

FINANCIAL PERFORMANCE MEASUREMENT WITH CASH
FLOW RATIOS : A RESEARCH AND COMPARISON ON BORSA ISTANBUL
(BIST) MAIN METAL INDUSTRY AND ACCOMODATION SECTOR



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BY

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PLAGIARISM

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ABSTRACT

As soon as people start to earn the money that their labor deserves, they begin to control their cash inflows and outflows. This control is more important for businesses established for profit making. Businesses that want to control their cash flows in a more detailed and neat report form refer to the cash flow statement. Knowing cash flow is vital for businesses. It provides both the control of the cash flow within themselves and the opportunity to compare itself with other businesses that use different accounting methods. The success and sustainability of a business is evaluated by the measurability of its financial performance. Cash flow ratios are used in the analysis of the financial situation of the enterprises. The aim of this study is to give information about cash and cash equivalents and cash flow statement, to examine the items of the cash flow statement and to discuss the purposes of cash flow ratios. In this context, within the scope of the study, the financial statements of 17 enterprises operating in the Main Metal Industry sector whose stocks are traded in Borsa Istanbul (BIST) and 9 enterprises operating in the accommodation sector, covering the 5-year period between 2017-2018-2019-2020-2021, were used. The financial performances of companies were measured and the differences between the sectors were compared.

Key words: *Cash Flow Statement, Balance Sheet, Turkish Accounting Standards (TMS 7), CRITIC, TOPSIS, Financial Performance*

ÖZET

İnsanlar emeklerinin hakkı olan parayı kazanmaya başladığı andan itibaren, nakit giriş ve çıkışlarını kontrol etmeye başlarlar. Kar elde etme amacıyla kurulan işletmeler için bu kontrol daha önemlidir. Nakit akışlarını daha detaylı ve düzgün bir rapor şeklinde kontrol etmek isteyen işletmeler, nakit akış tablosuna başvurmaktadır. Nakit akışının bilinmesi, işletmeler açısından hayati bir öneme sahiptir. Hem kendi içlerindeki nakit akışının kontrolünü, hem de farklı muhasebe metotları kullanılan diğer işletmelerle kendisini mukayese etme imkanı sağlamaktadır. Bir işletmenin başarısı ve sürdürülebilirliği finansal performansının ölçülebilirliği ile değerlendirilmektedir. Nakit akış oranları işletmelerin finansal durumlarının analizinde kullanılmaktadır. Bu çalışmanın amacı, nakit ve nakit benzerleri ile nakit akış tablosu hakkında bilgiler vermek, nakit akış tablosunun kalemlerini incelemek ve nakit akış oranlarının amaçlarını ele almaktır. Bu çerçevede, çalışma kapsamında Borsa İstanbul (BİST)'da hisse senetleri işlem gören Ana Metal Sanayi sektöründe faaliyetini sürdüren 17 işletme ile Konaklama sektöründe faaliyetini sürdüren 9 işletmenin 2017-2018-2019-2020-2021 dönemleri arası 5 yıllık süreci kapsayan finansal tabloları kullanılarak hesaplanan nakit akış rasyo analizi oranları ile firmaların finansal performansları ölçülmüş ve sektörler arası farklılıklar karşılaştırılmıştır.

Anahtar Kelimeler: *Nakit Akış Tablosu, Bilanço, Türk Muhasebe Standartları (TMS 7), CRITIC, TOPSIS, Finansal Performans*

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1. INTRODUCTION

With globalization, financial information should be compatible both nationally and internationally. The implementation of different standards in terms of countries complicates capital movements in the international arena. The reason for this is that the nationally prepared financial statements cannot be understood by foreign investors. Foreign investors, when making investment decisions in a country, prefer countries where there is an environment of trust and where they will not have problems with tax and accounting practices. For this reason, financial statements should be comparable, consistent, transparent, and understandable.

The information in the financial statements needs to be high quality, reliable, understandable, relevant, impartial, comparable, and providing the right basis for the decision makers. It has revealed the necessity of applying the accounting standards and policies applied and known by the whole world. For this purpose, the International Accounting Standards Committee (IASC) was established in 1973. The committee has been preparing IAS (International Accounting Standards) since 1975. For financial information to respond to the needs of global capital markets, it is necessary to harmonize financial accounting and reporting standards.

IASC plays a major role in ensuring compliance with international accounting standards. In this context, the work of IASC is of great importance for the development of international accounting standards. The International Financial Reporting Standards become a common language of accounting among countries and a common language of business in business life.

On the other hand, in order to put an end to different practices regarding accounting and financial reporting in Turkey, the Turkish Accounting Standards Board (TASB), which has administrative and financial autonomy and has a public

legal entity, was established with the Law No. 4487 to build and publish accounting standards. While using this authority, TASB adopted the International Financial Reporting Standards and published it as the Turkish Accounting Standards in order to integrate with contemporary world practices and to comply with European Union legislation. The standards published by the Turkish Accounting Standards Board (TASB), are the translations of International Accounting Standards, International Financial Reporting Standards and interpretations published by the International Accounting Standards Board into Turkish. The Turkish Accounting Standards Board (TASB), on November 2, 2011, was replaced by abolishing; the Public Oversight, Accounting and Auditing Standards Authority was established.

When the reasons of the enterprises business problems are investigated, it is seen that one of the most important problems is the need for cash. Internal and external information users, making some forward-looking decisions by using the financial statements of the enterprises, evaluate the ability of the enterprise to create cash and cash equivalents and provide information about how the cash flow in the enterprise is formed from the information in the cash flow statement. The status of cash and cash equivalents, which are vital for the company, and the status of cash inflows and outflows during the period are monitored with the cash flow statement.

The cash flow statement, which is the most important tool of cash management, whose importance is understood with the increase in financing costs and the enrichment of short-term financial investment areas in the globalizing world order, and its use has become widespread with the latest legal regulations; reporting the cash resources and cash uses of the enterprise for a certain accounting period in accordance with IAS-7 within the framework of international accounting standards (IAS).

It is an indispensable financial statement in terms of providing the necessary information. The information provided by the cash flow statement to the users of the financial statements is indisputable in terms of knowing the cash situation of the business in order to meet its financial responsibilities at any time, the growth of the business, benefiting from new investment opportunities, or understanding the activities of the existing cash business.

The information that accounting science will offer in business management is very important. The information function of accounting is fulfilled through financial statements. According to the Accounting System Implementation General Communiqués, the first of the financial statements that the business management has to prepare are the balance sheet and income statement. However, in today's economic conditions, it is seen that the balance sheet and income statement are sometimes insufficient in presenting the financial status of the enterprises. For this reason, there is a need for other financial statements that can be used by investors and lenders, especially managers in publicly traded companies, for future planning and decision making. The cash flow statement comes first among the financial statements that can be prepared.

Financial statements are prepared and presented to external users by most companies around the world. Said financial statements show similarities from country to country. On the other hand, they show some changes due to some social, economic and legal reasons and the consideration of the needs of different financial statement users by different countries during the formation of national regulations.

International Financial Reporting Standards (IFRS), prepared under the leadership of international organizations, is one of the important areas for businesses,

accountants, academics and the whole public. When the subject is examined in our country, it is seen that the enterprises set the appropriate standards in order to develop in accordance with international standards. These published standards are also used as a guide in the accounting practices of companies. In short, when the financial statements are prepared in accordance with international standards, they will reveal more accurate and reliable results by comparing them with the business standards of different countries.

As a result, with the uniformity desired to be achieved in preparing Financial Reports, the reports of companies will be more open, transparent and suitable for comparison. When companies with international activities and investments make economic decisions; They experience difficulties when comparing financial statements prepared according to accounting systems that vary in the world. For this reason, it has made it necessary to establish global accounting standards that are of high quality in the world, that are applied at a global level and that have the power of sanction and that do not differ internationally.

In the third part, the cash flow ratio analysis calculated by using the financial statements of 17 enterprises operating in the Main Metal Industry sector whose stocks are traded in Borsa Istanbul (BIST) and 9 enterprises operating in the Accommodation sector is interpreted. In the conclusion part, the analyzes made are evaluated.

2. LITERATURE REVIEW

2.1. The Conceptual Framework: Financial Statements

2.1.1. The concept of financial statement

The main task of the financial statements in businesses is to present all the data of the business to the users of the financial statements in the form of a report. From this point of view, it is understood that the concept of financial statements is a tool that fulfills the reporting function of enterprises. The financial statements are the financial statements that enable the financial situation of the business to be reported to the top management or the superior levels of the hierarchy in a systematic and meaningful way in certain periods. Financial statements are accounting information that transfers the financial information of the business to the information users. It can be expressed that it is a function tool. With the changing market environment, developing technology and the effect of globalization, businesses have grown from one-person businesses to capital enterprises. The organizational structure of the transformed enterprises has been differentiated accordingly and a multi-level structure has been formed in a hierarchical order. At this point, managers have to take on more responsibility, and at the same time, they have to be more transparent to business owners. In addition to the growth in their volume, the businesses that have increased their employment capacity have also brought a sense of social responsibility towards the society. Thus, by supporting the efforts of communication with the society and the social environment, it has become more beneficial institutions for the society (Örücü, 1995).

Financial statements are the tools that contain all financial data about the business in the accounting system, which is one of the business functions, and provide them to information users. Financial statements are a very important tool for the

accounting function of the business. In order to better understand this instrument, first of all, it is necessary to address the function of the accounting function in a business. It is the science and art of recording, classifying, summarizing, and interpreting the results in monetary form (Sevilengül, 2000). While the process that records, reports, and classifies all financial data in a business is determined as the accounting function, financial statements are considered as the main outputs of this process (Cömert & İbiş, 2007).

Financial lists and tables in businesses may show financial information about industrial and geographical segments and explanations showing the effect of price differences. Financial statements contain information about the internal environment of the enterprise, in addition to some market data.

The examples of these are the statements of the chairman of the board of directors, the situation assessment and analysis of the management, the annual report of the board of directors and similar documents. Such information and documents can be found in financial or annual reports.

2.1.2. The purpose of financial statements

The purpose of financial statements is defined as follows in both IAS-1 “Presentation of Financial Statements” and Turkish Accounting Standard 1 (TAS 1) (Türkiye Muhasebe Standartları-TMS-1) “Presentation of Financial Statements” published by the Public Oversight Agency:

“Financial statements are a formatted presentation of an entity’s financial position and financial performance. The general purpose of financial statements is to help a wide range of users make economic decisions. To present this information to all financial statement users by providing information is about its performance and

cash flows. In addition, financial statements show how and effectively the management uses the resources given to it. To achieve this purpose, financial statements provide information about assets, liabilities, equity, income and expenses, profits and losses and cash flows of the business. This information, together with the notes to the financial statements, discloses to its users the facts regarding the realization and timing of the estimates of the future cash flows of the enterprise and the formation of cash and cash equivalents.” (Public Oversight, Accounting and Auditing Standards Authority, 31.12.2005).

In addition, the purpose of financial statements is expressed in three articles in the Accounting System Implementation General Communiqué published by the Ministry of Finance (Official Gazette, 1992).

- To provide useful information for investors, creditors and other interested parties in making decisions,
- Providing useful information in evaluating future cash flows,
- To provide information about assets, resources and their changes and operating results of the business.

The purpose of the Financial Statements is described in TAS 1 article 9 as follows:

“A formatted presentation of the financial position and financial performance of the business to assist a broad range of users in making economic decisions.”

The financial statements report the resources used by the managers, all the activities of the business and all the activities performed in order to generate profits for the shareholders together with the shareholders. When the financial statements are evaluated from this perspective,

In order to be useful, it contains the following contents, especially in line with the principle of transparency and responsibilities (Public Oversight Authority, 16.01.2005):

- Assets,
- Debts,
- Equity,
- Income and Expenses (including Profits and Losses),
- Contributions made by the partners due to being partners and distributions made to the partners,
- Cash flows

This information in the financial statements related to the business also helps the business to predict future cash flows, liquidity ratios, solvency of the business, and meeting its short-term debts (Yanik & Özerhan, 2010).

The purposes of the financial statements in the businesses are explained as follows (Argun et al., 2006):

- To provide useful decision-making information for lenders, investors, and other people,
- To provide useful information in estimating and evaluating future cash flows,
- To provide information about the differences in the assets and liabilities of businesses and business activities (İvgen, 2003),
- To see the results of whether the company's resources are managed effectively by the company management.

2.1.3. The importance of financial statements

Financial statements provide information to the senior management in order to determine the vision of the enterprise and to see the future, as well as to help in some decisions to develop a strategy. Particularly, in the light of this information various internal and external analyzes make it easier for managers to make decisions. In the hierarchical order in the business, the management is responsible for the preparation of the financial statements and their presentation to the business stakeholders and shareholders. Financial statements provide information that helps the senior management to take decisions for the future, while at the same time, they allow the level of responsibility of the enterprise to be seen. The point of particular attention here is to collect, record and save the financial information of the enterprise in an accurate, reliable, and complete manner by adhering to accounting principles. In this respect, financial statements are extremely important financial instruments for businesses (Akdoğan & Tenker, 2001).

On the other hand, the financial statements provide information about the current financial structure of the business to the shareholders and shareholders of the business. When the financial information users of the enterprise are mentioned, only the shareholders and shareholders can be understood. However, there are many more users of financial information with them. These users can be listed as follows (Akgüc, 2006):

- Company managers,
- Owner or partners of the firm,
- Capital owners looking for investment areas,
- Investment analysts,

- Third persons and companies that have commercial relations with the enterprise,
- Domestic or foreign financial institutions,
- State (detection of tax base, tax audit, price determination, national income accounts, implementation of incentive measures, support of companies in financial difficulties, etc.),
- Employees in the business,
- People.

As it can be understood from the explanations so far, many decisions taken within businesses are made through financial statements. In this respect, objective evaluation of financial statements, reliability, accuracy and impartiality of the information contained in the statements are of utmost importance.

Today, the importance of the reliability of financial statements has increased even more due to the competitive advantage to be gained through strategic decisions. With the regular and careful assessment and analysis of the financial statements, the financial situation of the enterprises during the period can be better perceived and the activities can be made more perfect, consistent, and efficient. The solvency of the business, the liquidity balance, the increase or decrease in the accounts can be easily determined. In addition, the course of business activities can be evaluated and the necessary feedback for the business can be provided by understanding whether the desired goals and objectives have been achieved (Şamiloğlu, 2006).

2.1.4. The preparation of financial statements within the scope of turkish accounting standards

Accounting practices in Turkey in the Republican period are generally determined by the provisions of the Turkish Commercial Code (Türk Ticaret Kanunu-TTK) and the Tax Procedure Law (Vergi Usul Kanunu-VUK). The Tax Procedure Law, which was enacted with the tax reform in 1950, formed the basis of accounting practices in Turkey. With the Turkish Commercial Code, which was issued in 1957 to regulate commercial affairs after the Tax Procedure Law, the protection of the rights of creditors, partners or shareholders was prioritized (Çiftçi, 1997). However, in cases where the provisions in these laws are insufficient, some organizations with legal status have conducted studies guiding accounting practices for businesses that fall within their sphere of influence.

The laws taken from different nations have been effective in the development of Turkish accounting system, which is one of the basic functions of the business in Turkey. In the 1938s, a group of German accounting experts worked on projects in Turkey to prepare the accounting policies, accounting framework and chart of accounts for Sümerbank.

With this project, the effects of German accounting practices have emerged. Accounting framework and accounting rules started to be applied by other state-owned enterprises (SOE) after a short time, thus the first standards in accounting emerged. Later, until 1960, it was influenced by the French Legislation and publications, and then the German practices and publications. After 1960, with the increase in relations with the USA, the American system was effected and the period

after 1987 was influenced by the International Accounting Standards (IAS) (Sağlam, 2001).

Until 1992, regulations regarding accounting principles and standards, which were of great importance for the intelligibility of financial statements, covered certain business groups. The Cost Accounting Principles that came into force in 1977, Uniform Chart of Accounts prepared by the Banks Association of Turkey in 1986 and Capital Markets Board Communiqués published since 1989 are the main ones. One of the important stages in the development of accounting in Turkey is the Law No. 3568 on Independent Accountants and Financial Advisors (SMMM- Serbest Muhasebeci Mali Müşavir) published in the Official Gazette No. 20194, on 19 July 1989.

The Turkish Accounting Standards Board (TMSK-Türkiye Muhasebe Standartları Kurulu) was established pursuant to Article. The board, which has administrative and financial autonomy, became operational on 07 March 2002. The main task of the Turkish Accounting Standards Board is

- to present audited financial statements,
- to ensure that the financial statements are relevant and real,
- to ensure the development and adoption of national accounting principles,

so that they are reliable, comparable, and understandable. In addition, it was to help determine and publish national accounting standards to be applied for the public benefit. It can be accepted that the main task of the Turkish Accounting Standards Board was putting an end to the multi-headed practice of accounting and financial reporting in Turkey and issuing standards to ensure parallel praxis with international practices. For this reason, the Board decided to adopt International Accounting Standards (IAS), with its new name International Financial Reporting Standards

(IFRS), in order to adapt to contemporary world practices and to comply with European Union legislation. Therefore, there is a copyright and agreement between the Turkish Accounting Standards Board and the International Accounting Standards Committee Foundation (IASCF).

In this concept, the license agreement was signed. Thus, it was envisaged that an official Turkish translation would be made by the Turkish Accounting Standards Board and that it would be included in the Turkish Legislation. In these translations, the paragraph numbers and codes in the original texts were used exactly in order to ensure parallelism with IFRS. The Turkish Accounting Standards Board has published 30 International Accounting Standards (IAS) and eight International Financial Reporting Standards (IFRS). In addition, 10 TAS interpretations with the Official Gazette on 9 March 2007 and numbered 26457 and 10 TFRSs (Turkish Financial Reporting Standards) with the Official Gazette on 15 July 2007 and numbered 26553. It was only in draft form in the standards published by the Turkish Accounting Standards Board, since there were still some hesitations in the implementation of the standards numbered TMS 32 and TMS 39. But later, TMS 32 was published in the Official Gazette on 28 October 2006 and numbered 26330, and TMS 39 was published on 3 November 2006 and numbered 26335.

In addition, TMS 30 has been repealed as of 2007. In our country, banks and publicly traded companies have been preparing their financial statements in accordance with International Financial Reporting Standards since 2005. TAS (Turkish Accounting Standards), published to be valid on 1 January 2006, constituted an up-to-date legislation for these sectors (Yalkın, 2001).

To summarize, financial statements are the statements that will meet the information needs of the users and help them make decisions and provide detailed information about the financial status of the business, the performance of the managers, and the cash flow in a certain period.

In the TMS 1 Presentation of Financial Statements Standard, the general rules that the financial statements to be created by the enterprises. The general rules to be followed in the preparation of general-purpose tables to be prepared by businesses. These businesses can be grouped under the following headings (Yanık & Özerhan, 2010).

- The financial statements to be prepared by the business should present the financial position, performance, and cash flows of the business in a fair manner. The fair presentation means that it is the presentation of the results of the transactions specified in the Conceptual Framework by adhering to the definitions of assets, liabilities, income and expenses and accounting criteria.
- The company should clearly and fully indicate in the footnotes that the financial statements are in compliance with all the articles of Turkish Financial Reporting Standards. If an entity uses accounting policies that do not conform to the standard, it shall disclose those policies or disclose them in the notes. However, the disclosure of these policies and their disclosure in the footnotes does not mean that the company has presented its financial statements appropriately. The business should clearly and fully state in its footnotes that its financial statements are in full compliance with TFRS (Yanık & Özerhan, 2010).

- The company should act according to the concept of going concern unless there is a contrary provision when issuing its financial statements. If the business management is aware of important events that will affect and cast doubt on the continuity of business activities, they should disclose them.
- A company should prepare all its financial statements on the accrual basis of accounting, except the cash flow statement in the set of financial statements.
- A company should present separately in the financial statements each significant class of similar items when preparing the financial statements. The items with similar qualities should be combined.
- A company cannot offset assets and liabilities or income and expenses when preparing its financial statements. Netting is prohibited unless TFRSs allow or require it (Yanık & Özerhan, 2010). TAS 1 allows for clarification on some issues. Among its normal activities, the entity also performs certain transactions that do not generate revenue but arise in relation to the main revenue generating activities. Income and expenses related to that transaction if the presentation reflects the substance of the transaction or related event can be offset from each other and the result of these can be presented in the financial statements.

Based on the contract made by a third party in relation to the provisions accounted for in accordance with the “TAS 37 Provisions, Contingent Liabilities and Contingent Assets” standard specified in TAS 1 Article 34, an indemnified payment may be set off against the compensation received. Gains and losses arising from similar transactions, which are stated in TAS 37 Article 35, can be reported by clarifying. However, if the losses and gains in question are significant, they must be shown separately without clarification.

A business should prepare and present a complete set of financial statements with comparable information at least annually. In addition to explaining the period covered by the financial period, if it changes the end of the reporting period and prepares its financial statements within a period longer or shorter than one year, it should explain the reason why the information presented in the financial statements (Public Oversight Authority, 16.01.2005)

- The financial statements to be prepared by the company should present comparative information with the previous period regarding all amounts reported in the current period financial reports, unless there is a contrary provision in TFRS. That is, it should present its financial statements and footnotes for the two periods. With retrospective accounting policies, an entity will either restate or reclassify items in its financial statements. In such a case, at least three balance sheets (at the end of the current period, at the end of the previous period and at the beginning of the earliest comparable period) must also present at least two periods from each of the other statements and related footnotes. If the business will make different presentations and classifications on the items in its financial statements in any way, it is obliged to explain the nature of the classification, the amount of the classified items and the reason for the reclassifications (Yanık & Özerhan, 2010).
- An company must be consistent in the presentation of its financial statements. In other words, unless a significant change in operations has brought about a change in the presentation of the financial statements in TFRS, or unless it has been clearly demonstrated that such presentation would be more appropriate according to the criteria of selection and application of accounting policies, the

presentation and classification of items in the financial statements should continue in the same way from one period to the next.

2.2. Basic and Additional Financial Statements

2.2.1. Balance sheet

The balance sheet is the financial statement that reports the financial position of the companies, consisting of assets, liabilities and equity structure, as monetary value as of a certain period. Financial statements are the statements prepared for the purpose of systematically and meaningfully reporting the financial situation to the relevant parties in certain periods. Therefore, they are financial instruments that are extremely important for businesses (Örücü, 1995).

In general, the balance sheet is the table that shows in detail all the tangible and intangible assets, (assets and liabilities), liabilities (foreign resources) and equity of a business on a given date. The balance sheet is also called the statement of financial position because it shows the financial position of the business at a certain date.

The balance sheet consists of two parts as active and passive. When the balance sheet is prepared according to certain principles, it shows how much of a company's assets are met from equity and foreign resources. In order to obtain the necessary information from the balance sheet, some principles must be considered (Akgüç, 2002).

First of all, the date of issuance of the balance sheet and the name of the business, the words on the balance sheet, the currency used in the reporting, the degree of certainty in the result of the numerical information in the balance sheet should be clearly stated. In addition, the valuation measures and depreciation methods

applied in the balance sheet should be explained. The balance sheet items should be meaningfully segregated in accordance with the purpose for which the balance sheet will serve. Items with different qualities that are not related to each other should not be gathered under the same heading. While preparing balance sheets, it can be arranged in two forms as account type or report type.

If the balance sheet is arranged as an account, assets are listed on the left side and liabilities on the right side, as two columns. The balance sheet form in this form. It provides the opportunity to make comparisons between assets and short-term liabilities, and between fixed assets and long-term liabilities and equity. In the report format, assets and resources are listed one after the other. Balance sheets prepared in the form of reports especially facilitate comparisons between balance sheets related to successive accounting periods (Akdoğan & Tenker, 2007).

While preparing the balance sheet, corrective accounts can be shown in the balance sheet either by deducting them from the related asset and resource items or separately in the assets and resources section of the balance sheet. Value correcting accounts are the accounts used to reduce some asset and resource items to their actual values on the balance sheet.

In the section, provision for receivables, provision for stock depreciation, provision for impairment of securities, accumulated depreciation and depletion shares, and rediscount accounts for bills receivable. This value can be shown with their net values in the balance sheet by deducting the corrective accounts from the relevant asset, or as (-) related balance sheet items. These accounts may also be located on the right side (liability) of the balance sheet. Passive corrective accounts are loss, outstanding capital, and bills rediscount accounts. While these accounts are being

prepared, they can be deducted from the related liabilities or included in the assets section of the balance sheet (Akgüç, 2002).

Although there are many different definitions of the balance sheet (statement of financial position), the most specific definition is that it is the financial statement that shows the assets owned by the businesses operating in a certain date range and the sources from which these assets are obtained. The following information should be included in the balance sheet (Akdoğan & Tenker, 2007):

- The word balance sheet,
- Balance sheet history,
- Company name or trade name.

When the balance sheet reports the asset structure of a company, it classifies assets as current and non-current assets. The present cash and similar assets of the company and the assets that can be converted into money within one year or within the operating period as of the balance sheet date are in the nature of current assets. As of the balance sheet date, the assets of the company that do not turn into money within one year or within the operating period and that will be utilized in a longer period of time are in the nature of non-current assets (Dabbağoglu, 2011).

The features of the balance sheet are given below (Durmuş & Arat, 2000):

- Balance sheet is drawn up for an institution: A business is an economic and legal unit that individuals or individuals create in accordance with the law by putting a capital to profit through the production of goods or services. In accordance with the laws in force, a business can be formed by a real individual (a sole proprietorship) or by the merging of many real and legal

persons (ordinary partnerships, sole proprietorships, capital companies, associations, facilities and foundations).

- Balance sheet is drawn up as of a specific time: The balance sheet is drawn up for a specific period. It is assumed that during this period, all transactions prepared in the enterprise ceased. This period, on the other hand, is the end of working hours, usually on the last day of the accounting period. This period is called balance sheet time or balance sheet day.
- Balance sheet shows the asset and the source of this asset.
- Balance sheet shows the result of the activity: The balance sheet expresses the result of the activity (work) in the accounting period in which it is prepared as profit or loss.
- Balance sheet should be prepared in accordance with accounting rules and principles.

There are two columns in the balance sheets. These are the assets column on the left side of the balance sheet where all the “Assets and their Progress Amounts” owned by the companies are recorded, and the liabilities column on the right side of the balance sheet where the “Resources acquired by the companies are recorded. The company’s receivables are included in the asset column of the balance sheet, while its debts are added to the liabilities column. Assets are shown in the balance sheet if the right to use future economic benefits belongs to the company and has a cost or value that can be measured reliably. No accrual process can be performed for receivables whose amounts are not determined precisely. Such receivables are shown in the explanations and footnotes related to asset items (Yıldırım, 2008).

The principles regarding the assets of the balance sheet are listed below (the General Communiqué on Accounting System Application No: 1, 26.12.1992).

- Assets of the firm that can be converted into money in one year or in the normal operating period are shown in current assets in the balance sheet.
- The basic principle of the balance sheet is to show separately the amounts belonging to the partners, personnel, affiliates, and subsidiaries with which the company is related in terms of capital and management from the receivables, securities, related securities and other related accounts and liabilities included in the current and fixed assets groups of the balance sheet.
- In order to present the assets in the balance sheet, it is obligatory to set aside provisions by showing the impairment in the assets. As a result of the valuation to be made for the receivables, securities, stocks and other current assets in the current assets group, appropriate provisions are made when necessary. This principle applies to receivables, subsidiaries. It also applies to related items in partnerships and other non-current assets.
- The long-term assets of the firm, which cannot be converted into money within one year or the normal operating period, and whose services are utilized for longer than one accounting period, are recorded in the non-current assets group in the balance sheet. Accounts in this group with maturities less than one year on the balance sheet day at the end of the period are transferred to the relevant accounts in the current assets group.
- Rediscount transactions should be made in order to show the bills receivable in the current and non-current assets group with their real values on the balance sheet date.

- Expenses paid in advance for future periods and incomes accrued in the current period but to be collected in the future should be determined, recorded, and shown separately in the balance sheet.
- In order to charge the costs of the assets subject to special depletion within the fixed assets group to the costs of various periods, the accumulated amounts of the depletion shares allocated for each period should also be shown in the balance sheet.
- In order to charge the costs of tangible fixed assets and intangible assets included in the fixed assets group in the balance sheet, to the costs of various periods, the accumulated amounts of depreciation allocated for each period should also be shown in the balance sheet.
- No accrual is made for receivables whose amounts cannot be determined with certainty. Such receivables are shown in the balance sheet footnotes or annexes.

The principles regarding the liabilities of the balance sheet are listed below:

- Expenses incurred in the current period, but which will be paid in the future, are shown in the balance sheet, together with the revenue previously collected for future periods.
- Payables due within one year or the normal operating period are shown in the short-term liabilities group in the balance sheet.
- Rediscount transactions should be made on debt securities.

- Foreign resources whose amounts cannot be determined with certainty or whose status is controversial should be identified, recorded, and shown in the balance sheet.
- Debts that are not due in one year or in the normal operating period are shown in the balance sheet as long-term liabilities.
- Payables belonging to partners, employees, affiliates, and subsidiaries should be shown separately.

Principles regarding equity of the balance sheet are listed below:

- The rights of the owner or partners of the company, as owners or partners, on the assets of the company constitute the equity group.
- The paid-in capital of the enterprise is shown as a single item within the scope of the balance sheet.
- Maintaining the capital invested by the shareholders of the firm required.
- In order to show equity in the balance sheet clearly, previous years' losses and period losses are included as discount items in the equity group.
- Equity consists of paid-in capital, capital reserves, profit reserves, retained earnings (losses) and net profit/loss for the period. Profit reserves include the undistributed portion of profits from operating activities such as legal, statutory, and extraordinary reserves, reserves, special funds. Capital reserves consist of items such as share issue premiums, canceled partnership shares, revaluation increases. Capital reserves cannot be transferred to the income statement as an element of income.

Since the main purpose of the balance sheet is to show the financial position of the enterprise as of a certain period, it is often described as a status report. The

financial status report shows the assets of the business and the foreign resources used to acquire these assets, and the rights of the owners and owners of the business in a tabular form. The balance sheet is known as a report that is very important for the owner or partners, managers and creditors of the business. Since it shows the state of the shareholding structure in the business, it provides or intends to provide capital to the business.

It is of great importance to thinkers. Since the balance sheet shows assets and liabilities together, it provides useful information about the solvency of the enterprise and the degree of security of the rights of those who provide resources to the enterprise (Şamiloğlu, 2006).

2.2.2. Income statement

Income statement is the financial statements that report the operating results of the companies. It consists of the income and expenses incurred in a certain period, with their monetary values. Income statement accounts are the accounts in which the increase and decrease in the equity of the enterprise related to the operating period. By means of these accounts, income and expenses obtained during the period are classified and an income statement showing the results of one-period activity is prepared (Erkan, Elitaş, & Ceran, 2012).

The main purpose of most companies is to make a profit. Even in a small sole proprietorship, the goal is to manage profitably and increase the owner's wealth. While the shareholders of large capital enterprises invest in this business, they expect the business to make a profit and increase the value of the investments. The definition of net profit is the increase in owners' equity as a result of firm transactions. If there is a decrease in the wealth of the owners as a result of these transactions, "loss" is

possible. When the firm makes a profit, that profit can be withdrawn from the firm by its owners. This profit withdrawn from the company can be called dividend or profit share. If the profit obtained as a result of the activities is not withdrawn from the business for the realization of new transactions and/or the expansion of existing transactions, this amount remains with the company as “Retained Profits”. Another definition of profit can be made as the difference between the income obtained as a result of the transactions and the expenses incurred for the transactions during the acquisition of this income. The profit must be given together in a certain period. Net profit is determined for periods of equal length so that period results can be compared with each other. Expenses decrease the company’s equity capital, and revenues increase the company’s equity capital (Erdamar & Orhon Basık, 2003).

As a result of the rapid growth in businesses in recent years, the hierarchical structure formed at the management level and the separation of management functions from each other, the need to evaluate the activities of each department has come to the fore. When this is the case, businesses have felt the need to plan for the future by determining their income and expenses. For this reason, besides the balance sheet showing the financial status of the enterprises, the interest in the income statement has also increased and this table has found wide use. Because the income statement not only reflects the periodic developments of the enterprise, but also reveals the information about the activity of the enterprise for a period.

As in the presentation of the balance sheet, the income statement can be prepared in two different ways such as account type and report type. In the account type, revenues are on the right and expenses are on the left. Since income and expenses are not grouped in this presentation format, information about the formation of profit items such as gross sales profit, operating profit, ordinary profit.

The net result of the period can be seen directly. In the report type, the data is given by grouping the income and expense elements in a way that shows the formation of profits. In this presentation format, it is possible to see the gross sales profit/loss, operating profit/loss, ordinary profit/loss, and period net profit/loss of the business easily. There are different practices in the grouping of expenses, whether the income statements are presented in report type or account type. In the EU Directives, expenses can be classified differently according to their types (material expenses, personnel expenses, external benefits, and services) and functions (cost of sales, research and development expenses, general administrative expenses) (Akdoğan & Tenker, 2001).

The rules that should be applied by the companies during the preparation of the income statement are called the income statement principles (Örten & Karapınar, 2003). Of all profits and losses, those that require adjustments from prior periods' financial statements and those excluding their size should be included in the current period's income statement.

- Provisions should not be used to arbitrarily reduce the firm's profits or to transfer profits from one period to another.
- In case a difference is made in the valuation principles and period costs related to the determination of the period results, the effects of this difference should be clearly stated.
- Expenses and losses, which can reasonably be estimated to be true, arising from contingent events that exist at the balance sheet date and indicate the circumstances depending on whether one or more events with uncertain outcome will occur in the future, are added to the income statement by realizing.

In Turkish practice, expenses are presented in the income statement of report type, while the expenses are grouped on the basis of function. In addition, the cost of sales part in the income statement is prepared in a separate table to show the inventory movements of the enterprise during the period and the cost of goods sold, raw materials and materials, commercial goods and services sold. This table forms an annex to the income statement and completes the income statement (Gücenme, 2000).

Income statement is a financial statement that presents the income, expense, profit and loss status of the business at the end of the period by grouping them for the purpose of planning for the business management. In this way, the income statement clearly presents the types of activities and transactions resulted from the situation at the end of the period. Moreover, it fulfills a function that provides a link between such activities and transactions and the decision function. The importance given to the income statement by the enterprises is increasing day by day. Because in this financial table, the activities of the business in a certain period and the results of these activities are presented with concepts such as net sales amount, cost of sales, gross sales profit, operating profit, ordinary profit, net period profit. In this way, it is possible to evaluate the progress and degree of success of the enterprise from various aspects (Şamiloğlu, 2006).

2.2.3. Statement of changes in equity

Equity refers to the rights of business owners over the assets owned by the business (Dinç & Çankaya, 2012). The statement of changes in equity is the statement showing the increase or decrease in equity items in the current period (Çabuk & Lazol, 2005).

It is a table prepared to show the changes in the equity of an enterprise. Equity, on the one hand, shows the resources necessary for the business to carry out its activities, on the other hand, it provides an opportunity to benefit from foreign resources by creating an assurance against the creditors of the business. It also undertakes the duty of insurance against various risks that the business may encounter. This table shows the additional investments made by the owner and partners of the business. In other words, changes in capital increase, reserve, funds, and profit items are transferred to financial statement users with the help of this table. The income statement does not provide sufficient information to show the changes in the equity of the enterprise. Changes in equity may occur from profit, or these changes may occur from transactions other than profit. Increases and decreases in equity items can be monitored with the help of changes in shareholders' equity. Aforementioned table provides a collective view of the changes in equity items during the period, especially in capital companies (Akgüç, 2002).

Changes in a business' equity between the beginning and end of the reporting period reflect increases or decreases in net assets during the period. Except for the transactions with the partners and because of their partnership for example, capital contributions, re-acquisition of the equity instruments of the enterprise and dividends and the expenses directly related to these transactions, all of the changes in the equity during the period are the profit and loss created by the operating activities in the period in question. It shows all income and expenses including losses (Yanık & Özerhan, 2010).

The purpose of preparing the statement of changes in equity is to provide a collective display of the differences in the equity items of the period examined, especially in capital enterprises. The statement of changes in shareholders' equity is

presented including the current period and previous period data. The table arranges paid-in capital, capital reserves, profit reserves and previous periods profit (loss) and period net profit items in a way to show the beginning of the period separately, the decreases, increases and the remainder at the end of the period (Gücenme, 2005).

2.2.4. Profit distribution statement

The profit distribution table is a table that shows how the income generated in the firm will be distributed. The profit distribution statement includes the calculations of taxes and other legal liabilities and the offsetting of capital. Other calculations of this table are determined according to the decision of the general assembly of the company and the data in the articles of association. Profit distribution table consists of four elements (Çabuk & Lazol, 2009):

- Distribution of the profit for the period,
- Distribution of reserves,
- Earnings per share,
- Profit share per share.

2.2.5. Funds flow statement

It is a financial statement that shows the financial resources provided by the companies in a certain accounting period and the places of use of these resources. Funds flow statement consists of two parts, fund sources and fund uses (Erol, 1991).

In the firm, a fund is created when an asset is decreased, and a financial resource is used when an asset item is acquired. Since every change in assets and resources in the balance sheet and income statement is not sufficient to show the fund inflows and outflows, these changes are shown in the fund flow statement. This table is a table that helps both company officials and credit institutions.

2.3. The Concept of the Cash Flow Statement

2.3.1. The concept of cash and cash equivalent

The cash flow statement aims to explain the change in cash and cash equivalents. With the help of this table, cash collections and payments made by the enterprise during the period can be followed as their sources and places of use. In addition, with the help of this table, it is ensured that the increases and decreases in cash and cash equivalents during the period are seen together with the reasons. Thus, it has become easier to predict the future money needs of the enterprise and to prepare the cash budget (TMS, 7-8).

Investors and lenders make use of the cash flow statement when making business decisions. Investors and lenders use the information provided by the cash flow statement to estimate the probability of a business' future cash generation. The cash flow statement influences the lender's decisions as it shows the ability of the business to pay its debt. It is very important for investors to learn about the profit-paying potential of the business. Investors get this information from the contract flow table (TMS, 7-9).

Asset items expressed as liquid assets in businesses are considered as cash. In this context, the concept of cash refers to cash and demand legislation in the enterprise. The concept of cash is more broadly expressed as checks that have not yet been collected or deposited in the bank, postal and bank transfers, foreign currency in Turkish Lira, stamps and postage stamps, and undue coupons. Some of these values can be used in cash, while others can be used for payments. The concept of cash, which is handled in the cash flow statement, expresses the use of resources and resources equivalent to cash and cash (Uğur, 2001).

On the other hand, the term cash equivalent is used to describe some short-term investments that have a short time to maturity and are easy to convert to cash or to be treated as money because they are liquid (Özerhan ve Yanık, 2012).

For an asset to be classified as cash equivalents, it must be convertible into cash with an appreciable value and the risk of a change in value must be negligible. Accordingly, investments with a maturity of three months or less are considered cash equivalents (Yanar Gülşen, 2004).

It has been argued by some scholars that there are some changes that need to be made in the Uniform Chart of Accounts to ensure compliance with International Accounting Standards (IAS), and it has been stated that the name of the Liquid Assets group should be changed to “Cash and Cash Equivalent”. Thus, assets reported as “Liquid Assets” according to the Uniform Chart of Accounts are reported as cash and cash equivalents in the financial statements prepared in accordance with international standards. In the cash flow statement, since the increases and decreases in cash movements and cash and cash equivalents are analyzed, the name of the item called liquid assets in the Uniform Chart of Accounts has been changed to cash and cash equivalents in accordance with the scope of TAS-7 Cash Flow Statements. In the TAS-7 standard, the definition of this item is as follows: “This group consists of the assets held in cash or in the bank and the accounts that can be converted into money at any time without loss of value, have high liquidity and have an insignificant risk of change in value” (Şensoy, 2002).

2.3.2. The concept and importance of cash flow statement

A statement summarizing the transactions of an accountant's use of cash in a given period is called a cash flow statement. This table examines the change in cash and bank accounts between two consecutive periods (Akdoğan & Tenker, 2001).

In the cash flow statement, cash flows during an operating period are presented as operating cash flows, investing cash flows and financial activities cash flows. In other words, this table explains the change in cash and cash equivalents account between two consecutive periods. The money to be collected and the payments to be made during the period, with the resources and places of use of the enterprise, can be monitored with this table. In this way, increases and decreases in cash values can be observed along with their reasons (Akdoğan & Tenker, 2001).

Business managers are the group that will benefit most from the cash flow statement. With this table, managers measure the ability of the business to provide cash and it is possible to make comparisons with other businesses. With this situation, it is ensured that the cash structure of the enterprise is estimated in order to create a balanced cash management of the enterprise. A healthy cash management is necessary for the business to control its liquidity risk and maximize its profitability. In addition, this table explains why there is not as much money in cash and cash equivalents as the profit for the period at the end of the period.

Thanks to the cash flow statement, it can be seen why the cash value is low and there is a tightness in the dividend payment even if the business has closed the operating period profitably. With the cash flow statement, business partners and managers get information about the cash flow by seeing the cash inflows and outflows and get information about why the change in the remainder of the cash and cash

equivalents account is different from the profit for the period. The cash and cash equivalents of the business at the end of the period are reported in the balance sheet. However, the balance sheet does not reveal the cash movements during the period because it only shows the current situation. The cash flow statement summarizes the transactions that require the receipt and payment of cash without considering the income generating activities of the business. Some items in the income statement do not cause cash movements. However, some items in the cash flow statement are not found in the income statement. The income statement takes into account the income and expenses incurred, whether or not they cause cash movements. In other words, income and expense elements for the period are considered on both accrual and cash basis. In contrast, the cash basis is the prevailing element in the preparation of the cash flow statement. For example, items such as accrued but not collected income, credit sales, provision expenses, depreciation expenses that do not cause cash movements in the income statement are not included in the cash flow statement. (Akdogan & Tenker, 2007).

The cash basis is the recording of an income or expense when it is collected or paid (Büyükmirza, 2012). Today, Cash Flow Statement is examined in this study in the context of a manufacturing In this study, the publication of the General Communiqués on International Accounting Standards and Accounting System Practices laid the groundwork to support all these developments.

Although the Cash Flow Statement has been included in accounting education in Turkey for many years, its use in practice is not very common. In this way, it has become regulated by all commercial organizations whose work capacities have exceeded a certain limit, and it is not limited to organizations that attach importance to financial planning and their supervision (Uçma & Koroğlu, 2005).

Businesses can determine their dividend policies in line with the information obtained from the cash flow statement. Businesses can increase or decrease their dividends. In addition, the cash flow statement guides the investment and financing policies of the enterprise. It contributes to the future cash planning of the business. The cash flow statement provides important information to business lenders. By having information about the cash flows of the business, lenders can measure the solvency of the business. In other words, they determine whether the company has a cash generation problem. Evaluating the ability of the business to generate cash and cash equivalents with the data obtained from the cash flow statement in accordance with TAS 7 and it provides the opportunity to measure future cash flows and compare them with other businesses. It also allows the performance reports of different businesses to be compared.

2.3.3. The historical development of cash flow statement

In order to obtain information about the historical development of the cash flow statement, the accounting system should be examined starting from the end of the 19th century. The accrual basis has been adopted by accountants since the 1890s and the accrual basis has been widely used by small and medium-sized firms. Since cash-based accounting was seen as an obstacle to the development of accounting by accountants, it could not find an application area and this process continued until the 1930s. Later, it has been a matter of debate whether the income statement prepared on an accrual basis, in parallel with the developments in the economy, reflects all the changes. As a result of these discussions, the importance of the cash flow statement has increased, and it has taken its place among the mandatory financial statements (Erol, 1991).

