The relationship between the intrinsic value of the stock and the institutional investor behavior applied on the listed firms in Kuwait stock market

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Abstract

This thesis is conducted to examine the relationship between the intrinsic value of the stock and the institutional investor behavior applied on a sample of 159 companies which represent the listed firms in Kuwait stock exchange market. The judgmental sample to 6 listed firms so we can apply the DCF model and the present value coefficient to acquire the growth rate to get (the intrinsic value of the stocks) the independent variable. It was relied on the survey list to collect primary data for the dependent variable (institutional investors behavior) a questionnaire consists of 13 questions presented to 31 portfolio managers, assistant managers and investment senior analyst in several institutional investments to analysis their behaviors.

The study found a statistically significant relationship between intrinsic value of the stock and the institutional investors behavior. Furthermore, the study shown a significant positive correlation between the intrinsic value of the 6 company stocks that generated by the DCF model compared with the average market price for each year by the Correlation coefficient for 9 years.

Keywords: Intrinsic value, Institutional investors behavior, Market value, Discounted cash flow, Prospect theory, Regret theory

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"العلاقة بين القيمة العادلة للسهم وسلوك المستثمر المؤسسي المطبقة على الشركات المدرجة في سوق الأوراق المالية الكويتي"

ملخص

يهدف البحث الى قياس العلاقة ما بين القيمة الجوهرية للسهم وسلوك المستثمر المؤسسي المطبقة على 159 شركة مدرجة في سوق الاوراق المالية الكويتي. العينة التي يمكن التطبيق عليها نموذج التدفقات النقدية المخصومة وهي 6 شركات لإيجاد القيمة الجوهرية للسهم المتغير التابع. وتم تقديم 31 استبيان ملخص بـ 13 سؤال لمدراء محافظ ومساعدين مدراء ومحللين استثمارين اولين لقياس سلوك المستثمر المؤسسي لعدة شركات استثمارية.

توصلت الدراسة الى وجود علاقة ذات دلالة إحصائية بين سلوك المستثمر المؤسسي والقيمة العادلة للسهم. كما أظهرت النتائج وجود معامل ارتباط إيجابي ما بين القيمة الجوهرية للسهم لستة شركات من خلال نموذج التدفقات النقدية المخصومة ومعدل أسعار السوق للأسهم من كل سنة خلال 9 سنوات

الكلمات المفتاحية: القيمة الجوهرية للسهم، سلوك المستثمر المؤسسي، قيمة السوق، التدفقات النقدية المخصومة، نظرية التوقع، نظرية التندم

I) Introduction

Every asset, financial as well as real, has a value. The key to successfully investing in and managing these assets lies in understanding not only what the value is, but the sources of the value. Every asset can be valued, but some assets are easier to value than others, and the detailed of valuation will vary from case to case. thus, valuating of a real estate property will require different information and follow different format than valuating a publicly traded stock.

There are different techniques or models that are used to value a share prior to making an investment decision. A good share valuation model should be simple, understandable, testable and precise in explaining current prices against historical data and be helpful to investors in isolating the market consensus estimate of future company performance (Wilcox, 1984)[1].

In this research, the valuation approach would be referred as the discount cash flow models. The intrinsic value of a share is used for many reasons and one of them is for evaluating prices that could be used for mergers and acquisitions, changing capital structure, expanding decisions and dividend policies. According to Heifer and Vishny (2003), Rhodes-Kopf, Robinson, and Viswanathan (2005)[2] and Gao (2010)[3],

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[1] Wilcox J.W. (1984). The P/-ROE Valuation Model. **Financial Analysts Journal**, Vol 40(1), Jan –Feb 1984, pp.58-66.
[2] Morris R., Rudd D. P. and Flanegin FR. (2005). Should Investments Professors Join the "Crowd"? **Managerial Finance**, Vol 31(5), 2005, pp. 28-37.

misevaluation is used as a significant driving force in mergers and acquisitions where they stimulate managers to undertake acquisitions. It is the investment horizon of managers that will dictate the need for valuation and the result of the valuation. Managers who have a longer horizon tend to focus on the firm's long-term value and they use overvaluation to acquire target firms in order to preserve some temporary over valuation for long run shareholders (Gao, 2010).

II)Literature reviews and Theoretical framework

II.I) Previous studies

Rafael La Porta Florencio Lopez-De-Silanes Andrei Shleifer Robert Vishny (2002).

"Investor Protection and Corporate Valuation"

● The objective of the research

The objective is to present a model of the effects of legal protection of minority shareholders and of cash-flow ownership by a controlling shareholder on the valuation of firms. We then test this model using a sample of 539 large firms from 27 wealthy economies

● Conclusion

The research has presented a simple theory of the consequences of corporate ownership for corporate valuation in different legal regimes. We have also tested this theory using data on companies from 27 wealthy countries around the world. The results generally confirm the crucial predictions of the theory, namely that poor shareholder protection is penalized with lower valuations, and that

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[3] Gao H. (2010). Market Misevaluation, Managerial Horizon, and Acquisitions. **Financial Management, Vol 39(2). Summer 2010. Pp.833-850.**

higher cash-flow ownership by the controlling shareholder improves valuation, especially in countries with poor investor protection.

