

## THE EFFECTS OF HYPERINFLATION ON FINANCIAL REPORTING AND AUDIT PRACTICES: EVIDENCE FROM TÜRKİYE

### HİPERENFLASYONUN FİNANSAL RAPORLAMA VE DENETİM UYGULAMALARI ÜZERİNDEKİ ETKİLERİ: TÜRKİYEDEN ÖRNEKLER

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#### Abstract

The purpose of this paper is to reveal the impact and reflections of a hyperinflationary economy, thus hyperinflationary accounting on annual financial reports and independent auditor's reports in Türkiye for the year 2023 regarding IAS 29 Financial Reporting in Hyperinflationary Economies, and International Standard on Auditing (ISA) 701-Communicating Key Audit Matters in the Independent Auditor's Report & (ISA) 706 – Emphasis of Matter Paragraphs in the Independent Auditor's Report. This study concerns a relatively emerging topic and an additional specific area for which there are a few studies peculiar to each country's economy. The empirical findings of this study are significant in that they provide a complete map from a broader research perspective. The study adds to the literature by providing valuable insights and content about the matter of hyperinflation which is an ongoing problem in the long term as regards financial reporting and independent auditing. Moreover, it raises awareness about the reporting challenges of hyperinflation for the prospective hyperinflationist periods that might occur in the foreseeable future.

**Keywords:** Hyperinflation, financial reporting, audit practices, ias 29, isa 701&706

**JEL Classification:** M41, M42, M48

#### Öz

Bu çalışmanın amacı, TMS 29 Yüksek Enflasyonlu Ekonomilerde Finansal Raporlama ve BDS 701-Bağımsız Denetçi Raporunda Kilit Denetim Konularının Bildirilmesi ve BDS 706 – Bağımsız Denetçi Raporunda Yer Alan Dikkat Çekilen Hususlar ve Diğer Hususlar Paragrafları Standartları uyarınca, Türkiye'de 2023 yılına ilişkin yıllık finansal raporlar ve bağımsız denetim raporları üzerinde hiperenflasyonist ekonominin,

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dolayısıyla hiperenflasyon muhasebenin etkisini ve yansımalarını ortaya koymaktır. Araştırma konusu, yakın bir zamanda ortaya çıkmış olan ve her ülke ekonomisinin kendine özgü birkaç çalışmanın bulunduğu spesifik bir çalışma alanını kapsamaktadır. Çalışmanın ampirik bulguları, araştırma konusu ile ilgili olarak oldukça geniş bir araştırma perspektifinden bir yol haritası sunması açısından önemlidir. Çalışma, finansal raporlama ve bağımsız denetim açısından devam eden bir sorun olan hiperenflasyon konusunda önemli bilgiler ve içerikler sunarak literatüre katkıda bulunmaktadır. Ayrıca, çalışma yakın gelecekte meydana gelebilecek olası hiperenflasyonist dönemler için hiperenflasyonist ekonomi ortamının finansal raporlamada yaratacağı zorluklar hakkında farkındalığı da arttırmaktadır.

**Anahtar Kelimeler:** Hiperenflasyon, finansal raporlama, denetim uygulamaları, tms-29, bds 701&706

**JEL Sınıflandırılması:** M41, M42, M48

## 1. Introduction

According to IMF World Economic Report released on October, 22 2024, several countries including Türkiye have been considered to be hyperinflationary economies. These countries are Argentina, Ethiopia, Ghana, Haiti, Iran, Lao PDR, Lebanon, Malawi, Sierra Leone, South Sudan, Sudan, Suriname, Zimbabwe, Venezuela, etc. All of these economies were hyperinflationary in 2023, thus entities of these countries should apply IAS-29 to their currencies (PwC, 2024). Similarly, Türkiye became hyperinflationary in the year 2023 regarding the characteristics of the economic environment of a country stated by IAS-29 Financial Reporting in Hyperinflationary Economies. The hyperinflationary economic environment has impacted all of the entities operating under the hyperinflationary economy in Türkiye, significantly. Particularly, their accounting and financial reporting systems have been affected negatively, because accounting and financial reporting systems might be very challenging in the presence of hyperinflation and hyperinflationary economic conditions. Operating under hyperinflationary economic conditions or applying hyperinflationary accounting requires some additional challenges and difficulties in the accounting information system and reporting process. For instance, identification of the certain price index and the movement in the index, making non-standard or specific calculations for inflation accounting, making specific adjustments on hyperinflationary accounting records, assessing monetary and non-monetary assets, restatements of financial statements, additional disclosures, etc. To battle with the negative impacts of hyperinflationary economic conditions, there are different kinds of ways or strategies to be applied by entities. According to PwC Switzerland's discloses about hyperinflation in Türkiye, these strategies are comprised of accounting by Swiss GAAP FER, applying IFRS which is mainly referred to the application of IAS-29, preparation of hard currency financial statements, transitional arrangements and effective date (PwC, 2022). In this meaning, applying IFRS, and adopting the requirements for financial reporting set out by IAS-29 which was the main research instrument in this study is one of these strategies.

The main purpose of the study is to reveal the impacts and reflections of hyperinflation on annual financial reports of the star market quoted manufacturing entities in Türkiye for the year 2023 as per IAS-29 Financial Reporting in Hyperinflationary Economies. Also, the consideration of the independent audit reports of the entities according to the International Standard on Auditing (ISA) 701 Communicating Key Audit Matters in the Independent Auditor's Report and (ISA) 706 Emphasis

of Matter Paragraphs in the Independent Auditor's Report is based on the matter of hyperinflation. In this context, the remainder of this study is organized as follows. A review of literature and the theoretical framework are developed in Section 2, and Section 3. describes the research methodology including with the scope and limitations of it. Finally, the findings and conclusions are explained in Section 4.

## 2. Literature Review

The International Accounting Standards Board (IASB) adopted IAS-29 Financial Reporting in Hyperinflationary Economies, and the first version of the Standard was published in 1989. Thus, a valuable guideline has been provided for the financial reporting system of countries that are going through or will go through hyperinflationary economic conditions in the future. The Standard has enabled to elimination of impacts or negative effects of hyperinflation on the financial reports of entities. This Standard is known as TAS-29 Financial Reporting in Hyperinflationary Economies which was applied for the reporting period ending 31 December 2005 for the first time in Türkiye. Since the Türkiye started going through hyperinflationary economic conditions from the beginning of 2021 until the end of 2023 after many years, it has stirred significant interest in Turkish academics, particularly in the year 2023 which might be referred to the highest hyperinflationist year in comparison to the previous years in Türkiye. In this respect, any Turkish specialty literature about financial reporting in a hyperinflationary economy regarding IAS-29 hasn't been found before 2023 except for one research made in 2015, and one research made in 2022. In other words, existing research has focused on the year 2023. However, the research made in 2023 is comprised of a few papers since this debate – applying IAS-29 to financial statements is a new phenomenon in Türkiye. Besides international specialty literature about financial reporting in the hyperinflationary economy in this approach is extremely limited, since hyperinflation is not a standing matter, and not every country is required to apply IAS-29. The study relates to four streams of literature on the link of a hyperinflationary economy, inflation accounting, financial reports, and independent audit reports based on the requirements of IAS-29 and (SA)-701 & (SA)-706. International specialty literature that similarly approaches the research matter is comprised of six different research. Three of these research are empirical studies while the other three research are theoretical studies. The most recent empirical study examines the complexity of inflation accounting and the challenging side of it regarding accurate preparation and presentation of financial reports by applying IAS-29 requirements to selected items in a case study (Umut, 2024). Another empirical research is designed on more than one research model. It contains a combination of descriptive analysis and robustness tests. The research majorly points out the value relevance of inflation-adjusted amounts and historical cost amounts on an empirical model. The results of the research shows that both inflation-adjusted amounts and historical cost amounts are more value-relevant in periods of relatively high inflation, but historical cost amounts are more value-relevant in periods of relatively low inflation (Chamisa *et al.*, 2018). The last empirical research which is the one most closely related to this study is designed on a mixed research methodology and considers the advantages and limitations of the application of IAS-29 to the quoted entities of the Istanbul Stock Exchange (Mihaela, 2014).

Other existing three research have a theoretical discussion of the matter of inflation accounting, and hyperinflationary economy with regards to financial reporting as per IAS-29. The first one is referred to the necessity of inflation accounting when there is a significant level of price inflation for an useful and more valuable financial statements based on a theoretical study; the second one emphasizes the interest in serious financial reporting and financial management problems caused by inflation occurred in Slovakia from a theoretical point of the view, the third one is based on the significance of identifying hyperinflationary economies for the financial reporting process of entities particularly regarding multinational dual reports. The research considers the reporting differences between IFRS and USGAAP accounting models in hyperinflationary economies. It states the necessity of making adequate adjustments to inflation in financial statements to reflect the financial position and performance of entities in a meaningful way (Stojanova *et al.*, 2022; Kramarova, 2021; Trajkovska *et al.*, 2018). Turkish specialty literature in this context contains five main research. This research mainly focused on the following fields; restatement of financial statements by IAS-29 in hyperinflationary economies (Keleş, 2015), implementation of IAS-29 to financial statements in hyperinflationary economies (Akçin, 2023; Peker, 2023), and inflation accounting (Varol, 2022; Gökten, *et al.*, 2023).

