Research Paper

Financial Performance of Commercial Banks in Jordan: Application of the CAMELS Model

Saleh Jawarneh *

* University of Miskolc, Department of Finance. Miskolc, Hungary. Correspondence: saleh1jaw@gmail.com

Abstract: The study aims to analyse and rank the financial performance of Jordanian commercial banks using the elements of the CAMELS model. The study relies on a sample of 12 Jordanian commercial banks listed on the Amman Stock Exchange during the period 2016–2020. The study used variables included in the CAMELS model, namely: capital adequacy, asset quality, management efficiency, profitability, liquidity, and sensitivity to market risks. The research results indicate that Jordanian commercial banks enjoy high Capital Adequacy Ratios that exceed the minimum required by the Central Bank of Jordan and the Basel Committee. Jordanian banks have a strong sensitivity to market risks; therefore, they can control market risks and face any risk to which they may be exposed as well as the variety of the securities invested in these banks. Jordanian commercial banks are also characterized by a good earning ability. On the other hand, Jordanian commercial banks have a weak asset quality, and they also maintain weak and insufficient liquidity ratios to meet any unforeseen needs. These banks also show weak management efficacy, and this rating reflects weak management in expense controls.

Keywords: CAMELS Model; financial performance; commercial banks; ranking; Jordanian banks

1. Introduction

The Jordanian Banking Industry is regulated by the Central Bank of Jordan (CBJ). The CBJ Act was passed in 1959 and the CBJ was established in 1964. The Jordanian government owns the entire capital of the Central Bank, which has been increased in stages from one million to eighteen million Jordanian dinars, and despite the government's ownership of its capital, the Central Bank enjoys, according to the provisions of the applicable law, an independent legal personality (Central Bank of Jordan, 2020). It is the only single institution that can issue and regulate banknotes and coins, as well as maintain and manage the Kingdom of Jordan's reserves of gold and foreign exchange in order to maintain monetary stability in the Kingdom.

The banking sector in Jordan is one of the important economic sectors that contributes to the gross domestic product (GDP) thereby increasing economic growth, improving stability, and enhancing employment. Moreover, the banking sector in Jordan is the main financing artery for the economy and one of the important sectors that contribute directly and indirectly to the creation of added value. This is in line with the general trend of recent studies that emphasize the significant positive role of financial intermediation in increasing economic growth rates and achieving sustainable development (Valeriu Paun, et al., 2019). According to the literature, banks are extensively connected to economic components, which in turn means that any financial shock would likely have a correlated impact on banks' balance sheets (Roncoroni, et al., 2019). So, it is necessary to evaluate and measure the strength of the banking industry so that Jordan's economy improves efficiently.

As part of the evaluation of each bank's performance to determine its contribution to business and economic development, the analysis of bank performance includes a collection of formal and informal data to help clients and sponsors set and achieve their goals. Banks are also expected to provide evidence of their credit operations and financial flows, as these operations affect the growth and economic development of a country (Brigit, 2013).

The CAMELS model is a rating method to assess a bank's overall health. It was first established in the United States in the 1970s by three federal banking supervisors of the US

(the Federal Reserve, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency). The CAMELS rating model applies to every bank and credit union in the US, and it is also enforced by numerous financial supervisory authorities out-side the US (Girija and Nayak, 2020).

The CAMELS rating model was modified in 1997 when a sixth component was added to address price and interest rate risks (IRR): the component is called Sensitivity to Market Risk ("S"). Each component of the CAMELS model is rated on a scale of 1 to 5 (NATIONAL CREDIT UNION ADMINISTRATION, 2021).

The following factors are examined under CAMELS:

- C–Capital Adequacy
- A–Asset Quality
- M–Management Efficiency
- E–Earning Ability
- L–Liquidity
- S-Sensitivity to Market Risks.

