

The Extent to Which Performance Indicators Based On Cash Flows Reflect On the Adequacy and Efficiency of the Financing Structure in Sudanese Banks - An Applied Study On Omdurman National Bank

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Abstract: The study aimed to shed light on the forecasting process according to statistical methods and financial analysis processes for the values of cash flows that help decision-makers to obtain many results derived from issuing a statement of cash flows in accordance with the generally accepted accounting rules, and to highlight the importance of the information of the statement of cash flows in making financing decisions.

The study reached a number of results, the most important of which was the coefficient of determination when testing the study hypothesis for the study sample (85.45%) when measuring the effect of the relationship between the third dependent variable of the study (the total non-self-financing structure) and the independent variable (index of cash inflows from financing activities / inflows Cash from outgoing financing activities), when the error coefficient was (0.008354) for the model as a whole, which is less than the error value (0.05), which means high confidence in the validity of the model test under study.

Keywords: Performance indicators, cash flows, financing structure, Sudanese banks

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1. Introduction: The financial statements are one of the most important outputs of accounting systems that are prepared in accordance with generally accepted accounting principles and that are relied upon by financial decision makers. The statement of cash flows is the most prominent because of its reliance on the cash basis, unlike the accrual-based financial statements. The process of choosing the ideal financing structure depends heavily on the information of the statement of cash flows due to making financing decisions based on the nature of the business, which enhances the achievement of the desired objectives based on the data and

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information that are presented and the methods that are used that help in the process of predicting the future and to reduce the financial failures that lead to the failure of some enterprises during their journey. Using the statement of cash flows and linking it to the financial analysis helps to reduce the gap caused by the statements of financial position and income due to their inability to show some of the information that the statement of cash flows seeks to show, such as the size of financing, its methods, the size of investment and ways of distributing it to the various activities of the entity.

2.The problem of the study: The problem of the study can be identified by the existence of a gap between the intellectual proposition and what exists in Sudanese banks, as the use of cash flow statement information and its impact on financing decisions is still being tested. By extrapolating all previous studies available within the study, it became clear to their searcher that there is a gap in it. The study of (Farshadfar & Monem, 2013) dealt with testing the relationship between the ability of accounting profits and predicting the values of future cash flows. The study of (Abu AL-Jawad, 2019) dealt with testing a multivariate model for predicting cash flows. The study of (Muhammad,2017) took on measurement and accounting disclosure under accounting standard No. 4. The study of (Siam, 2003) aimed at recognizing the importance of using accounting data in rationalizing capital expenditure decisions. The study of (Abdul Qadir,2017) focused on the impact of computer-based accounting systems on the statement of cash flows. The study of (Qasimand Jameel ,2009) focused ontherole of accounting measurement of overall quality in increasing the media content of financial reports and statements. As for this study, it will test the variables of factors that affect the efficiency and adequacy of the financing structure across the financial periods of Sudanese banks. Based on the above, the problem of the study is on the following question: Do the methods for analyzing the statement of cash flows affect the adequacy and efficiency of the financing structure in Sudanese banks?

3. Importance of the study: The importance of the study is as follows:

- ❖ **Scientific importance:** The study contributes to bridging a research gap that previous studies did not address to the knowledge of the researcher, through exposure to the behavioral aspects of funding decision makers based on the indicators of the cash flow statement and enriching scientific libraries with

scientific research that deals with the cash flow statement and linking it to financial decision-making.

- ❖ **Practical Importance:** The practical importance of this study is to analyze the statement of cash flows and link it to the analysis of other financial statements and build models to predict the adequacy and efficiency of the financing structure that enhances in increasing the future forecasting process for making financial decisions and raising accounting awareness for the users of the statement of cash flows information. In addition, the study highlights the financial indicators derived from them and helps enterprises in the process of differentiation and selection for future decisions in the light of the information and data provided by the statement of cash flows.

4. Objectives of the study: This study mainly targets the extent to which performance indicators based on cash flows reflect the adequacy and efficiency of the financing structure in Sudanese banks through the following objectives:

- ❖ Demonstrate statistical methods and financial analysis of cash flow values that are useful in obtaining many results derived from a list of cash flows prepared in accordance with the accounting rules recognized in Sudanese banks.
- ❖ Highlighting the importance of cash flow statement information in facilitating the process of making financing decisions in Sudanese banks.
- ❖ Identify the indicators of the statement of cash flows and the extent to which they contribute to determining the financing structure in Sudanese banks.
- ❖ Highlighting the informational content of the statement of cash flows in Sudanese banks.

