

The Effect of Free Cash Flow on the Efficiency of Investment Decisions in a Sample of Iraqi Companies Listed on the Iraqi Stock Exchange

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Abstract: The research aims to measure the impact of free cash flow on the efficiency of investment decisions, and this goal is achieved by identifying the concept of free cash flow and the concept of the efficiency of investment decisions, and identifying the impact of cash flow on the efficiency of investment decisions, by relying on annual financial reports data for a sample of Iraqi companies Listed in the Iraq Stock Exchange, which numbered (27) companies, represented by (15) companies from the banking sector, (8) companies from the industrial sector and (4) companies from the insurance sector for the period from (2011-2020).

For the purpose of measuring free cash flow, the model (Brigham & Houston, 2019) was used, and the model (Richardson, 2006) was used to measure the efficiency of investment decisions.

The research reached several results, the most important of which is that there is a statistically significant effect of free cash flow on the efficiency of investment decisions.

The most important thing recommended by the researcher is the need for companies listed in the Iraqi Stock Exchange to provide sufficient information about the free cash flow (FCF) and optional disclosure about it because this disclosure provides important information for all parties that have interests and objectives linked to the firm, and helps them in making investment decisions related to the firm as well. Study and analyze the financial data for making investment decisions in detail and follow the methods of evaluating investment projects (economic feasibility study) to prevent wrong (sub-optimal) investment decisions that result in huge irreversible losses.

Keywords: Investment, Stock Exchange..

Introduction

Net cash from operating activities provides an indication of the firm's ability to generate cash from its core activities, but analysts note that this figure. Insufficient, as the net cash provided by the operating activities

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is not taken into consideration with what companies must invest in new assets at the level of their current operations or expansion, and therefore it was necessary to have a quantitative measure that shows the firm's ability to exploit its money from operational activities through cash. The free cash flow was a feasible indicator as it provides an additional insight into the firm's ability to generate cash from its main activities. It describes the net cash provided and the surplus by operating activities after adjusting for capital expenditures and cash dividends.

Investments are the firm's lung through which it breathes for the purpose of achieving growth in profits and the sustainability of its continuity in the long term. The efficiency of investment decisions constitutes the cornerstone for achieving the firm's goals and opportunities for its growth and survival in the competitive market, and one of the important things that should be taken into account when making investment decisions is the size The optimum investment, its timing, and the methods of providing the necessary funds for it. As well as the expected return on investment. And other factors, and there is no doubt that successful investment decisions depend on useful and correct information that directs the decision towards the desired results. Which enables the firm to attract capital that can be employed in the optimal areas for efficient investment, which is supposed to contribute to enhancing the value of the firm in the long term.

Research Importance

It is hoped that this research will be of interest to those in charge of managing the stock market to the necessity of educating the importance of analyzing the impact of free cash flow on the decisions taken by managers because it is expected to provide important information that would enhance the value of the firm and thus market efficiency and activate the movement of stock trading in it. .

The success and continuity of companies and the maximization of their value in the long term is the first goal for investors, as well as being beneficial to many relevant parties and leads to the development of the economy in general. And the firm's success is an analysis of the effect of free flow and its use in creating new investments that reflect the efficiency of its investment decisions and for the purpose of organizing and directing investment in a way that serves the firm's interest away from the opportunistic behavior of corporate managers. This good analysis may contribute to reducing agency costs and increasing the firm's profits and value in the financial market.

Research problem

Recently, many researchers have highlighted the search for variables that have a significant impact on the diversity of investment opportunities through the efficiency of investment decisions taken by the executive body in the economic unit. One of these variables that affect the efficiency of investment decisions is the free cash flow. There are free cash flows, which led to the search for the best investment decisions, in addition to the fact that the diversity of investment decisions is affected by the level of free cash flow in the economic unit, which is reflected on the value of the firm. Therefore, the research problem can be represented by the following questions:

- Is there an impact of free cash flow on the efficiency of investment decisions?

Research Aims

The research seeks to achieve a set of goals, most notably the following: -

A statement of the concept of free cash flow, its types, importance and methods of measuring it.

Understand the concept of the efficiency of investment decisions, their types and methods of measurement.

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Testing the impact of free cash flow on the efficiency of investment decisions.

Research Hypothesis

For the purpose of achieving the objectives of the research and answering the questions raised in the research problem, the following hypothesis was formulated: -

- There is a statistically significant effect of free cash flows on the efficiency of investment decisions.

Community and Sample Research

The research community consists of a sample of the (27) Iraqi commercial companies listed in the Iraqi Stock Exchange, represented by (15) companies from the banking sector, (8) companies from the industrial sector and (4) companies from the insurance sector for the period from (2011). -2020). By (270) views, this sector was chosen for its great importance for investments in it.

