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Effect of Free Cash Flow on Firm Value

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Abstract

This research aims to examine how free cash flow affects the value of a company. The investors' assessment of the level of success of a company is known as the value of the company. Many previous studies have indicated that free cash flow is among the variables that affect the value of a company. According to some studies, the value of a company increases with the amount of free cash flow generated by the company. While the other study produced a different result, the value of the company decreased with the increase in the free cash flow owned by the company. Therefore, the result regarding the effect of the impact of free cash flow remains unclear.

In order to achieve the research objectives, the researcher presented a measurement of the company's value using free cash flow equations based on the Capital Asset Pricing Model (CAPM), through the parameters of the equation represented by measuring the market portfolio return and the stock return, and the risk beta, which is the basic parameter of the equation and reaching the required rate, to obtain the weighted average cost of capital (WACC) rate, which is the basic in measuring the company's value. The researcher also reached the preparation of a free cash flow statement and measuring the final value using the perpetual growth approach, which is based on the Gordon growth model.

The researcher reached a set of conclusions, the most important of which are: Measuring the company's value using free cash flow provides accuracy and suitability in achieving results and showing the real value of the company in which the investor wishes to invest by purchasing its shares, and that using the free cash flow model in measuring the company's value is one of the best means of measurement because it achieves more appropriate and more accurate results.

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Introduction

Given the importance of free cash flows and their role in measuring the company's value and knowing its financial performance, it is important to know how to calculate them and what are the accurate and important methods adopted in the calculation according to the accounting and financial concept. International terms differ in the equations used to measure free cash flow, which made the researcher seek to reach a statement of the difference and similarity in the calculation process and measure the company's value between the concept of financial management and the accounting concept, relying on the sources of both, as well as reaching a measurement of the terminal value, which is the company's value at the end of the future forecast period. The Gordon growth model is used to calculate the terminal value based on free cash flow. If the calculation process is accurate and appropriate, it achieves an impact on the final value and thus is reflected in measuring the company's value, which helps analysts, users of accounting information and investors to make decisions and is a reason to attract investments.

Chapter One: Research Methodology

First: The Research Problem

The use of free cash flow in measuring the value of the company faces many differences between the accounting literature and financial management and problems from a practical and scientific point of view, whether in how to achieve measuring the value of the company by determining the free cash flow and the final value.

Based on the research problem, the following question can be formulated:

Does free cash flow and terminal value, using accounting equations and financial management equations, have an impact on measuring the value of the company?

Second: The Importance of the Research

The importance of the research lies in the implications of applying the measurement of free cash flow and the final value on determining the real value of the company and contributing to providing perceptions to analysts and investors about the value of the company before making an investment decision and the impact of this measurement in arriving at the value of the share or the value of the company’s net assets.

Third: The Research Objective

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This research aims to establish a specific definition of free cash flow that is most relevant to users of accounting information in order to achieve a standardized and accurate measurement of free cash flow and terminal value.

Fourth: The Research Hypothesis

The research hypothesis is represented in a main hypothesis which is (applying the measurement of the company's value according to the free cash flow equations from an accounting concept that achieves accuracy and suitability for users of accounting information).

Chapter Two: Theoretical Framework

First: The Concept of Cash Flow

Cash flow is one of the essential elements in financial management processes to provide basic information and achieve better performance. Users and financial analysts believe that cash flow is one of the indicators through which the company's ability to plan, meet its obligations, and maintain its operational activities is known. Cash flow also has the ability to predict more than other ratios. (Al-Hayek, 2020: 6583) Cash flow refers to net cash and its equivalent of cash inputs inside and outside the company, where cash received represents inflows and cash spent represents outflows.

Cash flow is the link between operating, investing, and financing activities. It allows each of these three core business activities to continue to operate smoothly and efficiently. The cash flow statement can also be useful in assessing a company's past ability to generate free cash flows and forecasting future free cash flows. Free cash flow is a key component of cash flow-based valuation models. (Wahlen et al., 2015: 34)

Second: Free Cash Flow

The literature review below shows that there is a great deal of consistency in the concept of free cash flow in the financial literature, but there is a great deal of variation in the definition of free cash flow in the accounting literature. (Maksy & Chen, 2014 : 2)

Given that free cash flow theories were first proposed in 1986 by Jensen, they have gradually evolved as one of the new topics in the financial literature describing corporate behavior. In general, investors should also keep an eye on companies where they can influence free cash flow by extending the time it takes to pay bills and keep

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their cash, shortening the time it takes to collect what is owed to them by outsiders, and similarly delaying the purchase of inventory. In fact, maintaining an optimal level of liquidity within companies is important for corporate operations.

In Financial Literature

In the financial literature, there is no wide variation in the definitions of free cash flow (Sapuan, 2021: 212). Given that the free cash flow theory was first proposed in 1986 by Jensen, it has gradually developed as one of the new topics in the financial literature that describes the behavior of companies (Ali, 2018: 57).

Jensen is considered the seminal paper that established the basic definition of free cash flow. (Maksy & Chen, 2014: 3) Free cash flow is a measure of a company's ability to generate revenue. Jensen was a pioneer in the ideas of free cash flow. Jensen defined free cash flow as "cash flow in excess of what is required to finance all projects that have a positive net present value" (Sapuan, 2021: 212).