2.3.3.1. The development of cash flow statement in the world

With globalization, the acceleration of international investments throughout the world and the international trade reaching overseas and even trans-ocean dimensions, as a result of investors turning to abroad, an accounting language that expresses the same meaning everywhere in terms of presenting financial information, transparent, reflecting the truth, and enabling comparison has been needed. These developments have paved the way for the formation of accounting standards around the world and accelerated harmonization and harmonization efforts (Çiftçi ve Sarioğlu, 2007).

The changing economic activity structures and practices of countries, macroeconomic developments such as price instability and the desire of companies to dominate in many sectors have led to new searches in financial reporting. The complexity created by the fact that businesses operate in countries with different legislation and accounting systems, especially during the transition to a world order where economic borders have disappeared, has caused companies and other interested parties to be in a difficult situation. they have developed. As a result of the laws introduced, the concept of financial statements was formed and the income statement was prepared in addition to the balance sheet, and the period of financial statements in the modern sense began. In the following periods, in addition to the basic financial statements, funds flow statements, working capital statements and cash flow statements have started to be used (Aksoy, 2005).

Cash flow statement was mentioned for the first time in 1908 by William Morse Cole in the article titled “Where Got, Where Gone” and appeared as sources and applications of funds. In 1921, H. A. Finney gathered all of the financial

resources of the enterprise under the concept of fund and presented the “Table of Implementation of Funds” (Sanlı & Özbirecikli, 2012).

The analysis made by the American Institute of Certificated Public Accountants (AICPA) in 1961, which includes only the increases and decreases in balance sheet items, formed the core of the cash flow statement, and in the following years the name of the table was changed to “Table of Funds” and “Table of Cash Flows and Funds”. In 1963, a standard was published showing the presentation and preparation of the funds table (Çiftçi ve Sarıoğlu, 2007).

With the publication of the statement No. 19 by the Accounting Principles of Board (APB) in 1971, it has become mandatory for companies to publish the “Change in Financial Position”. The debates on whether the reports prepared on the basis of accrual accounting and presented in this way fully reflect the financial positions ended with the publication of No: 19 by APB in 1971 (Kargın & Aktaş, 2011). In the same period, the Funds Flow Statement started to lose its importance in international accounting, and all attention was paid to Cash Flow (Yalkın & Demir, 2016).

Furthermore, the International Working Group of Accountants formed at the X. World Accounting Congress held in 1972 put forward the idea of establishing a committee for the regulation of accounting standards, and in 1973 the International Accounting Standards Committee was established. The Committee aimed to produce the International Accounting Standards (IAS) and to spread its use and to provide a common structure for the information produced from accounting. The board took the name International Accounting Standards Board (IASB) in the 2000s. As a result of the studies carried out by the International Accounting Standards Board, many countries have fully accepted international accounting standards, and the published

standards have formed the basis of national accounting standards in many countries (Ataman ve Gökçen, 2011).

The draft text of the cash flow statement was prepared by the FASB (Financial Accounting Standards Board) in the USA in July 1986. By the FASB in November – 1987, “Statement of Financial Accounting Standard (SFAS) 95; Statement of Cash Flows” was published. In 1988, it was mandatory for businesses to prepare a “Cash Flow Statement” (Bayazıtlı, 1997).

The International Accounting Standards Board and the Financial Accounting Standards Board have established standards and provided uniformity in accounting and financial statements. In order to promote this uniformity, the European Union, with a decision taken in 2000, brought the obligation to prepare the financial statements of the listed companies in the countries of the European Union in accordance with the International Accounting Standards as of January 1, 2005.

2.3.3.2. The development of cash flow statement in Turkey

The development of accounting in Turkey has been under the influence of the laws transferred from various countries. In addition to the translated and published works in the field of accounting, the participation of people who received accounting education in foreign countries and foreign lecturers in our country's education played an important role in the development of accounting. Accounting practices developed with the translations of French and German laws until the 1960s. The entry into force of the Law of “*Kanunname-i Ticaret*”, a translation of the French Commercial Code of 1807, in 1850, and the Commercial Code No. 856, which was taken from the German Commercial Code in 1926, are the most concrete proofs of this development (Uçma & Koroğlu, 2005).

Later in the accounting development process, it is stated that the provisions of the Turkish Commercial Code and the Tax Procedure Law direct the accounting practices in Turkey. However, in cases where the provisions on these issues do not meet the needs, it has been observed that some institutions with legal status conduct guiding studies for the businesses that fall under their jurisdiction. It has been resolved with various and important changes and it has been made mandatory to prepare the financial statements in order to ensure an environment of trust in Turkey (Bozdemir, 2013).

One of the most comprehensive regulations regarding financial statements in Turkey is the General Communiqué on Accounting System Application, which was issued by the Ministry of Finance in 1992 and put into effect in 1994. Accordingly, cash inflows and cash outflows during the period are reported separately in the cash flow statement. The cash flow statement, which was requested to be prepared with the General Communiqué on Accounting System Application but not required to be published, was not used by the enterprises since it could not be prepared according to the operational principles of the enterprise (Yanar, 2004).

Cash flow statements began to be used with the publication in the Official Gazette on January 29, 1989, “Provisions regarding the communiqués published and to be published by the Capital Markets Board and the additional communiqué to the communiqué”. With this communiqué, the cash flow statement has been expanded to some extent by including it among the financial statements that are required to be prepared and published by public companies subject to the supervision of the Capital Markets Board. The main limits of the Communiqué were determined by the General Communiqué on Accounting System Practices with Serial No. 1 published in the Official Gazette of the Ministry of Finance in 1992 (Güvemli, 1977).

Due to the order created as a result of the social and technological developments in the world, efforts to harmonize the accounting standards of our country with the International Accounting Standards (IAS) in order to develop a common language in financial reporting and prepare financial statements that can be understood by everyone, and to provide more reliable information to the concerned parties. It started with the establishment of the Turkish Accounting Standards Board. and Turkish Financial Reporting Standards were prepared and published in the Official Gazette in 2005 (TMS, 7-7).

With the adoption of the International Accounting Standards (IAS), the necessity of making changes in the current accounting system in Turkey has emerged. One of the most important changes to be made is the preparation of cash flow statements and equity statements, in addition to the required balance sheet and income statements. Thus, the regulation principles of cash flow statements, which were not required to be prepared before, have gained great importance for accounting practitioners. For this reason, the principles of arrangement of the Statement of Cash Flows are included in the 7th of Turkish Accounting Standards.

2.3.4. The benefits of cash flow statement

The benefits of preparing a cash flow statement in businesses can be listed as follows:

- It helps to predict future cash flows by showing the cash collections and cash payments made by the enterprise during the period by their sources and places of use (Kunz, 2007).

- It assists the management in evaluating the financial policy in the current period and making future decisions based on these data.
- It helps in determining the ability of the business to distribute dividends to its partners and helps the lending institutions determine the ability of the business to pay principal and interest.
- It helps to prepare the cash budget in a healthy way by determining the increases and decreases in the cash, bank and check accounts of the enterprise during the period.
- It helps us to learn how much of the amount in cash and cash equivalents remains from the profit of the period, and how much of the profit is in other asset items, by showing the relationship between the changes in the cash availability of the enterprise and its profit (Çiftçi & Sarıoğlu, 2007).
- It helps to reliably analyze the effects of management decisions regarding financial policies (Elidior, Oviodu, 2013)

Besides, managers, shareholders, and lenders use cash flow statements.

Managers evaluate the fluidity of the business with the help of the cash flow statement. They decide on whether to increase or decrease dividend payments by determining the dividend distribution policy. They plan the investment and financing needs of the enterprise. With the help of the cash flow statement, investors and lenders can predict the future positive cash flow generation potential of the business and evaluate its ability to manage cash flow. Investors and lenders can explain the differences between the net profit figure in the income statement and the net cash flow from operations with the help of the cash flow statement (Yanar, 2004).

2.3.5. The aims of cash flow statement

It is possible to reveal how a business creates cash and how it uses this cash through the cash flow statement. Knowing where cash is generated is important in terms of predicting whether cash will be generated from these places again in the future. It is important for businesses to know where they use the cash they create, in terms of evaluating their future cash needs. Investors, credit institutions and other parties obtain information about the financial condition of the enterprise, its cash generating power, the reasons for the difference between profit and cash flow from the cash flow statement. In addition, with the information obtained from the cash flow statement, strategic decisions such as budgeting, planning, discounted cash flow analysis and performance management can be taken (Gücenme & Poroy Arsoy, 2006).

The cash flow statement explains that why there is not as much money as profit for the period in cash and cash equivalents at the end of the period. Despite the fact that the business closed the operating period profitably, the reason for the low cash value and the tightness in the dividend payment can be understood through the cash flow statement. The preparation of the cash flow statement is important in that it illuminates the business partners and managers about the cash flow by showing the cash inflows and outflows and gives explanatory information about why the change in the cash and cash equivalents account is different from the profit for the period (Çiftçi & Sarıoğlu, 2007).

2.3.6. Cash flow statement arrangement methods

There are two different methods of reporting cash flows from operating activities. These methods are as follows:

- Direct (Gross) Method,
- Indirect (Net) Method.

These two methods differ only in terms of the presentation of cash flows from operating activities (Başar, 2010).

2.3.6.1. Direct method

The direct method shows cash inputs and outputs from operations in separate categories (Broome, 2004). Cash inputs and outputs are shown in different categories with the direct method. It shows the cash inflows and outflows from the activities. Cash inflows from the activities of the business are considered as resources and cash outflows are considered as usage.

The starting point, purchases and sales, helps calculate cash flows related to operating activities. Among the sources of cash inflows from activities, the reasons for the activities. The other name of the direct method is the gross method, in which the cash outflows are handled separately as between uses. This means that the items in the income statement are among the uses if they cause cash outflows, and they are among the sources if they provide cash inflows (Akdoğan & Tenker, 2007).

In the direct method, the main groups of gross cash inflows and gross cash outflows are determined by examining the business' accounting records or changes in income statement items, inventories and operating receivables and payables during the period, other non-cash items and the cash effect of net cash from investing or financing activities. The flows are determined by adjusting net profit or loss for the effects of the following (SPK):

- Changes in stocks, receivables and payables related to the activity during the period,

- Non-cash items such as depreciation, provisions, deferred tax, unrealized foreign exchange gains and expenses, and undistributed participation dividend income,
- Items whose cash impact is related to investment or financing cash purchases.

In the indirect method of displaying the net cash purchases from operating activities, the revenues and expenses in the income statement and the changes in inventories and receivables and payables related to the operation during the period can be used as an alternative.

The direct method (gross method) explains the function of the cash flow statement and its editing studies more clearly. In this method, the income statement is the starting point for the preparation of the cash flow statement, and the balance sheet is also used. The feature of the cash flow statement prepared by the direct method is that the cash account starts with the income, which is the upper item of the income statement (Önce, 2004).

It can be expressed the advantages of the direct method as follows:

- Annually, similar cash inflows and outflows in different businesses provides the opportunity for comparison.
- The direct method presents the cash transfer of the business to the creditors in a better way and is in a format that can be better understood even by managers who do not have sufficient accounting knowledge.
- It helps in preparing the cash budget as it focuses on the real sources of the cash flow problems.

- Since gross cash inflows and outflows respond to changes in activities, it facilitates the analysis of the sensitivity of cash inflows and outflows to volumetric changes resulting from their activities (Yanar, 2004).

The direct method determines the main classes of cash inflows and cash outflows from operations. It is preferred for businesses to report cash flows related to operating activities according to the direct method (TAS 7, Article 19). This is because the direct method provides more detailed information, contributes more to businesses in preparing cash budgets, and gives more information to lenders. However, international regulations such as Statement of Financial Accounting Standard (SFAS) have left those concerned free to choose which method.

2.3.6.2. Indirect method

The indirect method shows the difference between cash flow from operations and net profit. This method shows the cash inflows obtained from activities such as the direct method and the cash outflows made for the realization of these activities, separately from each other. In this method, calculations are started from the profit or loss of the period. In the indirect method, profit or loss for the period is taken and depreciation and amortization shares that do not cause cash flow, provision expenses, fixed asset sales profits or losses, prepaid expenses for the period and the share of prepaid income for the period are added or subtracted from this amount. In addition to these, the income items in the income statement that are not yet collected in cash but recorded on an accrual basis are subtracted from the total, and those that have not yet been paid from the expense items are added back to the total. At the end of these transactions, cash inflows from operating, investment and financing activities or net cash usage caused by activities will be found (Kısakurek & Ayarlıoğlu, 2007).

The indirect method is not as detailed and descriptive as the direct method. If the table is prepared according to this method, the net cash surplus and deficit from operating activities are stated, and the cash inflows and outflows caused by the activities are not listed.

In this method, the starting point is the net profit reported in the income statement. Then, the effects on net profit of expenses such as depreciation, provision account, which do not provide net cash flow (cash input and use) are corrected.

There are two views supporting the indirect method. First, the direct method is very costly to implement. The second is that the direct method does not clearly articulate accrual-based financial determinations (Larson, 1988).

The advantages of this method can be listed as follows:

- Revealing the difference between cash flow from operations and net profit,
- Illuminating the changes in non-cash accounts in working capital,
- Its application is easier than the direct method due to aspects such as collecting and preparing the necessary data.

The indirect method (net profit method) does not show the cash inflows from the activities and the payments made separately, the calculations are started from the period result (the profit or loss for the period). Here, the profit (loss) for the period is taken and depreciation expenses that do not cause cash flow, provision expenses, fixed asset sales profits or losses, depreciation, prepaid expenses for the period and the share of the pre-collected income for the period are added or subtracted from this amount. In addition, the income items recorded on an accrual basis in the income statement, that is the amounts that have not yet been collected in cash, are subtracted from the total, and those that have not yet been paid from the expense items are added

back to the total. Thus, the net cash inflow from the activities or the net cash use from the activities are found (Akdoğan & Tenker, 2001).

The indirect method is less detailed and descriptive than the direct method. The indirect method should be preferred in order to indicate the net cash surplus and deficit provided by the operating activities, but the inventory of the cash inflows and outflows caused by the activities cannot be made (Önce, 2004).

In the indirect method, cash flows from operating activities are determined by adjusting the net profit loss for the period according to the following effects (TAS 7, Article 20, p.5).

- Changes in stocks, activity-related receivables, and payables during the period,
- Depreciation, provisions, deferred tax, unrealized foreign exchange profit losses, retained earnings of associates and minority interest,
- Cash impact consists of items related to investment or financing activity cash flows.

The reporting of cash flows from operating activities is also specified in the communiqués of the CMB. But in the Banking Regulation and Supervision Agency (BRSA), the situation different.

The reporting of cash flows in the BRSA is gathered under a single heading and explained as follows (Banking Regulation and Supervision Agency):

- Cash collections and payments made on behalf of customers, such as the bank's acceptance of demand deposits and amounts withdrawn from demand deposit accounts, funds kept on behalf of customers in investment funds, rents collected to be paid to property owners, etc.

- Cash inflows and outflows arising from short-term transactions with high turnover rates and large amounts, such as advance and repayment records for principal balances of credit card customers, investment buying and selling transactions or other borrowings with maturities of less than three months,
- It is explained by classifying them as deposit acceptance and payments related to deposit accounts, deposits of banks with other financial institutions and the amounts withdrawn from these accounts, loans and advances given and cash collections and payments arising from their repayments.

2.3.7. Presentation of cash flow statement

In the cash flow statement, the classification and reporting of the cash flows for the period are made based on operating, investment, and financing activities (Yalkın, 2001).

A business presents cash flows from investing and financing activities in the most appropriate way to the business. It provides users with information on the impact of activities on the financial position of the business and on cash and cash equivalents by activity. At the same time, this information can be used to evaluate the relationships between activities. A single transaction may include cash flows classified differently. For instance, a loan repayment includes the payment of both interest and principal, interest is classified as a business activity and principal is classified as a financing activity.

The International Accounting Standards Committee (IASC) is one of the leading institutions working for the harmonization of financial reporting schemes at the international level (Pamukçu & Pamukçu, 2011).

In the latest standards put into practice abroad and in Turkey, it is required that the cash flow statement be prepared in a way that gives information about three activities and that their sources and uses are shown separately for each activity in their own section.

In these applications, cash flows are segmented as follows:

- Cash flows from operating activities,
- Cash flows related to investment activities,
- Cash flows from financing activities.

2.4. Parts of the Cash Flow Statement

2.4.1. Business activities

Cash flows from the main income generating activities of the enterprise constitute the cash flows from the operating activities. These cash flows, therefore, consist of the transactions and events involved in determining net profit (Evci, 2008).

Cash flows from operating activities, without the need for external financing resources. It is reported to provide information on repayment of debts, continuation of activities, making dividend payments and deciding whether to start new investments. The information about certain parts of the cash flows of the period is evaluated together with other information and used in the estimations of the future cash flows and in the preparation of the budgets (Yanar, 2004).

Cash flows arising from operating activities are listed as follows in TAS 7 Statement of Cash Flows (Özerhan & Yanık, 2012);

- Cash inflows from goods sold and services rendered,
- Cash inflows related to commissions, fees, and other revenues,

- Cash outflows arising from payments made for goods and services,
- Cash outflows resulting from payments made to and on behalf of employees,
- Cash inflows and outflows due to premiums, indemnities, annual payments, and other policy-related obligations received or paid by insurance companies,
- Cash outflows related to other taxes not directly related to financing or investment activities or cash inflows related to tax refunds received within the scope of such taxes,

Businesses may hold securities for commercial purposes or for their own activities. These items are the same as the company's inventory transactions acquired for sale. Cash flows from trading are considered cash flows from operating activities. Because the main purpose of the business here is to take advantage of price increases in short-term purchases and sales (Alderman & Mueller, 2003).

2.4.2. Investment activities

Investing activities are defined as activities related to the acquisition and disposal of long-term assets and other investments not included in cash equivalents. Cash flows related to investing activities are reported separately to show the resources allocated to generate income and cash flows (Yanar, 2004).

For an activity to be included in the investment activities section, conditions such as the purchased asset to bring a regular income, its value to be stable, to give confidence to the investor, to have the possibility of gaining in value in the long term and to be held by the investor for a long time are required (Şengür & Çiftçi, 2011).

Property, plant and equipment profits or losses are considered in determining the net profit for the period. However, cash flows resulting from the sale of property, plant and equipment are evaluated and reported as cash flows from investment

activities. The sales of property, plant and equipment are reported as cash inflows related to investment activities over the sales amount. Examples of cash flows from investment activities can be listed as follows (Erdoğan, 2002);

- Cash outflows from the purchase of tangible and intangible assets and other long-term assets,
- Cash inflows from the sale of tangible and intangible assets and other long-term assets,
- Cash outflows related to advances and debts given to third parties by businesses, excluding transactions made by financial institutions,
- Cash inflows related to advances and debts received from third parties by businesses, excluding transactions made by financial institutions,
- Cash inflows and outflows related to forward or forward contracts, option contracts and swap contracts, excluding those made for trading and financing activities.

2.4.3. Financing activities

Cash flows related to financing activities include the part disclosed in order to determine the portion that the shareholders and creditors who provide capital will demand from the future cash flows of the enterprise (Broome, 2004).

Examples of net cash flow related to financing games are as follows (Örten, et. al., 2012);

- Review entries from stock sales and equity production issuance,
- Exit from the sale resulting from using the share of the capital to use the right to buy itself,

- Cash inflows from long-term and short-term loans from education received without borrowing,
- Cash outflows related to debt payments,
- Consists of financial leasing transactions.

2.5. Cash Flow Statement in the Turkish Accounting Standards (TMS 7)

TMS 7 Cash Flow Statement Standard was published in the Official Gazette on 18 January 2005 and numbered 25704 and began to be implemented. It has been prepared in parallel with the IAS 7 Statement of Cash Flows Standard, which is included in the TMS 7 International Accounting Standard.

The purpose of its preparation is to classify and report cash flows for the period according to operating, investment and financing activities. Although it cannot provide very important information about the change in cash values and its power to generate cash, comparative balance sheets and income statements provide very important information about the financial structure, economic performance and use of funds of a business's accounting personality. Therefore, the cash flow statement provides the necessary information to the information users who are interested in the liquidity situation of the business.

The cash flow statement, which is of great importance for both the business management and the relevant people of the business in making future cash planning, has an important role in determining both the past and future financing policy by summarizing the money flow (Köroğlu & Uçma, 2005).

2.5.1. The aims of cash flow statement in the turkish accounting standards (tms 7)

According to this standard, businesses should prepare and present cash flow statements as an integral part of the financial statements for each period for which the financial statements are prepared. This standard has replaced the statement of change in financial position. Financial statement users concerned with how the business generates and uses its cash and cash equivalents. This concern is independent of the fact that cash is seen as a product of the enterprise and its activities arising from the nature of the enterprise, as in financial institutions. Although businesses engage in different activities to make a profit, they essentially need cash for similar reasons such as continuing their activities, fulfilling their obligations, and providing returns for their investors. Therefore, all businesses have to prepare a cash flow statement (TAS 7, Article 1,2,3).

Even though businesses engage in various activities to make a profit, they want to continue their activities, fulfill their responsibilities, and earn returns for investors because they need cash. For this reason, businesses have to prepare a cash flow statement. Necessary information is provided when the cash flow statement is used together with other financial statements in order to evaluate the change in the net assets of the enterprise, the financial structure, and its ability to affect the amount and timing of cash flows in order to adapt to changing conditions and opportunities (TAS 7, Clause 4). It also enables businesses to compare performance and eliminate the effects of different accounting practices for the same transactions and events.

2.5.2. The scope of cash and cash equivalent assets

Since the cash flow statement focuses on the concept of cash and cash equivalent assets, the concepts of cash and cash equivalents are defined as follows in the standard (TAS 7, Article 6,7):

According to the standards, cash refers to cash and demand deposits in the enterprise. Therefore, money movements in the cash and bank account of the enterprise are expressed in cash.

Cash equivalents are assets that are held for current liabilities and not used for investment or other purposes. For assets to be considered cash equivalents, they must be converted into cash with an absolutely determinable value and the risk of change in value must be negligible. Therefore, the maturity of the investment is three months or less, it is considered a cash equivalent investment. Investments in securities representing equity capital are not considered cash equivalents, except in specific cases, such as preference shares that are acquired shortly before maturity and have a specific redemption date. Bank loans are considered to be within the scope of financing activities. However, current accounts with banks, which must be repaid at the bank's request and whose balances can often fluctuate positively and negatively, are considered cash and cash equivalents, as they form an integral part of the cash management of the business. Transactions between items of cash and cash equivalents are cash because they form part of cash management and the entity is outside of operating, investing or financing activities. is not considered a stream. Cash management includes the evaluation of excess cash in cash equivalent investment instruments (TAS 7, Article 9).

Transactions between cash and cash equivalents are not considered cash flows as they form part of cash management. Cash management involves the use of excess cash in cash equivalent investment instruments. Therefore, transactions between cash and cash equivalents are operating, investment and financing activities (TAS 7, Article 9).

2.5.3. The presentation of cash flow statement in the turkish accounting standards

At the end of the process of revealing the cash inflows and outflows within the period with the cash flow statement, cash and cash equivalents that are vital for businesses (Gündüz, 2008). Classification and reporting are realized on the basis of operating, investing, and financing activities on the basis of cash flows for the period in the table. This classification provides information about the financial position of the business activities and their impact on cash and cash equivalents, as well as evaluating business activities. However, a single transaction (as with a loan repayment) may include cash flows classified differently. In this case, in a loan repayment, interest will be classified as operating activity and principal will be classified as financing activity (TAS 7, Article 11).

In particular, the cash flow statement, which provides the establishment and explanation of the relationship between the profitability of the enterprises and their cash and cash equivalents, is an important financial statement for the members of the accounting profession. Cash flow statement in the General Communique on Accounting System Application differs from TAS in two important ways. First, cash flow statement in the General Communique on Accounting System Application is one of the additional financial statements that businesses will prepare voluntarily. In TAS,

on the other hand, the cash flow statement that businesses have to prepare for each period is also defined as an inseparable part of the set of financial statements. According to TAS 7, the cash flow statement is subject to completely different classification principles from the General Communiqué on Accounting System Application. Because the main purpose of preparing this table is not to find the total net cash flow of the business. The aim is to reveal the amount of the total net cash flow of the enterprise with the effect of which types of activities, as a result of cash movements (Sarioğlu, 2009).

In the cash flow statement, cash flows for the period are classified and reported based on operating, investing, and financing activities. A business presents cash flows from investing and financing activities in the most appropriate way to the business. The classification by activity provides users with information about the impact of these activities on the financial position of the enterprise and on cash and cash equivalents. This information can also be used to evaluate the relationships between activities (Article 11 of TAS 7).

2.5.4. The reporting of cash flows statement

TAS 7 states that cash flow statements can be reported in two ways. These are according to Article 18 of TAS 7: The direct method is a reporting method in which the main groups of gross cash inflows and gross cash outflows are specified. It can also be called direct, and indirect method.

Indirect method is the method in which net profit/loss is adjusted for the effects of non-cash transactions, accruals or deferrals of cash inflows or outflows related to past or future transactions, and items of income or expense related to cash

flows related to investing or financing activities. It can also be called net and indirect method.

It is a reporting method in which net profit or loss is adjusted for the effects of the following items:

- Changes in working capital,
- Non-cash items such as depreciation, provisions, deferred taxes, unrealized foreign currency gains and losses, retained earnings of associates and minority interest.
- All other items for which the cash effects are related to cash flows related to investing or financing activities

However, TAS 7 recommends that cash flow statements be reported on the gross method. It is stated that the reason for this is that the tables prepared according to this method provide more useful information about future cash flows. There are multi-dimensional studies on issues such as the quality of the information presented by the cash flow statement, their estimation capacity, comparison of the reporting methods of the cash flow statement. In particular, future cash flows from these studies Those concerned with estimating flows offer controversial results.

Although businesses are encouraged to report their cash flows according to the direct method, the indirect method is more commonly used in practice. Reporting of cash inflows from investment and financing activities In enterprises, gross cash inflows and gross cash outflows resulting from investment and financing activities are presented separately by classifying them by main groups, excluding those reported on a netting basis (Wilknis & Loudder , 2000).

Cash flows from operating activities arise from transactions and events that are usually related to the main income generating activities of the business and are involved in determining net profit or loss. Similar to holding stock for sale, a business may hold securities for trading. Cash flows resulting from these transactions are considered cash flows from operating activities. Likewise, cash advances and loans given by financial institutions can be classified as cash flows from operating activities of the entity as long as they are related to its main income generating activities (TAS 7, Clause 15).

A business reports separately the main groups of gross cash inflows and gross cash outflows from investing and financing activities, excluding cash flows that are allowed to be disclosed on a netting basis. For example, transactions related to the acquisition or disposal of property, plant and equipment within investing activities are disclosed separately.

In order to be able to offset cash inflows and outflows arising from principal, investment or financing activities, the following conditions must be met (Alderman & Minyard, 1991).

The following cash inflows and outflows can be reported on a netting basis:

- Cash receipts and payments made on behalf of the customer, reflecting the cash flows arising from the activities of customers rather than the business,
- Cash inflows and outflows for items with fast transaction turnover, large amounts and short maturities.

Below are examples of cash receipts and payments on behalf of customers:

- Money deposited and withdrawn as demand deposits for a bank,

- Funds held for clients by an investment institution,
- Rents collected on behalf of property owners and then paid to them.

Below are examples of cash inflows and outflows that are associated with rapid turnover, large amounts, and short maturities:

- Principal amounts related to credit card customers,
- Buying and selling investments (For example, a broker, a bank, a pension fund, etc.),
- Other short-term borrowings, for instance, those with a maturity of less than three months (Denetimnet, 2018).

2.5.5. Cash flows in foreign currency transactions

The cash flows arising from foreign currency transactions are found by converting the cash flow into the functional currency of the relevant business at the exchange rates on the date of realization. The cash flows of the subsidiaries in the foreign country are also converted from the currency used in the foreign country to the functional currency of the enterprise and are found in using the exchange rate on the date of occurrence. Foreign currency cash flows, Turkish Accounting Standard TAS 21 Currency Processed in accordance with the Effects of Change. This allows the use of an exchange rate that approximates the actual rate. For example, the weighted average rate for a period can be used to record foreign currency transactions or to translate cash flows of a foreign subsidiary. However, TAS 21 does not allow the conversion of cash flows of a foreign subsidiary at the exchange rate on the date of balance sheet (TAS 7, Article 27).

Unrealized gains and losses arising from foreign exchange differences are not taken into consideration as cash flows. However, the effect of foreign currency differences on cash and cash equivalents held in foreign currencies is included in the statement of cash flows in order to reconcile cash and cash equivalents at the beginning and end of the period. The amounts found in this way. It is presented separately from the cash flows related to operating, investing, and financing activities and includes the exchange differences that would arise if such cash flows were translated into the relevant currency at the exchange rate at the end of the period (TAS 7, Article 28).

2.5.6. The interest and dividends in the statement of cash flows

In the cash flow statement, cash inflows and outflows related to interest and dividends are disclosed separately. Each of these items is classified according to their relevance to operating, investing, or financing activities on a consistent basis between periods. The sums of interest expenses, which are shown as expenses in the income statement or given to the asset costs, are disclosed as the total interest expenses of the period in the cash flow statement (TAS 7, Article 31).

The total interest expenses of the period included in the income statement or capitalized in accordance with the alternative method included in the Turkish Accounting Standard Borrowing Costs No. 23 are disclosed in the cash flow statement. For financial institutions, interest income, expenses and dividends are generally included in the operating cash flows. However, there is no developed principle on how to classify such cash flows for other businesses. Since interest expenses and dividends are considered in calculating net profit or loss, they can be classified as operating cash flows. Alternatively, businesses can classify cash flows related to interest income and expenses and dividend income in accordance with their

activities and present them in the cash flow statement. In this context, businesses, interest income and expenses and dividend income, if they are taken into consideration in the determination of net profit/loss from their main activities. They may present them as cash flows arising from financing activities if they constitute the cost of acquiring financing resources, or as cash flows arising from investment activities if the investment has yields (TAS 7, Article 33).

Moreover, dividend payments can be classified as cash flows related to financing activities as they constitute the costs of the financing resources obtained. Alternatively, an operating cash flow may be presented as operating cash flow to provide users of financial statements with information about the entity's ability to distribute dividends from operating cash flows (IAS 7, Article 34).

2.5.7. Displaying data on taxes in the statement of cash flows

Displaying data on taxes in the statement of cash flows includes corporate and income taxes paid during the period and other deduction items. It should be used to classify tax-related cash flows that are not explicitly related to financing and investing activities as cash flows from operating activities.

Taxes arise from transactions that generate cash flows related to operating activities, investing, and financing activities. While the amount of tax expense from investing and financing activities is determinable, difficulties may arise in determining the relevant cash flows and the tax-related cash flow may occur in a different period from the taxable transaction or event. Therefore, taxes paid are generally classified into operating cash flows. However, a tax-related cash flow that can be identified as arising from a transaction that gives rise to cash flows from investing or financing activities is classified as cash flows from investing or financing

activities. If the tax cash flows are related to more than one activity and are shown in different activity groups, the total amount of tax paid is disclosed in the footnotes (TAS 7, Article 35, 36).

2.5.8. Cash flows in the investments in subsidiaries, affiliates and joint ventures

When subsidiaries or affiliates are accounted for on the cost basis or the equity method, cash flows between the main partnership and subsidiaries and associates are shown in the cash flow statement, for instance, in the form of dividends and advance payments and other cash flows (IAS 7, Clause 37).

If the joint venture's share is reported using the proportional consolidation method, the main company's share of the joint venture's cash flows is included in the consolidated cash flow in the consolidated cash flow statement of the parent. If the joint venture share is accounted for using the equity method, the cash flows generated by this investment and the cash flows between the joint venture and the parent are included in the cash flow statement of the parent (Denetimnet, 2018).

Total cash flows resulting from the acquisition and disposal of subsidiaries and other units of the business are separately shown in the cash flow statement and classified as investing activity. Cash flows from the purchase and sale of subsidiaries and other business units are reported as a separate item and this reporting format allows cash flows for these items to be distinguished from cash flows from other operating, investing, and financing activities. Cash inflows and cash outflows arising from the sale or purchase of these assets are not deducted (TAS 7, Article 39-42).

3. METHOD

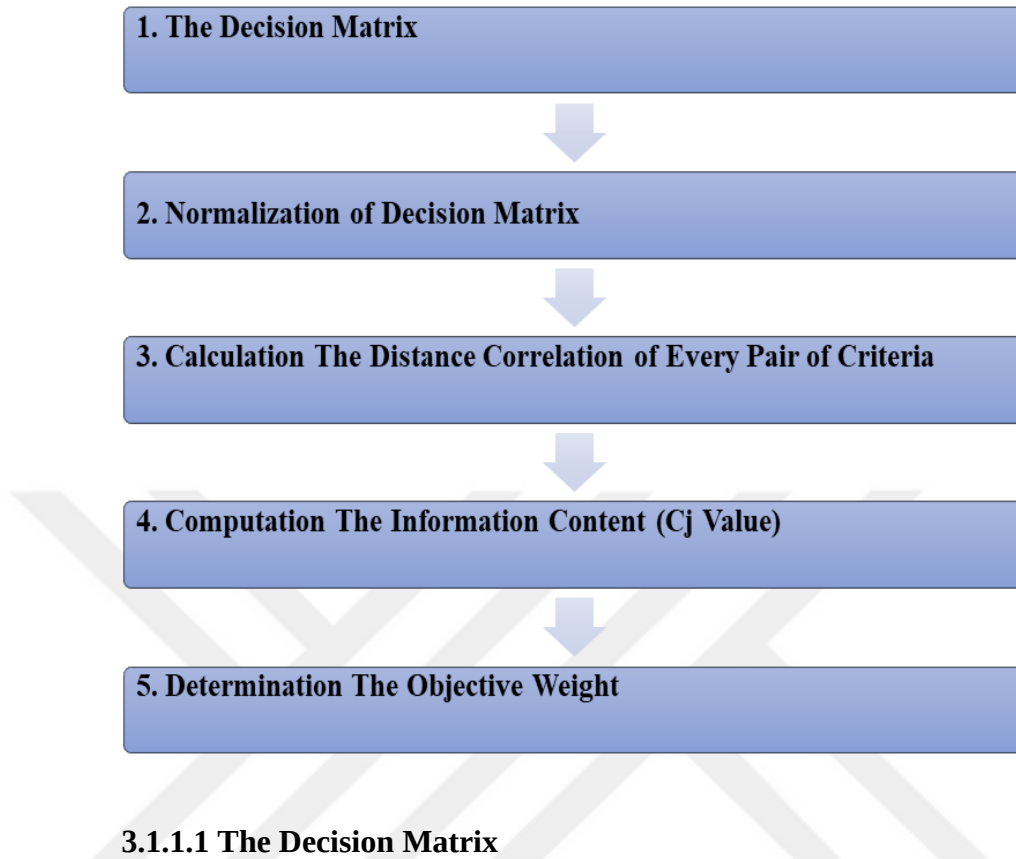
In this study, CRITIC and TOPSIS methods, which are among the MCDM (Multi-criteria Decision Making Method) techniques, were used, and the financial statements of 17 enterprises operating in the Main Metal Industry sector whose stocks are traded in Borsa Istanbul (BIST) and 9 enterprises operating in the accommodation sector, covering the 5-year period between 2017-2021, were used. An analysis has been made to measure the calculated cash flow ratio analysis rates and financial performances and to compare the differences between the sectors. In the first part of the analysis, the cash flow rates used in the performance measurement of the enterprises were calculated and the criteria for the performance measurement were determined. In the second part, the CRITIC method was used to determine the importance of the criteria and the differences between the sectors. In the third part, the performance measurements of the enterprises were carried out with the 2021 TOPSIS Method by using the criteria weights determined.

3.1 CRITIC (Criteria Importance Through Intercriteria Correlation) Method

The CRITIC (Criteria Importance Through Intercriteria Correlation) method is a method used to determine the degree of importance of the criteria. CRITIC method was proposed by Diakoulaki et al. in 1995. The standard deviation of the normalized matrix and the correlation coefficients between the criteria are used to determine the criterion weights and the contrast between the criteria (Ghorabae et al., 2018).

3.1.1 CRITIC Method Stages

The CRITIC (Criteria Importance Through Intercriteria Correlation) method consists of 5 stages. The stages are shown in Figure 1 (Kiracı ve Bakır, 2019).

Figure 1.**CRITIC Method Stages****3.1.1.1 The Decision Matrix**

The decision matrix, which includes the criteria and alternatives for the problem, is created in Equation (1) (Kiracı and Bakır, 2019).

Equation 1

$$X = [x_{ij}] = \begin{bmatrix} x_{11} & x_{12} & \cdots & x_{1n} \\ x_{21} & x_{22} & \cdots & x_{2n} \\ \cdots & \cdots & \cdots & \cdots \\ x_{m1} & x_{m2} & \cdots & x_{mn} \end{bmatrix}$$

3.1.1.2 Normalization of Decision Matrix

The values in the decision matrix are normalized with the help of benefit criteria (max sided) Equation (2) and cost criteria (min sided) Equation (3) (Ömürbek et al., 2021).

Equation 2

$$r_{ij} = \frac{x_{ij} - x_j^{\min}}{x_j^{\max} - x_j^{\min}}$$

Equation 3

$$r_{ij} = \frac{x_j^{\max} - x_{ij}}{x_j^{\max} - x_j^{\min}}$$

3.1.1.3 Calculation The Distance Correlation of Every Pair of Criteria

Calculating correlations and measuring the degree of relationship between criteria are obtained with the help of Equation (4) (Ömürbek et al., 2021).

Equation 4

$$\rho_{jk} = \frac{\sum_{i=1}^m (r_{ij} - \bar{r}_j)(r_{ik} - \bar{r}_k)}{\sqrt{\sum_{i=1}^m (r_{ij} - \bar{r}_j)^2 \sum_{i=1}^m (r_{ik} - \bar{r}_k)^2}}, j, k = 1, 2, \dots, n$$

3.1.1.4 Computation The Information Content (Cj Value)

The Cj value calculated with the help of equation (5) shows the amount of information for each criterion. Criteria with high standard deviation and low correlation coefficients are considered to have the highest level of importance (Madić & Radovanović, 2015).

Equation 5

$$c_j = \sigma_j \sum_{k=1}^n (1 - \rho_{jk})$$

3.1.1.5 Determination The Objective Weight

The weight of the criteria is calculated with the help of Equation (6) (Ömürbek et al., 2021).

Equation 6

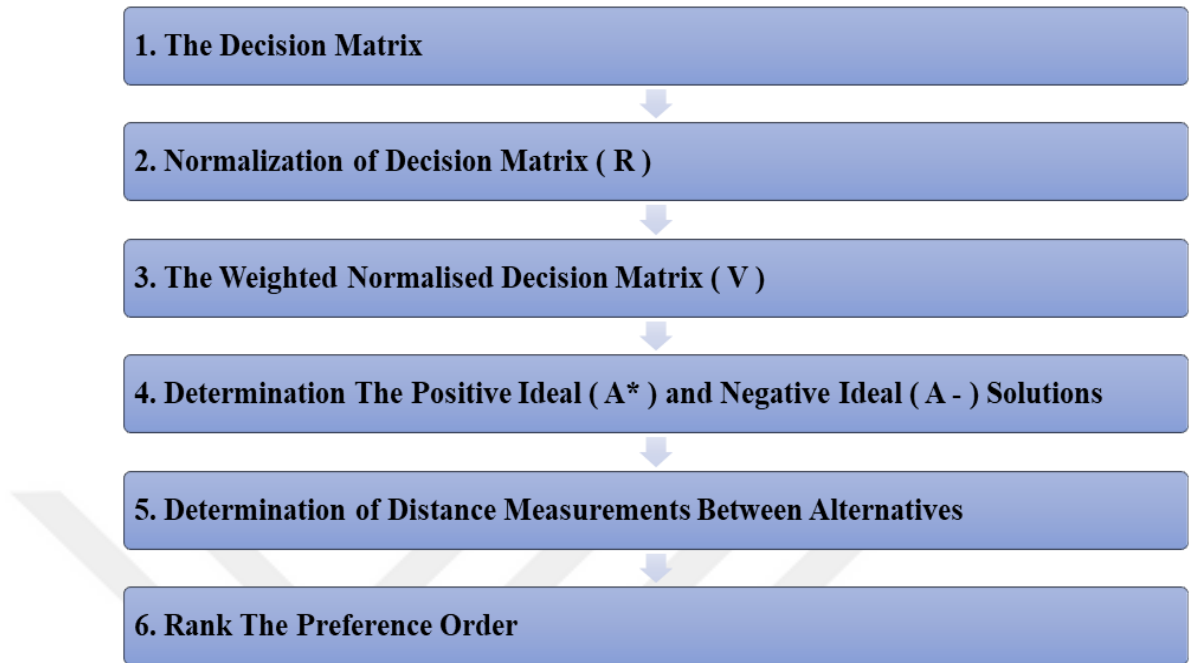
$$W_j = \frac{C_j}{\sum_{k=1}^n C_k}, j, k = 1, 2, \dots, n$$

3.2 TOPSIS (Technique for Order Preference by Similarity) Method

TOPSIS, one of the multi-criteria decision making methods, was developed by Hwang and Yoon in 1980. The method is used to solve multi-criteria problems. In this method, the aim is to reach the positive ideal solution and the negative ideal solution. A positive ideal solution shows the information user that the benefit is the highest criterion and the cost is the lowest criterion. On the contrary, the negative ideal solution shows that the benefit is the lowest and the cost is the highest criterion. The most useful option is the one closest to the positive ideal solution and the farthest from the negative ideal solution (Akyüz et al., 2011).

3.2.1 TOPSIS Method Stages

The TOPSIS (Technique for Order Preference by Similarity) method consists of 6 stages. The stages are shown in Figure 2 (Ergül, 2014).

Figure 2.**TOPSIS Method Stages****3.2.1.1 The Decision Matrix**

The decision matrix, which is the starting matrix, is shown in Equation (7), and there are alternatives in its rows and criteria in its columns (Ergül, 2014).

Equation 7

$$A_{ij} = \begin{bmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{bmatrix}$$

3.2.1.2 Normalization of Decision Matrix (R)

Normalized Decision Matrix is calculated with the formula shown in Equation (8).

Equation 8

$$r_{ij} = \frac{a_{ij}}{\sqrt{\sum_{k=1}^m a_{kj}^2}} \quad (i = 1, \dots, m ; j = 1, \dots, n)$$

3.2.1.3 The Weighted Normalised Decision Matrix (V)

In the creation of this matrix, firstly, the weight values of the evaluation criteria are determined by Equation (9) (Ergül, 2014).

Equation 9

$$V_{ij} = w_{ij} \cdot r_{ij} \quad i = 1, \dots, m, j = 1, \dots, n$$

At this stage, each element in the column of the R matrix is multiplied by the value given in Equation (9) and the V matrix is formed with the help of Equation (10) (Ergül, 2014).

Equation 10

$$w_j = \frac{\frac{1}{r_j}}{\sum_{k=1}^m \frac{1}{r_k}}$$

3.2.1.4 Determination The Positive Ideal (A*) and Negative Ideal (A -)**Solutions**

The Ideal Solution (A*) covers the best performance values of the V matrix. The Negative Ideal Solution (A-) covers the worst performance values of the V matrix. The calculation of the Ideal (A+) Solution is shown in Equation (11) and the

calculation of the Negative Ideal (A-) Solution is shown in Equation (12) (Özkan, 2017).