Free cash flow concept

The concept of free cash flow has appeared in the financial accounting literature under a variety of terms such as excess cash flow, extra cash flow, cash flow that can be distributed to shareholders, and cash flow that can be expendable by managers (12 Bhandari & Adams, 2017:), Jensen)) The first to refer to the concept of free cash flow in 1986 and defined it as cash flow in excess of what is required to finance projects with a positive net present value (NPV (Na, 2018: 1)), and he defined (Trisna & Gayatri, 2019) free cash flow is the firm's image of flows Cash available in the accounting period after deducting operating costs and expenses (Trisna & Gayatri, 2019:487), and (Qeshta, 2020) referred to the concept of free cash flow as the additional funds that can be exploited for investment purposes to generate future cash flows (Qeshta, 2020: 32) According to Kieso, free cash flow is the cash flow available from operating cash flows and this flow can be used to pay off debts, increase investment, purchase treasury shares, or increase liquidity (Eklesiawati &Novyarni,2020:4).

(Nurdani & Rahmawati, 2020) believes that the free cash flow is the remaining cash that is distributed to investors (shareholders and creditors) after the firm invests in the necessary fixed assets and working capital to maintain the continuity of operating activities (Nurdani & Rahmawati, 2020: 104). As defined (Sapuan et al, 2021), free cash flow is a measure of the firm's ability to generate revenue (Sapuan et al, 2021:212) and (Putri & Azzahra, 2022) sees free cash flow as the money given to creditors or shareholders in the form of dividends Without affecting the firm's growth rate (Putri & Azzahra, 2022:159).

Uses of free cash flow

Free cash flow can be used in the following expenditures (Al Kubaisi, 2016: 13) and (Alnawaiseh et al, 2017: 1):

1. Payment of cash dividends to shareholders.
2. Payment of debts and interest owed to creditors.
3. Purchase of short-term investments for trading in non-operating assets.
4. Reducing the debts incurred by the firm.
5. Buy back shares.

The importance of free cash flow

Cash flow is of great importance to companies and users of financial statements that can be summarized as follows:

1. Checking creditworthiness

Financial analysts and lenders are interested in the financial position of the firm, specifically the firm's credit efficiency and the level of liquidity through several financial indicators, the most important of which is the free cash flow index (Abbas, 2021: 24). Usually, the positive free cash flow is an indication that the firm is able to meet its financial obligations. Free cash on the provision of internal financing to finance investment opportunities that will lead to the enhancement of shareholder wealth. The free cash flow of the firm also allows the firm to increase dividends to shareholders, develop new products, pay off debts and buy back shares (Mundia, 2016:1-2).

2. Measuring financial performance

Free cash flow represents one of the tools for measuring financial performance by clarifying the amount of cash owned by the firm after the required operating assets have been developed (Tristiarini & Prawiwi, 2017: 184), the backbone of any firm's performance is free cash flow. Free cash flow is used to evaluate and analyze the financial position The firm's internal financing is often backed by free cash flow and is the source for improving the firm's financial performance if used effectively in attracting investments can lead to massive growth of the firm and increase the profitability of the firm Lenders are always looking for companies with high cash flow as they assess the financial stability of the firm Shareholders who are looking for a safe haven for their surplus funds are more likely to invest in companies with high cash flow Financial performance is used to assess the success of the firm i. Komal et al, 2022:545).

3. Investing in new assets

Effective use of free cash flow will lead to managers making optimal investment decisions as managers use free cash flow on profitable (positive NPV) projects (Iskandar et al, 2012:76), and sometimes managers use free cash flow to purchase new assets (Widyanti & Widyasari,2019:34).

4. Attracting investors

Investors consider companies that have a high free cash flow as more beneficial, that investors are always keen to invest in companies with high cash flows if they often evaluate the work of any firm on the basis of two criteria The first criterion is the extent of financial flexibility that the firm enjoys The second criterion How easy is it for the firm to repay its loans, so free cash flow plays a key role in the investment decision-making process for investors, as it is one of the important indicators that investors rely on in evaluating companies' performance, so many investors rely on free cash flow predictions and are interested in knowing how much Free cash flow in the firm so that they can get a proper idea of the profits that they can get when investing in these companies (Ambreen & Aftab, 2016:113), and therefore companies that have high free cash flow easily attract investors looking for effective opportunities to invest their surplus money Creditors and investors are keen to put money in companies with high free cash flow because it is more profitable (Ajmal et al, 2022). :183).

Free cash flow is more suitable for administrative purposes

The traditional profits that companies disclose in the financial statements contain items such as cash dividends, expansions, and contingency provisions, while free cash flow does not contain those items, so it is more suitable for administrative purposes (Al-Zayyat, 2014: 14).

