



FACTORS DETERMINING LEVELS OF FINANCIAL FLEXIBILITY: AN ANALYTICAL STUDY OF A NUMBER OF COMPANIES LISTED ON THE IRAQ STOCK EXCHANGE

Sura Taki Mohammed Ali Al-Sultan¹, Namir Amir Jasim Al-Saegh²

¹University of Mosul, Iraq

²University of Mosul, Iraq

Email: Sura_taqi_alsultan@uomosul.edu.iq; nameer_alsaigh@uomosul.edu.iq

Abstract. Financial flexibility is one of the fundamental pillars on which companies base their financial decision-making, as it helps to enhance their competitiveness and enables them to secure the funding required for their long-term investments. Despite the importance of this topic, in-depth studies on the subject remain relatively limited. This has prompted the present study to focus on identifying the key determinants of financial flexibility, as well as testing the extent to which these indicators can be used to guide decision-makers towards more prudent financial decisions. To achieve the study's objectives, the researchers adopted the Autoregressive Distributed Lag (ARDL) model methodology, drawing on time-series data covering the period from 2010 to 2025, equivalent to sixteen years of annual observations. The study sample consisted of a group of companies listed on the Iraq Stock Exchange, whilst the Eviews 11 software was used to carry out the financial and statistical analyses, in addition to employing a number of financial equations and ratios. The study's findings demonstrated that total assets, current assets, and fixed assets are some of the most important variables affecting net cash flows because, while the degree of this effect varied from company to company, these variables unmistakably helped to explain the differences seen among the companies in the study sample. The findings also supported the primary hypothesis of the study by confirming the presence of a statistically significant association between net cash flows and specific financial and macroeconomic factors. In order to increase positive cash flows and guarantee the long-term sustainability of financial performance, the study advises businesses to pay more attention to financial flexibility indicators and improve the efficiency of their management, especially with regard to the management of total assets and the improvement of their structure.

Keywords: financial flexibility, net cash flows, current assets.

Introduction

The rapid economic transformations of recent decades have imposed a new reality on financial firms, requiring them to possess high levels of flexibility to cope with market volatility. Financial flexibility is no longer merely a traditional concept; rather, it has become a fundamental element in capital structure and a strategic objective that contributes to maximising corporate value and sustainability. The importance of this flexibility lies in management's ability to control the volume and timing of cash flows and to direct them with high efficiency, thereby enabling the company to avoid the risks of financial stress and mitigate the effects of liquidity shortages. Consequently, financial flexibility represents the first line of defence for managing negative shocks and seizing unexpected investment opportunities, ensuring the protection of cash flows and the continuity of operational activities without disruption, whilst securing continuous access to financing at a low cost.

The study was split into three pieces in order to accomplish the methodology's overall goals. The study methodology, pertinent prior research, and the research gap were covered in the first portion; the theoretical framework of financial flexibility and financial variables were covered in the second; and the empirical analysis, results, and recommendations were covered in the third section.

Methods

Research Methodology

Significance of the Research

The importance of this study stems from the role of financial flexibility in enhancing companies' ability to meet financial challenges and improve the management of their resources, as well as the importance of total assets and fixed assets in supporting operational, financing and investment activities, and the resulting direct implications for net cash flows, which is a key indicator of a company's ability to generate cash and achieve financial flexibility. It has also been emphasised that financial flexibility improves the efficiency of management in coping with financial shocks, whether positive or negative, which in turn creates profitable investment opportunities that benefit the sectors as a whole.

Research Problem

The research problem was articulated as follows:

What are the most significant variables affecting net cash flow?

What is the nature, magnitude and direction of the impact of these variables on net cash flows (the study sample)?

Research Hypothesis

Certain financial variables have a significant impact on net cash flows, varying in terms of the degree, direction and nature of their effect – whether positive or negative – on these levels.

Research Objectives

The study aims to determine the impact of financial flexibility indicators. Based on the research problem and hypotheses, the study sought to determine the impact of financial flexibility indicators in achieving the following objectives:

- To present a theoretical framework on financial flexibility.
- To reveal the mechanism by which the independent (explanatory) variables influence cash flow levels.
- To conduct statistical tests and interpret the most significant results and the direction of the effect.

An analytical approach was adopted. The study relied on the Autoregressive Distributed Lag (ARDL) model and the parametric tests it entails, with the aim of estimating and testing the financial variables that influence net cash flow levels.

Scope of the Research

Geographical scope: The study covered a sample of companies (Baghdad Packaging Materials Company (Private Corporation), Baghdad Soft Drinks Company (Private Corporation), Modern Chemical Industries (Private Corporation), ready-to-wear clothing production, general trade, dates, tailoring and pharmaceuticals).

Temporal scope: The study covers the period 2010–2025, a period characterised by the availability of data and marked by political, economic and financial turning points, as well as covering the COVID-19 period.

Theoretical Framework

The Concept of Financial Flexibility

Financial flexibility is an important indicator in today's business environment, as companies are now classified as financially flexible, financially inflexible or even moderately flexible; however, every company strives to possess sufficient financial flexibility to capitalise on the most profitable investment opportunities. It contributes to the success, growth, expansion and sustainability of companies that enjoy this flexibility. When a business has financial flexibility, it can capitalise on available investment opportunities and alternatives. A company is considered financially flexible when it has sufficient borrowing capacity; this is regarded as a key strength for a business as it reduces financial risk and serves as a financial resource to cope with dynamic changes and risks in the financial environment [1], [2], [3], [4].

When companies lack this flexibility, they are unable to capitalise on many of the profitable investment options available. Consequently, companies without financial flexibility cannot maximise their value nor increase shareholder wealth [5].

Financial flexibility refers to a company's ability to raise and deploy funds at a relatively low cost and within a short period, thereby helping to maintain the company's operational capacity and ensuring the sustainability and continuity of its investments under conditions of uncertainty. It is, therefore, a company's ability to access and restructure its financing at the lowest possible cost, which enhances its capacity to raise capital and capitalise on investment opportunities swiftly. The literature supports the importance of financial flexibility in mitigating the effects of sub-optimal investments and poor performance. Financial flexibility allows firms to harness low-cost financing for investments whilst maintaining a prudent level of leverage, thereby mitigating investment shortfalls [6].

The historical development of the concept of financial flexibility

The concept of flexibility has undergone a remarkable intellectual and academic evolution over the past decades; indeed, this concept did not emerge in a single moment, but rather took shape through a gradual accumulation of knowledge to which numerous researchers have contributed. These turning points form the basis of disagreement amongst researchers or, for some, represent a theoretical build-up upon one another's work. Table (1) summarises the most important concepts that have been put forward to frame the concept and the field, as well as the epistemological focus, in order to identify the differences between these researchers in how they incorporate concepts or accommodate new variables; whilst some focused on the ability to secure low-cost financing when needed, others emphasised the capacity for rapid adaptation to shocks and unexpected changes, as follows:

Table 1. The evolution of concepts and the epistemological focus

Researcher and Year	Concept	Knowledge Focus
a. Guettala, A. (2026).	Financial flexibility, at its core, refers to the ability of firms to mobilise and deploy their financial resources to respond effectively to uncertain future events; it represents a forward-looking strategic policy for future circumstances	Focuses on the role of flexibility during periods of uncertainty and crises, particularly in determining the direction of future leverage
b. Sun, Y., & Zhang, G. (2025)	Financial flexibility serves as a strategic reserve of resources that helps alleviate funding constraints and enhances resilience in the face of risks.	It helps companies to diversify their sources of funding, stimulate investment in research and

