

Building a portfolio of common stocks under the Kida model: An analytical study in sectors of Iraq Stock Exchange

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Abstract:

The main purpose of this study is to build an investment portfolio of ordinary shares under the Kida model to avoid financial failure, and in order to achieve the objective of the study, the Iraq Stock Exchange was chosen as an applied sample, and the study methodology depends on identifying a major problem that has been clarified through several questions centered on an important question, is it possible to use the Keida model to predict financial failure in order to build an investment portfolio of ordinary shares?, The study sample was also reflected in the sectors of the Iraq Stock Exchange and the banking sector by (6) banks, as the period of studying companies was limited between (2017-2022), which indicates that the study period was five years, and in order to extract the results in light of the data withdrawn from the Iraq Stock Exchange The study sample resorted to the use of a set of important indicators in financial, administrative and statistical analysis according to the (SPSS) program. V.23 & Excel.v.2010), and accordingly the study reached a set of results, perhaps the most prominent of which represents the best diversity in the investment portfolio can be achieved by building a diversified portfolio of ordinary shares belonging to different sectors and possessing different risks and benefits, and the study also recommends that care must be taken to achieve the appropriate balance between investment risks and expected returns to achieve the best financial performance of the investment portfolio.

Keywords: investment portfolio, common stocks, financial failure, Kida model.

Introduction

Building an investment portfolio of ordinary shares is a crucial resource in ensuring the improvement of the performance of companies, due to the nature of the investment portfolio in taking into account the various risks and rewards associated with different investment options when creating a portfolio, and doing so in a way that is in line with the company's goals and objectives, when building a portfolio it is important to take into account the expected return of the portfolio, risk tolerance and liquidity needs. In general, companies with a longer investment horizon can afford investments with higher risks, volatility and losses are more likely to be compensated. Gradually short-term over a longer period of time, it is also important to diversify investments across different asset classes, such as stocks, bonds, and real estate, to protect against the possibility of losses due to an unexpected market recession.

When it comes to building a portfolio of common stocks to avoid financial failure, the Kida model is often described as the gold standard, the Kida model is an effective strategy to avoid financial failure through smart investment in common stocks, as it suggests that investors build a diversified portfolio of stocks that represent a mix of industries, including stocks from companies representing different regions and different sizes. When building a portfolio of common stocks under the Keida model, investors should focus on investing in companies that provide stability and potential growth, and requires taking into account corporate shares in sectors such as consumer staples, healthcare, and technology due to their relative consistency and growth potential. In addition, investing in shares of companies located in different countries and of different sizes can provide more balance and protection in the event of a market downturn, and therefore investors should also consider the liquidity

of their investments. Highly liquid corporate stocks can also provide quick access to funds during the most volatile times.

Hence, the study came to highlight the importance of the Keida model in the use of diversity to build investment portfolios, to activate the role of the Keida model significantly requires the use of diversity in the financial sectors, as diversification helps to distribute risks and can provide a safety net in the event of unexpected fluctuations or contraction in the market, without diversification, the portfolio is more vulnerable to risks.

From the foregoing, the study was divided into four main sections, the first section was devoted to the presentation of the scientific methodology of the study, while the second section included the theoretical side of the study, and the third section explained the practical side, and the fourth section presented the conclusions and recommendations reached by the study.

PART ONE: THE SCIENTIFIC METHODOLOGY OF THE STUDY

First: The idea and problem of the study

When building a portfolio, it is important to consider a variety of factors, such as company performance and financial failure, as corporate performance is a key indicator of investment success, and therefore companies that have consistently recorded strong financial results, as well as those that have grown in size and scope, are generally considered more reliable investments. Moreover, those companies that focus on strong customer service, innovation, and strategic partnerships tend to achieve better results in the long run.

Financial markets' neglect of forecasting models will lead to deficiencies in the process of forecasting stock valuation, and investors can reduce the risk of investing in securities and increase the likelihood of achieving their investment goals when the investee index is good.

Companies that lack sufficient cash reserves, have poor management, or rely heavily on a single source of income, are particularly at risk of financial failure.