Brigham and Houston argue that the focus so far has been on financial statements as they are prepared by accountants. However, accounting statements are designed primarily for use by creditors and tax collectors, not managers and equity analysts. Therefore, corporate decision makers and financial analysts often modify accounting statements to meet their needs. The most important modification is the concept of free cash flow. (Brigham & Houston, 2015: 75)

Brigham and Houston defined free cash flow as "the cash flow available for distribution to all investors after a company has invested its funds in fixed assets, new products, and working capital needed to maintain the continuity of the company's operations" (Sinaga et al., 2022: 371) and another definition as "the amount of cash that can be withdrawn without harming the company's ability to operate and generate future cash flows" (Brigham & Houston, 2015: 75).

Unlike the financial literature, the accounting literature contains many definitions of free cash flow. It is defined differently among different academic articles, books, and (professional articles. (Maksy & Chen, 2014 : 3

Kieso et al. define free cash flow as "the amount of cash flow available to a company" and this cash flow can be used to purchase additional investments, pay down debt, purchase treasury stock, or add to liquidity. (Kieso et al., 2019 : ch5-p23)

Nobles et al. also define free cash flow as "the amount of cash available from operating activities after paying planned investments in long-term assets and after paying dividends to shareholders" (Nobles et al, 2016: 741). The definition of free

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cash flow also varies between companies, with free cash flow defined as "the discretionary cash flow available to firms. Free cash flow is cash generated from operating activities minus capital expenditures that a firm makes to meet current production capacity" (Suhartono, 2015: 130).

Furthermore, some companies change their definition of free cash flow over time. For example, Mandalay Resort (formerly Circus Circus) was one of the first companies to disclose free cash flow information in its 1988 annual report. Over the years, its definition has changed. In 1988, free cash flow was defined as operating income (OI), but in 2000, it added pre-opening expenses, abandonment loss, depreciation and amortization (D&A), interest, dividends, and other income, as well as proceeds from the disposal of equipment and other assets (Maksy & Chen, 2014 : 3).

The researcher defines free cash flow as the cash flow in excess of the company's needs after reducing capital expenditure and cash distributions to shareholders. It is used to determine the real value of the company, which is reflected in the perception of investors and financial analysts about the company's performance when making investment decisions.

Second: Requirements for Measuring Free Cash Flow

Professor Tom Copeland (1990) explains how to calculate free cash flow in more detail: "Free cash flow equals a company's net operating profit (net operating profit minus adjusted tax), plus non-cash expenses such as depreciation and amortization, minus additional working capital and investments in property, plant, equipment, and other assets. It is the total after-tax cash flow generated by a company that can be made available to all of the company's suppliers of capital, including creditors and shareholders." It is calculated according to the following equation: (Yu, 2021: 16-17)

Ft= (N+D)-(Cl+Ic)

Ft -- cash flow of year t

N-- Net operating profit after tax

D-- Depreciation and amortization

Cl-- Capital spending

Ic-- Increase in working capital

According to accounting literature, users of financial statements rely on the following equation to calculate free cash flow: (Kieso et al., 2019: ch5-p23

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Net Cash Provided by operating Activities-capital Expenditures-Cash Dividends=Free Cash Flow

In the above equation analysis, capital expenditures are first deducted from net cash generated from operating activities, and then cash dividends are deducted. Although a company can cut dividends, it usually only does so in financial emergencies. The amount resulting from these deductions is the company's free cash flow. Obviously, the larger the free cash flow, the greater the financial flexibility of the company.

Nobles et al. also provide an equation for calculating free cash flow as follows:-

Free Cash Flow=Net Cash Provided by operating Activities-Cash payments planned for investments in long term assets-Cash Dividends

To analyze the above equation based on the definition provided by Nobles et al., which is the amount of cash available from operating activities after paying off planned investments in long-term assets and after paying dividends to shareholders. (Nobles et al., 2016: 741) The researcher believes that the equation provided by Nobles et al. is identical in concept to what was indicated by Kieso et al.

Nobles et al. offer an equation for calculating free cash flow as follows:

According to financial literature, Gitman and Zutter provide the following equation used to calculate free cash flow:

FCF = OCF - Net fixed asset investment (NFAI) - Net current asset investment (NCAI)

In the above equation analysis, OCF represents cash flow from operating activities and NFAI represents net investment in fixed assets. It is the net investment made by the company in fixed assets and refers to purchases minus sales of fixed assets.

And you can calculate NFAI using the following equation:

NFAI = Change in net fixed assets + Depreciation

NFAI is also equal to the change in total fixed assets from year to year plus annual depreciation.

NCAI = Change in current assets - Change in (accounts payable + accruals)

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NCAI represents the net investment a company makes in its current (operating) assets. "Net" refers to the difference between current assets and the sum of accounts payable and receivables. Notes payable are not included in the NCAI calculation because they represent a negotiated creditor's claim on the company's free cash flow.