Equation 11

$$A^* = \{(\max v_{ij} | j \in J), (\min v_{ij} | j \in J')\}$$

Equation 12

$$A^- = \{(\min v_{ij} | j \in J), (\max v_{ij} | j \in J')\}$$

3.2.1.5 Determination of Distance Measurements Between Alternatives

The distance of the discrimination criteria from the ideal solution is indicated by the ideal separation (S_i^*) and the distance from the negative ideal solution by the Negative Ideal separation (S_i^-). Distances are calculated with the formula in Equation (13) and Equation (14) below (Özkan, 2017).

Equation 13

$$S_i^* = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^*)^2}$$

Equation 14

$$S_i^- = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^-)^2}$$

3.2.1.6 Rank The Preference Order

The relative closeness to the ideal solution is calculated using the formulas in Equation (15) and Equation (16).

Equation 15

$$C_i^* = \frac{S_i^-}{S_i^- + S_i^*}$$

Equation 16

$$0 \leq C_i^* \leq 1$$

3.3 Sampling

In this study, performance measurements of the companies in the Main Metal Industry and Accommodation sector whose stocks are traded in Borsa Istanbul (BIST) were made. Financial data of 17 companies belonging to the Main Metal Industry sector have been accessed and included in the performance analysis. Financial data of 9 companies belonging to the Accommodation sector were obtained and included in the performance analysis. Since the financial data of 6 of the enterprises in the Main Metal Industry sector could not be accessed, they were not included in the analysis. The titles and code numbers of the companies included in the analysis in Borsa Istanbul (BIST) are shown in Tables 1 and Table 2.

Table 1*List of Companies in the Main Metal Sector*

<u>Code</u>	<u>Company Title</u>
AYES	Ayeş Çelik Hasır ve Çit Sanayi A.Ş.
BRSAN	Borusan Mannesmann Boru Sanayi ve Ticaret A.Ş.
BURCE	Burcelik Bursa Çelik Döküm Sanayii A.Ş.
BURVA	Burcelik Vana Sanayi ve Ticaret A.Ş.
CELHA	Çelik Halat ve Tel Sanayii A.Ş.
CEMAS	Cemaş Döküm Sanayi A.Ş.
CEMTS	Cemtaş Çelik Makine Sanayi ve Ticaret A.Ş.
CUSAN	Çuhadaroğlu Metal Sanayi ve Pazarlama A.Ş.
DMSAS	Demisaş Döküm Emaye Mamülleri Sanayi A.Ş.
DOKTA	Döktaş Dökümcülük Ticaret ve Sanayi A.Ş.
ERBOS	Erbosan Erçiyas Boru Sanayii ve Ticaret A.Ş.
EREGL	Ereğli Demir ve Çelik Fabrikaları T.A.Ş.
ISDMR	İskenderun Demir ve Çelik A.Ş.
IZMDC	İzmir Demir Çelik Sanayi A.Ş.
KRDMA	Kardemir Karabük Demir Çelik Sanayi ve Ticaret A.Ş.
SARKY	Sarkuysan Elektronik Bakır Sanayi ve Ticaret A.Ş.
TUCLK	Tuçcelik Alüminyum ve Metal Mamülleri Sanayi ve Ticaret A.Ş.

Kaynak: <https://www.kap.org.tr/en/Sectors>

Table 2*List of Companies in the Accommodation Sector*

<u>Code</u>	<u>Company Title</u>
AYCES	Altın Yunus Çeşme Turistik Tesisler A.Ş.
AVTUR	Avrasya Petrol ve Turistik Tesisler Yatırımlar A.Ş.
KSTUR	Kuştur Kuşadası Turizm Endüstri A.Ş.
MAALT	Marmaris Altinyunus Turistik Tesisler A.Ş.
MARTI	Martı Otel İşletmeleri A.Ş.
MERIT	Merit Turizm Yatırım ve İşletme A.Ş.
PKENT	Petrokent Turizm A.Ş.
TEKTU	Tek-Art İnşaat Ticaret Turizm Sanayi ve Yatırımlar A.Ş.
ULAS	Ulaşlar Turizm Yatırımları ve Dayanıklı Tüketim Malları Ticaret Pazarlama A.Ş.

Kaynak: <https://www.kap.org.tr/en/Sector>

3.4 Data Collection Techniques

In this study, CRITIC and TOPSIS methods from MCDM techniques were used, and the calculation stages of these methods were carried out with the help of Excel. The data subject to the analysis were obtained from the Public Disclosure Platform (KAP) website. Performance evaluation was made based on the 5-year financial data of 17 companies from the Main Metal Industry sector and 9 companies from the Accommodation sector whose stocks are traded on the Borsa Istanbul (BIST).

As performance evaluation ratios, a total of 15 Cash Flow ratios were used, including 4 Liquidity, 5 Efficiency, 3 Profitability and 3 Leverage Ratios, which are shown in Table 3. In total, 1950 ratios were calculated for each firm, including 5-year periods ($26 \text{ firms} * 15 \text{ ratios} * 5 \text{ years}$) and 34 tables and 112 appendices have been created.

Table 3*Cash Flow Ratios Used in Financial Performance Analysis*

A- LIQUIDITY RATIOS	Formula
A1 - Operating Cash Flow Ratio	Cash Flow from Operations / Current Liabilities
A2 - Cash Ratio	Cash and Cash Equivalents / Current Liabilities
A3 - Cash Debt Coverage Ratio	(Cash Flow from Operations - Dividend) / Total Liabilities
A4 - Cash Interest Cover Ratio	(Cash Flow from Operations + Interest) / Interest Expense
B- EFFECTIVENESS RATIOS	
B1 - Cash Return on Assets	Cash Flow from Operations / Total Assets
B2 - Cash Return on Fixed Assets	Cash Flow from Operations / Total Fixed Assets
B3 - Cash Reinvestment Ratio	Increase in Fixed Assets and Increase in Working Capital / (Net Income + Depreciations)
B4 - Cash Turnover	Cost of Sales / Cash and Cash Equivalents
B5 - Cash Balance	(Cash and Cash Equivalents * 365) / Cost of Sales
C- PROFITABILITY RATIOS	
C1 -Earnings/Profit Quality Ratio	Cash Flow from Operations /Net profit
C2 - Ratio of Cash from Sales to Sales	(Cash Flow from Operations - Dividend) / Total Sales
C3 -Cash Flow Margin	Cash Flow from Operations / Total Sales
D- LEVERAGE RATIOS	
D1 - Ratio of Cash Flows to Long-Term Debt	Cash Flow from Operations / Long-Term Debt
D2 - Shareholders' Cash Return Ratio	Cash Flow from Operations / Equity
D3 - Cash Per Share Ratio	Cash Flow from Operations / Number of Shares in Circulation

Kaynak: Ibarra, Venus, C., 2009

Purpose of the Cash Flow Ratios Used in Financial Performance Analysis

A- LIQUIDITY RATIOS	Purpose
A1 - Operating Cash Flow Ratio	Measures whether operating cash flows are sufficient to cover current liabilities
A2 - Cash Ratio	Shows the portion of short-term debt that can be paid with the amount of cash available
A3 - Cash Debt Coverage Ratio	Shows the percentage of debt that can be paid with cash from operating activities
A4 - Cash Interest Cover Ratio	Indicates real cash that can cover interest expenses
B- EFFECTIVENESS RATIOS	
B1 - Cash Return on Assets	Shows the percentage of cash generated by the use of assets
B2 - Cash Return on Fixed Assets	Shows the percentage of cash generated from the use of fixed assets
B3 - Cash Reinvestment Ratio	Indicates the degree to which net profit is reinvested in the business as cash
B4 - Cash Turnover	Shows the number of cash returns in a year
B5 - Cash Balance	Indicates the number of days to cash returns
C- PROFITABILITY RATIOS	
C1 -Earnings/Profit Quality Ratio	It indicates the cash collectability of net profit. Indicates the percentage of net profit converted into cash.
C2 - Ratio of Cash from Sales to Sales	Indicates the degree of cash generation of sales
C3 -Cash Flow Margin	Indicates the ability to convert sales into cash
D- LEVERAGE RATIOS	
D1 - Ratio of Cash Flows to Long-Term Debt	Measures the adequacy of available funds to pay off debts
D2 - Shareholders' Cash Return Ratio	Shows the percentage of operating activity cash flow to equity
D3 - Cash Per Share Ratio	Indicates cash generated from operating activities per share

Kaynak: Ibarra, Venus, C., 2009

3.5 Analysis Method

In this study, the financial performances of the companies in the Main Metal Industry and Accommodation sector whose stocks are traded in Borsa Istanbul (BIST) are measured. In the analysis, a total of 26 alternatives and 15 criteria, 17 from the Main Metal Industry sector and 9 from the Accommodation sector, were used. While performing the analysis, firstly, the weight calculation was made with the CRITIC method in order to find the performance degrees of the companies, and then the

companies with the best and the worst financial performance were determined as a result of the scores calculated with the TOPSIS method.

The financial performances of each firm within their respective sectors were measured. Finally, the financial performances of companies in the Main Metal Industry and Accommodation sectors were compared.

4. FINDINGS

In this part of the study, the financial performances of 17 enterprises from the Basic Metal Industry sector and 9 from the Accommodation sector, whose stocks are traded in Borsa Istanbul (BIST), are obtained from the financial data of the 5-year period between 2017-2018-2019-2020-2021, and the measured financial performances are revealed. In this part of the study, only the analysis details for 2021 will be shown, and the details for other years are included in the appendices.

4.1 2021 CRITIC Method Findings

Stage 1: Creating the Decision Matrix

In the rows of the decision matrix prepared using the CRITIC method, there are alternatives (businesses in BIST), and criteria (financial ratios) in the columns. The decision matrix with a size of (17 x 15) for the Main Metal Industry sector, whose stocks are traded on the Borsa Istanbul (BIST) and (9 x 15) for the Accommodation sector, was prepared using Equation (1). The results are shown in Table 4 and Table 5.

Table 4*Main Metal Industry Sector 2021 CRITIC Method Decision Matrix*

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,2406	0,1304	-0,2448	0,0000	-0,1708	-1,3309	0,1380	40,5418	9,0031	-1,5377	-0,0430	-0,0412	-9,0837	-0,6300	-0,0755
BRSAN	0,2398	0,3094	0,1781	7,8257	0,1062	0,1974	11,2513	2,9861	122,2323	18,5499	0,2387	0,2387	0,6917	0,4930	0,0622
BURCE	0,1165	0,0668	0,0821	2,0822	0,0455	0,0720	-0,6172	21,0652	17,3272	3,4660	0,0660	0,0660	0,2784	0,1019	1,7671
BURVA	0,0920	0,1278	0,0790	1,8595	0,0578	0,3424	-0,5328	6,6042	55,2677	3,6285	0,0823	0,0823	0,5598	0,2150	0,3288
CELHA	-0,0773	0,1534	-0,0727	-2,8602	-0,0662	-0,3953	2,1614	7,4252	49,1568	-5,0524	-0,0557	-0,0557	-1,2218	-0,7435	-3,1073
CEMAS	2,1749	6,3263	1,6544	0,0000	0,1414	0,3412	1,7339	0,5350	682,2899	0,5501	0,5281	0,5281	6,9131	0,1546	0,2341
CEMTS	0,7646	0,8147	0,6094	508,3329	0,1248	0,5773	0,9014	6,7347	54,1969	0,3684	0,0865	0,0983	7,3355	0,1523	0,0348
CUSAN	-0,1001	0,1338	-0,1104	-5,8897	-0,0592	-0,3704	1,0401	13,0388	27,9933	-0,5103	-0,0528	-0,0447	-1,3859	-0,1615	-2,6288
DMSAS	-0,0841	0,1163	-0,0900	-0,9852	-0,0428	-0,1408	1,1513	17,6275	20,7063	-0,7702	-0,0509	-0,0362	-0,2689	-0,1294	-2,8195
DOKTA	-0,1916	0,0135	-0,1045	-2,8440	-0,0811	-0,1341	3,0910	92,3035	3,9543	-0,9872	-0,1262	-0,1262	-0,2299	-0,3629	-0,5596
ERBOS	0,0380	0,3830	-0,0102	13,8422	0,0143	0,0826	0,8896	6,3350	57,6162	0,0797	-0,0034	0,0121	1,0510	0,0235	0,0078
EREGL	0,2435	0,9877	-0,0133	18,2250	0,0452	0,0941	3,0008	1,8418	198,1745	0,3556	-0,0082	0,0838	0,3104	0,0676	0,0343
ISDMR	0,1206	1,0270	-0,4233	11,8566	0,0186	0,0348	2,9250	2,5815	141,3899	0,1603	-0,1925	0,0284	0,1295	0,0265	0,0697
IZMDC	0,0708	0,3242	0,0640	4,0427	0,0574	0,1296	-0,2050	4,7560	76,7454	-0,5687	0,0411	0,0411	0,6706	0,5559	0,0071
KRDMA	0,5293	0,5585	0,4283	19,1044	0,2327	0,5357	1,5186	1,8635	195,8656	1,3177	0,3438	0,3438	2,2434	0,5096	0,0445
SARKY	-0,2810	0,1035	-0,2449	-5,7378	-0,1688	-1,2684	1,6798	36,3832	10,0321	-1,7501	-0,0760	-0,0699	-1,1367	-0,6722	-0,0323
TUCLK	-0,4203	0,2392	-0,2968	-6,6874	-0,1868	-0,4266	2,1732	3,6507	99,9821	-1,6286	-0,3829	-0,3829	-1,0102	-0,5042	-7,7331
MIN	-0,4203	0,0135	-0,4233	0,0000	-0,1868	-1,3309	-0,6172	0,5350	3,9543	-5,0524	-0,3829	-0,3829	-9,0857	-0,7435	-7,7331
MAX	2,1749	6,3263	1,6544	0,0000	0,2327	0,5773	11,2513	92,3035	682,2899	18,5499	0,5281	0,5281	7,3355	0,5559	1,7671

Table 5*Accommodation Sector 2021 CRITIC Method Decision Matrix*

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	1,3140	0,5923	0,2411	8,9482	0,0400	0,0414	14,9649	2,7077	134,7991	1,6258	0,4153	0,4153	0,2952	0,0480	12,8720
AVTUR	4,9275	5,0080	0,7106	396,5211	0,0701	0,0770	1,0433	0,2783	1,311,2988	0,3081	2,8168	2,8168	0,8303	0,0778	0,3143
KSTUR	2,5467	15,4369	1,9792	5,4937	0,0910	0,2241	0,9111	0,3767	968,8500	0,3709	0,3078	0,3078	8,8814	0,0954	0,0788
MAALT	2,3249	10,4609	0,4429	983,7804	0,1477	0,4812	0,8775	0,0158	23,108,5510	0,7488	6,7629	6,7629	0,5471	0,2216	23,9232
MARTI	-0,1312	0,0571	-0,0272	0,8644	-0,0223	-0,0249	-57,7196	3,0588	119,3264	0,9787	-0,4113	-0,4113	-0,0343	-0,1252	-0,4301
MERIT	2,6901	0,0094	0,3222	0,0000	0,0136	0,0137	231,7486	31,2252	11,6893	3,3421	1,1462	1,1462	0,3660	0,0142	1,5349
PKENT	1,1481	0,6223	0,8579	0,0000	0,2103	0,3453	1,8178	3,8088	95,8296	0,7822	0,3092	0,3092	3,3937	0,2787	32,3360
TEKTU	0,0782	0,0049	0,0221	1,3521	0,0089	0,0094	-6,5556	23,3950	15,6016	-0,1851	0,4286	0,4286	0,0309	0,0150	0,0901
ULAS	2,0896	5,3345	0,3598	4,3993	0,0899	0,1220	1,4837	0,0000	0,0000	0,2568	0,0000	0,0000	0,4346	0,1198	0,3862
MIN	-0,1312	0,0049	-0,0272	0,0000	-0,0223	-0,0249	-57,7196	0,0000	0,0000	-0,1851	-0,4113	-0,4113	-0,0343	-0,1252	-0,4301
MAX	4,9275	15,4369	1,9792	983,7804	0,2103	0,4812	231,7486	31,2252	23,108,5510	3,3421	6,7629	6,7629	8,8814	0,2787	32,3360

Stage 2: Creating the Normalized Decision Matrix

Normalized decision matrices were created by using the data obtained in Stage 1 and using the formulas in Equation (2) and Equation (3). Minimum and maximum

values were determined for each of the 15 criteria in the study, and standard deviations (σ_j) of the criteria were calculated in order to calculate the amount of information (c_j). The results are shown in Table 6 and Table 7.

Table 6

Main Metal Industry Sector 2021 CRITIC Method Normalized Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
AYES	0,0693	0,0185	0,0859	0,0130	0,0382	0,0000	0,9364	0,4360	0,9926	0,1489	0,3731	0,3751	0,0000	0,0873	0,8061
BRSAN	0,2544	0,0469	0,2894	0,0282	0,6984	0,8009	0,0000	0,0267	0,8256	1,0000	0,6823	0,6823	0,5954	0,9515	0,8205
BURCE	0,2068	0,0085	0,2432	0,0170	0,5537	0,7352	1,0000	0,2237	0,9803	0,3609	0,4927	0,4927	0,5702	0,6506	1,0000
BURVA	0,1974	0,0181	0,2417	0,0166	0,5830	0,8769	0,9929	0,0661	0,9244	0,3678	0,5107	0,5107	0,5874	0,7376	0,8486
CELHA	0,1322	0,0222	0,1687	0,0074	0,2875	0,4903	0,7659	0,0751	0,9334	0,0000	0,3592	0,3592	0,4789	0,0000	0,4869
CEMAS	1,0000	1,0000	1,0000	0,0130	0,7824	0,8763	0,8019	0,0000	0,0000	0,2374	1,0000	1,0000	0,9743	0,6912	0,8386
CEMTS	0,4566	0,1269	0,4970	1,0000	0,7429	1,0000	0,8720	0,0676	0,9259	0,2297	0,5153	0,5283	1,0000	0,6894	0,8177
CUSAN	0,1234	0,0191	0,1506	0,0015	0,3043	0,5033	0,8604	0,1363	0,9646	0,1924	0,3623	0,3712	0,4689	0,4478	0,5373
DMSAS	0,1296	0,0163	0,1604	0,0111	0,3432	0,6237	0,8510	0,1863	0,9753	0,1814	0,3644	0,3805	0,5369	0,4725	0,5172
DOKTA	0,0882	0,0000	0,1534	0,0075	0,2519	0,6272	0,6876	1,0000	1,0000	0,1722	0,2818	0,2818	0,5393	0,2929	0,7551
ERBOS	0,1766	0,0585	0,1988	0,0399	0,4795	0,7408	0,8730	0,0632	0,9209	0,2174	0,4166	0,4335	0,6173	0,5902	0,8148
EREGL	0,2558	0,1543	0,1973	0,0484	0,5531	0,7468	0,6952	0,0142	0,7137	0,2291	0,4113	0,5123	0,5722	0,6242	0,8176
ISDMR	0,2085	0,1605	0,0000	0,0360	0,4896	0,7157	0,7015	0,0223	0,7974	0,2209	0,2090	0,4515	0,5612	0,5925	0,8213
IZMDC	0,1892	0,0492	0,2345	0,0208	0,5822	0,7654	0,9653	0,0460	0,8927	0,1900	0,4654	0,4654	0,5941	1,0000	0,8147
KRDMA	0,3659	0,0863	0,4099	0,0501	1,0000	0,9782	0,8200	0,0145	0,7171	0,2699	0,7978	0,7978	0,6899	0,9644	0,8187
SARKY	0,0537	0,0143	0,0858	0,0018	0,0431	0,0328	0,8065	0,3906	0,9910	0,1399	0,3369	0,3436	0,4841	0,0548	0,8106
TUCLK	0,0000	0,0358	0,0609	0,0000	0,0000	0,4739	0,7649	0,0340	0,8584	0,1451	0,0000	0,0000	0,4918	0,1842	0,0000

Table 7

Accommodation Sector 2021 CRITIC Method Normalized Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
AYCES	0,2857	0,0381	0,1337	0,0091	0,2680	0,1311	0,7489	0,0867	0,9942	0,5134	0,1152	0,1152	0,0370	0,4289	0,4060
AVTUR	1,0000	0,3242	0,3677	0,4031	0,3974	0,2013	0,7970	0,0089	0,9433	0,1398	0,4500	0,4500	0,0970	0,5027	0,0227
KSTUR	0,5294	1,0000	1,0000	0,0056	0,4872	0,4920	0,7975	0,0121	0,9581	0,1576	0,1002	0,1002	1,0000	0,5463	0,0155
MAALT	0,4855	0,6776	0,2343	1,0000	0,7307	1,0000	0,7976	0,0005	0,0000	0,2648	1,0000	1,0000	0,0652	0,8587	0,7432
MARTI	0,0000	0,0034	0,0000	0,0009	0,0000	0,0000	1,0000	0,0980	0,9948	0,3299	0,0000	0,0000	0,0000	0,0000	0,0000
MERIT	0,5577	0,0003	0,1741	0,0000	0,1545	0,0764	0,0000	1,0000	0,9995	1,0000	0,2171	0,2171	0,0449	0,3453	0,0600
PKENT	0,2529	0,0400	0,4411	0,0000	1,0000	0,7315	0,7943	0,1220	0,9959	0,2743	0,1004	0,1004	0,3845	1,0000	1,0000
TEKTU	0,0414	0,0000	0,0246	0,0014	0,1344	0,0678	0,8232	0,7492	0,9993	0,0000	0,1171	0,1171	0,0073	0,3472	0,0159
ULAS	0,4390	0,3454	0,1929	0,0045	0,4822	0,2903	0,7955	0,0000	1,0000	0,1253	0,0573	0,0573	0,0526	0,6066	0,0249

Stage 3: Calculation The Distance Correlation of Every Pair of Criteria

Correlation was calculated by using the formula in Equation (4) in order to measure the degree of relationship between the criteria. The results are shown in Table 8 and Table 9.

Table 8

Main Metal Industry Sector 2021 CRITIC Method Correlation Matrix

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	1,0000	0,9167	0,9609	0,2708	0,6881	0,5571	-0,0345	-0,3535	-0,8960	0,1473	0,8233	0,8532	0,7391	0,4621	0,3633
A2	0,9167	1,0000	0,8511	0,0240	0,3943	0,3006	-0,0169	-0,2693	-0,9638	-0,0110	0,6312	0,6754	0,5572	0,2105	0,1697
A3	0,9609	0,8511	1,0000	0,2885	0,6565	0,5367	-0,0034	-0,2772	-0,8274	0,1582	0,8570	0,8117	0,7356	0,4377	0,3003
A4	0,2708	0,0240	0,2885	1,0000	0,3085	0,3571	0,0838	-0,1262	0,0715	-0,0100	0,1017	0,1014	0,5295	0,1698	0,1358
B1	0,6881	0,3943	0,6565	0,3085	1,0000	0,8821	-0,1373	-0,4809	-0,4881	0,4328	0,7898	0,8402	0,7160	0,8765	0,5390
B2	0,5571	0,3006	0,5367	0,3571	0,8821	1,0000	-0,1058	-0,4397	-0,3814	0,3539	0,5124	0,5612	0,7931	0,8201	0,2710
B3	-0,0345	-0,0169	-0,0034	0,0838	-0,1373	-0,1058	1,0000	0,0522	0,1242	-0,7436	-0,1333	-0,1719	-0,0659	-0,1759	0,0402
B4	-0,3535	-0,2693	-0,2772	-0,1262	-0,4809	-0,4397	0,0522	1,0000	0,3777	-0,2025	-0,2884	-0,3590	-0,3714	-0,4688	0,0925
B5	-0,8960	-0,9638	-0,8274	0,0715	-0,4881	-0,3814	0,1242	0,3777	1,0000	-0,0848	-0,6678	-0,7201	-0,5502	-0,3197	-0,1293
C1	0,1473	-0,0110	0,1582	-0,0100	0,4328	0,3539	-0,7436	-0,2025	-0,0848	1,0000	0,4037	0,4023	0,1611	0,5799	0,3156
C2	0,8233	0,6312	0,8570	0,1017	0,7898	0,5124	-0,1333	-0,2884	-0,6678	0,4037	1,0000	0,9627	0,5368	0,6072	0,5726
C3	0,8532	0,6754	0,8117	0,1014	0,8402	0,5612	-0,1719	-0,3590	-0,7201	0,4023	0,9627	1,0000	0,5595	0,6531	0,6365
D1	0,7391	0,5572	0,7356	0,5295	0,7160	0,7931	-0,0659	-0,3714	-0,5502	0,1611	0,5368	0,5595	1,0000	0,5567	0,2014
D2	0,4621	0,2105	0,4377	0,1698	0,8765	0,8201	-0,1759	-0,4688	-0,3197	0,5799	0,6072	0,6531	0,5567	1,0000	0,4793
D3	0,3633	0,1697	0,3003	0,1358	0,5390	0,2710	0,0402	0,0925	-0,1293	0,3156	0,5726	0,6365	0,2014	0,4793	1,0000

Table 9

Accommodation Sector 2021 CRITIC Method Correlation Matrix

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	1,0000	0,4438	0,4328	0,3952	0,2422	0,1800	-0,3086	-0,1871	-0,1536	0,0851	0,4447	0,4447	0,1777	0,2911	-0,1174
A2	0,4438	1,0000	0,7731	0,4388	0,3782	0,5725	0,2047	-0,5006	-0,4626	-0,3516	0,4115	0,4115	0,6992	0,3621	-0,0249
A3	0,4328	0,7731	1,0000	-0,0196	0,4734	0,4310	0,0455	-0,3523	0,0230	-0,1964	-0,0056	-0,0056	0,9615	0,4107	0,0611
A4	0,3952	0,4388	-0,0196	1,0000	0,3715	0,6547	0,1273	-0,3158	-0,9394	-0,1434	0,9830	0,9830	-0,1756	0,4192	0,3812
B1	0,2422	0,3782	0,4734	0,3715	1,0000	0,8872	0,1635	-0,4614	-0,3945	-0,2498	0,3692	0,3692	0,3844	0,9705	0,8027
B2	0,1800	0,5725	0,4310	0,6547	0,8872	1,0000	0,1796	-0,4448	-0,7387	-0,2229	0,6458	0,6458	0,3598	0,8721	0,7672
B3	-0,3086	0,2047	0,0455	0,1273	0,1635	0,1796	1,0000	-0,7349	-0,1045	-0,8403	-0,0380	-0,0380	0,1061	0,0441	0,1035
B4	-0,1871	-0,5006	-0,3523	-0,3158	-0,4614	-0,4448	-0,7349	1,0000	0,2578	0,5265	-0,1769	-0,1769	-0,2838	-0,3346	-0,2647
B5	-0,1536	-0,4626	0,0230	-0,9394	-0,3945	-0,7387	-0,1045	0,2578	1,0000	0,0792	-0,9271	-0,9271	0,1103	-0,4425	-0,4709
C1	0,0851	-0,3516	-0,1964	-0,1434	-0,2498	-0,2229	-0,8403	0,5265	0,0792	1,0000	-0,0241	-0,0241	-0,2092	-0,2083	0,0391
C2	0,4447	0,4115	-0,0056	0,9830	0,3692	0,6458	-0,0380	-0,1769	-0,9271	-0,0241	1,0000	1,0000	-0,1705	0,4464	0,3916
C3	0,4447	0,4115	-0,0056	0,9830	0,3692	0,6458	-0,0380	-0,1769	-0,9271	-0,0241	1,0000	1,0000	-0,1705	0,4464	0,3916
D1	0,1777	0,6992	0,9615	-0,1756	0,3844	0,3598	0,1061	-0,2838	0,1103	-0,2092	-0,1705	-0,1705	1,0000	0,3018	0,0411
D2	0,2911	0,3621	0,4107	0,4192	0,9705	0,8721	0,0441	-0,3346	-0,4425	-0,2083	0,4464	0,4464	0,3018	1,0000	0,7819
D3	-0,1174	-0,0249	0,0611	0,3812	0,8027	0,7672	0,1035	-0,2647	-0,4709	0,0391	0,3916	0,3916	0,0411	0,7819	1,0000

Stage 4: Computation The Information Content (Cj Value)

The Cj value, which shows the amount of information for each criterion, was calculated with the help of Equation (5) and using standard deviation values. The results are shown in Table 10 and Table 11.

Table 10

Main Metal Industry Sector 2021 CRITIC Method Cj Value

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	0,0000	0,0833	0,0391	0,7292	0,3119	0,4429	1,0345	1,3535	1,8960	0,8527	0,1767	0,1468	0,2609	0,5379	0,6367
A2	0,0833	0,0000	0,1489	0,9760	0,6057	0,6994	1,0169	1,2693	1,9638	1,0110	0,3688	0,3246	0,4428	0,7895	0,8303
A3	0,0391	0,1489	0,0000	0,7115	0,3435	0,4633	1,0034	1,2772	1,8274	0,8418	0,1430	0,1883	0,2644	0,5623	0,6997
A4	0,7292	0,9760	0,7115	0,0000	0,6915	0,6429	0,9162	1,1262	0,9285	1,0100	0,8983	0,8986	0,4705	0,8302	0,8642
B1	0,3119	0,6057	0,3435	0,6915	0,0000	0,1179	1,1373	1,4809	1,4881	0,5672	0,2102	0,1598	0,2840	0,1235	0,4610
B2	0,4429	0,6994	0,4633	0,6429	0,1179	0,0000	1,1058	1,4397	1,3814	0,6461	0,4876	0,4388	0,2069	0,1799	0,7290
B3	1,0345	1,0169	1,0034	0,9162	1,1373	1,1058	0,0000	0,9478	0,8758	1,7436	1,1333	1,1719	1,0659	1,1759	0,9598
B4	1,3535	1,2693	1,2772	1,1262	1,4809	1,4397	0,9478	0,0000	0,6223	1,2025	1,2884	1,3590	1,3714	1,4688	0,9075
B5	1,8960	1,9638	1,8274	0,9285	1,4881	1,3814	0,8758	0,6223	0,0000	1,0848	1,6678	1,7201	1,5502	1,3197	1,1293
C1	0,8527	1,0110	0,8418	1,0100	0,5672	0,6461	1,7436	1,2025	1,0848	0,0000	0,5963	0,5977	0,8389	0,4201	0,6844
C2	0,1767	0,3688	0,1430	0,8983	0,2102	0,4876	1,1333	1,2884	1,6678	0,5963	0,0000	0,0373	0,4632	0,3928	0,4274
C3	0,1468	0,3246	0,1883	0,8986	0,1598	0,4388	1,1719	1,3590	1,7201	0,5977	0,0373	0,0000	0,4405	0,3469	0,3635
D1	0,2609	0,4428	0,2644	0,4705	0,2840	0,2069	1,0659	1,3714	1,5502	0,8389	0,4632	0,4405	0,0000	0,4433	0,7986
D2	0,5379	0,7895	0,5623	0,8302	0,1235	0,1799	1,1759	1,4688	1,3197	0,4201	0,3928	0,3469	0,4433	0,0000	0,5207
D3	0,6367	0,8303	0,6997	0,8642	0,4610	0,7290	0,9598	0,9075	1,1293	0,6844	0,4274	0,3635	0,7986	0,5207	0,0000

Table 11

Accommodation Sector 2021 CRITIC Method Cj Value

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	0,0000	0,5562	0,5672	0,6048	0,7578	0,8200	1,3086	1,1871	1,1536	0,9149	0,5553	0,5553	0,8223	0,7089	1,1174
A2	0,5562	0,0000	0,2269	0,5612	0,6218	0,4275	0,7953	1,5006	1,4626	1,3516	0,5885	0,5885	0,3008	0,6379	1,0249
A3	0,5672	0,2269	0,0000	1,0196	0,5266	0,5690	0,9545	1,3523	0,9770	1,1964	1,0056	1,0056	0,0385	0,5893	0,9389
A4	0,6048	0,5612	1,0196	0,0000	0,6285	0,3453	0,8727	1,3158	1,9394	1,1434	0,0170	0,0170	1,1756	0,5808	0,6188
B1	0,7578	0,6218	0,5266	0,6285	0,0000	0,1128	0,8365	1,4614	1,3945	1,2498	0,6308	0,6308	0,6156	0,0295	0,1973
B2	0,8200	0,4275	0,5690	0,3453	0,1128	0,0000	0,8204	1,4448	1,7387	1,2229	0,3542	0,3542	0,6402	0,1279	0,2328
B3	1,3086	0,7953	0,9545	0,8727	0,8365	0,8204	0,0000	1,7349	1,1045	1,8403	1,0380	1,0380	0,8939	0,9559	0,8965
B4	1,1871	1,5006	1,3523	1,3158	1,4614	1,4448	1,7349	0,0000	0,7422	0,4735	1,1769	1,1769	1,2838	1,3346	1,2647
B5	1,1536	1,4626	0,9770	1,9394	1,3945	1,7387	1,1045	0,7422	0,0000	0,9208	1,9271	1,9271	0,8897	1,4425	1,4709
C1	0,9149	1,3516	1,1964	1,1434	1,2498	1,2229	1,8403	0,4735	0,9208	0,0000	1,0241	1,0241	1,2092	1,2083	0,9609
C2	0,5553	0,5885	1,0056	0,0170	0,6308	0,3542	1,0380	1,1769	1,9271	1,0241	0,0000	0,0000	1,1705	0,5536	0,6084
C3	0,5553	0,5885	1,0056	0,0170	0,6308	0,3542	1,0380	1,1769	1,9271	1,0241	0,0000	0,0000	1,1705	0,5536	0,6084
D1	0,8223	0,3008	0,0385	1,1756	0,6156	0,6402	0,8939	1,2838	0,8897	1,2092	1,1705	1,1705	0,0000	0,6982	0,9589
D2	0,7089	0,6379	0,5893	0,5808	0,0295	0,1279	0,9559	1,3346	1,4425	1,2083	0,5536	0,5536	0,6982	0,0000	0,2181
D3	1,1174	1,0249	0,9389	0,6188	0,1973	0,2328	0,8965	1,2647	1,4709	0,9609	0,6084	0,6084	0,9589	0,2181	0,0000

Stage 5: Determination The Objective Weight

In order to obtain criterion weights (W_j), the formula in Equation (6) was calculated by dividing the information amount (C_j) values of the criteria by the sum of the information amount values (C_j) of the criteria. The results are shown in Table 12 and Table 13.

Table 12

Main Metal Industry Sector 2021 CRITIC Method Weight of The Criteria

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
2021	0,0490	0,0627	0,0494	0,0705	0,0565	0,0643	0,0872	0,1086	0,1164	0,0642	0,0475	0,0450	0,0479	0,0729	0,0580

Table 13

Accommodation Sector 2021 CRITIC Method Weight of The Criteria

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
2021	0,0588	0,0638	0,0556	0,0620	0,0509	0,0526	0,0711	0,1088	0,1050	0,0780	0,0556	0,0556	0,0646	0,0474	0,0701

As can be seen in Table 12, as a result of the weighting made with the CRITIC method, the criterion with the highest weight for the Basic Metal Industry sector was B5 with a value of 0.1164. The criterion with the lowest weight was the C3 criterion with 0.0450.

For the accommodation sector in Table 13, the criterion with the highest weight was B4 with a value of 0.1088. The criterion with the lowest weight was the D3 criterion with 0.0474.

Table 15

Main Metal Industry Sector 2021 TOPSIS Method Decision Matrix
(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,2406	0,1304	-0,2448	0,0000	-0,1708	-1,3309	0,1380	40,5418	9,0031	-1,5377	-0,0430	-0,0412	-9,0857	-0,6300	-0,0755
BRSAN	0,2398	0,3094	0,1781	7,8257	0,1062	0,1974	11,2513	2,9861	122,2323	18,5499	0,2387	0,2387	0,6917	0,4930	0,0622
BURCE	0,1165	0,0668	0,0821	2,0822	0,0455	0,0720	-0,6172	21,0652	17,3272	3,4660	0,0660	0,0660	0,2784	0,1019	1,7671
BURVA	0,0920	0,1278	0,0790	1,8595	0,0578	0,3424	-0,5328	6,6042	55,2677	3,6285	0,0823	0,0823	0,5598	0,2150	0,3288
CELHA	-0,0773	0,1534	-0,0727	-2,8602	-0,0662	-0,3953	2,1614	7,4252	49,1568	-5,0524	-0,0557	-0,0557	-1,2218	-0,7435	-3,1073
CEMAS	2,1749	6,3263	1,6544	0,0000	0,1414	0,3412	1,7339	0,5350	682,2899	0,5501	0,5281	0,5281	6,9131	0,1546	0,2341
CEMTS	0,7646	0,8147	0,6094	508,3329	0,1248	0,5773	0,9014	6,7347	54,1969	0,3684	0,0865	0,0983	7,3355	0,1523	0,0348
CUSAN	-0,1001	0,1338	-0,1104	-5,8897	-0,0592	-0,3704	1,0401	13,0388	27,9933	-0,5103	-0,0528	-0,0447	-1,3859	-0,1615	-2,6288
DMSAS	-0,0841	0,1163	-0,0900	-0,9852	-0,0428	-0,1408	1,1513	17,6275	20,7063	-0,7702	-0,0509	-0,0362	-0,2689	-0,1294	-2,8195
DOKTA	-0,1916	0,0135	-0,1045	-2,8440	-0,0811	-0,1341	3,0910	92,3035	3,9543	-0,9872	-0,1262	-0,1262	-0,2299	-0,3629	-0,5596
ERBOS	0,0380	0,3830	-0,0102	13,8422	0,0143	0,0826	0,8896	6,3350	57,6162	0,0797	-0,0034	0,0121	1,0510	0,0235	0,0078
EREGL	0,2435	0,9877	-0,0133	18,2250	0,0452	0,0941	3,0008	1,8418	198,1745	0,3556	-0,0082	0,0838	0,3104	0,0676	0,0343
ISDMR	0,1206	1,0270	-0,4233	11,8566	0,0186	0,0348	2,9250	2,5815	141,3899	0,1603	-0,1925	0,0284	0,1295	0,0265	0,0697
IZMDC	0,0708	0,3242	0,0640	4,0427	0,0574	0,1296	-0,2050	4,7560	76,7454	-0,5687	0,0411	0,0411	0,6706	0,5559	0,0071
KRDMA	0,5293	0,5585	0,4283	19,1044	0,2327	0,5357	1,5186	1,8635	195,8656	1,3177	0,3438	0,3438	2,2434	0,5096	0,0445
SARKY	-0,2810	0,1035	-0,2449	-5,7378	-0,1688	-1,2684	1,6798	36,3832	10,0321	-1,7501	-0,0760	-0,0699	-1,1367	-0,6722	-0,0323
TUCLK	-0,4203	0,2392	-0,2968	-6,6874	-0,1868	-0,4266	2,1732	3,6507	99,9821	-1,6286	-0,3829	-0,3829	-1,0102	-0,5042	-7,7331

Table 16

Accommodation Sector 2021 TOPSIS Method Decision Matrix
(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	1,3140	0,5923	0,2411	8,9482	0,0400	0,0414	14,9649	2,7077	134,7991	1,6258	0,4153	0,4153	0,2952	0,0480	12,8720
AVTUR	4,9275	5,0080	0,7106	396,5211	0,0701	0,0770	1,0433	0,2783	1,311,2988	0,3081	2,8168	2,8168	0,8303	0,0778	0,3143
KSTUR	2,5467	15,4369	1,9792	5,4937	0,0910	0,2241	0,9111	0,3767	968,8500	0,3709	0,3078	0,3078	8,8814	0,0954	0,0788
MAALT	2,3249	10,4609	0,4429	983,7804	0,1477	0,4812	0,8775	0,0158	23,108,5510	0,7488	6,7629	6,7629	0,5471	0,2216	23,9232
MARTI	-0,1312	0,0571	-0,0272	0,8644	-0,0223	-0,0249	-57,7196	3,0588	119,3264	0,9787	-0,4113	-0,4113	-0,0343	-0,1252	-0,4301
MERIT	2,6901	0,0094	0,3222	0,0000	0,0136	0,0137	231,7486	31,2252	11,6893	3,3421	1,1462	1,1462	0,3660	0,0142	1,5349
PKENT	1,1481	0,6223	0,8579	0,0000	0,2103	0,3453	1,8178	3,8088	95,8296	0,7822	0,3092	0,3092	3,3937	0,2787	32,3360
TEKTU	0,0782	0,0049	0,0221	1,3521	0,0089	0,0094	-6,5556	23,3950	15,6016	-0,1851	0,4286	0,4286	0,0309	0,0150	0,0901
ULAS	2,0896	5,3345	0,3598	4,3993	0,0899	0,1220	1,4837	0,0000	0,0000	0,2568	0,0000	0,0000	0,4346	0,1198	0,3862

Stage 2: Creating the Normalized Decision Matrix (R)

Normalized decision matrices were created by using the data obtained in Stage 1 and using the formulas in Equation (8). The results are shown in Table 16 and Table 17.