The financial failure prediction model, including the Keda model, provided indicators in order to reduce risk and limit losses. It is therefore essential for investors to understand the different types of stocks and the risks associated with them before creating a suitable portfolio. Moreover, investors should regularly monitor their portfolios to ensure that their investments remain on track and that their desired goals have been achieved. In addition, the portfolio must be adjusted regularly to ensure that it meets the needs of the investor. The problem of the study resorts to the application of the Kida Model to detect the possibility of failure of companies, **and therefore the problem of the study can be formulated in the question (Can the Kida model be used to predict financial failure in order to build an investment portfolio of ordinary shares?)**.

From this question, a set of important sub-questions can be raised, namely:

- 1) Can the Kida Model determine the position of companies for the purpose of maximizing common stocks in emerging financial markets?
- 2) What are the steps involved in building an investment portfolio of common stocks?
- 3) What indicators can be tracked to improve the ability of companies to build an investment portfolio under the Kida model?
- 4) Does the value of the Kida model differ between companies referred for liquidation and non-referred for liquidation?
- 5) Can the Kida model identify financially qualified companies for the purpose of building a portfolio?

Second: Objectives of the study

When it comes to building an investment portfolio for ordinary shares to avoid financial failure under the Kida model, the company should assess the level of risk associated with such a move. As with any investment, there are no guarantees of success, and the possibility of losses is always present. Therefore, it is necessary to consider both short-term and long-term strategies to ensure that gains can be maximized while minimizing losses at the same time. Which requires careful selection of stocks that can provide stability and growth. A diversified equity portfolio has to include a variety of industries, such as technology, energy, transportation, and healthcare. Moreover, it is important to consider both large and small capital stocks, as well as a mix of value and growth stocks. This will help balance any potential market volatility, Hence, the objectives of the study can be formulated according to the following:

- 1) Knowing the ability of companies in the Iraq Stock Exchange to use the Kida Model).
- 2) Determine the methods through which ordinary shares can be maximized in the financial markets.
- 3) Measuring the impact of the Kida Model in predicting the financial failure to build an investment portfolio of common stocks.
- 4) Building an investment portfolio of common shares

Third: The importance of the study

Common stocks are often volatile, and while they can generate significant returns, they can also lead to significant losses. Moreover, the Kida model does not take into account the risks involved in owning ordinary shares. While it is true that diversifying your portfolio can help reduce risk, it is also true that a portfolio with too many different stocks can lead to losses in the event of a market crash..

The Keda model also represents one of the most important financial models in financial management, but the neglect of the financial markets for the importance of this model contributed to causing a deficiency in predicting ordinary shares in the stock market, and not linking ordinary shares in such markets with the peculiarities and basic indicators, as these topics did not receive much attention among the companies of Iraq as they represent the basis through which investment portfolios can be built, the seriousness of financial failure and its negative effects on the economies of countries The world and as a result of the presence of a number of companies that have failed financially in recent times and the continued attempt not to increase these companies in order not to harm the Iraqi economy.

Hence, the importance of the Keida model can be highlighted in that it is a method that contributes to the correction and diversity of the financial portfolio, which helps reduce risks and reduce losses in the event of disruption or failure of the labor market, and this importance can be summarized as follows:

- 1) The Kida Model is among the important financial models that have received high interest among researchers.
- 2) The study derives its field importance through its contribution to vital aspects, including introducing the sample companies to the need to pay attention to the Kida Model in order to maximize their ordinary shares to build an investment portfolio.
- 3) Proposing a set of results through which the performance of companies in the Iraqi stock market can be improved in order to give them more ability and support to compete with foreign companies.

Fourth: Study hypotheses

These hypotheses were formulated based on understanding the nature of the problem as follows:

1. The first main hypothesis: The Keda model can predict the financial failure of companies and banks studied in a stock market.

2. The second main hypothesis: - (correlation hypothesis test)

(There is a statistically significant correlation between the investment portfolio of ordinary shares and financial failure under the KIDA model) for the sectors of the study sample and several sub-hypotheses branch.

3. The third main hypothesis: - (test the hypothesis of the study)

(There is a statistically significant effect of the investment portfolio of ordinary shares on financial failure under the Kida model) for the sectors of the study sample and several sub-hypotheses branch.

Fifth: Population and sample of the study

The target population is determined in the study before selecting the sample so that its vocabulary has the same characteristics and the study population is determined in the light of what serves the objectives of the study, and then decides how to choose the sample from it, and the study population is represented in the banking sector by (6) banks.