Researcher and Year	Concept	Knowledge Focus
		development, alleviate funding constraints and reduce uncertainty.
c. Naz, F., Saleem, Q., & Riaz, S. (2024)	Having a reserve of borrowing capacity allows them to respond swiftly to unanticipated events and take advantage of future expansion opportunities.	Financing decisions in a changing financial environment and the retention of loans for investment and speculative purposes
d. Wu, W., Alkaraan, F., & Le, C. (2023).	Companies' ability to access capital at a low cost to meet unforeseen needs.	The accounting dimension in cost calculations to meet recurring banking and financial requirements, including the offset balance motive
Yanti, Y., Sastra, E., & Kurniawan, T. B. (2022).	A measure of a company's ability or inability to mobilise its financial resources when dealing with uncertain future risks.	Dealing with unexpected extreme traditional risk scenarios
e. Aleksandrovic, Gerasimenko Aleksej (2022)	and its ability to respond effectively to various types of unexpected shocks that may undermine the stability of its cash flow, as well as the ability to restructure the company's capital at low cost when necessary.	The strategic dimension involves managing the financial environment in terms of responsiveness and adaptability, as well as optimising costs, market share and flexibility in adjusting the capital structure
f. Teng, X., Chang, B. G., & Wu, K. S. (2021)	It also refers to 'access to and restructuring of finance at low cost', as well as 'a company's ability to respond effectively to unexpected shocks affecting cash flows or investment opportunities'. More specifically, financial flexibility refers to: - Obtaining or adjusting resources in a timely manner and seizing investment opportunities - Providing the necessary flexibility to cope with future unforeseen events and contributing to maximising the company's value	It encompasses several dimensions, including the market dimension and its relationship with the capital structure—the ability to adjust when needed—and the cognitive dimension relating to market conditions, such as bear markets or bull markets
g. Yasir, M. H., &	Taking measures aimed at	Investment and

Researcher and Year	Concept	Knowledge Focus
Alabassi, Z. M. (2020). 1890	reducing expected excess cash outflows and the company's ability to assess its resources for financing and restructuring at a low cost.	financing, as this involves a delay in the cash cycle and the ongoing adjustment of the capital structure within a system ranging from (0–1) – i.e. borrowing versus non-borrowing – based on cash flows (operating, financing and investment).

Source: Prepared by the researchers based on the sources cited in the table.

From the above, it is evident that the concept of financial flexibility has not remained fixed to a single meaning, but has evolved gradually through previous studies. Whilst early studies focused on the financing aspect (that is, a company's ability to borrow and maintain liquidity to cope with emergencies) the concept subsequently broadened to include the accounting dimension, represented by access to capital at a low cost, and then the strategic dimension, which links flexibility to a company's ability to adapt to unexpected shocks by adjusting its capital structure and reallocating resources.

On this basis, financial flexibility can be defined as a company's ability to cope with risks and sudden financial shocks by having access to sources of funding when needed, maintaining cash flows, and restructuring its capital structure in a way that ensures the continuity of its operations and its ability to capitalise on available opportunities. Financial flexibility is therefore one of the key indicators reflecting a company's ability to survive and grow in a changing and unstable business environment. Companies capable of increasing their financial flexibility are prepared and willing to face economic uncertainty and future recessions. Among the requirements for financial flexibility in companies are that shareholders prioritise financial flexibility over other factors; this entails reducing leverage ratios, sustaining lower dividend payouts, and using profits to buy back shares, thereby enhancing flexibility; Financial flexibility, in the face of information asymmetries and difficult financial challenges, enhances companies' ability to absorb economic uncertainty and capitalise on opportunities that may arise in the future. Thus, financial flexibility is key to better investment decisions, both in qualitative and quantitative terms. Capital structure is one of the key tools for building, investing in and achieving financial flexibility [7], [8], [9], [10], [11], [12].

The impact of financial flexibility on performance

Modigliani and Miller noted that financial flexibility is a reserve of borrowing capacity. It is the ability of companies to obtain financial resources in order to respond in a timely manner to any unforeseen future event affecting cash flow, thereby enabling them to maximise their value (corporate value). It therefore involves managing negative shocks to a company's income, avoiding financial crises, and reaping benefits should the economy experience a positive shock, as this facilitates investment opportunities. Unused borrowing capacity is an important source of financial flexibility. Financial flexibility is divided into

Structural flexibility: this refers to a company's ability to change its structure and operations to adapt to changes in the environment

Strategic flexibility: the company's ability to respond to changes in its external environment in a manner that ensures success, survival and continuity [13].

Operational flexibility: This refers to the ability to adjust production in response to market fluctuations, with a certain degree of capacity for scaling back.

Indicators of financial flexibility

The ability to secure financial resources to respond in a timely manner to any unforeseen future event affects cash flow; by doing so, a company can maximise its value. Financial flexibility indicators

act as a safety net that continuously protects the company from challenges. Analysts and debtors rely on a number of crucial financial indicators and ratios to assess a company's degree of financial flexibility; the one that illustrates how much an organization uses debt to finance its assets is arguably the most significant. [14], [15], [16], [17], [18], [19], [20].

Table 2. Financial Flexibility Indicators

Researcher and Year	Financial flexibility Indicators Used
a. Guettala, A. (2026).	- Cash flexibility, which represents realised liquidity (effectiveness). - Debt flexibility, which represents discretionary liquidity or the capacity for external financing.
b. Sun, Y., & Zhang, G. (2025).	- Cash flow flexibility. -Liability flexibility.
c. Naz, F., Saleem, Q., & Riaz, S. (2024)	Cash flows. Net cash flows from financing, investing, and operating operations levels of debt. Non-current liabilities divided by total equity is the debt-to-equity ratio; access to the capital market Market capitalisation = number of shares in issue multiplied by the current market price per share.
d. Wu, W., Alkaraan, F., & Le, C. (2023).	Cash reserves and financial leverage as an alternative measure of financial flexibility.
e. Yanti, Y., Sastra, E., & Kurniawan, T. B. (2022).	Earnings-to-total-capital ratio = retained earnings ÷ total assets. Cash reserves = Cash and short-term investments / Total assets. Operating cash flow to market capitalisation ratio = Operating cash flow / Market value of assets. Dividend payout ratio = Dividends per share / Earnings per share.
f. Zhang, H., Zhang, Z., & Steklova, E. (2020).	Financial flexibility = Cash flexibility + Liability flexibility Cash flexibility (cfrx) = (the company's cash reserves – the industry's average cash reserves). Liability flexibility (lfrx) = (average industry debt ratio – company debt ratio).
g. Yasir, M. H., & Alabassi, Z. M. (2020).	Debt Capacity = Tangible Assets / Total Assets. Cash reserves = (Total cash + Marketable investments) ÷ Total assets. Net cash flow = (operating, investing and financing activities) ÷ total assets.
h. Cherkasova, V., & Kuzmin, E. (2018).	Financial flexibility = financial leverage + industrial leverage ratio + market-to-book ratio (MTB) + scale + tangibility + profitability. Financial leverage ratio = Book value of total debt / Total assets. Industry leverage ratio = the average level of financial leverage in the industry in a given year, derived from the company's data. Market-to-Book Ratio (MTB)

Researcher and Year	Financial flexibility Indicators Used
	$= (\text{Book value of assets} + \text{Market value of shareholders' equity} - \text{Book value of equity}) \div \text{Book value of assets} \times 100\%$ Scale = the natural logarithm of total assets. Tangibility ratio = ratio of fixed assets to total assets Profitability (Return on Assets) = $\text{Net income} / \text{Total assets}$.
i. Hooshyar, A. M., Mohammadi, M. F., & Valizadeh, A. S. (2017).	Financial flexibility = $\text{operating cash flow} \div \text{total assets}$.

Source: Prepared by the researchers based on the sources cited in the table.