### 3. Research Methods

The research reported upon in this paper was designed mixed-method approach containing a combination of quantitative, and qualitative analyses to provide a comprehensive understanding. As a quantitative method, firstly descriptive analysis was used for these manufacturing entities which were operating under a hyperinflationary economy in the year 2023. Then, the results from the descriptive analysis method were expanded through content analysis, TOPSIS analysis, and textual analysis of annual financial reports and independent audit reports of these entities. This research was conducted to exploit Türkiye's unique setting to provide substantial evidence about the effects of a hyperinflationary economy on both annual reports and independent audit reports for the year 2023. The analysis unit of the research consists of the star market quoted manufacturing entities (ISE Star) in the Istanbul Stock Exchange (<https://www.kap.org.tr/en/Pazarlar>). ISE Star in Türkiye is an exclusive segment where entities that have taken their distinguished place on the Istanbul Stock Exchange are traded. Sample entities in the scope of this research were chosen from the star market, and limited to manufacturing entities in this market deliberately. These entities would be probably one of the most aligned ones to IFRS & ISAs requirements regarding their certain prestige in the market, but therewithal the most affected and risky ones in any hyperinflationary economic conditions when it comes to their sector. The population of the research is the star market quoted entities (ISE Star) operating under hyperinflationary economic conditions, and reporting as of December 31, 2023. There have been 300 quoted entities in the star market. In line with the research context, the target population was comprised of the star market quoted entities (ISE Star) operating in the manufacturing sector in Türkiye. The decision to focus on the manufacturing entities in ISE Star was made to ensure with some certainty that these entities would be more likely under intensive pressure to adhere or align to the disclosure requirements by IAS-29 since the manufacturing sector is one of the riskiest and most affected sectors in hyperinflationary economic conditions. Accordingly, it might be assumed that uncertainty caused by hyperinflation

could negatively affect entities in the manufacturing sector through different channels (Hasanov, 2008). Thus, it would be expected that these entities would be more engaged with many of the disclosure requirements based on IAS-29. The population of the study was referred to 112 manufacturing entities since a number of the manufacturing entities listed on ISE Star was comprised of 112 entities as of the date of July 8, 2023. The vast majority of the sample entities were able to find annual reports referring to the fiscal year ending on December 31, 2023. However, the target population was first decreased to 106 manufacturing entities from 112 manufacturing entities, and only six entities (*EFORC, KAYSE, KOCMT, LILAK, SEGMN, YIGIT*) didn't have annual reports referring to the fiscal year ending on December 31, 2023, and their annual reports couldn't be reached on the system of Public Disclosure Platform (KAP) in Türkiye. Additionally, the other 7 entities (*BRSAN, ERCB, EREGL, ISDMR, KOPOL, KORDS, MEGMT*) were not required for applying IAS-29 since their functional currency is USD, not Turkish Lira. Therefore, the sample size of the study was limited to 99 manufacturing entities, ultimately. The starting point of the research was the creation of a disclosure index. This disclosure index referred to the disclosures required by IAS-29 to provide a measurable basis for how fully the sample entities' reporting disclosures coincide in terms of hyperinflation requirements and adjustments. The dataset was drawn from annual financial reports of the sample entities quoted in ISE Star.

### **3.1. Assessing the Degree of Meeting the Standard – IAS 29 Disclosure Requirements by Descriptive Analysis**

This research focused on assessing the degree of meeting the Standard – IAS 29 disclosure requirements by descriptive statistics. As it is known, IAS-29 identifies three main disclosure items regarding its core content, These disclosures enable to make clear the basis of dealing with the effects of inflation in the financial statements. Also, they are intended to provide other information necessary to understand that basis and resulting amounts (IAS-29,40.). These disclosure requirements are stated below;

*Disclosure requirement-1:* the fact that the financial statements and the corresponding figures for previous periods have been restated for the changes in the general purchasing power of the functional currency and, as a result, are stated in terms of the measuring unit current at the end of the reporting period,

*Disclosure requirement-2:* whether the financial statements are based on a historical cost approach or a current cost approach, and

*Disclosure requirement-3:* the identity and level of the price index at the end of the reporting period and the movement in the index during the current and the previous reporting period.

Each one of the three main disclosure requirements explained above was rated as “1 point” in the research. In line with this, each disclosure item found in the annual financial reports of the sample entities was scored as “1”, while each disclosure item found to be absent was scored as “0”. By doing so, separate disclosure scores were calculated, and the degrees of the meeting the Standard were computed as the ratio of the number of items disclosed by the sample entities in their annual financial

reports to the number of required disclosure items based on the Standard – IAS 29. Table 1 presents the descriptive statistics along with the related scores and ratios per total required disclosure items prescribed by IAS-29.

Table 1: Disclosure Scores

| Code  | Disclosure<br>requirement-1 | Disclosure<br>requirement-2 | Disclosure<br>requirement-3 | Total scores | Total required<br>items | Ratios |
|-------|-----------------------------|-----------------------------|-----------------------------|--------------|-------------------------|--------|
| ADEL  | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| AFYON | 1                           | 0                           | 1                           | 2            | 3                       | 67 %   |
| AKCNS | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| AKSA  | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| ALCAR | 1                           | 0                           | 1                           | 2            | 3                       | 67 %   |
| ALKIM | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| ALVES | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| AEFES | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| ASUZU | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| ARCLK | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| ASTOR | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| ATAKP | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| AYGAZ | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| BAGFS | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| BTCIM | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| BSOKE | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| BIENY | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| BOBET | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| BORSK | 0                           | 1                           | 0                           | 1            | 3                       | 33 %   |
| BFREN | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| BRISA | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| BUCIM | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| CCOLA | 1                           | 0                           | 1                           | 2            | 3                       | 67 %   |
| CEMAS | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| CEMTS | 1                           | 0                           | 1                           | 2            | 3                       | 67 %   |
| CMBTN | 1                           | 0                           | 1                           | 2            | 3                       | 67 %   |
| CIMSA | 1                           | 0                           | 1                           | 2            | 3                       | 67 %   |
| DESA  | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| DEVA  | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| DGNMO | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| EGEEN | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| EGGUB | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| EGPRO | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| EKOS  | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| EKSUN | 1                           | 0                           | 1                           | 2            | 3                       | 67 %   |
| ELITE | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |
| EMKEL | 1                           | 1                           | 1                           | 3            | 3                       | 100 %  |

|       |   |   |   |   |   |       |
|-------|---|---|---|---|---|-------|
| ERBOS | 1 | 0 | 1 | 2 | 3 | 67 %  |
| TEZOL | 1 | 1 | 1 | 3 | 3 | 100 % |
| EUREN | 1 | 1 | 1 | 3 | 3 | 100 % |
| EUPWR | 1 | 0 | 1 | 2 | 3 | 67 %  |
| FROTO | 1 | 1 | 1 | 3 | 3 | 100 % |
| GIPTA | 1 | 0 | 1 | 2 | 3 | 67 %  |
| GOODY | 1 | 1 | 1 | 3 | 3 | 100 % |
| GOKNR | 1 | 1 | 1 | 3 | 3 | 100 % |
| GOLTS | 1 | 0 | 1 | 2 | 3 | 67 %  |
| GUBRF | 1 | 0 | 1 | 2 | 3 | 67 %  |
| HATSN | 1 | 0 | 1 | 2 | 3 | 67 %  |
| HEKTS | 1 | 1 | 1 | 3 | 3 | 100 % |
| ISSEN | 1 | 1 | 1 | 3 | 3 | 100 % |
| IZMDC | 1 | 1 | 1 | 3 | 3 | 100 % |
| JANTS | 1 | 1 | 1 | 3 | 3 | 100 % |
| KLKIM | 1 | 1 | 1 | 3 | 3 | 100 % |
| KLSEK | 1 | 1 | 1 | 3 | 3 | 100 % |
| KRDMA | 0 | 1 | 1 | 2 | 3 | 67 %  |
| KARSN | 1 | 1 | 1 | 3 | 3 | 100 % |
| KARTN | 1 | 0 | 1 | 2 | 3 | 67 %  |
| KATMR | 1 | 1 | 1 | 3 | 3 | 100 % |
| KERVT | 1 | 1 | 1 | 3 | 3 | 100 % |
| KRVGD | 1 | 0 | 1 | 2 | 3 | 67 %  |
| KMPUR | 1 | 1 | 1 | 3 | 3 | 100 % |
| KCAER | 1 | 1 | 1 | 3 | 3 | 100 % |
| KONYA | 1 | 1 | 1 | 3 | 3 | 100 % |
| KONKA | 1 | 1 | 1 | 3 | 3 | 100 % |
| KBORU | 1 | 1 | 1 | 3 | 3 | 100 % |
| KTSKR | 1 | 0 | 1 | 2 | 3 | 67 %  |
| LMKDC | 1 | 1 | 1 | 3 | 3 | 100 % |
| MEDTR | 0 | 1 | 1 | 2 | 3 | 67 %  |
| NUHCM | 1 | 1 | 1 | 3 | 3 | 100 % |
| OBAMS | 1 | 1 | 1 | 3 | 3 | 100 % |
| OTKAR | 1 | 1 | 1 | 3 | 3 | 100 % |
| OYAKC | 1 | 1 | 1 | 3 | 3 | 100 % |
| PNLSN | 1 | 0 | 1 | 2 | 3 | 67 %  |
| PARSN | 1 | 1 | 0 | 2 | 3 | 67 %  |
| PETKM | 1 | 1 | 1 | 3 | 3 | 100 % |
| PETUN | 1 | 1 | 1 | 3 | 3 | 100 % |
| PNSUT | 1 | 1 | 1 | 3 | 3 | 100 % |
| POLTK | 1 | 0 | 1 | 2 | 3 | 67 %  |
| QUAGR | 1 | 1 | 1 | 3 | 3 | 100 % |
| SNICA | 1 | 1 | 1 | 3 | 3 | 100 % |
| SARKY | 1 | 0 | 1 | 2 | 3 | 67 %  |
| SASA  | 0 | 1 | 1 | 2 | 3 | 67 %  |