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The target population is determined in the study before selecting the sample so that its vocabulary has the same characteristics and the study population is determined in the light of what serves the objectives of the study, and then decides how to choose the sample from it, and the study population is represented in the banking sector, while the study sample was represented in the banking sector by (6) banks.

part two: the theoretical side of the study

First: Investment Portfolio

1. Concept of investment portfolio

Wallet Language: As mentioned in the dictionaries of the language, the word portfolio originally means a large or small bag of leather or cloth in which pieces of money and other important securities are kept, the word portfolio means that we have multiple investments such as precious commodities such as gold, silver, and precious metals, and can contain securities, the term portfolio (portfolio) in the original is a type of which can carry securities (Reilly, 2003:210)

Portfolio idiomatically: The scientist (Harry Markowitz) is the first to clarify the theory of portfolio in 1952, and based his theory on several hypotheses related to investor behavior. Portfolio theory is concerned with the investor's decisions in choosing the assets to be invested in terms of balancing the expected return and risk by maximizing the return without any increase in the amount or reduction of risk at a certain level of return. The theory of portfolio is one of the great developments witnessed by investing in securities and was awarded by the scientist (Markowitz) Nobel Prize in 1990, and the concept of portfolio has existed since ancient times through the saying "not to put all eggs in one basket" and from this saying we conclude the meaning of risk reduction through diversification. The decision to select assets and distribute the amount to be invested among the assets that make up the portfolio is one of the most important decisions that are taken, according to which the expected return from the portfolio and the degree of risk borne by the investor who owns the portfolio are determined (Hattab, 2007: 5). Finds (Talebi,2008:12; Miralles-Quirós et al.,2019:245) said that the portfolio is the key to enabling managers to rethink the direction of their portfolios and investments in a way that makes them more efficient and effective.

The investment portfolio represents the group of investments owned by the individual, that is, the group of assets in which he employs his money in order to obtain returns from them, and it includes real estate, land, and precious assets such as gold, precious metals ... and others (Abdelhamid et al., 2010: 2).

An investment portfolio has been defined as a group of shares invested in different companies, as well as a combination of securities such as ordinary shares, preferred shares and bonds. In order to ensure the success of investing in the portfolio, the portfolio manager or individual investor needs to understand the elements of portfolio management, which is one of its primary necessities to create a broad disclosure of securities that suit the needs of investors and in accordance with an investment plan based on investment principles, whose pillar is the trade-off between risk and return (Li et al., 2019: 895). As well as choosing the appropriate timing for buying shares when starting the investment plan, the investor must be rational, as it is wise to accept a reasonable risk in exchange for an acceptable return. Within the framework of portfolio management, it is necessary to periodically supervise its components and keep abreast of the investment situation in the capital market. With regard to the objectives of investing in securities, the objectives of the investor do not differ whether his investment is in an investment portfolio or in a single security except with regard to the element of diversification, as through the investment portfolio the investor can reduce the risks that he may be exposed to as a result of the investment process in the portfolio (Al-Hamdouni, 2013: 14).

Al-Mamouri and Al-Daami (2015: 294) also views the investment portfolio as a set of assets, stocks and bonds held by the investor in order to achieve the maximum possible satisfaction through the expected future return and offset by the lowest possible risk.

2. The importance of investment portfolio

The importance of the investment portfolio lies in the fact that: (Al-Qadi, 2016: 15; Al-Baroudi, 2015: 373; Shetah and Salem, 2020: 270).

a. Availability of liquidity in various sectors or service institutions, whether companies or financial institutions

In. The expansion of the activity of investment institutions and banks and providing advice to investors as well as the diversity of investment tools

c. Investors' interest in quick profit, which requires optimal investment of available resources using short and long-term investment tools.

W. It represents the flow of capital to the successors of investment and industrial companies and that these large expenses in capital are directed to investment in stocks and bonds.

C. Contribute to encouraging long- and medium-term investments based on scientific studies.

Going to. It is one of the most appropriate investment tools that allow the employment of government savings

X. Financing small and medium enterprises.

D. Avoid investment risks that the investor may be exposed to when focusing on one investment instrument.

L. Ensure an acceptable income and achieve positive returns.

t . Increase the market value of capital.

3. Objectives of investment portfolio

There are a set of objectives through which the objectives of investors can be achieved as a result of using the investment portfolio, these goals are:

a. Generating profits for the organization, and managing interest rate risk (Mufleh and Kujak, 2020: 24).