2. Literature review

Many previous studies examined the CAMELS model, and some of those studies examined the impact of this model on the performance of commercial banks. Dzeawuni and Tanko's (2008) study aimed to assess the efficiency of the CAMEL model in measuring the general performance of banks to find a relative weight for the importance of the elements of the model and to determine the best ratios that supervisory bodies must adopt to assess the efficiency of banks. The study was based on a sample of 11 commercial banks in Nigeria during the period 1997–2005. The results showed the inability of each factor alone in the CAMEL model to measure the overall performance of banks. The results also showed that the most important factor is the capital adequacy ratio, followed by liquidity, then profitability, then assets quality, and finally management efficiency. Therefore, the study suggested re-arranging the acronym of the model according to the importance of its components and calling it CLEAM. Furthermore, the study identified the best ratio in each factor. For example, the best ratio for Capital Adequacy was found to be the ratio of total shareholders' fund to total risk-weighted assets, for Asset Quality the best ratio was the ratio of loan loss provision to total net loans, for Management Quality the best ratio was the ratio of risk-weighted assets to total assets, for Earning Ability the best ratio was the ratio of net profit after tax to total shareholders' fund, and finally the best ratio for Liquidity was the ratio of demand liabilities to the total deposit.

Bawaneh and Dahiyat's (2019) study used the CAMELS rating model to present a comprehensive financial evaluation of commercial banks listed in the Amman Stock Exchange (ASE). This study aimed to discuss the effect of the CAMELS model on the performance of banks. The study was based on a sample of 13 commercial banks in Jordan during the period 2012–2018. The results of this study found that there is a significant effect of the CAMELS dimensions of management efficiency, earning quality, liquidity, and risk sensitivity on the financial performance of commercial banks, but there is no statistically significant effect of the CAMELS dimensions of capital adequacy and asset quality on the performance of commercial banks.

Bashatweh and Al-sheikh (2020) aimed to analyse and evaluate the financial performance of commercial Jordanian banks using the CAMELS framework. The study was based on a sample of 13 commercial banks for the period 2014–2018. Bashatweh and Al-sheikh (2020) concluded that the overall degree of classification of Jordanian commercial banks was acceptable and that Jordanian commercial banks show convergence in their rating, which is an indication of the convergence of procedures and policies followed by Jordanian commercial banks. The study recommended that banks should reduce their operating expenses and manage such operating expenses better, and that the management of Jordanian commercial banks should reconsider the policies and strategies used in providing facilities, the level of required guarantees, and debt procedures. The study also recommended the preparation of accurate and regulated plans for liquidity in order to achieve consistency

between assets and liabilities in terms of maturity dates and their distribution of use transferable to liquid balances.

Kaddumi (2017) studied and evaluated the financial soundness of Jordanian commercial banks using the CAMEL model. The study contained all banks listed in Amman Stock Exchange –ASE 15 Banks (2 Islamic banks and 13 commercial banks). The study covered a period of 5 years (2011–2015). Kaddumi (2017) used total shareholders' equity to risk-weighted assets ratio in capital adequacy factor, total assets to total liabilities ratio to study assets quality factor, total assets to total deposit ratio to study management efficiency factor, net profit to total equity ratio to study earning quality factor, and quick ratio to analyse liquidity adequacy. The findings indicated that all Jordanian banks' performance is within the acceptable norms despite the difference in indicator values of the CAMEL approach: the statistical analysis used in the scope of the study pointed out that there is no significant difference in the performance of Jordanian banks. The study also depicted that the performance of all Jordanian banks was similar, which might be attributed to Jordanian banks' similar attitudes, low levels of competition, and the Central Bank of Jordan's stringent laws regarding deposits, loans, and many forms of financial services.

Al-abedallat (2019) aimed to assess the performance of Jordanian banks and identify the impact of the components of the CAMELS model on banks' performance measured by returns on the assets, returns on equity, and net income. The study sample contained the 11 largest Jordanian banks ranked by banks' capital and asset for the period (2003–2017). The study concluded that Jordanian banks have a Capital Adequacy Ratio above 12% and that Jordanian banks generally have low ratios of the return on assets and return on equity because of the high level of liquidity, their serious shortcomings in fund investment and the high-income tax in Jordan. The study also found that commercial banks have an advantage over Islamic banks in the components of the CAMELS model and performance measures. The study proposed that the Central Bank of Jordan should use the CAMELS model to examine the performance of Jordanian banks in its entirety, with a particular focus on Islamic banks.

3. Methods

This section on methodology describes the research path to be followed, the tools to be used, the population and sample of the study, the analytical tools to be used, and the patterns of drawing conclusions. The starting point is that this study aims to analyse the financial performance of banks listed in the Amman Stock Exchange (ASE) using the CAMELS model. In this system, the rating of individual banks is completed along with six key parameters: capital adequacy, asset quality, management efficiency, earnings ability, liquidity, and sensitivity to market risks. Each of the six parameters of performance is rated on a scale of 1 to 5, varying from a fundamentally strong bank to a fundamentally weak bank.