5. The hypotheses of the study: The hypothesis of the study can be formulated as follows, the analysis of the indicators of the statement of cash flows affects the adequacy and efficiency of the financing structure in Sudanese banks.

6. Limitations of the study: The limits of the study are as follows:

- ❖ Time limit: The applied study used the published financial reports of a sample of Sudanese banks listed on the Khartoum Stock Exchange covering the period from 2016 to 2022.
- ❖ Spatial Limit: Applied Study, Omdurman National Bank.
- ❖ Substantive Limits: Statement of Cash Flows and Financing Structure.

7. Literature of the study and previous studies:

1.7. The Origin and development of the cash flow statement: The cash flow statement is a relatively recent statement of developments, whether in terms of the methods used in preparing it, in terms of its presentation or in terms of the strength

The Extent to Which Performance Indicators Based On Cash Flows Reflect On the Adequacy and Efficiency of the Financing Structure in Sudanese Banks - An Applied Study On Omdurman National Bank

of the rules binding its publication issued by professional groups. The cash flow statement was first introduced by companies voluntarily operating in the United States at the end of the 1950s. In 1961, the American Institute of Accountants issued a study that recommended changing the name of the list to "List of Analysis of Cash Flows and Financial Resources." (Mosiah& Larsen: ,2000, P934) according to the accounting research study No. (2) under the title Cash Flow Analysis and List of Funds (Dahmash: 2003, p. 3).

2.7. The concept of the statement of cash flows: cash flow means any operation that expresses the use of cash and the flows are either internal flows, which are collections or receivables and external flows, which are represented in repayments or payments (Andrews:2007, p. 11) , receipts represent the sale of fixed assets and cash receipts from the sale of securities owned by the institution or the sale of assets other than inventories , and payments represent repayments or dues (Dahmash and Nassar:2005, 35), defined as a financial statement showing the sources and uses of funds during a certain period of time (Dhabih and Rami:2019, p. 247) It is also known as a list of receipts and payments of an institution during a certain period of time (Hamza and Ali:2021, p. 310). The cash flow statement also helps to identify the financial conditions of the bank under analysis, as it shows receipts and payments during the period provided by the income statement (Abu Al-Jawad: 2019, p 40). The effectiveness of cash flows helps to clarify the relationship between accounting profit and cash flow (Jamam and Dabbash:2015, p. 71). The main goal of the cash flow statement is to obtain information about changes in cash and its equivalent, as the sources of cash flows are classified into cash from activities operational, investment and financing, in order to assist the users of these lists with information to assess the bank's cash position (Yahya:2021, p 336).

3.7. importance of the cash flow statement: The importance of the cash flow statement is as follows (Abdul Rahman:2022, 34).

- ❖ It is an important tool for financial management to know the changes that have taken place in the bank.
- ❖ It works to ensure that the financing needs of the facility are provided and used effectively and efficiently.

- ❖ Helps identify financial problems and develop long-term financial policies.
- ❖ Assist in the preparation of estimated cash budgets.
- ❖ Highlights the entity's financial operations while analyzing the past and anticipating the future.

The importance of the cash flow statement also comes in assessing the extent to which banks are able to meet cash requirements by measuring their liquidity, financial availability and financial flexibility (Lee:2006, p35).

4.7. Performance indicators extracted from the statement of cash flows:

The indicator is a relationship that can be used to assess the total activity of the entity and its internal activities, and each indicator has its own (measure) or rate in order to be meaningful and not an ambiguous number, and it also includes the extent of tolerance in which actual performance ranges, so that any deviation from this range is undesirable if it is to the detriment of the bank (Mohammed and Rababaa: 2017,p. 9).The percentages extracted from the statement of cash flows represent one of the important methods for analyzing cash flows and evaluating performance according to the cash basis in different banks (Mohammed: 2020, p. 12). The most important of these percentages are as follows:

1.4.7. Cash flow return ratio: It can be obtained by comparing the net profit with the net cash flows from current or ongoing activities. It is also useful in identifying the amount of cash generation from operating activities, which is an important percentage in linking the cash flow from operating activities with the net profit and loss (Al-Atout and Al-Zahir:2010, p. 60).