In. Meet the requirements of cash liquidity and avoid the risks of financial hardship by selling its contents in the financial market when needed to pay its financial obligations to creditors in a timely manner.

c. Investing surplus funds for the organization, as the survival of surplus funds with the organization in a frozen manner leads to exposure to the risks of depreciation of the time value of money and thus erode its purchasing power.

W. Reducing credit risk, and achieving appropriate returns that are equivalent to market rates of return.

C. Ability to reduce risk through diversification (Hamdouni, 2013: 14; Omar et al., 2017: 101 ; Al-Arbeed, 2021: 151).

Going to. Achieving the maximum possible return on portfolio capital: The most important goal of portfolio investors is to achieve the greatest possible return on portfolio capital.

X. Preserving the original capital of the portfolio: Preserving the original capital is one of the most important objectives that the owner of the investment portfolio seeks to achieve, and therefore the investor may be exposed to some kind of loss as a result of the low prices of securities or exposed to a high degree of risk as a result of the high degree of risk of securities.

D. Income flow stability: It is a key objective of the investment portfolio, as it requires the portfolio manager, especially the management, to maintain the cash flows of investment portfolios as income is an important source for shareholders in the portfolio's assets.

L. Capital growth: (Portfolio capital increase) is one of the most important goals that portfolio management or investors in general always seek.

t . Diversification: Diversification of portfolio assets is one of the most important works that portfolio management is interested in, as the goal of the balanced diversification process is to obtain the largest returns with the lowest degree of risk.

G. Convertibility of portfolio assets into liquidity: This requires portfolio management to find a way to convert its assets into liquidity (Rania and Khadija,2021: 24-25 ; Abbou,2022: 150).

Second: Kida Model

1. Concept Of Financial Failure

The word failure in Arabic means failure and failure to achieve the goals set in advance, and the failure of companies financially refers to the inability of the company to fulfill its obligations or failure to sell its products or provide its services and obtain an appropriate return (Al-Morshedy, 2018: 256; Llo Worvo,2019: 428 ; Ameri and Jabr,2018: 335; Al-Hamdani, 2018: 87). Thus, financial failure is one of the serious things that are exposed to financial activities in companies and the multiplicity of reasons for its occurrence, all of which are due to bankruptcy and liquidation, and represent a stage that the company is going through from the stages of financial decline until reaching financial liquidation, financial failure represents the current that occurs when the company's liabilities exceed its assets, and this means that the company has a negative value that makes its ability to pay obligations weaken completely (Al-Hamdani and Al-Qattan, 2013: 459).

Financial failure often develops through bankruptcy and financial distress, which represents the company's inability to guarantee the payment of its obligations at the present time and within the specified maturity time, and this results from the existence of an infringement of the value of current liabilities on the value of current assets (Sulub, 2014: 174). Al-Helioi and Al-Sharif (2017: 200) shows that financial failure is the inability of a company to pay its financial obligations when they are due. Financial failure represents the process in which the company has begun to walk the long road that ends with an event, which is financial hardship, and between (Shaheen and Matar, 2011: 852) that financial failure refers to the company's achievement of losses for two consecutive years or more during a certain period.

Financial failure is seen as the inability of a company to achieve an appropriate return that exceeds the cost of capital and therefore the company is at risk of being voluntarily liquidated or being compulsorily liquidated in favor of creditors legally (Jwaifel, 2019:16). Felt (Alhamdi et al., 2019:1321; Abdalgane, 2019:263) that financial failure represents the stage in which the company is unable to meet its short-term obligations when they mature, and in the subsequent period the company loses the ability to pay interest, loans and preferred dividends, leading it to liquidation.

When current assets are larger than current liabilities but are unable to meet their financial obligations such as interest payments or loan installments (Pringle & Harris, 1984:632-633), financial failure represents the company's assumption of more debt combined with a decrease in its ability to generate revenue with insufficient cash flow from operations will lead the organization to liquidity problems leading to financial distress (Schmuck, 2013:28).

Financial failure is defined as a company's inability to pay its current obligations (Al-Khalili,2022:125), and therefore financial failure may result in corporate bankruptcy or liquidation (Perinpanathan,2015:3; Aksoy& Boztosun,2020:237). Yaman&Korkmaz,2022:11) saw financial failure as a financial difficulty in meeting short-term obligations.