Abdul Nafea Al Zararee and Abdulrahman Al-Azzawi. (2014).
"The Impact of Free Cash Flow on Market Value of Firm"
- The objective of the research
  The objective is to investigate the relationship between cash flow to equity and the firm's market value in the pharmaceutical sector of Jorden
- Conclusion
  The research has confirmed a positive relationship between FCFE and market value of the firm.

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The research has confirmed a positive relationship between FCFE and market value of the firm.

Kung-Cheng, Ho (2016).
"A Comparative Analysis of Accounting-Based Valuation Models"
- The objective of the research

The objective of the research is to answer two questions:

(1) Compare the reliability of the dividend (DIV) model, the residual income valuation (CT, GLS) model, and the abnormal earnings growth (OJ) model.

(2) Find the model that more reliable than those from the other three models

● Conclusion

The article examined the relative valuation accuracy between stock price and theoretical value for OJ, DIV, CT, and GLS models, using analysts-based and model-based earnings forecasts to generate valuation estimates. Among our four models, the OJ model provides superior reliable valuation estimates versus the other three. the OJ valuation estimates' average probability is greater than that of the other models. it suggested that capitalized next-year earnings forecast is a superior anchor versus book value. By comparison, the book value in RIV fails to adequately track movement in stock prices. Abnormal book value growth appears to more than compensate for the inadequacy in book value.

Bader S. Alhashel. (2018).
"Rights offering announcements and the efficiency of the Kuwaiti market"

● The objective of the research

The objective of the research is:

1) Test the semi-strong form of the EMH in the Kuwait Stock Exchange.

2) Examining the behavior of stock prices around the date of rights offering announcements based on a sample of 69 rights offerings over the period 2004–2013.

● Conclusion

Those prices incorporate new information within an average of 4 days. The observation has been taken as evidence that the Kuwaiti market is a semi-strong efficient market.

II.II) Gap in the Literature

There has been research on valuation models and to determine whether the intrinsic value affect the market value. However, there is no research that has been done to measure the role of the intrinsic value on the institutional behavior applied on Kuwait Stock Market listed firms to determine the relationship between intrinsic value obtained by discounted cash flow models and the institutional investors behavior.

II.III) Theoretical framework

1.1)Understanding Institutional Investor

To begin with, an institutional investor is an organization or corporation that invest in the interest of others. There are many types of institutional investor for example pensions, banks, insurance companies, and mutual funds. Institutional investors are considered as the whales on wall street because they purchase and sell significant squares of stocks, bonds, or other securities.

Likewise, an institutional investor is a legal entity that pools the funds of several interested investors, private individuals, or other legal entities, to invest in a variety of financial instruments and profit from the process. To put it another way, an institutional investor is a company that invests on behalf of its shareholders. The aim of the investor is to make sure that they get assets to invest on and then in return they make money for the clients but in the whole process they also end up making good amounts of money. On behalf of clients, customers,

members, or shareholders, an institutional investor buys, sells, and manages stocks, bonds, and other investment securities (Davies et al., 2004). The institutions have the resources they need to carry out research and know what is good to invest in as well as know when to buy and when to sell and because of this, they largely control and have a significant influence on price fluctuations in the markets.

1.2) The difference between institutional investors and individual investors:

There exists a very big difference between the institutional investors and individual investor and the main difference comes largely in investment as the individual investor mainly invests in his own personal money driven by his own personal goals and ambitions, on the other hand, institutional investors do not use their own money but instead invests on other people's money on their behalf. Other differences include access to resources where the individual investors are only exposed to limited resources to conduct research as well as purchasing products whereas the institutional investors boast a significantly huge number of resources at their disposal. Duong et al (2009) assert that, Institutional investors are huge corporations that may take benefit of a variety of resources, such as financial professionals, to monitor their portfolio daily which is not the case for individual investors who must conduct their own research and analysis using publicly available data.

1.3) Characteristics of Institutional Investors

• Institutional investors are legal entities
• They are also managed professionally

•   The institutional investors have a huge role in the stock market and they own a significantly large amount of shares in that sector. Institutional investors buy and sell enormous blocks of stock and have a significant impact on the stock market's movements (Davies et al., 2004).

1.4) Investment behavior of institutional investors

According to Bebchuk et al (2017), Investment behaviors are defined as how investors assess, predict, analyze, and review decision-making procedures, which includes investment psychology, data gathering, defining and comprehending, research, and analysis. The investment behavior of most Institutional investors is determined by the risks involved and the returns. Most investors will opt for the investment that balances the risks and returns since high return is always associated with high risks (Bebchuk et al., 2017). The relationship between returns and risks is the most important factor to consider when choosing investment behaviors, markets, or strategies, which is to choose investment targets with high credibility, huge firm size, high dividends, and high returns. The investment behaviors are also influenced by the experiences as well as the psychological factors of those involved in the decision-making process. According to Nofsinger (2017), Investor psychology and expectations, according to the study, are also important variables in investing performance.