Table 17

Main Metal Industry Sector 2021 TOPSIS Method Normalized Decision

Matrix (R) (For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0972	0,0198	-0,1262	0,0000	-0,3632	-0,6059	0,0104	0,3604	0,0116	-0,0762	-0,0518	-0,0507	-0,6464	-0,3798	-0,0080
BRSAN	0,0969	0,0469	0,0918	0,0154	0,2258	0,0899	0,8482	0,0265	0,1568	0,9191	0,2873	0,2938	0,0492	0,2972	0,0066
BURCE	0,0470	0,0101	0,0423	0,0041	0,0967	0,0328	-0,0465	0,1873	0,0222	0,1717	0,0794	0,0812	0,0198	0,0614	0,1884
BURVA	0,0372	0,0194	0,0407	0,0036	0,1228	0,1559	-0,0402	0,0587	0,0709	0,1798	0,0991	0,1013	0,0398	0,1296	0,0351
CELHA	-0,0312	0,0232	-0,0375	-0,0056	-0,1408	-0,1799	0,1629	0,0660	0,0631	-0,2503	-0,0671	-0,0686	-0,0869	-0,4482	-0,3314
CEMAS	0,8786	0,9588	0,8527	0,0000	0,3007	0,1553	0,1307	0,0048	0,8754	0,0273	0,6357	0,6500	0,4918	0,0932	0,0250
CEMTS	0,3089	0,1235	0,3141	0,9976	0,2655	0,2628	0,0680	0,0599	0,0695	0,0183	0,1042	0,1210	0,5219	0,0918	0,0037
CUSAN	-0,0404	0,0203	-0,0569	-0,0116	-0,1258	-0,1686	0,0784	0,1159	0,0359	-0,0253	-0,0636	-0,0550	-0,0986	-0,0974	-0,2803
DMSAS	-0,0340	0,0176	-0,0464	-0,0019	-0,0911	-0,0641	0,0868	0,1567	0,0266	-0,0382	-0,0613	-0,0446	-0,0191	-0,0780	-0,3007
DOKTA	-0,0774	0,0020	-0,0539	-0,0056	-0,1725	-0,0611	0,2330	0,8205	0,0051	-0,0489	-0,1519	-0,1553	-0,0164	-0,2187	-0,0597
ERBOS	0,0154	0,0580	-0,0053	0,0272	0,0305	0,0376	0,0671	0,0563	0,0739	0,0039	-0,0040	0,0148	0,0748	0,0142	0,0008
EREGL	0,0984	0,1497	-0,0069	0,0358	0,0961	0,0428	0,2262	0,0164	0,2543	0,0176	-0,0099	0,1031	0,0221	0,0408	0,0037
ISDMR	0,0487	0,1556	-0,2181	0,0233	0,0395	0,0159	0,2205	0,0229	0,1814	0,0079	-0,2317	0,0350	0,0092	0,0160	0,0074
IZMDC	0,0286	0,0491	0,0330	0,0079	0,1221	0,0590	-0,0155	0,0423	0,0985	-0,0282	0,0495	0,0506	0,0477	0,3352	0,0008
KRDMA	0,2138	0,0847	0,2207	0,0375	0,4948	0,2439	0,1145	0,0166	0,2513	0,0653	0,4139	0,4232	0,1596	0,3072	0,0047
SARKY	-0,1135	0,0157	-0,1262	-0,0113	-0,3588	-0,5774	0,1266	0,3234	0,0129	-0,0867	-0,0914	-0,0860	-0,0809	-0,4053	-0,0034
TUCLK	-0,1698	0,0363	-0,1530	-0,0131	-0,3973	-0,1942	0,1638	0,0325	0,1283	-0,0807	-0,4609	-0,4713	-0,0719	-0,3039	-0,8247

Table 18

Accommodation Sector 2021 TOPSIS Method Normalized Decision Matrix (R)
(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,1843	0,0295	0,1015	0,0084	0,1336	0,0636	0,0625	0,0687	0,0058	0,4030	0,0557	0,0557	0,0308	0,1148	0,3045
AVTUR	0,6911	0,2498	0,2990	0,3738	0,2341	0,1181	0,0044	0,0071	0,0566	0,0764	0,3774	0,3774	0,0867	0,1862	0,0074
KSTUR	0,3572	0,7699	0,8329	0,0052	0,3039	0,3440	0,0038	0,0096	0,0418	0,0919	0,0412	0,0412	0,9270	0,2283	0,0019
MAALT	0,3261	0,5217	0,1864	0,9275	0,4931	0,7386	0,0037	0,0004	0,9975	0,1856	0,9062	0,9062	0,0571	0,5302	0,5660
MARTI	-0,0184	0,0028	-0,0114	0,0008	-0,0746	-0,0383	-0,2411	0,0776	0,0052	0,2426	-0,0551	-0,0551	-0,0036	-0,2997	-0,0102
MERIT	0,3773	0,0005	0,1356	0,0000	0,0455	0,0211	0,9680	0,7922	0,0005	0,8284	0,1536	0,1536	0,0382	0,0340	0,0363
PKENT	0,1610	0,0310	0,3610	0,0000	0,7023	0,5300	0,0076	0,0966	0,0041	0,1939	0,0414	0,0414	0,3542	0,6668	0,7651
TEKTU	0,0110	0,0002	0,0093	0,0013	0,0299	0,0144	-0,0274	0,5935	0,0007	-0,0459	0,0574	0,0574	0,0032	0,0359	0,0021
ULAS	0,2931	0,2661	0,1514	0,0041	0,3000	0,1873	0,0062	0,0000	0,0000	0,0637	0,0000	0,0000	0,0454	0,2866	0,0091

Stage 3: The Weighted Normalized Decision Matrix (V)

The Weighted Standard Decision Matrix (V) was calculated with the formulas in Equation (9) and Equation (10), taking into account both constant and variable weights calculated by the CRITIC method. The results are shown in Table 19, Table 20, Table 21 and Table 22.

Table 19*Main Metal Industry Sector 2021 TOPSIS Method Fixed Weighted Standard**Decision Matrix (V)*

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0065	0,0013	-0,0084	0,0000	-0,0242	-0,0404	0,0007	0,0240	0,0008	-0,0051	-0,0035	-0,0034	-0,0431	-0,0253	-0,0005
BRSAN	0,0065	0,0031	0,0061	0,0010	0,0151	0,0060	0,0565	0,0018	0,0105	0,0613	0,0192	0,0196	0,0033	0,0198	0,0004
BURCE	0,0031	0,0007	0,0028	0,0003	0,0064	0,0022	-0,0031	0,0125	0,0015	0,0114	0,0053	0,0054	0,0013	0,0041	0,0126
BURVA	0,0025	0,0013	0,0027	0,0002	0,0082	0,0104	-0,0027	0,0039	0,0047	0,0120	0,0066	0,0068	0,0027	0,0086	0,0023
CELHA	-0,0021	0,0015	-0,0025	-0,0004	-0,0094	-0,0120	0,0109	0,0044	0,0042	-0,0167	-0,0045	-0,0046	-0,0058	-0,0299	-0,0221
CEMAS	0,0586	0,0639	0,0568	0,0000	0,0200	0,0104	0,0087	0,0003	0,0584	0,0018	0,0424	0,0433	0,0328	0,0062	0,0017
CEMTS	0,0206	0,0082	0,0209	0,0665	0,0177	0,0175	0,0045	0,0040	0,0046	0,0012	0,0069	0,0081	0,0348	0,0061	0,0002
CUSAN	-0,0027	0,0014	-0,0038	-0,0008	-0,0084	-0,0112	0,0052	0,0077	0,0024	-0,0017	-0,0042	-0,0037	-0,0066	-0,0065	-0,0187
DMSAS	-0,0023	0,0012	-0,0031	-0,0001	-0,0061	-0,0043	0,0058	0,0104	0,0018	-0,0025	-0,0041	-0,0030	-0,0013	-0,0052	-0,0200
DOKTA	-0,0052	0,0001	-0,0036	-0,0004	-0,0115	-0,0041	0,0155	0,0547	0,0003	-0,0033	-0,0101	-0,0104	-0,0011	-0,0146	-0,0040
ERBOS	0,0010	0,0039	-0,0004	0,0018	0,0020	0,0025	0,0045	0,0038	0,0049	0,0003	-0,0003	0,0010	0,0050	0,0009	0,0001
EREGL	0,0066	0,0100	-0,0005	0,0024	0,0064	0,0029	0,0151	0,0011	0,0170	0,0012	-0,0007	0,0069	0,0015	0,0027	0,0002
ISDMR	0,0032	0,0104	-0,0145	0,0016	0,0026	0,0011	0,0147	0,0015	0,0121	0,0005	-0,0154	0,0023	0,0006	0,0011	0,0005
IZMDC	0,0019	0,0033	0,0022	0,0005	0,0081	0,0039	-0,0010	0,0028	0,0066	-0,0019	0,0033	0,0034	0,0032	0,0223	0,0001
KRDMA	0,0143	0,0056	0,0147	0,0025	0,0330	0,0163	0,0076	0,0011	0,0168	0,0044	0,0276	0,0282	0,0106	0,0205	0,0003
SARKY	-0,0076	0,0010	-0,0084	-0,0008	-0,0239	-0,0385	0,0084	0,0216	0,0009	-0,0058	-0,0061	-0,0057	-0,0054	-0,0270	-0,0002
TUCLK	-0,0113	0,0024	-0,0102	-0,0009	-0,0265	-0,0129	0,0109	0,0022	0,0086	-0,0054	-0,0307	-0,0314	-0,0048	-0,0203	-0,0550

Table 20

*Main Metal Industry Sector 2021 TOPSIS Method Variable Weighted
Standard Decision Matrix (V)*

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0048	0,0012	-0,0062	0,0000	-0,0205	-0,0389	0,0009	0,0391	0,0013	-0,0049	-0,0025	-0,0023	-0,0310	-0,0277	-0,0005
BRSAN	0,0047	0,0029	0,0045	0,0011	0,0128	0,0058	0,0739	0,0029	0,0183	0,0590	0,0136	0,0132	0,0024	0,0217	0,0004
BURCE	0,0023	0,0006	0,0021	0,0003	0,0055	0,0021	-0,0041	0,0203	0,0026	0,0110	0,0038	0,0037	0,0009	0,0045	0,0109
BURVA	0,0018	0,0012	0,0020	0,0003	0,0069	0,0100	-0,0035	0,0064	0,0083	0,0115	0,0047	0,0046	0,0019	0,0094	0,0020
CELHA	-0,0015	0,0015	-0,0019	-0,0004	-0,0080	-0,0116	0,0142	0,0072	0,0073	-0,0161	-0,0032	-0,0031	-0,0042	-0,0327	-0,0192
CEMAS	0,0431	0,0601	0,0421	0,0000	0,0170	0,0100	0,0114	0,0005	0,1019	0,0018	0,0302	0,0292	0,0236	0,0068	0,0014
CEMTS	0,0151	0,0077	0,0155	0,0703	0,0150	0,0169	0,0059	0,0065	0,0081	0,0012	0,0049	0,0054	0,0250	0,0067	0,0002
CUSAN	-0,0020	0,0013	-0,0028	-0,0008	-0,0071	-0,0108	0,0068	0,0126	0,0042	-0,0016	-0,0030	-0,0025	-0,0047	-0,0071	-0,0163
DMSAS	-0,0017	0,0011	-0,0023	-0,0001	-0,0051	-0,0041	0,0076	0,0170	0,0031	-0,0025	-0,0029	-0,0020	-0,0009	-0,0057	-0,0174
DOKTA	-0,0038	0,0001	-0,0027	-0,0004	-0,0098	-0,0039	0,0203	0,0891	0,0006	-0,0031	-0,0072	-0,0070	-0,0008	-0,0159	-0,0035
ERBOS	0,0008	0,0036	-0,0003	0,0019	0,0017	0,0024	0,0058	0,0061	0,0086	0,0003	-0,0002	0,0007	0,0036	0,0010	0,0000
EREGL	0,0048	0,0094	-0,0003	0,0025	0,0054	0,0028	0,0197	0,0018	0,0296	0,0011	-0,0005	0,0046	0,0011	0,0030	0,0002
ISDMR	0,0024	0,0098	-0,0108	0,0016	0,0022	0,0010	0,0192	0,0025	0,0211	0,0005	-0,0110	0,0016	0,0004	0,0012	0,0004
IZMDC	0,0014	0,0031	0,0016	0,0006	0,0069	0,0038	-0,0013	0,0046	0,0115	-0,0018	0,0024	0,0023	0,0023	0,0244	0,0000
KRDMA	0,0105	0,0053	0,0109	0,0026	0,0280	0,0157	0,0100	0,0018	0,0293	0,0042	0,0197	0,0190	0,0076	0,0224	0,0003
SARKY	-0,0056	0,0010	-0,0062	-0,0008	-0,0203	-0,0371	0,0110	0,0351	0,0015	-0,0056	-0,0043	-0,0039	-0,0039	-0,0295	-0,0002
TUCLK	-0,0083	0,0023	-0,0076	-0,0009	-0,0225	-0,0125	0,0143	0,0035	0,0149	-0,0052	-0,0219	-0,0212	-0,0034	-0,0222	-0,0478

Table 21

*Accommodation Sector 2021 TOPSIS Method Fixed Weighted Standard
Decision Matrix (V)*

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0123	0,0020	0,0068	0,0006	0,0089	0,0042	0,0042	0,0046	0,0004	0,0269	0,0037	0,0037	0,0021	0,0077	0,0203
AVTUR	0,0461	0,0167	0,0199	0,0249	0,0156	0,0079	0,0003	0,0005	0,0038	0,0051	0,0252	0,0252	0,0058	0,0124	0,0005
KSTUR	0,0238	0,0513	0,0555	0,0003	0,0203	0,0229	0,0003	0,0006	0,0028	0,0061	0,0027	0,0027	0,0618	0,0152	0,0001
MAALT	0,0217	0,0348	0,0124	0,0618	0,0329	0,0492	0,0002	0,0000	0,0665	0,0124	0,0604	0,0604	0,0038	0,0353	0,0377
MARTI	-0,0012	0,0002	-0,0008	0,0001	-0,0050	-0,0026	-0,0161	0,0052	0,0003	0,0162	-0,0037	-0,0037	-0,0002	-0,0200	-0,0007
MERIT	0,0252	0,0000	0,0090	0,0000	0,0030	0,0014	0,0645	0,0528	0,0000	0,0552	0,0102	0,0102	0,0025	0,0023	0,0024
PKENT	0,0107	0,0021	0,0241	0,0000	0,0468	0,0353	0,0005	0,0064	0,0003	0,0129	0,0028	0,0028	0,0236	0,0445	0,0510
TEKTU	0,0007	0,0000	0,0006	0,0001	0,0020	0,0010	-0,0018	0,0396	0,0000	-0,0031	0,0038	0,0038	0,0002	0,0024	0,0001
ULAS	0,0195	0,0177	0,0101	0,0003	0,0200	0,0125	0,0004	0,0000	0,0000	0,0042	0,0000	0,0000	0,0030	0,0191	0,0006

Table 22*Accommodation Sector 2021 TOPSIS Method Variable Weighted Standard**Decision Matrix (V)*

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0108	0,0019	0,0056	0,0005	0,0068	0,0033	0,0044	0,0075	0,0006	0,0314	0,0031	0,0031	0,0020	0,0054	0,0214
AVTUR	0,0407	0,0159	0,0166	0,0232	0,0119	0,0062	0,0003	0,0008	0,0059	0,0060	0,0210	0,0210	0,0056	0,0088	0,0005
KSTUR	0,0210	0,0491	0,0463	0,0003	0,0155	0,0181	0,0003	0,0010	0,0044	0,0072	0,0023	0,0023	0,0599	0,0108	0,0001
MAALT	0,0192	0,0333	0,0104	0,0575	0,0251	0,0389	0,0003	0,0000	0,1047	0,0145	0,0504	0,0504	0,0037	0,0251	0,0397
MARTI	-0,0011	0,0002	-0,0006	0,0001	-0,0038	-0,0020	-0,0171	0,0084	0,0005	0,0189	-0,0031	-0,0031	-0,0002	-0,0142	-0,0007
MERIT	0,0222	0,0000	0,0075	0,0000	0,0023	0,0011	0,0688	0,0862	0,0001	0,0646	0,0085	0,0085	0,0025	0,0016	0,0025
PKENT	0,0095	0,0020	0,0201	0,0000	0,0358	0,0279	0,0005	0,0105	0,0004	0,0151	0,0023	0,0023	0,0229	0,0316	0,0536
TEKTU	0,0006	0,0000	0,0005	0,0001	0,0015	0,0008	-0,0019	0,0646	0,0001	-0,0036	0,0032	0,0032	0,0002	0,0017	0,0001
ULAS	0,0172	0,0170	0,0084	0,0003	0,0153	0,0099	0,0004	0,0000	0,0000	0,0050	0,0000	0,0000	0,0029	0,0136	0,0006

Stage 4: Determination The Positive Ideal (A*) and Negative Ideal (A -) Solutions

At this stage, the values in the V matrix and the Ideal (A*) solution set were created using Equation (11) and the Negative Ideal (A-) solution set was created using Equation (12). For the Ideal (A*) solution set, the largest values in the V matrix columns were selected, and for the Negative Ideal (A-) solution set, the smallest values in the V matrix columns were selected. The results are shown in Table 23, Table 24, Table 25 and Table 26 according to fixed and variable weights.

Table 23

Main Metal Industry Sector 2021 TOPSIS Method Determination The Positive Ideal (A) and Negative Ideal (A -) Solutions*
(For Fixed Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0586	0,0639	0,0568	0,0665	0,0330	0,0175	0,0565	0,0547	0,0584	0,0613	0,0424	0,0433	0,0348	0,0223	0,0126
A-	-0,0113	0,0001	-0,0145	-0,0009	-0,0265	-0,0404	-0,0031	0,0003	0,0003	-0,0167	-0,0307	-0,0314	-0,0431	-0,0299	-0,0550

Table 24

Main Metal Industry Sector 2021 TOPSIS Method Determination The Positive Ideal (A) and Negative Ideal (A -) Solutions*
(For Variable Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0431	0,0601	0,0421	0,0703	0,0280	0,0169	0,0739	0,0891	0,1019	0,0590	0,0302	0,0292	0,0250	0,0244	0,0109
A-	-0,0083	0,0001	-0,0108	-0,0009	-0,0225	-0,0389	-0,0041	0,0005	0,0006	-0,0161	-0,0219	-0,0212	-0,0310	-0,0327	-0,0478

Table 25

Accommodation Sector 2021 TOPSIS Method Determination The Positive Ideal (A) and Negative Ideal (A -) Solutions*
(For Fixed Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0461	0,0513	0,0555	0,0618	0,0468	0,0492	0,0645	0,0528	0,0665	0,0552	0,0604	0,0604	0,0618	0,0445	0,0510
A-	-0,0012	0,0000	-0,0008	0,0000	-0,0050	-0,0026	-0,0161	0,0000	0,0000	-0,0031	-0,0037	-0,0037	-0,0002	-0,0200	-0,0007

Table 26

Accommodation Sector 2021 TOPSIS Method Determination The Positive Ideal (A) and Negative Ideal (A-) Solutions*
(For Variable Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0.0407	0.0491	0.0463	0.0575	0.0358	0.0389	0.0688	0.0862	0.1047	0.0646	0.0504	0.0504	0.0599	0.0316	0.0536
A-	-0.0011	0.0000	-0.0006	0.0000	-0.0038	-0.0020	-0.0171	0.0000	0.0000	-0.0036	-0.0031	-0.0031	-0.0002	-0.0142	-0.0007

Stage 5: Determination of Distance Measurement Between Alternatives

In this method, Ideal discrimination (S_i^*) and Negative Ideal discrimination (S_i^-) measures were calculated with the help of Equation (13) and Equation (14) in order to find the deviations of the values from the Ideal (A^*) solution set and the Negative Ideal (A^-) solution set. The results are shown in Table 27, Table 28, Table 29 and Table 30.

Table 27

Main Metal Industry Sector 2021 TOPSIS Method Determination of Distance

Measurement Between Alternatives (For Fixed Weights)

~~Company Code~~	Si +	<u>Si -</u>
AYES	0,2192	0,0728
BRSAN	0,1452	0,1648
BURCE	0,1750	0,1212
BURVA	0,1743	0,1218
CELHA	0,2048	0,0738
CEMAS	0,1175	0,2094
CEMTS	0,1441	0,1612
CUSAN	0,1956	0,0799
DMSAS	0,1921	0,0861
DOKTA	0,1910	0,1032
ERBOS	0,1804	0,1080
EREGL	0,1694	0,1139
ISDMR	0,1834	0,1047
IZMDC	0,1788	0,1190
KRDMA	0,1505	0,1567
SARKY	0,2090	0,0804
TUCLK	0,2298	0,0523

Table 28

Main Metal Industry Sector 2021 TOPSIS Method Determination of Distance

Measurement Between Alternatives (For Variable Weights)

~~Company Code~~	Si +	<u>Si -</u>
AYES	0,2204	0,0684
BRSAN	0,1640	0,1566
BURCE	0,1943	0,1049
BURVA	0,1953	0,1053
CELHA	0,2156	0,0610
CEMAS	0,1434	0,1898
CEMTS	0,1721	0,1407
CUSAN	0,2071	0,0683
DMSAS	0,2038	0,0742
DOKTA	0,1920	0,1169
ERBOS	0,1972	0,0924
EREGL	0,1816	0,1016
ISDMR	0,1918	0,0936
IZMDC	0,1973	0,1053
KRDMA	0,1739	0,1342
SARKY	0,2140	0,0721
TUCLK	0,2262	0,0475

Table 29

Accommodation Sector 2021 TOPSIS Method Determination of Distance Measurement Between Alternatives (For Fixed Weights)

~~Company Code~~	Si +	<u>Si -</u>
AYCES	0,1913	0,0559
AVTUR	0,1704	0,0848
KSTUR	0,1706	0,1151
MAALT	0,1237	0,1660
MARTI	0,2253	0,0199
MERIT	0,1742	0,1202
PKENT	0,1709	0,1137
TEKTU	0,2069	0,0495
ULAS	0,1939	0,0600

Table 30

Accommodation Sector 2021 TOPSIS Method Determination of Distance Measurement Between Alternatives (For Variable Weights)

~~Company Code~~	Si +	<u>Si -</u>
AYCES	0,2048	0,0550
AVTUR	0,1949	0,0728
KSTUR	0,1942	0,1031
MAALT	0,1419	0,1672
MARTI	0,2316	0,0240
MERIT	0,1771	0,1437
PKENT	0,1924	0,0971
TEKTU	0,2119	0,0691
ULAS	0,2136	0,0489

Stage 6: Rank The Preference Order

The relative closeness to the ideal solution (C^*i) was calculated using the formulas in Equation (15) and Equation (16), and their importance levels were determined by sorting. The results are shown in Table 31, Table 32, Table 33 and Table 34.

Table 31

Main Metal Industry Sector 2021 TOPSIS Method Relative Closeness to Fixed Weighted Ideal Solution (C^*i)

<u>Company Code</u>	<u>C Value</u>	<u>Row Number</u>
CEMAS	0,6406	1
BRSAN	0,5316	2
CEMTS	0,5281	3
KRDMA	0,5101	4
BURVA	0,4113	5
BURCE	0,4091	6
EREGL	0,4021	7
IZMDC	0,3996	8
ERBOS	0,3745	9
ISDMR	0,3634	10
DOKTA	0,3508	11
DMSAS	0,3095	12
CUSAN	0,2902	13
SARKY	0,2778	14
CELHA	0,2648	15
AYES	0,2493	16
TUCLK	0,1853	17

Table 32

*Main Metal Industry Sector 2021 TOPSIS Method Relative Closeness to Variable Weighted Ideal Solution (C*i)*

<u>Company Code</u>	<u>C Value</u>	<u>Row Number</u>
CEMAS	0,5697	1
BRSAN	0,4885	2
CEMTS	0,4498	3
KRDMA	0,4355	4
DOKTA	0,3784	5
EREGL	0,3588	6
BURCE	0,3506	7
BURVA	0,3504	8
IZMDC	0,3480	9
ISDMR	0,3280	10
ERBOS	0,3191	11
DMSAS	0,2670	12
SARKY	0,2520	13
CUSAN	0,2480	14
AYES	0,2370	15
CELHA	0,2206	16
TUCLK	0,1734	17

Table 33

*Accommodation Sector 2021 TOPSIS Method Relative Closeness to Fixed Weighted Ideal Solution (C*i)*

<u>Company Code</u>	<u>C Value</u>	<u>Row Number</u>
MAALT	0,5730	1
MERIT	0,4083	2
KSTUR	0,4029	3
PKENT	0,3995	4
AVTUR	0,3323	5
ULAS	0,2364	6
AYCES	0,2261	7
TEKTU	0,1930	8
MARTI	0,0812	9

Table 34

Accommodation Sector 2021 TOPSIS Method Relative Closeness to Variable Weighted Ideal Solution (C^*)

~~Company Code~~	C Value	~~Row Number~~
MAALT	0,5409	1
MERIT	0.4479	2
KSTUR	0,3467	3
PKENT	0,3353	4
AVTUR	0,2719	5
TEKTU	0,2459	6
AYCES	0,2117	7
ULAS	0.1864	8
MARTI	0,0940	9

5. CONCLUSION

After it is understood that the cash flow statement, the importance of which has not been understood for many years in our country, is a necessity and indispensable in a competitive economic environment, accounting standards regulations are handled as a whole. The Turkish Commercial Code and related legislation have started to be made in our country and have been made compulsory for businesses of certain sizes.

The economic crises experienced in recent years have further increased the importance of cash management and liquidity control. Today, cash management has a very important role in the survival of businesses. The survival of businesses depends on their ability to create and maintain the money they need as well as being profitable. The most common reasons for businesses to suffer economic losses are that they cannot produce the cash they need despite being profitable enough and they have to

sell their non-cash assets below their value. Businesses that have cash problems or inefficient practices in cash management may face the risk of failure and bankruptcy.

The cash flow statement is basically a table that shows the cash resources of the business and how these resources are used. Cash flow statement is a financial statement that classifies cash flows from operating, investing and financing activities in the financial period and aims to provide information about changes in cash and cash equivalents to financial statement users such as investors, credit institutions, shareholders and managers.

According to the General Communique on Accounting System Practices, which has been in force in our country since 1994, the cash flow statement is considered within the scope of additional financial statements and must be prepared by businesses exceeding a certain size. For this reason, it is thought that the importance of this table for standard companies is not sufficiently understood.

In this study the companies included in the analysis in the Accommodation and Main Metal Industry sectors in the study, according to the Cash Flow performances used in the analysis, are listed in Table 31, Table 32, Table 33 and Table 34. Companies datas are based on the years 2017-2018-2019-2020 and 2021.

As a result of the analysis made by giving a fixed weight in the measurement of financial performance of accommodation companies, the most important indicator is the Cash Turnover Effectiveness Ratio (B4), and the least influential indicator is the Shareholders' Cash Return Leverage Ratio (D2). In the study, the companies included in the analysis in the accommodation sector were also ranked according to their performance, and it was determined that the most successful accommodation

company in terms of overall performance was Marmaris Altınyunus Turistik Tesisler A.Ş.

As a result of the analysis made by giving variable weight in the measurement of the financial performance of the accommodation companies, the most important indicator is the Cash Turnover Effectiveness Ratio (B4), and the least influential indicator is the Shareholders' Cash Return Leverage Ratio (D2). In the study, the companies included in the analysis in the accommodation sector were also ranked according to their performance, and it was determined that the most successful accommodation company in terms of overall performance again was Marmaris Altınyunus Turistik Tesisler A.Ş.

As a result of the analysis made by giving a fixed weight in the measurement of the financial performances of Main Metal Industry companies, the most important indicator is the Cash Balance Efficiency Ratio (B5), the least affecting indicator is the Cash Flow Margin Leverage Ratio (C3) indicator. In the study, the companies included in the analysis in the basic metal industry sector were ranked according to their performance, and the most successful basic metal industry company in terms of overall performance was Çemaş Döküm Sanayi A.Ş. has been determined.

As a result of the analysis made by giving a variable weight in the measurement of the financial performances of Main Metal Industry companies, the most important indicator is the Cash Balance Efficiency Ratio (B5), the least affecting indicator is the Cash Flow Margin Leverage Ratio (C3) indicator. In the study, the companies included in the analysis in the basic metal industry sector were ranked according to their performance, and the most successful basic metal industry company in terms of overall performance again was Çemaş Döküm Sanayi A.Ş. has been determined.

As can be seen, the use of fixed weight and variable weight values in the analysis did not make any difference in the performance results.

In the analysis consisting of cash flow rates criteria, Cash Balance (B5), Cash Turnover (B4) and Cash Reinvestment Ratio (B3) criteria are among the top 5 in both the Main Metal Industry and the Accommodation Sector.

<i>Accommodation Sector</i>			<i>Main Metal Industry Sector</i>		
Serial Number	Criteria	Ratio	Serial Number	Criteria	Ratio
1	B4	0,1088	1	B5	0,1164
2	B5	0,1050	2	B4	0,1086
3	C1	0,0780	3	B3	0,0872
4	B3	0,0711	4	D2	0,0729
5	D3	0,0701	5	A4	0,0705
6	D1	0,0646	6	B2	0,0643
7	A2	0,0638	7	C1	0,0642
8	A4	0,0620	8	A2	0,0627
9	A1	0,0588	9	D3	0,0580
10	C2	0,0556	10	B1	0,0565
11	C3	0,0556	11	A3	0,0494
12	A3	0,0556	12	A1	0,0490
13	B2	0,0526	13	D1	0,0479
14	B1	0,0509	14	C2	0,0475
15	D2	0,0474	15	C3	0,0450

In the Main Metal Industry sector, the criteria with the highest importance are Cash Balance (B5) and Cash Turnover (B4), and the criteria with the lowest degree of importance are Cash Flow Margin (C3). In the accommodation sector, the criteria with the highest importance are Cash Balance (B5) and Cash Turnover (B4), and the criteria with the lowest importance are Shareholders' Cash Return Ratio (D2).

In line with these results, it can be said that Cash Balance and Cash Turnover have a high contribution to the financial performance in both sectors.

The Cash Flow Margin (C3) criterion, which shows the power of converting sales into cash, is at the bottom of the ranking of success rates according to

performances in the Main Metal Sector, and is higher in the Accommodation sector. The reason for this can be explained as the payback period of resource inputs in the accommodation sector is shorter than in the basic metal industry sector.

Another big difference is seen in the Shareholders' Cash Return (D2), which shows the percentage of cash flows obtained by operating activity through equity. It is bottom of the ranking of success rates according to performance in the Accommodation sector and is among the top 5 for Main Metal Industry Sector. The reason for this difference can be explained as follows; The experience of accommodation businesses differs depending on their needs due to the season they operate. However, since the activities continue in every period of the year in the basic metal industry sector, in case all the cash required for operational activities is provided from equity, all of the profit to be obtained there will still belong to the shareholders.

Another big difference is seen in the Earnings/Profit Quality Ratio(C1). This value, which is very important for the accommodation sector and is among the top 5 in the ranking of success rates according to performances, is in the lower ranks for the Main Metal Industry sector. The difference between this ratio, which shows the cash collectability of the net profit and the percentage of the net profit turning into cash, between the two sectors may be that the Basic Metal Industry sector sales in longer terms than the accommodation sector and the collection may be made in the long term, the Main Metal Industry sector can also use the profits it earns in commercial goods instead of turning it into cash. Therefore, it can be explained that while it is important to turn the profit into cash in the accommodation sector, it is more important to transform the profit into commercial goods instead of cash in the basic metal industry.

It is clear that cash flow data is very important in predicting bankruptcy and financial distress. Ratios based on cash flow are very useful tools in evaluating a company's financial strength, sustainability, and performance.

In addition, the order of importance of the ratios used in cash flow analysis in the measurement of financial performance differs according to the characteristics of the sector in which it operates. Therefore, considering the ratios selected according to the characteristics of the relevant sector in the financial situation performance measurement will be effective in making the right decisions.

The results obtained in the study can support business partners, managers, investors and financial information users in their decisions in order to determine the adequacy of the financial situation of companies operating in the basic metal industry and accommodation sector.

In the literature, there are many studies on financial performance measurement. However, no study was found in which the CRITIC and TOPSIS models were used together and the two different sectors were compared. Therefore, this study can contribute to the literature.

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evizyon-
%20G%C3%B6r%C3%BC%C5%9Fe%20A%C3%A7%C4%B1lan.pdf)

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S1.pdf](http://www.kgk.gov.tr/Portalv2Uploads/files/DynamicContentFiles/T%C3
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APPENDICES

Appendix 1. Main Metal Industry Sector 2017 CRITIC & TOPSIS Method Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,1548	0,0345	-0,1492	0,0000	-0,0732	-0,2340	1,7497	207,7743	1,7567	-1,2811	-0,0233	-0,0207	-0,9202	-0,1637	-0,0173
BRSAN	-0,0058	0,3402	-0,0450	0,9156	-0,0021	-0,0035	0,8500	-4,6131	-79,1229	-0,0363	-0,0370	-0,0031	-0,0108	-0,0048	-0,0003
BURCE	-0,0955	0,1052	-0,0585	0,2121	-0,0321	-0,0504	-1,1028	14,1770	25,7460	0,8257	-0,0520	-0,0520	-0,1512	-0,0713	-0,7035
BURVA	0,3236	0,1724	0,2580	3,0061	0,1689	0,9017	0,3254	9,0840	40,1807	2,7272	0,1573	0,1573	1,2723	0,4886	0,6093
CELHA	0,1476	0,1112	0,1276	23,5065	0,0991	0,3711	5,5088	16,6673	21,8991	1,3839	0,0610	0,0662	2,1912	0,3496	4,3810
CEMAS	0,2086	0,0256	0,1360	4,3537	0,0912	0,1704	3,2319	39,8902	9,1501	-0,7624	0,1841	0,1841	0,3910	0,2770	0,6472
CEMTS	-0,5982	0,1468	-0,5488	-20,3920	-0,1869	-0,5805	0,8088	17,6999	20,6216	-0,9201	-0,1912	-0,1833	-4,3881	-0,2897	-0,0196
CUSAN	-0,0290	0,3027	-0,1400	-1,6917	-0,0107	-0,0327	0,0989	7,5943	48,0622	-0,2668	-0,0563	-0,0109	-0,4104	-0,0177	-0,1557
DMSAS	0,2475	0,1734	0,1623	4,0040	0,1191	0,2738	0,0923	12,1673	29,9984	5,1199	0,1004	0,1004	0,4719	0,4476	4,6842
DOKTA	-0,1600	0,0502	-0,0556	-0,1710	-0,0531	-0,0722	6,5291	46,2362	7,8942	-0,8173	-0,0522	-0,0522	-0,0853	-1,1688	-0,1296
ERBOS	0,1857	0,5916	0,0784	13,7157	0,0648	0,3173	0,7564	4,1941	87,0264	0,4373	0,0277	0,0608	2,3620	0,1041	0,0457
EREGL	0,6561	1,2735	0,2442	35,4081	0,1277	0,2678	-1,6539	1,9162	190,4861	0,9300	0,1192	0,1935	1,0003	0,1885	0,0217
ISDMR	1,2064	0,0050	0,3269	80,6815	0,2067	0,3748	3,3993	639,1083	0,5711	1,2011	0,1191	0,2691	1,9052	0,2870	0,2001
IZMDC	0,0952	0,1120	0,0649	3,1702	0,0503	0,0772	-11,4491	15,3773	23,7362	16,3689	0,0514	0,0514	0,2040	0,2240	0,0189
KRDMA	0,4852	0,3461	0,3097	15,3330	0,2003	0,3352	0,1303	3,3351	109,4407	5,5170	0,3493	0,3493	0,8562	0,5669	0,0122
SARKY	-0,1428	0,0578	-0,1387	-1,5416	-0,0854	-0,3596	0,6785	79,2989	4,6028	-1,4581	-0,0336	-0,0296	-0,8394	-0,2839	-0,0064
TUCLK	-0,0815	0,1281	-0,0458	-0,5261	-0,0241	-0,0366	6,1539	13,1876	27,6774	-1,3906	-0,0393	-0,0393	-0,1047	-0,0507	-0,2767
MIN	-0,5982	0,0050	-0,5488	-20,3920	-0,1869	-0,5805	-11,4491	-4,6131	-79,1229	-1,4581	-0,1912	-0,1833	-4,3881	-1,1688	-0,7035
MAX	1,2064	1,2735	0,3269	80,6815	0,2067	0,9017	6,5291	639,1083	190,4861	16,3689	0,3493	0,3493	2,3620	0,5669	4,6842

Appendix 2. Main Metal Industry Sector 2018 CRITIC & TOPSIS Method Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	0,2280	0,1126	0,1913	0,0000	0,1183	0,3955	-0,1189	74,0306	4,9304	2,7532	0,0232	0,0258	3,2184	0,2663	0,0253
BRSAN	-0,0797	0,2678	-0,0896	-0,2017	-0,0339	-0,0639	3,0548	5,3874	67,7512	-0,8179	-0,0747	-0,0476	-0,2024	-0,0836	-0,0082
BURCE	0,1093	0,0433	0,0692	1,7600	0,0412	0,0631	-1,5351	35,2335	10,3595	19,8524	0,0553	0,0553	0,1884	0,1018	0,9012
BURVA	0,2141	0,1562	0,1535	1,7689	0,0971	0,4530	0,9274	13,1099	27,8416	16,3630	0,0802	0,0802	0,5418	0,2642	0,3301
CELHA	-0,0348	0,0206	-0,0678	-2,8879	-0,0242	-0,0770	0,5491	83,8515	4,3529	-0,2719	-0,0329	-0,0160	-0,6099	-0,0909	-1,3875
CEMAS	-0,6049	0,0103	-0,3671	-8,8588	-0,2347	-0,5524	-2,0544	89,4098	4,0823	3,0815	-0,5571	-0,5571	-0,9338	-0,6505	-0,3691
CEMTS	1,2337	0,1900	0,9294	10,1216	0,1975	0,6870	0,8693	34,4858	10,5841	0,7219	0,1303	0,1381	4,8819	0,2470	0,0247
CUSAN	0,2240	0,3774	0,1954	26,3020	0,1158	0,4148	-1,3445	3,7501	97,3319	-70,2414	0,1233	0,1374	7,8605	0,2473	2,0468
DMSAS	0,3659	0,3753	0,2341	5,4553	0,1435	0,3848	1,4490	6,4944	56,2026	1,2321	0,1210	0,1210	0,6501	0,3709	5,0902
DOKTA	0,0876	0,0413	0,0478	1,9050	0,0433	0,0591	-0,0877	33,5886	10,8668	0,5813	0,0499	0,0499	0,1053	0,4565	0,2508
ERBOS	0,0608	0,6175	-0,0547	2,6784	0,0222	0,1344	0,7181	4,3640	83,6391	0,1420	-0,0173	0,0181	0,9818	0,0364	0,0196
EREGL	0,5349	1,0979	0,1093	24,8073	0,1010	0,2189	1,6353	2,1517	169,6364	0,7218	0,0507	0,1562	0,9092	0,1442	0,0253
ISDMR	1,0355	0,0199	0,2327	71,3650	0,1550	0,3122	1,3772	171,4432	2,1290	0,7916	0,0770	0,2048	1,5394	0,2068	0,2186
IZMDC	-0,1070	0,0512	-0,0788	-0,7581	-0,0714	-0,1172	1,1956	37,6322	9,6991	0,6700	-0,0520	-0,0520	-0,2990	-0,7659	-0,0299
KRDMA	0,1078	0,1295	0,0548	3,1687	0,0276	0,0427	2,1442	14,2068	25,6919	0,2788	0,0407	0,0407	0,1113	0,0556	0,0020
SARKY	0,0433	0,0635	0,0051	1,6309	0,0246	0,0941	1,4209	83,3794	4,3776	0,4824	0,0011	0,0078	0,1958	0,0798	0,0022
TUCLK	-0,1863	0,0253	-0,1209	-2,4233	-0,0719	-0,1241	-3,0732	58,8851	6,1985	2,4945	-0,1010	-0,1010	-0,3446	-0,1775	-0,9862
MIN	-0,6049	0,0103	-0,3671	-8,8588	-0,2347	-0,5524	-3,0732	2,1517	2,1290	-70,2414	-0,5571	-0,5571	-0,9338	-0,7659	-1,3875
MAX	1,2337	1,0979	0,9294	71,3650	0,1975	0,6870	3,0548	171,4432	169,6364	19,8524	0,1303	0,2048	7,8605	0,4565	5,0902

Appendix 3. Main Metal Industry Sector 2019 CRITIC & TOPSIS Method Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,1098	0,2178	-0,1173	0,0000	-0,0691	-0,2895	-0,0555	21,0896	17,3071	-3,8063	-0,0250	-0,0228	-4,2309	-0,1949	-0,0158
BRSAN	0,0966	0,3336	0,0331	2,3318	0,0395	0,0682	0,7584	4,3067	84,7511	4,1447	0,0293	0,0598	0,2259	0,0947	0,0097
BURCE	0,1335	0,0666	0,0802	1,8195	0,0393	0,0523	-35,8700	17,9481	20,3364	-2,0223	0,0863	0,0863	0,2009	0,0769	1,3550
BURVA	-0,0078	0,0513	-0,0055	0,9667	-0,0035	-0,0139	4,4426	16,0438	22,7502	0,4225	-0,0055	-0,0055	-0,0183	-0,0099	-0,0153
CELHA	0,2393	0,0881	0,1784	24,3264	0,1952	0,6337	-7,6392	16,2617	22,4454	-4,4784	0,1167	0,1485	4,3759	1,3973	12,9958
CEMAS	0,0618	0,0149	0,0398	1,9766	0,0251	0,0458	-0,0652	63,9912	5,7039	-0,4782	0,0600	0,0600	0,1118	0,0683	0,0409
CEMTS	3,1731	2,2421	1,7974	39,4149	0,2847	0,9494	0,7245	5,4144	67,4128	2,7947	0,2131	0,2276	4,8635	0,3342	0,0370
CUSAN	-0,2357	0,1362	-0,2287	-37,5202	-0,1075	-0,3603	0,3112	15,7820	23,1276	-2,8731	-0,0926	-0,0926	-7,7677	-0,2029	-1,7594
DMSAS	0,2464	0,3601	0,1430	2,9785	0,0842	0,2111	0,4131	8,7932	41,5092	1,5851	0,0679	0,0679	0,3405	0,2048	2,9401
DOKTA	0,1636	0,1249	0,0531	2,0115	0,0500	0,0747	2,1700	16,5541	22,0489	0,7302	0,0620	0,0620	0,0787	0,8425	0,3055
ERBOS	-0,0274	0,6658	-0,1156	0,0116	-0,0116	-0,0896	0,6599	3,1303	116,6013	-0,1024	-0,0492	-0,0111	-0,5636	-0,0208	-0,0034
EREGL	0,7664	1,1206	0,1661	20,2719	0,1552	0,3214	0,7166	2,1203	172,1455	2,0729	0,0933	0,2637	1,2123	0,2318	0,0434
ISDMR	1,2120	0,0198	0,0107	45,9480	0,1650	0,3012	0,2987	233,7236	1,5617	1,6549	0,0035	0,2168	1,4340	0,2203	0,2398
IZMDC	0,2569	0,1137	0,1997	4,4512	0,1841	0,2781	-0,1477	11,8882	30,7026	-1,4598	0,1876	0,1876	0,8970	2,3600	0,0952
KRDMA	0,3890	0,0681	0,1859	13,2246	0,1359	0,2155	-0,9080	25,7237	14,1892	15,2150	0,1574	0,2019	0,6162	0,3162	0,0108
SARKY	0,0579	0,0708	0,0097	1,9500	0,0331	0,1455	1,3028	62,9787	5,7956	0,8053	0,0026	0,0124	0,2125	0,1220	0,0036
TUCLK	0,0315	0,0034	0,0228	1,4700	0,0142	0,0233	0,2833	410,9361	0,8882	2,1910	0,0192	0,0192	0,0826	0,0373	0,2195
MIN	-0,2357	0,0034	-0,2287	-37,5202	-0,1075	-0,3603	-35,8700	2,1203	0,8882	-4,4784	-0,0926	-0,0926	-7,7677	-0,2029	-1,7594
MAX	3,1731	2,2421	1,7974	45,9480	0,2847	0,9494	4,4426	410,9361	172,1455	15,2150	0,2131	0,2637	4,8635	2,3600	12,9958