Asyikin et al. (2018:11) noted that financial failure expresses insolvency that distinguishes between cash flow and inventory base. Li et al., 2019:21 (Li et al.,2019:21) explained that financial failure is defined as a consecutive net loss of two years or more, and the likelihood of failure decreases with increases in the value of assets.

2. Kida model

It is one of the quantitative models of importance in predicting failure, as Kida applied his model to a sample consisting of 20 companies in the United States of America, half of which failed and the other half of which are non-failure, and Kida used 20 financial ratios extracted from the financial statements, and after conducting a differentiation analysis, Kida 1980 reached five financial ratios that combine all aspects of operational performance in public shareholding companies, which can now be expected and predicted by financial failure two years before the failure occurs, where He presented it in the form of a discriminatory equation as follows (Kida, 1980) (Abdurrahim, 2021: 24):

$$K=1.042*X1+ 0.42*X2-0.461*X3 - 0.463*X4+ 0.271*X5$$

Whereas:

X1: Net profit after interest and tax/total assets

X2: Book value of equity / total liabilities

X3: Current Assets / Current Liabilities

X4: Sales / Total Assets

X5: Cash / Total Assets

The coefficients (1.042, 0.42, -0.461, -0.463, 0.271) refer to the weights of the function variables as they express the relative importance of each variable depending on what the companies in question use. A negative K value expresses a high probability of failure according to the Keida model, and this model has proven its ability to predict failure by up to 90% a year before the risk of bankruptcy (Renas, 2016 & Islam).

PART THREE: THE PRACTICAL SIDE

First: - Analysis of the closing rate of the banks of the study sample

The results of Table (1) indicate that the closing price of the shares of the banks of the study sample listed on the Iraq Stock Exchange, which numbered (6) banks for the period from (2017-2022), as it is clear that the average period for all banks in the study sample (sectoral rate) has reached (0.513) dinars per share, and that the highest bank obtained the highest price represented in the National Bank, which reached a closing rate of (0.882). It is followed by the Bank of Baghdad, which has a closing rate of (0.628), which makes it in the first place, and second, while in the last place it was the share of the **Middle East Bank**, with a closing rate of (0.197).

Table (1) Closing Rate Arrangement of Studied Banks

| Sector | Bank Name | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Who |
|---------|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| Banking | National Bank | 0.470 | 0.340 | 0.610 | 1.290 | 1.350 | 1.230 | 0.882 |
| | Commercial Bank of Iraq | 0.490 | 0.470 | 0.460 | 0.690 | 0.630 | 0.620 | 0.560 |
| | Mansour Bank | 0.790 | 0.630 | 0.670 | 0.580 | 0.590 | 0.510 | 0.628 |
| | Bank of Baghdad | 0.510 | 0.290 | 0.380 | 0.620 | 0.810 | 1.030 | 0.607 |
| | Middle East Bank | 0.350 | 0.130 | 0.100 | 0.190 | 0.210 | 0.200 | 0.197 |
| | Gulf Bank | 0.390 | 0.190 | 0.140 | 0.190 | 0.180 | 0.150 | 0.207 |
| | Average | 0.5 | 0.342 | 0.393 | 0.593 | 0.628 | 0.623 | 0.513 |

2- Determine the return and risk of shares Trynor for shares

Stocks can be arranged according to the Trynor index (from high to low), which positively determines the percentage of the desire of the stock to enter into the portfolio, and Table (2) includes the rate of return achieved per share and the beta coefficient resulting from dividing the common variance between stock returns and market returns on the variance with market returns, as well as the rate of return for risk-free assets.

$$\frac{\bar{R}_i - R_F}{\beta_i}$$

R_i : Expected Earnings per Share I .

R_F : Return on risk-free assets .

β_i : Expected change in the rate of return on shares associated with the change in market return.