The investors have mastered the use of psychological analysis of the market such they know precisely how psychology affects buying and selling stock market. Most investors overlook objective data and are swayed by media reports; they purchase stocks when they are cheap and sell them when they are expensive (Nofsinger., 2017). People will also invest in credible

companies with credible records, large and stock size since they feel that the return on investment. Investors would choose to invest in companies with a high level of credibility, a greater size, high cash/stock dividends, and a high stock price (3H stocks) or high risk with high reward (Bebchuk et al.,2017). Other factors that play a role as well in the investment behavior of institutional investors are the macroeconomic factors as there are risks and non-risks involved with the fluctuations in prices.

Fabozzi and his co-authors talk about a lot if things in the financial world, but not about the underlying human behavior, behavior finance or behavioral economics more broadly, is a kind of revolution that has occurred in finance and economics over the last 3 decades and it remains somewhat controversial and its coming along that behavioral finance as an important element of finance. Economists have liked to invoke the principle of rationality as an underlying component of their theory such as the investor should be mature and rational, and that has been useful but it's of limited use, because people are not rational; they are often rational, not completely rational. The real problem is that people are complex, and the financial institutions are designed for real people and their functioning depends on the behavior of real people.

2) The main rules of the Behavioral Finance:

Prospect theory
Behavioral finance has many aspects, one of these aspects which in the present considered one of the most famous element of behavioral finance is prospect theory, an analysis of decision under risk, uncertainty and how people form decisions

about prospects (Kahneman & Tversky,1979) [4]. According to this theory there are two functions which represents how people value things and the way they deal with probabilities: value function and weighting function.
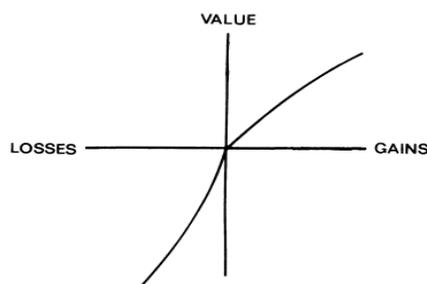

figure: value function[5]

this function shows the way people value financial gains or losses, (Kahneman and Tversky, 1979) wrote in their econometrical that people don't weigh gains and losses linearly, the figure shows there is diminishing marginal utility for gains, in the other hand, for losses we have concave up, the zero here is the reference point which refers to today's wealth. These social scientists proposed that losses have a greater emotional impact than a gain of the same amount. Furthermore, the investors weight potential gains more than losses, despite the losses people may accept the investment whenever the gains are presented to them.

The other aspect is the weighting function which present how people psychologically think about probabilities (Kahneman and Tversky,1990). A probability is a number between 0 and 1

[4] Kahneman, D., & Tversky, A. (1990). **Prospect theory: An analysis of decision under risk**. In P. K. Moser (Ed.), Rationality in action: Contemporary approaches (pp. 140–170). Cambridge University Press. (Reprinted from "Econometrica" 47 (1979), 263-91

[5] Ibid., (pp. 279).

or 0 and 100%, the errors that people make are described by the weighting function, it's the psychological impact that people are having as if they just don't understand the probability, and these are errors that naturally happen.
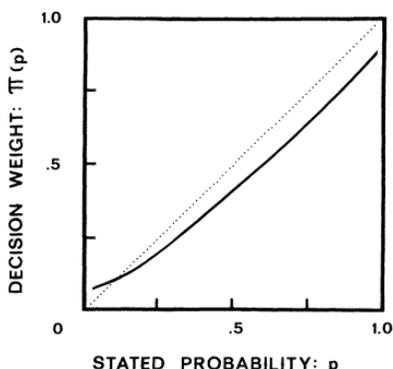
figure: weighting function[6]

(Kahneman and Tversky,1990) claimed that for very low probabilities people may around them to zero and for very high probabilities, they may around them to one but if they decide not to around them to zero neither one, they exaggerate the difference between 0 and 1 as it's like there is only three probabilities; cannot happen which refers to 0, maybe (that refers to exaggerate people) and will happen which refers to 1.

Regret theory

These aspects explain many things go on in finance nevertheless, not everything. Behavioral finance considered a huge field, not yet being exposed, Regret theory an alternative theory of rational choice under uncertainly by (Loomes and

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[6] Kahneman, D., & Tversky, A. (1990). Prospect theory: An analysis of decision under risk. In P. K. Moser (Ed.), *Rationality in action: Contemporary approaches* (pp. 280- 284).

Sugden, 1982) [7], refers that People fear the pain of regret resulting to people show some tendencies for errors and bad decisions, so then people end up designing their life and their decisions around that to avoid doing anything that they might regret later, which it can create problems and bad decisions because of overly worried about regret.