Appendix 4. Main Metal Industry Sector 2020 CRITIC & TOPSIS Method Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,3658	0,3070	-0,2664	0,0000	-0,1769	-0,9085	2,6425	22,0200	16,5758	-1,9617	-0,0514	-0,0502	-0,8985	-0,5535	-0,0502
BRSAN	-0,1063	0,2526	-0,0740	-1,0019	-0,0413	-0,0671	3,8589	4,2779	85,3220	31,6339	-0,0891	-0,0891	-0,2437	-0,0499	-0,0118
BURCE	-0,0087	0,2155	-0,0051	0,9395	-0,0027	-0,0039	1,2168	6,6852	54,5982	-0,1498	-0,0052	-0,0052	-0,0122	-0,0057	-0,0952
BURVA	0,3989	0,2477	0,2944	2,6661	0,2006	1,0681	0,1808	11,3464	32,1687	15,6306	0,1212	0,1212	1,1233	0,6293	0,9123
CELHA	0,0945	0,0540	0,0886	4,4277	0,0803	0,2690	-1,3267	24,1833	15,0930	-2,5239	0,0612	0,0612	1,4281	0,8543	4,2711
CEMAS	-0,1548	1,0680	-0,1008	-1,9094	-0,0190	-0,0293	7,2412	1,8325	199,1800	-0,3173	-0,0624	-0,0624	-0,2894	-0,0234	-0,0272
CEMTS	0,7521	1,1534	0,4666	19,5258	0,0967	0,3402	0,6468	6,2339	58,5508	0,4867	0,0631	0,0857	4,0245	0,1141	0,0158
CUSAN	0,0359	0,1903	0,0315	2,1455	0,0160	0,0545	1,4093	7,7918	46,8444	0,2666	0,0187	0,0187	0,2540	0,0326	0,3447
DMSAS	0,2248	0,4457	0,1449	4,1652	0,0908	0,2968	0,7882	4,8402	75,4103	2,1827	0,0887	0,0887	0,4077	0,2433	3,9303
DOKTA	0,1213	0,0353	0,0643	2,6037	0,0576	0,0887	0,5744	30,1527	12,1051	1,3980	0,0883	0,0883	0,1366	0,5516	0,2570
ERBOS	-0,8360	0,8513	-0,7840	-25,4195	-0,1901	-0,6358	1,9878	3,6858	99,0276	-1,4513	-0,2350	-0,2175	-5,4945	-0,2575	-0,0622
EREGL	0,7754	1,4354	0,3873	20,8208	0,1261	0,2481	2,2516	1,9290	189,2131	2,0843	0,2039	0,2283	0,9835	0,1779	0,0439
ISDMR	1,4338	0,0137	0,5522	55,3187	0,1424	0,2621	2,1407	355,3200	1,0272	1,6653	0,2076	0,2385	1,1374	0,1836	0,2713
IZMDC	0,1583	0,0780	0,1242	4,1406	0,1123	0,1616	-0,5122	19,0819	19,1280	-1,1223	0,0996	0,0996	0,5761	1,1739	0,0511
KRDMA	0,3509	0,2989	0,2445	16,2608	0,1563	0,2872	0,4524	4,4267	82,4537	27,8798	0,2249	0,2249	0,8059	0,4332	0,0148
SARKY	-0,0829	0,1147	-0,0749	-0,9329	-0,0468	-0,2635	1,4035	32,2126	11,3310	-0,5682	-0,0241	-0,0209	-0,2984	-0,1681	-0,0047
TUCLK	-0,0584	0,0856	-0,0407	0,2446	-0,0276	-0,0530	3,0974	10,6519	34,2662	-1,3379	-0,0494	-0,0494	-0,1344	-0,0855	-0,5785
MIN	-0,8360	0,0137	-0,7840	-25,4195	-0,1901	-0,9085	-1,3267	1,8325	1,0272	-2,5239	-0,2350	-0,2175	-5,4945	-0,5535	-0,5785
MAX	1,4338	1,4354	0,5522	55,3187	0,2006	1,0681	7,2412	355,3200	199,1800	31,6339	0,2249	0,2385	4,0245	1,1739	4,2711

Appendix 5. Accomodation Sector 2017 CRITIC & TOPSIS Method Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	-0,0027	0,0872	-0,0008	0,9852	-0,0002	-0,0002	-260,5764	15,7470	23,1790	0,0077	-0,0015	-0,0015	-0,0012	-0,0003	-0,0274
AVTUR	0,7003	0,0093	0,1071	0,0000	0,0225	0,0230	-0,4278	114,0056	3,2016	-0,2436	0,6217	0,6217	0,1264	0,0285	0,0695
KSTUR	3,2300	5,8591	1,7352	5,0467	0,1766	0,2742	0,4030	0,8305	439,4680	1,3319	0,2839	0,4483	18,0687	0,1888	0,0534
MAALT	0,5825	3,1647	0,5615	1.833,8292	0,0849	0,1590	0,5615	0,1013	3.604,6922	2,3699	0,9042	0,9042	15,5938	0,1000	4,1719
MARTI	-0,0905	0,0068	-0,0270	0,3832	-0,0203	-0,0228	-1,0194	24,0303	15,1891	-23,6572	-0,3123	-0,3123	-0,0386	-0,0814	-0,1724
MERIT	0,0014	0,0035	0,0013	0,0000	0,0002	0,0003	1,7141	257,6805	1,4165	0,0008	0,0003	0,0003	0,0411	0,0002	0,0040
PKENT	0,0530	0,0538	0,0513	1,5409	0,0370	0,0523	-4,8126	19,9158	18,3271	0,7366	0,0428	0,0428	1,5363	0,1327	1,5677
TEKTU	0,0194	0,0131	0,0102	0,0000	0,0044	0,0059	4,4446	8,7225	41,8457	0,1823	0,1227	0,1227	0,0213	0,0077	0,0281
ULAS	-4,0636	0,6405	-1,6714	-89,1221	-0,5042	-0,7529	0,0043	0,0000	0,0000	-1,1281	0,0000	0,0000	-2,8391	-0,7219	-2,5083
MIN	-4,0636	0,0035	-1,6714	-89,1221	-0,5042	-0,7529	-260,5764	0,0000	0,0000	-23,6572	-0,3123	-0,3123	-2,8391	-0,7219	-2,5083
MAX	3,2300	5,8591	1,7352	1.833,8292	0,1766	0,2742	4,4446	257,6805	3.604,6922	2,3699	0,9042	0,9042	18,0687	0,1888	4,1719

Appendix 6. Accomodation Sector 2018 CRITIC & TOPSIS Method Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,4778	0,0674	0,2143	4,4054	0,0509	0,0521	-1,1814	17,3606	21,0246	19,8077	0,2623	0,2623	0,3885	0,0667	7,1380
AVTUR	0,3981	0,0070	0,0750	2,7216	0,0119	0,0140	2,0725	297,9586	1,2250	0,4716	0,2449	0,2449	0,0925	0,0142	0,0422
KSTUR	1,4924	3,1971	1,0971	2,2912	0,2218	0,4827	0,7520	0,5770	632,5452	0,7985	0,3130	0,4032	26,6612	0,2631	0,1664
MAALT	9,6027	15,5865	0,8818	25.061,2749	0,4685	1,9637	5,6198	0,0209	17.441,9252	5,3202	15,6739	15,6739	0,9710	0,9995	51,4261
MARTI	-0,1156	0,0056	-0,0407	-0,1298	-0,0360	-0,0403	-0,7154	34,9848	10,4331	0,5399	-0,3124	-0,3124	-0,0628	-0,3137	-0,3045
MERIT	2,1027	0,0018	1,6251	0,0000	0,2332	0,2800	3,3128	98,6466	3,7001	1,4383	1,1044	1,1044	7,1548	0,2723	14,9302
PKENT	0,0774	0,0236	0,0712	2,4766	0,0428	0,0920	1,1260	46,1257	7,9132	0,1970	0,0424	0,0424	0,8993	0,1073	3,1259
TEKTU	0,2983	0,0046	0,0694	2,6404	0,0184	0,0198	-17,6485	73,9574	4,9353	-0,4184	0,6977	0,6977	0,0904	0,0251	0,1574
ULAS	2,4469	1,7056	1,1831	0,0000	0,2821	0,5697	-0,8407	0,0000	0,0000	8,3835	0,0000	0,0000	2,2907	0,3704	1,3573
MIN	-0,1156	0,0018	-0,0407	-0,1298	-0,0360	-0,0403	-17,6485	0,0000	0,0000	-0,4184	-0,3124	-0,3124	-0,0628	-0,3137	-0,3045
MAX	9,6027	15,5865	1,6251	25.061,2749	0,4685	1,9637	5,6198	297,9586	17.441,9252	19,8077	15,6739	15,6739	26,6612	0,9995	51,4261

Appendix 7. Accomodation Sector 2019 CRITIC & TOPSIS Method Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	1,4033	0,2443	0,2202	3,8798	0,0448	0,0456	12,3923	13,1040	27,8541	4,5690	0,2666	0,2666	0,2611	0,0563	6,2084
AVTUR	0,0115	0,0107	0,0044	1,2024	0,0005	0,0006	0,1906	87,6037	4,1665	0,0069	0,0098	0,0098	0,0071	0,0006	0,0018
KSTUR	5,0014	7,8560	0,3240	6,9742	0,2815	0,5344	0,0341	0,8763	416,5158	1,0624	0,0310	0,3873	21,1882	0,3025	0,1925
MAALT	-0,4435	15,5071	-0,0482	-780,2262	-0,0225	-0,1055	0,6547	0,0200	18.212,4476	-0,2155	-0,7579	-0,7579	-0,0541	-0,0420	-2,6851
MARTI	-0,0190	0,0040	-0,0084	0,8118	-0,0080	-0,0091	2,3499	46,2753	7,8876	0,2052	-0,0587	-0,0587	-0,0150	-0,1600	-0,0731
MERIT	0,0077	0,0107	0,0052	0,0000	0,0005	0,0007	0,7647	12,0371	30,3230	0,0035	0,0017	0,0017	0,0156	0,0005	0,0338
PKENT	1,1505	0,1582	0,7377	0,0000	0,3328	0,5475	0,6999	23,5958	15,4689	1,5937	0,1731	0,2079	3,8575	0,5330	20,0188
TEKTU	0,0557	0,0026	0,0207	1,6996	0,0061	0,0066	1,9153	103,6824	3,5204	-0,1742	0,1615	0,1615	0,0330	0,0086	0,0526
ULAS	2,6768	1,1372	1,6351	0,0000	0,2939	0,5686	3,4655	0,0000	0,0000	-8,5202	0,0000	0,0000	4,2018	0,3584	1,2235
MIN	-0,4435	0,0026	-0,0482	-780,2262	-0,0225	-0,1055	0,0341	0,0000	0,0000	-8,5202	-0,7579	-0,7579	-0,0541	-0,1600	-2,6851
MAX	5,0014	15,5071	1,6351	6,9742	0,3328	0,5686	12,3923	103,6824	18.212,4476	4,5690	0,2666	0,3873	21,1882	0,5330	20,0188

Appendix 8. Accomodation Sector 2020 CRITIC & TOPSIS Method Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,2640	0,1021	0,0517	1,9745	0,0113	0,0114	6,9797	15,9019	22,9532	-0,2998	0,1399	0,1399	0,0644	0,0144	1,5110
AVTUR	0,1055	0,0914	0,0190	22,3850	0,0020	0,0023	1,1739	11,5824	31,5133	0,0842	0,0680	0,0680	0,0231	0,0022	0,0068
KSTUR	-3,7008	9,8688	-4,2829	-1,2442	-0,1323	-0,2255	-0,5951	0,4799	760,5423	-4,5001	-2,4346	-1,5882	-11,4008	-0,1389	-0,0850
MAALT	-0,6696	16,0765	-0,0671	-511,1947	-0,0270	-0,0825	0,6255	0,0264	13.834,1511	-0,2845	-0,9662	-0,9662	-0,0745	-0,0453	-3,4440
MARTI	0,0413	0,0006	0,0383	1,5704	0,0369	0,0407	-60,6522	40,2869	9,0600	-3,4920	0,9168	0,9168	0,5234	1,0001	0,4666
MERIT	0,0034	0,0247	0,0016	0,0000	0,0001	0,0002	0,4843	6,2913	58,0167	0,0022	0,0011	0,0011	0,0031	0,0001	0,0059
PKENT	0,0899	0,0655	0,0699	0,0000	0,0274	0,0437	-0,3178	28,2262	12,9313	-1,4578	0,0490	0,0490	0,3143	0,0450	1,6645
TEKTU	-0,0407	0,0138	-0,0105	0,7184	-0,0037	-0,0041	-1,2897	8,9673	40,7034	0,0873	-0,2352	-0,2352	-0,0142	-0,0058	-0,0260
ULAS	-0,6267	5,5508	-0,2393	-3,2532	-0,0297	-0,0429	1,0788	0,0000	0,0000	-0,1782	0,0000	0,0000	-0,3871	-0,0339	-0,0632
MIN	-3,7008	0,0006	-4,2829	-511,1947	-0,1323	-0,2255	-60,6522	0,0000	0,0000	-4,5001	-2,4346	-1,5882	-11,4008	-0,1389	-3,4440
MAX	0,2640	16,0765	0,0699	22,3850	0,0369	0,0437	6,9797	40,2869	13.834,1511	0,0873	0,9168	0,9168	0,5234	1,0001	1,6645

Appendix 9. Main Metal Industry Sector 2017 CRITIC Method Normalized Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
AYES	0,2457	0,0232	0,4563	0,2018	0,2888	0,2338	0,2658	0,3299	0,7000	0,0099	0,3107	0,3055	0,5138	0,5791	0,1274
BRSAN	0,3283	0,2642	0,5753	0,2108	0,4694	0,3893	0,3159	0,0000	1,0000	0,0798	0,2853	0,3384	0,6485	0,6706	0,1305
BURCE	0,2786	0,0790	0,5599	0,2039	0,3931	0,3577	0,4245	0,0292	0,6110	0,1281	0,2574	0,2466	0,6277	0,6323	0,0000
BURVA	0,5108	0,1320	0,9213	0,2315	0,9038	1,0000	0,3451	0,0213	0,5575	0,2348	0,6448	0,6396	0,8386	0,9549	0,2437
CELHA	0,4133	0,0837	0,7724	0,4343	0,7266	0,6421	0,0568	0,0331	0,6253	0,1594	0,4667	0,4685	0,9747	0,8748	0,9437
CEMAS	0,4471	0,0163	0,7821	0,2448	0,7066	0,5066	0,1834	0,0691	0,6726	0,0390	0,6944	0,6899	0,7080	0,8329	0,2507
CEMTS	0,0000	0,1118	0,0000	0,0000	0,0000	0,0000	0,3182	0,0347	0,6300	0,0302	0,0000	0,0000	0,0000	0,5065	0,1269
CUSAN	0,3154	0,2347	0,4669	0,1850	0,4476	0,3696	0,3577	0,0190	0,5283	0,0668	0,2496	0,3238	0,5893	0,6632	0,1017
DMSAS	0,4686	0,1327	0,8121	0,2414	0,7775	0,5764	0,3580	0,0261	0,5953	0,3690	0,5395	0,5327	0,7200	0,9312	1,0000
DOKTA	0,2428	0,0356	0,5632	0,2001	0,3399	0,3429	0,0000	0,0790	0,6772	0,0359	0,2571	0,2462	0,6374	0,0000	0,1065
ERBOS	0,4344	0,4624	0,7163	0,3375	0,6396	0,6058	0,3211	0,0137	0,3837	0,1063	0,4049	0,4583	1,0000	0,7333	0,1391
EREGL	0,6951	1,0000	0,9056	0,5521	0,7994	0,5724	0,4552	0,0101	0,0000	0,1340	0,5743	0,7074	0,7983	0,7820	0,1346
ISDMR	1,0000	0,0000	1,0000	1,0000	1,0000	0,6445	0,1741	1,0000	0,7044	0,1492	0,5741	0,8495	0,9323	0,8387	0,1677
IZMDC	0,3842	0,0843	0,7008	0,2331	0,6027	0,4437	1,0000	0,0311	0,6185	1,0000	0,4489	0,4408	0,6803	0,8024	0,1341
KRDMA	0,6004	0,2689	0,9804	0,3535	0,9837	0,6178	0,3559	0,0123	0,3006	0,3913	1,0000	1,0000	0,7769	1,0000	0,1328
SARKY	0,2523	0,0416	0,4684	0,1865	0,2579	0,1491	0,3254	0,1304	0,6895	0,0000	0,2915	0,2887	0,5257	0,5098	0,1294
TUCLK	0,2863	0,0970	0,5744	0,1965	0,4137	0,3670	0,0209	0,0277	0,6039	0,0038	0,2810	0,2705	0,6346	0,6442	0,0792
Standard Deviation	0,2205	0,2422	0,2484	0,2172	0,2792	0,2290	0,2235	0,2422	0,2092	0,2430	0,2305	0,2526	0,2282	0,2348	0,2841

Appendix 10. Main Metal Industry Sector 2018 CRITIC Method Normalized Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
AYES	0,4530	0,0940	0,4307	0,1104	0,8168	0,7648	0,5179	0,4246	0,9833	0,8102	0,8442	0,7651	0,4721	0,8444	0,2181
BRSAN	0,2857	0,2367	0,2140	0,1079	0,4645	0,3941	0,0000	0,0191	0,6082	0,7706	0,7018	0,6687	0,0832	0,5582	0,2129
BURCE	0,3884	0,0303	0,3365	0,1324	0,6383	0,4966	0,7490	0,1954	0,9509	1,0000	0,8908	0,8038	0,1276	0,7098	0,3533
BURVA	0,4455	0,1341	0,4015	0,1325	0,7677	0,8112	0,3472	0,0647	0,8465	0,9613	0,9270	0,8364	0,1678	0,8426	0,2652
CELHA	0,3101	0,0094	0,2309	0,0744	0,4871	0,3835	0,4089	0,4826	0,9867	0,7766	0,7625	0,7102	0,0368	0,5522	0,0000
CEMAS	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,8337	0,5154	0,9883	0,8139	0,0000	0,0000	0,0000	0,0944	0,1572
CEMTS	1,0000	0,1652	1,0000	0,2366	1,0000	1,0000	0,3566	0,1910	0,9495	0,7877	1,0000	0,9124	0,6613	0,8286	0,2180
CUSAN	0,4508	0,3375	0,4338	0,4383	0,8110	0,7804	0,7179	0,0094	0,4316	0,0000	0,9898	0,9115	1,0000	0,8288	0,5302
DMSAS	0,5280	0,3356	0,4637	0,1784	0,8752	0,7562	0,2620	0,0257	0,6772	0,7933	0,9864	0,8900	0,1801	0,9299	1,0000
DOKTA	0,3766	0,0285	0,3200	0,1342	0,6432	0,4933	0,5128	0,1857	0,9478	0,7861	0,8830	0,7967	0,1182	1,0000	0,2529
ERBOS	0,3621	0,5583	0,2409	0,1438	0,5945	0,5542	0,3813	0,0131	0,5134	0,7812	0,7852	0,7550	0,2178	0,6563	0,2172
EREGL	0,6199	1,0000	0,3674	0,4197	0,7767	0,6223	0,2316	0,0000	0,0000	0,7877	0,8842	0,9362	0,2096	0,7445	0,2181
ISDMR	0,8922	0,0088	0,4626	1,0000	0,9018	0,6976	0,2738	1,0000	1,0000	0,7884	0,9224	1,0000	0,2812	0,7957	0,2479
IZMDC	0,2708	0,0376	0,2224	0,1010	0,3778	0,3511	0,3034	0,2096	0,9548	0,7871	0,7348	0,6630	0,0722	0,0000	0,2096
KRDMA	0,3876	0,1096	0,3254	0,1499	0,6069	0,4801	0,1486	0,0712	0,8593	0,7827	0,8696	0,7846	0,1188	0,6720	0,2145
SARKY	0,3525	0,0489	0,2870	0,1308	0,5999	0,5216	0,2666	0,4798	0,9866	0,7850	0,8121	0,7414	0,1284	0,6918	0,2145
TUCLK	0,2277	0,0138	0,1899	0,0802	0,3766	0,3455	1,0000	0,3351	0,9757	0,8073	0,6636	0,5987	0,0670	0,4814	0,0619
Standard Deviation	0,2357	0,2602	0,2060	0,2326	0,2442	0,2354	0,2623	0,2665	0,2756	0,2076	0,2298	0,2214	0,2569	0,2683	0,2181

Appendix 11. Main Metal Industry Sector 2019 CRITIC Method Normalized Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
AYES	0,0369	0,0958	0,0550	0,4495	0,0980	0,0541	0,1116	0,0464	0,9041	0,0341	0,2211	0,1958	0,2800	0,0031	0,1182
BRSAN	0,0975	0,1475	0,1292	0,4775	0,3748	0,3271	0,0914	0,0053	0,5103	0,4379	0,3986	0,4277	0,6328	0,1161	0,1199
BURCE	0,1083	0,0282	0,1525	0,4713	0,3743	0,3150	1,0000	0,0387	0,8864	0,1247	0,5851	0,5019	0,6309	0,1092	0,2111
BURVA	0,0668	0,0214	0,1102	0,4611	0,2652	0,2644	0,0000	0,0341	0,8723	0,2489	0,2848	0,2443	0,6135	0,0753	0,1182
CELHA	0,1393	0,0379	0,2009	0,7410	0,7718	0,7590	0,2997	0,0346	0,8741	0,0000	0,6848	0,6765	0,9614	0,6244	1,0000
CEMAS	0,0873	0,0052	0,1325	0,4732	0,3383	0,3100	0,1118	0,1513	0,9719	0,2031	0,4992	0,4283	0,6238	0,1058	0,1220
CEMTS	1,0000	1,0000	1,0000	0,9217	1,0000	1,0000	0,0922	0,0081	0,6116	0,3693	1,0000	0,8988	1,0000	0,2096	0,1217
CUSAN	0,0000	0,0593	0,0000	0,0000	0,0000	0,0000	0,1025	0,0334	0,8701	0,0815	0,0000	0,0000	0,0000	0,0000	0,0000
DMSAS	0,1414	0,1593	0,1834	0,4852	0,4888	0,4363	0,1000	0,0163	0,7628	0,3079	0,5251	0,4505	0,6419	0,1591	0,3185
DOKTA	0,1171	0,0543	0,1391	0,4736	0,4016	0,3321	0,0564	0,0353	0,8764	0,2645	0,5056	0,4337	0,6212	0,4079	0,1399
ERBOS	0,0611	0,2959	0,0558	0,4497	0,2447	0,2067	0,0938	0,0025	0,3243	0,2222	0,1418	0,2286	0,5703	0,0711	0,1190
EREGL	0,2940	0,4990	0,1949	0,6924	0,6699	0,5205	0,0924	0,0000	0,0000	0,3327	0,6080	1,0000	0,7109	0,1696	0,1222
ISDMR	0,4247	0,0073	0,1182	1,0000	0,6948	0,5050	0,1028	0,5665	0,9961	0,3114	0,3144	0,8683	0,7285	0,1651	0,1355
IZMDC	0,1445	0,0493	0,2115	0,5028	0,7437	0,4874	0,1139	0,0239	0,8259	0,1533	0,9166	0,7863	0,6860	1,0000	0,1257
KRDMA	0,1833	0,0289	0,2046	0,6080	0,6208	0,4396	0,1327	0,0577	0,9223	1,0000	0,8179	0,8266	0,6637	0,2025	0,1200
SARKY	0,0861	0,0301	0,1177	0,4729	0,3586	0,3862	0,0779	0,1489	0,9713	0,2683	0,3115	0,2946	0,6318	0,1268	0,1195
TUCLK	0,0784	0,0000	0,1242	0,4671	0,3103	0,2929	0,1032	1,0000	1,0000	0,3387	0,3657	0,3137	0,6215	0,0937	0,1341
Standard Deviation	0,2336	0,2541	0,2181	0,2196	0,2607	0,2366	0,2246	0,2614	0,2704	0,2219	0,2708	0,2894	0,2223	0,2519	0,2187

Appendix 12. Main Metal Industry Sector 2020 CRITIC Method Normalized Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
AYES	0,2072	0,2063	0,3873	0,3148	0,0337	0,0000	0,5367	0,0571	0,9215	0,0165	0,3993	0,3671	0,4828	0,0000	0,1089
BRSAN	0,3215	0,1680	0,5314	0,3024	0,3808	0,4257	0,3948	0,0069	0,5746	1,0000	0,3173	0,2817	0,5516	0,2915	0,1169
BURCE	0,3645	0,1419	0,5829	0,3265	0,4797	0,4576	0,7031	0,0137	0,7296	0,0695	0,4998	0,4657	0,5759	0,3171	0,0996
BURVA	0,5441	0,1646	0,8070	0,3479	1,0000	1,0000	0,8241	0,0269	0,8428	0,5315	0,7746	0,7429	0,6952	0,6848	0,3074
CELHA	0,4099	0,0284	0,6530	0,3697	0,6921	0,5957	1,0000	0,0632	0,9290	0,0000	0,6441	0,6113	0,7272	0,8150	1,0000
CEMAS	0,3001	0,7415	0,5113	0,2912	0,4379	0,4448	0,0000	0,0000	0,0000	0,0646	0,3753	0,3402	0,5468	0,3069	0,1137
CEMTS	0,6997	0,8016	0,9359	0,5567	0,7341	0,6317	0,7697	0,0125	0,7097	0,0881	0,6482	0,6650	1,0000	0,3865	0,1225
CUSAN	0,3841	0,1242	0,6103	0,3414	0,5276	0,4872	0,6807	0,0169	0,7688	0,0817	0,5517	0,5181	0,6039	0,3393	0,1904
DMSAS	0,4673	0,3038	0,6952	0,3664	0,7191	0,6098	0,7532	0,0085	0,6246	0,1378	0,7040	0,6717	0,6200	0,4613	0,9297
DOKTA	0,4218	0,0152	0,6348	0,3471	0,6339	0,5045	0,7781	0,0801	0,9441	0,1148	0,7031	0,6707	0,5916	0,6397	0,1723
ERBOS	0,0000	0,5891	0,0000	0,0000	0,0000	0,1379	0,6131	0,0052	0,5054	0,0314	0,0000	0,0000	0,0000	0,1714	0,1065
EREGL	0,7099	1,0000	0,8766	0,5727	0,8095	0,5851	0,5824	0,0003	0,0503	0,1349	0,9544	0,9777	0,6805	0,4234	0,1283
ISDMR	1,0000	0,0000	1,0000	1,0000	0,8511	0,5923	0,5953	1,0000	1,0000	0,1226	0,9625	1,0000	0,6967	0,4267	0,1752
IZMDC	0,4381	0,0452	0,6797	0,3661	0,7741	0,5414	0,9049	0,0488	0,9087	0,0410	0,7276	0,6955	0,6377	1,0000	0,1298
KRDMA	0,5229	0,2006	0,7697	0,5162	0,8867	0,6049	0,7923	0,0073	0,5891	0,8901	1,0000	0,9702	0,6619	0,5712	0,1223
SARKY	0,3318	0,0710	0,5307	0,3033	0,3667	0,3263	0,6813	0,0859	0,9480	0,0573	0,4586	0,4312	0,5459	0,2231	0,1183
TUCLK	0,3426	0,0506	0,5563	0,3179	0,4160	0,4328	0,4836	0,0249	0,8323	0,0347	0,4037	0,3688	0,5631	0,2709	0,0000
Standard Deviation	0,2215	0,3106	0,2300	0,2013	0,2819	0,2154	0,2265	0,2372	0,2940	0,3046	0,2611	0,2696	0,1921	0,2475	0,2827

Appendix 13. Accomodation Sector 2017 CRITIC Method Normalized Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
AYCES	0,5568	0,0143	0,4904	0,0469	0,7403	0,7328	1,0000	0,0611	0,9936	0,9092	0,2555	0,2555	0,1357	0,7924	0,3714
AVTUR	0,6532	0,0010	0,5221	0,0463	0,7736	0,7554	0,0184	0,4424	0,9991	0,8996	0,7678	0,7678	0,1418	0,8240	0,3859
KSTUR	1,0000	1,0000	1,0000	0,0490	1,0000	1,0000	0,0153	0,0032	0,8781	0,9601	0,4901	0,6252	1,0000	1,0000	0,3835
MAALT	0,6370	0,5399	0,6555	1,0000	0,8653	0,8878	0,0147	0,0004	0,0000	1,0000	1,0000	1,0000	0,8816	0,9026	1,0000
MARTI	0,5447	0,0006	0,4827	0,0465	0,7107	0,7108	0,0206	0,0933	0,9958	0,0000	0,0000	0,0000	0,1339	0,7033	0,3497
MERIT	0,5573	0,0000	0,4910	0,0463	0,7408	0,7333	0,0103	1,0000	0,9996	0,9090	0,2569	0,2569	0,1378	0,7929	0,3761
PKENT	0,5644	0,0086	0,5057	0,0471	0,7949	0,7839	0,0349	0,0773	0,9949	0,9372	0,2918	0,2918	0,2093	0,9384	0,6102
TEKTU	0,5598	0,0016	0,4936	0,0463	0,7470	0,7388	0,0000	0,0339	0,9884	0,9159	0,3576	0,3576	0,1368	0,8011	0,3797
ULAS	0,0000	0,1088	0,0000	0,0000	0,0000	0,0000	0,0168	0,0000	1,0000	0,8656	0,2567	0,2567	0,0000	0,0000	0,0000
Standard Deviation	0,2554	0,3521	0,2557	0,3200	0,2799	0,2804	0,3280	0,3335	0,3294	0,3106	0,3038	0,3115	0,3637	0,2953	0,2650

Appendix 14. Accomodation Sector 2018 CRITIC Method Normalized Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
AYCES	0,0611	0,0042	0,1531	0,0002	0,1722	0,0461	0,2923	0,0583	0,9988	1,0000	0,0360	0,0360	0,0169	0,2897	0,1439
AVTUR	0,0529	0,0003	0,0695	0,0001	0,0951	0,0271	0,1525	1,0000	0,9999	0,0440	0,0349	0,0349	0,0058	0,2497	0,0067
KSTUR	0,1655	0,2050	0,6830	0,0001	0,5111	0,2610	0,2092	0,0019	0,9637	0,0602	0,0391	0,0448	1,0000	0,4393	0,0091
MAALT	1,0000	1,0000	0,5538	1,0000	1,0000	1,0000	0,0000	0,0001	0,0000	0,2837	1,0000	1,0000	0,0387	1,0000	1,0000
MARTI	0,0000	0,0002	0,0000	0,0000	0,0000	0,0000	0,2723	0,1174	0,9994	0,0474	0,0000	0,0000	0,0000	0,0000	0,0000
MERIT	0,2283	0,0000	1,0000	0,0000	0,5336	0,1598	0,0991	0,3311	0,9998	0,0918	0,0886	0,0886	0,2701	0,4462	0,2945
PKENT	0,0199	0,0014	0,0672	0,0001	0,1562	0,0660	0,1931	0,1548	0,9995	0,0304	0,0222	0,0222	0,0360	0,3206	0,0663
TEKTU	0,0426	0,0002	0,0661	0,0001	0,1079	0,0300	1,0000	0,2482	0,9997	0,0000	0,0632	0,0632	0,0057	0,2580	0,0089
ULAS	0,2637	0,1093	0,7347	0,0000	0,6305	0,3044	0,2777	0,0000	1,0000	0,4352	0,0195	0,0195	0,0881	0,5210	0,0321
Standard Deviation	0,3131	0,3279	0,3742	0,3333	0,3309	0,3154	0,2869	0,3175	0,3319	0,3252	0,3217	0,3215	0,3253	0,2736	0,3244

Appendix 15. Accomodation Sector 2019 CRITIC Method Normalized Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
AYCES	0,3392	0,0156	0,1594	0,9961	0,1894	0,2243	0,0000	0,1264	0,9985	1,0000	1,0000	0,8946	0,0148	0,3122	0,3917
AVTUR	0,0836	0,0005	0,0312	0,9927	0,0646	0,1574	0,9873	0,8449	0,9998	0,6515	0,7494	0,6704	0,0029	0,2317	0,1183
KSTUR	1,0000	0,5065	0,2211	1,0000	0,8554	0,9493	1,0000	0,0085	0,9771	0,7321	0,7701	1,0000	1,0000	0,6674	0,1267
MAALT	0,0000	1,0000	0,0000	0,0000	0,0000	0,0000	0,9498	0,0002	0,0000	0,6345	0,0000	0,0000	0,0000	0,1703	0,0000
MARTI	0,0780	0,0001	0,0237	0,9922	0,0408	0,1430	0,8126	0,4463	0,9996	0,6666	0,6825	0,6106	0,0018	0,0000	0,1150
MERIT	0,0829	0,0005	0,0317	0,9911	0,0646	0,1576	0,9409	0,1161	0,9983	0,6512	0,7415	0,6633	0,0033	0,2317	0,1198
PKENT	0,2928	0,0100	0,4669	0,9911	1,0000	0,9687	0,9461	0,2276	0,9992	0,7727	0,9088	0,8434	0,1841	1,0000	1,0000
TEKTU	0,0917	0,0000	0,0409	0,9933	0,0804	0,1664	0,8478	1,0000	0,9998	0,6376	0,8975	0,8028	0,0041	0,2434	0,1206
ULAS	0,5731	0,0732	1,0000	0,9911	0,8905	1,0000	0,7223	0,0000	1,0000	0,0000	0,7398	0,6618	0,2003	0,7480	0,1722
Standard Deviation	0,3240	0,3492	0,3285	0,3312	0,4257	0,4200	0,3137	0,3778	0,3323	0,2661	0,2893	0,2868	0,3265	0,3268	0,3031

Appendix 16. Accomodation Sector 2020 CRITIC Method Normalized Decision Matrix

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
AYCES	1,0000	0,0063	0,9958	0,9617	0,8487	0,8799	0,0000	0,3947	0,9983	0,9156	0,7682	0,6898	0,9615	0,1346	0,9699
AVTUR	0,9600	0,0056	0,9883	1,0000	0,7940	0,8461	0,0858	0,2875	0,9977	0,9993	0,7467	0,6612	0,9580	0,1239	0,6755
KSTUR	0,0000	0,6138	0,0000	0,9557	0,0000	0,0000	0,1120	0,0119	0,9450	0,0000	0,0000	0,0000	0,0000	0,0000	0,6575
MAALT	0,7645	1,0000	0,9685	0,0000	0,6223	0,5312	0,0940	0,0007	0,0000	0,9190	0,4381	0,2483	0,9499	0,0822	0,0000
MARTI	0,9438	0,0000	0,9927	0,9610	1,0000	0,9890	1,0000	1,0000	0,9993	0,2197	1,0000	1,0000	1,0000	1,0000	0,7655
MERIT	0,9343	0,0015	0,9843	0,9580	0,7828	0,8383	0,0960	0,1562	0,9958	0,9815	0,7268	0,6344	0,9564	0,1221	0,6753
PKENT	0,9561	0,0040	1,0000	0,9580	0,9439	1,0000	0,1079	0,7006	0,9991	0,6632	0,7411	0,6536	0,9825	0,1615	1,0000
TEKTU	0,9231	0,0008	0,9815	0,9594	0,7600	0,8224	0,1223	0,2226	0,9971	1,0000	0,6563	0,5401	0,9549	0,1169	0,6691
ULAS	0,7753	0,3452	0,9290	0,9520	0,6067	0,6783	0,0872	0,0000	1,0000	0,9421	0,7264	0,6340	0,9236	0,0922	0,6618
Standard Deviation	0,3133	0,3643	0,3274	0,3214	0,2948	0,3105	0,3060	0,3443	0,3310	0,3743	0,2813	0,2854	0,3210	0,3021	0,2866

Appendix 17. Main Metal Industry Sector 2017 CRITIC Method Correlation Matrix

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	1,0000	0,2938	0,8806	0,9173	0,8938	0,7083	0,0283	0,5819	-0,3507	0,2172	0,7231	0,8817	0,7336	0,5715	0,1321
A2	0,2938	1,0000	0,2566	0,2081	0,2548	0,2175	0,2198	-0,2930	-0,7711	-0,0120	0,1923	0,2671	0,2368	0,1904	-0,1146
A3	0,8806	0,2566	1,0000	0,6902	0,9661	0,8742	0,0447	0,2437	-0,3668	0,3434	0,8776	0,9116	0,8748	0,6266	0,2727
A4	0,9173	0,2081	0,6902	1,0000	0,6941	0,4950	-0,1159	0,7551	-0,2312	0,0612	0,4667	0,6808	0,6478	0,3606	0,1065
B1	0,8938	0,2548	0,9661	0,6941	1,0000	0,8993	0,0748	0,2557	-0,3812	0,3721	0,8916	0,9389	0,8161	0,7432	0,3293
B2	0,7083	0,2175	0,8742	0,4950	0,8993	1,0000	0,0117	0,0737	-0,3123	0,2908	0,7371	0,7433	0,8257	0,6543	0,3374
B3	0,0283	0,2198	0,0447	-0,1159	0,0748	0,0117	1,0000	-0,1949	-0,1999	0,7982	0,0939	0,0697	-0,0789	0,3110	-0,1693
B4	0,5819	-0,2930	0,2437	0,7551	0,2557	0,0737	-0,1949	1,0000	0,2234	-0,1060	0,0945	0,3077	0,1851	0,0399	-0,0918
B5	-0,3507	-0,7711	-0,3668	-0,2312	-0,3812	-0,3123	-0,1999	0,2234	1,0000	-0,1302	-0,4205	-0,4304	-0,2624	-0,2873	0,0506
C1	0,2172	-0,0120	0,3434	0,0612	0,3721	0,2908	0,7982	-0,1060	-0,1302	1,0000	0,3632	0,3003	0,2014	0,4137	0,1580
C2	0,7231	0,1923	0,8776	0,4667	0,8916	0,7371	0,0939	0,0945	-0,4205	0,3632	1,0000	0,9564	0,6356	0,6945	0,2222
C3	0,8817	0,2671	0,9116	0,6808	0,9389	0,7433	0,0697	0,3077	-0,4304	0,3003	0,9564	1,0000	0,6827	0,6877	0,1613
D1	0,7336	0,2368	0,8748	0,6478	0,8161	0,8257	-0,0789	0,1851	-0,2624	0,2014	0,6356	0,6827	1,0000	0,4786	0,3083
D2	0,5715	0,1904	0,6266	0,3606	0,7432	0,6543	0,3110	0,0399	-0,2873	0,4137	0,6945	0,6877	0,4786	1,0000	0,3935
D3	0,1321	-0,1146	0,2727	0,1065	0,3293	0,3374	-0,1693	-0,0918	0,0506	0,1580	0,2222	0,1613	0,3083	0,3935	1,0000

Appendix 18. Main Metal Industry Sector 2018 CRITIC Method Correlation Matrix

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	1,0000	0,2360	0,8934	0,6883	0,8757	0,8273	-0,3593	0,1312	-0,1315	-0,0391	0,6938	0,7663	0,5226	0,5941	0,2122
A2	0,2360	1,0000	0,1199	0,1904	0,3027	0,2780	-0,2995	-0,5497	-0,9566	-0,1985	0,2431	0,3357	0,2131	0,2333	0,2300
A3	0,8934	0,1199	1,0000	0,3504	0,8415	0,8779	-0,2319	-0,0896	-0,0222	-0,0957	0,6811	0,6614	0,6446	0,5882	0,2693
A4	0,6883	0,1904	0,3504	1,0000	0,5424	0,4167	-0,1992	0,4383	-0,2097	-0,2786	0,3897	0,5534	0,3824	0,3338	0,1453
B1	0,8757	0,3027	0,8415	0,5424	1,0000	0,9617	-0,3497	-0,1108	-0,2365	-0,1565	0,8934	0,9082	0,6135	0,8319	0,4402
B2	0,8273	0,2780	0,8779	0,4167	0,9617	1,0000	-0,2854	-0,1922	-0,2106	-0,1949	0,8391	0,8245	0,6941	0,7649	0,4137
B3	-0,3593	-0,2995	-0,2319	-0,1992	-0,3497	-0,2854	1,0000	0,1722	0,2641	-0,1618	-0,3819	-0,4310	0,1195	-0,1873	-0,1181
B4	0,1312	-0,5497	-0,0896	0,4383	-0,1108	-0,1922	0,1722	1,0000	0,6038	0,1811	-0,2736	-0,1763	-0,1547	-0,1669	-0,3480
B5	-0,1315	-0,9566	-0,0222	-0,2097	-0,2365	-0,2106	0,2641	0,6038	1,0000	0,3773	-0,2252	-0,3111	-0,2678	-0,2059	-0,2713
C1	-0,0391	-0,1985	-0,0957	-0,2786	-0,1565	-0,1949	-0,1618	0,1811	0,3773	1,0000	-0,1659	-0,1631	-0,7459	-0,1126	-0,2586
C2	0,6938	0,2431	0,6811	0,3897	0,8934	0,8391	-0,3819	-0,2736	-0,2252	-0,1659	1,0000	0,9751	0,4670	0,7493	0,3812
C3	0,7663	0,3357	0,6614	0,5534	0,9082	0,8245	-0,4310	-0,1763	-0,3111	-0,1631	0,9751	1,0000	0,4521	0,7372	0,3340
D1	0,5226	0,2131	0,6446	0,3824	0,6135	0,6941	0,1195	-0,1547	-0,2678	-0,7459	0,4670	0,4521	1,0000	0,4346	0,2955
D2	0,5941	0,2333	0,5882	0,3338	0,8319	0,7649	-0,1873	-0,1669	-0,2059	-0,1126	0,7493	0,7372	0,4346	1,0000	0,4126
D3	0,2122	0,2300	0,2693	0,1453	0,4402	0,4137	-0,1181	-0,3480	-0,2713	-0,2586	0,3812	0,3340	0,2955	0,4126	1,0000

Appendix 19. Main Metal Industry Sector 2019 CRITIC Method Correlation Matrix

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	1,0000	0,8271	0,9258	0,7341	0,7553	0,8020	-0,0785	-0,0104	-0,2160	0,2252	0,5780	0,6558	0,5958	0,0765	-0,0315
A2	0,8271	1,0000	0,8424	0,4244	0,5089	0,5981	-0,1418	-0,2735	-0,6164	0,1082	0,4141	0,4223	0,3918	-0,0685	-0,1121
A3	0,9258	0,8424	1,0000	0,5691	0,7137	0,8092	-0,0272	-0,1361	-0,1739	0,1991	0,6939	0,5392	0,6126	0,1605	0,0435
A4	0,7341	0,4244	0,5691	1,0000	0,8346	0,8062	-0,0139	0,1673	-0,1270	0,2474	0,5576	0,8173	0,8257	0,2320	0,3026
B1	0,7553	0,5089	0,7137	0,8346	1,0000	0,9531	0,0128	-0,0508	-0,1891	0,2820	0,8552	0,9197	0,8620	0,5737	0,3684
B2	0,8020	0,5981	0,8092	0,8062	0,9531	1,0000	0,0166	-0,0611	-0,1692	0,1952	0,7984	0,7939	0,8979	0,4530	0,4534
B3	-0,0785	-0,1418	-0,0272	-0,0139	0,0128	0,0166	1,0000	-0,0900	0,1280	-0,2161	0,1712	0,0678	0,0846	0,0030	0,2455
B4	-0,0104	-0,2735	-0,1361	0,1673	-0,0508	-0,0611	-0,0900	1,0000	0,3875	0,0820	-0,1960	-0,0310	0,0411	-0,1574	-0,0943
B5	-0,2160	-0,6164	-0,1739	-0,1270	-0,1891	-0,1692	0,1280	0,3875	1,0000	-0,0723	-0,0802	-0,2905	-0,1509	0,0695	0,0956
C1	0,2252	0,1082	0,1991	0,2474	0,2820	0,1952	-0,2161	0,0820	-0,0723	1,0000	0,3419	0,3950	0,2284	-0,1359	-0,2913
C2	0,5780	0,4141	0,6939	0,5576	0,8552	0,7984	0,1712	-0,1960	-0,0802	0,3419	1,0000	0,7968	0,7347	0,6248	0,2705
C3	0,6558	0,4223	0,5392	0,8173	0,9197	0,7939	0,0678	-0,0310	-0,2905	0,3950	0,7968	1,0000	0,7323	0,4646	0,2046
D1	0,5958	0,3918	0,6126	0,8257	0,8620	0,8979	0,0846	0,0411	-0,1509	0,2284	0,7347	0,7323	1,0000	0,4329	0,4869
D2	0,0765	-0,0685	0,1605	0,2320	0,5737	0,4530	0,0030	-0,1574	0,0695	-0,1359	0,6248	0,4646	0,4329	1,0000	0,4227
D3	-0,0315	-0,1121	0,0435	0,3026	0,3684	0,4534	0,2455	-0,0943	0,0956	-0,2913	0,2705	0,2046	0,4869	0,4227	1,0000