Table (2) Realized rate of return, beta coefficient, interest rate on treasury bills and trainor for the companies of the study sample for the period (2017-2022)

| Company Name | R_f | R_i | B | Trynor |
|--------------|-------|--------|-------|--------|
| BIME | 6% | -0.011 | 1.565 | -0.049 |
| INCP | 6% | 0.014 | 0.921 | -0.051 |
| IKLV | 6% | 0.004 | 1.005 | -0.056 |
| IBSD | 6% | 0.010 | 1.533 | -0.029 |
| IRMC | 6% | 0.011 | 0.015 | -3.989 |
| IITC | 6% | 0.016 | 0.504 | -0.103 |
| TASC | 6% | -0.004 | 0.739 | -0.085 |
| AVE | 6% | 0.001 | 0.041 | -1.462 |
| AIRP | 6% | 0.009 | 0.389 | -0.145 |
| NAME | 6% | -0.008 | 0.821 | -0.081 |

The dermis step includes the order of the highest stock order to the lowest as follows:-

Table (3) Realized rate of return, beta coefficient, interest rate on treasury bills and trainor for the study sample companies for the period (2017-2022) after ranking them from highest to lowest

| Company Name | R_f | R_i | B | Treynor Index |
|--------------|-------|--------|-------|---------------|
| IBSD | 6% | 0.01 | 1.533 | -0.029 |
| BIME | 6% | -0.011 | 1.565 | -0.049 |
| INCP | 6% | 0.014 | 0.921 | -0.051 |
| IKLV | 6% | 0.004 | 1.005 | -0.056 |
| NAME | 6% | -0.008 | 0.821 | -0.081 |
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It is clear from Table (3) that the highest value of the Trynor index (-0.029) is for Baghdad Soft Drinks Company (IBSD), which indicates that the company is the highest attractive among the shares of the research sample to be included in the investment portfolio, and the lowest value of the Trynor index (-3.989) is for Al-Khazir Road Construction Materials Company IRMC. It is the least attractive to enter into the risky portfolio.

3- Determining the rate of pieces and shares nominated for the investment portfolio

After calculating the Trynor index and arranging the shares positively, (Ci) can be calculated according to the equation below, which is the basis adopted in determining the stocks eligible to enter the portfolio and the shares that are excluded and determining the optimal cut-off rate (c*) and the shares with the highest value Trynor are entered compared to * (Ci) and the exclusion of the lowest value stocks of the Trynor index compared to the CI and through the following table: -

Table (4) Determining the rate of pieces and shares nominated for the investment portfolio

| Company Name | Treynor Index | (Ri-Rf) B/Var | B^2/ Var | Σ(Ri-Rf)B/var | ΣB^2 /Var | Q2mΣ(Ri-Rf)B/Var | 1+Q2mΣ B^2/Var | Ci |
|--------------|---------------|---------------|----------|---------------|-----------|------------------|----------------|-------|
| IBSD | -0.029 | 1.638 | 0.618 | 1.638 | 0.618 | 0.009 | 1.003 | 0.008 |
| BIME | -0.049 | 1.108 | 1.089 | 2.745 | 1.707 | 0.014 | 1.009 | 0.014 |
| INCP | -0.051 | 2.678 | 2.652 | 3.786 | 3.741 | 0.02 | 1.019 | 0.019 |
| IKLV | -0.056 | 0.026 | 0.001848 | 0.057 | 0.004 | 0.619 | 1.042 | 0.594 |
| NAME | -0.081 | 0.01 | 0.000724 | 0.036 | 0.003 | 0.39 | 1.028 | 0.38 |
| TASC | -0.085 | 0.062 | 0.001174 | 0.062 | 0.001 | 0.675 | 1.013 | 0.667 |
| IITC | -0.103 | 0.041 | 0.001462 | 0.05 | 0.002 | 0.547 | 1.019 | 0.537 |
| AIRP | -0.145 | 0.011 | 0.011 | 0.051 | 0.002 | 0.557 | 1.022 | 0.545 |
| AVE | -1.462 | -1.35 | 1.772 | -2.78 | 5.568 | -0.01 | 1.029 | -0.01 |
| IRMC | -3.989 | -2.91 | 1.929 | -4.26 | 3.701 | -0.02 | 1.019 | -0.02 |

Source: Prepared by the researcher based on the outputs of the electronic calculator

4- Determine the investment weight of each share in the investment portfolio

After we have identified the shares included in the investment portfolio, the next step is to determine the weight, and this requires calculating (Zi) according to the equations below in Table (5).

$$Z_i = \frac{\beta_i}{\sigma_{ei}^2} \left(\frac{\bar{R}_i - R_F}{\beta_i} - C^* \right)$$