Some previous academic contributions relating to financial flexibility and its relationship with other variables

Financial flexibility has received increasing attention in contemporary financial literature due to its important role in enhancing companies' ability to face challenges and unforeseen economic circumstances and to adapt to rapidly changing environmental conditions. This section aims to present some previous Arabic and international studies that have addressed the concept of financial flexibility, its dimensions and determinants, as well as its relationship with financial performance indicators and market value. Furthermore, it forms a fundamental basis for understanding the data and variables of the present study, identifying the most significant findings of previous studies, and accurately pinpointing the research gap. Accordingly, the researchers review below the most relevant studies on financial flexibility:

Table 3. Reference Literature

1. Author and Year	Naz, F., Saleem, Q., & Riaz, S. (2024)
Title	The Role of Financial Flexibility in the Financial Performance of the Automobile Sector
Aim of the Study	The purpose of this study is to investigate, from an Asian viewpoint, how financial flexibility affects the automotive industry's financial performance between 2013 and 2022.
Study Population and Sample	The study population comprised the automotive sector in Pakistan, and the sample consisted of 19 companies.
Key Findings	The findings supported theories like the investment theory and the trade-off theory by demonstrating that the level of financial leverage has a substantial detrimental effect on investment activities and the Tobin's Q ratio. Nonetheless, it was discovered that return on assets (ROA) is positively impacted by the level of financial leverage. The goal of this study is to develop a model to evaluate the empirical effects of financial flexibility on financial performance, which is thought to be a crucial component that greatly increases a company's overall worth. The following dynamic model was created for testing purposes.:

1. Author and Year	Naz, F., Saleem, Q., & Riaz, S. (2024)
	$FP_{it} = \beta_1 FP_{it-1} + \beta_2 FF_{it} + \beta_3 NCF_{it} + \beta_4 DL_{it} + \beta_5 MCAP_{it} + \beta_6 FS_{it} + \beta_7 Liq_{it} + \beta_8 Tang_{it} + \varepsilon_{it}$ Using a dynamic panel model, the study includes lagged values of the dependent variables as independent variables. The purpose of this model is to investigate the impact of mean reversion behavior on business performance. According to this analytical method, a company's success in prior years affects its performance in the present year by enabling a quick performance adjustment. Tobin's Q, which is calculated as the ratio of market value to book value (Mbit), was used to evaluate the success of the company.
Key recommendations	Minimise the risk of financial distress to improve companies' financial performance.
2. The Researcher and the Sunnah	Al-Dabbagh, H. G. (2024).
Title	Financial Flexibility and Its Impact on the Firm's Value: A Study on a Sample of Firms Listed on the Iraq Stock Exchange.
Aim of the study	To evaluate, examine, and interpret the ways in which business value is impacted by financial flexibility.
Study Population and Sample	The study population consists of companies listed on the Iraqi Stock Exchange, whilst the sample comprised six companies for which data was available for the years 2012–2022.
Key Findings	An increase in financial flexibility – whether through a rise in the liquidity ratio or a decrease in the gearing ratio – is usually accompanied by a positive impact on the firm's value.
Key Recommendations	Companies should pay attention to financial flexibility ratios and adopt them as a guide for their operations, given their importance in managing their financing resources and protecting them from the risk of default.
3. Researcher and year	Wu, W., Alkaraan, F., & Le, C. (2023).
Title	The moderating effects of corporate governance and investment efficiency on the nexus between financial flexibility and firm performance.
Aim of the study	This study examines the effects of investment efficiency and corporate governance mechanisms as moderating factors on the relationship between financial flexibility and firm performance.
Study Population and Sample	The study population consisted of listed US companies, and the sample comprised 13,865 US companies selected from the BoardEx (WRDS) database for the period 2010–2022.
Key Findings	Financial flexibility enhances firm value and accounting performance, and that the combined

1. Author and Year	Naz, F., Saleem, Q., & Riaz, S. (2024)
Key recommendations	effect of corporate governance mechanisms and investment efficiency significantly strengthens this relationship and adds value to it. The study suggests that decision-makers and finance trainers favor corporate governance measures since they are associated with better financial flexibility and business performance. To improve governance standards and foster better financial decision-making, this may entail supporting boards of directors' increased efficacy, accountability, and openness.
4. Researcher and Year	Yanti, Y., Sastra, E., & Kurniawan, T. B. (2022).
Title	The Impact of Financial Flexibility and Business Risk on Capital Structure with Firm Size as a Moderating Variable.
Aim of the Study	This study examines the impact of financial flexibility and business risk, as well as the effect of firm size as a moderating variable, on capital structure
Study Population and Sample	The study population consists of industrial companies listed on the Indonesia Stock Exchange during the period from 2017 to 2019, whilst the sample comprised 52 companies
Key Findings	The results indicated that financial flexibility, measured by the ratio of profits to total capital, has a negative effect (-per) on the capital structure. Meanwhile, financial flexibility, measured by cash reserves, the ratio of operating cash flow to total cash flow, and the dividend payout ratio, had no significant effect on the capital structure.
Key recommendations	The profit-to-total-capital ratio, as an indicator of financial flexibility, has a significant impact on capital structure. It is therefore recommended that an optimal and balanced profit-to-total-capital ratio be maintained, so that the company's management can determine the capital structure in a way that maximises its value.
5. Researcher and year	Aleksandrovic, Gerasimenko Aleksej (2022)
Title	The Impact of Financial Flexibility on Company Value.
Objective of the Study	To determine the relationship between financial flexibility and company value
Study Population and Sample	The study population comprised companies listed on the S&P Index, excluding financial institutions (banks) and property companies. The sample consisted of 404 companies for which data was available for the period 2014–2020.
Key Findings	The study showed that financial flexibility indicators are directly related to firm value.
Key Recommendations	Using the calculated measure of financial flexibility helps companies formulate investment

1. Author and Year	Naz, F., Saleem, Q., & Riaz, S. (2024)
6. Researcher and year	Teng, X., Chang, B. G., & Wu, K. S. (2021)
Title	strategies and track their returns more easily. The role of financial flexibility in enterprise sustainable development during the COVID-19 crisis—a consideration of tangible assets.
Aim of the study	To explore the impact of financial flexibility on the performance of manufacturing firms
Study population and sample	The study population comprised manufacturing companies in Taiwan during the COVID-19 pandemic, using data from companies listed on the Taiwan Stock Exchange for the first and second quarters of 2020; the study sample consisted of 1,694 of these companies.
Key findings	Financial resilience had a significant positive impact on corporate performance (return on assets (ROA)) in the manufacturing sector, which relies heavily on assets.
Key recommendations	It is essential to maintain a reasonable level of financial flexibility to ensure the sustainability of companies. Greater attention must be paid to liquidity risk management to improve performance during crises and achieve sustainable development.
7. Researcher and year	Yasir, M. H., & Alabassi, Z. M. (2020).
Title	The role of financial flexibility in addressing financial failure caused by the COVID-19 pandemic: an analytical study of a sample of companies listed on the Iraqi Stock Exchange.
Objective	To measure the impact of financial flexibility on financial failure resulting from the COVID-19 pandemic.
Study Population and Sample	The study population comprised companies listed on the Iraqi Stock Exchange, and the sample consisted of 12 companies, using data for the period 2010–2018.
Key Findings	There is a statistically significant inverse relationship between financial flexibility and financial failure.
Key Recommendations	Increasing the ability to retain cash holdings and borrowing capacity to cope with negative shocks (during falling share prices) and to address crises resulting from extraordinary circumstances.
8. Researcher and year	Zhang, H., Zhang, Z., & Steklova, E. (2020).
Title	Do companies need financial flexibility for sustainable development?
Aim of the study	To examine the relationship between the level of cash holdings, liabilities and corporate social responsibility, and the impact of corporate social responsibility on financial flexibility.
Study Population and Sample	The study population consisted of companies listed on the Shanghai Stock Exchange, whilst the sample comprised 3,359 companies.
Key Findings	Corporate social responsibility has a significant