Overconfidence

In addition, Psychologists have found that there is a human tendency to overestimate one's own abilities, most of the people think they are above average, and some of them think they are way above average and this tendency has been revealed in a number of experiments. Knowing where the market is going is one of the important knowledge in corporate finance field and most of the analysis thought they are above average in their analytical skills, and apparently, it is impossible statistically that most of these analysis are above average, (Montier, 2006) [8] conducted in his study of 300 professional fund managers surveyed that 74% believed that they were above average at investing and delivering job performance, while most of the 26% of the 300 remaining considered them-self as average. This means that all these mangers found themselves average or better which it is not possible, since the statistics method states that 50% of any sample can be either above or below average.

The psychologists have tried to describe what is goes on in people's mind that produces answers and decisions like this, one of them is that people seem to have a sense that they understand the world more than they really do and that is

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[7] Loomes, G., & Sugden, R. (1982). Regret Theory: *An Alternative Theory of Rational Choice Under Uncertainty*. **The Economic Journal**, 92(368), 805–824

[8] James Montier. (2006). Behaving Badly. **SSRN Electronic Journal**, 10.2139, pp(3-16)

illusion, actually the world is just infinitely complicated and there are so many surprises, which This also applies to the market, investors and the investment world.

2.1) intrinsic value

Assets are valued based on their intrinsic value. Rather of utilizing the current market price of the asset, an objective computation or complicated financial model is used to arrive at this figure. This phrase is used in financial analysis to describe the process of establishing a company's intrinsic value and cash flow as precisely as possible. The difference between the option's strike price and the underlying asset's current price is referred to as the "difference in option pricing. "The phrase "intrinsic value" may be used to a variety of contexts. Typically, the term refers to the job of a financial analyst who evaluates an asset's intrinsic value using basic and technical analysis. Financial analysts use a variety of quantitative, qualitative, and perceptual factors to determine a company's value, but there is no universal standard for determining a company's intrinsic value.

The intrinsic value of the business is simply the fair value of the business, it's what the business is. American economist (John Burr Williams,1938) stated in his book the theory of investment value that usually been quoted by warren buffet in his lectures is that the intrinsic value of any stock, bond or business today is determined by cash outflows and inflows, discounted at an appropriate interest rate, that be able to be expected to occur during the remaining life of the asset[9].

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[9] Williams, J.B. (1938), **The Theory of Investment Value**. Harvard University Press, Cambridge, MA, pp.55-73

2.2) Discontinued cash flow model (DCF) and intrinsic value:

When estimating a company's intrinsic value, the discounted cash flow (DCF) model is often used. In the DCF model, free cash flow and the weighted average cost of capital are employed (WACC). Therefore, WACC considers the time value of money and returns 'risk for all future cash flow to the present.

The weighted average cost of capital refers to investment returns that are larger than the company's cost of capital. If a company needs to raise capital, it may do so by issuing bonds or stock shares. As a result of a project or investment in a firm, the DCF model predicts potential income streams that might be realized later, if a company's rate of return and its intrinsic worth exceed its cost of capital, it is optimal.

This means the risk-free rate of return that might have been generated had the project or investment not been pursued is considered. In other words, the risk-free rate of return must be higher than the return on the investment. Unless there is a guarantee that the project will succeed, there is no use in doing it[10].

2.3) Stock valuation according to the free cash flow model

the value of the company's value and the value of the shareholder, depends on the interaction of two components, the first is cash flow and the second is the cost of capital.
1. **Cash flow**

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[10] SWANSON, E. T. 2022. The Federal Funds Market, Pre-and Post-2008.

Relying on the direct concept of cash flow (net profit after tax + depreciation), can be misleading, because it does not reflect the current cash flows that is necessary to survive in the future11. Hence, three cash flow concepts appeared, operating cash flow, free cash flow and proprietary free cash flow.

1.1. Operating cash flow
It can be estimated through the following equation:

Operating cash flow = [cash revenues - cash operating costs - taxes] =
[cash revenues - cash operating costs] [1 - tax rate] + [depreciation x tax rate] =
[cash revenues - operating costs] [1 - tax rate] + [Depreciation] =
[Operating Profit After Tax] + [Depreciation]

Operating profit after tax means profit before interest deduction and after-tax deduction, while cash operating profit after tax refers to accounting profit before deduction of depreciation and interest. As for operating profit in general, it is profit before interest and taxes are deducted.

The concept of operating cash flow is an essential concept to serve decisions that take into account the dimension of time, and then we find it common in the analysis of long-term investment decisions and decisions related to determining the optimal level of investment in receivables and inventory and attempting to determine the value of the facility.

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11 Fabozzi, Frank J., and Peterson, Pamela P., **Financial Management & Analysis**, Second Edition, Wiley, 2003, p.805.

1.2. Free cash flow

The value of this flow is estimated, according to the following equation:[12]

Free cash flow = [operating cash flow after tax] - [net investment in fixed assets] - [net investment in current assets]

= [Net investment in fixed assets = Change in Fixed Assets + Depreciation]

&

[Net investment in current assets = Change in Current Assets – Change in Accounts Payable and Receivable]

It is noted that the operating cash flow measures the cash generated from operations, without considering the investment spending requirements or working capital requirements, and this flow must be positive, because its negative value and repeated for several periods of time, indicates the inability of the facility to generate cash that Sufficient to cover operational costs.