Appendix 20. Main Metal Industry Sector 2020 CRITIC Method Correlation Matrix

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	1,0000	0,0561	0,9429	0,9506	0,7979	0,6431	0,2148	0,6358	0,0844	0,0899	0,8453	0,8749	0,7448	0,3497	0,0690
A2	0,0561	1,0000	0,0103	-0,0357	-0,0476	-0,0259	-0,3877	-0,2950	-0,8282	-0,1019	-0,0664	-0,0224	0,0124	-0,2705	-0,1583
A3	0,9429	0,0103	1,0000	0,8510	0,8833	0,7544	0,2847	0,4018	0,0949	0,1623	0,8880	0,8947	0,8998	0,4652	0,1399
A4	0,9506	-0,0357	0,8510	1,0000	0,6380	0,4241	0,1063	0,7681	0,1379	0,0709	0,7816	0,8134	0,6488	0,2056	0,0012
B1	0,7979	-0,0476	0,8833	0,6380	1,0000	0,9253	0,4454	0,2415	0,0479	0,2664	0,8941	0,8852	0,7362	0,7408	0,2820
B2	0,6431	-0,0259	0,7544	0,4241	0,9253	1,0000	0,3728	0,0974	0,0101	0,3064	0,6820	0,6687	0,6547	0,6786	0,3150
B3	0,2148	-0,3877	0,2847	0,1063	0,4454	0,3728	1,0000	-0,0164	0,6129	-0,0484	0,4289	0,4154	0,2919	0,6184	0,4423
B4	0,6358	-0,2950	0,4018	0,7681	0,2415	0,0974	-0,0164	1,0000	0,3452	-0,1038	0,3629	0,4038	0,1367	0,0213	-0,0360
B5	0,0844	-0,8282	0,0949	0,1379	0,0479	0,0101	0,6129	0,3452	1,0000	-0,1318	0,0905	0,0736	0,1505	0,2201	0,1416
C1	0,0899	-0,1019	0,1623	0,0709	0,2664	0,3064	-0,0484	-0,1038	-0,1318	1,0000	0,1940	0,1724	0,0988	0,0910	-0,1151
C2	0,8453	-0,0664	0,8880	0,7816	0,8941	0,6820	0,4289	0,3629	0,0905	0,1940	1,0000	0,9965	0,7004	0,5750	0,1948
C3	0,8749	-0,0224	0,8947	0,8134	0,8852	0,6687	0,4154	0,4038	0,0736	0,1724	0,9965	1,0000	0,6927	0,5471	0,1733
D1	0,7448	0,0124	0,8998	0,6488	0,7362	0,6547	0,2919	0,1367	0,1505	0,0988	0,7004	0,6927	1,0000	0,4237	0,1962
D2	0,3497	-0,2705	0,4652	0,2056	0,7408	0,6786	0,6184	0,0213	0,2201	0,0910	0,5750	0,5471	0,4237	1,0000	0,4031
D3	0,0690	-0,1583	0,1399	0,0012	0,2820	0,3150	0,4423	-0,0360	0,1416	-0,1151	0,1948	0,1733	0,1962	0,4031	1,0000

Appendix 21. Accomodation Sector 2017 CRITIC Method Correlation Matrix

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	1,0000	0,5761	0,9835	0,1486	0,9499	0,9485	-0,0111	0,0475	-0,1878	0,1100	0,3328	0,4171	0,6847	0,9113	0,4849
A2	0,5761	1,0000	0,6987	0,3803	0,3819	0,4033	-0,1849	-0,3331	-0,4826	0,2757	0,4456	0,5598	0,9402	0,3032	0,2914
A3	0,9835	0,6987	1,0000	0,2421	0,9178	0,9226	-0,0382	-0,0386	-0,2942	0,1406	0,3640	0,4576	0,7959	0,8708	0,5228
A4	0,1486	0,3803	0,2421	1,0000	0,2562	0,2898	-0,1200	-0,2024	-0,9931	0,2115	0,7344	0,6993	0,6040	0,2389	0,8327
B1	0,9499	0,3819	0,9178	0,2562	1,0000	0,9992	0,0432	0,0977	-0,2630	0,0858	0,3304	0,3788	0,5802	0,9888	0,6530
B2	0,9485	0,4033	0,9226	0,2898	0,9992	1,0000	0,0375	0,0822	-0,2978	0,0844	0,3455	0,3940	0,6049	0,9855	0,6734
B3	-0,0111	-0,1849	-0,0382	-0,1200	0,0432	0,0375	1,0000	-0,1495	0,1404	0,1009	-0,1921	-0,2055	-0,1791	0,0552	-0,0765
B4	0,0475	-0,3331	-0,0386	-0,2024	0,0977	0,0822	-0,1495	1,0000	0,2454	0,0758	-0,0620	-0,0909	-0,2910	0,1144	-0,0985
B5	-0,1878	-0,4826	-0,2942	-0,9931	-0,2630	-0,2978	0,1404	0,2454	1,0000	-0,2369	-0,7469	-0,7272	-0,6811	-0,2366	-0,8101
C1	0,1100	0,2757	0,1406	0,2115	0,0858	0,0844	0,1009	0,0758	-0,2369	1,0000	0,5682	0,5782	0,2845	0,1459	0,2204
C2	0,3328	0,4456	0,3640	0,7344	0,3304	0,3455	-0,1921	-0,0620	-0,7469	0,5682	1,0000	0,9896	0,5954	0,3241	0,6434
C3	0,4171	0,5598	0,4576	0,6993	0,3788	0,3940	-0,2055	-0,0909	-0,7272	0,5782	0,9896	1,0000	0,6837	0,3618	0,6181
D1	0,6847	0,9402	0,7959	0,6040	0,5802	0,6049	-0,1791	-0,2910	-0,6811	0,2845	0,5954	0,6837	1,0000	0,5183	0,5949
D2	0,9113	0,3032	0,8708	0,2389	0,9888	0,9855	0,0552	0,1144	-0,2366	0,1459	0,3241	0,3618	0,5183	1,0000	0,6788
D3	0,4849	0,2914	0,5228	0,8327	0,6530	0,6734	-0,0765	-0,0985	-0,8101	0,2204	0,6434	0,6181	0,5949	0,6788	1,0000

Appendix 22. Accomodation Sector 2018 CRITIC Method Correlation Matrix

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	1,0000	0,9667	0,4567	0,9537	0,8960	0,9885	-0,4256	-0,3063	-0,9556	0,1073	0,9599	0,9603	-0,0079	0,9369	0,9474
A2	0,9667	1,0000	0,2921	0,9758	0,8113	0,9780	-0,3870	-0,3353	-0,9819	0,0651	0,9706	0,9716	0,0457	0,8800	0,9128
A3	0,4567	0,2921	1,0000	0,1844	0,7723	0,4560	-0,3987	-0,2832	-0,1961	0,0320	0,2235	0,2255	0,5184	0,5862	0,3381
A4	0,9537	0,9758	0,1844	1,0000	0,7295	0,9388	-0,3625	-0,2508	-0,9994	0,0719	0,9968	0,9968	-0,1426	0,8338	0,9553
B1	0,8960	0,8113	0,7723	0,7295	1,0000	0,9101	-0,4629	-0,4134	-0,7384	0,1266	0,7457	0,7472	0,2770	0,9485	0,7714
B2	0,9885	0,9780	0,4560	0,9388	0,9101	1,0000	-0,4284	-0,3764	-0,9444	0,0932	0,9387	0,9397	0,0798	0,9441	0,9065
B3	-0,4256	-0,3870	-0,3987	-0,3625	-0,4629	-0,4284	1,0000	-0,0239	0,3671	-0,1238	-0,3465	-0,3472	-0,1692	-0,4045	-0,4408
B4	-0,3063	-0,3353	-0,2832	-0,2508	-0,4134	-0,3764	-0,0239	1,0000	0,2612	-0,3393	-0,2342	-0,2358	-0,2484	-0,3162	-0,2507
B5	-0,9556	-0,9819	-0,1961	-0,9994	-0,7384	-0,9444	0,3671	0,2612	1,0000	-0,0661	-0,9962	-0,9964	0,1084	-0,8392	-0,9522
C1	0,1073	0,0651	0,0320	0,0719	0,1266	0,0932	-0,1238	-0,3393	-0,0661	1,0000	0,0625	0,0614	-0,2021	0,1516	0,1490
C2	0,9599	0,9706	0,2235	0,9968	0,7457	0,9387	-0,3465	-0,2342	-0,9962	0,0625	1,0000	1,0000	-0,1268	0,8506	0,9681
C3	0,9603	0,9716	0,2255	0,9968	0,7472	0,9397	-0,3472	-0,2358	-0,9964	0,0614	1,0000	1,0000	-0,1213	0,8516	0,9676
D1	-0,0079	0,0457	0,5184	-0,1426	0,2770	0,0798	-0,1692	-0,2484	0,1084	-0,2021	-0,1268	-0,1213	1,0000	0,1285	-0,1403
D2	0,9369	0,8800	0,5862	0,8338	0,9485	0,9441	-0,4045	-0,3162	-0,8392	0,1516	0,8506	0,8516	0,1285	1,0000	0,8555
D3	0,9474	0,9128	0,3381	0,9553	0,7714	0,9065	-0,4408	-0,2507	-0,9522	0,1490	0,9681	0,9676	-0,1403	0,8555	1,0000

Appendix 23. Accommodation Sector 2019 CRITIC Method Correlation Matrix

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	1,0000	0,1140	0,5146	0,3326	0,7654	0,8001	-0,0520	-0,4670	0,3092	-0,1538	0,3021	0,5733	0,9171	0,6349	0,1015
A2	0,1140	1,0000	-0,1745	-0,8787	-0,0480	-0,0894	0,2663	-0,4597	-0,8922	0,0050	-0,8520	-0,6478	0,2975	-0,0714	-0,3464
A3	0,5146	-0,1745	1,0000	0,2486	0,7921	0,8078	-0,0991	-0,4009	0,2517	-0,7095	0,2230	0,2119	0,2336	0,7520	0,3387
A4	0,3326	-0,8787	0,2486	1,0000	0,3131	0,3750	-0,1799	0,3035	0,9995	0,0094	0,9353	0,8962	0,1867	0,2646	0,2958
B1	0,7654	-0,0480	0,7921	0,3131	1,0000	0,9929	0,1120	-0,4361	0,3031	-0,3124	0,3197	0,4683	0,6493	0,9613	0,5810
B2	0,8001	-0,0894	0,8078	0,3750	0,9929	1,0000	0,1261	-0,4104	0,3644	-0,3697	0,3510	0,5054	0,6768	0,9337	0,5080
B3	-0,0520	0,2663	-0,0991	-0,1799	0,1120	0,1261	1,0000	0,1686	-0,1832	-0,2956	-0,3846	-0,2548	0,2436	0,1003	-0,1455
B4	-0,4670	-0,4597	-0,4009	0,3035	-0,4361	-0,4104	0,1686	1,0000	0,3134	0,1259	0,3017	0,1620	-0,3794	-0,3753	-0,1115
B5	0,3092	-0,8922	0,2517	0,9995	0,3031	0,3644	-0,1832	0,3134	1,0000	0,0016	0,9354	0,8858	0,1591	0,2582	0,3011
C1	-0,1538	0,0050	-0,7095	0,0094	-0,3124	-0,3697	-0,2956	0,1259	0,0016	1,0000	0,1964	0,2316	-0,0059	-0,2342	0,2853
C2	0,3021	-0,8520	0,2230	0,9353	0,3197	0,3510	-0,3846	0,3017	0,9354	0,1964	1,0000	0,9339	0,1221	0,3345	0,4691
C3	0,5733	-0,6478	0,2119	0,8962	0,4683	0,5054	-0,2548	0,1620	0,8858	0,2316	0,9339	1,0000	0,4614	0,4369	0,4056
D1	0,9171	0,2975	0,2336	0,1867	0,6493	0,6768	0,2436	-0,3794	0,1591	-0,0059	0,1221	0,4614	1,0000	0,5191	0,0167
D2	0,6349	-0,0714	0,7520	0,2646	0,9613	0,9337	0,1003	-0,3753	0,2582	-0,2342	0,3345	0,4369	0,5191	1,0000	0,6984
D3	0,1015	-0,3464	0,3387	0,2958	0,5810	0,5080	-0,1455	-0,1115	0,3011	0,2853	0,4691	0,4056	0,0167	0,6984	1,0000

Appendix 24. Accommodation Sector 2020 CRITIC Method Correlation Matrix

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	1,0000	-0,5964	0,9775	0,0619	0,9598	0,9587	0,1257	0,4627	0,1017	0,6768	0,9086	0,8174	0,9738	0,3034	0,2233
A2	-0,5964	1,0000	-0,4351	-0,8114	-0,6399	-0,7351	-0,2026	-0,5922	-0,8286	-0,1818	-0,6983	-0,7608	-0,4303	-0,3252	-0,8227
A3	0,9775	-0,4351	1,0000	-0,1019	0,9200	0,9034	0,1080	0,3623	-0,0588	0,7231	0,8684	0,7514	0,9992	0,2702	0,0504
A4	0,0619	-0,8114	-0,1019	1,0000	0,1161	0,2509	0,1138	0,3373	0,9980	-0,1689	0,2832	0,4193	-0,1028	0,1496	0,8797
B1	0,9598	-0,6399	0,9200	0,1161	1,0000	0,9866	0,3392	0,6854	0,1558	0,4493	0,9424	0,8881	0,9238	0,5072	0,3194
B2	0,9587	-0,7351	0,9034	0,2509	0,9866	1,0000	0,2789	0,6603	0,2908	0,4790	0,9529	0,9078	0,9054	0,4491	0,4250
B3	0,1257	-0,2026	0,1080	0,1138	0,3392	0,2789	1,0000	0,7336	0,1240	-0,5413	0,4342	0,5352	0,1403	0,9771	0,0833
B4	0,4627	-0,5922	0,3623	0,3373	0,6854	0,6603	0,7336	1,0000	0,3552	-0,3271	0,6557	0,7374	0,3806	0,8196	0,5485
B5	0,1017	-0,8286	-0,0588	0,9980	0,1558	0,2908	0,1240	0,3552	1,0000	-0,1441	0,3236	0,4552	-0,0590	0,1664	0,8897
C1	0,6768	-0,1818	0,7231	-0,1689	0,4493	0,4790	-0,5413	-0,3271	-0,1441	1,0000	0,3981	0,2333	0,7014	-0,4197	-0,1540
C2	0,9086	-0,6983	0,8684	0,2832	0,9424	0,9529	0,4342	0,6557	0,3236	0,3981	1,0000	0,9795	0,8780	0,5911	0,3869
C3	0,8174	-0,7608	0,7514	0,4193	0,8881	0,9078	0,5352	0,7374	0,4552	0,2333	0,9795	1,0000	0,7640	0,6797	0,5012
D1	0,9738	-0,4303	0,9992	-0,1028	0,9238	0,9054	0,1403	0,3806	-0,0590	0,7014	0,8780	0,7640	1,0000	0,2998	0,0482
D2	0,3034	-0,3252	0,2702	0,1496	0,5072	0,4491	0,9771	0,8196	0,1664	-0,4197	0,5911	0,6797	0,2998	1,0000	0,1812
D3	0,2233	-0,8227	0,0504	0,8797	0,3194	0,4250	0,0833	0,5485	0,8897	-0,1540	0,3869	0,5012	0,0482	0,1812	1,0000

Appendix 25. Main Metal Industry Sector 2017 CRITIC Method Cj Value

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	0,0000	0,7062	0,1194	0,0827	0,1062	0,2917	0,9717	0,4181	1,3507	0,7828	0,2769	0,1183	0,2664	0,4285	0,8679
A2	0,7062	0,0000	0,7434	0,7919	0,7452	0,7825	0,7802	1,2930	1,7711	1,0120	0,8077	0,7329	0,7632	0,8096	1,1146
A3	0,1194	0,7434	0,0000	0,3098	0,0339	0,1258	0,9553	0,7563	1,3668	0,6566	0,1224	0,0884	0,1252	0,3734	0,7273
A4	0,0827	0,7919	0,3098	0,0000	0,3059	0,5050	1,1159	0,2449	1,2312	0,9388	0,5333	0,3192	0,3522	0,6394	0,8935
B1	0,1062	0,7452	0,0339	0,3059	0,0000	0,1007	0,9252	0,7443	1,3812	0,6279	0,1084	0,0611	0,1839	0,2568	0,6707
B2	0,2917	0,7825	0,1258	0,5050	0,1007	0,0000	0,9883	0,9263	1,3123	0,7092	0,2629	0,2567	0,1743	0,3457	0,6626
B3	0,9717	0,7802	0,9553	1,1159	0,9252	0,9883	0,0000	1,1949	1,1999	0,2018	0,9061	0,9303	1,0789	0,6890	1,1693
B4	0,4181	1,2930	0,7563	0,2449	0,7443	0,9263	1,1949	0,0000	0,7766	1,1060	0,9055	0,6923	0,8149	0,9601	1,0918
B5	1,3507	1,7711	1,3668	1,2312	1,3812	1,3123	1,1999	0,7766	0,0000	1,1302	1,4205	1,4304	1,2624	1,2873	0,9494
C1	0,7828	1,0120	0,6566	0,9388	0,6279	0,7092	0,2018	1,1060	1,1302	0,0000	0,6368	0,6997	0,7986	0,5863	0,8420
C2	0,2769	0,8077	0,1224	0,5333	0,1084	0,2629	0,9061	0,9055	1,4205	0,6368	0,0000	0,0436	0,3644	0,3055	0,7778
C3	0,1183	0,7329	0,0884	0,3192	0,0611	0,2567	0,9303	0,6923	1,4304	0,6997	0,0436	0,0000	0,3173	0,3123	0,8387
D1	0,2664	0,7632	0,1252	0,3522	0,1839	0,1743	1,0789	0,8149	1,2624	0,7986	0,3644	0,3173	0,0000	0,5214	0,6917
D2	0,4285	0,8096	0,3734	0,6394	0,2568	0,3457	0,6890	0,9601	1,2873	0,5863	0,3055	0,3123	0,5214	0,0000	0,6065
D3	0,8679	1,1146	0,7273	0,8935	0,6707	0,6626	1,1693	1,0918	0,9494	0,8420	0,7778	0,8387	0,6917	0,6065	0,0000

Appendix 26. Main Metal Industry Sector 2018 CRITIC Method Cj Value

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	0,0000	0,7640	0,1066	0,3117	0,1243	0,1727	1,3593	0,8688	1,1315	1,0391	0,3062	0,2337	0,4774	0,4059	0,7878
A2	0,7640	0,0000	0,8801	0,8096	0,6973	0,7220	1,2995	1,5497	1,9566	1,1985	0,7569	0,6643	0,7869	0,7667	0,7700
A3	0,1066	0,8801	0,0000	0,6496	0,1585	0,1221	1,2319	1,0896	1,0222	1,0957	0,3189	0,3386	0,3554	0,4118	0,7307
A4	0,3117	0,8096	0,6496	0,0000	0,4576	0,5833	1,1992	0,5617	1,2097	1,2786	0,6103	0,4466	0,6176	0,6662	0,8547
B1	0,1243	0,6973	0,1585	0,4576	0,0000	0,0383	1,3497	1,1108	1,2365	1,1565	0,1066	0,0918	0,3865	0,1681	0,5598
B2	0,1727	0,7220	0,1221	0,5833	0,0383	0,0000	1,2854	1,1922	1,2106	1,1949	0,1609	0,1755	0,3059	0,2351	0,5863
B3	1,3593	1,2995	1,2319	1,1992	1,3497	1,2854	0,0000	0,8278	0,7359	1,1618	1,3819	1,4310	0,8805	1,1873	1,1181
B4	0,8688	1,5497	1,0896	0,5617	1,1108	1,1922	0,8278	0,0000	0,3962	0,8189	1,2736	1,1763	1,1547	1,1669	1,3480
B5	1,1315	1,9566	1,0222	1,2097	1,2365	1,2106	0,7359	0,3962	0,0000	0,6227	1,2252	1,3111	1,2678	1,2059	1,2713
C1	1,0391	1,1985	1,0957	1,2786	1,1565	1,1949	1,1618	0,8189	0,6227	0,0000	1,1659	1,1631	1,7459	1,1126	1,2586
C2	0,3062	0,7569	0,3189	0,6103	0,1066	0,1609	1,3819	1,2736	1,2252	1,1659	0,0000	0,0249	0,5330	0,2507	0,6188
C3	0,2337	0,6643	0,3386	0,4466	0,0918	0,1755	1,4310	1,1763	1,3111	1,1631	0,0249	0,0000	0,5479	0,2628	0,6660
D1	0,4774	0,7869	0,3554	0,6176	0,3865	0,3059	0,8805	1,1547	1,2678	1,7459	0,5330	0,5479	0,0000	0,5654	0,7045
D2	0,4059	0,7667	0,4118	0,6662	0,1681	0,2351	1,1873	1,1669	1,2059	1,1126	0,2507	0,2628	0,5654	0,0000	0,5874
D3	0,7878	0,7700	0,7307	0,8547	0,5598	0,5863	1,1181	1,3480	1,2713	1,2586	0,6188	0,6660	0,7045	0,5874	0,0000

Appendix 27. Main Metal Industry Sector 2019 CRITIC Method Cj Value

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	0,0000	0,1729	0,0742	0,2659	0,2447	0,1980	1,0785	1,0104	1,2160	0,7748	0,4220	0,3442	0,4042	0,9235	1,0315
A2	0,1729	0,0000	0,1576	0,5756	0,4911	0,4019	1,1418	1,2735	1,6164	0,8918	0,5859	0,5777	0,6082	1,0685	1,1121
A3	0,0742	0,1576	0,0000	0,4309	0,2863	0,1908	1,0272	1,1361	1,1739	0,8009	0,3061	0,4608	0,3874	0,8395	0,9565
A4	0,2659	0,5756	0,4309	0,0000	0,1654	0,1938	1,0139	0,8327	1,1270	0,7526	0,4424	0,1827	0,1743	0,7680	0,6974
B1	0,2447	0,4911	0,2863	0,1654	0,0000	0,0469	0,9872	1,0508	1,1891	0,7180	0,1448	0,0803	0,1380	0,4263	0,6316
B2	0,1980	0,4019	0,1908	0,1938	0,0469	0,0000	0,9834	1,0611	1,1692	0,8048	0,2016	0,2061	0,1021	0,5470	0,5466
B3	1,0785	1,1418	1,0272	1,0139	0,9872	0,9834	0,0000	1,0900	0,8720	1,2161	0,8288	0,9322	0,9154	0,9970	0,7545
B4	1,0104	1,2735	1,1361	0,8327	1,0508	1,0611	1,0900	0,0000	0,6125	0,9180	1,1960	1,0310	0,9589	1,1574	1,0943
B5	1,2160	1,6164	1,1739	1,1270	1,1891	1,1692	0,8720	0,6125	0,0000	1,0723	1,0802	1,2905	1,1509	0,9305	0,9044
C1	0,7748	0,8918	0,8009	0,7526	0,7180	0,8048	1,2161	0,9180	1,0723	0,0000	0,6581	0,6050	0,7716	1,1359	1,2913
C2	0,4220	0,5859	0,3061	0,4424	0,1448	0,2016	0,8288	1,1960	1,0802	0,6581	0,0000	0,2032	0,2653	0,3752	0,7295
C3	0,3442	0,5777	0,4608	0,1827	0,0803	0,2061	0,9322	1,0310	1,2905	0,6050	0,2032	0,0000	0,2677	0,5354	0,7954
D1	0,4042	0,6082	0,3874	0,1743	0,1380	0,1021	0,9154	0,9589	1,1509	0,7716	0,2653	0,2677	0,0000	0,5671	0,5131
D2	0,9235	1,0685	0,8395	0,7680	0,4263	0,5470	0,9970	1,1574	0,9305	1,1359	0,3752	0,5354	0,5671	0,0000	0,5773
D3	1,0315	1,1121	0,9565	0,6974	0,6316	0,5466	0,7545	1,0943	0,9044	1,2913	0,7295	0,7954	0,5131	0,5773	0,0000

Appendix 28. Main Metal Industry Sector 2020 CRITIC Method Cj Value

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	0,0000	0,9439	0,0571	0,0494	0,2021	0,3569	0,7852	0,3642	0,9156	0,9101	0,1547	0,1251	0,2552	0,6503	0,9310
A2	0,9439	0,0000	0,9897	1,0357	1,0476	1,0259	1,3877	1,2950	1,8282	1,1019	1,0664	1,0224	0,9876	1,2705	1,1583
A3	0,0571	0,9897	0,0000	0,1490	0,1167	0,2456	0,7153	0,5982	0,9051	0,8377	0,1120	0,1053	0,1002	0,5348	0,8601
A4	0,0494	1,0357	0,1490	0,0000	0,3620	0,5759	0,8937	0,2319	0,8621	0,9291	0,2184	0,1866	0,3512	0,7944	0,9988
B1	0,2021	1,0476	0,1167	0,3620	0,0000	0,0747	0,5546	0,7585	0,9521	0,7336	0,1059	0,1148	0,2638	0,2592	0,7180
B2	0,3569	1,0259	0,2456	0,5759	0,0747	0,0000	0,6272	0,9026	0,9899	0,6936	0,3180	0,3313	0,3453	0,3214	0,6850
B3	0,7852	1,3877	0,7153	0,8937	0,5546	0,6272	0,0000	1,0164	0,3871	1,0484	0,5711	0,5846	0,7081	0,3816	0,5577
B4	0,3642	1,2950	0,5982	0,2319	0,7585	0,9026	1,0164	0,0000	0,6548	1,1038	0,6371	0,5962	0,8633	0,9787	1,0360
B5	0,9156	1,8282	0,9051	0,8621	0,9521	0,9899	0,3871	0,6548	0,0000	1,1318	0,9095	0,9264	0,8495	0,7799	0,8584
C1	0,9101	1,1019	0,8377	0,9291	0,7336	0,6936	1,0484	1,1038	1,1318	0,0000	0,8060	0,8276	0,9012	0,9090	1,1151
C2	0,1547	1,0664	0,1120	0,2184	0,1059	0,3180	0,5711	0,6371	0,9095	0,8060	0,0000	0,0035	0,2996	0,4250	0,8052
C3	0,1251	1,0224	0,1053	0,1866	0,1148	0,3313	0,5846	0,5962	0,9264	0,8276	0,0035	0,0000	0,3073	0,4529	0,8267
D1	0,2552	0,9876	0,1002	0,3512	0,2638	0,3453	0,7081	0,8633	0,8495	0,9012	0,2996	0,3073	0,0000	0,5763	0,8038
D2	0,6503	1,2705	0,5348	0,7944	0,2592	0,3214	0,3816	0,9787	0,7799	0,9090	0,4250	0,4529	0,5763	0,0000	0,5969
D3	0,9310	1,1583	0,8601	0,9988	0,7180	0,6850	0,5577	1,0360	0,8584	1,1151	0,8052	0,8267	0,8038	0,5969	0,0000

Appendix 29. Accomodation Sector 2017 CRITIC Method Cj Value

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	0,0000	0,4239	0,0165	0,8514	0,0501	0,0515	1,0111	0,9525	1,1878	0,8900	0,6672	0,5829	0,3153	0,0887	0,5151
A2	0,4239	0,0000	0,3013	0,6197	0,6181	0,5967	1,1849	1,3331	1,4826	0,7243	0,5544	0,4402	0,0598	0,6968	0,7086
A3	0,0165	0,3013	0,0000	0,7579	0,0822	0,0774	1,0382	1,0386	1,2942	0,8594	0,6360	0,5424	0,2041	0,1292	0,4772
A4	0,8514	0,6197	0,7579	0,0000	0,7438	0,7102	1,1200	1,2024	1,9931	0,7885	0,2656	0,3007	0,3960	0,7611	0,1673
B1	0,0501	0,6181	0,0822	0,7438	0,0000	0,0008	0,9568	0,9023	1,2630	0,9142	0,6696	0,6212	0,4198	0,0112	0,3470
B2	0,0515	0,5967	0,0774	0,7102	0,0008	0,0000	0,9625	0,9178	1,2978	0,9156	0,6545	0,6060	0,3951	0,0145	0,3266
B3	1,0111	1,1849	1,0382	1,1200	0,9568	0,9625	0,0000	1,1495	0,8596	0,8991	1,1921	1,2055	1,1791	0,9448	1,0765
B4	0,9525	1,3331	1,0386	1,2024	0,9023	0,9178	1,1495	0,0000	0,7546	0,9242	1,0620	1,0909	1,2910	0,8856	1,0985
B5	1,1878	1,4826	1,2942	1,9931	1,2630	1,2978	0,8596	0,7546	0,0000	1,2369	1,7469	1,7272	1,6811	1,2366	1,8101
C1	0,8900	0,7243	0,8594	0,7885	0,9142	0,9156	0,8991	0,9242	1,2369	0,0000	0,4318	0,4218	0,7155	0,8541	0,7796
C2	0,6672	0,5544	0,6360	0,2656	0,6696	0,6545	1,1921	1,0620	1,7469	0,4318	0,0000	0,0104	0,4046	0,6759	0,3566
C3	0,5829	0,4402	0,5424	0,3007	0,6212	0,6060	1,2055	1,0909	1,7272	0,4218	0,0104	0,0000	0,3163	0,6382	0,3819
D1	0,3153	0,0598	0,2041	0,3960	0,4198	0,3951	1,1791	1,2910	1,6811	0,7155	0,4046	0,3163	0,0000	0,4817	0,4051
D2	0,0887	0,6968	0,1292	0,7611	0,0112	0,0145	0,9448	0,8856	1,2366	0,8541	0,6759	0,6382	0,4817	0,0000	0,3212
D3	0,5151	0,7086	0,4772	0,1673	0,3470	0,3266	1,0765	1,0985	1,8101	0,7796	0,3566	0,3819	0,4051	0,3212	0,0000

Appendix 30. Accomodation Sector 2018 CRITIC Method Cj Value

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	0,0000	0,0333	0,5433	0,0463	0,1040	0,0115	1,4256	1,3063	1,9556	0,8927	0,0401	0,0397	1,0079	0,0631	0,0526
A2	0,0333	0,0000	0,7079	0,0242	0,1887	0,0220	1,3870	1,3353	1,9819	0,9349	0,0294	0,0284	0,9543	0,1200	0,0872
A3	0,5433	0,7079	0,0000	0,8156	0,2277	0,5440	1,3987	1,2832	1,1961	0,9680	0,7765	0,7745	0,4816	0,4138	0,6619
A4	0,0463	0,0242	0,8156	0,0000	0,2705	0,0612	1,3625	1,2508	1,9994	0,9281	0,0032	0,0032	1,1426	0,1662	0,0447
B1	0,1040	0,1887	0,2277	0,2705	0,0000	0,0899	1,4629	1,4134	1,7384	0,8734	0,2543	0,2528	0,7230	0,0515	0,2286
B2	0,0115	0,0220	0,5440	0,0612	0,0899	0,0000	1,4284	1,3764	1,9444	0,9068	0,0613	0,0603	0,9202	0,0559	0,0935
B3	1,4256	1,3870	1,3987	1,3625	1,4629	1,4284	0,0000	1,0239	0,6329	1,1238	1,3465	1,3472	1,1692	1,4045	1,4408
B4	1,3063	1,3353	1,2832	1,2508	1,4134	1,3764	1,0239	0,0000	0,7388	1,3393	1,2342	1,2358	1,2484	1,3162	1,2507
B5	1,9556	1,9819	1,1961	1,9994	1,7384	1,9444	0,6329	0,7388	0,0000	1,0661	1,9962	1,9964	0,8916	1,8392	1,9522
C1	0,8927	0,9349	0,9680	0,9281	0,8734	0,9068	1,1238	1,3393	1,0661	0,0000	0,9375	0,9386	1,2021	0,8484	0,8510
C2	0,0401	0,0294	0,7765	0,0032	0,2543	0,0613	1,3465	1,2342	1,9962	0,9375	0,0000	0,0000	1,1268	0,1494	0,0319
C3	0,0397	0,0284	0,7745	0,0032	0,2528	0,0603	1,3472	1,2358	1,9964	0,9386	0,0000	0,0000	1,1213	0,1484	0,0324
D1	1,0079	0,9543	0,4816	1,1426	0,7230	0,9202	1,1692	1,2484	0,8916	1,2021	1,1268	1,1213	0,0000	0,8715	1,1403
D2	0,0631	0,1200	0,4138	0,1662	0,0515	0,0559	1,4045	1,3162	1,8392	0,8484	0,1494	0,1484	0,8715	0,0000	0,1445
D3	0,0526	0,0872	0,6619	0,0447	0,2286	0,0935	1,4408	1,2507	1,9522	0,8510	0,0319	0,0324	1,1403	0,1445	0,0000

Appendix 31. Accomodation Sector 2019 CRITIC Method Cj Value

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	0,0000	0,8860	0,4854	0,6674	0,2346	0,1999	1,0520	1,4670	0,6908	1,1538	0,6979	0,4267	0,0829	0,3651	0,8985
A2	0,8860	0,0000	1,1745	1,8787	1,0480	1,0894	0,7337	1,4597	1,8922	0,9950	1,8520	1,6478	0,7025	1,0714	1,3464
A3	0,4854	1,1745	0,0000	0,7514	0,2079	0,1922	1,0991	1,4009	0,7483	1,7095	0,7770	0,7881	0,7664	0,2480	0,6613
A4	0,6674	1,8787	0,7514	0,0000	0,6869	0,6250	1,1799	0,6965	0,0005	0,9906	0,0647	0,1038	0,8133	0,7354	0,7042
B1	0,2346	1,0480	0,2079	0,6869	0,0000	0,0071	0,8880	1,4361	0,6969	1,3124	0,6803	0,5317	0,3507	0,0387	0,4190
B2	0,1999	1,0894	0,1922	0,6250	0,0071	0,0000	0,8739	1,4104	0,6356	1,3697	0,6490	0,4946	0,3232	0,0663	0,4920
B3	1,0520	0,7337	1,0991	1,1799	0,8880	0,8739	0,0000	0,8314	1,1832	1,2956	1,3846	1,2548	0,7564	0,8997	1,1455
B4	1,4670	1,4597	1,4009	0,6965	1,4361	1,4104	0,8314	0,0000	0,6866	0,8741	0,6983	0,8380	1,3794	1,3753	1,1115
B5	0,6908	1,8922	0,7483	0,0005	0,6969	0,6356	1,1832	0,6866	0,0000	0,9984	0,0646	0,1142	0,8409	0,7418	0,6989
C1	1,1538	0,9950	1,7095	0,9906	1,3124	1,3697	1,2956	0,8741	0,9984	0,0000	0,8036	0,7684	1,0059	1,2342	0,7147
C2	0,6979	1,8520	0,7770	0,0647	0,6803	0,6490	1,3846	0,6983	0,0646	0,8036	0,0000	0,0661	0,8779	0,6655	0,5309
C3	0,4267	1,6478	0,7881	0,1038	0,5317	0,4946	1,2548	0,8380	0,1142	0,7684	0,0661	0,0000	0,5386	0,5631	0,5944
D1	0,0829	0,7025	0,7664	0,8133	0,3507	0,3232	0,7564	1,3794	0,8409	1,0059	0,8779	0,5386	0,0000	0,4809	0,9833
D2	0,3651	1,0714	0,2480	0,7354	0,0387	0,0663	0,8997	1,3753	0,7418	1,2342	0,6655	0,5631	0,4809	0,0000	0,3016
D3	0,8985	1,3464	0,6613	0,7042	0,4190	0,4920	1,1455	1,1115	0,6989	0,7147	0,5309	0,5944	0,9833	0,3016	0,0000

Appendix 32. Accomodation Sector 2020 CRITIC Method Cj Value

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A1	0,0000	1,5964	0,0225	0,9381	0,0402	0,0413	0,8743	0,5373	0,8983	0,3232	0,0914	0,1826	0,0262	0,6966	0,7767
A2	1,5964	0,0000	1,4351	1,8114	1,6399	1,7351	1,2026	1,5922	1,8286	1,1818	1,6983	1,7608	1,4303	1,3252	1,8227
A3	0,0225	1,4351	0,0000	1,1019	0,0800	0,0966	0,8920	0,6377	1,0588	0,2769	0,1316	0,2486	0,0008	0,7298	0,9496
A4	0,9381	1,8114	1,1019	0,0000	0,8839	0,7491	0,8862	0,6627	0,0020	1,1689	0,7168	0,5807	1,1028	0,8504	0,1203
B1	0,0402	1,6399	0,0800	0,8839	0,0000	0,0134	0,6608	0,3146	0,8442	0,5507	0,0576	0,1119	0,0762	0,4928	0,6806
B2	0,0413	1,7351	0,0966	0,7491	0,0134	0,0000	0,7211	0,3397	0,7092	0,5210	0,0471	0,0922	0,0946	0,5509	0,5750
B3	0,8743	1,2026	0,8920	0,8862	0,6608	0,7211	0,0000	0,2664	0,8760	1,5413	0,5658	0,4648	0,8597	0,0229	0,9167
B4	0,5373	1,5922	0,6377	0,6627	0,3146	0,3397	0,2664	0,0000	0,6448	1,3271	0,3443	0,2626	0,6194	0,1804	0,4515
B5	0,8983	1,8286	1,0588	0,0020	0,8442	0,7092	0,8760	0,6448	0,0000	1,1441	0,6764	0,5448	1,0590	0,8336	0,1103
C1	0,3232	1,1818	0,2769	1,1689	0,5507	0,5210	1,5413	1,3271	1,1441	0,0000	0,6019	0,7667	0,2986	1,4197	1,1540
C2	0,0914	1,6983	0,1316	0,7168	0,0576	0,0471	0,5658	0,3443	0,6764	0,6019	0,0000	0,0205	0,1220	0,4089	0,6131
C3	0,1826	1,7608	0,2486	0,5807	0,1119	0,0922	0,4648	0,2626	0,5448	0,7667	0,0205	0,0000	0,2360	0,3203	0,4988
D1	0,0262	1,4303	0,0008	1,1028	0,0762	0,0946	0,8597	0,6194	1,0590	0,2986	0,1220	0,2360	0,0000	0,7002	0,9518
D2	0,6966	1,3252	0,7298	0,8504	0,4928	0,5509	0,0229	0,1804	0,8336	1,4197	0,4089	0,3203	0,7002	0,0000	0,8188
D3	0,7767	1,8227	0,9496	0,1203	0,6806	0,5750	0,9167	0,4515	0,1103	1,1540	0,6131	0,4988	0,9518	0,8188	0,0000

Appendix 33. Main Metal Industry Sector 2017 CRITIC Method Weight of The Criteria (Wj)

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
2017	0,0438	0,0912	0,0473	0,0526	0,0511	0,0499	0,0858	0,0846	0,1095	0,0764	0,0505	0,0506	0,0516	0,0559	0,0991

Appendix 34. Main Metal Industry Sector 2018 CRITIC Method Weight of The Criteria (Wj)

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
2018	0,0468	0,0870	0,0430	0,0585	0,0458	0,0461	0,1059	0,0950	0,1069	0,0816	0,0492	0,0464	0,0651	0,0592	0,0635

Appendix 35. Main Metal Industry Sector 2019 CRITIC Method Weight of The Criteria (Wj)

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
2019	0,0526	0,0748	0,0495	0,0462	0,0475	0,0434	0,0857	0,1040	0,1149	0,0760	0,0556	0,0600	0,0443	0,0754	0,0702

Appendix 36. Main Metal Industry Sector 2020 CRITIC Method Weight of The Criteria (Wj)

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
2020	0,0412	0,1392	0,0404	0,0427	0,0490	0,0448	0,0642	0,0726	0,1056	0,1102	0,0466	0,0479	0,0406	0,0613	0,0937

Appendix 37. Accomodation Sector 2017 CRITIC Method Weight of The Criteria (Wj)

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
2017	0,0406	0,0717	0,0398	0,0714	0,0445	0,0441	0,1013	0,1018	0,1347	0,0737	0,0592	0,0579	0,0628	0,0478	0,0486

Appendix 38. Accomodation Sector 2018 CRITIC Method Weight of The Criteria (Wj)

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
2018	0,0440	0,0481	0,0755	0,0506	0,0488	0,0447	0,0964	0,1030	0,1362	0,0840	0,0481	0,0480	0,0852	0,0389	0,0486

Appendix 39. Accomodation Sector 2019 CRITIC Method Weight of The Criteria (Wj)

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
2019	0,0540	0,1112	0,0648	0,0587	0,0651	0,0634	0,0819	0,1060	0,0595	0,0726	0,0509	0,0449	0,0579	0,0514	0,0576

Appendix 40. Accomodation Sector 2020 CRITIC Method Weight of The Criteria (Wj)

	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
2020	0,0475	0,1730	0,0540	0,0801	0,0409	0,0420	0,0708	0,0606	0,0800	0,0989	0,0369	0,0374	0,0524	0,0608	0,0644

Appendix 41. Main Metal Industry Sector 2017 TOPSIS Method Normalized Decision Matrix (R)

(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0918	0,0221	-0,1697	0,0000	-0,1565	-0,1648	0,1058	0,3053	0,0066	-0,0690	-0,0443	-0,0347	-0,1477	-0,0996	-0,0026
BRSAN	-0,0035	0,2178	-0,0512	0,0095	-0,0045	-0,0025	0,0514	-0,0068	-0,2991	-0,0020	-0,0704	-0,0052	-0,0017	-0,0029	0,0000
BURCE	-0,0567	0,0674	-0,0666	0,0022	-0,0687	-0,0355	-0,0667	0,0208	0,0973	0,0445	-0,0990	-0,0875	-0,0243	-0,0434	-0,1078
BURVA	0,1920	0,1104	0,2934	0,0313	0,3609	0,6349	0,0197	0,0133	0,1519	0,1468	0,2994	0,2647	0,2043	0,2972	0,0934
CELHA	0,0876	0,0712	0,1450	0,2449	0,2118	0,2613	0,3331	0,0245	0,0828	0,0745	0,1162	0,1113	0,3518	0,2126	0,6714
CEMAS	0,1238	0,0164	0,1547	0,0454	0,1950	0,1200	0,1954	0,0586	0,0346	-0,0410	0,3504	0,3097	0,0628	0,1684	0,0992
CEMTS	-0,3549	0,0940	-0,6241	-0,2124	-0,3995	-0,4087	0,0489	0,0260	0,0779	-0,0495	-0,3639	-0,3085	-0,7045	-0,1762	-0,0030
CUSAN	-0,0172	0,1938	-0,1592	-0,0176	-0,0229	-0,0230	0,0060	0,0112	0,1817	-0,0144	-0,1071	-0,0183	-0,0659	-0,0108	-0,0239
DMSAS	0,1469	0,1110	0,1846	0,0417	0,2547	0,1928	0,0056	0,0179	0,1134	0,2757	0,1911	0,1689	0,0758	0,2722	0,7178
DOKTA	-0,0949	0,0321	-0,0633	-0,0018	-0,1135	-0,0508	0,3948	0,0679	0,0298	-0,0440	-0,0994	-0,0879	-0,0137	-0,7108	-0,0199
ERBOS	0,1102	0,3787	0,0892	0,1429	0,1386	0,2234	0,0457	0,0062	0,3290	0,0235	0,0527	0,1022	0,3792	0,0633	0,0070
EREGL	0,3893	0,8152	0,2777	0,3688	0,2730	0,1886	-0,1000	0,0028	0,7200	0,0501	0,2270	0,3255	0,1606	0,1146	0,0033
ISDMR	0,7158	0,0032	0,3717	0,8405	0,4418	0,2639	0,2055	0,9391	0,0022	0,0647	0,2267	0,4527	0,3059	0,1746	0,0307
IZMDC	0,0565	0,0717	0,0738	0,0330	0,1076	0,0544	-0,6923	0,0226	0,0897	0,8813	0,0979	0,0865	0,0327	0,1362	0,0029
KRDMA	0,2879	0,2215	0,3521	0,1597	0,4281	0,2360	0,0079	0,0049	0,4137	0,2970	0,6649	0,5876	0,1375	0,3448	0,0019
SARKY	-0,0847	0,0370	-0,1577	-0,0161	-0,1825	-0,2532	0,0410	0,1165	0,0174	-0,0785	-0,0639	-0,0497	-0,1348	-0,1726	-0,0010
TUCLK	-0,0483	0,0820	-0,0521	-0,0055	-0,0514	-0,0257	0,3721	0,0194	0,1046	-0,0749	-0,0748	-0,0661	-0,0168	-0,0308	-0,0424