3.1. Sample of the study

There are 16 banks in Jordan listed on the Amman Stock Exchange. Among these banks were 13 Jordanian commercial banks, and 3 Islamic banks. Islamic banks were excluded from this research as Islamic banks do not manage credit facilities whereas commercial banks do. The present study covers a period of five years during 2016–2020.

3.2. Data and tools

This study mainly relies on two main sources for data collection: a collection of secondary data from previous research, such as scientific journals, books, periodicals, and publications related to the subject of study. As for its main primary source of data, the study relies on annual reports by the 12 listed Jordanian banks. These reports can be downloaded from the banks' websites and from the Amman Stock Exchange (ASE) website. For analysis of the data, this research uses the means to arrive at a scientific conclusion.

Each component of the CAMELS model is rated on a scale of 1 to 5, with 1 for the best and 5 for the worst result (NATIONAL CREDIT UNION ADMINISTRATION, 2021). These components include the following:

Table 1. CAMELS Model Ratios and Ranking. *Source: Bashatweh and Al-sheikh (2020)*

Component	Ratios of Measuring CAMELS	1	2	3	4	5
		Strong	Good	Acceptable	Marginal	Critical
Capital Adequacy	Tier1 + Tier 2 capital / RWA	≥12%	≥8%	below 8%	below 6%	≤2%
Asset Quality	Non-Performing Loans / Total Loans	<1.25%	1.26%-2.59%	2.60% – 3.59%	3.60% – 5.50%	>5.5%
Management Efficiency	Operation Expenses / Gross income	≤25%	26% - 30.99%	31% – 38.90%	39% – 45.90%	≥46%
Earning Ability	Net Profit after Tax / Total Assets	≥1%	0.90% - 0.80%	0.70% – 0.35%	0.34% – 0.25%	≥0.24%
Liquidity	Liquid Assets / Total Assets	≥50%	45% - 49.99%	44.99% – 38%	37.99% – 33%	≥32%
Sensitivity to market risk	Total Securities / Total Assets	≤25.49%	25.5% - 30.99%	31% – 37.99%	38% – 42.99%	≥43%

4. Results

In order to analyse the financial performance of banks, the study relies on the six elements of the CAMELS model. The first element of analysis is Capital Adequacy as shown in Table 2.

Table 2. Capital Adequacy, CAMELS rating applied to sample banks 2016–2020. *Source: own work*

Name of Bank	Ratio	Ranking	Descriptive ranking
Arab Bank	13.92%	1	Strong
Jordan Ahli Bank	14.66%	1	Strong
Bank of Jordan	18.82%	1	Strong
Cairo Amman Bank	16.14%	1	Strong
Societe Generale De Banque - Jordanie	18.21%	1	Strong
Capital Bank of Jordan	15.99%	1	Strong
Invest Bank	16.06%	1	Strong
Bank El Eithad	14.16%	1	Strong
Arab Jordan Investment Bank	16.08%	1	Strong
The Housing Bank for Trading	17.14%	1	Strong
Jordan Commercial Bank	12.64%	1	Strong
Jordan Kuwait Bank	18.65%	1	Strong

Capital Adequacy: The capital adequacy ratio reflects the ability of a bank's capital to withstand unexpected losses and meet obligations (Rajveer, et al., 2017). Based on the figures in Table 2, it can be concluded that all banks maintain a comfortable margin that is well above both the CBJ's minimum requirement of 12% and the Basel Committee's minimum requirement of 10.5% (Central Bank of Jordan CBJ, 2019). The lowest value recorded is 12.64% for the Jordan Commercial Bank, and the highest is 18.82% for the Bank of Jordan. The average capital adequacy ratio for the banks included in this study is 16.04% (Strong).