Table (5) Investment weight for each share in the investment portfolio

| Company Name | Treynor-c* | Like | Wi |
|--|------------|---------|--------|
| Middle East Bank | 3.307 | -39.19 | 0.0772 |
| National Company for Chemical and Plastic Industries | 2.252 | -42.01 | 0.0827 |
| Canadian for the production of veterinary vaccines and medicines | 2.09 | -18.867 | 0.0371 |
| Baghdad Soft Drinks | 1.319 | -23.29 | 0.0459 |
| Al Khazir Road Construction Materials Company | 0.841 | -13.26 | 0.0261 |

| | | | |
|---|--------|---------|--------|
| Ethnic Company for Carpets and Furnishings | 0.352 | -1.638 | 0.0032 |
| Asia Cell Company | -0.247 | -54.46 | 0.1072 |
| Middle East Fish Production & Marketing | -0.28 | -4.4404 | 0.0087 |
| Iraqi for the production and marketing of agricultural products | -0.322 | -31.31 | 0.0617 |
| Mesopotamia Financial Investments | -0.853 | -279.4 | 0.5501 |

5- Determine the return and risk of the investment portfolio

After determining the optimal weights of the stocks included in the portfolio, we can determine the return and risk of the investment portfolio.

Table 6 Return and Risk of Investment Portfolio

| Company Name | Portfolio Return | | | Portfolio risk |
|--------------|------------------|--------|-----------|--------------------|
| | R_i | W_i | $W_i R_i$ | |
| IBSD | 0.01 | 0.0772 | 0.00077 | 0.472 beta |
| BIME | -0.011 | 0.0827 | -0.00091 | Indication 0.0004- |
| INCP | 0.014 | 0.0371 | 0.00052 | |
| IKLV | 0.004 | 0.0459 | 0.00018 | |
| NAME | -0.008 | 0.0261 | -0.00021 | |
| TASC | -0.004 | 0.0032 | -0.00001 | |
| IITC | 0.016 | 0.1072 | 0.00172 | |
| AIRP | 0.009 | 0.0087 | 0.00008 | |
| AVE | 0.001 | 0.0617 | 0.00006 | |
| IRMC | 0.011 | 0.5501 | 0.00605 | |

According to the foregoing, the relative weights of the shares involved in building the investment portfolio in the Iraq Stock Exchange vary in the percentages allocated to invest in it, meaning that the investor wishing to build a risky investment portfolio in the Iraq Stock Exchange and during the research period should allocate 46% of his funds in the share of the Iraqi Company for Carpets and Furnishings IITC and distribute the remaining amount of investment among the shares of the remaining companies included in the portfolio.

PART FOUR: CONCLUSIONS AND RECOMMENDATIONS

First: Conclusions

1. Better diversification of the investment portfolio can be achieved by building a diversified portfolio of common stocks that belong to different sectors and possess different risks and benefits.
2. Overall financial performance can also be improved by spreading risk across a variety of financial assets such as bonds and stocks.
3. The results showed that the investment portfolio can face the risk of financial failure in the event of loss of the value of the financial assets invested in it and failure to achieve the expected returns.
4. The results showed that the good use of the Keda model contributes to achieving financial growth by evaluating the expected returns and risks associated with investments, which means that the model helps in determining the appropriate levels of risk and return in the investment portfolio, thus achieving better financial performance and reducing the chances of financial failure.
5. The Kida models described allow the portfolio manager to build an investment portfolio quickly and easily.
6. The cut-off rate allows to determine whether or not the stock should enter into the portfolio building.

Second: Recommendations

1. Care must be taken to achieve the appropriate balance between investment risks and expected returns to achieve the best financial performance of the investment portfolio.
2. The need to ensure the appropriate balance between investment risks and expected returns to achieve the best financial performance of the investment portfolio, and reduce the chances of financial failure, and this can be achieved by building a diversified portfolio of financial assets, including ordinary stocks, bonds, real estate and commodities, and dividing risks between these different assets.
3. The need to look at the general economic conditions, market expectations, inflation, liquidity requirements and personal financial objectives of the investor when building the investment portfolio and choosing the financial assets to be invested in.
4. The need for sectors to reduce the chances of financial failure, which they must ensure to achieve the appropriate balance between investment risks and expected returns from various financial assets.
5. It is necessary to review the reasons for deviation and its dispersion during the period, because the weights that appeared for most companies in the two portfolios are the result of the standard deviation, and this makes investors more averse to investment.
6. Relying on models that are interested in taking note in measuring the investment portfolio from its various aspects.

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