As for the total cash flow, it considers what is spent on investments in fixed assets and additions to working capital, and this flow is often negative. When the facility grows at a rapid rate, we often find that spending on inventory and fixed assets is higher than the cash flow resulting from the sales. Free cash flow is an important concept in long-term financial planning, as well as when evaluating facilities for acquisition purposes or for the purposes of judging the extent to which management decisions contribute to value creation.

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[12] Gitman, Lawrence, **Principles of Managerial Finance**, Twelfth Edition, Pearson,2009,p.115.

This concept implies, that a part of the funds generated from the activity of the enterprise, must be set aside to reinvest in the enterprise, and therefore, these funds are not available for distribution to the owners of the enterprise.

The company's free cash flow can also be formulated as follows:
The company's free cash flow = operating profit after tax - investment requirements

Thus, the free cash flow represents the amount of cash flows available to investors (creditors and owners) after the company fulfills all its operational needs and fulfills the investment requirements[13].

1.3. Free cash flow for ownership:

Where the term free cash flow for ownership means, the maximum distributions that can be paid by the enterprise, without sacrificing growth model. Therefore, the additional investment expenditure financed by the property needs to be deducted from the company's net cash flow. So, it will be[14]:

Free cash flow of the property = net profit after tax + depreciation - investment spending financed by the property

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[13] Gitman, op.cit, p.115.
[14] Mandell, Lewis and O'Brien, Thomas J., **Investments,** Macmillan, 1992, p.352.

Ownership-financed investment expenditure = net property added + depreciation.

Equity free cash flow = Net profit after tax - Net property added

As it noticed,

[Net Equity Added = New Retained Earnings + New Issues of Equity - Recovered from Existing Ownership].

1. Valuation models

The value of the company can be estimated from one of two models, the first is based on estimating the value of the property, by deducting the free cash flow of the property, and then adding the value of the indebtedness, to reach the value of the company. The second model is based on directly discounting the free cash flow stream. If we want to estimate the value of the property, we subtract the value of the debt from the value of the company.

To build a model for estimating the value of the company, where we will assume once, that the company's performance is stable, and then achieve a permanent regular growth rate. Then we will assume the case that the company is in the stage of growth, and therefore achieves a high rate of growth, for a limited period, and then growth returns to regularity after that. Finally, we refer to the estimation of the property value, under the same assumptions.

1.1. Company value with Regular growth condition

We will symbolize,

V0 = the value of the company with the symbol.

FCF = the free cash flow with the symbol.

G = the growth rate with the symbol.

WACC = the cost of capital with the symbol.

Company value = present value of the free cash flow stream.

Company value: Regular growth condition: We will symbolize the value of the company with the symbol S0&, the free cash flow with the symbol D & H, the growth rate with the symbol M & and the cost of capital with the symbol Rho.

Company value = present value of the free cash flow stream.

$$V0 = [FCF (1 + g) \div (1 + WACC)] + [FCF2(1 + g)^2 \div (1 + WACC)^2] + [FCF3 (1 + g)^3 \div (1 + WACC)^3] + [FCF4 (1 + g) \div (1 + WACC)] + \dots\dots\infty \quad (1)$$

By multiplying both sides of the equation by the expression $(1 + g) \div (1 + WACC)$, we get:

$$V0 [(1 + g) \div (1 + WACC) = [FCF2 (1 + g)^2 \div (1 + WACC)^2] + [FCF3 (1 + g)^3 \div (1 + WACC)^3] + [FCF4 (1 + g)^4 \div (1 + WACC)^4] \dots\dots\infty \quad (2)$$

Subtracting equation (2) from equation (1), we get:

$$V0 - V0 [(1 + g) \div (1 + WACC)] = [FCF1 (1 + g) \div (1 + WACC)]$$

Multiplying both sides of the equation by the expression $(1+ WACC)$, we get:

$$V0(1 + WACC) - V0 [(1 + g) = FCF1 (1 + g)$$

Taking V as a common factor, on the left-hand side of the equation:

$$V0(1 + WACC - 1-g) = FCF1 (1 + g)$$

V0 = FCF1 (1 + g) ÷ (WACC - g)

That is,
the value of the company = expected free cash flow ÷ (cost of capital - growth rate)

1.2. Company value with the case of erratic growth[15]

Company value = [present value of the free cash flow stream during the period of abnormal growth] + [present value of the value of the company at the end of the period of abnormal growth].

That is, the model of regular growth is applied to the period following the period of abnormal growth, then discounted to the current moment of evaluation, with the addition of the present value of free cash flows during the period of abnormal growth.