Table 3. Asset Quality, CAMELS rating applied to sample banks 2016–2020. *Source: own work*

Name of Bank	Ratio	Ranking	Descriptive ranking
Arab Bank	7.88%	5	Critical
Jordan Ahli Bank	8.25%	5	Critical
Bank of Jordan	6.40%	5	Critical
Cairo Amman Bank	4.94%	4	Marginal
Societe Generale De Banque - Jordanie	5.95%	5	Critical
Capital Bank of Jordan	9.23%	5	Critical
Invest Bank	6.87%	5	Critical
Bank El Etihad	4.95%	4	Marginal
Arab Jordan Investment Bank	1.75%	2	Good
The Housing Bank for Trading	5.95%	5	Critical
Jordan Commercial Bank	10.14%	5	Critical
Jordan Kuwait Bank	8.61%	5	Critical

Asset Quality: One of the most widely used measures of the quality of a bank's assets is the ratio of non-performing loans to total loans (Misra and Aspal, 2012). Asset quality is a measure of a bank's financial health. Improving asset quality is often marked by a strong financial performance (Rajveer et al., 2017). Table 3 shows the average ratio of non-performing loans to total loans for the period 2016–2020. No bank shows a strong (less than 1.25%) assets quality. The best ratio was achieved by the Arab Jordan Investment Bank at 1.75% (rating: Good) and the lowest value was registered for the Jordan Commercial Bank at 10.14% (Critical). The average non-performing loans to the banks' total loans included in this study is 6.74% (Critical).

Table 4. Management Capability, CAMELS rating applied to sample banks 2016–2020.

Source: own work

Name of Bank	Ratio	Ranking	Descriptive ranking
Arab Bank	42.78%	4	Marginal
Jordan Ahli Bank	66.68%	5	Critical
Bank of Jordan	45.12%	4	Marginal
Cairo Amman Bank	60.60%	5	Critical
Societe Generale De Banque - Jordanie	48.04%	5	Critical
Capital Bank of Jordan	48.48%	5	Critical
Invest Bank	53.06%	5	Critical
Bank El Etihad	51.04%	5	Critical
Arab Jordan Investment Bank	52.50%	5	Critical
The Housing Bank for Trading	42.55%	4	Marginal
Jordan Commercial Bank	40.26%	4	Marginal
Jordan Kuwait Bank	51.10%	5	Critical

Management Efficiency: This ratio reflects the ability and efficiency of a bank's management in running its business and managing its risks (Dang, 2011). The ratio is obtained by dividing a bank's operating expenses by its gross income. Table 4 shows that all the banks under scrutiny are ranked 4 or 5 (Marginal or Critical) with an average ratio of 50.18% and an average ranking of 5. This rating reflects weak management in the field of expense controls.

Managers need to enhance their ability and efficiency in running the business and managing risks.

Table 5. Earning Quality, CAMELS rating applied to sample banks 2016–2020. *Source: own work*

Name of Bank	Ratio	Ranking	Descriptive ranking
Arab Bank	1.01%	1	Strong
Jordan Ahli Bank	0.52%	3	Acceptable
Bank of Jordan	1.59%	1	Strong
Cairo Amman Bank	0.98%	2	Good
Societe Generale De Banque - Jordanie	0.58%	3	Acceptable
Capital Bank of Jordan	1.23%	1	Strong
Invest Bank	1.27%	1	Strong
Bank El Etihad	0.92%	2	Good
Arab Jordan Investment Bank	0.86%	2	Good
The Housing Bank for Trading	1.17%	1	Strong
Jordan Commercial Bank	0.36%	3	Acceptable
Jordan Kuwait Bank	0.90%	2	Good

Earning Ability: Achieving profitability is one of the most important goals and determinants of performance because profits are the main source of achieving appropriate returns for banks' shareholders and serve the purpose of enhancing banks' capital (Atikoğullari, 2009). The study used a ratio of a bank's net profit after tax to total assets. Table 5 shows that the average ratio of the banks studied is 0.95% (Good). The best rating is awarded to the Bank of Jordan (1.59%; Strong), while the worst value is recorded for the Jordan Commercial Bank (0.36%; Acceptable).