Also, according to financial literature, Brigham and Houston provides the following equation used to calculate free cash flow:

$$FCF = \left[EBIT(1-T) + \begin{matrix}\text{Depreciation} \\ \text{and amortization}\end{matrix}\right] - \left[\begin{matrix}\text{Capital} \\ \text{expenditures}\end{matrix} + \begin{matrix}\Delta\text{Net operating} \\ \text{working capital}\end{matrix}\right] \quad 3.3$$

In the above equation, the first term represents the amount of cash the company generates from its current operations. EBIT (1 - T) is often referred to as NOPAT, or net operating profit after taxes. Depreciation and amortization are added back because these are non-cash expenses that reduce EBIT but do not reduce the amount of cash available to the company. The second term in parentheses refers to the amount of cash the company invests in its fixed assets (capital expenditures) and operating working capital in order to maintain current operations. A positive FCF level indicates that the company is generating enough cash to finance current investments in fixed assets and working capital. In contrast, a negative free cash flow means that the company does not have enough internal funds to finance investments in fixed assets and working capital, and that it will have to raise new funds in the capital markets in order to pay for these investments. (Brigham & Houston, 2015: 75)

Third: Company Value

The interest in the value of the company has become an important element in the analysis (Al-Slehat, 2020: 110) and the main concept that is taken into consideration is that the value of the company is the investor's perception of the success of the company, which is reflected in the company's share price. Investors' confidence in the company is shown if there is an increase in the share price (Haryono & Iskandar, 2015: 71), which means that the value of the company is determined by investors' perceptions of the level of success of the company, which is reflected in the company's share price. (Reschiwati, 2020: 327) Therefore, they are willing to pay more in order to achieve a higher return. The value of the company is the total assets owned. It consists of the market value of shares and liabilities. (Haryono & Iskandar,

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2015: 71) The wealth of shareholders and companies is shown through stock prices that reflect investment decisions related to financing and asset management. The increase in stock prices reflects the market's confidence in the good prospects of the companies concerned in the future. (Reschiwati, 2020: 327) Companies always seek to maximize their value in the competitive market because their value reflects the efficiency of their performance and investment decisions. (Al-Sarraf, 2022: 48)

- ❖ Concepts Related to Company Value

Par value: It is the value stated on the stock coupon and by legal text upon establishment. In Iraq, the Companies Law No. (21) of 1997, as amended, specified the nominal value of company shares (one dinar), and it is not permissible to issue less or more than that upon establishment or upon increasing capital. The nominal value is used to determine the percentage of profit distributed to shareholders. There are some legislations in advanced countries that allow it to be issued without a nominal value, as it is determined according to its sale on the stock exchange. (Al-Shammari and others: 2022: 157)

- ❖ Book Value:

It is the book value of net assets. (Barker, 2015: 516) It is the accounting value of the share recorded in the company's books and represents the ownership interest in the balance sheet. (Al-Shammari, et al.: 2022: 157) (Al-Shammari, et al.: 2022: 157) It is calculated by subtracting total liabilities from total assets and is also referred to as net value or book value of equity.

The researcher defines the book value as the value of assets that generate current and future benefits and are owned by the company and under its management on the date of preparing the financial position statement.

- ❖ Economic Value

It is “the present value of expected cash flows attributable to owners of property rights.” In practice, of course, economic value is an estimate, and it depends on forecasting and discounting future cash flows. (Barker, 2015: 516)

- ❖ Market Value

It is the most common type and carries a simple concept in nature, as it is an objective value created based on many market behaviors. However, the definition of market value is “the estimated amount for which an asset should be exchanged on the date of valuation between a willing buyer and a willing seller in an arm’s length transaction

after proper marketing where both parties acted knowingly, prudently, and without coercion." (Kucharska-Stasiak, 2022: 139)

Donleavy defined it as "the current market value of a stock between a willing buyer and a willing seller who are willing to make the exchange without any pressure from another party" (Al-Sarraf, 2022: 49)

- ❖ Terminal Value :

It is the value of the company at the end of the future forecast period, and allows models to reflect returns that will occur so far in the future that are almost impossible to predict. The Gordon growth model and discounted cash flows are used in calculating the terminal value (www.investopedia.com).

The value of a firm in an efficient market is defined as the present value of expected discounted future net cash flows. An important input into the market's assessment of value is the firm's current performance, reflecting the conceptual framework's focus on financial statements that provide useful information in the valuation. The amounts, timing, and certainty of future cash flows. (Rankin et al., 2012: 232) The net present value is obtained by using a discount rate that is obtained in most cases by the CAPM (Capital Asset Pricing Model).

Many previous studies have indicated that the value of a company is affected by the following factors: (Al-Slehat, 2020: 111)

1. The value of a company is affected by the asset structure: Assets are the property or assets owned by a company at a certain period. There are two types of assets: current assets and fixed assets.
2. The value of a company is affected by the size of the company: The total assets owned by a company indicate the size of the company. The larger the size of the company, the easier it is to obtain internal or external sources of financing, which will affect the value of the company itself.
3. The value of a company is affected by the capital structure: The first task of the company's management is to gain a comprehensive understanding of the main components of the capital structure. The capital structure that maximizes the share price is the ideal structure. Excessive loan amounts can hinder the development of the company and prompt investors to reconsider their investments.