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Free cash flow measurement method

Model (Brigham&Houston,2019)

The free cash flow according to this model is defined as the amount of cash that can be withdrawn without harming the firm's ability to work and produce future cash flow. The free cash flow is calculated according to the following equation:

$$FCF = EBIT (1-T)+DE-CAPEX+\Delta WC$$

It represents:

FCF = Free Cash Flow

EBIT = Profit before interest and taxes

(1-T) = (1- tax rate)

DE = extinction and amortization

CAPEX = capital expenditure

ΔWC = change in net working capital

If the result of the previous equation is positive, the positive free cash flow indicates that the firm is generating more than enough cash to finance the current investments in fixed assets and working capital, and on the contrary, if the result of the previous equation is negative, negative free cash flow indicates that the firm is not It has enough internal funds to finance investments in fixed assets and working capital, which will be considered in the practical side of the research (Brigham & Houston, 2019:81).

Table (1) free cash flow measurement results for a sample of Iraqi banks listed in the Iraq Stock Exchange

2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	company
287,093,685,250.00-	295,515,202,750.00-	305,526,843,450.00-	305,631,892,000.00-	298,564,007,250.00-	287,108,057,350.00-	273,392,932,000.00-	182,125,445,850.00-	152,851,754,900.00-	134,801,583,750.00-	Credit Bank
300,689,664,595.55-	242,621,102,720.85-	262,971,283,541.95-	259,421,754,650.00-	263,336,370,850.00-	249,948,453,800.00-	243,111,071,400.00-	143,287,897,450.00-	99,062,887,500.00-	98,109,905,300.00-	investment bank
255,309,526,000.00-	240,109,095,400.00-	242,655,670,550.00-	264,193,285,900.00-	248,318,573,500.00-	244,030,318,448.50-	243,052,712,470.90-	149,940,895,763.80-	139,163,910,950.00-	99,318,628,100.00-	Al Ahli Bank
261,190,574,799.65-	262,646,546,000.45-	266,457,029,093.45-	269,441,194,028.95-	268,455,788,308.10-	260,804,960,018.50-	257,599,153,922.45-	233,732,123,711.80-	86,928,020,960.25-	89,799,631,795.75-	Gulf Bank
55,095,198,300.00-	174,194,570,350.00-	178,159,977,300.00-	126,984,885,150.00-	145,832,479,600.00-	185,262,980,642.85-	216,853,100,767.40-	111,884,196,110.45-	111,037,002,256.55-	69,446,153,997.70-	Middle East Bank
140,516,693,612.15-	214,403,664,416.20-	258,667,100,524.35-	261,300,222,268.75-	257,084,665,057.60-	257,721,886,184.95-	254,471,711,930.35-	215,825,710,488.05-	202,257,466,091.85-	70,990,583,654.35-	Mosul Bank
146,285,726,450.00-	197,287,481,963.65-	193,170,076,492.30-	194,177,085,811.25-	228,571,963,340.45-	166,336,759,802.20-	114,361,702,017.50-	115,470,493,880.40-	78,828,240,829.10-	81,888,198,685.90-	Babel Bank
184,208,602,500.00-	223,333,144,100.00-	217,095,543,750.00-	120,151,122,800.00-	100,383,810,900.00-	198,465,040,950.00-	205,130,755,000.00-	208,524,000,650.00-	136,496,268,300.00-	85,101,625,750.00-	Baghdad Bank
231,955,886,150.00-	238,642,972,450.00-	248,477,818,350.00-	253,952,981,550.00-	243,724,450,800.00-	238,545,541,800.00-	238,229,896,750.00-	177,654,448,450.00-	141,409,202,050.00-	98,348,485,950.00-	Sumer Bank
236,528,477,200.00-	235,264,366,150.00-	233,146,848,450.00-	223,803,969,750.00-	210,367,053,900.00-	229,899,484,400.00-	233,796,314,600.00-	193,314,189,439.50-	138,846,445,227.00-	61,981,522,922.70-	Ashur Bank
238,544,323,600.00-	237,091,270,550.00-	241,220,207,850.00-	239,914,299,650.00-	239,283,054,400.00-	241,410,608,643.55-	235,235,135,679.40-	153,279,640,989.70-	91,788,277,584.95-	52,111,487,189.10-	Union Bank
270,101,995,750.00-	263,772,354,250.00-	272,017,491,700.00-	280,369,868,250.00-	273,540,333,150.00-	265,882,736,083.55-	273,885,550,717.85-	185,674,252,412.80-	129,052,082,819.15-	127,064,883,922.35-	Iraqi Commercial Bank
189,965,750,000.00-	188,781,650,000.00-	236,316,547,100.00-	245,686,344,450.00-	262,170,712,550.00-	253,755,619,300.00-	230,139,886,350.00-	197,944,500,500.00-	36,718,392,350.00-	62,416,615,400.00-	North Bank
248,682,405,049.05-	241,260,316,948.00-	247,310,459,520.70-	258,208,801,632.75-	273,998,448,467.30-	255,721,143,533.10-	252,363,597,347.55-	246,811,285,886.05-	229,865,147,232.85-	94,476,708,933.35-	Al-Mansour Bank