Table 6. Liquidity, CAMELS rating applied to sample banks. *Source: own work*

Name of Bank	Ratio	Ranking	Descriptive ranking
Arab Bank	27.74%	5	Critical
Jordan Ahli Bank	14.70%	5	Critical
Bank of Jordan	27.65%	5	Critical
Cairo Amman Bank	21.22%	5	Critical
Societe Generale De Banque - Jordanie	16.92%	5	Critical
Capital Bank of Jordan	18.25%	5	Critical
Invest Bank	16.38%	5	Critical
Bank El Etihad	19.20%	5	Critical
Arab Jordan Investment Bank	20.62%	5	Critical
The Housing Bank for Trading	20.36%	5	Critical
Jordan Commercial Bank	11.60%	5	Critical
Jordan Kuwait Bank	18.21%	5	Critical

Liquidity: Liquidity has special importance in assessing a bank's solvency because it reflects the bank's ability to meet its obligations to creditors, especially depositors (Ongore and Kusa, 2013). Liquidity is measured using the ratio of liquid assets to total assets. A bank's liquidity is known as its capacity to satisfy financial commitments once they are due (Naushada, 2021). Table 6 shows that banks in Jordan suffer from weak and critical liquidity with an average ratio of banks included in the study at 19.40% (Critical).

Table 7. Sensitivity to market risk, CAMELS rating applied to sample banks 2016–2020.

Source: own work

Name of Bank	Ratio	Ranking	Descriptive ranking
Arab Bank	18.91%	1	Strong
Jordan Ahli Bank	26.25%	2	Good
Bank of Jordan	12.74%	1	Strong
Cairo Amman Bank	25.55%	2	Good
Societe Generale De Banque - Jordanie	32.42%	3	Acceptable
Capital Bank of Jordan	25.91%	2	Good
Invest Bank	15.78%	1	Strong
Bank El Etihad	19.16%	1	Strong
Arab Jordan Investment Bank	49.83%	5	Critical
The Housing Bank for Trading	24.14%	1	Strong
Jordan Commercial Bank	23.86%	1	Strong
Jordan Kuwait Bank	17.18%	1	Strong

Sensitivity to market risk: This variable measures a bank's exposure to market risks; sensitivity to market risk is measured by dividing the bank's portfolio of securities by its total assets (Babar and Zeb, 2011). The average sensitivity to the market risk concerning the banks included in this study is 24.31% (Strong). The Bank of Jordan has a ratio of 12.74% (Strong), which is the best rank compared to the other banks. On the other hand, the Arab Jordan Investment Bank has a ratio of 49.83% (Critical). These figures show that Jordanian commercial banks can control their market risks and are capable of facing any risk to which they may be exposed as well as the variety of the securities invested in them.

Table 8. Overall Jordanian commercial banks Ranking 2016–2020. *Source: own work*

Name of Bank	Ranking	Descriptive ranking
Arab Bank	2.83	Acceptable
Jordan Ahli Bank	3.50	Marginal
Bank of Jordan	2.83	Acceptable
Cairo Amman Bank	3.17	Acceptable
Societe Generale De Banque - Jordanie	3.67	Marginal
Capital Bank of Jordan	3.17	Acceptable
Invest Bank	3.00	Acceptable
Bank El Etihad	3.00	Acceptable
Arab Jordan Investment Bank	3.33	Acceptable
The Housing Bank for Trading	2.83	Acceptable
Jordan Commercial Bank	3.17	Acceptable
Jordan Kuwait Bank	3.17	Acceptable

Finally, an overall rating of each bank is shown in Table 8. The overall average ratings of the studied sample of banks ranged from acceptable to marginal. According to the overall average, the Arab Bank, Bank of Jordan, and The Housing Bank for Trading have the best bank ranking at 2.83 (Acceptable). The Societe Generale de Banque – Jordaine bank has the worst ranking at 3.67% (Marginal).

5. Discussion and conclusions

The estimated results using the CAMELS model show that the overall average for the evaluation of Jordanian commercial banks during 2016–2020 was acceptable. This agrees with the results established by Bashatweh and Al-sheikh (2020) in their research of the same market for the years 2014–2018, and Al-abedallat (2019) likewise concluded in his research covering the period 2003–2017 that the overall average evaluation of Jordanian commercial banks was good.

This study aimed to analyse, evaluate and rank the financial performance of commercial banks in Jordan using the CAMELS model. The study sample consisted of 12 commercial banks listed in Amman Stock Exchange.