Reis and Augusto's study sought to gather the perceptions of financial analysts in Europe and North America about the key attributes of a firm that they believe

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contribute most to its value. Using a closed-ended questionnaire, the authors concluded from an analysis of 123 valid responses that there is a significant importance attached to (1) the expected life of the firm, (2) liquidity and operating performance, (3) innovation and the ability to allocate resources to research and development, and (4) managerial ability and capital structure, in determining the long-term value of a firm or business. These results contribute to our belief that we can formulate a model for valuing firms and businesses in which the results obtained in valuations are as close as possible to those found in the stock market (Reis & Augusto, 2014 : 793)

Fourth: The relationship between profits, their distribution, and free cash flow and the company's value

Free cash flow can be used instead of dividends as the expected future returns to the investor in the numerator of the general valuation model. Both approaches, if implemented with consistent assumptions, will produce identical estimates of a company's value. This equivalence occurs because, over the life of the company, the free cash flows to the company will be equal to the cash flows paid out by the company in dividends to shareholders. The earnings-based valuation approach is an alternative valuation perspective, equivalent to both dividend-based and free cash flow-based valuations. It will also produce an identical valuation to dividend-based and free cash flow-based valuations as long as the earnings, dividends, and cash flow forecasts are based on consistent assumptions. Figure ( ) provides a conceptual illustration of these three approaches to valuing a company. If you apply these three different valuation approaches, you will gain much better insights into a company's value than analysts who rely on just one approach. You will understand valuation more comprehensively across a wide range of situations when you can triangulate valuation across dividend-, cash flow-, and earnings-based methods. (Wahlen et al., 2015: 34)

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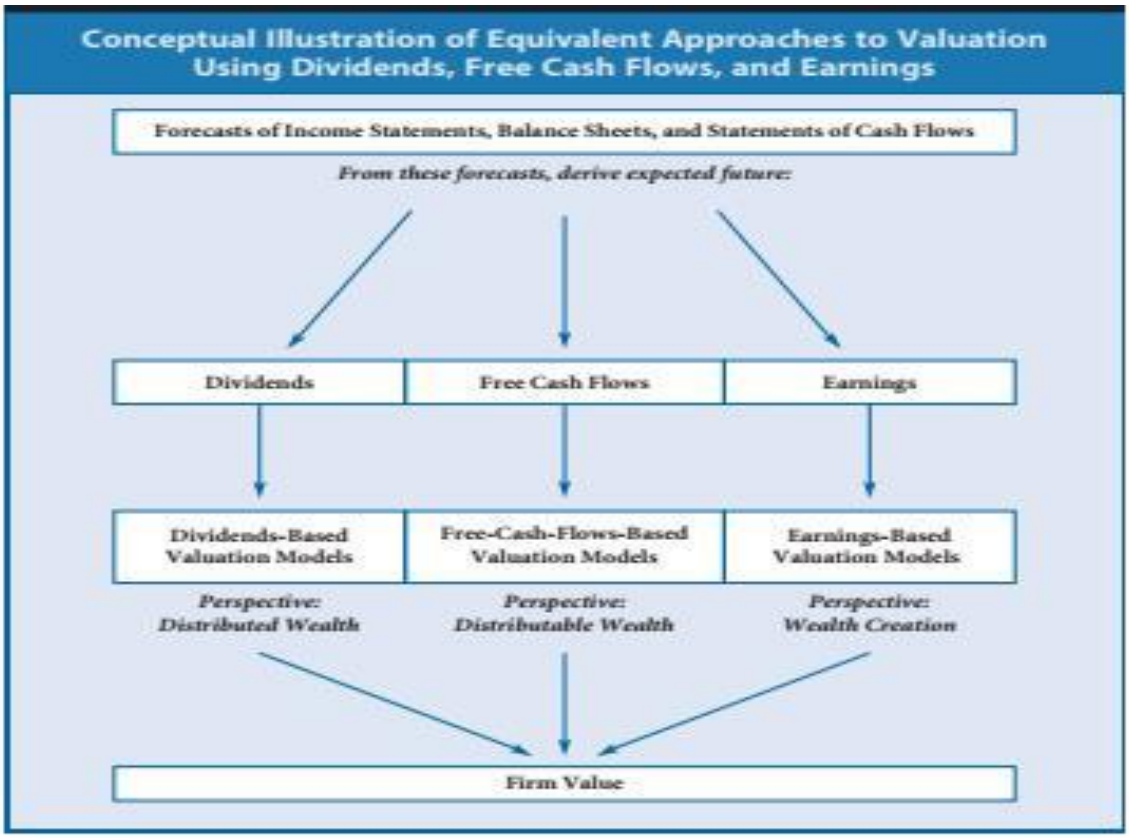

Chapter Three: The Applied and Practical Aspect

First: Analysis of the Variables for Measuring Company Value

In this research, the variables of measuring the company's value are analyzed by using the Capital Asset Pricing Model (CAPM) and Free Cash Flow (FCF) to reach an accurate and appropriate measurement for decision makers, financial analysts, and users of accounting information. Asia Telecommunications Company was chosen as the research sample.

