that may arise to change business and conditions, or initiating new activities or products, appropriate internal policies and controls, addressing risky operations, accuracy, timeliness, effectiveness of information management, appropriate risk control systems, the size of the bank and is considered a risk. Usually, all of them are measured according to qualitative indicators, but some quantitative indicators were used to measure the quality and efficiency of management, including the employment rate and efficiency of operations.

3.2.4. Earnings:

The low rate of these ratios can give an indication of the existence of problems in the earnings of banks and financial institutions, while the high rise in these ratios may reflect an investment policy in risky financial portfolios. There are several ratios that can assess the earnings of financial institutions, the most important of which are the return on assets, the return on equity, income and expenditure rates, and structural indicators (Ben Omar & Nassir, 2017).

3.2.5. Liquidity:

Liquidity is an indicator of the bank's ability to meet its current, expected and future obligations. When assessing the bank's liquidity, focus must be placed on the current level of liquidity as well as the future need for it. Liquidity management must ensure a sufficient level of liquidity to meet the various obligations in a timely manner, taking into account the mismatch in the field of exigibility between assets and liabilities in the entire banking sector or at the level of large-sized financial institutions (Al-Taie & Muhammad, 2013).

3.2.6. Sensitivity to Market Risk:

This indicator is linked to the sensitivity of banks related to interest rate risks and commodity price risks, so that financial analysts conduct an examination of banking operations that can produce large losses if prices go in an unexpected direction, such as using derivatives with very excessive expectations (Ball, 2012). Banks may be exposed to market risks, or what are called general or systemic risks, such as interest rates and the sensitivity of the bank’s net interest margin (the difference between the interest income that the bank obtains from its various assets and the interest expenses it pays on its various liabilities) to fluctuations in interest rates, exchange rate risks and fluctuations in foreign exchange centers as well as fluctuations in stock prices (Al-Dahlaki, 2018).

3.3. CAMELS Model Classification Levels

According to this model, the bank is subject to a single numerical classification for each of the six elements, where an assessment score is given to each element ranging between one and five, and the degree is one for the best while five is for the worst. Then there is a comprehensive assessment based on the individual assessment called the composite assessment where it integrates the results of the individual evaluation until the results of the general evaluation of the bank are obtained. If the bank obtains the classification No. (1), then this means that the bank is strong and its position is fundamentally sound according to all considerations. If the classification is No. (2), it is satisfactory, sound, stable and fundamentally compatible with legislative laws and regulations. But if the classification is No. (3) then it is moderate and faces some weaknesses and needs to focus and supervise in one or more of the six elements, where specific activities and activities are imposed.And if the bank obtained the classification No. (4), then the bank is weak, its practices are unsound, and its performance is marginal. However, if the bank gets the classification No. (5), then the bank is in a critical condition and its performance is unsatisfactory, and its practices are unsafe, and here the bank's failure is highly likely. By determining the degree of classification of the bank, the nature of the financial conditions and the supervisory follow-up and control mechanism that will be adopted by the Central Bank (Al-Imam, 2010) is determined. The table below shows the levels of classification of banks according to the CAMELS model:

Table (1) Banks Classification Levels according to the CAMELS Model

Estimation	Description
Classification 1	Strong (Excellent)
Classification 2	Satisfying (Very Good)
Classification 3	Reasonable (Good)
Classification 4	Marginal (Limitative)
Classification 5	Unsatisfying (Weak)

(Maimbo, 2000)