Appendix 42. Main Metal Industry Sector 2018 TOPSIS Method Normalized Decision Matrix (R)

(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	0,1198	0,0788	0,1701	0,0000	0,2625	0,3052	-0,0179	0,2887	0,0210	0,0367	0,0367	0,0381	0,3180	0,2013	0,0043
BRSAN	-0,0419	0,1873	-0,0797	-0,0025	-0,0753	-0,0493	0,4588	0,0210	0,2889	-0,0109	-0,1181	-0,0703	-0,0200	-0,0632	-0,0014
BURCE	0,0575	0,0303	0,0615	0,0216	0,0914	0,0487	-0,2306	0,1374	0,0442	0,2647	0,0874	0,0815	0,0186	0,0769	0,1542
BURVA	0,1126	0,1092	0,1365	0,0217	0,2154	0,3495	0,1393	0,0511	0,1187	0,2182	0,1268	0,1183	0,0535	0,1997	0,0565
CELHA	-0,0183	0,0144	-0,0603	-0,0354	-0,0537	-0,0594	0,0825	0,3269	0,0186	-0,0036	-0,0521	-0,0236	-0,0603	-0,0687	-0,2374
CEMAS	-0,3180	0,0072	-0,3265	-0,1086	-0,5207	-0,4262	-0,3085	0,3486	0,0174	0,0411	-0,8812	-0,8220	-0,0923	-0,4917	-0,0631
CEMTS	0,6486	0,1329	0,8266	0,1241	0,4381	0,5301	0,1306	0,1345	0,0451	0,0096	0,2061	0,2037	0,4823	0,1867	0,0042
CUSAN	0,1177	0,2640	0,1738	0,3224	0,2569	0,3201	-0,2019	0,0146	0,4151	-0,9366	0,1950	0,2027	0,7766	0,1869	0,3502
DMSAS	0,1924	0,2625	0,2082	0,0669	0,3184	0,2969	0,2176	0,0253	0,2397	0,0164	0,1914	0,1785	0,0642	0,2803	0,8708
DOKTA	0,0460	0,0289	0,0425	0,0234	0,0960	0,0456	-0,0132	0,1310	0,0463	0,0078	0,0789	0,0736	0,0104	0,3451	0,0429
ERBOS	0,0320	0,4320	-0,0487	0,0328	0,0493	0,1037	0,1079	0,0170	0,3567	0,0019	-0,0274	0,0268	0,0970	0,0275	0,0034
EREGL	0,2812	0,7680	0,0972	0,3041	0,2240	0,1689	0,2456	0,0084	0,7234	0,0096	0,0802	0,2304	0,0898	0,1090	0,0043
ISDMR	0,5443	0,0139	0,2069	0,8748	0,3439	0,2409	0,2068	0,6685	0,0091	0,0106	0,1217	0,3021	0,1521	0,1563	0,0374
IZMDC	-0,0562	0,0358	-0,0701	-0,0093	-0,1585	-0,0904	0,1796	0,1467	0,0414	0,0089	-0,0822	-0,0767	-0,0295	-0,5790	-0,0051
KRDMA	0,0567	0,0906	0,0487	0,0388	0,0612	0,0329	0,3220	0,0554	0,1096	0,0037	0,0643	0,0600	0,0110	0,0420	0,0003
SARKY	0,0228	0,0444	0,0045	0,0200	0,0545	0,0726	0,2134	0,3251	0,0187	0,0064	0,0018	0,0115	0,0193	0,0604	0,0004
TUCLK	-0,0979	0,0177	-0,1075	-0,0297	-0,1596	-0,0958	-0,4616	0,2296	0,0264	0,0333	-0,1597	-0,1490	-0,0340	-0,1341	-0,1687

Appendix 43. Main Metal Industry Sector 2019 TOPSIS Method Normalized Decision Matrix (R)

(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0309	0,0818	-0,0629	0,0000	-0,1371	-0,2087	-0,0015	0,0436	0,0703	-0,2123	-0,0624	-0,0417	-0,3764	-0,0661	-0,0012
BRSAN	0,0272	0,1253	0,0178	0,0294	0,0783	0,0492	0,0205	0,0089	0,3441	0,2312	0,0732	0,1093	0,0201	0,0321	0,0007
BURCE	0,0376	0,0250	0,0430	0,0229	0,0779	0,0377	-0,9675	0,0371	0,0826	-0,1128	0,2156	0,1577	0,0179	0,0261	0,1002
BURVA	-0,0022	0,0193	-0,0029	0,0122	-0,0070	-0,0100	0,1198	0,0331	0,0924	0,0236	-0,0138	-0,0101	-0,0016	-0,0034	-0,0011
CELHA	0,0674	0,0331	0,0957	0,3064	0,3873	0,4569	-0,2061	0,0336	0,0911	-0,2498	0,2918	0,2714	0,3893	0,4736	0,9615
CEMAS	0,0174	0,0056	0,0214	0,0249	0,0499	0,0330	-0,0018	0,1322	0,0232	-0,0267	0,1500	0,1097	0,0099	0,0231	0,0030
CEMTS	0,8943	0,8422	0,9639	0,4965	0,5649	0,6845	0,0195	0,0112	0,2737	0,1559	0,5326	0,4162	0,4327	0,1133	0,0027
CUSAN	-0,0664	0,0512	-0,1227	-0,4726	-0,2134	-0,2597	0,0084	0,0326	0,0939	-0,1602	-0,2313	-0,1692	-0,6910	-0,0688	-0,1302
DMSAS	0,0694	0,1353	0,0767	0,0375	0,1671	0,1522	0,0111	0,0182	0,1686	0,0884	0,1698	0,1242	0,0303	0,0694	0,2175
DOKTA	0,0461	0,0469	0,0285	0,0253	0,0992	0,0538	0,0585	0,0342	0,0895	0,0407	0,1549	0,1133	0,0070	0,2856	0,0226
ERBOS	-0,0077	0,2501	-0,0620	0,0001	-0,0230	-0,0646	0,0178	0,0065	0,4735	-0,0057	-0,1230	-0,0203	-0,0501	-0,0070	-0,0002
EREGL	0,2160	0,4209	0,0891	0,2554	0,3080	0,2317	0,0193	0,0044	0,6990	0,1156	0,2331	0,4821	0,1079	0,0786	0,0032
ISDMR	0,3416	0,0074	0,0057	0,5788	0,3274	0,2171	0,0081	0,4828	0,0063	0,0923	0,0088	0,3963	0,1276	0,0747	0,0177
IZMDC	0,0724	0,0427	0,1071	0,0561	0,3654	0,2005	-0,0040	0,0246	0,1247	-0,0814	0,4688	0,3429	0,0798	0,8000	0,0070
KRDMA	0,1096	0,0256	0,0997	0,1666	0,2698	0,1554	-0,0245	0,0531	0,0576	0,8486	0,3934	0,3692	0,0548	0,1072	0,0008
SARKY	0,0163	0,0266	0,0052	0,0246	0,0657	0,1049	0,0351	0,1301	0,0235	0,0449	0,0066	0,0227	0,0189	0,0414	0,0003
TUCLK	0,0089	0,0013	0,0122	0,0185	0,0281	0,0168	0,0076	0,8489	0,0036	0,1222	0,0480	0,0351	0,0073	0,0127	0,0162

Appendix 44. Main Metal Industry Sector 2020 TOPSIS Method Normalized Decision Matrix (R)

(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,1728	0,1266	-0,2122	0,0000	-0,3828	-0,5268	0,2560	0,0610	0,0485	-0,0433	-0,1015	-0,0955	-0,1220	-0,2940	-0,0085
BRSAN	-0,0502	0,1042	-0,0589	-0,0144	-0,0894	-0,0389	0,3738	0,0119	0,2494	0,6983	-0,1760	-0,1696	-0,0331	-0,0265	-0,0020
BURCE	-0,0041	0,0889	-0,0040	0,0135	-0,0058	-0,0023	0,1179	0,0185	0,1596	-0,0033	-0,0103	-0,0099	-0,0017	-0,0030	-0,0161
BURVA	0,1884	0,1022	0,2344	0,0382	0,4341	0,6194	0,0175	0,0315	0,0940	0,3450	0,2394	0,2308	0,1525	0,3342	0,1539
CELHA	0,0446	0,0223	0,0706	0,0635	0,1737	0,1560	-0,1285	0,0670	0,0441	-0,0557	0,1209	0,1165	0,1939	0,4537	0,7205
CEMAS	-0,0731	0,4405	-0,0803	-0,0274	-0,0411	-0,0170	0,7014	0,0051	0,5823	-0,0070	-0,1233	-0,1189	-0,0393	-0,0124	-0,0046
CEMTS	0,3552	0,4758	0,3715	0,2800	0,2092	0,1973	0,0627	0,0173	0,1712	0,0107	0,1246	0,1632	0,5465	0,0606	0,0027
CUSAN	0,0170	0,0785	0,0250	0,0308	0,0347	0,0316	0,1365	0,0216	0,1369	0,0059	0,0369	0,0356	0,0345	0,0173	0,0581
DMSAS	0,1061	0,1838	0,1154	0,0597	0,1965	0,1721	0,0764	0,0134	0,2205	0,0482	0,1753	0,1690	0,0554	0,1292	0,6631
DOKTA	0,0573	0,0146	0,0512	0,0373	0,1246	0,0514	0,0556	0,0836	0,0354	0,0309	0,1744	0,1681	0,0186	0,2929	0,0434
ERBOS	-0,3948	0,3512	-0,6243	-0,3645	-0,4114	-0,3687	0,1926	0,0102	0,2895	-0,0320	-0,4642	-0,4142	-0,7461	-0,1368	-0,0105
EREGL	0,3662	0,5921	0,3084	0,2985	0,2730	0,1439	0,2181	0,0053	0,5532	0,0460	0,4027	0,4346	0,1335	0,0945	0,0074
ISDMR	0,6771	0,0057	0,4397	0,7931	0,3081	0,1520	0,2074	0,9851	0,0030	0,0368	0,4100	0,4540	0,1544	0,0975	0,0458
IZMDC	0,0748	0,0322	0,0989	0,0594	0,2431	0,0937	-0,0496	0,0529	0,0559	-0,0248	0,1967	0,1896	0,0782	0,6234	0,0086
KRDMA	0,1657	0,1233	0,1947	0,2331	0,3382	0,1665	0,0438	0,0123	0,2411	0,6154	0,4441	0,4282	0,1094	0,2301	0,0025
SARKY	-0,0392	0,0473	-0,0596	-0,0134	-0,1013	-0,1528	0,1360	0,0893	0,0331	-0,0125	-0,0476	-0,0398	-0,0405	-0,0893	-0,0008
TUCLK	-0,0276	0,0353	-0,0324	0,0035	-0,0597	-0,0308	0,3000	0,0295	0,1002	-0,0295	-0,0975	-0,0940	-0,0183	-0,0454	-0,0976

Appendix 45. Accomodation Sector 2017 TOPSIS Method Normalized Decision Matrix (R)

(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	-0,0005	0,0130	-0,0003	0,0005	-0,0004	-0,0002	-0,9997	0,0554	0,0064	0,0003	-0,0012	-0,0012	0,0000	-0,0003	-0,0054
AVTUR	0,1329	0,0014	0,0432	0,0000	0,0414	0,0281	-0,0016	0,4013	0,0009	-0,0102	0,5256	0,5044	0,0052	0,0370	0,0136
KSTUR	0,6127	0,8757	0,7006	0,0027	0,3252	0,3347	0,0015	0,0029	0,1210	0,0558	0,2400	0,3637	0,7502	0,2454	0,0104
MAALT	0,1105	0,4730	0,2267	0,9988	0,1564	0,1940	0,0022	0,0004	0,9925	0,0994	0,7644	0,7335	0,6474	0,1300	0,8152
MARTI	-0,0172	0,0010	-0,0109	0,0002	-0,0374	-0,0278	-0,0039	0,0846	0,0042	-0,9918	-0,2640	-0,2533	-0,0016	-0,1059	-0,0337
MERIT	0,0003	0,0005	0,0005	0,0000	0,0003	0,0003	0,0066	0,9071	0,0004	0,0000	0,0002	0,0002	0,0017	0,0002	0,0008
PKENT	0,0101	0,0080	0,0207	0,0008	0,0681	0,0638	-0,0185	0,0701	0,0050	0,0309	0,0361	0,0347	0,0638	0,1725	0,3063
TEKTU	0,0037	0,0020	0,0041	0,0000	0,0081	0,0072	0,0171	0,0307	0,0115	0,0076	0,1038	0,0996	0,0009	0,0100	0,0055
ULAS	-0,7709	0,0957	-0,6748	-0,0485	-0,9284	-0,9190	0,0000	0,0000	0,0000	-0,0473	0,0000	0,0000	-0,1179	-0,9383	-0,4901

Appendix 46. Accomodation Sector 2018 TOPSIS Method Normalized Decision Matrix (R)

(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0465	0,0042	0,0869	0,0002	0,0795	0,0245	-0,0620	0,0529	0,0012	0,8909	0,0167	0,0167	0,0140	0,0565	0,1319
AVTUR	0,0388	0,0004	0,0304	0,0001	0,0187	0,0066	0,1088	0,9082	0,0001	0,0212	0,0156	0,0156	0,0033	0,0120	0,0008
KSTUR	0,1454	0,1998	0,4448	0,0001	0,3469	0,2274	0,0395	0,0018	0,0362	0,0359	0,0199	0,0256	0,9613	0,2228	0,0031
MAALT	0,9356	0,9740	0,3575	1,0000	0,7327	0,9251	0,2951	0,0001	0,9993	0,2393	0,9959	0,9958	0,0350	0,8463	0,9500
MARTI	-0,0113	0,0004	-0,0165	0,0000	-0,0563	-0,0190	-0,0376	0,1066	0,0006	0,0243	-0,0199	-0,0198	-0,0023	-0,2656	-0,0056
MERIT	0,2049	0,0001	0,6588	0,0000	0,3647	0,1319	0,1739	0,3007	0,0002	0,0647	0,0702	0,0702	0,2580	0,2305	0,2758
PKENT	0,0075	0,0015	0,0289	0,0001	0,0670	0,0434	0,0591	0,1406	0,0005	0,0089	0,0027	0,0027	0,0324	0,0908	0,0577
TEKTU	0,0291	0,0003	0,0281	0,0001	0,0288	0,0093	-0,9266	0,2254	0,0003	-0,0188	0,0443	0,0443	0,0033	0,0213	0,0029
ULAS	0,2384	0,1066	0,4796	0,0000	0,4412	0,2684	-0,0441	0,0000	0,0000	0,3771	0,0000	0,0000	0,0826	0,3136	0,0251

Appendix 47. Accomodation Sector 2019 TOPSIS Method Normalized Decision Matrix (R)

(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,2350	0,0140	0,1199	0,0050	0,0849	0,0475	0,9333	0,0895	0,0015	0,4633	0,3172	0,2861	0,0119	0,0770	0,2933
AVTUR	0,0019	0,0006	0,0024	0,0015	0,0009	0,0006	0,0144	0,5983	0,0002	0,0007	0,0117	0,0105	0,0003	0,0008	0,0001
KSTUR	0,8374	0,4509	0,1764	0,0089	0,5328	0,5566	0,0026	0,0060	0,0229	0,1077	0,0369	0,4156	0,9655	0,4137	0,0091
MAALT	-0,0742	0,8900	-0,0263	-1,0000	-0,0425	-0,1099	0,0493	0,0001	0,9997	-0,0218	-0,9020	-0,8133	-0,0025	-0,0575	-0,1269
MARTI	-0,0032	0,0002	-0,0046	0,0010	-0,0151	-0,0095	0,1770	0,3160	0,0004	0,0208	-0,0698	-0,0630	-0,0007	-0,2189	-0,0035
MERIT	0,0013	0,0006	0,0028	0,0000	0,0009	0,0007	0,0576	0,0822	0,0017	0,0004	0,0021	0,0019	0,0007	0,0007	0,0016
PKENT	0,1926	0,0091	0,4016	0,0000	0,6301	0,5702	0,0527	0,1611	0,0008	0,1616	0,2060	0,2231	0,1758	0,7290	0,9457
TEKTU	0,0093	0,0001	0,0113	0,0022	0,0115	0,0069	0,1442	0,7081	0,0002	-0,0177	0,1922	0,1733	0,0015	0,0118	0,0025
ULAS	0,4482	0,0653	0,8902	0,0000	0,5565	0,5921	0,2610	0,0000	0,0000	-0,8640	0,0000	0,0000	0,1915	0,4901	0,0578

Appendix 48. Accomodation Sector 2020 TOPSIS Method Normalized Decision Matrix (R)

(For Fixed and Variable Weights)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0690	0,0052	0,0121	0,0039	0,0770	0,0452	0,1142	0,2939	0,0017	-0,0508	0,0501	0,0669	0,0056	0,0142	0,3649
AVTUR	0,0276	0,0046	0,0044	0,0437	0,0137	0,0090	0,0192	0,2141	0,0023	0,0143	0,0244	0,0325	0,0020	0,0022	0,0016
KSTUR	-0,9676	0,5019	-0,9981	-0,0024	-0,9051	-0,8969	-0,0097	0,0089	0,0549	-0,7630	-0,8727	-0,7590	-0,9980	-0,1372	-0,0205
MAALT	-0,1751	0,8176	-0,0156	-0,9990	-0,1849	-0,3281	0,0102	0,0005	0,9985	-0,0482	-0,3463	-0,4618	-0,0065	-0,0448	-0,8318
MARTI	0,0108	0,0000	0,0089	0,0031	0,2521	0,1620	-0,9927	0,7447	0,0007	-0,5921	0,3286	0,4382	0,0458	0,9878	0,1127
MERIT	0,0009	0,0013	0,0004	0,0000	0,0007	0,0006	0,0079	0,1163	0,0042	0,0004	0,0004	0,0005	0,0003	0,0001	0,0014
PKENT	0,0235	0,0033	0,0163	0,0000	0,1872	0,1738	-0,0052	0,5217	0,0009	-0,2472	0,0176	0,0234	0,0275	0,0444	0,4020
TEKTU	-0,0107	0,0007	-0,0024	0,0014	-0,0256	-0,0164	-0,0211	0,1657	0,0029	0,0148	-0,0843	-0,1124	-0,0012	-0,0057	-0,0063
ULAS	-0,1639	0,2823	-0,0558	-0,0064	-0,2031	-0,1706	0,0177	0,0000	0,0000	-0,0302	0,0000	0,0000	-0,0339	-0,0335	-0,0153

Appendix 49. Main Metal Industry Sector 2017 TOPSIS Method Fixed Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0061	0,0015	-0,0113	0,0000	-0,0104	-0,0110	0,0071	0,0204	0,0004	-0,0046	-0,0030	-0,0023	-0,0098	-0,0066	-0,0002
BRSAN	-0,0002	0,0145	-0,0034	0,0006	-0,0003	-0,0002	0,0034	-0,0005	-0,0199	-0,0001	-0,0047	-0,0003	-0,0001	-0,0002	0,0000
BURCE	-0,0038	0,0045	-0,0044	0,0001	-0,0046	-0,0024	-0,0044	0,0014	0,0065	0,0030	-0,0066	-0,0058	-0,0016	-0,0029	-0,0072
BURVA	0,0128	0,0074	0,0196	0,0021	0,0241	0,0423	0,0013	0,0009	0,0101	0,0098	0,0200	0,0176	0,0136	0,0198	0,0062
CELHA	0,0058	0,0047	0,0097	0,0163	0,0141	0,0174	0,0222	0,0016	0,0055	0,0050	0,0077	0,0074	0,0235	0,0142	0,0448
CEMAS	0,0083	0,0011	0,0103	0,0030	0,0130	0,0080	0,0130	0,0039	0,0023	-0,0027	0,0234	0,0206	0,0042	0,0112	0,0066
CEMTS	-0,0237	0,0063	-0,0416	-0,0142	-0,0266	-0,0272	0,0033	0,0017	0,0052	-0,0033	-0,0243	-0,0206	-0,0470	-0,0117	-0,0002
CUSAN	-0,0011	0,0129	-0,0106	-0,0012	-0,0015	-0,0015	0,0004	0,0007	0,0121	-0,0010	-0,0071	-0,0012	-0,0044	-0,0007	-0,0016
DMSAS	0,0098	0,0074	0,0123	0,0028	0,0170	0,0129	0,0004	0,0012	0,0076	0,0184	0,0127	0,0113	0,0051	0,0181	0,0479
DOKTA	-0,0063	0,0021	-0,0042	-0,0001	-0,0076	-0,0034	0,0263	0,0045	0,0020	-0,0029	-0,0066	-0,0059	-0,0009	-0,0474	-0,0013
ERBOS	0,0073	0,0252	0,0059	0,0095	0,0092	0,0149	0,0030	0,0004	0,0219	0,0016	0,0035	0,0068	0,0253	0,0042	0,0005
EREGL	0,0260	0,0543	0,0185	0,0246	0,0182	0,0126	-0,0067	0,0002	0,0480	0,0033	0,0151	0,0217	0,0107	0,0076	0,0002
ISDMR	0,0477	0,0002	0,0248	0,0560	0,0295	0,0176	0,0137	0,0626	0,0001	0,0043	0,0151	0,0302	0,0204	0,0116	0,0020
IZMDC	0,0038	0,0048	0,0049	0,0022	0,0072	0,0036	-0,0462	0,0015	0,0060	0,0588	0,0065	0,0058	0,0022	0,0091	0,0002
KRDMA	0,0192	0,0148	0,0235	0,0106	0,0285	0,0157	0,0005	0,0003	0,0276	0,0198	0,0443	0,0392	0,0092	0,0230	0,0001
SARKY	-0,0056	0,0025	-0,0105	-0,0011	-0,0122	-0,0169	0,0027	0,0078	0,0012	-0,0052	-0,0043	-0,0033	-0,0090	-0,0115	-0,0001
TUCLK	-0,0032	0,0055	-0,0035	-0,0004	-0,0034	-0,0017	0,0248	0,0013	0,0070	-0,0050	-0,0050	-0,0044	-0,0011	-0,0021	-0,0028

Appendix 50. Main Metal Industry Sector 2018 TOPSIS Method Fixed Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	0,0080	0,0053	0,0113	0,0000	0,0175	0,0203	-0,0012	0,0192	0,0014	0,0024	0,0024	0,0025	0,0212	0,0134	0,0003
BRSAN	-0,0028	0,0125	-0,0053	-0,0002	-0,0050	-0,0033	0,0306	0,0014	0,0193	-0,0007	-0,0079	-0,0047	-0,0013	-0,0042	-0,0001
BURCE	0,0038	0,0020	0,0041	0,0014	0,0061	0,0032	-0,0154	0,0092	0,0029	0,0176	0,0058	0,0054	0,0012	0,0051	0,0103
BURVA	0,0075	0,0073	0,0091	0,0014	0,0144	0,0233	0,0093	0,0034	0,0079	0,0145	0,0085	0,0079	0,0036	0,0133	0,0038
CELHA	-0,0012	0,0010	-0,0040	-0,0024	-0,0036	-0,0040	0,0055	0,0218	0,0012	-0,0002	-0,0035	-0,0016	-0,0040	-0,0046	-0,0158
CEMAS	-0,0212	0,0005	-0,0218	-0,0072	-0,0347	-0,0284	-0,0206	0,0232	0,0012	0,0027	-0,0587	-0,0548	-0,0062	-0,0328	-0,0042
CEMTS	0,0432	0,0089	0,0551	0,0083	0,0292	0,0353	0,0087	0,0090	0,0030	0,0006	0,0137	0,0136	0,0322	0,0124	0,0003
CUSAN	0,0078	0,0176	0,0116	0,0215	0,0171	0,0213	-0,0135	0,0010	0,0277	-0,0624	0,0130	0,0135	0,0518	0,0125	0,0233
DMSAS	0,0128	0,0175	0,0139	0,0045	0,0212	0,0198	0,0145	0,0017	0,0160	0,0011	0,0128	0,0119	0,0043	0,0187	0,0581
DOKTA	0,0031	0,0019	0,0028	0,0016	0,0064	0,0030	-0,0009	0,0087	0,0031	0,0005	0,0053	0,0049	0,0007	0,0230	0,0029
ERBOS	0,0021	0,0288	-0,0032	0,0022	0,0033	0,0069	0,0072	0,0011	0,0238	0,0001	-0,0018	0,0018	0,0065	0,0018	0,0002
EREGL	0,0187	0,0512	0,0065	0,0203	0,0149	0,0113	0,0164	0,0006	0,0482	0,0006	0,0053	0,0154	0,0060	0,0073	0,0003
ISDMR	0,0363	0,0009	0,0138	0,0583	0,0229	0,0161	0,0138	0,0446	0,0006	0,0007	0,0081	0,0201	0,0101	0,0104	0,0025
IZMDC	-0,0037	0,0024	-0,0047	-0,0006	-0,0106	-0,0060	0,0120	0,0098	0,0028	0,0006	-0,0055	-0,0051	-0,0020	-0,0386	-0,0003
KRDMA	0,0038	0,0060	0,0032	0,0026	0,0041	0,0022	0,0215	0,0037	0,0073	0,0002	0,0043	0,0040	0,0007	0,0028	0,0000
SARKY	0,0015	0,0030	0,0003	0,0013	0,0036	0,0048	0,0142	0,0217	0,0012	0,0004	0,0001	0,0008	0,0013	0,0040	0,0000
TUCLK	-0,0065	0,0012	-0,0072	-0,0020	-0,0106	-0,0064	-0,0308	0,0153	0,0018	0,0022	-0,0106	-0,0099	-0,0023	-0,0089	-0,0112

Appendix 51. Main Metal Industry Sector 2019 TOPSIS Method Fixed Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0021	0,0055	-0,0042	0,0000	-0,0091	-0,0139	-0,0001	0,0029	0,0047	-0,0142	-0,0042	-0,0028	-0,0251	-0,0044	-0,0001
BRSAN	0,0018	0,0084	0,0012	0,0020	0,0052	0,0033	0,0014	0,0006	0,0229	0,0154	0,0049	0,0073	0,0013	0,0021	0,0000
BURCE	0,0025	0,0017	0,0029	0,0015	0,0052	0,0025	-0,0645	0,0025	0,0055	-0,0075	0,0144	0,0105	0,0012	0,0017	0,0067
BURVA	-0,0001	0,0013	-0,0002	0,0008	-0,0005	-0,0007	0,0080	0,0022	0,0062	0,0016	-0,0009	-0,0007	-0,0001	-0,0002	-0,0001
CELHA	0,0045	0,0022	0,0064	0,0204	0,0258	0,0305	-0,0137	0,0022	0,0061	-0,0167	0,0195	0,0181	0,0260	0,0316	0,0641
CEMAS	0,0012	0,0004	0,0014	0,0017	0,0033	0,0022	-0,0001	0,0088	0,0015	-0,0018	0,0100	0,0073	0,0007	0,0015	0,0002
CEMTS	0,0596	0,0561	0,0643	0,0331	0,0377	0,0456	0,0013	0,0007	0,0182	0,0104	0,0355	0,0277	0,0288	0,0076	0,0002
CUSAN	-0,0044	0,0034	-0,0082	-0,0315	-0,0142	-0,0173	0,0006	0,0022	0,0063	-0,0107	-0,0154	-0,0113	-0,0461	-0,0046	-0,0087
DMSAS	0,0046	0,0090	0,0051	0,0025	0,0111	0,0101	0,0007	0,0012	0,0112	0,0059	0,0113	0,0083	0,0020	0,0046	0,0145
DOKTA	0,0031	0,0031	0,0019	0,0017	0,0066	0,0036	0,0039	0,0023	0,0060	0,0027	0,0103	0,0076	0,0005	0,0190	0,0015
ERBOS	-0,0005	0,0167	-0,0041	0,0000	-0,0015	-0,0043	0,0012	0,0004	0,0316	-0,0004	-0,0082	-0,0014	-0,0033	-0,0005	0,0000
EREGL	0,0144	0,0281	0,0059	0,0170	0,0205	0,0154	0,0013	0,0003	0,0466	0,0077	0,0155	0,0321	0,0072	0,0052	0,0002
ISDMR	0,0228	0,0005	0,0004	0,0386	0,0218	0,0145	0,0005	0,0322	0,0004	0,0062	0,0006	0,0264	0,0085	0,0050	0,0012
IZMDC	0,0048	0,0028	0,0071	0,0037	0,0244	0,0134	-0,0003	0,0016	0,0083	-0,0054	0,0313	0,0229	0,0053	0,0533	0,0005
KRDMA	0,0073	0,0017	0,0066	0,0111	0,0180	0,0104	-0,0016	0,0035	0,0038	0,0566	0,0262	0,0246	0,0037	0,0071	0,0001
SARKY	0,0011	0,0018	0,0003	0,0016	0,0044	0,0070	0,0023	0,0087	0,0016	0,0030	0,0004	0,0015	0,0013	0,0028	0,0000
TUCLK	0,0006	0,0001	0,0008	0,0012	0,0019	0,0011	0,0005	0,0566	0,0002	0,0081	0,0032	0,0023	0,0005	0,0008	0,0011

Appendix 52. Main Metal Industry Sector 2020 TOPSIS Method Fixed Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0115	0,0084	-0,0141	0,0000	-0,0255	-0,0351	0,0171	0,0041	0,0032	-0,0029	-0,0068	-0,0064	-0,0081	-0,0196	-0,0006
BRSAN	-0,0033	0,0069	-0,0039	-0,0010	-0,0060	-0,0026	0,0249	0,0008	0,0166	0,0466	-0,0117	-0,0113	-0,0022	-0,0018	-0,0001
BURCE	-0,0003	0,0059	-0,0003	0,0009	-0,0004	-0,0002	0,0079	0,0012	0,0106	-0,0002	-0,0007	-0,0007	-0,0001	-0,0002	-0,0011
BURVA	0,0126	0,0068	0,0156	0,0025	0,0289	0,0413	0,0012	0,0021	0,0063	0,0230	0,0160	0,0154	0,0102	0,0223	0,0103
CELHA	0,0030	0,0015	0,0047	0,0042	0,0116	0,0104	-0,0086	0,0045	0,0029	-0,0037	0,0081	0,0078	0,0129	0,0302	0,0480
CEMAS	-0,0049	0,0294	-0,0054	-0,0018	-0,0027	-0,0011	0,0468	0,0003	0,0388	-0,0005	-0,0082	-0,0079	-0,0026	-0,0008	-0,0003
CEMTS	0,0237	0,0317	0,0248	0,0187	0,0139	0,0132	0,0042	0,0012	0,0114	0,0007	0,0083	0,0109	0,0364	0,0040	0,0002
CUSAN	0,0011	0,0052	0,0017	0,0021	0,0023	0,0021	0,0091	0,0014	0,0091	0,0004	0,0025	0,0024	0,0023	0,0012	0,0039
DMSAS	0,0071	0,0123	0,0077	0,0040	0,0131	0,0115	0,0051	0,0009	0,0147	0,0032	0,0117	0,0113	0,0037	0,0086	0,0442
DOKTA	0,0038	0,0010	0,0034	0,0025	0,0083	0,0034	0,0037	0,0056	0,0024	0,0021	0,0116	0,0112	0,0012	0,0195	0,0029
ERBOS	-0,0263	0,0234	-0,0416	-0,0243	-0,0274	-0,0246	0,0128	0,0007	0,0193	-0,0021	-0,0309	-0,0276	-0,0497	-0,0091	-0,0007
EREGL	0,0244	0,0395	0,0206	0,0199	0,0182	0,0096	0,0145	0,0004	0,0369	0,0031	0,0268	0,0290	0,0089	0,0063	0,0005
ISDMR	0,0451	0,0004	0,0293	0,0529	0,0205	0,0101	0,0138	0,0657	0,0002	0,0025	0,0273	0,0303	0,0103	0,0065	0,0031
IZMDC	0,0050	0,0021	0,0066	0,0040	0,0162	0,0062	-0,0033	0,0035	0,0037	-0,0017	0,0131	0,0126	0,0052	0,0416	0,0006
KRDMA	0,0110	0,0082	0,0130	0,0155	0,0225	0,0111	0,0029	0,0008	0,0161	0,0410	0,0296	0,0285	0,0073	0,0153	0,0002
SARKY	-0,0026	0,0032	-0,0040	-0,0009	-0,0068	-0,0102	0,0091	0,0060	0,0022	-0,0008	-0,0032	-0,0027	-0,0027	-0,0060	-0,0001
TUCLK	-0,0018	0,0024	-0,0022	0,0002	-0,0040	-0,0021	0,0200	0,0020	0,0067	-0,0020	-0,0065	-0,0063	-0,0012	-0,0030	-0,0065

Appendix 53. Main Metal Industry Sector 2017 TOPSIS Method Variable Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0040	0,0020	-0,0080	0,0000	-0,0080	-0,0082	0,0091	0,0258	0,0007	-0,0053	-0,0022	-0,0018	-0,0076	-0,0056	-0,0003
BRSAN	-0,0002	0,0199	-0,0024	0,0005	-0,0002	-0,0001	0,0044	-0,0006	-0,0328	-0,0001	-0,0036	-0,0003	-0,0001	-0,0002	0,0000
BURCE	-0,0025	0,0061	-0,0032	0,0001	-0,0035	-0,0018	-0,0057	0,0018	0,0107	0,0034	-0,0050	-0,0044	-0,0013	-0,0024	-0,0107
BURVA	0,0084	0,0101	0,0139	0,0016	0,0185	0,0317	0,0017	0,0011	0,0166	0,0112	0,0151	0,0134	0,0105	0,0166	0,0093
CELHA	0,0038	0,0065	0,0069	0,0129	0,0108	0,0130	0,0286	0,0021	0,0091	0,0057	0,0059	0,0056	0,0181	0,0119	0,0665
CEMAS	0,0054	0,0015	0,0073	0,0024	0,0100	0,0060	0,0168	0,0050	0,0038	-0,0031	0,0177	0,0157	0,0032	0,0094	0,0098
CEMTS	-0,0156	0,0086	-0,0295	-0,0112	-0,0204	-0,0204	0,0042	0,0022	0,0085	-0,0038	-0,0184	-0,0156	-0,0363	-0,0098	-0,0003
CUSAN	-0,0008	0,0177	-0,0075	-0,0009	-0,0012	-0,0012	0,0005	0,0009	0,0199	-0,0011	-0,0054	-0,0009	-0,0034	-0,0006	-0,0024
DMSAS	0,0064	0,0101	0,0087	0,0022	0,0130	0,0096	0,0005	0,0015	0,0124	0,0211	0,0096	0,0086	0,0039	0,0152	0,0711
DOKTA	-0,0042	0,0029	-0,0030	-0,0001	-0,0058	-0,0025	0,0339	0,0057	0,0033	-0,0034	-0,0050	-0,0044	-0,0007	-0,0397	-0,0020
ERBOS	0,0048	0,0345	0,0042	0,0075	0,0071	0,0112	0,0039	0,0005	0,0360	0,0018	0,0027	0,0052	0,0196	0,0035	0,0007
EREGL	0,0171	0,0744	0,0131	0,0194	0,0140	0,0094	-0,0086	0,0002	0,0789	0,0038	0,0115	0,0165	0,0083	0,0064	0,0003
ISDMR	0,0314	0,0003	0,0176	0,0442	0,0226	0,0132	0,0176	0,0795	0,0002	0,0049	0,0114	0,0229	0,0158	0,0098	0,0030
IZMDC	0,0025	0,0065	0,0035	0,0017	0,0055	0,0027	-0,0594	0,0019	0,0098	0,0673	0,0049	0,0044	0,0017	0,0076	0,0003
KRDMA	0,0126	0,0202	0,0167	0,0084	0,0219	0,0118	0,0007	0,0004	0,0453	0,0227	0,0336	0,0297	0,0071	0,0193	0,0002
SARKY	-0,0037	0,0034	-0,0075	-0,0008	-0,0093	-0,0126	0,0035	0,0099	0,0019	-0,0060	-0,0032	-0,0025	-0,0070	-0,0096	-0,0001
TUCLK	-0,0021	0,0075	-0,0025	-0,0003	-0,0026	-0,0013	0,0319	0,0016	0,0115	-0,0057	-0,0038	-0,0033	-0,0009	-0,0017	-0,0042

Appendix 54. Main Metal Industry Sector 2018 TOPSIS Method Variable Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	0,0056	0,0069	0,0073	0,0000	0,0120	0,0141	-0,0019	0,0274	0,0022	0,0030	0,0018	0,0018	0,0207	0,0119	0,0003
BRSAN	-0,0020	0,0163	-0,0034	-0,0001	-0,0034	-0,0023	0,0486	0,0020	0,0309	-0,0009	-0,0058	-0,0033	-0,0013	-0,0037	-0,0001
BURCE	0,0027	0,0026	0,0026	0,0013	0,0042	0,0022	-0,0244	0,0131	0,0047	0,0216	0,0043	0,0038	0,0012	0,0046	0,0098
BURVA	0,0053	0,0095	0,0059	0,0013	0,0099	0,0161	0,0147	0,0049	0,0127	0,0178	0,0062	0,0055	0,0035	0,0118	0,0036
CELHA	-0,0009	0,0013	-0,0026	-0,0021	-0,0025	-0,0027	0,0087	0,0311	0,0020	-0,0003	-0,0026	-0,0011	-0,0039	-0,0041	-0,0151
CEMAS	-0,0149	0,0006	-0,0140	-0,0064	-0,0238	-0,0197	-0,0327	0,0331	0,0019	0,0034	-0,0434	-0,0381	-0,0060	-0,0291	-0,0040
CEMTS	0,0303	0,0116	0,0356	0,0073	0,0201	0,0244	0,0138	0,0128	0,0048	0,0008	0,0102	0,0094	0,0314	0,0111	0,0003
CUSAN	0,0055	0,0230	0,0075	0,0189	0,0118	0,0148	-0,0214	0,0014	0,0444	-0,0764	0,0096	0,0094	0,0506	0,0111	0,0222
DMSAS	0,0090	0,0228	0,0090	0,0039	0,0146	0,0137	0,0230	0,0024	0,0256	0,0013	0,0094	0,0083	0,0042	0,0166	0,0553
DOKTA	0,0022	0,0025	0,0018	0,0014	0,0044	0,0021	-0,0014	0,0124	0,0050	0,0006	0,0039	0,0034	0,0007	0,0204	0,0027
ERBOS	0,0015	0,0376	-0,0021	0,0019	0,0023	0,0048	0,0114	0,0016	0,0381	0,0002	-0,0014	0,0012	0,0063	0,0016	0,0002
EREGL	0,0132	0,0668	0,0042	0,0178	0,0103	0,0078	0,0260	0,0008	0,0773	0,0008	0,0039	0,0107	0,0058	0,0065	0,0003
ISDMR	0,0255	0,0012	0,0089	0,0512	0,0158	0,0111	0,0219	0,0635	0,0010	0,0009	0,0060	0,0140	0,0099	0,0093	0,0024
IZMDC	-0,0026	0,0031	-0,0030	-0,0005	-0,0073	-0,0042	0,0190	0,0139	0,0044	0,0007	-0,0040	-0,0036	-0,0019	-0,0343	-0,0003
KRDMA	0,0027	0,0079	0,0021	0,0023	0,0028	0,0015	0,0341	0,0053	0,0117	0,0003	0,0032	0,0028	0,0007	0,0025	0,0000
SARKY	0,0011	0,0039	0,0002	0,0012	0,0025	0,0033	0,0226	0,0309	0,0020	0,0005	0,0001	0,0005	0,0013	0,0036	0,0000
TUCLK	-0,0046	0,0015	-0,0046	-0,0017	-0,0073	-0,0044	-0,0489	0,0218	0,0028	0,0027	-0,0079	-0,0069	-0,0022	-0,0079	-0,0107

Appendix 55. Main Metal Industry Sector 2019 TOPSIS Method Variable Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0016	0,0061	-0,0031	0,0000	-0,0065	-0,0091	-0,0001	0,0045	0,0081	-0,0161	-0,0035	-0,0025	-0,0167	-0,0050	-0,0001
BRSAN	0,0014	0,0094	0,0009	0,0014	0,0037	0,0021	0,0018	0,0009	0,0395	0,0176	0,0041	0,0066	0,0009	0,0024	0,0001
BURCE	0,0020	0,0019	0,0021	0,0011	0,0037	0,0016	-0,0830	0,0039	0,0095	-0,0086	0,0120	0,0095	0,0008	0,0020	0,0070
BURVA	-0,0001	0,0014	-0,0001	0,0006	-0,0003	-0,0004	0,0103	0,0034	0,0106	0,0018	-0,0008	-0,0006	-0,0001	-0,0003	-0,0001
CELHA	0,0035	0,0025	0,0047	0,0141	0,0184	0,0198	-0,0177	0,0035	0,0105	-0,0190	0,0162	0,0163	0,0172	0,0357	0,0675
CEMAS	0,0009	0,0004	0,0011	0,0011	0,0024	0,0014	-0,0002	0,0137	0,0027	-0,0020	0,0083	0,0066	0,0004	0,0017	0,0002
CEMTS	0,0470	0,0630	0,0477	0,0229	0,0268	0,0297	0,0017	0,0012	0,0314	0,0118	0,0296	0,0250	0,0192	0,0085	0,0002
CUSAN	-0,0035	0,0038	-0,0061	-0,0218	-0,0101	-0,0113	0,0007	0,0034	0,0108	-0,0122	-0,0129	-0,0101	-0,0306	-0,0052	-0,0091
DMSAS	0,0037	0,0101	0,0038	0,0017	0,0079	0,0066	0,0010	0,0019	0,0194	0,0067	0,0094	0,0074	0,0013	0,0052	0,0153
DOKTA	0,0024	0,0035	0,0014	0,0012	0,0047	0,0023	0,0050	0,0036	0,0103	0,0031	0,0086	0,0068	0,0003	0,0215	0,0016
ERBOS	-0,0004	0,0187	-0,0031	0,0000	-0,0011	-0,0028	0,0015	0,0007	0,0544	-0,0004	-0,0068	-0,0012	-0,0022	-0,0005	0,0000
EREGL	0,0114	0,0315	0,0044	0,0118	0,0146	0,0101	0,0017	0,0005	0,0803	0,0088	0,0130	0,0289	0,0048	0,0059	0,0002
ISDMR	0,0180	0,0006	0,0003	0,0267	0,0155	0,0094	0,0007	0,0502	0,0007	0,0070	0,0005	0,0238	0,0057	0,0056	0,0012
IZMDC	0,0038	0,0032	0,0053	0,0026	0,0173	0,0087	-0,0003	0,0026	0,0143	-0,0062	0,0260	0,0206	0,0035	0,0603	0,0005
KRDMA	0,0058	0,0019	0,0049	0,0077	0,0128	0,0067	-0,0021	0,0055	0,0066	0,0645	0,0219	0,0221	0,0024	0,0081	0,0001
SARKY	0,0009	0,0020	0,0003	0,0011	0,0031	0,0046	0,0030	0,0135	0,0027	0,0034	0,0004	0,0014	0,0008	0,0031	0,0000
TUCLK	0,0005	0,0001	0,0006	0,0009	0,0013	0,0007	0,0007	0,0883	0,0004	0,0093	0,0027	0,0021	0,0003	0,0010	0,0011