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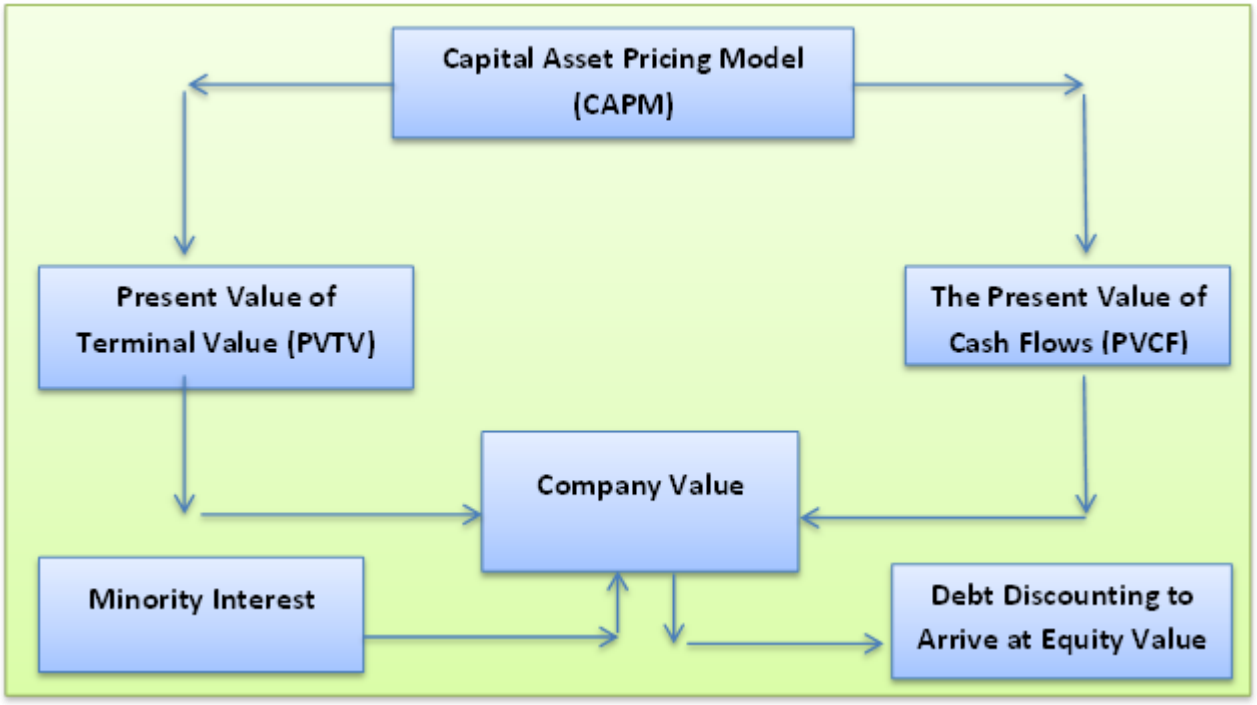

Figure 1: (2) Measuring Company Value/ (Abdul Rahim, 2007: 117), adapted by the researcher.

1- Analysis of the Parameters of the Capital Asset Pricing Model (CAPM)

The researcher relied on CAPM to arrive at the net present value of free cash flows and the final value of the company in order to obtain a measure of the value of the company or the value of assets, which users of accounting information rely on, especially investors, as investors are interested in the minimum return that the company must achieve on its assets or investments in order to achieve the satisfaction of its shareholders.

1.1 Analysis of the Parameters of the Capital Asset Pricing Model

This model consists of three main parameters: the risk-free rate (Rf), the market rate of return (Rm), and the beta coefficient of the company's shares (β). In light of these three parameters, the required rate of return on the company is calculated and expressed in the following formula:

$$R = Rf + (Rm - Rf)\beta$$

1. Risk Free Rate Rf)) Risk Free Rate

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2. Market Return Rate Rm
3. Rf (which represents 8.5%, which is equivalent to the interest of government bonds)
4. Beta Coefficientβ

From the data included in Appendix No. (1), it is clear that the market returns are negative, which means that the market has witnessed a decrease in value during that period. This means that the expected return for the market is less than the risk-free return. This indicates an expected decrease in the market compared to the risk-free return.

By analyzing the data of Appendix No. (1), the average return per share and the return for the market portfolio of the company and for the years of the research sample were extracted and the Beta coefficient was extracted, and Table No. (1) shows this.

Table No. (1) Results of the Company Data for the Research Sample to Determine the Beta of Stock Risks

Company Name	**Average Stock Return**	**Average Market Return**	**Unsystematic Risk**	**Correlation Between Stock and Market Return**	**R2**	**Market Standard Deviation**	**Standard Deviation**	**Beta**
Asiacell	**0.014232**	**0.003571**	**0.009094**	**0.617574**	**0.381398**	**0.037700**	**0.095360**	**1.562123**

Source: Prepared by the researcher based on mathematical equations and application programs.