2.4.7. Cash flow to sales ratio: This ratio is significant because it clearly shows the relationship between the net cash flow from operating activity with net sales. This ratio is also calculated by dividing the net cash flow from operating activity by net sales, as this ratio benefits the cash flow generated from sales (Abdul Majeed and Sami:2017, p. 393).

3.4.7. Cash flow ratio to average total assets: This ratio is calculated by dividing the net cash flow from operating activity by the average total assets. This ratio is useful in indicating the strength or weakness of the average turnover rate of total assets (Al-Khalilah:2004, p. 190).

4.4.7. The ratio of cash flow to total current liabilities: This ratio is calculated by dividing operating activities by total current liabilities. It measures the bank's ability to generate the necessary cash flows to meet short-term liability coverage (Al-Azhar and Deinoury: 2013, p. 31).

5. Concept and Determinants of Financial Structure:

1.5. The concept of financial structure: The financing decision is one of the important strategic decisions in the bank that require those concerned to take care of it and realize its importance and analyze it in accordance with scientific and customary principles (Jumai:2021, p. 247). The financial structure is one of the most important aspects that stakeholders within the bank, shareholders and others, are interested in because it has an impact on the stability of the bank from the financial side and ensure that it is not exposed to dismissals (Habib Wadam:2021, p. 11). It was also defined as the variety of sources that the bank obtained on the funds in order to finance its investments (Abdullah:2015, p. 111). It is also known as related to how to finance the total assets and investments of the bank (Abdul-Aziz: 1997, p. 177). The financial structure also means how the bank finances its various assets from external and internal resources (Al-Zubaidi:2002, p. 12). It was also defined as that combination of private and leveraged funds that results in the lowest possible cost (Abdul-Aziz: 2007, p. 393).

2.5. Determinants of financial structure: There are a set of factors that the financial manager should take into account, the most important of which are (Abdel-Kader Hariri:2021, p. 159): the size of the institution, profitability, sales growth, profitability, asset structure.

6. Previous studies: The researcher reviews some of the previous studies related to the subject of the study that the researcher was able to review: The study (Farshadfar & Monem, 2013) aimed to apply financial reporting standards to cash flow statements. The evidence indicates that the components of direct detailed operating cash flows enhance the predictive ability of total direct cash flows in future cash flow forecasts. The study concluded that cash flows received from customers and cash paid to suppliers and employees complement each other in enhancing the overall predictive ability of cash flow components. The study of

(Mohammed,2013) dealt with determining the information content of the statement of cash flows, and the relationship of the statement of cash flows with the basic financial statements. The study came out with a number of recommendations, the most important of which was that there are no analytical tools for a financial statement that can be described as comprehensive for all purposes of financial analysis. The study of (Alexis and Berdai,2014) aimed to show the impact of the cash flow statement in the analysis of the financial situation of the institution by identifying the financial analysis, the parties benefiting from it and the tools used in this with an indication of the importance of the cash flow statement and how to prepare it. It concluded that the cash flow statement is one of the most important statements adopted by the financial accounting system in order to provide it with information that helps its users to make decisions. The study came out to work more on increasing interest in financial analysis, whether for internal parties or external parties. The study of (Mohammed ,2016) focused on the impact of the capital structure on the financial performance of companies listed on the Damascus Securities Exchange. By choosing the impact of the capital structure on the financial performance of companies listed on the Damascus Securities Exchange and increasing knowledge about this impact, it found that there is a positive relationship between the debt used in the capital structure and the ratio of market value to the book value of the ownership right. This means that there is a relationship between the two variables, which came out to reduce financing through debt as the financing structure represented by the ratio of debt to equity and the ratio of debt to total assets is optimal. The study (Soewignyo & Soewignyo.2018) highlighted the impact of financial ratios derived from cash flows on the company's profitability. It concluded that there is an impact of both cash flows attributed to total liabilities and cash flows attributed to current liabilities on the company's profitability in all its indicators represented in earnings per share and return on equity. It came out to conduct further studies on the impact of financial ratios derived from cash flows on the company's profitability by relying on other financial ratios and comparing them to traditional ratios in different sectors. The study of (Abu Al-Jawad,2019) showed the importance of cash flows in making investment decisions at Al-Rajhi Bank. It reached a number that the model that contains the operational activities, investment activities and financing activities of the bank, came out to the need to benefit from the information provided by the cash flow statement to serve investment decision makers. The study of (Al-Zahraa and Marwa, 2020) showed the impact of the financial structure on the profitability of companies by measuring financial