154,489,302,050.00-	250,606,484,703.65-	262,746,412,004.15-	243,270,058,439.95-	241,995,583,839.15-	249,624,871,987.00-	260,918,173,797.90-	269,328,936,600.00-	215,162,849,700.00-	195,165,562,600.00-	United Bank
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Table (2) Free cash flow measurement results for a sample of Iraqi insurance companies listed on the Iraq Stock Exchange

2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	company
2,014,063,051.35-	2,228,405,030.80-	2,351,156,738.90-	2,500,404,507.15-	2,536,469,292.65-	2,668,675,948.35-	2,873,848,131.45-	2,547,228,849.90-	2,305,749,341.35-	2,224,010,030.65-	Al Ahlia Insurance
3,420,142,420.55-	3,331,724,834.65-	3,241,895,469.80-	1,275,537,751.90-	1,274,866,694.25-	3,127,115,696.65-	2,987,471,037.80-	2,781,138,685.45-	2,256,352,198.20-	2,089,435,698.75-	Al Amin Insurance
7,328,260,286.55-	7,289,961,084.20-	5,692,750,653.95-	3,705,175,701.70-	4,556,170,214.60-	4,677,797,153.05-	4,133,335,241.85-	3,871,575,73.00-	3,575,271,161.70-	2,980,334,562.75-	Dar Al Salam Insurance
8,349,644,397.60-	8,621,466,578.55-	8,085,115,300.15-	4,106,152,071.50-	2,939,461,143.85-	2,056,258,606.60-	1,626,731,167.75-	4,388,266,119.70-	3,288,815,506.35-	1,916,723,559.70-	Al Hamra Insurance

Table (3) Results of free cash flow measurement for a sample of Iraqi industrial companies listed in the Iraq Stock Exchange

2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	company
3,215,042,366.45-	2,388,728,096.45-	2,635,405,800.00-	4,888,610,035.95-	6,566,619,053.45-	5,997,653,578.75-	5,638,584,809.25-	5,861,194,321.35-	2,532,053,242.25-	2,790,858,494.15-	Al-Mansour Pharmaceutical Industries
1,939,910,457.55-	1,559,697,094.75-	1,205,439,758.70-	825,316,875.80-	699,318,319.25-	901,715,293.85-	722,749,608.25-	690,532,355.20-	7,898,315,702.50-	659,794,547.55-	modern sewing
138,002,471,231.25-	62,502,870,015.15-	55,107,442,285.45-	99,735,225,065.10-	31,754,448,459.15-	92,485,389,759.05-	72,428,369,170.25-	65,846,661,346.60-	68,133,026,374.10-	60,659,423,663.25-	Baghdad for soft drinks
2,108,202,491.10-	1,801,105,376.20-	1,764,549,613.35-	1,765,827,578.55-	1,630,878,572.15-	1,712,280,340.95-	1,778,870,309.30-	1,710,633,811.60-	1,636,668,678.20-	2,763,569,582.65-	Iraqi carpets and furnishings
4,988,453,914.65-	5,013,582,056.55-	4,555,921,704.75-	4,543,050,878.10-	4,397,036,681.85-	4,447,139,870.70-	4,331,745,190.00-	3,887,758,760.55-	3,153,317,485.85-	2,793,583,291.35-	Canadian for the production of veterinary vaccines
245,800,472.80-	250,378,629.25-	230,393,798.25-	241,532,460.15-	273,403,691.25-	502,766,244.90-	641,299,425.85-	772,184,080.80-	301,777,716.35-	407,458,321.10-	Baghdad for packaging materials industry
718,049,772.60-	547,451,686.60-	395,770,891.20-	242,814,552.80-	224,677,601.75-	325,694,772.45-	351,584,146.65-	480,759,238.80-	1,383,107,408.95-	1,083,766,835.25-	Ready-to-wear production
3,254,451,325.00	2,863,820,351.05	1,992,961,823.20	1,310,714,965.80	295,387,982.05	964,323,062.80-	2,001,063,725.20-	3,569,685,814.05-	3,429,877,189.85-	3,381,056,425.50-	National Metal Industries and Bicycles

Efficient Investment Decisions

The efficiency of investment decisions is the selection and implementation of the firm's management of investment projects with a positive net present value (NPV) in the absence of distortions in the market.

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(Houcinel & Kolsi, 2017:5), and it means distortions or problems in the market, the constraints imposed by the nature of the financial market, which make it difficult to fully achieve the targeted results and are the aspects related to completing transactions in the financial market such as time, cost, effort, and tax burdens necessary to collect Appropriate data that helps in completing transactions and is linked to the efficiency of investment decisions Another concept is the optimum level of investment and it means that the firm makes the investment until the marginal benefit of the investments equals the marginal cost of it and this is done by adjusting this cost with the costs of processing these new investments, that the managers In this case, they can obtain financing to carry out investment projects with a positive net present value and at a prevailing interest rate in the market, while at the same time achieving a cash surplus for investors, but the optimal level of investment is rare (Al-Sayegh and Abdul Majeed, 2015: 6), the efficiency of investment decisions allows to increase the wealth of Long-term shareholders because investing in profitable projects results in positive returns that support the growth of companies in the long term (Hu et al, 2019:9), however, financial market defects such as information inconsistency and agency problems may lead firm managers to make ineffective investment decisions (Al-Hadi et al, 2016:9).