V0 = [t = n, g $_{t=1}$ FCF ÷ (1 + WACC) ^{t}] + [FCF $_{t}$ (1 + g) ÷ (WACC – g)] ÷ [1 + WACC] ^{n}

1.3. Equity value case of regular growth
The following model can be applied:
V$_{EQUITY}$ = n, g $_{T=1}$ [FCF$_{EQUITY}$ \ (1 + WACC)^{t}]
Where V represents the value of the property, and FCF represents the free cash flow of the property in period T, and WACC represents the required rate of return on property funds. Hence, the value of ownership in the facility is the sum of the present values of the free cash flows of ownership, discounted at the rate of return required by the shareholders, and by dividing this value representing the ownership, by the number of shares, you get the fair value of the share.

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[15] Copeland, Thomas E., Weston, J. Fred and Shastri, Kuldeep, **Financial Theory and Corporate Policy**, Fourth Edition, Pearson. 2005, p.500.

This model can also be formulated in the following form:

V0 = FCF1 \ (WACC - g)
Where FCF1 is the expected cash flow of the property, a year from now, that is, which is equal to the free cash flow of the property multiplied by the total growth rate, that is:
FCF1 = FCF (1 + g)

The growth rate, equal to the rate of return on equity, multiplied by the ratio of property added to net profit after tax, and it reflects the growth rate of free cash flows of ownership, which considers, besides retained earnings, other changes in net property added. This contrasts with the growth rate of dividends, in the predominantly used Gordon (discounted dividend) model, which depends on retained earnings, which is something that must be corrected, according to this revised vision.

It must be emphasized that, when estimating the value of the company, the present value reflects the value of all claims on the company. Therefore, the cash flows used are all the flows generated from assets, before any debt payments, but after subtracting the reinvestment requirements needed to achieve asset growth.

The discount rate used reflects the cost of managing both the equity and the indebtedness funds, according to their relative weights. But when addressing the estimation of the property value, the present value here, only reflects the property claims on the company. Therefore, the cash flow used is the cash generated from the assets after debt repayments, and after the reinvestment requirements necessary for future growth. Also,

the discount rate used, only reflects the cost of procuring the property's money[16].

III) PROBLEM OF THE STUDY

Understanding the mechanism of corporate evaluation is necessary in the enterprise finance field. In addition to its major role in the mergers and acquisitions processes, its required for the corporation valuation.

IV)Objective of the study

The main objective we seek from this study is to try to add value through access to research that contributes to enriching the knowledge of each researcher in the field of financial investment and capital budgeting in addition to other goals related to the results reached, such as:

- To establish whether the discounted cash flow models give an intrinsic value that is equal to, less or more than the observed share prices for Kuwait listed companies.
- to establish whether the intrinsic value resulted by discounted cash flow valuation models of listed firms in Kuwait stock market influence the market value.
- to establish whether there is a relationship between intrinsic value resulted by discounted cash flow models of listed firms in Kuwait stock market and the institutional investors behavior

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[16] Damodaran, op. cit. p.128.

V)The Study Method:

This study is mainly used the analytical descriptive method, where the intrinsic value of share is determined using the discounted cash flow valuation models applied on the listed firms in Kuwait stock market influence the market value, analyze the relationship between intrinsic value resulted by discounted cash flow models of listed firms in Kuwait stock market and the institutional investors behavior.

VI)Research Structure
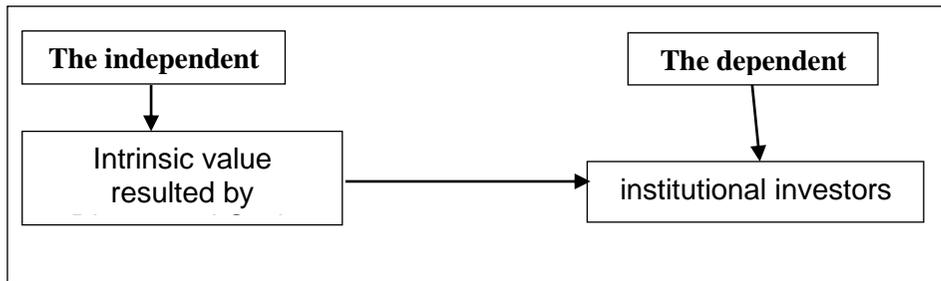
VII)The research population:

In this research, we use the share price and accounting data obtained from the Bursa Kuwait databases. All companies listed on the Kuwait stock markets that have dividend data for the full period between 2011 and 2020 will be included in the study.

VIII)Hypothesis

To answer research questions and to achieve its objectives. It is possible to determine the hypothesis in the following assumptions:
 The hypothesis of study:

H0: there is a relationship between intrinsic value of a share and institutional investors behavior.

H1: there is no relationship between intrinsic value of a share and institutional investors behavior.

IX)The Research Sample And Limitation:

In This research, there was some limitation that appears. First, to apply the DCF model the free cash flows to equity must be positive and ascending in a specific period, in this research that applied to the 159 listed firms in Kuwait Stock Exchange, 21 of these firms had a positive and ascending FCF from the end of 2013 until the end of 2021. The pandemic that attacked the world in the late of 2019 and the war in the early of 2022 between Ukraine and Russia had a negative effect on the operating cash flows and the capital expenditure of the firms and resulted to nearly 13% of the listed firms in Kuwait Stock Marker that had a positive FCF.