The Extent to Which Performance Indicators Based On Cash Flows Reflect On the Adequacy and Efficiency of the Financing Structure in Sudanese Banks - An Applied Study On Omdurman National Bank

performance, identifying the most important sources of funding available to the institution and identifying the concept of the cost of financing. It concluded that profitability ratios are declining during the study period and this is due to the company's use of debt at a greater rate than its own funds. It came out to the need to achieve a balance between all factors affecting the financial structure in an appropriate manner and proper planning of the financial structure.

General comment on previous studies: It is similar to previous studies in some variables such as financial analysis and financial analysis of published accounting information, as well as similarity in some dimensions of variables such as rationalization of investment decisions and bank credit decision, as well as similarity in some of the results of the study. One of the differences is the uniqueness of this study by choosing some variables according to objective limits, such as rationalizing investment and credit decisions in Sudanese banks, as well as the uniqueness by mentioning some of the results and recommendations in this study, which were not mentioned in previous studies, as far as the researcher is aware, from what was stated in previous studies through the theoretical framework of some of the variables mentioned in this study.

7. Applied study procedures:

1.7. Study Methodology: The study adopted the analytical approach to study, analyze and interpret data related to banks operating in Sudan, Omdurman National Bank. The deductive approach was also used through research from the generalities of the molecules in tracking the case and the inductive approach in order to review the thesis books, scientific journals and scientific references related to the subject of the study.

2.7. Sources of data and information collection: The study relied on secondary sources, with the aim of answering the questions of the study problem, testing its hypotheses, and achieving its objectives, and there were many sources of secondary data from which books, references, scientific journals, university theses, and research in the Internet information network were collected. For the purposes of the applied study, the data contained in the cash flow statement of the banks under study were analyzed.

3.7. Study population and sample:

1.3.7. The study community: The study population consists of all banks that have one or common characteristics that can be observed, and the results of the study are circulated to them. The identification of the study population is of great importance because it provides the necessary information to form answers to the study questions in order to answer them, and test hypotheses. The study population consists of the Sudanese banking system, consisting of (39) banks (Al-Fundi, 2008: 30).

2.3.7. Study sample: The study sample is intended to be a relatively specific number of members of the original community, and is dealt with within the available time, and the possibilities available to the researcher, and begins with their study, and then circulates the results to the original community (Suleiman, 2006: 68), and the researcher chose the applied study sample in an intentional way that represents Omdurman National Bank.

4.7. Method used in data analysis: The researcher used the Views program and the test used to test the hypotheses of the applied study with the descriptive analysis of the study variables and the multiple linear regression analysis test to determine the effect of the independent variable on the variable of the applied study hypotheses, and the correlation coefficient to determine the direction and strength of the relationship between the variables of the study hypotheses. A set of statistical methods was used to describe and analyze the data of the applied study according to the following(Net:2001,p. 153): Simple Linear Regression (SLR) to study the co-distribution of a number of variables measured without error to clarify the relationship between the independent variable and the dependent variable to help explain the change in the dependent variable according to the change in the independent variable, the Pearson correlation coefficient, and the modified determination coefficient (R-Squared) (R^2). and the adjusted-Squared coefficient. The (T) test to judge the significance of the relationship between the two independent dependent variables, and the (F) test to judge the significance of regression. and the level of morale (Prob.) Whenever the value is less than or equal to (0.050), this indicates that there is a strong moral relationship, but if the value is greater than (0.050), this indicates that there is no strong moral relationship.

5.7. Testing the proposed model (adequacy of the funding structure):

1.5.7. Table No. (1) deals with the relationship between the dependent variable (total financing structure) and the independent variable (cash flow index from inward financing activities ÷ cash flow from outward financing activities) of the

The Extent to Which Performance Indicators Based On Cash Flows Reflect On the Adequacy and Efficiency of the Financing Structure in Sudanese Banks - An Applied Study On Omdurman National Bank

study sample, which aims to test the hypothesis that analysis of cash flow statement indicators affects the adequacy and efficiency of the financing structure in Sudanese banks. The table shows how the values of these two variables are distributed to Omdurman National Bank, which reflects the variance and disparity in the relationship between them.