4.0. Literature Review

The study of (Al-Imam, 2010) and (Al-Moussawi, et al., 2018) concluded that there is a relationship between the results of the CAMELS classification system and the financial safety of banks as measured by financial performance indicators. The study of (Shakara, 2012) concluded that the importance of implementing the decisions of the Basel Committee and the CAMELS system in shedding light on the strengths and weaknesses of banking work systems, leading to directing attention towards them and achieving the goals of depositors, investors and shareholders alike, which contributes to increasing the efficiency of banking work locally and internationally. While the study of (Al-Taie and Muhammad, 2013) concluded that the CAMELS standard is one of the most important modern standards adopted in evaluating the performance of banks. According to this criterion, the performance of banks is classified in order to identify the strengths and shortcomings in performance and to take appropriate corrective measures to improve performance as one of the early warning systems for banking crises. The results of (Dhairb, 2015) study indicate that the CAMELS system works on conducting a comprehensive analysis of the bank's performance and a comparison with the industry level in the banking environment, which contributes to the formulation of tight policy and plans for management by focusing on the negative elements that need special attention. Whereas the study of (Yahya, 2017) aimed at assessing the financial performance of commercial banks through the application of the CAMELS system and its importance in determining the importance of bank inspection reports in clarifying the pros and cons and how to treat them as well as to identify how to link the indicators of the banking evaluation system in terms of quality and finance together. The study concluded that the follow-up reveals a complete analysis of the internal environment of the bank through the banking strengths and weaknesses, which helps to increase banking efficiency in managing assets and liabilities, in addition to the lack of the balance between earnings and liquidity, which would show the lack of competencies capable of exploiting skills to reach the best employment of the bank's capabilities. The study of (Abu Taloul, 2016) aimed to show the impact of the elements of using the CAMELS model of (capital adequacy, asset quality, management, return, liquidity, sensitivity to market risk) in evaluating and classifying the performance of commercial banks. It recommended the necessity of obligating the application of banks to review the performance level of their financial and banking operations through the continuous application of the elements of the American banking evaluation model as a whole, and to work to increase the level of efficiency of banks through the participation of regional and international conferences, and to conduct further studies related to the importance of the application of the American Bank Assessment Model (CAMELS) in commercial banks.

The study of (Yameen and El-Dahrawi, 2016) aimed to investigate the effect of CAMELS components on the credit risk component. The study indicates that the components of the model completely affect the credit risk component of banks, while when we examine the effect of each component of the model separately on credit risk, the results are as follows: There is an effect of credit adequacy, capital, asset quality, revenue quality and credit risk sensitive market risk. As for the elements of management quality and liquidity quality, they have no impact on credit risk. The study of (Al-Dahlaki, 2018) aimed to identify the elements of CAMELS classification to evaluate banking performance and analyze its impact on the market value of the common stock. The study concluded that the classification of CAMELS provides valuable information for stock markets and is a warning sign to investors and dealers in those markets about the rise and fall of the stock price. The CAMELS classification also plays an important role in evaluating banking performance, as it reflects the most important factors that are taken in evaluating the financial performance of banks.

5.0. Results and Discussion

In this sense, the most important advantages and disadvantages of the CAMELS model can be stated. The researchers agree with the study of (Yahya, 2017) and (Dhairb, 2015) about the advantages of the CAMELS banking evaluation system, as it helps classify banks according to a unified standard and standardize the style of writing reports, in addition to shortening the inspection time by focusing on six main items and not to distract efforts in inspecting items that are unnecessary or affecting the integrity of the financial position, and rely on digital assessment more than the structural method of writing reports, which reduces their size, and relying on a comprehensive classification of the banking system as a whole according to a unified approach. It helps to apply the principle of transparency, disclosure and availability of information to market customers and the public, and thus it becomes clear that the CAMELS model is a measure that allows comparing situations across countries (through indicators).However, there are flaws and criticisms of the CAMELS system, including that fixed weights were given to the elements that make up the standard, regardless of its relative importance, and this reduces the accuracy and efficiency of the standard in the analysis, and that this system divides banks into similar groups according to the size of assets, but there is a difference from one bank to another within the same group represented by the average values of the ratios used. Also, this system depends on measuring performance based on other banks similar to the group, and in the event of a structural change, the evaluation indicators are usually not changed when calculating the final rating scores (Creusot, 2001) and (Taj El-Din, 2020).Consequently, it becomes clear that the importance of the CAMELS system in evaluating banking performance lies in following the legislation issued by the competent government agencies and applying the laws and regulations in force in order to ensure the accuracy of the data contained in the periodic statements. Through this system, all the loopholes and defects in the work of banks are revealed, and this system relies on numbers more than the descriptive method, which leads to an increase in the credibility of the results (Kamel & Abdel Sattar, 2020) and (Cole & Gunther, 1998).Therefore, many issues and considerations related to capital, earnings, asset quality, and liquidity, which are related to these components, the most important of which are the level of risk in the market, as well as the risks of non-traditional activities, the strength of returns and their impact on unconventional elements, and what are the provisions made to cover expected losses and their adequacy in addition to the extent to which the bank needs additional capital for the purpose of strengthening the financial position to meet potential activities. The application of the CAMELS system leads to a development in profits as well as the quality of assets and liabilities, and that this system displays the results of periodic statements and financial reports in all transparency, as it helps investors, shareholders and dealers to identify the financial position of the bank clearly and accurately. In order to achieve the goal of comprehensive supervision with a high degree of efficiency, more openness should be made to global developments and follow-up, especially those related to the financial analysis of banks, especially specialized systems such as the CAMELS system or other global systems that lead to benefiting from the experiences of the world's countries in advanced banks. Therefore, work should be conducted to develop the main elements that make up the model for the purpose of reaching more accurate and effective indicators and elements in determining the image of the true situation of each element and what is its role in revealing the strengths and weaknesses in the bank’s performance. The insertion of new equations and ratios leads to strengthening the rates and ratios used for the purpose of reaching more accurate results about the elements used in the model.