Moreover, the Discounted Rate of Return It is made up of factors including growth rate the growth rate can be calculated in several ways such as the average of the growth rate last years, but it ignores the effect of time, but the scientific method is According to the present value coefficient (PVIF), and because of these limitations:

the study sample that can be applied on it these methods are 6 firms.

X)Mode of Analysis

In this research the main question is what is relation between the Cash flow discounting-based methods and the institutional investors behavior to measure this relation DCF model applied to 6 companies that listed in the KSE to find the intrinsic value

of the stock and Compare it with the market price. Furthermore, the discounted rate of this model can be either of the WACC or the Required Rate of Return but since, this method objective is to get the intrinsic value of the stock the RRR was chosen to get the accurate discounted rate, the risk-free rate return is 2.00% given from the Kuwait central bank official cite[17], and the stock market return was reported at 16.08% by World Bank collection of development indicators[18].

In addition, the growth factor can be calculated in several ways such as, the average growth rate of a specific period of time and the less growth rate from the same period but these ways of calculating the growth rate ignore the effect of time the value of money now is not equal to the same amount after a year

the accurate growth rate used in this research and considered as the scientific method is according to the present value coefficient (PVIF) Present value Interest Factors for One Dollar Discounted, by dividing the old FCF to the last year FCF to get the factor of period of time (N) and get the growth rate from the PVIF formula Discounted at *k* Percent for *n* Periods:

$$PVIF_{k,n} = 1/(1+k)^n$$

X.I) Statistical Analysis

The quantitative research approach is employed to find out the findings of the research study since numerical and secondary data is used quantitative approach is considered to be a suitable

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[17]   https://www.cbk.gov.kw/en/cbk-news/announcements-and-press-releases/press-releases

[18]   https://tradingeconomics.com/kuwait/stock-market-return-percent-year-on-year-wb-data.html#:~:text=Stock%20market%20return%20(%25%2C%20year%2Don%2Dyear)%20in,compiled%20from%20officially%20recognized%20sources.

approach for the study, according to (Leavy,2003)[19] statistical analysis are used to describe an account for the observed variability in the data, this involves the process if analyzing the that has been collected, thus the purpose of statistics is to summarize and answer questions that were obtained in the research.

Non-Parametric analysis

In this research the analysis used to fund the relation between the variables is one sample test by the SPSS and the results:

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Percentile Group of Rating	31	1.48	.508	.091

One-Sample Test

Test Value = 1.33

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Percentile Group of Rating	1.686	30	.102	.154	-.03	.34

The average rating of the six companies under study is 1.33.

A one sample t-test was conducted to compare the average rating of institutional investment behavior and the cash flow discounting-based methods, the result showed that there is a no significant difference in the mean, t (30) = 1.69, p = .102. This indicates that we do not have enough evidence to reject the null hypothesis that there is no difference between the Cash flow discounting-based methods and the institutional investors behavior

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[19] Sharlene Nagy Hesse-Biber and Patricia Leavy, Approaches to Qualitative Research, July 2003, 83-92p

From these results, we conclude that there is a relationship between the intrinsic value and the institutional investor behavior and we accept the null hypothesis

X.II)Correlation coefficient

The intrinsic value of the 6 company stocks that generated by the DCF model was compared with the average market price for each year by the Correlation coefficient formula:

$$Correl\,(X,Y) = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

where x is, the intrinsic value resulted by DCF model and y is the market value, the resulted test show that:

Company name	significance	correlation coefficient of XY
Qurain Petrochemical Industries	Strong Significant positive correlation	0.574
Al Ahleia Insurance Co	Weak Significant positive correlation	0.257
National Petroleum Services	Strong Significant positive	0.769

|		
	correlation	
Agility Public Warehousing	Weak Significant positive correlation	0.455
ZAIN Co	Weak Significant positive correlation	0.378
Mabanee Co K.P.S.C	Weak significant negative correlation	-0.05

Most of the sample shows that there is a significant positive correlation coefficient of XY, furthermore, when the intrinsic value of the stock for the period year compared with the market value and its over-valued the stock price decreased, in the other hand, when it is under-valued the stock price increased the accuracy of this is as follow:

Mabanee Co K.P.S.C

|	2021	2020	2019	2018	2017	2016	2015	2014	2013
FCFE	60.31	14.66	88.93	54.13	100.34	28.06	76.08	54.69	44.14
Intrinsic value	369.1237711	89.7256588	544.29078	331.299448	614.125007	171.739563	465.643119	334.726895	270.156247
Total common stock	1241.68	1241.68	1241.68	1236.32	1237.37	1234.8	1165.17	1099.24	1099.24
Intrinsic value STOCK	0.297277697	0.0722615	0.43835028	0.26797225	0.49631477	0.1390829	0.39963535	0.30450756	0.24576639
Market value STOCK	0.725	0.781	0.765	0.665	0.7775	0.895	0.95	1.4	1.15
Intrinsic value Vs Market value	OverValued	OverValued	OverValued	OverValued	OverValued	OverValued	OverValued	OverValued	OverValued