1. Author and Year	Naz, F., Saleem, Q., & Riaz, S. (2024)
Key Recommendations	impact on financial flexibility, and this relationship is stronger in companies facing environmental uncertainty and financial constraints. This implies that corporate social responsibility compensates for a lack of financial flexibility when evaluating companies under these circumstances. Companies should prioritise corporate social responsibility, as it enhances or compensates for any shortfall in financial flexibility.
9. Researcher and year	Ibe Chukwu, B., Kalu, A. E., Offor, F. O., & Udoh, B. E. (2019).
Title	Does the profitability of deposit-taking institutions increase with financial flexibility? Nigerian evidence. Does the profitability of deposit-taking institutions increase with financial flexibility? Nigerian evidence.
Objective	The impact of financial flexibility on the profitability of deposit-taking banks in Nigeria.
Study Population and Sample	The study population comprised Nigerian banks and their staff, and the sample consisted of 241 questionnaire respondents from six banks.
Key Findings	The study concluded that financial flexibility enhances banks' profitability
Key Recommendations	The study recommends that banks adopt an appropriate mix of financial flexibility to ensure increased and sustainable profitability.
10. Researcher and year	Cherkasova, V., & Kuzmin, E. (2018).
1. Title	Financial flexibility as an investment efficiency factor in Asian companies.
Aim of the study	To explore the impact of financial flexibility in companies on their investment efficiency.
Study Population and Sample	The study population comprised companies in the Asian region, whilst the sample consisted of 1,736 companies for which data was available for the period 2005–2015.
Key Findings	Companies with financial flexibility spend more on investments and implement more effective investment policies.
Key Recommendations	It is necessary to compare the financial flexibility of companies in developed and developing countries.
11. Researcher and year	Hooshyar, A. M., Mohammadi, M. F., & Valizadeh, A. S. (2017).
Title	Factors affecting the financial flexibility of firms listed on the Tehran Stock Exchange.
Aim of the study	To analyse the factors affecting financial flexibility based on data from companies listed on the Tehran Stock Exchange.
Study Population and Sample	The study population consisted of registered Iranian companies, and the sample comprised 106 companies over the period from 2009 to 2014.
Key Findings	Profitability enhances companies' ability to

1. Author and Year	Naz, F., Saleem, Q., & Riaz, S. (2024)
Key Recommendations	achieve financial flexibility; larger companies face greater challenges in maintaining their financial flexibility. It is important to improve operational efficiency and financial structure to achieve the required financial flexibility.
12. Researcher and year	Rahimi, K., & Mosavi, A. (2016)
Title	Value of financial flexibility and firm's financial policies: Empirical evidence from firms listed on the Tehran Stock Exchange.
Aim of the study	To investigate the relationship between financial flexibility and firms' financial policies.
Study Population and Sample	The study population comprised companies listed on the Tehran Stock Exchange, whilst the sample consisted of 155 companies for which data was available for the period 2010–2014.
Key Findings	Results: The level of financial flexibility is inversely related to companies' dividend payments, financial leverage and changes in the liquidity balance.
Key Recommendations	Companies seeking to improve their financial flexibility should reduce their dividend payments and use shares to pay dividends in order to strengthen their cash liquidity.

Source: Prepared by the researchers based on the sources listed in the table.

Review of the literature and research gap:

A review of the relevant studies yielded a number of observations, the most important of which are:

- Variation in the metrics used, which point to numerous methods for calculating financial flexibility.
- Differences in samples (spatial boundaries) and years (temporal) indicate the importance of tracking such literature to accurately identify the research gap, given the differing conclusions.
- The diversity of the sectors studied and the large number of companies assessed in these studies, which implies the potential for application to similar sectors and different companies.
- Consequently, the sample gap will be defined as follows:
 - The sample comprises the following companies: (Baghdad Packaging Materials Company (Private Corporation), Baghdad Soft Drinks Company (Private Corporation), Modern Chemical Industries (Private Corporation), Ready-to-Wear Garments Production, General Trade in Dates, tailoring, and Pharmaceuticals)
 - The years covered are 2010–2025.
 - Indicators and variables: These include Total Assets (TA), Total Current Assets (TCA) and Total Fixed Assets (TFA) – as these are the most common indicators in the macroeconomic framework – and the dependent variable expressed as net cash flows

Results and Discussion

The empirical framework for the impact of financial flexibility variables

Section One

Specifications of the empirical model and estimation methods

A quantitative model for measuring and analyzing the strength and direction of the relationship

between the explanatory and dependent variables (total assets TA, total current assets TCA, total fixed assets TFA)—the most widely used indicators for understanding the causal relationship—and the dependent variable, net cash flow NCF, the Autoregressive Distributed Lag (ARDL) model methodology and its associated standard tests were applied, using data for these variables and a time series covering the period 2010–2025, comprising annual data, with a total of 112 observations for the entire sample of companies.

First – Data Sources

Data on companies listed on the Iraq Stock Exchange

Second – Model variables

Dependent (outcome) variable: Net Cash Flow (NCF): This is considered one of the most important indicators used to measure asset performance.

Independent (explanatory) variables: In accordance with the division of the empirical framework into four companies, based on an analysis of financial information spanning sixteen years, the research focuses on the impact of cash flows on a set of financial measures that reflect the company's flexibility. The independent variables and their expected effects have been classified, as shown in Table (4), into:

Table 4. Independent Variables (Explanatory) and Their Expected Effects

T	Variables	Indicator	Code	Expected effect
1	Net cash flows	Net cash flow = (operating, investing and financing activities) / total assets.	NCF	Dependent variable
2	Total assets	The total value of all assets owned by the company.	TA	+
3	Current assets	Total current assets.	TCA	+
4	Fixed assets	Total long-term assets (buildings, machinery, equipment, land).	TFA	+

Source: Prepared by the researchers based on the sources cited in the table.

Based on the above, the estimation model can be formulated as a mathematical function upon which a standard equation is based, reflecting the impact of (total assets, current assets, fixed assets, book value) on the net cash flow ratio of companies, as follows:

Methodology for Estimating the Model

With the aim of obtaining accurate and realistic results, enabling a sound and logical analysis of the impact of financial variables on net cash flow, which can then be relied upon and utilised in making sound decisions, the study adopted the following steps:

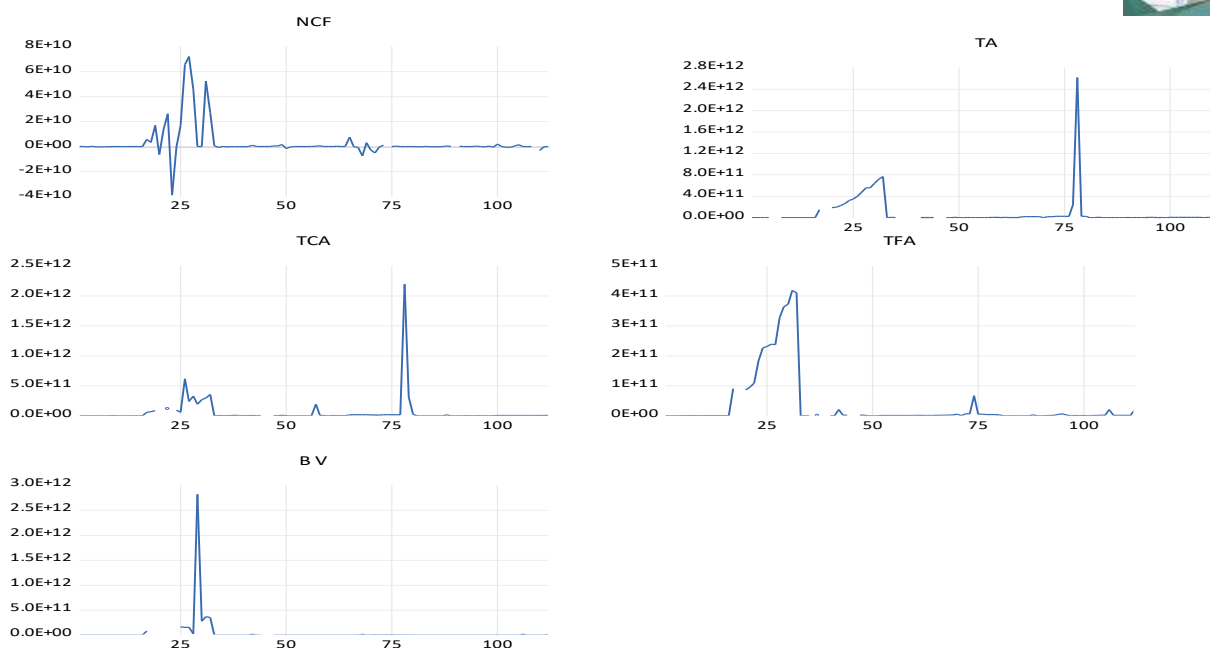


Figure 1. Line charts of the time series for the study variables

Source: Prepared by the researchers based on the results of the EViews 11 software