Table No. (1): The relationship between the dependent variable (total financing structure) and the independent variable (cash flows index from incoming financing activities ÷ cash flows from outgoing financing activities) for the study sample Omdurman National Bank to test the hypothesis:

Variable	Coefficient	Std. Error	t-Statistic	PROB
C	6.19E+09	1.93E+08	32.07219	0.0000
The independent variable	2.02E+08	27208154	7.433408	0.0017
R-squared	0.932496	Mean dependent Var		7.23E+09
Adjusted R-Squared	0.915620	S.D. dependent Var		1.12E+09
S.E. of Regression	3.25E+08	Akaike info Criterion		42.30011
Sum Squared Resid	4.23E+17	Schwarz Criterion		42.23070
Log Likelihood	-124.9003	Hannan-QuinnCriter.		42.02224
F-Statistic	55.25555	Durbin-Watson stat		1.935614
Prob(F-Statistic)	0.001749			

Source: Researcher's preparation from the data of the applied study 2023 Eviews program

The researcher deduces the following from the data in the above table:

- ❖ The coefficient of determination (R-Squared) is (0.932496), used to measure the explanatory power of the model. The independent variable is responsible for an average of (93.25%) of the changes in the dependent variable and the rest (6.75%) is the impact of other variables. The value of (Adjusted R-Squared) is (0.915620).
- ❖ (C) The constant rate of change of the dependent variable according to the change of the independent variable of (6.19E+09).

- ❖ The standard error coefficient for the parameters estimated for the constant rate is (1.93E+08), and the value of (t-Statistic) is (32.07219) at an error level for the parameter (0.0000), which is less than the error value (0.05), which means that there is a statistically significant relationship.
- ❖ The value of the independent variable coefficient is (2.02E+08) with a standard error coefficient of (27208154) when the value of (t-Statistic), which is (7.433408), is at an error level for the parameter (0.0017), which is less than the error value (0.05), which means that there is a statistically significant relationship.
- ❖ The estimation error (S.E. of Regression) is (3.25E+08).
- ❖ Sum Squared Resid error box (4.23E+17).
- ❖ The value of (F-Statistic) is (55.25555) at an error coefficient of (0.001749) for the model as a whole, which is less than the error value (0.05), which means that there is a statistically significant relationship. The model for the study sample can be formulated as follows: $Y = 6.19E+09 + 2.02E+08 \times b$
Whereas: Y total financing structure and b cash flows from inward financing activities/cash flows from outward financing activities.

2.5.7. Studying the relationship between the dependent variable, which is the "total self-financing structure", and the independent variable that represents the "cash flows index from financing activities", Table No. (2) shows a breakdown of the relationship between them. This relationship aims to test the hypothesis that analysis of cash flow statement indicators affects the adequacy and efficiency of the financing structure in Sudanese banks. Table (2) reflects a set of data that shows the relationship between the two variables. It notes how the "total self-financing structure" changes based on changes in the "cash flow index from inward financing activities ÷ cash flow from outward financing activities". This table allows the researcher to understand the relationship between these two variables and assess the impact of cash flow indicators on the self-financing structure at Omdurman National Bank.

Table No. (2): The relationship between the dependent variable (total financing structure) and the independent variable (cash flows index from incoming financing activities ÷ cash flows from outgoing financing activities) for the study sample Omdurman National Bank to test the hypothesis:

The Extent to Which Performance Indicators Based On Cash Flows Reflect On the Adequacy and Efficiency of the Financing Structure in Sudanese Banks - An Applied Study On Omdurman National Bank

Variable	Coefficient	Std. Error	t-Statistic	PROB
C	3.23E+08	1.14E+08	2.838960	0469 .
The independent variable	55712766	16065941	3.467756	0.0256
R-squared	0.750395	Mean dependent Var		6.10E+08
Adjusted R-Squared	0.687994	S.D. dependent Var		3.44E+08
S.E. of Regression	1.92E+08	Akaike info Criterion		41.24648
Sum Squared Resid	1.48E+17	Schwarz Criterion		41.17707
Log Likelihood	-121.7394	Hannan-Quinn Criter.		40.96861
F-Statistic	12.02533	Durbin-Watson stat		3.137437
Prob(F-Statistic)	0.025636			

Source: Researcher's preparation from the data of the applied study 2023 Eviews program.