Inefficiency of Investment Decisions

Corporate investment is one of the most important and necessary decisions to ensure the firm's growth and long-term continuity. However, the separation between ownership and management allows managers to make decisions in their own interest. One of these decisions is the investment that the firm makes. This is based on the efficiency of investment decisions, investing efficiently refers to investments with a positive present value in the absence of market frictions (Ibrahim & Ibrahim, 2021:9). As for the inefficiency of investment decisions, this means that the investment decision results in (underinvestment or excessive investment), underinvestment. Under-investment when management does not choose investment projects with a positive net present value, while over-investment when management chooses investment projects with negative net present value (Cherkasova & Zakharova, 2016:95). Companies achieving the optimal level of investment, the most important of which is Moral Hazard and Adverse Selection. It arises from the inconsistency of information between The managers and shareholders, which results in a low efficiency of investment decisions (Lai et al, 2013: 3-4):

1. **Moral Hazard:** Moral hazard arises from the separation of ownership from management, which leads to the fact that providers of capital do not enjoy full decision-making rights. Managers may tend to maximize their personal benefit by making investments that do not achieve the interest of shareholders and therefore managers will invest in projects of value Negative net current when there is a difference in motives between shareholders and managers that may jeopardize shareholder returns. The moral hazard of managers can lead to overinvestment or underinvestment depending on the availability of capital. Managers tend to overinvest if they have more resources. Managers are motivated to consume the privileges and to grow their companies beyond the optimum size. In return, when the shareholders realize this problem, they reduce the capital and then restrict the management's freedom to invest, which leads to a lack of investment.

2. **Adverse Selection:** It arises from information asymmetry between managers and external shareholders, which can affect the efficiency of capital investment. Managers usually have more information about the expected profitability of current and future corporate investments from shareholders. The consistency of information between shareholders and managers affects the efficiency of investment in two ways. The higher the degree of inconsistent information, the more excessive managers engage in their own self-interest or withholding information about the firm that is critical to investors for evaluating the investment in the firm. On the other hand, investors expect an increase in opportunism by managers the more The degree of inconsistent information has increased and therefore they will refrain from investing if they

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cannot observe whether the investment is appropriate (Knetsch, 2020:2), and (Elberry&Hussainy, 2020:311) indicated that managers with an ineffective investment decision may disclose more inconsistent information. information to justify their deviations from optimal investments, and also indicated that the quality of financial reports mitigates the inefficiency of investment R by reducing information asymmetry.

Factors affecting the efficiency of investment decisions:

Factors Affecting the Efficiency of Investment Decisions

There are many factors that can affect the efficiency of investment decisions, including:

1. The quality of accounting information: In general, information is the determining factor for investment efficiency, as the level of ineffective investment increases with the increase in information asymmetry (Ibrahim & Ibrahim, 2021:10). One of the main objectives of accounting information is to provide information that can facilitate the effective allocation of capital and can Defining the quality of information as the accuracy with which the reported information depicts the firm's operations to interested users, and the Financial Accounting Standards Board (FASB) statement of Financial Accounting Concepts No. (1) in 1978 states that one of the objectives of financial reporting is to assist current and potential investors in making rational investment decisions. High-quality accounting reduces the opportunity for managers to engage in self-maximizing decisions such as building an empire and thus improves the quality of information from the efficiency of the investment decision by mitigating information asymmetries that raise the problems of moral hazard and adverse selection and improves the ability of shareholders to monitor managerial activities and detect their dysfunctional behavior such as Excessive or underinvestment (Rad et al, 2016: 132-132).

2. Accounting conservatism: Conservative financial reports can enhance the efficiency of investment decisions by restricting the opportunistic behavior of managers. Accounting conservatism enhances investment efficiency by restricting managers' ability to overestimate and reduce net assets and current profits (Balakrishnan et al, 2016): 9) And (Lara et al, 2016:2-3) indicated that accounting conservatism limits the problems of excessive investment in companies that have a high investment capacity in these companies. Managers are more able to follow up on projects that have a negative present value but generate benefits Especially to them by reporting losses in a timely manner urgently reveals the self-interested decisions of managers.