The first column in Table No. (1) represents the average return on the company's stock, which is shown in Appendix No. (1). The average market return was also calculated in the same way. The column of unsystematic risks is the result of the variation in stock returns during the months of the research sample years, which consist of (48). The correlation column also represents the amount of correlation between the market return and the company's stock return. As for the coefficient of determination column, it is the result of squaring the correlation between stock returns and market returns. It results from the variation in market returns through the process of the root of the standard deviation of the market, as well as the standard deviation of

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the stock return, which results from the root of the variation in stock returns, which ultimately results in the beta coefficient.

0 > β - Inverse correlation between stock returns and market returns
0 = β - No correlation between stock returns and market returns
1 > β > 0 - Positive correlation, and the change in stock returns is less than the change in market returns
1 = β - Positive correlation if stock returns change at the same rate as market returns
1 < β - Positive correlation, and the change in stock returns is greater than the change in market returns

Because the result of the market return appears negative, the Return on Assets (ROA) method was adopted using the following formula:

Market Return = Net Income / Total Assets

After completing all the variables of the Capital Asset Pricing Model (CAPM) with its three elements mentioned above, and the features of the Capital Asset Pricing Model (CAPM), by finding the relationship between the risk-free rate of return for the year 2022 and the average market return and the stock risk beta, the required rate was reached, as shown in Table No. (2)

Table No. (2) Parameters of the Capital Asset Pricing Model (CAPM)

Company Name	Risk-Free Rate (%)	Average Market Return (%)	Beta (β)	Required Rate of Return (%)
Asia Cell	8.5	7.8	1.562	0.0741

Ref: Compiled by the researcher.

The researcher reached the results of the required rate according to the Capital Asset Pricing Model (CAPM), which is considered the discount rate. The results show that the impact of the company's stock beta risks as well as the decrease in the average market return led to a decrease in the required rate on the investment as it became less than the risk-free rate of return due to the impact of the Iraqi Stock Exchange on the political and security situation and its reflection on the trading movement, which means that there is no exaggeration in the required rate and also gives more appropriate and reliable measurement results.

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Second: Calculation of Free Cash Flow (FCF)

It is the excess flow achieved by the company from operating profit after tax, plus the annual depreciation premium, minus the net new investments, and is calculated according to the Brigham and Houston equation. Table No. (3) shows the free cash

Table (3) Free Cash Flow for Asia Cell (Amounts in Millions)flow of Asia Cell Company for the years 2018-2022.

Statement	**2018**	**2019**	**2020**	**2021**	**2022**
EBIT	261,327	244,513	228,827	378,753	314,393
(1-T)	85%	85%	85%	85%	85%
DE	440,188	433,534	334,886	331,286	318,773
CAPEX	34,526	107,673	145,948	215,068	163,420
ΔWC	161,753	78,465	-264,132	74,236	58,524
FCF	466,037	455,232	647,573	363,922	364,063

Ref Compiled by the researcher.

Table (3) shows that Asia Cell achieved a net profit before tax for the years of the research sample at a rate of (84.3%, 79%, 74%, 122%, 101%) of the paid-up capital, respectively. Table No. (3) also indicates a decrease in free cash flow in the recent years of the research sample, and 2020 was the best year for the company by achieving the highest net profit in addition to increasing net operating cash flow and thus increasing free cash flow, which leads to better decisions by investors.

According to the Gitman and Zutter equation, free cash flow was calculated as shown in the following Table No. (4):

Table No. (4) Free Cash Flow Calculation (Gitman and Zutter)

Statement	**2018**	**2019**	**2020**	**2021**	**2022**
OCF	**519,130**	**116,676**	**833,873**	**243,602**	**489,532**
NFAI	**305,897**	**254,275**	**229,667**	**424,759**	**359,600**
NCAI	**161,753**	**78,465**	**-264,132**	**74,236**	**58,524**

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FCC	**51,480**	**-216,064**	**868,338**	**-255,393**	**71,408**

Ref: Compiled by the researcher.

Table No. (4) shows that the free cash flow for the years 2019 and 2021 was negative, while in 2020 it was high, which is one of the best years for the research sample company. As for the method of calculating free cash flow according to accounting literature according to both Kieso et al. and Nobles et al, it is as follows:

Table 5 New Free Cash Flow Calculation

Statement	**2018**	**2019**	**2020**	**2021**	**2022**
NOCF	519,130	116,676	833,873	243,602	489,532
Capital Expenditures	34,526	107,673	145,948	215,068	163,420
Cash Dividends	240,067	214,523	271,762	441,633	436,988
FCC	244,537	(205,520)	416,163	(413,099)	(110,876)

Ref: Compiled by the researcher.

From the above tables, there is a great consistency in measuring cash flow in the accounting literature, and a great difference in the financial literature, which is the opposite of what Maksy and Chen claimed. The researcher presents a proposal for the equation parameters to calculate free cash flow as follows: Net Cash Provided by operating Activities-capital Expenditures-Cash Dividends + Cash at beginning of year = Free Cash Flow

Statement	2018	2019	2020	2021	2022
NOCF	519,130	116,676	833,873	243,602	489,532
Capital Expenditures	34,526	107,673	145,948	215,068	163,420
Cash Dividends	240,067	214,523	271,762	441,633	436,988
Cash at beginning of	852,664	1,046,760	1,128,192	1,295,075	632,741

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year					
FCC	1,097,201	841,240	1,544,355	881,976	521,865

Ref: Compiled by the researcher.