|       |    |    |    |   |   |       |
|-------|----|----|----|---|---|-------|
| SAYAS | 1  | 1  | 1  | 3 | 3 | 100 % |
| SOKE  | 1  | 0  | 1  | 2 | 3 | 67 %  |
| SUNTK | 1  | 1  | 1  | 3 | 3 | 100 % |
| TARKM | 1  | 1  | 1  | 3 | 3 | 100 % |
| TATGD | 1  | 1  | 1  | 3 | 3 | 100 % |
| TOASA | 1  | 1  | 1  | 3 | 3 | 100 % |
| TMSN  | 1  | 1  | 1  | 3 | 3 | 100 % |
| TUPRS | 1  | 1  | 1  | 3 | 3 | 100 % |
| TTRAK | 1  | 0  | 1  | 2 | 3 | 67 %  |
| ULUUN | 1  | 0  | 1  | 2 | 3 | 67 %  |
| USAK  | 1  | 1  | 1  | 3 | 3 | 100 % |
| ULKER | 1  | 1  | 1  | 3 | 3 | 100 % |
| VESBE | 1  | 1  | 1  | 3 | 3 | 100 % |
| VESTL | 1  | 1  | 1  | 3 | 3 | 100 % |
| YATAS | 1  | 1  | 1  | 3 | 3 | 100 % |
| YYLGD | 0  | 1  | 1  | 2 | 3 | 67 %  |
| YUNSA | 1  | 1  | 1  | 3 | 3 | 100 % |
| TOTAL | 93 | 77 | 97 | - | - | -     |

\*: Author's own work.

Disclosure requirement 3 was the most aligned one. According to disclosure requirement 3, entities that are operating in a hyperinflationary economy must present the level price index they used for inflation adjustments, and the movement in the index during the related period. In Türkiye, the related price index was the Customer Price Index (CPI) published by the Turkish Statistical Institute (TSI) according to directions given by POAASA as of the date of December 31, 2023. The CPI for current and previous year periods and cumulative inflation rates for three years published by TSI formally were as follows;

| Date       | Index    | Correction Factor | Cumulative inflation rates |
|------------|----------|-------------------|----------------------------|
| 31.12.2023 | 1.859,38 | 1,00000           | 268 %                      |
| 31.12.2022 | 1.128,45 | 1,64773           | 156 %                      |
| 31.12.2021 | 686,95   | 2,70672           | 74 %                       |

In the scope of the analysis, it was uncovered that 2 out of 99 entities were not by the cumulative inflation rates published by TSI and shown above. These entities were ALCAR and GOODY. Both two companies differed in the cumulative inflation rate for the year 2021. In the annual financial reports of ALCAR and GOODY, the cumulative inflation rate was declared surprisingly at the same incorrect rate – 55,9 % for the year 2021 although it was 74 %. That might be considered an unnoticeable point in the annual financial reports of these entities although the existence of independent audits for the period. Although that, 97 out of 99 entities (97 %), had met this requirement, statistically at final. Unlike disclosure requirement 3, disclosure requirement 2 was the most neglected one by the sample entities. 77 out of 99 entities (77 %) adhered to this requirement. The Standard – IAS 29 simply referred to the approach on which financial statements are presented regarding disclosure requirement 2. According to the results of the analysis, it was seen that all of the entities adhered

to disclosure requirement 2 and explained their accounting approach had preferred to apply the *historical cost approach* rather than the current cost approach. Disclosure requirement 1 was the second one following disclosure requirement 3. 93 out of 99 entities (93 %) had complied with this requirement. Except for 6 entities, all of the entities had made detailed explanations about the facts proving that their financial statements had been restated as a result of a hyperinflationary economy. According to one of the attractive results of the analysis, all of the sample entities except one entity complied with two requirements at least and had a degree of 67 percent. The entity that could only comply with the disclosure requirement 2 in its annual financial report was BORSK. Taking all three requirements together, 71 out of 99 entities (71 %) could comply with all of these three requirements.

### 3.2. Considering the Financial Performance of the Sample Entities with the TOPSIS method, and Analyzing the Relationship between TOPSIS Orders of Financial Ratios and Degrees of Meeting the Standard Described in Table 1

This research has two parts containing the computation of related financial ratios of the sample entities and analysis of these computed ratios by TOPSIS Software.

#### *Computation of financial ratios of the sample entities*

In the scope of this analysis, three financial ratios (inventory turnover, inventory days ratio, fixed assets to equity ratio) were computed primarily according to the related financial data drawn from the annual financial reports of the sample entities for the period of January, 1 – December 31, 2023. Table 2 provides basic descriptive statistics for the sample entities showing the financial indicators used in the computation of the related financial ratios within this analysis.

Table 2: Disclosure Scores

| Code  | Cost of goods sold | Beginning inventory | Ending inventory | Fixed assets   | Equity         |
|-------|--------------------|---------------------|------------------|----------------|----------------|
| ADEL  | 1.205.803          | 493.060             | 615.600          | 802.864        | 1.110.832      |
| AFYON | 1.977.730.535      | 206.475.057         | 255.875.962      | 3.399.947.978  | 3.971.219.274  |
| AKCNS | 14.746.909.429     | 1.716.105.052       | 1.560.640.978    | 11.827.672.340 | 13.797.585.926 |
| AKSA  | 19.979.732         | 14.063.214          | 3.448.222        | 15.228.338     | 16.734.520     |
| ALCAR | 4.550.658.863      | 932.796.933         | 1.134.252.755    | 882.270.309    | 1.491.107.496  |
| ALKIM | 3.229.702.348      | 996.193.121         | 800.297.252      | 1.569.499.243  | 2.746.594.963  |
| ALVES | 2.605.959.752      | 447.255.995         | 367.904.993      | 679.182.847    | 651.061.612    |
| AEFES | 100.877.033        | 23.545.932          | 24.877.917       | 175.097.552    | 129.877.895    |
| ASUZU | 12.499.506.711     | 2.665.408.912       | 3.672.642.194    | 7.969.104.615  | 8.254.126.098  |
| ARCLK | 181.725.746        | 50.870.483          | 47.448.681       | 86.815.970     | 59.563.339     |
| ASTOR | 10.437.034.178     | 2.129.119.803       | 1.512.236.478    | 5.719.483.892  | 12.238.814.122 |
| ATAKP | 1.905.907.982      | 868.441.286         | 1.048.426.689    | 1.839.647.899  | 3.067.164.324  |
| AYGAZ | 59.871.852         | 3.848.530           | 1.984.885        | 36.045.382     | 36.523.311     |
| BAGFS | 3.586.396.815      | 2.649.966.534       | 1.262.355.724    | 6.261.402.585  | 4.700.145.746  |
| BTCIM | 9.856.128          | 1.436.430           | 1.159.857        | 15.729.521     | 12.264.328     |
| BSOKE | 3.544.848          | 756.731             | 728.276          | 7.236.846      | 3.803.474      |