3. Corporate Social Responsibility (CSR): Corporate social responsibility is the continuous commitment of companies to high ethical standards of behavior and to contribute to economic development while improving the quality of social life. Information, and that socially responsible companies should have higher ethical standards, lower profit management, higher quality of accounting, and thus better financial disclosure and higher transparency in financial reports, thus enhancing the efficiency of investment decisions. However, management may use corporate social responsibility to hide their bad behaviors and social responsibility activities generate costs Additional and may be used as a tool to cover up the waste of corporate resources, which leads to a higher level of information asymmetry, weak firm performance, and increased agency conflicts between managers and shareholders, and thus reduces the efficiency of investment decisions (Lee,2020:2-3).

4. International Financial Reporting Standards IFRS: The adoption of IFRS is linked to a higher accounting quality. IFRS is supposed to reduce information inconsistency by increasing the transparency and comparability of accounting information and by increasing the quality of financial reporting, the adoption of IFRS makes Optimal corporate investment, that high-quality financial reports enhance the efficiency of investment decisions, that accounting according to IFRS is linked to a lesser degree of overinvestment (Lenger et al, 2011:2) (Andre et al, 2014:107), because it leads to To increase

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transparency and the comparability of financial reports, reduce the cost of capital and improve the quality of profits (Alain et al, 2021:251), and that the mandatory adoption of IFRS enhances the efficiency of investment decisions, especially in countries with weak investor protection laws (Andre et al, 2014:107).

5. Earnings quality: Earnings quality along with the quality of comprehensive financial reporting plays an important role in mitigating sub-optimal investment issues, high earnings quality reduces information asymmetry between managers and shareholders and a lower probability of agency problems (moral hazard and adverse selection) that Reducing information asymmetry leads to efficient and profitable investment decisions (Cherkasova & Rasadi, 2017:443).

Measuring the Efficiency of Investment Decisions Model

Model (Mcnichols & Stubben, 2008)

The optimal level of investment in this model is determined through the following equation:

(Shin et al, 2019:11):

$$\text{Investi,t} = \beta_0 + \beta_1 \text{TQi,t-1} + \beta_2 \text{CFOi,t-1} + \beta_3 \text{Growi,t-1} + \beta_4 \text{Investi,t-1} + \text{ei,t}$$

whereas:

Investi,t = the increase in capital expenditures to total waves in the previous year.

TQi,t-1 = the market value of the shares + the book value of the debt / the book value of the total assets of the previous year.

CFOi, t-1 = cash flow from operations to total waves for the previous year.

Growi,t-1 = total assets for the current year - total assets for the previous year / total assets for the previous year.

ei,t = remainders of the model.

The greater the absolute numbers of the residuals, the greater the deviation from the optimal level of investment, so the positive residuals represent an over-investment, while the negative residuals indicate a lack of investment.

Table (4) Results of measuring the efficiency of investment decisions for a sample of Iraqi banks listed in the Iraqi Stock Exchange

2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	company
0.0098	0.0079	0.0248	0.0468	0.0057	0.0288	0.0030	0.0709	0.0958	0.0103	Credit Bank
0.0431	0.0117	0.0181	0.0080	0.0089	0.0109	0.0061	0.0241	0.0055	0.0050	investment bank
0.0305	0.0094	0.0200	0.0195	0.0214	0.0149	0.0101	0.2167	0.0565	0.0763	Al Ahli Bank
0.0043	0.0054	0.0560	0.0155	0.0090	0.6470	0.0466	0.0179	0.0245	0.0389	Gulf Bank
0.0073	0.0044	0.0218	0.0152	0.0052	0.0298	0.0065	0.0213	0.0129	0.1491	Middle East Bank
0.0168	0.0315	0.1124	0.0082	0.0198	0.1491	0.0548	0.0303	0.0341	0.0579	Mosul Bank
0.0149	0.0269	0.0407	0.0017	0.0944	0.0345	0.1070	0.0220	0.0254	0.0236	Babel Bank
0.0270	0.0104	0.0092	0.1319	0.0212	0.0011	0.0259	0.0220	0.0745	0.0453	Baghdad Bank
0.0058	0.0265	0.0308	0.0163	0.0193	0.0112	0.0152	0.0121	0.0208	0.0147	Sumer Bank
0.0351	0.0405	0.0148	0.0011	0.0287	0.0475	0.0113	0.0022	0.0616	0.0662	Ashur Bank
0.0099	0.0180	0.0024	0.0143	0.0765	0.0173	0.1228	0.0845	0.0618	0.0723	Union Bank
0.0105	0.0007	0.0045	0.0022	0.0019	0.0160	0.0106	0.0218	0.4328	0.0514	Iraqi Commercial Bank

0.0103	0.0082	0.0198	0.0578	0.1534	0.0238	0.0014	0.0470	0.0612	0.0231	North Bank
0.0103	0.0279	0.0157	0.0072	0.0204	0.0065	0.0317	0.0186	0.0057	0.0294	Al-Mansour Bank
0.1398	0.0362	0.0013	0.0238	0.0267	0.0525	0.0130	0.0029	0.0149	0.0333	United Bank