The researcher deduces the following from the data in the above table:

- ❖ The coefficient of determination (R-Squared) is 0.750395, indicating the explanatory power of the model. The independent variable is responsible for approximately 75.04% of the variations in the dependent variable, while the remaining 24.96% is attributed to other variables. The Adjusted R-Squared value is 0.687994.
- ❖ The constant (C) value, representing the rate of change in the dependent variable concerning changes in the independent variable, is 3.23E+08.
- ❖ The standard error of the estimated constants is 1.14E+08, with a t-Statistic of 2.838960 at a significance level of 0.0469, indicating a statistically significant relationship.
- ❖ The coefficient of the independent variable is 55712766, with a standard error of 16065941, a t-Statistic of 3.467756 at a significance level of 0.0256, suggesting a statistically significant relationship.
- ❖ The standard error of regression (S.E. of Regression) is 1.92E+08.
- ❖ The sum squared residuals (Sum Squared Resid) is 1.48E+17.
- ❖ The F-Statistic value is 12.02533 with an error term of 0.025636 for the model as a whole, indicating a statistically significant relationship.
- ❖ The model for the study sample can be formulated as follows: $Y = 3.23E+08 + 55712766 \times b$, where Y represents the total structure of self-financing – equity and b represents the cash flows from financing activities inflow/outflow.

3.5.7. Table (3) illustrates the relationship between the dependent variable, "Total Non-Self Financing Structure," and the independent variable representing the "Cash

Flow Ratio from Financing Activities Inflow ÷ Cash Flow from Financing Activities Outflow." This relationship aims to test the hypothesis that analyzing cash flow indicators affects the adequacy and efficiency of the financing structure in Sudanese banks.

Table (3): The relationship between the dependent variable (Total Non-Self Financing Structure) and the independent variable (Cash Flow Ratio from Financing Activities Inflow ÷ Cash Flow from Financing Activities Outflow) for the study sample, Bank of Khartoum, is conducted to test the hypothesis.

Variable	Coefficient	Std. Error	t-Statistic	PROB
C	5.86E+09	2.14E+08	27.35878	0.0000
The independent variable	1.47E+08	30228487	4.847631	0.0084
R-squared	0.854543	Mean dependent Var		6.62E+09
Adjusted R-Squared	0.818179	S.D. dependent Var		8.48E+08
S.E. of Regression	3.62E+08	Akaike info Criterion		42.51065
Sum Squared Resid	5.23E+17	Schwarz Criterion		42.44123
Log Likelihood	-125.5319	Hannan-Quinn Criter.		42.23278
F-Statistic	23.49952	Durbin-Watson stat		1.413770
Prob(F-Statistic)	0.008354			

Source: Researcher's preparation from the data of the applied study 2023 Eviews program.

The researcher infers the following from the data in the above table:

- ❖ The coefficient of determination (R-Squared) is 0.854543, used to measure the explanatory power of the model. The independent variable accounts for a rate of 85.45% of the variations in the dependent variable, while the remaining 14.55% is attributed to other variables. The Adjusted R-Squared value is 0.818179.
- ❖ The constant (C) value, representing the rate of change in the dependent variable concerning changes in the independent variable, is 5.86E+09.
- ❖ The standard error of the estimated constants is 2.14E+08, with a t-Statistic of 27.35878 at a significance level of 0.0000, indicating a statistically significant relationship.

The Extent to Which Performance Indicators Based On Cash Flows Reflect On the Adequacy and Efficiency of the Financing Structure in Sudanese Banks - An Applied Study On Omdurman National Bank

- ❖ The coefficient of the independent variable is 1.47E+08, with a standard error of 30228487, a t-Statistic of 4.847631 at a significance level of 0.0084, suggesting a statistically significant relationship.
- ❖ The standard error of regression (S.E. of Regression) is 3.62E+08.
- ❖ The sum squared residuals (Sum Squared Resid) is 5.23E+17.
- ❖ The F-Statistic value is 23.49952 with an error term of 0.008354 for the model as a whole, indicating a statistically significant relationship.

The model for the study sample can be formulated as follows: $Y = 1.47E+08 + 1.47E+08 \times b$, where Y represents the total non-self-financing structure, and b represents the cash flows from financing activities inflow/outflow.