The results shown in Figure (1) for the time series of each variable indicate that a number of variables are non-stationary, due to the presence of a general trend. To confirm this, the researcher will conduct a unit root test by applying one of its indicators, namely the Augmented Dickey–Fuller (ADF) test, and its associated p-value, The hypothesis used in the test is:

- Null hypothesis: The time series is non-stationary.
- Alternative hypothesis: The time series is stationary.

Stationarity tests for the time series of the study variables

Time series stationarity tests are a fundamental and important prerequisite for conducting modern economic analyses, as these tests confirm the presence of stationarity in the time series, thereby providing an understanding that their levels remain constant over time; this is a fundamental prerequisite for conducting modern economic analyses. This is to avoid the phenomenon of spurious trends arising from the presence of a unit root in the data of these series. In the event that the series are non-stationary, appropriate measures are taken to treat them so that they become stationary by taking their first difference, and second difference if necessary. The Phillips–Perron (PP) test was chosen as an alternative to the Augmented Dickey–Fuller and Dickey–Fuller (DF and ADF) tests to determine whether the series is stationary or not. The PP test differs from these tests in that it uses non-parametric statistical techniques to account for model heteroscedasticity without the need to add lag terms, and it performs better by correcting for autocorrelation of the residuals in its unit root test equation.

Thirdly – the Autoregressive Distributed Lag (ARDL) methodology

One of the most significant models used in applying the cointegration and error correction methodology to test for the existence of a long-run equilibrium relationship between the dependent and independent variables is the Autoregressive Distributed Lag (ARDL) model, created by Pesaran et al. This model is more flexible and appropriate for use than other models that require all variables to be stationary at the same order. This methodology is used when all the variables under study are stationary at level $I(0)$, or stationary at the first difference $I(1)$, or a mixture of the two orders, However, the sole condition is that the time series are non-stationary at the second difference. The general form of the ARDL methodology is as follows:

$$\gamma_t a + \sum_{i=1}^p \gamma_i \gamma_{t-i} + \sum_{i=1}^k \sum_{j=1}^q \beta_{ij} x_{j,t-1} + \varepsilon_t$$

Where P denotes the lags of the endogenous variables q1 and q2. To apply this test, the following steps must be carried out:

Step 1: Use the Phillips–Perron (PP) test to determine whether the time series for the research variables are stationary [21].

Step 2: Use the tests suggested by Schumann and Hassan to determine the ideal lag length for the first-order differences of the study variables in the unrestricted error correction model. The Akaike information criterion (AIC) is the best test among them since it specifies a lag length of 20.

Step 3: Estimation of the Autoregressive Distributed Lag (ARDL) model (the initial model) within the UECM framework, which takes the following autoregressive form:

$$\Delta y_t = \alpha_0 + \sum_{i=1}^m \beta_i \Delta y_{t-1} + \sum_{i=0}^n \vartheta_i \Delta x_{t-1} + \lambda_1 y_{t-1} + \lambda_2 x_{t-1} + n_t$$

$\lambda_1 \lambda_2$: long-run coefficients.

$\vartheta \beta$: short-run parameters.

Δ : first differences of the variables, noting that the number of lags for the variables need not be the same.

n : the random error term, with a mean of zero, constant variance and no serial autocorrelation.

Step 4: Use the Bounds Test, which is based on the F-test (Wald test), to confirm the presence of a long-term link between the variables. This test compares the alternative hypothesis that there is cointegration between the variables under investigation with the null hypothesis that there is not. , in order to determine whether or not a long-run relationship exists between these variables, The following conclusion is reached by comparing the computed F-value with its tabulated values, assuming that the higher limit indicates that the variables are stationary at their initial difference and the lower limit indicates that all variables are stationary at the level.

We reject the null hypothesis and accept the alternative hypothesis, which states that there is cointegration between the variables, when the computed F-value is higher than the lower bound of its tabular value. The alternative hypothesis is rejected and the null hypothesis, which asserts that there is no multicollinearity between the variables, is accepted when the computed F-value is less than the lower limit of its tabular values.

If, however, the calculated F-value falls between the upper and lower limits of the table values, this indicates a case of ambiguity, meaning that it is not possible to detect the presence of cointegration between the variables [21].

Step 5: Where a long-run relationship exists between the variables, the long-run equation is estimated using the following formula:

$$y_t = \alpha_0 + \sum_{i=1}^p \vartheta_i y_{t-1} + \sum_{i=0}^q \delta_i x_{t-1} + \varepsilon_t$$

$\vartheta \delta$: coefficients of the variables

q, p : lag periods

ε : the random error term

Step 6: Derive the autoregressive model for the distributed time gaps of short-run dynamics in constructing the Error Correction Model (ECM), which takes the following form:

$$\Delta y_t = c + \sum_{i=1}^p \vartheta_i \Delta y_{t-1} + \sum_{i=0}^q \delta_i x_{t-i} + \psi ECT_{t-1} + v_t$$

ECT_{t-1} : error correction term

ψ : the error correction coefficient, which expresses the speed at which short-run imbalances are adjusted towards long-run equilibrium following any disturbance or disruption caused by an exogenous shock; it is a requirement that the value of ψ be negative and significant for the short-run model estimates to be accepted.

Fourth – Justification for the choice of the ARDL model

The ARDL methodology is characterised by its applicability regardless of whether the variables are stationary at level (0), stationary at first difference (I(1)), or a combination of both; however, the sole condition is that the time series are non-stationary at second difference.

It can be applied when sample sizes are small and yields good results, unlike most joint integration tests, which require a large number of observations to obtain more reliable results. This methodology eliminates problems related to autocorrelation, thereby providing efficient and unbiased estimates. It enables the separation of short-run from long-run effects, and then determines the integrative relationship between the dependent variable and the independent variables in a single equation rather than two separate equations. It allows for the inclusion of the greatest number of lag periods in order to achieve the best results.

Section Two

Model Estimation and Discussion of Results

The models were estimated using the estimation methodology described in the preceding section in order to measure, analyze, and interpret the nature, magnitude, and direction of the effect that the independent (explanatory) variables—that is, total assets (TA), total current assets (TCA), and fixed assets (TFA) for the period 2010–2025—and to confirm or refute the research hypotheses :

First: Estimation of the corporate model and discussion of its results

The results of the Phillips-Perron (PP) stationarity test, shown in Table (1) at a 5% significance level, indicate that none of the study variables (total assets (TA), total current assets (TCA) and total fixed assets (TFA)) nor the dependent variable (net cash flow (NCF)) were able to achieve stability or demonstrate statistical significance at this level, as the Prob. to fall below the 0.05 threshold, whether with a fixed effect or a time trend; however, they were able to demonstrate stability and statistical significance by not exceeding a Prob. 0.05 threshold. Upon retesting their stability at the first difference, the results confirmed their stability in all three cases—namely, the presence of a constant limit, the presence of a constant limit with or without a time trend—as the Prob. test values did not exceed the 0.05 threshold for these variables.