|       |                |                |                |                |                |
|-------|----------------|----------------|----------------|----------------|----------------|
| BIENY | 7.185.909.006  | 2.042.516.700  | 2.949.073.174  | 5.049.811.035  | 9.199.293.503  |
| BOBET | 7.092.098.419  | 110.673.283    | 93.125.845     | 4.168.418.066  | 4.551.246.401  |
| BORSK | 2.795.941.482  | 1.576.086.722  | 1.324.627.095  | 746.951.815    | 1.592.701.575  |
| BFREN | 1.149.077.531  | 82.372.407     | 82.709.187     | 306.426.946    | 122.676.994    |
| BRISA | 19.999.236.481 | 4.045.055.057  | 3.287.820.389  | 15.030.531.870 | 13.446.157.370 |
| BUCIM | 7.476.093.988  | 1.712.067.755  | 1.225.050.932  | 7.260.535.252  | 10.352.463.680 |
| CCOLA | 68.002.645     | 11.192.910     | 12.982.517     | 61.903.552     | 44.954.779     |
| CEMAS | 1.508.495.522  | 276.859.167    | 243.175.731    | 2.254.650.432  | 2.940.276.158  |
| CEMTS | 4.100.419.737  | 1.351.983.613  | 934.079.544    | 1.461.614.567  | 3.660.317.782  |
| CMBTN | 2.911.586.264  | 19.472.706     | 38.926.232     | 515.849.103    | 371.628.515    |
| CIMSA | 16.475.179     | 2.855.498      | 2.861.185      | 26.299.983     | 23.434.254     |
| DESA  | 1.232.347.159  | 332.500.927    | 322.082.224    | 905.658.655    | 1.623.885.872  |
| DEVA  | 6.584.386.361  | 3.963.413.685  | 4.100.390.874  | 10.930.111.119 | 14.783.087.735 |
| DGNMO | 5.346.831.713  | 1.562.128.067  | 1.554.820.063  | 3.841.193.819  | 2.195.838.851  |
| EGEEN | 2.712.511.691  | 847.360.728    | 743.222.937    | 3.162.173.417  | 4.034.522.394  |
| EGGUB | 1.502.629.788  | 270.335.500    | 247.241.806    | 3.668.448.732  | 4.169.809.346  |
| EGPRO | 5.786.558.115  | 872.728.841    | 803.530.110    | 4.154.837.203  | 4.539.631.464  |
| EKOS  | 824.702.900    | 417.805.291    | 582.201.111    | 840.766.920    | 1.909.187.631  |
| EKSUN | 6.147.361.080  | 930.826.298    | 986.454.784    | 462.191.321    | 1.857.020.768  |
| ELITE | 434.462.217    | 282.680.099    | 276.230.994    | 436.923.960    | 808.562.642    |
| EMKEL | 319.336.270    | 204.435.599    | 166.697.698    | 519.685.603    | 597.532.328    |
| ERBOS | 3.163.814.544  | 1.021.768.078  | 942.403.658    | 949.726.564    | 2.009.190.398  |
| TEZOL | 2.899.945.623  | 693.249.481    | 825.722.499    | 2.195.091.319  | 3.119.848.876  |
| EUREN | 3.301.460.396  | 700.451.236    | 610.778.087    | 4.189.295.659  | 4.287.925.443  |
| EUPWR | 4.796.582      | 337.550        | 1.477.743      | 2.293.754      | 5.304.418      |
| FROTO | 356.657.683    | 23.274.992     | 29.352.289     | 114.037.767    | 73.007.545     |
| GIPTA | 987.689.122    | 194.147.464    | 214.744.734    | 706.120.742    | 1.636.674.833  |
| GOODY | 17.847.898.004 | 4.137.338.977  | 2.350.760.392  | 3.161.354.496  | 2.977.020.131  |
| GOKNR | 5.870.921.860  | 2.178.774.362  | 1.721.161.439  | 2.730.265.075  | 4.230.029.531  |
| GOLTS | 3.513.974.700  | 563.791.148    | 439.624.720    | 5.486.227.598  | 5.313.637.459  |
| GUBRF | 31.658.806.129 | 13.215.279.520 | 5.945.039.993  | 17.324.048.777 | 16.637.379.098 |
| HATSN | 1.734.305.314  | 102.660.083    | 241.499.517    | 2.557.775.415  | 2.723.270.739  |
| HEKTS | 5.223.402.568  | 5.405.788.009  | 4.250.506.812  | 10.325.630.860 | 7.539.775.642  |
| ISSEN | 2.147.128.555  | 785.635.321    | 644.522.917    | 2.574.461.200  | 3.129.201.682  |
| IZMDC | 34.336.126.029 | 5.890.832.212  | 6.006.495.804  | 24.308.468.177 | 18.161.347.042 |
| JANTS | 5.810.705.419  | 932.682.453    | 581.327.821    | 3.151.438.747  | 3.587.133.167  |
| KLKIM | 2.863.932.548  | 394.693.714    | 329.073.243    | 1.577.366.596  | 2.525.168.764  |
| KLSEK | 8.186.069.929  | 2.770.774.454  | 2.738.740.144  | 5.426.084.481  | 7.771.866.309  |
| KRDMA | 49.431.252.795 | 16.723.951.014 | 12.282.746.065 | 34.750.625.059 | 36.843.887.941 |
| KARSN | 6.255.622      | 1.480.397      | 1.255.500      | 6.963.608      | 5.277.676      |
| KARTN | 2.941.881.561  | 1.086.458.628  | 558.194.356    | 1.991.118.272  | 2.385.352.157  |
| KATMR | 1.308.380.796  | 3.270.253.077  | 3.189.735.386  | 921.559.118    | 3.336.409.766  |
| KERVT | 15.074.508.641 | 3.162.705.792  | 3.358.503.127  | 7.284.222.289  | 7.286.543.429  |
| KRVGD | 6.013.359      | 1.822.881      | 1.551.969      | 4.488.709      | 4.312.914      |
| KMPUR | 8.837.382.925  | 1.076.727.074  | 888.532.246    | 1.226.081.562  | 2.718.142.402  |

|       |                |               |               |                |                |
|-------|----------------|---------------|---------------|----------------|----------------|
| KCAER | 12.126.252.301 | 2.219.087.293 | 2.861.204.532 | 6.041.930.404  | 7.081.355.247  |
| KONYA | 3.586.195.515  | 667.529.964   | 670.112.777   | 2.123.005.360  | 2.494.988.158  |
| KONKA | 2.229.071.907  | 807.668.232   | 536.488.283   | 3.819.037.551  | 4.731.553.029  |
| KBORU | 1.409.264.011  | 222.404.290   | 390.174.381   | 986.685.061    | 1.673.302.089  |
| KTSKR | 1.383.934.931  | 861.037.433   | 599.250.958   | 2.783.771.464  | 2.889.967.128  |
| LMKDC | 1.542.489.457  | 342.733.655   | 297.509.315   | 1.091.650.704  | 1.583.518.963  |
| MEDTR | 808.544.532    | 278.362.340   | 275.409.548   | 812.530.483    | 1.479.747.334  |
| NUHCM | 10.195.426.221 | 1.637.156.657 | 1.111.987.962 | 12.808.700.530 | 13.411.675.656 |
| OBAMS | 21.429.480.090 | 1.663.809.138 | 1.575.718.320 | 3.172.755.594  | 4.372.318.964  |
| OTKAR | 20.932.034     | 7.164.857     | 7.430.298     | 8.392.290      | 8.303.143      |
| OYAKC | 21.425.641.489 | 3.760.999.495 | 4.091.545.077 | 20.569.124.393 | 26.666.146.623 |
| PNLSN | 2.074.019.166  | 324.317.311   | 424.093.243   | 912.282.153    | 1.265.167.737  |
| PARSN | 2.982.075.023  | 682.048.403   | 974.234.077   | 11.348.370.971 | 8.051.210.552  |
| PETKM | 62.769.546     | 7.627.461     | 6.140.873     | 75.456.547     | 51.388.127     |
| PETUN | 4.360.326.926  | 450.244.586   | 446.340.401   | 5.112.436.743  | 4.669.169.234  |
| PNSUT | 10.327.975.168 | 1.250.634.925 | 1.284.899.292 | 7.252.381.289  | 6.702.143.432  |
| POLTK | 315.833.844    | 62.273.221    | 66.789.627    | 74.283.290     | 201.082.702    |
| QUAGR | 5.716.014.815  | 1.821.105.045 | 2.073.391.341 | 6.230.987.246  | 7.765.769.617  |
| SNICA | 1.471.199.711  | 780.026.506   | 1.420.117.914 | 1.018.843.197  | 2.384.666.694  |
| SARKY | 43.130.375.172 | 4.421.186.930 | 4.856.482.722 | 4.299.210.727  | 6.554.708.184  |
| SASA  | 37.611.345     | 15.024.952    | 11.380.817    | 1.230.125.060  | 65.844.785     |
| SAYAS | 678.958.547    | 173.046.315   | 187.186.496   | 114.087.129    | 556.435.545    |
| SOKE  | 4.506.662.682  | 290.344.254   | 290.493.663   | 1.873.286.787  | 2.373.923.124  |
| SUNTK | 6.088.366.787  | 1.025.186.468 | 1.007.678.602 | 2.558.068.231  | 3.297.003.517  |
| TARKM | 591.603.461    | 918.164.009   | 596.835.834   | 392.331.693    | 1.280.649.168  |
| TATGD | 5.387.864.332  | 4.263.771.716 | 3.076.844.314 | 1.682.177.481  | 2.356.962.913  |
| TOASA | 105.107.908    | 5.553.569     | 9.712.040     | 18.163.365     | 36.879.584     |
| TMSN  | 5.958.404.661  | 1.678.782.600 | 2.124.826.996 | 3.581.733.260  | 4.906.767.254  |
| TUPRS | 576.796.119    | 59.452.710    | 44.464.007    | 165.644.252    | 202.940.767    |
| TTRAK | 42.884.383.885 | 6.332.693.829 | 8.695.894.638 | 7.449.403.127  | 15.397.990.316 |
| ULUUN | 37.412.443.888 | 2.116.516.673 | 2.050.369.077 | 7.409.571.292  | 7.071.338.568  |
| USAK  | 2.140.899.604  | 1.040.430.352 | 830.314.461   | 2.343.911.506  | 2.402.134.662  |
| ULKER | 39.659.581     | 8.516.384     | 8.391.268     | 24.602.395     | 19.801.973     |
| VESBE | 51.094.963     | 7.603.835     | 7.235.371     | 24.418.676     | 21.589.779     |
| VESTL | 87.243.106     | 22.555.833    | 23.510.954    | 77.076.042     | 40.860.209     |
| YATAS | 9.747.461.253  | 2.176.312.808 | 2.083.789.791 | 5.291.403.584  | 4.675.072.693  |
| YYLGD | 14.220.685.058 | 4.953.153.046 | 4.556.726.069 | 5.073.764.009  | 5.669.593.638  |
| YUNSA | 1.552.746.170  | 529.801.784   | 511.355.426   | 2.107.298.338  | 2.540.088.317  |

\*: Author's own work.