Table (5) Results of measuring the efficiency of investment decisions for a sample of Iraqi insurance companies listed on the Iraqi Stock Exchange

2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	company
0.0174	0.0798	0.0402	0.0265	0.0236	0.0252	0.0222	0.0011	0.0291	0.1716	Al Ahlia Insurance
0.0154	0.0413	0.0388	0.0485	0.0190	0.1220	0.0307	0.1240	0.0299	0.0338	Al Amin Insurance
0.0479	0.1310	0.0986	0.1105	0.0960	0.0043	0.0228	0.0126	0.0287	0.0603	Dar Al Salam Insurance
0.0470	0.0323	0.0032	0.0875	0.0296	0.1250	0.0937	0.0017	0.3604	0.0931	Al Hamra Insurance

Table (6) Results of measuring the efficiency of investment decisions for a sample of Iraqi industrial companies listed on the Iraqi Stock Exchange

2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	الشركة
0.1196	0.1300	0.2761	0.0244	0.0595	0.0053	0.2638	0.3938	0.2995	0.1161	Al-Mansour Pharmaceutical Industries
0.0934	0.1621	0.5014	0.1753	0.0551	0.1065	0.2860	0.2388	0.2074	0.5236	modern sewing
0.0158	0.0557	0.0669	0.0832	0.0223	0.0171	0.1176	0.0667	0.0128	0.0203	Baghdad for soft drinks
0.1838	0.1486	0.0198	0.1169	0.0176	0.0281	0.0545	0.1758	0.0899	0.0779	Iraqi carpets and furnishings
0.0191	0.0938	0.1023	0.0964	0.0279	0.0817	0.0335	0.0940	0.2705	0.1098	Canadian for the production of veterinary vaccines
0.0789	0.0881	0.0674	0.0665	0.1142	0.1062	0.0305	0.7335	0.0357	5.7549	Baghdad for packaging materials industry
0.0108	1.1701	0.4565	0.1026	0.1418	0.0309	0.0978	0.1772	0.0186	0.4625	Ready-to-wear production
0.0905	0.0951	0.0415	0.0875	0.2113	0.1703	0.1399	0.1096	0.0427	0.0726	National Metal Industries and Bicycles

The Effect of Free Cash Flow on the Efficient Investment Decisions

Free cash flow is excess cash necessary to finance all projects with a positive net present value (Rajapaksha & Weerawickrama, 2020:44), there are many studies that have examined the effects of free cash flow (FCF) on the investment activities of companies and many of them have found that excessive investment by companies Free cash flow according to Zhu is positively correlated with increased free cash flow (that the firm has idle cash) the firm will be more vulnerable to the agency problem because managers over-invest free cash flow on profitable investment projects from a managerial perspective that

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achieve their personal benefits, but is wasted From the shareholder's perspective (Zhu, 2019:8), the study (Wang et al, 2015) confirmed that excessive investment exists in companies with high free cash flow because the managers of these companies prefer to invest in projects with negative NPV rather than paying them as dividends to shareholders (Wang et al, 2015:2), and this opportunistic behavior leads them to make wrong investment decisions and move away from the optimal level of investment (Moez & Amina, 2018: 48), while (Muchtar et al, 2021) argued that the Free cash flow can help enhance the firm's performance in the future because one of the most important purposes of free cash flow is to allow the firm to pursue investment opportunities that can ensure shareholder wealth and firm value and that the presence of free cash flow in the firm indicates its ability to invest in new projects with a net Positive present value (Muchtar et al, 2021: 356), and in the same context (Rochmah & Ardianto, 2020) concluded that free cash flow can depict the state of the firm, where companies with high free cash flow have better performance than other companies because they benefit from Investment opportunities that other companies have not had. Companies with high free cash flow will benefit more than companies with low cash flow because companies with high cash flow can survive turbulent times. Companies with high cash flow can make effective investment decisions. By managing free cash flow it can also hamper the agency problem by distributing the firm's profits to shareholders (Rochmah&Ardianto,2020:5)), or allowing directors to acquire stakes in the firm and in The case of a decrease in free cash flow (that the firm has a shortage of cash) does not lead to a decrease in investments but rather leads to a more pronounced shift towards debt (Yeo, 2018:117), companies prefer internal funds over debt due to the disadvantage of the cost of external financing this makes the flow Cash is an important determinant of investment decisions, as it represents an internal source of financing (Tamasila et al, 2018: 705).

From the above, it can be said that the presence of free cash flow in the firm allows the firm to pursue investment opportunities that guarantee the wealth of shareholders and the value of the firm.

Research hypothesis test results

Hypothesis "There is a statistically significant effect of free cash flow on the efficiency of investment decisions"

To test this hypothesis, the following "linear regression" model was formulated:

$$EID_{it} = b_0 + b_1FCF_{it} + \varepsilon_{it}$$

Where: -

b_0 = The regression equation constant that represents the value of the dependent variable when the value of the independent variable is zero.

b_1 = slope, used to measure the type and amount of an effect.