1. **Discounted Cash Flow Method**

By using the discounted cash flow valuation method to estimate the value of the company, the investor discounts the expected cash flows to the present value at a rate of return that represents the time value of money and the relative risk of the investment. Equity instruments can be valued directly using free cash flow to equity, or indirectly by obtaining the value of the company using free cash flow and then subtracting net debt from cash. The cash flow model is commonly used to measure the value of the company when the acquisition target is in a business group. The cash flow model is used to determine the purchase price and becomes the basis for recording the investment or business combination according to the purchase method.

2- Terminal Value

It is known that the forecast period for which free cash flow is calculated does not cover the actual economic operating period of the project, so it is necessary to recover the value of the company after the forecast period and it is called the final value and it is also discounted at the same discount rate as the free cash flow and they are combined to reach the value of the company before excluding debts, and the net assets (owners' equity) of the company are reached through the following mathematical equation: -

Present Value of Free Cash Flows + Present Value of Terminal Value – Debts

The final value can be calculated using the Perpetuity Growth Model

This method is based on the Gordon Growth model, which assumes that the company is in a state of continuous, eternal and stable growth at the same assumed growth rates to reach the free cash flow for the last year

Tables (6, 5) show the cash flows of the economic unit of the research sample and the final value based on the free cash flow for the last year of the research sample years and based on the Perpetuity Growth Model

$$Where\ , TV = \frac{\text{FCF TV} * (1 + G)}{\text{R} - \text{G}}$$

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FCFn: Free cash flow for the last year of the research sample years

G: Annual growth rate of permanent cash flows (the researcher considered that the company continues at the same level in generating free cash flows and did not assume a growth rate(

R: Represents the discount rate to reach the present value

Table. (5) Free cash flows and final value of the economic units of the research sample Amounts in millions

Method	**2018**	**2019**	**2020**	**2021**	**2022**	**Terminal Value**
Brigham and Houston	466,037	455,232	647,573	363,922	364,063	4,915,443
Gitman and Zutter	51,480	-216,064	868,338	-255,393	71,408	964,124
Kieso et al. and Nobles et al	244,537	-205,520	416,163	-413,099	-110,876	Cannot be calculated due to negative cash flow
Proposed Method	1,097,201	841,240	1,544,355	881,976	521,865	7,046,027

Ref: Compiled by the researcher.

Table (6) Net present value of free cash flows and terminal value Amounts in m

Method	2018	2019	2020	2021	2022	Discounted Terminal Value
Brigham and Houston	433,900	452,748	647,310	363,911	364,062	4,915,432
Gitman	47,930	-214,885	867,985	-255,385	71,408	964,122

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and Zutter						
Kieso et al. and Nobles et al	227,674	-204,399	415,994	-413,087	-110,876	Cannot be calculated due to negative cash flow
Proposed Method	1,021,540	836,650	1,543,728	881,949	521,864	7,046,012

Ref: Compiled by the researcher.

The researcher reached a measurement of the net present value of cash flows based on the parameters of the Capital Asset Pricing Model (CAPM), which represents the discount factor multiplied by the cash flows that the researcher reached in Table . (5), in order to reach the fair value of the net assets (equity at fair value) of the company, as explained in Table (7).

Table (7) The actual fair value of the net assets of Asia Cell Company, the research sample. Amounts in millions

Company Name	Total Discounted FCF (1)	Discounted Terminal Value (2)	Company Value (1+2=3)	Outstanding Debt (4)	Net Assets (Equity) (3-4=5)
Brigham and Houston	2,261,932	4,915,432	7,177,364	1,390,990	5,786,374
Gitman and Zutter	517,053	964,122	1,481,175	1,390,990	90,185
Kieso et al. and Nobles et al	-84,693	/	/	1,390,990	/
Proposed Method	4,805,732	7,046,012	11,851,744	1,390,990	10,460,754

Ref: Compiled by the researcher.

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Table (7) shows that Asia Cell Company achieved discounted cash flows of (2.261) billion dinars, and achieved a final discounted value of (4.915) billion dinars, according to the Brigham and Houston method, and achieved (517.053) million net present value of cash flows and (964.122) million final discounted value according to the Gitman and Zutter method, while the company achieved a net present value of free cash flow for the years of the research sample of (4.805) billion and achieved a final value of (7.046) billion only according to the proposed method, and the researcher was unable to complete the measurement process according to both Kieso et al. and Nobles et al. in order to achieve the method of free cash flow for the last year, which caused the failure to measure the final value of the company according to it.

Table (14) Fair Value of Shares (Amounts in Dinar)

Company Name	Fair Value per Share	Market Price	Difference between Fair Value and Market Price	Book Value per Share	Highest Opening Price	Highest Closing Price
Brigham and Houston	18.67	7.2	11.47	4.427	9.420	9.420
Gitman and Zutter	0.291	7.2	-6.909	4.427	9.420	9.420
Proposed Method	33.74	7.2	26.54	4.427	9.420	9.420

Ref: Compiled by the researcher.