6.0. Conclusion

Banks play an important role in financing economic development through their impact on the performance and effectiveness of deposit mobilization and other banking services, and thus influencing the financing of economic activity. Therefore, the performance of banks is one of the important requirements for the growth and development of the economy, and it is clear that the CAMELS system is characterized by technical, financial and administrative elements through which the performance of banks can be evaluated. Therefore, the activation of the basic components of the CAMELS system, which is characterized by the detection of strengths and weaknesses in each of the six levels of the system, leads to achieving benefit in dealing with problems and finding preventive and remedial solutions. This is achieved by documenting the causes of the problems faced by the bank and ways to address them through special reports, the aim of which is to increase the efficiency of management and accumulating experience, and thus reducing exposure to those problems in the future.

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المستخلص

هدفت الدراسة إلى التعرف على نموذج CAMELS في تقييم أداء المصارف ومحاولة الكشف عن نقاط القوة والضعف التي تعاني منها المصارف بهدف الوصول إلى رفع فاعلية وكفاءة أداء العمل المصرفي على وفق نماذج تقييم الأداء الحديثة. وذلك من خلال تحليل الدراسة السابقة من الفترة 2010 ولغاية الآن بالتركيز على الدراسات السابقة في الوطن العربي والعراق، ويعتبر نظام CAMELS من أهم أنظمة التصنيف المستخدمة من قبل الهيئات الرقابية في العالم لتقييم سلامة أداء المصارف، وتوصلت الدراسة إلى أن استخدام نموذج CAMELS يؤدي إلى اختصار زمن التفتيش بالتركيز على ستة بنود رئيسية وعدم تشتيت الجهود في تفتيش بنود غير ضرورية أو مؤثرة على سلامة الموقف المالي، ويساعد على تطبيق مبدأ الشفافية والإفصاح وإتاحة المعلومات لعملاء السوق والجمهور، ومن أجل تحقيق هدف الرقابة الشاملة بدرجة عالية من الكفاءة يجب بذل المزيد من الانفتاح على التطورات العالمية ومتابعتها وخصوصاً التي تتعلق بالتحليل المالي للمصارف وبالخصوص النظم المتخصصة مثل نظام CAMELS أو غيرها من الأنظمة العالمية والتي تؤدي إلى الاستفادة من خبرات دول العالم في المصارف المتطورة. ولذلك يجب العمل على تطوير العناصر الرئيسية، وادخال معادلات ونسب جديدة تؤدي إلى تعزيز المعدلات والنسب المستخدمة بغرض الوصول إلى نتائج أكثر دقة عن العناصر المستخدمة في النموذج.