Table 5. Results of the Phillips–Perron test for the stationarity of the time series data for the study variables in their linear form

		Intercept		Trend and intercept		None	
		t-statistic	p-value	t-statistic	p-value	t-statistic	p-value
NCF(x1)	Level	-5.7751	0.0001	-5.899	0.0001	-5.61	0.0001
	Ist		0.0001		0.0001		0.0001
	difference	-8.8741		-8.828		-8.925	
TA(x ²)	Intercept			Trend and intercept		None	
		t-statistic	p-value	t-statistic	p-value	t-statistic	p-value
	Level	-7.31005	0.0001	-7.39261	0.0001	-	0.0001
TCA(x3)	Ist		0.0001		0.0001		0.0001
	difference	-10.2993		-10.2373		-	0.0001
	Intercept			Trend and intercept		10.3608	
TFA(x4)		t-statistic	p-value	t-statistic	p-value	t-statistic	p-value
	Level	-8.36459	0.0001	-8.33171	0.0001	-	0.0001
	Ist		0.0001		0.0001		0.0001
	difference	-11.2668		-11.2056		-	0.0001
	Intercept			Trend and intercept		11.3239	
		t-statistic	p-value	t-statistic	p-value	t-statistic	p-value
	Level	-2.46781	0.1264	-2.67264	0.2502	-	0.0219
	Ist	-11.2668	0.0001	-11.2056	0.0001	-	0.0001

		Intercept		Trend and intercept		None	
difference		Intercept		Trend and intercept		11.3239	
						None	
		t-statistic	p-value	t-statistic	p-value	t-statistic	p-value
BV(x5)					0.0001	-	0.0001
Level		-8.81598	0.0001	-8.93245		8.67657	
Ist					0.0001	-	0.0001
difference		-17.6962	0.0001	-17.6028		17.7889	

The table was compiled by the researchers based on the output from Eviews 11

The values in the table represent statistical values.

The lag length was determined using the 'Automatic selection of maximum lags' function in Eviews 11

Considering the aforementioned, the time series of the study variables meet the requirements for the test of cointegration between the study variables, which was examined using the Autoregressive Duration-Limited (ARDL) methodology suggested, because they are stable within the first-order difference limits and do not surpass the second-order difference threshold. by Pesaran et al.. Table (5) shows that all variables are stationary at the level, as evidenced by the statistical significance of the constant and trend terms, for which the P-values were less than 0.05. A precise and direct statistical interpretation of the results of the unit root test (unit root test) for this specific table. Using the Akaike Information Criterion (AIC) , which, after removing non-material variables from the model, specifies 20 lags for ARDL models, making it the best test for determining the number of lags and choosing the ideal lag length for determining the relationship between the independent variables (total assets TA, total current assets TCA, and total fixed assets TFA) and the dependent variable, net cash flow NCF. The results verify that a lag of four years (t-4) was used, as seen in Figure (2).

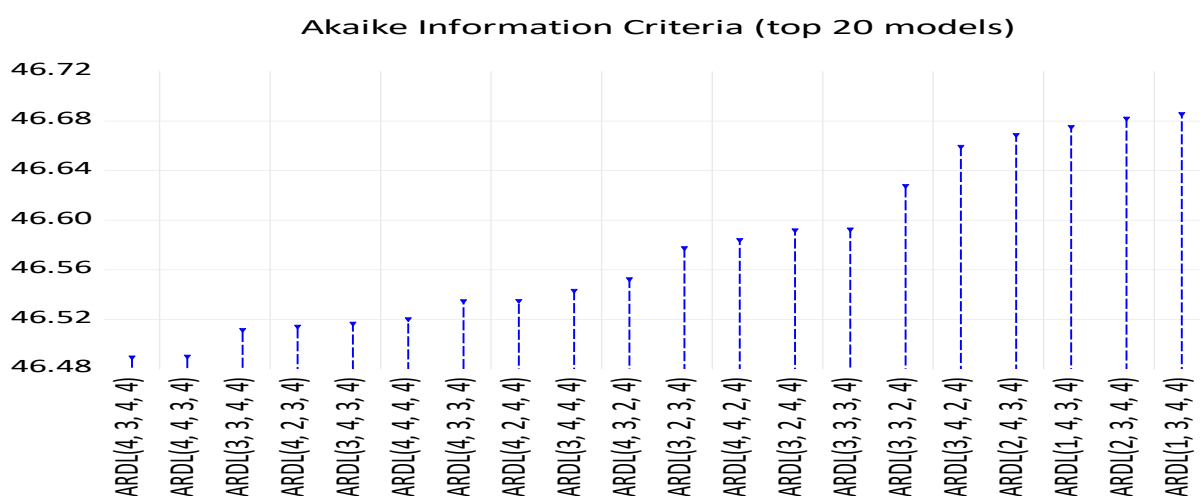


Figure 2. Testing the number of lag periods according to the AIC criterion for the model
Figure prepared by the researchers based on the results of the Eviews 11 software

The initial model was estimated based on the lag length tests, which showed that the ARDL model was built on the basis of a lag length between 3 and 4. This implies a lag length of 4 for the dependent variable and (3, 1, 3, 3.2) for the independent variables. The results are shown in Figure 2.

Table (6)

Results of the initial ARDL model estimation

Dependent Variable: NCF

Method: ARDL

Date: 13 May 26 Time: 12:58

Sample (adjusted): 5 108

Included observations: 65 after adjustments

Maximum dependent lags: 4 (Automatic selection)

Model selection method: Akaike information criterion (AIC)

Dynamic regressors (4 lags, automatic): TA, TCA, TFA

Fixed regressors: C

Number of models evaluated: 500

Selected model: ARDL(4, 3, 4, 4)

Note: the sample for the final equation is larger than the selection sample

Prob.*	t-Statistic	Standard Error	Coefficient	Variable
0.6790	0.416469	0.127706	0.053186	NCF(-1)
0.0014	3.407020	0.115152	0.392326	NCF(-2)
0.0006	-3.681180	0.117400	-0.432170	NCF(-3)
0.1143	1.609895	0.150042	0.241552	NCF(-4)
0.2337	-1.206786	0.043879	-0.052953	TA
0.6351	0.477741	0.011407	0.005450	TA(-1)
0.0023	-3.224381	0.009094	-0.029322	TA(-2)
0.0597	1.930398	0.009534	0.018405	TA(-3)
0.6020	0.525085	0.013574	0.007127	TCA
0.7835	-0.276421	0.013601	-0.003760	TCA(-1)
0.0032	3.109386	0.010969	0.034108	TCA(-2)
0.0161	-2.498551	0.010533	-0.026318	TCA(-3)
0.0597	1.930387	0.001791	0.003458	TCA(-4)
0.0908	1.727637	0.077047	0.133109	TFA
0.2558	-1.150779	0.024153	-0.027795	TFA(-1)
0.2634	-1.132136	0.026265	-0.029736	TFA(-2)
0.0000	10.03056	0.066370	0.665725	TFA(-3)
0.0000	-9.481864	0.070728	-0.670631	TFA(-4)
0.7030	0.383614	4.12E+08	1.58E+08	C
2.06E+09	Mean dependent variable		0.943561	R-squared
9.30E+09	Standard deviation of dependent variable		0.921477	Adjusted R-squared
46.43946	Akaike information criterion		2.61E+09	Standard error of regression
47.07505	Schwarz criterion		3.13E+20	Sum of squared residuals
46.69024	Hannan-Quinn criterion		-1490.282	Log-likelihood
2.643214	Durbin-Watson statistic		42.72465	F-statistic
			0.000000	Prob(F-statistic)

*Note: p-values and any subsequent tests do not account for the model selection.