88%
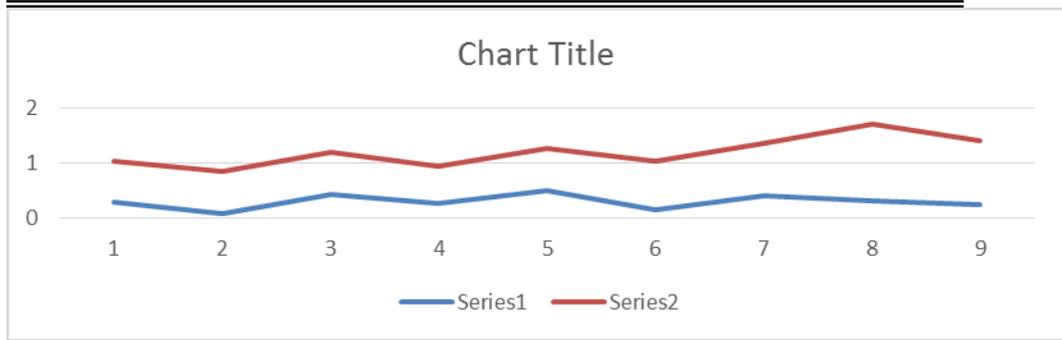
Qurain Petrochemical Industries

Year	2021	2020	2019	2018	2017	2016	2015	2014	2013
FCFE	36.61	53.42	21.23	76.47	53.17	38.03	34.83	19.6	19.04
Intrinsic value	413.9944709	604.0858956	240.073822	864.7407045	601.258837	430.052164	393.865813	221.641399	215.308788
Total common stock	1,073.40	1,022.08	1,021.34	1,037.64	1,038.68	1,041.55	1,039.90	1,049.35	1,049.35
Intrinsic value STOCK	0.385685179	0.591035825	0.23505769	0.833372561	0.57886821	0.41289632	0.37875355	0.2112178	0.20518301
Market Value STOCK	0.34	0.33	0.34	0.34	0.28	0.21	0.20	0.21	0.20
Intrinsic value Vs Market value	UnderValued	UnderValued	OverValued	UnderValued	UnderValued	UnderValued	UnderValued	OverValued	UnderValued

100%
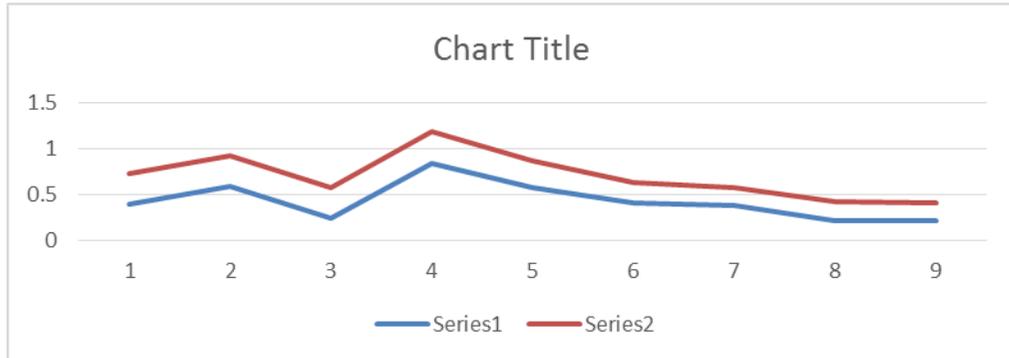
in each table the percentage in the right shows the accuracy of the result when the intrinsic value generated by the DCF compared with the average market value of the begin and end of the same period the less accuracy is 50% in agility and the most is 100% the average of the total is 75% that means the result of this sample shows that the investor by using the DCF model have 75% predictability of the stock prices. In addition,

the chart shows the correlation coefficient of the market value (series 1) along with the intrinsic value (series 2)

X)Testing of hypothesis

Based on the empirical analysis of the study the results are consistent with the developed hypotheses as it is clearly found that:

- A positive significant statistical relation between the intrinsic value of the stock generated by the DCF model and the institutional investors behavior
- We accept the null hypothesis

H0: there is a relationship between intrinsic value of a share and institutional investors behavior.

XI)Conclusions

The study has examined where there a relationship between the intrinsic value resulting by DCF model and the institutional investor behavior of the listed firms in the Kuwait stock market. The study found that there is no difference and there is a significant relationship between the intrinsic value and the institutional investor behavior, the study showed that the intrinsic value.

XII)Recommendation

This study is limited to the sample of the institutional investor behavior, the findings of this study could only be generalized by 6 company from the 159 listed firms in Kuwait Stock Exchange due to the pandemic that hit the world in the end of

2019 many companies in the world closed and the war in the early of 2022 many firms did not generalize a positive free cash flows in the last 3 years, future research should include more firms. Furthermore, the institutional investors behavior should be compared with the amount of the trading value to know the impact on that value and the relation.

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