Ref: prepared by the researcher

The reader and the informed person will see the difference between the methods of calculating free cash flow and their impact on the company's value, which is what the study aimed to show the impact of free cash flow on the company's value.

Conclusion

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At the end of this research on the impact of free cash flow on the company's value, we can emphasize the great importance that this financial indicator plays in evaluating companies and analyzing their performance. Studies and analyses have shown that free cash flow is a vital measure that reflects the company's true ability to generate cash from its main operations after covering the necessary capital expenditures.

The availability of positive and sustainable free cash flows enhances the company's value in the eyes of investors and gives them greater confidence in its ability to achieve future profits, as well as its ability to deal with any potential economic fluctuations. Free cash flow also reflects the company's ability to achieve growth, expand its operations, or distribute profits to shareholders, which increases its investment attractiveness.

However, analysts and investors must be careful when measuring, calculating, or interpreting these indicators, as free cash flow is affected by several internal and external factors, such as management strategies, capital investments, and general financial policies. Therefore, it is always recommended to consider free cash flow as part of a larger set of financial and management indicators when assessing a company’s value. Ultimately, understanding the impact of free cash flow on a company’s value is a powerful tool for investors and financial analysts, enabling them to make informed investment decisions based on a comprehensive and realistic assessment of a company’s financial and operational performance. Hence, the importance of free cash flow emerges as a key factor in improving a company’s transparency and enhancing its ability to attract investment and sustainable growth in the future.

Chapter Four: Conclusions and Recommendations

First: Conclusions

1. Despite the general agreement on the importance of free cash flow, there are differences in the methods of measuring it among authors, financial researchers and accountants. This difference is due to the difference in the definition of the elements included in the calculation of free cash flow such as capital expenditures, changes in working capital, and other changes.

2. The inadequacy of accounting measurement and the shortcomings of the means and methods used in calculating free cash flow, which leads to a lack of clarity in data and information and misleads users and investors.

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3. The difference in measuring free cash flow leads to a difference in financial results and analyses, and this difference may affect the investment decisions of investors and create challenges in comparing financial performance between companies.

4. Free cash flow is a good and important indicator in evaluating the performance of companies if it is measured appropriately and using appropriate information.

5. Due to the inefficiency of the Iraqi Stock Exchange, which affects the symmetry of information and the balance of stock prices and the lack of disclosure of information by the company in a timely manner, which is reflected in the decisions of users and investors in particular.

6. One of the most important obstacles to applying the measurement of free cash flow is the inefficiency of the market and the lack of financial and non-financial information on a continuous and timely basis.

7. Relying on free cash flow to reach a measurement of the company's value is one of the best methods, in order to achieve real and appropriate results for investors, as the net present value of free cash flow and the final value are the closest to expressing the company's value.

8. Calculating free cash flow indicates the provision of information characterized by the characteristics of suitability and honest representation in measuring the company's value, which is positively reflected on users and investment decision makers.

9. There is a positive relationship between free cash flow and company value. Companies with stable and strong free cash flows often command higher market valuations, enhancing their investment attractiveness.

Here is the translation for "Second: Recommendations":

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Second: Recommendations

1. Given the importance of free cash flow in evaluating companies, unifying its measurement standards can contribute to improving the accuracy of financial analysis and enhancing the transparency of financial reports, which helps investors make more informed decisions.

2. Free cash flow is one of the basic indicators that greatly affect the value of a company. However, differences in the methods of measuring it highlight the need to adopt unified standards to enhance the accuracy and transparency of financial analyses.

3. It is recommended to adopt unified standards for measuring free cash flow among companies and financial institutions to ensure the accuracy and transparency of financial analyses. Accounting and finance bodies, such as the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB), can play a major role in setting and disseminating these standards.

4. Training programs and workshops should be provided to financial analysts and accountants to enhance their understanding of the importance of free cash flow and how to measure it correctly according to unified standards. These trainings can also include analyzing changes in working capital and capital expenditures.

5. Companies should enhance transparency in their financial reporting by providing more detail about the components of free cash flow and the factors that influence it. This includes disclosing capital expenditures and changes in working capital in a clear and organized manner.

6. Researchers are encouraged to conduct more studies on the impact of free cash flow on company value in different sectors and industries. This research can help identify the key factors that influence free cash flow and develop strategies to increase it.

7. Companies should enhance communication with investors about the importance of free cash flow as part of their financial strategies. These efforts could include providing presentations and webinars to explain how free cash flow affects financial performance and market value of the company.

8. Advanced technology and analytics can be used to improve the accuracy of measuring free cash flow. Integrated financial systems and big data technologies can help collect and analyze financial data quickly and efficiently, allowing companies to make more informed decisions.

9. It is recommended that companies monitor free cash flow regularly as part of the financial planning and financial statement preparation process. This ongoing monitoring can help identify any potential financial problems and take the necessary corrective actions in a timely manner.

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