Average inventory, inventory turnover & inventory days ratio, and the ratio of fixed assets to equity used in TOPSIS analysis according to the financial indicators summarized in Table 2. The formulas for average inventory, inventory turnover & inventory days ratio, and the ratio of fixed assets to equity are expressed as follows:

Average inventory =  $[\text{current inventory} + \text{previous inventory}] / \text{number of periods}$

Inventory turnover ratio =  $\text{cost of goods sold} / \text{average inventory}$

Inventory days ratio =  $360 / \text{inventory turnover ratio}$

The ratio of fixed assets to equity =  $\text{fixed assets} / \text{equity}$

Inventory turnover ratio, inventory days ratio, and the ratio of fixed assets to equity are three main financial ratios that are commonly used in assessing the impact of hyperinflation on the financial performance of entities as well as being the most affected ratios under the circumstances of hyperinflation. That was the motivating point of the computations of these ratios used in TOPSIS Analysis. The results are shown in Table 3 as follows.

Table 3: Financial Ratios of the Sample Entities

| Code  | Average inventory | Inventory turnover | Inventory days | The ratio of fixed assets to equity |
|-------|-------------------|--------------------|----------------|-------------------------------------|
| ADEL  | 554.330           | 2,18               | 165            | 0,72                                |
| AFYON | 231.175.510       | 8,56               | 42             | 0,86                                |
| AKCNS | 1.638.373.015     | 9,00               | 40             | 0,86                                |
| AKSA  | 3.755.718         | 5,32               | 68             | 0,91                                |
| ALCAR | 1.033.524.844     | 4,40               | 82             | 0,59                                |
| ALKIM | 898.245.187       | 3,60               | 100            | 0,57                                |
| ALVES | 407.580.494       | 6,39               | 56             | 1,04                                |
| AEFES | 24.211.925        | 4,17               | 86             | 1,35                                |
| ASUZU | 3.169.025.553     | 3,94               | 91             | 0,97                                |
| ARCLK | 49.159.582        | 3,70               | 97             | 1,46                                |
| ASTOR | 1.820.678.141     | 5,73               | 63             | 0,47                                |
| ATAKP | 958.433.988       | 1,99               | 181            | 0,60                                |
| AYGAZ | 2.916.708         | 20,53              | 18             | 0,99                                |
| BAGFS | 1.956.161.129     | 1,83               | 196            | 1,33                                |
| BTCIM | 1.298.144         | 7,59               | 47             | 1,28                                |
| BSOKE | 742.504           | 4,77               | 75             | 1,90                                |
| BIENY | 2.495.794.937     | 2,88               | 125            | 0,55                                |
| BOBET | 101.899.564       | 69,60              | 5              | 0,92                                |
| BORSK | 1.450.356.909     | 1,93               | 187            | 0,47                                |
| BFREN | 82.540.797        | 13,92              | 26             | 2,50                                |
| BRISA | 3.666.437.723     | 5,45               | 66             | 1,12                                |
| BUCIM | 1.468.559.344     | 5,09               | 71             | 0,70                                |
| CCOLA | 12.087.714        | 5,63               | 64             | 1,38                                |
| CEMAS | 260.017.449       | 5,80               | 62             | 0,77                                |
| CEMTS | 1.143.031.579     | 3,59               | 100            | 0,40                                |
| CMBTN | 29.199.469        | 99,71              | 4              | 1,39                                |
| CIMSA | 2.858.342         | 5,76               | 62             | 1,12                                |
| DESA  | 327.291.576       | 3,77               | 96             | 0,56                                |

|       |                |       |     |      |
|-------|----------------|-------|-----|------|
| DEVA  | 4.031.902.280  | 1,63  | 220 | 0,74 |
| DGNMO | 1.558.474.065  | 3,43  | 105 | 1,75 |
| EGEEN | 795.291.833    | 3,41  | 106 | 0,78 |
| EGGUB | 258.788.653    | 5,81  | 62  | 0,88 |
| EGPRO | 838.129.476    | 6,90  | 52  | 0,92 |
| EKOS  | 500.003.201    | 1,65  | 218 | 0,44 |
| EKSUN | 958.640.541    | 6,41  | 56  | 0,25 |
| ELITE | 279.455.547    | 1,55  | 232 | 0,54 |
| EMKEL | 185.566.649    | 1,72  | 209 | 0,87 |
| ERBOS | 982.085.868    | 3,22  | 112 | 0,47 |
| TEZOL | 759.485.990    | 3,82  | 94  | 0,70 |
| EUREN | 655.614.662    | 5,04  | 71  | 0,98 |
| EUPWR | 907.647        | 5,28  | 68  | 0,43 |
| FROTO | 26.313.641     | 13,55 | 27  | 1,56 |
| GIPTA | 204.446.099    | 4,83  | 75  | 0,43 |
| GOODY | 3.244.049.685  | 5,50  | 65  | 1,06 |
| GOKNR | 1.949.967.901  | 3,01  | 120 | 0,65 |
| GOLTS | 501.707.934    | 7,00  | 51  | 1,03 |
| GUBRF | 9.580.159.757  | 3,30  | 109 | 1,04 |
| HATSN | 172.079.800    | 10,08 | 36  | 0,94 |
| HEKTS | 4.828.147.411  | 1,08  | 333 | 1,37 |
| ISSEN | 715.079.119    | 3,00  | 120 | 0,82 |
| IZMDC | 5.948.664.008  | 5,77  | 62  | 1,34 |
| JANTS | 757.005.137    | 7,68  | 47  | 0,88 |
| KLKIM | 361.883.479    | 7,91  | 45  | 0,62 |
| KLSER | 2.754.757.299  | 2,97  | 121 | 0,70 |
| KRDMA | 14.503.348.540 | 3,41  | 106 | 0,94 |
| KARSN | 1.367.949      | 4,57  | 79  | 1,32 |
| KARTN | 822.326.492    | 3,58  | 101 | 0,83 |
| KATMR | 3.229.994.232  | 0,41  | 889 | 0,28 |
| KERVT | 3.260.604.460  | 4,62  | 78  | 1,00 |
| KRVGD | 1.687.425      | 3,56  | 101 | 1,04 |
| KMPUR | 982.629.660    | 8,99  | 40  | 0,45 |
| KCAER | 2.540.145.913  | 4,77  | 75  | 0,85 |
| KONYA | 668.821.371    | 5,36  | 67  | 0,85 |
| KONKA | 672.078.258    | 3,32  | 109 | 0,81 |
| KBORU | 306.289.336    | 4,60  | 78  | 0,59 |
| KTSKR | 730.144.196    | 1,90  | 190 | 0,96 |
| LMKDC | 320.121.485    | 4,82  | 75  | 0,69 |
| MEDTR | 276.885.944    | 2,92  | 123 | 0,55 |
| NUHCM | 1.374.572.310  | 7,42  | 49  | 0,96 |
| OBAMS | 1.619.763.729  | 13,23 | 27  | 0,73 |
| OTKAR | 7.297.578      | 2,87  | 126 | 1,01 |
| OYAKC | 3.926.272.286  | 5,46  | 66  | 0,77 |
| PNLSN | 374.205.277    | 5,54  | 65  | 0,72 |

|       |               |       |     |      |
|-------|---------------|-------|-----|------|
| PARSN | 828.141.240   | 3,60  | 100 | 1,41 |
| PETKM | 6.884.167     | 9,12  | 39  | 1,47 |
| PETUN | 448.292.494   | 9,73  | 37  | 1,09 |
| PNSUT | 1.267.767.109 | 8,15  | 44  | 1,08 |
| POLTK | 64.531.424    | 4,89  | 74  | 0,37 |
| QUAGR | 1.947.248.193 | 2,94  | 123 | 0,80 |
| SNICA | 1.100.072.210 | 1,34  | 269 | 0,43 |
| SARKY | 4.638.834.826 | 9,30  | 39  | 0,66 |
| SASA  | 13.202.885    | 2,85  | 126 | 0,19 |
| SAYAS | 180.116.406   | 3,77  | 96  | 0,21 |
| SOKE  | 290.418.959   | 15,52 | 23  | 0,79 |
| SUNTK | 1.016.432.535 | 5,99  | 60  | 0,78 |
| TARKM | 757.499.922   | 0,78  | 461 | 0,31 |
| TATGD | 3.670.308.015 | 1,47  | 245 | 0,71 |
| TOASA | 7.632.805     | 13,77 | 26  | 0,49 |
| TMSN  | 1.901.804.798 | 3,13  | 115 | 0,73 |
| TUPRS | 51.958.359    | 11,10 | 32  | 0,82 |
| TTRAK | 7.514.294.234 | 5,71  | 63  | 0,48 |
| ULUUN | 2.083.442.875 | 17,96 | 20  | 1,05 |
| USAK  | 935.372.407   | 2,29  | 157 | 0,98 |
| ULKER | 8.453.826     | 4,69  | 77  | 1,24 |
| VESBE | 7.419.603     | 6,89  | 52  | 1,13 |
| VESTL | 23.033.394    | 3,79  | 95  | 1,89 |
| YATAS | 2.130.051.300 | 4,58  | 79  | 1,13 |
| YYLGD | 4.754.939.558 | 2,99  | 120 | 0,89 |
| YUNSA | 520.578.605   | 2,98  | 121 | 0,83 |

\*: Author's own work.