The table was compiled by the researchers based on the results of the 'E-Views 11' software

The results of the initial estimation of the ARDL model for the relationship between Net Cash Flow (NCF), Total Assets (TA), Total Current Assets (TCA), and Total Fixed Assets are shown statistically in Table 6. The model's high explanatory power is indicated by the value of the R- (R² = 0.943561). The model's overall significance was confirmed by the F-statistic value of 42.72465, since the Prob. (F-statistic) was less than 0.05. This means that the next step is to confirm the existence of a long-run equilibrium relationship between the study variables in accordance with the ARDL model, based on the Bound Test.

Table 7. Bound Test for cointegration between the variables of the ARDL Long Run Form and Bounds Test

Dependent Variable: D(NCF)

Selected Model: ARDL(4, 3, 4, 4)

Case 2: Restricted Constant and No Trend

-Date: 16/05/26 Time: 01:25

Sample: 1,112

Included observations: 65

Critical Value Bounds			62.74150	qF-statistic
I1 Bound	I0 Bound	Sign.		
3.2	2.37	10%	3	K
3.67	2.79	5%		
4.08	3.15	2.5%		
4.66	3.65	1%		

The table was prepared by the researchers based on the results of the Eviews 11 software

The calculated F-value exceeded the upper critical limit at this significance level, indicating acceptance of the alternative hypothesis and rejection of the null hypothesis, confirming the existence of a cointegration relationship between (Net Cash Flows (NCF), Total Assets (TA), Total Current Assets (TCA), and Total Fixed Assets (TFA)) at a significance level of 0.05. As a result, there is a cointegration relationship between the study variables, which is compatible with economic theory and shows that there is a long-run equilibrium link between the model variables and net cash flow. The short-run and long-run coefficients were calculated based on the bounds test results, which showed that the variables in the model had a cointegration relationship., and the results are presented in Tables (8) and (9).

Table 8. Long-run estimates and error corrections for the variables for the period (2010–2025)

ARDL Long-Run Form and Bounds Test				
Dependent Variable: D(NCF)				
Selected Model: ARDL(2, 3, 2, 3)				
Case 2: Restricted Constant and No Trend				
Date: 06/06/26 Time: 05:21				
Sample: 1,112				
Observations included: 109				
Prob.	t-statistic	Standard error	Coefficient	Variable
0.0000	-10.28826	0.017119	-0.176122	TA
0.0000	10.45031	0.018839	0.196873	TCA
0.0000	14.79030	0.015055	0.222666	TFA
0.1223	-1.559287	5.15E+08	-8.03E+08	C

EC = NCF - (-0.1761*TA + 0.1969*TCA + 0.2227*TFA - 802705978.9660)

The table was prepared by the researchers based on the results of the Eviews 11 software. The results of the t-test indicate that the variables TA, NCF and TCA were statistically significant in the long run, as the probability values (Prob) were 0.0000, which is below the significance level (0.05). This indicates a statistically significant effect of these variables on the dependent

variable. The results also showed that TA had a negative effect, whilst the effects of both NCF and TCA were positive; however, the constant C was not statistically significant, as the probability value was 0.1223, which is greater than 0.05 and thus exceeds the significance level.

The results in Table 8 indicate that the independent variables have long-term financial effects on net cash flow (NCF). The results showed that the total assets (TA) variable has a negative effect on net cash flow, suggesting that an expansion in total assets does not necessarily lead to an increase in cash flow, and may reflect the channelling of resources towards illiquid assets or investments that require a longer period of time before generating cash returns.

Conversely, total current assets (TCA) were found to have a positive and significant effect, reflecting the importance of current assets in enhancing liquidity and improving the company's ability to meet its short-term obligations, thereby increasing net cash flows. The results also showed that total fixed assets (TFA) have a positive and statistically significant effect on net cash flows, indicating that investment in productive fixed assets contributes to increasing production capacity and improving operating revenue, which has a positive impact on cash flows in the long term. The constant term (C), however, was not statistically significant, which means that net cash flows are determined primarily by the financial variables included in the model rather than being influenced by unaccounted-for constant factors.

The results in Table 8 show that the study variables had varying effects on net cash flows over the long term. It was found that the total assets (TA) variable has a negative and statistically significant effect, suggesting that an increase in total assets may require the deployment of substantial financial resources in investments, which results in a reduction in available net cash flows. Conversely, both total current assets (TCA) and total fixed assets (TFA) showed a positive and statistically significant effect, reflecting the importance of improving the management of current assets and investing in productive fixed assets in supporting cash flows and enhancing the company's ability to generate cash from its operating and investing activities. The constant (C), however, was not statistically significant, with a p-value of (0.1223), indicating that its impact on explaining changes in net cash flows is not substantial, and that the changes are primarily attributable to the independent variables included in the model.

Table 9. Short-term estimates of the independent variables

ARDL Error Correction Regression Dependent Variable: D(NCF) Selected Model: ARDL(2, 3, 2, 3) Case 2: Restricted Constant and No Trend Date: 06/06/26 Time: 05:37 Sample: 1,112 Included observations: 109				
Prob.	t-statistic	Standard error	Coefficient	Variable
0.0000	6.027720	0.077194	0.465306	D(NCF(-1))
0.0000	-7.455949	0.009727	-0.072523	D(TA)
0.0000	5.192317	0.016987	0.088202	D(TA(-1))
0.0043	2.928396	0.003174	0.009296	D(TA(-2))
0.0000	8.663252	0.011370	0.098498	D(TCA)
0.0000	-4.565284	0.017142	-0.078257	D(TCA(-1))
0.0000	4.254386	0.018639	0.079299	D(TFA)
0.0000	-5.465795	0.025135	-0.137381	D(TFA(-1))
0.0927	-1.698653	0.017339	-0.029453	D(TFA(-2))
0.0000	-12.89065	0.117902	-1.519831	CointEq(-1)*

The table was prepared by the researchers based on the results of the Eviews 11 software

To determine whether the estimated model followed a normal distribution, the Jarque-Bera test shown in Figure 3 was applied. The results confirmed that the estimated model did indeed follow a normal distribution, as the Jarque-Bera probability value exceeded the 0.05 threshold, which supports the acceptance of the hypothesis that the residuals are normally distributed. The test results indicate that most of the model's coefficients were statistically significant at the 5 per cent significance level, where the probability values (Prob) were less than 0.05, indicating that the variables have a statistically significant effect on the dependent variable as shown in table 10.

Table 10. Test of Significance of Parameters (Test of Individual Coefficients' Significance)

Interpretation	Prob.	t-Statistic	Std. Error
Positive moral impact	0.0000	6.027720	0.077194
Negative statistical effect	0.0000	-7.455949	0.009727
Positive significant effect	0.0000	5.192317	0.016987
Negative statistical effect	0.0043	2.928396	0.003174
Positive significant effect	0.0000	8.663252	0.011370
Negative significant effect	0.0000	-4.565284	0.017142
Positive statistical effect	0.0000	4.254386	0.018639
Negative significant effect	0.0000	-5.465795	0.025135
Non-significant positive	0.0927	-1.698653	0.017339
Significant negative effect	0.0000	-12.89065	0.117902

The table was prepared by the researchers based on the results of the E-Views 11 software. The results in Table 9 indicate that most of the model's coefficients were statistically significant at the 5 per cent significance level, as the probability (Prob) values were less than 0.05, indicating a statistically significant effect of the variables on net cash flow (NCF) in the short term. The variable D(TA) showed a statistically significant negative effect, suggesting that an expansion in total assets initially requires the use of cash liquidity to finance investments, which leads to a decline in net cash flow in the short term, whilst the effect shifts to a statistically significant positive effect in the first and second slowdown periods, D(TA(-1)) and D(TA(-2)), reflecting that these investments begin to generate cash returns and that cash flows improve over time. The variable D(TCA) also showed a statistically significant positive effect, indicating that an increase in current assets enhances liquidity and working capital, which has a positive impact on net cash flows, whilst the effect of D(TCA(-1)) was statistically significant and negative, which may reflect the use of these assets to settle liabilities or finance operating activities in the subsequent period. The results showed that D(TFA) had a statistically significant positive effect, suggesting that investment in fixed assets helps to support operating activities and improve cash flows, whilst the effect of D(TFA(-1)) was statistically significant and negative, likely due to subsequent operating or financing costs associated with those investments, whilst the effect of D(TFA(-2)) was not statistically significant at the 5 per cent level, with a p-value of 0.0927, indicating a weak impact on net cash flows during that period. The error correction coefficient, CointEq(-1), was negative and statistically significant, reflecting the existence of an effective mechanism for correcting any short-term deviations and returning to the long-term equilibrium path, indicating the ability of companies to restore the stability of their cash flows after experiencing shocks or temporary changes.