ε_{it} = Estimation errors or what is called statistical residuals.

Using the SPSS statistical program, the results were as follows: -

Table (7) Summary of Hypothesis Test Form

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.167 ^a	.028	.024	.987
a. Predictors: (Constant), FCF				
b. Dependent Variable: EID				

The table above shows the model summary above that the value of the correlation ((R) between the variables was 0.167, and the coefficient of determination R Square was 0.028, and the standard deviation of the estimation error Std. Error of the Estimate was 987.0 and the lower this type of error, the better Statistically speaking.

Table (8) Hypothesis Test Variance

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.544	1	7.544	7.732	.006 ^a
	Residual	261.456	268	.976		
	Total	269.000	269			

The table above shows the variance above anova that the calculated F value amounted to 7.732, which is greater than its tabular value calculated according to the degrees of freedom df (268.1), which is 3.84 at a significance level of 5%, and that the level of significance of the test Sig amounted to 0.006, which is much less than the value of the accepted error in Social sciences and predetermined at 0.05, which indicates the appropriateness of the statistical model used in the hypothesis test.

Table (9) Regression function coefficients for the hypothesis

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.001	.060		.013	.990
	FCF	.167	.060	.167	2.781	.006

The most important thing shown in the above table is that the slope value of the regression equation amounted to 0.167, which shows the effect of the independent variable on the dependent variable (by parameter B), and the positive value of the coefficient indicates that there is a direct effect between the independent and median variables, or in other words that any increase in the independent variable (the flow Free cash) by one degree leads to an increase of 16.7% in the median variable (the efficiency of investment decisions) with the stability of all other independent variables and that the level of T-statistics morale was 0.006, which is less than 0.05. Therefore, the sample data showed convincing evidence of accepting the research hypothesis for the effect Statistically.

Conclusions

1. Free cash flow is a positive indicator that the company is able to meet its financial obligations. The free cash flow also allows the company to increase dividends to shareholders, develop new products and repurchase shares, which will have positive effects in raising the value of the company.
2. The free cash flow is one of the important indicators that investors and financial analysts rely on in evaluating companies' performance because it gives a clearer picture of the company's ability to make profits.
3. The presence of free cash flow in the company allows the company to pursue investment opportunities that guarantee the wealth of shareholders and the value of the company.
4. Investment decisions for companies One of the most basic decisions and important factors that determine the value of a company, investment decisions are efficient when they improve the value of the

company and inefficient when there is either an increase in investment or a decrease in investment and reduce the value of the company.

5. The efficiency of investment decisions in the company is affected by a number of factors, including the quality of accounting information, the amount of attention to social responsibility, the amount of reliance on international standards for the preparation of financial reports, and the quality of profits.

6. Inefficiency in the use of free cash flow leads to the creation of the agency problem because managers tend to use free cash flow to achieve their own benefits at the expense of shareholders' interests, which would reduce the value of the company.

7. The high free cash flow gives a positive signal to investors that the company can take advantage of investment opportunities and pay dividends. When the free cash flow is managed efficiently, then managers make optimal or effective investment decisions that in turn can increase the value of the company.

8. There is a statistically significant effect of free cash flow on the efficiency of investment decisions for Iraqi companies, the sample of the research, and it agrees with the results of both studies (Kantudu, 2021) and (Muchtar et al, 2021).

Recommendations

1. Increased interest in the concept of free cash flow (FCF) by companies listed on the Iraqi Stock Exchange, as it is one of the modern and important measures of the financial performance of companies and an important tool for evaluation. Therefore, it is important to mention it in the published financial reports as other indicators.

2. The Companies Control Board's evaluation of management decisions regarding free cash flow due to its importance in raising the value of the company.

3. The necessity for companies listed on the Iraqi Stock Exchange to provide sufficient information about the free cash flow (FCF) and optional disclosure about it because this disclosure provides important information for all parties that have interests and objectives linked to the company, and helps them in making investment decisions related to the company.

4. Focusing and paying attention to the factors that result in the efficiency of investment decisions, such as the quality of accounting information and reliance on International Financial Reporting Standards (IFRS).

5. Studying and analyzing the financial data for making investment decisions in detail and following the methods of evaluating investment projects to prevent wrong investment decisions (suboptimal) that result in huge irreversible losses.

6. Since the issue of the impact of free cash flow on the efficiency of investment decisions needs more research and study, the researcher recommends, in this context, to conduct other specialized research that takes into account the following:

- a) The impact of free cash flow and the efficiency of investment decisions on the continuity of the company.
- b) The impact of free cash flow on the financial policies of companies.
- c) The relationship between free cash flow and corporate governance.
- d) Free cash flow and profit management.

e) the relationship between agency costs and the efficiency of investment decisions.

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