*TOPSIS analysis*

The results shown in Table 3 were used in TOPSIS analysis for analyzing the relationship between the Topsis order of financial performance of the sample entities, and degrees of meeting of the Standard of the sample entities. The reason why the TOPSIS analysis was conducted in the study was to answer the question of whether the entities whose financial performance is good are good at complying with the disclosure requirements of IAS-29 in the meanwhile or not, statistically. In this study, there were 3 criteria and 99 alternatives that were ranked based on the TOPSIS method. The following table describes the criteria;

**Characteristics of Criteria**

|   | name                                    | type         | weight |
|---|-----------------------------------------|--------------|--------|
| 1 | Inventory turnover ratio                | Positive (+) | 0.333  |
| 2 | Inventory days ratio                    | Negative (-) | 0.333  |
| 3 | Intangible assets to total equity ratio | Positive (+) | 0.333  |

\*: Created by TOPSIS Software.

The following table shows the decision matrix:

| Decision Matrix |                           |                       |                                          |       |                           |                       |                                          |
|-----------------|---------------------------|-----------------------|------------------------------------------|-------|---------------------------|-----------------------|------------------------------------------|
|                 | Inventory\nturnover ratio | Inventory\ndays ratio | Fixed assets<br>to total equity<br>ratio |       | Inventory\nturnover ratio | Inventory\ndays ratio | Fixed assets<br>to total equity<br>ratio |
| ADEL            | 2.18                      | 165                   | 0.72                                     | ASUZU | 3.94                      | 91                    | 0.97                                     |
| AFYON           | 8.56                      | 42                    | 0.86                                     | ARCLK | 3.7                       | 97                    | 1.46                                     |
| AKCNS           | 9                         | 40                    | 0.86                                     | ASTOR | 5.73                      | 63                    | 0.47                                     |
| AKSA            | 5.32                      | 68                    | 0.91                                     | ATAKP | 1.99                      | 181                   | 0.6                                      |
| ALCAR           | 4.4                       | 82                    | 0.59                                     | AYGAZ | 20.53                     | 18                    | 0.99                                     |
| ALKIM           | 3.6                       | 100                   | 0.57                                     | BAGFS | 1.83                      | 196                   | 1.33                                     |
| ALVES           | 6.39                      | 56                    | 1.04                                     | BTCIM | 7.59                      | 47                    | 1.28                                     |
| AEFES           | 4.17                      | 86                    | 1.35                                     | BSOKE | 4.77                      | 75                    | 1.9                                      |
| BIENY           | 2.88                      | 125                   | 0.55                                     | GOODY | 5.5                       | 65                    | 1.06                                     |
| BOBET           | 69.6                      | 5                     | 0.92                                     | GOKNR | 3.01                      | 120                   | 0.65                                     |
| BORSK           | 1.93                      | 187                   | 0.47                                     | GOLTS | 7                         | 51                    | 1.03                                     |
| BFREN           | 13.92                     | 26                    | 2.5                                      | GUBRF | 3.3                       | 109                   | 1.04                                     |
| BRISA           | 5.45                      | 66                    | 1.12                                     | HATSN | 10.08                     | 36                    | 0.94                                     |
| BUCIM           | 5.09                      | 71                    | 0.7                                      | HEKTS | 1.08                      | 333                   | 1.37                                     |
| CCOLA           | 5.63                      | 64                    | 1.38                                     | ISSEN | 3                         | 120                   | 0.82                                     |
| CEMAS           | 5.8                       | 62                    | 0.77                                     | IZMDC | 5.77                      | 62                    | 1.34                                     |
| CEMTS           | 3.59                      | 100                   | 0.4                                      | JANTS | 7.68                      | 47                    | 0.88                                     |
| CMBTN           | 99.71                     | 4                     | 1.39                                     | KLKIM | 7.91                      | 45                    | 0.62                                     |
| CIMSA           | 5.76                      | 62                    | 1.12                                     | KLSEK | 2.97                      | 121                   | 0.7                                      |
| DESA            | 3.77                      | 96                    | 0.56                                     | KRDMA | 3.41                      | 106                   | 0.94                                     |
| DEVA            | 1.63                      | 220                   | 0.74                                     | KARSN | 4.57                      | 79                    | 1.32                                     |
| DGNMO           | 3.43                      | 105                   | 1.75                                     | KARTN | 3.58                      | 101                   | 0.83                                     |
| EGEEN           | 3.41                      | 106                   | 0.78                                     | KATMR | 0.41                      | 889                   | 0.28                                     |
| EGGUB           | 5.81                      | 62                    | 0.88                                     | KERVY | 4.62                      | 78                    | 1                                        |
| EGPRO           | 6.9                       | 52                    | 0.92                                     | KRVGD | 3.56                      | 101                   | 1.04                                     |
| EKOS            | 1.65                      | 218                   | 0.44                                     | KMPUR | 8.99                      | 40                    | 0.45                                     |
| EKSUN           | 6.41                      | 56                    | 0.25                                     | KCAER | 4.77                      | 75                    | 0.85                                     |
| ELITE           | 1.55                      | 232                   | 0.54                                     | KONYA | 5.36                      | 67                    | 0.85                                     |
| EMKEL           | 1.72                      | 209                   | 0.87                                     | KONKA | 3.32                      | 109                   | 0.81                                     |
| ERBOS           | 3.22                      | 112                   | 0.47                                     | KBORU | 4.6                       | 78                    | 0.59                                     |
| TEZOL           | 3.82                      | 94                    | 0.7                                      | KTSKR | 1.9                       | 190                   | 0.96                                     |
| EUREN           | 5.04                      | 71                    | 0.98                                     | LMKDC | 4.82                      | 75                    | 0.69                                     |
| EUPWR           | 5.28                      | 68                    | 0.43                                     | MEDTR | 2.92                      | 123                   | 0.55                                     |
| FROTO           | 13.55                     | 27                    | 1.56                                     | NUHCM | 7.42                      | 49                    | 0.96                                     |
| GIPTA           | 4.83                      | 75                    | 0.43                                     | OBAMS | 13.23                     | 27                    | 0.73                                     |
| OTKAR           | 2.87                      | 126                   | 1.01                                     | TARKM | 0.78                      | 461                   | 0.31                                     |
| OYAKC           | 5.46                      | 66                    | 0.77                                     | TATGD | 1.47                      | 245                   | 0.71                                     |
| PNLSN           | 5.54                      | 65                    | 0.72                                     | TOASO | 13.77                     | 26                    | 0.49                                     |
| PARSN           | 3.6                       | 100                   | 1.41                                     | TMSN  | 3.13                      | 115                   | 0.73                                     |
| PETKM           | 9.12                      | 39                    | 1.47                                     | TUPRS | 11.1                      | 32                    | 0.82                                     |
| PETUN           | 9.73                      | 37                    | 1.09                                     | TTRAK | 5.71                      | 63                    | 0.48                                     |

|       |       |     |      |       |       |     |      |
|-------|-------|-----|------|-------|-------|-----|------|
| PNSUT | 8.15  | 44  | 1.08 | ULUUN | 17.96 | 20  | 1.05 |
| POLTK | 4.89  | 74  | 0.37 | USAK  | 2.29  | 157 | 0.98 |
| QUAGR | 2.94  | 123 | 0.8  | ULKER | 4.69  | 77  | 1.24 |
| SNICA | 1.34  | 269 | 0.43 | VESBE | 6.89  | 52  | 1.13 |
| SARKY | 9.3   | 39  | 0.66 | VESTL | 3.79  | 95  | 1.89 |
| SASA  | 2.85  | 126 | 0.19 | YATAS | 4.58  | 79  | 1.13 |
| SAYAS | 3.77  | 96  | 0.21 | YYLGD | 2.99  | 120 | 0.89 |
| SOKE  | 15.52 | 23  | 0.79 | YUNSA | 2.98  | 121 | 0.83 |
| SUNTK | 5.99  | 60  | 0.78 |       |       |     |      |

\*: Created by TOPSIS Software.

The Steps of the TOPSIS Method are explained below:

#### STEP 1: Normalize the decision matrix

This formula can be used to normalize;  $r_{ij}(x) = \frac{x_{ij}}{\sqrt{\sum_{i=1}^m x_{ij}^2}}$   $i = 1, \dots, m$  ;  $j = 1, \dots, n$

The following table shows the normalized matrix.