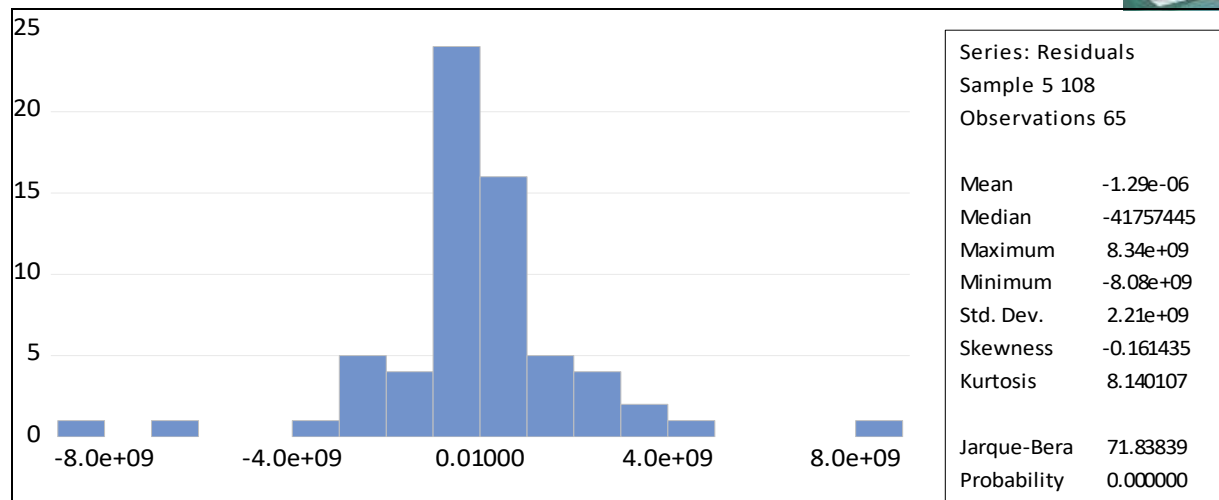


Figure 3. Jarque-Bera test of normality for the model

Figure prepared by the researchers based on the results of the Eviews 11 software

To ensure that the estimated model was free from the problem of autoregressive conditional heteroscedasticity (ARCH), the ARCH test was employed; the results of which are presented in Table (11), which confirmed that the model is free from the problem of random error variance, as the F-statistic p-value was below the 0.05 threshold.

Table 11. Test of the Hypothesis of Constant Variance of Error Terms (ARCH Test)

Heteroscedasticity Test: ARCH

0.0422	Prob. F(31,106)	4.227110	F-statistic
0.0418	Prob. Chi-Square(1)	24.04891	Obs*R-squared

The table was prepared by the researchers based on the results of the Eviews 11 software

To ensure that the estimated model was free from autocorrelation, the Serial Correlation LM Test was applied; the results of which are presented in Table (12) and which confirmed that the model was free from autocorrelation, as the F-statistic probability exceeded the 0.05 threshold.

Table 12. Serial Correlation LM Test for Autocorrelation

Breusch-Godfrey Serial Correlation LM Test

0.2910	Prob. F(2,93)	1.250845	F-statistic
0.2399	Prob. Chi-square (2)	2.855282	Obs*R-squared

Prepared by the researchers based on the results of the E-Views 12 software

To test for structural invariance of the estimated model parameters over the study period, the CUSUM and CUSUMSQ tests were employed; their results are presented in Figure 4, which indicate that the estimated coefficients of the model are structurally stable throughout the study period. This supports and demonstrates the relative structural stability of the study variables as well as the model's consistency, at a level of 80 per cent, as confirmed by the CUSUM plot, CUSUMSQ falling within the critical limits at the 5 per cent level. This demonstrates that the model's long-term estimates are stable and consistent with the short-term parameters, making them suitable for analysis.

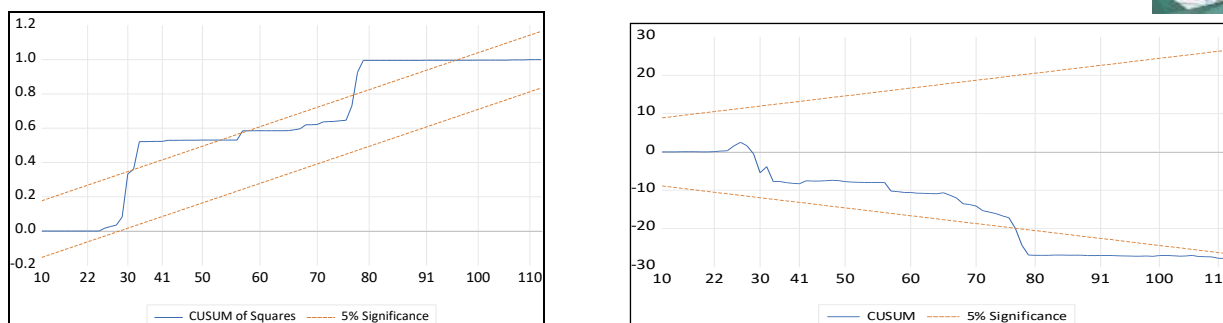


Figure 4. Structural stability test for the model

Figure prepared by the researchers based on the results of the E-Views 11 software

Conclusions and Recommendations

First: Conclusions

1. Strategic pillar: Financial flexibility is a fundamental criterion for securing long-term financing and directing decisions towards profitable investment opportunities to enhance competitiveness.
2. Net cash flows (the key requirement): The empirical results showed that the structural determinants of assets—total assets (TA), fixed assets (TCA) and current assets (TFA)—are the most influential and effective factors in determining the levels and growth of companies' net cash flows.
3. Financial flexibility has a positive impact on cash holdings and overall liquidity, and there is a statistically significant relationship between the debt-to-equity ratio and companies' financial recovery.
4. The results of the autoregressive distributed lag (ARDL) model demonstrated a wide variation in the financial and macroeconomic variables affecting net cash flows.
- 5- Net cash flows (the primary variable): The empirical results showed that the structural determinants of assets(total assets (TA), fixed assets (TCA) and current assets (TFA))are the most influential and effective factors in determining the levels and growth of companies' net cash flows.
6. It is financial flexibility that determines the optimal capital structure. All organisations worldwide must adapt to unexpected opportunities and needs, and this is not possible without sufficient financial flexibility. The level of financial flexibility is reflected in companies' ability to refinance themselves at low cost, as well as in their ability to increase their operating cash flows and sell their assets without disrupting the company's operations.

Secondly: Recommendations

In line with the above conclusions, a number of recommendations can be formulated, the most important of which are as follows :

1. Companies must be guided to enhance their financial flexibility and improve their asset structure (total, fixed and current assets) in order to increase net cash flow levels and achieve financial flexibility.
2. Companies should establish a clear policy for allocating net cash flow surpluses arising from current and fixed assets, and invest them in highly liquid, short-term assets. This enhances the company's ability to cope with sudden crises and supports levels of financial flexibility without the need for external borrowing.
3. The diversity of financial and economic variables influencing net cash flows, enable decision-makers to utilise them to influence net growth levels.

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