The results indicate that Jordanian commercial banks enjoy high Capital Adequacy Ratios, which exceed the minimum value required by the Central Bank of Jordan and the Basel Committee. Jordanian banks can control their market risks and are ready to face any risk to which they may be exposed as well as the variety of the securities invested in them. Jordanian commercial banks are also characterized by a good earning ability. In addition, Jordanian commercial banks show a weak Asset Quality, and must hold more capital to cover related credit risks and have to book higher provisions to prepare for expected losses. Jordanian commercial banks also maintain weak and insufficient liquidity ratios to meet any unforeseen needs; however, there has been an increase in their sensitivity to market risks. These commercial banks also have weak management efficacy, and this rating reflects weak management in expense controls. Managements need to enhance their ability and efficiency in running the business and managing risks.

The study recommends that the Central Bank of Jordan should adopt the CAMELS model when evaluating the performance of banks and give greater weight to the elements of the model so that Jordan can use a more appropriate evaluation tool for the performance of Jordanian commercial banks, namely the CAMELS Model.

Conflicts of Interest: The author declares no conflict of interest.

References

1. Al-abedallat, A. Z. (2019). The Factors Affecting the Performance of the Jordanian Banks using Camels Model. *European Journal of Scientific Research, 152*(2)*,* 116–127.
2. Atikogullari, M. (2009). An Analysis of the Northern Cyprus Banking Sector in the Post-2001 Period through the CAMELS Approach. *International Research Journal of Finance and Economics, 32,* 212–232.
3. Babar, H. Z., & Zeb, G. (2011). *CAMELS Rating System for Banking Industry in Pakistan.* Umea School of Business. https://www.diva-portal.org/smash/get/diva2:448378/fulltext01.pdf
4. Bashatweh, A. D. & Ahmed, E. Y. (2020). Financial Performance Evaluation of the commercial banks in Jordan: Based on the CAMELS Framework. *International Journal of Advanced Science and Technology, 29*(05), pp. 985-994.
5. Bawaneh, A. A. & Dahiyat, A. (2019). Performance Measurement of Commercial Banks in Jordan Using the Camels Rating System. *Academy of Accounting and Financial Studies Journal, 23*(6), 1–7.
6. Brigit, H. (ed.) (2013). *Access for All: Building Inclusive Financial Systems.* Stand Alone Book. World Bank Group. https://doi.org/10.1596/978-0-8213-6360-7
7. Central Bank of Jordan [CBJ], (2019). *Financial Stability Report*
8. Central Bank of Jordan (2020). *Central Bank of Jordan: FIFTY SEVENTH ANNUAL REPORT 2020*. Amman: Central Bank of Jordan.
9. Dang, U. (2011). *THE CAMEL RATING SYSTEM IN BANKING SUPERVISION A CASE STUDY.* Helsinki, Finland: Arcada University of Applied Sciences International Business
10. Dzeawuni, W. A. & Tanko, M. (2008). CAMELs and Banks Performance Evaluation: The Way Forward. *SSRN Electronic Journal.* https://doi.org/10.2139/ssrn.1150968
11. Girija, S. D. & Nayak, B. (2020). A CAMEL Model Study for Financial Performance of Public and Private Sector Banks in Odisha. *Journal of Critical Reviews,* 7(13), pp. 2486–2492.
12. Kaddumi, T. (2017). Soundness of Jordanian banks-camel approach. *International Journal of Economic Research, 14*(12), 119–127.
13. Misra, S. K. & Aspal, P. K. (2012). *A CAMEL Model Analysis of State Bank Group.*
14. NATIONAL CREDIT UNION ADMINISTRATION (2021). CAMELS Rating System. *Proposed Rules, 09,* 13494–13498.
15. Naushad, M. (2021). Comparative analysis of Saudi sharia compliant banks: A CAMEL framework. *Growing Science, 7*(5), 1119–1130.
16. Ongore, V. O. & Kusa, G. B. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues, 3*(1), pp. 237–252.

17. Rajveer, R., Singh, M. & Shanmugam, R. (2017). *Ranking Selected Public Sector Banks in India based on the Camel Rating Methodology.* Grin Verlag.
18. Roncoroni, A., Battiston, S., D'Errico, M., Hałaj, G. & Kok, C. (2019). Interconnected banks and systemically important exposures. *Working Paper Series 2331,* European Central Bank.
19. Paun, C., Musetescu, R., Topan, V. & Danuletiu, D. (2019). The Impact of Financial Sector Development and Sophistication on Sustainable Economic Growth. *Sustainability, 11*(6), 1713. https://doi.org/10.3390/su11061713