The Normalized Matrix

|       | Inventory\nturnover ratio | Inventory\ndays ratio | Intangible assets to total equity ratio |       | Inventory\nturnover ratio | Inventory\ndays ratio | Intangible assets to total equity ratio |
|-------|---------------------------|-----------------------|-----------------------------------------|-------|---------------------------|-----------------------|-----------------------------------------|
| ADEL  | 0.016                     | 0.112                 | 0.075                                   | DEVA  | 0.012                     | 0.15                  | 0.077                                   |
| AFYON | 0.062                     | 0.029                 | 0.09                                    | DGNMO | 0.025                     | 0.071                 | 0.183                                   |
| AKCNS | 0.065                     | 0.027                 | 0.09                                    | EGEEN | 0.025                     | 0.072                 | 0.081                                   |
| AKSA  | 0.039                     | 0.046                 | 0.095                                   | EGGUB | 0.042                     | 0.042                 | 0.092                                   |
| ALCAR | 0.032                     | 0.056                 | 0.062                                   | EGPRO | 0.05                      | 0.035                 | 0.096                                   |
| ALKIM | 0.026                     | 0.068                 | 0.059                                   | EKOS  | 0.012                     | 0.148                 | 0.046                                   |
| ALVES | 0.046                     | 0.038                 | 0.109                                   | EKSUN | 0.047                     | 0.038                 | 0.026                                   |
| AEFES | 0.03                      | 0.059                 | 0.141                                   | ELITE | 0.011                     | 0.158                 | 0.056                                   |
| ASUZU | 0.029                     | 0.062                 | 0.101                                   | EMKEL | 0.013                     | 0.142                 | 0.091                                   |
| ARCLK | 0.027                     | 0.066                 | 0.152                                   | ERBOS | 0.023                     | 0.076                 | 0.049                                   |
| ASTOR | 0.042                     | 0.043                 | 0.049                                   | TEZOL | 0.028                     | 0.064                 | 0.073                                   |
| ATAKP | 0.014                     | 0.123                 | 0.063                                   | EUREN | 0.037                     | 0.048                 | 0.102                                   |
| AYGAZ | 0.149                     | 0.012                 | 0.103                                   | EUPWR | 0.038                     | 0.046                 | 0.045                                   |
| BAGFS | 0.013                     | 0.133                 | 0.139                                   | FROTO | 0.099                     | 0.018                 | 0.163                                   |
| BTCIM | 0.055                     | 0.032                 | 0.134                                   | GIPTA | 0.035                     | 0.051                 | 0.045                                   |
| BSOKE | 0.035                     | 0.051                 | 0.198                                   | GOODY | 0.04                      | 0.044                 | 0.111                                   |
| BIENY | 0.021                     | 0.085                 | 0.057                                   | GOKNR | 0.022                     | 0.082                 | 0.068                                   |
| BOBET | 0.506                     | 0.003                 | 0.096                                   | GOLTS | 0.051                     | 0.035                 | 0.107                                   |
| BORSK | 0.014                     | 0.127                 | 0.049                                   | GUBRF | 0.024                     | 0.074                 | 0.109                                   |
| BFREN | 0.101                     | 0.018                 | 0.261                                   | HATSN | 0.073                     | 0.025                 | 0.098                                   |
| BRISA | 0.04                      | 0.045                 | 0.117                                   | HEKTS | 0.008                     | 0.227                 | 0.143                                   |

|       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
| BUCIM | 0.037 | 0.048 | 0.073 | ISSEN | 0.022 | 0.082 | 0.086 |
| CCOLA | 0.041 | 0.044 | 0.144 | IZMDC | 0.042 | 0.042 | 0.14  |
| CEMAS | 0.042 | 0.042 | 0.08  | JANTS | 0.056 | 0.032 | 0.092 |
| CEMTS | 0.026 | 0.068 | 0.042 | KLKIM | 0.058 | 0.031 | 0.065 |
| CMBTN | 0.725 | 0.003 | 0.145 | KLSEK | 0.022 | 0.082 | 0.073 |
| CIMSA | 0.042 | 0.042 | 0.117 | KRDMA | 0.025 | 0.072 | 0.098 |
| DESA  | 0.027 | 0.065 | 0.058 | KARSN | 0.033 | 0.054 | 0.138 |
| KARTN | 0.026 | 0.069 | 0.087 | SASA  | 0.021 | 0.086 | 0.02  |
| KATMR | 0.003 | 0.605 | 0.029 | SAYAS | 0.027 | 0.065 | 0.022 |
| KERTV | 0.034 | 0.053 | 0.104 | PETUN | 0.071 | 0.025 | 0.114 |
| KRVGD | 0.026 | 0.069 | 0.109 | PNSUT | 0.059 | 0.03  | 0.113 |
| KMPUR | 0.065 | 0.027 | 0.047 | POLTK | 0.036 | 0.05  | 0.039 |
| KCAER | 0.035 | 0.051 | 0.089 | SOKE  | 0.113 | 0.016 | 0.082 |
| KONYA | 0.039 | 0.046 | 0.089 | SUNTK | 0.044 | 0.041 | 0.081 |
| KONKA | 0.024 | 0.074 | 0.085 | TARKM | 0.006 | 0.314 | 0.032 |
| KBORU | 0.033 | 0.053 | 0.062 | TATGD | 0.011 | 0.167 | 0.074 |
| KTSKR | 0.014 | 0.129 | 0.1   | TOASO | 0.1   | 0.018 | 0.051 |
| LMKDC | 0.035 | 0.051 | 0.072 | TMSN  | 0.023 | 0.078 | 0.076 |
| MEDTR | 0.021 | 0.084 | 0.057 | TUPRS | 0.081 | 0.022 | 0.086 |
| NUHCM | 0.054 | 0.033 | 0.1   | TTRAK | 0.042 | 0.043 | 0.05  |
| OBAMS | 0.096 | 0.018 | 0.076 | ULUUN | 0.131 | 0.014 | 0.11  |
| OTKAR | 0.021 | 0.086 | 0.105 | USAK  | 0.017 | 0.107 | 0.102 |
| OYAKC | 0.04  | 0.045 | 0.08  | ULKER | 0.034 | 0.052 | 0.129 |
| PNLSN | 0.04  | 0.044 | 0.075 | VESBE | 0.05  | 0.035 | 0.118 |
| PARSN | 0.026 | 0.068 | 0.147 | VESTL | 0.028 | 0.065 | 0.197 |
| POLTK | 0.036 | 0.05  | 0.039 | YATAS | 0.033 | 0.054 | 0.118 |
| QUAGR | 0.021 | 0.084 | 0.083 | YYLGD | 0.022 | 0.082 | 0.093 |
| SNICA | 0.01  | 0.183 | 0.045 | YUNSA | 0.022 | 0.082 | 0.087 |
| SARKY | 0.068 | 0.027 | 0.069 |       |       |       |       |

\*: Created by TOPSIS Software.

#### STEP 2: Calculate the weighted normalized decision matrix

According to the following formula, the normalized matrix is multiplied by the weight of the criteria.

$$v_{ij}(x) = w_j r_{ij}(x) \quad i = 1, \dots, m ; j = 1, \dots, n$$

The following table shows the weighted normalized decision matrix.

| The Weighted Normalized Matrix |                           |                       |                                         |       |                           |                       |                                         |
|--------------------------------|---------------------------|-----------------------|-----------------------------------------|-------|---------------------------|-----------------------|-----------------------------------------|
|                                | Inventory\nturnover ratio | Inventory\ndays ratio | Intangible assets to total equity ratio |       | Inventory\nturnover ratio | Inventory\ndays ratio | Intangible assets to total equity ratio |
| ADEL                           | 0.005                     | 0.037                 | 0.025                                   | CEMAS | 0.014                     | 0.014                 | 0.027                                   |
| AFYON                          | 0.021                     | 0.01                  | 0.03                                    | CEMTS | 0.009                     | 0.023                 | 0.014                                   |
| AKCNS                          | 0.022                     | 0.009                 | 0.03                                    | CMBTN | 0.242                     | 0.001                 | 0.048                                   |
| AKSA                           | 0.013                     | 0.015                 | 0.032                                   | CIMSA | 0.014                     | 0.014                 | 0.039                                   |