4.5.7. In Table (4), the researcher reviews the scientific relationship between the dependent variable, "Total Non-Self Financing Structure - Short-Term," and the independent variable, "Cash Flow Ratio from Financing Activities Inflow ÷ Cash Flow from Financing Activities Outflow." The research aims to test the hypothesis that "analyzing cash flow indicators affects the adequacy and efficiency of the financing structure in Sudanese banks" using a sample from the Bank of Khartoum.

Table (4): The Relationship between the Dependent Variable (Total Non-Self Financing Structure - Short-Term) and the Independent Variable (Cash Flow Ratio from Financing Activities Inflow ÷ Cash Flow from Financing Activities Outflow) for the Study Sample, Bank of Khartoum, to Test the Hypothesis:

Variable	Coefficient	Std. Error	t-Statistic	PROB
C	2.63E+09	2.53E+08	10.38776	0.0005
The independent variable	40189513	35718319	1.125179	3235
R-squared	0.240414	Mean dependent Var		2.84E+09
Adjusted R-Squared	0.050518	S.D. dependent Var		4.38E+08
S.E. of Regression	4.27E+08	Akaike info Criterion		42.84440
Sum Squared Resid	7.30E+17	Schwarz Criterion		42.77499
Log Likelihood	-126.5332	Hannan-Quinn Criter.		42.56654
F-Statistic	1.266028	Durbin-Watson stat		1.195145
Prob(F-Statistic)	0.323459			

Source: Researcher's preparation from the data of the applied study 2023 Eviews program.

The researcher infers the following from the data in the above table:

- ❖ The coefficient of determination (R-Squared) is 0.240414, used to measure the explanatory power of the model. The independent variable is responsible for a rate of 24.04% of the variations in the dependent variable, while the remaining 75.96% is attributed to other variables. The Adjusted R-Squared value is 0.050518.
- ❖ The constant (C) value, representing the rate of change in the dependent variable concerning changes in the independent variable, is 2.63E+09.
- ❖ The standard error of the estimated constants is 2.53E+08, with a t-Statistic of 10.38776 at a significance level of 0.0005, indicating a statistically significant relationship.
- ❖ The coefficient of the independent variable is 40189513, with a standard error of 35718319, a t-Statistic of 1.125179 at a significance level of 0.3235, suggesting no statistically significant relationship.
- ❖ The standard error of regression (S.E. of Regression) is 4.27E+08.
- ❖ The sum squared residuals (Sum Squared Resid) is 7.30E+17.
- ❖ The F-Statistic value is 1.266028 with an error term of 0.323459 for the model as a whole, which is greater than the error value of 0.05, indicating no statistically significant relationship. The model cannot be formulated for the study sample.

Variable	Coefficient	Std. Error	t-Statistic	PROB
C	3.23E+09	1.61E+08	20.07957	0.0000
The independent variable	1.06E+08	22708709	4.683094	0.0094)
R-squared	0.845747	Mean dependent Var		3.78E+09
Adjusted R-Squared	0.807183	S.D. dependent Var		6.18E+08
S.E. of Regression	2.72E+08	Akaike info Criterion		41.93857
Sum Squared Resid	2.95E+17	Schwarz Criterion		41.86916
Log Likelihood	-123.8157	Hannan-QuinnCriter.		41.66071
F-Statistic	21.93137	Durbin-Watson stat		1.253582
Prob(F-Statistic)	0.009426			

The Extent to Which Performance Indicators Based On Cash Flows Reflect On the Adequacy and Efficiency of the Financing Structure in Sudanese Banks - An Applied Study On Omdurman National Bank

5.5.7. In section the relationship between the dependent variable (Total Non-Self Financing Structure - Long-Term) and the independent variable (Cash Flow Ratio from Financing Activities Inflow ÷ Cash Flow from Financing Activities Outflow) is presented in Table (5). The table illustrates the relationship between the variables for the study sample from Bank of Khartoum, aiming to test the first hypothesis stating that "analyzing cash flow indicators affects the adequacy and efficiency of the financing structure in Sudanese banks.

Table (5): The relationship between the dependent variable (Total Non-Self Financing Structure - Long-Term) and the independent variable (Cash Flow Indicator from Internal Financing Activities ÷ Cash Flow from External Financing Activities) for the study sample, the National Bank of Am Derman, to test the hypothesis.