Appendix 56. Main Metal Industry Sector 2020 TOPSIS Method Variable Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYES	-0,0071	0,0176	-0,0086	0,0000	-0,0188	-0,0236	0,0164	0,0044	0,0051	-0,0048	-0,0047	-0,0046	-0,0049	-0,0180	-0,0008
BRSAN	-0,0021	0,0145	-0,0024	-0,0006	-0,0044	-0,0017	0,0240	0,0009	0,0263	0,0770	-0,0082	-0,0081	-0,0013	-0,0016	-0,0002
BURCE	-0,0002	0,0124	-0,0002	0,0006	-0,0003	-0,0001	0,0076	0,0013	0,0169	-0,0004	-0,0005	-0,0005	-0,0001	-0,0002	-0,0015
BURVA	0,0078	0,0142	0,0095	0,0016	0,0213	0,0277	0,0011	0,0023	0,0099	0,0380	0,0112	0,0111	0,0062	0,0205	0,0144
CELHA	0,0018	0,0031	0,0028	0,0027	0,0085	0,0070	-0,0083	0,0049	0,0047	-0,0061	0,0056	0,0056	0,0079	0,0278	0,0675
CEMAS	-0,0030	0,0613	-0,0032	-0,0012	-0,0020	-0,0008	0,0450	0,0004	0,0615	-0,0008	-0,0057	-0,0057	-0,0016	-0,0008	-0,0004
CEMTS	0,0146	0,0662	0,0150	0,0119	0,0103	0,0088	0,0040	0,0013	0,0181	0,0012	0,0058	0,0078	0,0222	0,0037	0,0003
CUSAN	0,0007	0,0109	0,0010	0,0013	0,0017	0,0014	0,0088	0,0016	0,0145	0,0006	0,0017	0,0017	0,0014	0,0011	0,0054
DMSAS	0,0044	0,0256	0,0047	0,0025	0,0096	0,0077	0,0049	0,0010	0,0233	0,0053	0,0082	0,0081	0,0022	0,0079	0,0621
DOKTA	0,0024	0,0020	0,0021	0,0016	0,0061	0,0023	0,0036	0,0061	0,0037	0,0034	0,0081	0,0081	0,0008	0,0180	0,0041
ERBOS	-0,0163	0,0489	-0,0252	-0,0155	-0,0202	-0,0165	0,0124	0,0007	0,0306	-0,0035	-0,0216	-0,0199	-0,0303	-0,0084	-0,0010
EREGL	0,0151	0,0824	0,0125	0,0127	0,0134	0,0064	0,0140	0,0004	0,0584	0,0051	0,0188	0,0208	0,0054	0,0058	0,0007
ISDMR	0,0279	0,0008	0,0178	0,0338	0,0151	0,0068	0,0133	0,0715	0,0003	0,0041	0,0191	0,0218	0,0063	0,0060	0,0043
IZMDC	0,0031	0,0045	0,0040	0,0025	0,0119	0,0042	-0,0032	0,0038	0,0059	-0,0027	0,0092	0,0091	0,0032	0,0382	0,0008
KRDMA	0,0068	0,0172	0,0079	0,0099	0,0166	0,0075	0,0028	0,0009	0,0255	0,0678	0,0207	0,0205	0,0044	0,0141	0,0002
SARKY	-0,0016	0,0066	-0,0024	-0,0006	-0,0050	-0,0068	0,0087	0,0065	0,0035	-0,0014	-0,0022	-0,0019	-0,0016	-0,0055	-0,0001
TUCLK	-0,0011	0,0049	-0,0013	0,0001	-0,0029	-0,0014	0,0193	0,0021	0,0106	-0,0033	-0,0045	-0,0045	-0,0007	-0,0028	-0,0091

Appendix 57. Accommodation Sector 2017 TOPSIS Method Fixed Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0000	0,0009	0,0000	0,0000	0,0000	0,0000	-0,0666	0,0037	0,0004	0,0000	-0,0001	-0,0001	0,0000	0,0000	-0,0004
AVTUR	0,0089	0,0001	0,0029	0,0000	0,0028	0,0019	-0,0001	0,0268	0,0001	-0,0007	0,0350	0,0336	0,0003	0,0025	0,0009
KSTUR	0,0408	0,0584	0,0467	0,0002	0,0217	0,0223	0,0001	0,0002	0,0081	0,0037	0,0160	0,0242	0,0500	0,0164	0,0007
MAALT	0,0074	0,0315	0,0151	0,0666	0,0104	0,0129	0,0001	0,0000	0,0662	0,0066	0,0510	0,0489	0,0432	0,0087	0,0543
MARTI	-0,0011	0,0001	-0,0007	0,0000	-0,0025	-0,0019	-0,0003	0,0056	0,0003	-0,0661	-0,0176	-0,0169	-0,0001	-0,0071	-0,0022
MERIT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0004	0,0605	0,0000	0,0000	0,0000	0,0000	0,0001	0,0000	0,0001
PKENT	0,0007	0,0005	0,0014	0,0001	0,0045	0,0043	-0,0012	0,0047	0,0003	0,0021	0,0024	0,0023	0,0043	0,0115	0,0204
TEKTU	0,0002	0,0001	0,0003	0,0000	0,0005	0,0005	0,0011	0,0020	0,0008	0,0005	0,0069	0,0066	0,0001	0,0007	0,0004
ULAS	-0,0514	0,0064	-0,0450	-0,0032	-0,0619	-0,0613	0,0000	0,0000	0,0000	-0,0032	0,0000	0,0000	-0,0079	-0,0626	-0,0327

Appendix 58. Accommodation Sector 2018 TOPSIS Method Fixed Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0031	0,0003	0,0058	0,0000	0,0053	0,0016	-0,0041	0,0035	0,0001	0,0594	0,0011	0,0011	0,0009	0,0038	0,0088
AVTUR	0,0026	0,0000	0,0020	0,0000	0,0012	0,0004	0,0073	0,0605	0,0000	0,0014	0,0010	0,0010	0,0002	0,0008	0,0001
KSTUR	0,0097	0,0133	0,0297	0,0000	0,0231	0,0152	0,0026	0,0001	0,0024	0,0024	0,0013	0,0017	0,0641	0,0149	0,0002
MAALT	0,0624	0,0649	0,0238	0,0667	0,0488	0,0617	0,0197	0,0000	0,0666	0,0160	0,0664	0,0664	0,0023	0,0564	0,0633
MARTI	-0,0008	0,0000	-0,0011	0,0000	-0,0038	-0,0013	-0,0025	0,0071	0,0000	0,0016	-0,0013	-0,0013	-0,0002	-0,0177	-0,0004
MERIT	0,0137	0,0000	0,0439	0,0000	0,0243	0,0088	0,0116	0,0200	0,0000	0,0043	0,0047	0,0047	0,0172	0,0154	0,0184
PKENT	0,0005	0,0001	0,0019	0,0000	0,0045	0,0029	0,0039	0,0094	0,0000	0,0006	0,0002	0,0002	0,0022	0,0061	0,0038
TEKTU	0,0019	0,0000	0,0019	0,0000	0,0019	0,0006	-0,0618	0,0150	0,0000	-0,0013	0,0030	0,0030	0,0002	0,0014	0,0002
ULAS	0,0159	0,0071	0,0320	0,0000	0,0294	0,0179	-0,0029	0,0000	0,0000	0,0251	0,0000	0,0000	0,0055	0,0209	0,0017

Appendix 59. Accommodation Sector 2019 TOPSIS Method Fixed Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0157	0,0009	0,0080	0,0003	0,0057	0,0032	0,0622	0,0060	0,0001	0,0309	0,0211	0,0191	0,0008	0,0051	0,0196
AVTUR	0,0001	0,0000	0,0002	0,0001	0,0001	0,0000	0,0010	0,0399	0,0000	0,0000	0,0008	0,0007	0,0000	0,0001	0,0000
KSTUR	0,0558	0,0301	0,0118	0,0006	0,0355	0,0371	0,0002	0,0004	0,0015	0,0072	0,0025	0,0277	0,0644	0,0276	0,0006
MAALT	-0,0049	0,0593	-0,0018	-0,0667	-0,0028	-0,0073	0,0033	0,0000	0,0666	-0,0015	-0,0601	-0,0542	-0,0002	-0,0038	-0,0085
MARTI	-0,0002	0,0000	-0,0003	0,0001	-0,0010	-0,0006	0,0118	0,0211	0,0000	0,0014	-0,0047	-0,0042	0,0000	-0,0146	-0,0002
MERIT	0,0001	0,0000	0,0002	0,0000	0,0001	0,0000	0,0038	0,0055	0,0001	0,0000	0,0001	0,0001	0,0000	0,0000	0,0001
PKENT	0,0128	0,0006	0,0268	0,0000	0,0420	0,0380	0,0035	0,0107	0,0001	0,0108	0,0137	0,0149	0,0117	0,0486	0,0630
TEKTU	0,0006	0,0000	0,0008	0,0001	0,0008	0,0005	0,0096	0,0472	0,0000	-0,0012	0,0128	0,0116	0,0001	0,0008	0,0002
ULAS	0,0299	0,0044	0,0593	0,0000	0,0371	0,0395	0,0174	0,0000	0,0000	-0,0576	0,0000	0,0000	0,0128	0,0327	0,0039

Appendix 60. Accommodation Sector 2020 TOPSIS Method Fixed Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0046	0,0003	0,0008	0,0003	0,0051	0,0030	0,0076	0,0196	0,0001	-0,0034	0,0033	0,0045	0,0004	0,0009	0,0243
AVTUR	0,0018	0,0003	0,0003	0,0029	0,0009	0,0006	0,0013	0,0143	0,0002	0,0010	0,0016	0,0022	0,0001	0,0001	0,0001
KSTUR	-0,0645	0,0335	-0,0665	-0,0002	-0,0603	-0,0598	-0,0006	0,0006	0,0037	-0,0509	-0,0582	-0,0506	-0,0665	-0,0091	-0,0014
MAALT	-0,0117	0,0545	-0,0010	-0,0666	-0,0123	-0,0219	0,0007	0,0000	0,0666	-0,0032	-0,0231	-0,0308	-0,0004	-0,0030	-0,0555
MARTI	0,0007	0,0000	0,0006	0,0002	0,0168	0,0108	-0,0662	0,0496	0,0000	-0,0395	0,0219	0,0292	0,0031	0,0659	0,0075
MERIT	0,0001	0,0001	0,0000	0,0000	0,0000	0,0000	0,0005	0,0078	0,0003	0,0000	0,0000	0,0000	0,0000	0,0000	0,0001
PKENT	0,0016	0,0002	0,0011	0,0000	0,0125	0,0116	-0,0003	0,0348	0,0001	-0,0165	0,0012	0,0016	0,0018	0,0030	0,0268
TEKTU	-0,0007	0,0000	-0,0002	0,0001	-0,0017	-0,0011	-0,0014	0,0110	0,0002	0,0010	-0,0056	-0,0075	-0,0001	-0,0004	-0,0004
ULAS	-0,0109	0,0188	-0,0037	-0,0004	-0,0135	-0,0114	0,0012	0,0000	0,0000	-0,0020	0,0000	0,0000	-0,0023	-0,0022	-0,0010

Appendix 61. Accommodation Sector 2017 TOPSIS Method Variable Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0000	0,0009	0,0000	0,0000	0,0000	0,0000	-0,1013	0,0056	0,0009	0,0000	-0,0001	-0,0001	0,0000	0,0000	-0,0003
AVTUR	0,0054	0,0001	0,0017	0,0000	0,0018	0,0012	-0,0002	0,0409	0,0001	-0,0008	0,0311	0,0292	0,0003	0,0018	0,0007
KSTUR	0,0249	0,0628	0,0279	0,0002	0,0145	0,0148	0,0002	0,0003	0,0163	0,0041	0,0142	0,0210	0,0471	0,0117	0,0005
MAALT	0,0045	0,0339	0,0090	0,0713	0,0070	0,0086	0,0002	0,0000	0,1337	0,0073	0,0453	0,0424	0,0407	0,0062	0,0396
MARTI	-0,0007	0,0001	-0,0004	0,0000	-0,0017	-0,0012	-0,0004	0,0086	0,0006	-0,0731	-0,0156	-0,0147	-0,0001	-0,0051	-0,0016
MERIT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0007	0,0923	0,0001	0,0000	0,0000	0,0000	0,0001	0,0000	0,0000
PKENT	0,0004	0,0006	0,0008	0,0001	0,0030	0,0028	-0,0019	0,0071	0,0007	0,0023	0,0021	0,0020	0,0040	0,0082	0,0149
TEKTU	0,0001	0,0001	0,0002	0,0000	0,0004	0,0003	0,0017	0,0031	0,0016	0,0006	0,0061	0,0058	0,0001	0,0005	0,0003
ULAS	-0,0313	0,0069	-0,0269	-0,0035	-0,0413	-0,0405	0,0000	0,0000	0,0000	-0,0035	0,0000	0,0000	-0,0074	-0,0448	-0,0238

Appendix 62. Accommodation Sector 2018 TOPSIS Method Variable Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0021	0,0002	0,0066	0,0000	0,0039	0,0011	-0,0060	0,0055	0,0002	0,0748	0,0008	0,0008	0,0012	0,0022	0,0064
AVTUR	0,0017	0,0000	0,0023	0,0000	0,0009	0,0003	0,0105	0,0936	0,0000	0,0018	0,0007	0,0007	0,0003	0,0005	0,0000
KSTUR	0,0064	0,0096	0,0336	0,0000	0,0169	0,0102	0,0038	0,0002	0,0049	0,0030	0,0010	0,0012	0,0819	0,0087	0,0001
MAALT	0,0412	0,0468	0,0270	0,0506	0,0357	0,0413	0,0284	0,0000	0,1361	0,0201	0,0479	0,0478	0,0030	0,0329	0,0462
MARTI	-0,0005	0,0000	-0,0012	0,0000	-0,0027	-0,0008	-0,0036	0,0110	0,0001	0,0020	-0,0010	-0,0010	-0,0002	-0,0103	-0,0003
MERIT	0,0090	0,0000	0,0498	0,0000	0,0178	0,0059	0,0168	0,0310	0,0000	0,0054	0,0034	0,0034	0,0220	0,0090	0,0134
PKENT	0,0003	0,0001	0,0022	0,0000	0,0033	0,0019	0,0057	0,0145	0,0001	0,0007	0,0001	0,0001	0,0028	0,0035	0,0028
TEKTU	0,0013	0,0000	0,0021	0,0000	0,0014	0,0004	-0,0893	0,0232	0,0000	-0,0016	0,0021	0,0021	0,0003	0,0008	0,0001
ULAS	0,0105	0,0051	0,0362	0,0000	0,0215	0,0120	-0,0043	0,0000	0,0000	0,0317	0,0000	0,0000	0,0070	0,0122	0,0012

Appendix 63. Accommodation Sector 2019 TOPSIS Method Variable Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0127	0,0016	0,0078	0,0003	0,0055	0,0030	0,0765	0,0095	0,0001	0,0336	0,0161	0,0128	0,0007	0,0040	0,0169
AVTUR	0,0001	0,0001	0,0002	0,0001	0,0001	0,0000	0,0012	0,0634	0,0000	0,0001	0,0006	0,0005	0,0000	0,0000	0,0000
KSTUR	0,0453	0,0501	0,0114	0,0005	0,0347	0,0353	0,0002	0,0006	0,0014	0,0078	0,0019	0,0186	0,0559	0,0213	0,0005
MAALT	-0,0040	0,0990	-0,0017	-0,0587	-0,0028	-0,0070	0,0040	0,0000	0,0595	-0,0016	-0,0459	-0,0365	-0,0001	-0,0030	-0,0073
MARTI	-0,0002	0,0000	-0,0003	0,0001	-0,0010	-0,0006	0,0145	0,0335	0,0000	0,0015	-0,0036	-0,0028	0,0000	-0,0113	-0,0002
MERIT	0,0001	0,0001	0,0002	0,0000	0,0001	0,0000	0,0047	0,0087	0,0001	0,0000	0,0001	0,0001	0,0000	0,0000	0,0001
PKENT	0,0104	0,0010	0,0260	0,0000	0,0410	0,0362	0,0043	0,0171	0,0001	0,0117	0,0105	0,0100	0,0102	0,0375	0,0544
TEKTU	0,0005	0,0000	0,0007	0,0001	0,0008	0,0004	0,0118	0,0751	0,0000	-0,0013	0,0098	0,0078	0,0001	0,0006	0,0001
ULAS	0,0242	0,0073	0,0577	0,0000	0,0362	0,0376	0,0214	0,0000	0,0000	-0,0627	0,0000	0,0000	0,0111	0,0252	0,0033

Appendix 64. Accommodation Sector 2020 TOPSIS Method Variable Weighted Standard Decision Matrix (V)

Company Code	CRITERIA / FINANCIAL RATIOS														
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
AYCES	0,0033	0,0009	0,0007	0,0003	0,0032	0,0019	0,0081	0,0178	0,0001	-0,0050	0,0019	0,0025	0,0003	0,0009	0,0235
AVTUR	0,0013	0,0008	0,0002	0,0035	0,0006	0,0004	0,0014	0,0130	0,0002	0,0014	0,0009	0,0012	0,0001	0,0001	0,0001
KSTUR	-0,0460	0,0868	-0,0539	-0,0002	-0,0370	-0,0377	-0,0007	0,0005	0,0044	-0,0755	-0,0322	-0,0284	-0,0523	-0,0083	-0,0013
MAALT	-0,0083	0,1415	-0,0008	-0,0800	-0,0076	-0,0138	0,0007	0,0000	0,0799	-0,0048	-0,0128	-0,0173	-0,0003	-0,0027	-0,0536
MARTI	0,0005	0,0000	0,0005	0,0002	0,0103	0,0068	-0,0703	0,0452	0,0001	-0,0586	0,0121	0,0164	0,0024	0,0601	0,0073
MERIT	0,0000	0,0002	0,0000	0,0000	0,0000	0,0000	0,0006	0,0071	0,0003	0,0000	0,0000	0,0000	0,0000	0,0000	0,0001
PKENT	0,0011	0,0006	0,0009	0,0000	0,0077	0,0073	-0,0004	0,0316	0,0001	-0,0245	0,0006	0,0009	0,0014	0,0027	0,0259
TEKTU	-0,0005	0,0001	-0,0001	0,0001	-0,0010	-0,0007	-0,0015	0,0101	0,0002	0,0015	-0,0031	-0,0042	-0,0001	-0,0003	-0,0004
ULAS	-0,0078	0,0488	-0,0030	-0,0005	-0,0083	-0,0072	0,0013	0,0000	0,0000	-0,0030	0,0000	0,0000	-0,0018	-0,0020	-0,0010

Appendix 65. Main Metal Industry Sector 2017 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Fixed Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0477	0,0543	0,0248	0,0560	0,0295	0,0423	0,0263	0,0626	0,0480	0,0588	0,0443	0,0392	0,0253	0,0230	0,0479
A-	-0,0237	0,0002	-0,0416	-0,0142	-0,0266	-0,0272	-0,0462	-0,0005	-0,0199	-0,0052	-0,0243	-0,0206	-0,0470	-0,0474	-0,0072

Appendix 66. Main Metal Industry Sector 2018 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Fixed Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0432	0,0512	0,0551	0,0583	0,0292	0,0353	0,0306	0,0446	0,0482	0,0176	0,0137	0,0201	0,0518	0,0230	0,0581
A-	-0,0212	0,0005	-0,0218	-0,0072	-0,0347	-0,0284	-0,0308	0,0006	0,0006	-0,0624	-0,0587	-0,0548	-0,0062	-0,0386	-0,0158

Appendix 67. Main Metal Industry Sector 2019 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Fixed Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0596	0,0561	0,0643	0,0386	0,0377	0,0456	0,0080	0,0566	0,0466	0,0566	0,0355	0,0321	0,0288	0,0533	0,0641
A-	-0,0044	0,0001	-0,0082	-0,0315	-0,0142	-0,0173	-0,0645	0,0003	0,0002	-0,0167	-0,0154	-0,0113	-0,0461	-0,0046	-0,0087

Appendix 68. Main Metal Industry Sector 2020 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Fixed Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0451	0,0395	0,0293	0,0529	0,0289	0,0413	0,0468	0,0657	0,0388	0,0466	0,0296	0,0303	0,0364	0,0416	0,0480
A-	-0,0263	0,0004	-0,0416	-0,0243	-0,0274	-0,0351	-0,0086	0,0003	0,0002	-0,0037	-0,0309	-0,0276	-0,0497	-0,0196	-0,0065

Appendix 69. Main Metal Industry Sector 2017 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Variable Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0314	0,0744	0,0176	0,0442	0,0226	0,0317	0,0339	0,0795	0,0789	0,0673	0,0336	0,0297	0,0196	0,0193	0,0711
A-	-0,0156	0,0003	-0,0295	-0,0112	-0,0204	-0,0204	-0,0594	-0,0006	-0,0328	-0,0060	-0,0184	-0,0156	-0,0363	-0,0397	-0,0107

Appendix 70. Main Metal Industry Sector 2018 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Variable Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0303	0,0668	0,0356	0,0512	0,0201	0,0244	0,0486	0,0635	0,0773	0,0216	0,0102	0,0140	0,0506	0,0204	0,0553
A-	-0,0149	0,0006	-0,0140	-0,0064	-0,0238	-0,0197	-0,0489	0,0008	0,0010	-0,0764	-0,0434	-0,0381	-0,0060	-0,0343	-0,0151

Appendix 71. Main Metal Industry Sector 2019 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Variable Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0470	0,0630	0,0477	0,0267	0,0268	0,0297	0,0103	0,0883	0,0803	0,0645	0,0296	0,0289	0,0192	0,0603	0,0675
A-	-0,0035	0,0001	-0,0061	-0,0218	-0,0101	-0,0113	-0,0830	0,0005	0,0004	-0,0190	-0,0129	-0,0101	-0,0306	-0,0052	-0,0091

Appendix 72. Main Metal Industry Sector 2020 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Variable Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0279	0,0824	0,0178	0,0338	0,0213	0,0277	0,0450	0,0715	0,0615	0,0770	0,0207	0,0218	0,0222	0,0382	0,0675
A-	-0,0163	0,0008	-0,0252	-0,0155	-0,0202	-0,0236	-0,0083	0,0004	0,0003	-0,0061	-0,0216	-0,0199	-0,0303	-0,0180	-0,0091

Appendix 73. Accommodation Sector 2017 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Fixed Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0408	0,0584	0,0467	0,0666	0,0217	0,0223	0,0011	0,0605	0,0662	0,0066	0,0510	0,0489	0,0500	0,0164	0,0543
A-	-0,0514	0,0000	-0,0450	-0,0032	-0,0619	-0,0613	-0,0666	0,0000	0,0000	-0,0661	-0,0176	-0,0169	-0,0079	-0,0626	-0,0327

Appendix 74. Accommodation Sector 2018 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Fixed Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0624	0,0649	0,0439	0,0667	0,0488	0,0617	0,0197	0,0605	0,0666	0,0594	0,0664	0,0664	0,0641	0,0564	0,0633
A-	-0,0008	0,0000	-0,0011	0,0000	-0,0038	-0,0013	-0,0618	0,0000	0,0000	-0,0013	-0,0013	-0,0013	-0,0002	-0,0177	-0,0004

Appendix 75. Accommodation Sector 2019 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Fixed Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0558	0,0593	0,0593	0,0006	0,0420	0,0395	0,0622	0,0472	0,0666	0,0309	0,0211	0,0277	0,0644	0,0486	0,0630
A-	-0,0049	0,0000	-0,0018	-0,0667	-0,0028	-0,0073	0,0002	0,0000	0,0000	-0,0576	-0,0601	-0,0542	-0,0002	-0,0146	-0,0085

Appendix 76. Accommodation Sector 2020 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Fixed Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0046	0,0545	0,0011	0,0029	0,0168	0,0116	0,0076	0,0496	0,0666	0,0010	0,0219	0,0292	0,0031	0,0659	0,0268
A-	-0,0645	0,0000	-0,0665	-0,0666	-0,0603	-0,0598	-0,0662	0,0000	0,0000	-0,0509	-0,0582	-0,0506	-0,0665	-0,0091	-0,0555

Appendix 77. Accommodation Sector 2017 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Variable Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0249	0,0628	0,0279	0,0713	0,0145	0,0148	0,0017	0,0923	0,1337	0,0073	0,0453	0,0424	0,0471	0,0117	0,0396
A-	-0,0313	0,0000	-0,0269	-0,0035	-0,0413	-0,0405	-0,1013	0,0000	0,0000	-0,0731	-0,0156	-0,0147	-0,0074	-0,0448	-0,0238

Appendix 78. Accommodation Sector 2018 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Variable Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0412	0,0468	0,0498	0,0506	0,0357	0,0413	0,0284	0,0936	0,1361	0,0748	0,0479	0,0478	0,0819	0,0329	0,0462
A-	-0,0005	0,0000	-0,0012	0,0000	-0,0027	-0,0008	-0,0893	0,0000	0,0000	-0,0016	-0,0010	-0,0010	-0,0002	-0,0103	-0,0003

Appendix 79. Accommodation Sector 2019 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Variable Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0453	0,0990	0,0577	0,0005	0,0410	0,0376	0,0765	0,0751	0,0595	0,0336	0,0161	0,0186	0,0559	0,0375	0,0544
A-	-0,0040	0,0000	-0,0017	-0,0587	-0,0028	-0,0070	0,0002	0,0000	0,0000	-0,0627	-0,0459	-0,0365	-0,0001	-0,0113	-0,0073

Appendix 80. Accommodation Sector 2020 TOPSIS Method Determination The Positive Ideal (A*) and

Negative Ideal (A -) Solutions (For Variable Weights)

	CRITERIA / FINANCIAL RATIOS														
	MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX	MAX	MAX
	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3
A*	0,0033	0,1415	0,0009	0,0035	0,0103	0,0073	0,0081	0,0452	0,0799	0,0015	0,0121	0,0164	0,0024	0,0601	0,0259
A-	-0,0460	0,0000	-0,0539	-0,0800	-0,0370	-0,0377	-0,0703	0,0000	0,0000	-0,0755	-0,0322	-0,0284	-0,0523	-0,0083	-0,0536

Appendix 81. Main Metal Industry Sector 2017 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Fixed Weights)

Company Code	Si +	Si -
AYES	0,1771	0,0975
BRSAN	0,1745	0,1077
BURCE	0,1756	0,1009
BURVA	0,1326	0,1672
CELHA	0,1332	0,1637
CEMAS	0,1464	0,1451
CEMTS	0,2273	0,0666
CUSAN	0,1704	0,1048
DMSAS	0,1326	0,1542
DOKTA	0,1873	0,1062
ERBOS	0,1408	0,1455
EREGL	0,1202	0,1735
ISDMR	0,1102	0,1997
IZMDC	0,1612	0,1318
KRDMA	0,1190	0,1824
SARKY	0,1843	0,0904
TUCLK	0,1724	0,1177

Appendix 82. Main Metal Industry Sector 2018 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Fixed Weights)

Company Code	Si +	Si -
AYES	0,1338	0,1527
BRSAN	0,1563	0,1296
BURCE	0,1491	0,1457
BURVA	0,1351	0,1618
CELHA	0,1676	0,1224
CEMAS	0,2276	0,0710
CEMTS	0,1107	0,1960
CUSAN	0,1342	0,1630
DMSAS	0,1128	0,1818
DOKTA	0,1487	0,1440
ERBOS	0,1414	0,1373
EREGL	0,1157	0,1725
ISDMR	0,1120	0,1875
IZMDC	0,1730	0,1148
KRDMA	0,1469	0,1413
SARKY	0,1484	0,1370
TUCLK	0,1819	0,1057

Appendix 83. Main Metal Industry Sector 2019 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Fixed Weights)

Company Code	Si +	Si -
AYES	0,2028	0,0773
BRSAN	0,1681	0,1055
BURCE	0,1895	0,0776
BURVA	0,1833	0,0987
CELHA	0,1462	0,1529
CEMAS	0,1775	0,0982
CEMTS	0,1110	0,1966
CUSAN	0,2272	0,0657
DMSAS	0,1602	0,1087
DOKTA	0,1693	0,1052
ERBOS	0,1820	0,0962
EREGL	0,1441	0,1375
ISDMR	0,1518	0,1366
IZMDC	0,1570	0,1332
KRDMA	0,1522	0,1379
SARKY	0,1768	0,0993
TUCLK	0,1712	0,1123

Appendix 84. Main Metal Industry Sector 2020 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Fixed Weights)

Company Code	Si +	Si -
AYES	0,1918	0,0715
BRSAN	0,1577	0,1060
BURCE	0,1592	0,0996
BURVA	0,1244	0,1584
CELHA	0,1404	0,1400
CEMAS	0,1569	0,1139
CEMTS	0,1268	0,1585
CUSAN	0,1534	0,1062
DMSAS	0,1320	0,1353
DOKTA	0,1466	0,1190
ERBOS	0,2267	0,0401
EREGL	0,1191	0,1632
ISDMR	0,1050	0,1907
IZMDC	0,1451	0,1347
KRDMA	0,1235	0,1562
SARKY	0,1684	0,0882
TUCLK	0,1658	0,0946

Appendix 85. Main Metal Industry Sector 2017 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Variable Weights)

Company Code	Si +	Si -
AYES	0,1877	0,1004
BRSAN	0,2005	0,0993
BURCE	0,1912	0,0972
BURVA	0,1588	0,1454
CELHA	0,1518	0,1633
CEMAS	0,1722	0,1321
CEMTS	0,2169	0,0827
CUSAN	0,1810	0,1063
DMSAS	0,1490	0,1527
DOKTA	0,1969	0,1149
ERBOS	0,1565	0,1401
EREGL	0,1396	0,1808
ISDMR	0,1464	0,1782
IZMDC	0,1870	0,1215
KRDMA	0,1436	0,1652
SARKY	0,1949	0,0921
TUCLK	0,1862	0,1232

Appendix 86. Main Metal Industry Sector 2018 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Variable Weights)

Company Code	Si +	Si -
AYES	0,1478	0,1390
BRSAN	0,1495	0,1455
BURCE	0,1651	0,1360
BURVA	0,1459	0,1528
CELHA	0,1689	0,1228
CEMAS	0,2107	0,0884
CEMTS	0,1340	0,1660
CUSAN	0,1587	0,1372
DMSAS	0,1231	0,1694
DOKTA	0,1596	0,1324
ERBOS	0,1382	0,1378
EREGL	0,1137	0,1790
ISDMR	0,1296	0,1746
IZMDC	0,1712	0,1206
KRDMA	0,1516	0,1422
SARKY	0,1524	0,1370
TUCLK	0,1932	0,1019

Appendix 87. Main Metal Industry Sector 2019 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Variable Weights)

Company Code	Si +	Si -
AYES	0,2063	0,0889
BRSAN	0,1733	0,1132
BURCE	0,2100	0,0590
BURVA	0,1924	0,1062
CELHA	0,1688	0,1378
CEMAS	0,1888	0,1004
CEMTS	0,1416	0,1712
CUSAN	0,2198	0,0847
DMSAS	0,1723	0,1097
DOKTA	0,1805	0,1091
ERBOS	0,1815	0,1114
EREGL	0,1541	0,1466
ISDMR	0,1648	0,1302
IZMDC	0,1732	0,1309
KRDMA	0,1687	0,1382
SARKY	0,1874	0,1026
TUCLK	0,1725	0,1336

Appendix 88. Main Metal Industry Sector 2020 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Variable Weights)

Company Code	Si +	Si -
AYES	0,1913	0,0526
BRSAN	0,1541	0,1095
BURCE	0,1742	0,0700
BURVA	0,1437	0,1189
CELHA	0,1643	0,1186
CEMAS	0,1539	0,1168
CEMTS	0,1476	0,1222
CUSAN	0,1701	0,0748
DMSAS	0,1426	0,1159
DOKTA	0,1711	0,0844
ERBOS	0,1941	0,0622
EREGL	0,1348	0,1453
ISDMR	0,1500	0,1397
IZMDC	0,1731	0,0980
KRDMA	0,1392	0,1297
SARKY	0,1824	0,0602
TUCLK	0,1836	0,0660

Appendix 89. Accomodation Sector 2017 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Fixed Weights)

Company Code	Si +	Si -
AYCES	0,1884	0,1491
AVTUR	0,1520	0,1851
KSTUR	0,1270	0,2392
MAALT	0,0826	0,2491
MARTI	0,2024	0,1416
MERIT	0,1666	0,1745
PKENT	0,1653	0,1782
TEKTU	0,1722	0,1667
ULAS	0,2622	0,0951

Appendix 90. Accomodation Sector 2018 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Fixed Weights)

Company Code	Si +	Si -
AYCES	0,2135	0,0879
AVTUR	0,2183	0,0940
KSTUR	0,1958	0,1077
MAALT	0,0988	0,2238
MARTI	0,2353	0,0598
MERIT	0,1927	0,1037
PKENT	0,2216	0,0714
TEKTU	0,2366	0,0261
ULAS	0,1987	0,0926

Appendix 91. Accomodation Sector 2019 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Fixed Weights)

Company Code	Si +	Si -
AYCES	0,1560	0,1734
AVTUR	0,1851	0,1284
KSTUR	0,1368	0,1833
MAALT	0,2196	0,1060
MARTI	0,1898	0,1193
MERIT	0,1887	0,1215
PKENT	0,1377	0,1842
TEKTU	0,1793	0,1415
ULAS	0,1669	0,1503

Appendix 92. Accomodation Sector 2020 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Fixed Weights)

Company Code	Si +	Si -
AYCES	0,1169	0,2188
AVTUR	0,1233	0,2062
KSTUR	0,2324	0,1130
MAALT	0,1635	0,1761
MARTI	0,1220	0,2323
MERIT	0,1265	0,2023
PKENT	0,1147	0,2198
TEKTU	0,1293	0,1974
ULAS	0,1293	0,1900

Appendix 93. Accomodation Sector 2017 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Variable Weights)

Company Code	Si +	Si -
AYCES	0,2332	0,1162
AVTUR	0,1876	0,1728
KSTUR	0,1740	0,2043
MAALT	0,1015	0,2542
MARTI	0,2311	0,1309
MERIT	0,1912	0,1801
PKENT	0,2038	0,1621
TEKTU	0,2075	0,1574
ULAS	0,2482	0,1250

Appendix 94. Accomodation Sector 2018 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Variable Weights)

Company Code	Si +	Si -
AYCES	0,2273	0,1146
AVTUR	0,2234	0,1374
KSTUR	0,2133	0,1330
MAALT	0,1360	0,2284
MARTI	0,2440	0,0864
MERIT	0,2096	0,1285
PKENT	0,2358	0,0975
TEKTU	0,2619	0,0268
ULAS	0,2221	0,1058

Appendix 95. Accomodation Sector 2019 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Variable Weights)

Company Code	Si +	Si -
AYCES	0,1701	0,1622
AVTUR	0,1917	0,1233
KSTUR	0,1528	0,1624
MAALT	0,2024	0,1310
MARTI	0,1947	0,1093
MERIT	0,2013	0,1058
PKENT	0,1631	0,1603
TEKTU	0,1859	0,1355
ULAS	0,1891	0,1295

Appendix 96. Accomodation Sector 2020 TOPSIS Method Determination of Distance Measurement Between Alternatives

(For Variable Weights)

Company Code	Si +	Si -
AYCES	0,1755	0,1933
AVTUR	0,1789	0,1841
KSTUR	0,1969	0,1467
MAALT	0,1484	0,2129
MARTI	0,1911	0,1829
MERIT	0,1807	0,1804
PKENT	0,1756	0,1882
TEKTU	0,1813	0,1785
ULAS	0,1510	0,1791

Appendix 97. Main Metal Industry Sector 2017 TOPSIS Method Relative Closeness to Fixed Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
ISDMR	0,6444	1
KRDMA	0,6052	2
EREGL	0,5908	3
BURVA	0,5576	4
CELHA	0,5513	5
DMSAS	0,5376	6
ERBOS	0,5081	7
CEMAS	0,4979	8
IZMDC	0,4499	9
TUCLK	0,4057	10
BRSAN	0,3817	11
CUSAN	0,3809	12
BURCE	0,3649	13
DOKTA	0,3618	14
AYES	0,3550	15
SARKY	0,3290	16
CEMTS	0,2267	17

Appendix 98. Main Metal Industry Sector 2018 TOPSIS Method Relative Closeness to Fixed Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
CEMTS	0,6390	1
ISDMR	0,6261	2
DMSAS	0,6171	3
EREGL	0,5985	4
CUSAN	0,5485	5
BURVA	0,5451	6
AYES	0,5329	7
BURCE	0,4942	8
ERBOS	0,4927	9
DOKTA	0,4919	10
KRDMA	0,4903	11
SARKY	0,4799	12
BRSAN	0,4533	13
CELHA	0,4222	14
IZMDC	0,3988	15
TUCLK	0,3674	16
CEMAS	0,2377	17

Appendix 99. Main Metal Industry Sector 2019 TOPSIS Method Relative Closeness to Fixed Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
CEMTS	0,6391	1
CELHA	0,5112	2
EREGL	0,4882	3
KRDMA	0,4755	4
ISDMR	0,4736	5
IZMDC	0,4590	6
DMSAS	0,4042	7
TUCLK	0,3961	8
BRSAN	0,3855	9
DOKTA	0,3834	10
SARKY	0,3596	11
CEMAS	0,3562	12
BURVA	0,3500	13
ERBOS	0,3459	14
BURCE	0,2906	15
AYES	0,2759	16
CUSAN	0,2244	17

Appendix 100. Main Metal Industry Sector 2020 TOPSIS Method Relative Closeness to Fixed Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
ISDMR	0,6449	1
EREGL	0,5781	2
BURVA	0,5601	3
KRDMA	0,5583	4
CEMTS	0,5556	5
DMSAS	0,5060	6
CELHA	0,4992	7
IZMDC	0,4815	8
DOKTA	0,4482	9
CEMAS	0,4205	10
CUSAN	0,4092	11
BRSAN	0,4019	12
BURCE	0,3847	13
TUCLK	0,3633	14
SARKY	0,3436	15
AYES	0,2716	16
ERBOS	0,1504	17

Appendix 101. Main Metal Industry Sector 2017 TOPSIS Method Relative Closeness to Variable Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
EREGL	0,5642	1
ISDMR	0,5489	2
KRDMA	0,5350	3
CELHA	0,5182	4
DMSAS	0,5061	5
BURVA	0,4780	6
ERBOS	0,4724	7
CEMAS	0,4341	8
TUCLK	0,3982	9
IZMDC	0,3939	10
CUSAN	0,3700	11
DOKTA	0,3684	12
AYES	0,3486	13
BURCE	0,3370	14
BRSAN	0,3313	15
SARKY	0,3209	16
CEMTS	0,2759	17

Appendix 102. Main Metal Industry Sector 2018 TOPSIS Method Relative Closeness to Variable Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
EREGL	0,6117	1
DMSAS	0,5792	2
ISDMR	0,5740	3
CEMTS	0,5533	4
BURVA	0,5116	5
ERBOS	0,4994	6
BRSAN	0,4932	7
AYES	0,4847	8
KRDMA	0,4840	9
SARKY	0,4734	10
CUSAN	0,4637	11
DOKTA	0,4534	12
BURCE	0,4517	13
CELHA	0,4210	14
IZMDC	0,4133	15
TUCLK	0,3454	16
CEMAS	0,2957	17

Appendix 103. Main Metal Industry Sector 2019 TOPSIS Method Relative Closeness to Variable Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
CEMTS	0,5473	1
EREGL	0,4874	2
KRDMA	0,4504	3
CELHA	0,4495	4
ISDMR	0,4415	5
TUCLK	0,4365	6
IZMDC	0,4305	7
BRSAN	0,3950	8
DMSAS	0,3892	9
ERBOS	0,3804	10
DOKTA	0,3767	11
BURVA	0,3556	12
SARKY	0,3538	13
CEMAS	0,3470	14
AYES	0,3013	15
CUSAN	0,2782	16
BURCE	0,2194	17

Appendix 104. Main Metal Industry Sector 2020 TOPSIS Method Relative Closeness to Variable Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
EREGL	0,5188	1
KRDMA	0,4823	2
ISDMR	0,4822	3
CEMTS	0,4529	4
BURVA	0,4527	5
DMSAS	0,4483	6
CEMAS	0,4315	7
CELHA	0,4193	8
BRSAN	0,4154	9
IZMDC	0,3616	10
DOKTA	0,3302	11
CUSAN	0,3053	12
BURCE	0,2866	13
TUCLK	0,2645	14
SARKY	0,2480	15
ERBOS	0,2427	16
AYES	0,2157	17

Appendix 105. Accomodation Sector 2017 TOPSIS Method Relative Closeness to Fixed Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
MAALT	0,7511	1
KSTUR	0,6531	2
AVTUR	0,5491	3
PKENT	0,5187	4
MERIT	0,5115	5
TEKTU	0,4918	6
AYCES	0,4418	7
MARTI	0,4117	8
ULAS	0,2662	9

Appendix 106. Accomodation Sector 2018 TOPSIS Method Relative Closeness to Fixed Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
MAALT	0,6937	1
KSTUR	0,3548	2
MERIT	0,3499	3
ULAS	0,3179	4
AVTUR	0,3010	5
AYCES	0,2916	6
PKENT	0,2437	7
MARTI	0,2025	8
TEKTU	0,0993	9

Appendix 107. Accomodation Sector 2019 TOPSIS Method Relative Closeness to Fixed Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
KSTUR	0,5727	1
PKENT	0,5722	2
AYCES	0,5264	3
ULAS	0,4738	4
TEKTU	0,4411	5
AVTUR	0,4095	6
MERIT	0,3917	7
MARTI	0,3859	8
MAALT	0,3255	9

Appendix 108. Accomodation Sector 2020 TOPSIS Method Relative Closeness to Fixed Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
PKENT	0,6572	1
MARTI	0,6557	2
AYCES	0,6517	3
AVTUR	0,6258	4
MERIT	0,6153	5
TEKTU	0,6041	6
ULAS	0,5951	7
MAALT	0,5185	8
KSTUR	0,3271	9

Appendix 109. Accomodation Sector 2017 TOPSIS Method Relative Closeness to Variable Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
MAALT	0,7147	1
KSTUR	0,5400	2
MERIT	0,4851	3
AVTUR	0,4795	4
PKENT	0,4430	5
TEKTU	0,4313	6
MARTI	0,3617	7
ULAS	0,3348	8
AYCES	0,3326	9

Appendix 110. Accomodation Sector 2018 TOPSIS Method Relative Closeness to Variable Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
MAALT	0,6268	1
KSTUR	0,3840	2
AVTUR	0,3808	3
MERIT	0,3800	4
AYCES	0,3352	5
ULAS	0,3228	6
PKENT	0,2925	7
MARTI	0,2616	8
TEKTU	0,0927	9

Appendix 111. Accomodation Sector 2019 TOPSIS Method Relative Closeness to Variable Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
KSTUR	0,5153	1
PKENT	0,4957	2
AYCES	0,4880	3
TEKTU	0,4215	4
ULAS	0,4066	5
MAALT	0,3929	6
AVTUR	0,3915	7
MARTI	0,3595	8
MERIT	0,3445	9

Appendix 112. Accomodation Sector 2020 TOPSIS Method Relative Closeness to Variable Weighted Ideal Solution (C*i)

Company Code	C Value	Row Number
MAALT	0,5893	1
ULAS	0,5427	2
AYCES	0,5241	3
PKENT	0,5173	4
AVTUR	0,5073	5
MERIT	0,4995	6
TEKTU	0,4961	7
MARTI	0,4891	8
KSTUR	0,4269	9