Source: Researcher's preparation from the data of the applied study 2023 Eviews program. The researcher infers the following from the data in the above table:

- ❖ The coefficient of determination (R-Squared) is 0.845747, which is used to measure the explanatory power of the model. The independent variable accounts for 84.57% of the variations in the dependent variable, while the remaining 15.43% represents the influence of other variables. The adjusted R-Squared value is 0.807183.
- ❖ The constant rate of change in the dependent variable concerning changes in the independent variable is 3.23E+09.
- ❖ The standard error of the estimated features for the constant rate is 1.61E+08.
- ❖ The t-Statistic value is 20.07957 at a significance level of 0.0000, indicating a statistically significant relationship.
- ❖ The coefficient of the independent variable is 1.06E+08 with a standard error of 22708709. The t-Statistic value is 4.683094 at a significance level of 0.0094, suggesting a statistically significant relationship.
- ❖ The estimation error (S.E. of Regression) is 2.72E+08.
- ❖ The sum squared residuals (Sum Squared Resid) is 2.95E+17.
- ❖ The F-Statistic value is 21.93137 with an error coefficient of 0.009426 for the overall model, indicating a statistically significant relationship.

The model for the study sample can be formulated as follows: $Y = 3.23E+09 + 1.06E+08 \times b$, where Y is the Total Non-Self Financing Structure - Long-Term, and

b is the Cash Flow Indicator from Internal Financing Activities ÷ Cash Flow from External Financing Activities.

The researcher concludes that the adequacy of the financing structure can be predicted by analyzing cash flow indicators, supporting the study hypothesis that "Analyzing cash flow indicators affects the adequacy and efficiency of the financing structure in Sudanese banks," which has been achieved with an 80% confidence level.

8. Conclusion: It includes the findings and recommendations

1.8 Results: Through theoretical and applied study, the researcher reached the following results:

- ❖ The coefficient of determination when testing the study hypothesis for the study sample was (93.25%) when measuring the impact of the relationship between the first study variable (total financing structure) and the independent variable (cash inflows from financing activities/cash outflows from financing activities), at an error coefficient of (0.001749) for the model as a whole, which is less than the error value (0.05), which means high confidence in the validity of the test of the model under study.
- ❖ The coefficient of determination when testing the study hypothesis for the study sample was (75.04%) when measuring the impact of the relationship between the second study variable (total self-financing structure – equity) and the independent variable (cash inflows from financing activities/cash outflows from financing activities), at an error coefficient of (0.025636) for the model as a whole, which is less than the error value (0.05), which means high confidence in the validity of the test of the model under study.
- ❖ The determination coefficient, when testing the hypothesis for the study sample, reached 85.45%. This measure was employed to assess the influence of the relationship between the dependent variable (Total Non-Self Financing Structure) and the independent variable (Cash Flow Indicator from Financing Activities / Cash Flow from Financing Activities). The overall model exhibited an error coefficient of 0.008354, which is below the significance level of 0.05, indicating a high level of confidence in the validity of the study model.
- ❖ The coefficient of determination when testing the study hypothesis for the study sample was (24.04%) when measuring the impact of the relationship between the fourth study variable (total non-self-funding structure - short term) and the

The Extent to Which Performance Indicators Based On Cash Flows Reflect On the Adequacy and Efficiency of the Financing Structure in Sudanese Banks - An Applied Study On Omdurman National Bank

independent variable (cash inflows from financing activities/cash outflows from financing activities), at an error coefficient of (0.323459) for the model as a whole, which is greater than the error value (0.05), which means that there is no confidence in the validity of the test of the model under study.

- ❖ The determination coefficient, when testing the hypothesis for the study sample, was 85.45%. This was measured to assess the impact of the relationship between the fifth dependent variable (Total Non-Self Financing Structure - Long-Term) and the independent variable (Cash Flow Indicator from Financing Activities / Cash Flow from Financing Activities). The model exhibited an error coefficient of 0.009426, which is lower than the significance level of 0.05, indicating a high level of confidence in the validity of the study model.

2.8 Recommendations: In light of the results of the study, the researcher recommends the following:

- ❖ Adopting the proposed applied study model to predict the future efficiency of the financing structure.
- ❖ Holding advanced training courses on methods of preparing and analyzing the statement of cash flows of business entities.
- ❖ Requiring audit firms to review financial statements and reports more realistically.
- ❖ The need for advisory bodies to show the benefits derived from the statement of cash flows.
- ❖ The need to prepare detailed appended financial statements that take into account the current value of the items of financial statements and reports.

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