|        |       |       |       |       |       |       |       |
|--------|-------|-------|-------|-------|-------|-------|-------|
| ALCAR  | 0.011 | 0.019 | 0.02  | DESA  | 0.009 | 0.022 | 0.019 |
| ALKIM  | 0.009 | 0.023 | 0.02  | DEVA  | 0.004 | 0.05  | 0.026 |
| ALVES  | 0.015 | 0.013 | 0.036 | DGNMO | 0.008 | 0.024 | 0.061 |
| AEFES  | 0.01  | 0.02  | 0.047 | EGEEN | 0.008 | 0.024 | 0.027 |
| ASUZU  | 0.01  | 0.021 | 0.034 | EGGUB | 0.014 | 0.014 | 0.031 |
| ARCLK  | 0.009 | 0.022 | 0.051 | EGPRO | 0.017 | 0.012 | 0.032 |
| ASTOR  | 0.014 | 0.014 | 0.016 | EKOS  | 0.004 | 0.049 | 0.015 |
| ATAKP  | 0.005 | 0.041 | 0.021 | EKSUN | 0.016 | 0.013 | 0.009 |
| AYGAZ  | 0.05  | 0.004 | 0.034 | ELITE | 0.004 | 0.053 | 0.019 |
| BAGFS  | 0.004 | 0.044 | 0.046 | EMKEL | 0.004 | 0.047 | 0.03  |
| BTCIM  | 0.018 | 0.011 | 0.044 | ERBOS | 0.008 | 0.025 | 0.016 |
| BSOKE  | 0.012 | 0.017 | 0.066 | TEZOL | 0.009 | 0.021 | 0.024 |
| BIENY  | 0.007 | 0.028 | 0.019 | EUREN | 0.012 | 0.016 | 0.034 |
| BOBET  | 0.169 | 0.001 | 0.032 | EUPWR | 0.013 | 0.015 | 0.015 |
| BORSK  | 0.005 | 0.042 | 0.016 | FROTO | 0.033 | 0.006 | 0.054 |
| BFREN  | 0.034 | 0.006 | 0.087 | GIPTA | 0.012 | 0.017 | 0.015 |
| BRISA  | 0.013 | 0.015 | 0.039 | GOODY | 0.013 | 0.015 | 0.037 |
| BUCIM  | 0.012 | 0.016 | 0.024 | GOKNR | 0.007 | 0.027 | 0.023 |
| CCOLA  | 0.014 | 0.015 | 0.048 | GOLTS | 0.017 | 0.012 | 0.036 |
| GUBRF  | 0.008 | 0.025 | 0.036 | PARSN | 0.009 | 0.023 | 0.049 |
| HATSN  | 0.024 | 0.008 | 0.033 | PETKM | 0.022 | 0.009 | 0.051 |
| HEKTS  | 0.003 | 0.076 | 0.048 | PETUN | 0.024 | 0.008 | 0.038 |
| ISEN   | 0.007 | 0.027 | 0.028 | PNSUT | 0.02  | 0.01  | 0.038 |
| IZMDC  | 0.014 | 0.014 | 0.047 | POLTK | 0.012 | 0.017 | 0.013 |
| JANTS  | 0.019 | 0.011 | 0.031 | QUAGR | 0.007 | 0.028 | 0.028 |
| KLKIM  | 0.019 | 0.01  | 0.022 | SNICA | 0.003 | 0.061 | 0.015 |
| KLSE   | 0.007 | 0.027 | 0.024 | SARKY | 0.023 | 0.009 | 0.023 |
| KRDMA  | 0.008 | 0.024 | 0.033 | SASA  | 0.007 | 0.029 | 0.007 |
| KARSN  | 0.011 | 0.018 | 0.046 | SAYAS | 0.009 | 0.022 | 0.007 |
| KARTN  | 0.009 | 0.023 | 0.029 | SOKE  | 0.038 | 0.005 | 0.027 |
| KATMR  | 0.001 | 0.202 | 0.01  | SUNTK | 0.015 | 0.014 | 0.027 |
| KERVIT | 0.011 | 0.018 | 0.035 | TARKM | 0.002 | 0.105 | 0.011 |
| KRVGD  | 0.009 | 0.023 | 0.036 | TATGD | 0.004 | 0.056 | 0.025 |
| KMPUR  | 0.022 | 0.009 | 0.016 | TOASO | 0.033 | 0.006 | 0.017 |
| KCAER  | 0.012 | 0.017 | 0.03  | TMSN  | 0.008 | 0.026 | 0.025 |
| KONYA  | 0.013 | 0.015 | 0.03  | TUPRS | 0.027 | 0.007 | 0.028 |
| KONKA  | 0.008 | 0.025 | 0.028 | TTRAK | 0.014 | 0.014 | 0.017 |
| KBORU  | 0.011 | 0.018 | 0.02  | ULUUN | 0.044 | 0.005 | 0.036 |
| KTSKR  | 0.005 | 0.043 | 0.033 | USAK  | 0.006 | 0.036 | 0.034 |
| LMKDC  | 0.012 | 0.017 | 0.024 | ULKER | 0.011 | 0.017 | 0.043 |
| MEDTR  | 0.007 | 0.028 | 0.019 | VESBE | 0.017 | 0.012 | 0.039 |
| NUHCM  | 0.018 | 0.011 | 0.033 | VESTL | 0.009 | 0.022 | 0.066 |
| OBAMS  | 0.032 | 0.006 | 0.025 | YATAS | 0.011 | 0.018 | 0.039 |
| OTKAR  | 0.007 | 0.029 | 0.035 | YYLGD | 0.007 | 0.027 | 0.031 |
| OYAKC  | 0.013 | 0.015 | 0.027 | YUNSA | 0.007 | 0.027 | 0.029 |
| PNLSN  | 0.013 | 0.015 | 0.025 |       |       |       |       |

\*: Created by TOPSIS Software.

**STEP 3: Determine the positive ideal and negative ideal solutions**

In this step, the positive and negative ideal solutions are determined according to the following formulas.

$$A^+ = (v_1^+, v_2^+, \dots, v_n^+) \text{ ve } A^- = (v_1^-, v_2^-, \dots, v_n^-)$$

$$\text{So that } v_j^- = \{( \min v_{ij}(x) | j \in j_1 ), ( \max v_{ij}(x) | j \in j_2 )\} \quad i = 1, \dots, m$$

Where  $j_1$  and  $j_2$  denote the negative and positive criteria, respectively. The following table shows both positive and negative ideal values.

**The Positive and Negative Ideal Values**

|                                         | Positive ideal | Negative ideal |
|-----------------------------------------|----------------|----------------|
| Inventory\turnover ratio                | 0.242          | 0.001          |
| Inventory\days ratio                    | 0.001          | 0.202          |
| Intangible assets to total equity ratio | 0.087          | 0.007          |

\*: Created by TOPSIS Software.

**STEP 4: Distance from the positive and negative ideal solutions**

In this step, the calculation of the distances between each alternative and the positive and negative ideal solutions is obtained by using the following formulas.

$$d_i^+ = \sqrt{\sum_{j=1}^n [v_{ij}(x) - v_j^+(x)]^2} \quad , \quad i = 1, \dots, m \quad d_i^- = \sqrt{\sum_{j=1}^n [v_{ij}(x) - v_j^-(x)]^2} \quad , \quad i = 1, \dots, m$$

The following table shows the distance to the positive and negative ideal solutions.

**The Distance to Positive and Negative Ideal Points**

|       | Distance to positive ideal | Distance to negative ideal |       | Distance to positive ideal | Distance to negative ideal |
|-------|----------------------------|----------------------------|-------|----------------------------|----------------------------|
| ADEL  | 0.247                      | 0.165                      | BUCIM | 0.238                      | 0.187                      |
| AFYON | 0.228                      | 0.194                      | CCOLA | 0.232                      | 0.192                      |
| AKCNS | 0.227                      | 0.195                      | CEMAS | 0.236                      | 0.189                      |
| AKSA  | 0.236                      | 0.188                      | CEMTS | 0.245                      | 0.179                      |
| ALCAR | 0.241                      | 0.184                      | CMBTN | 0.039                      | 0.316                      |
| ALKIM | 0.243                      | 0.18                       | CIMSA | 0.233                      | 0.191                      |
| ALVES | 0.232                      | 0.192                      | DESA  | 0.243                      | 0.18                       |
| AEFES | 0.236                      | 0.187                      | DEVA  | 0.25                       | 0.153                      |
| ASUZU | 0.239                      | 0.183                      | DGNMO | 0.236                      | 0.186                      |
| ARCLK | 0.236                      | 0.185                      | EGEEN | 0.242                      | 0.179                      |
| ASTOR | 0.239                      | 0.188                      | EGGUB | 0.235                      | 0.19                       |
| ATAKP | 0.249                      | 0.161                      | EGPRO | 0.232                      | 0.192                      |
| AYGAZ | 0.199                      | 0.205                      | EKOS  | 0.253                      | 0.152                      |

|       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
| BAGFS | 0.244 | 0.162 | EKSUN | 0.239 | 0.189 |
| BTCIM | 0.227 | 0.195 | ELITE | 0.253 | 0.149 |
| BSOKE | 0.231 | 0.194 | EMKEL | 0.248 | 0.156 |
| BIENY | 0.246 | 0.174 | ERBOS | 0.245 | 0.177 |
| BOBET | 0.091 | 0.262 | TEZOL | 0.241 | 0.181 |
| BORSK | 0.251 | 0.16  | EUREN | 0.236 | 0.188 |
| BFREN | 0.208 | 0.214 | EUPWR | 0.24  | 0.187 |
| BRISA | 0.234 | 0.19  | PROTO | 0.211 | 0.204 |
| GIPTA | 0.241 | 0.185 | OBAMS | 0.218 | 0.199 |
| GOODY | 0.234 | 0.19  | OTKAR | 0.242 | 0.175 |
| GOKNR | 0.244 | 0.175 | OYAKC | 0.236 | 0.188 |
| GOLTS | 0.231 | 0.193 | PNLSN | 0.237 | 0.188 |
| GUBRF | 0.24  | 0.179 | PARSN | 0.237 | 0.184 |
| HATSN | 0.224 | 0.197 | PETKM | 0.222 | 0.199 |
| HEKTS | 0.253 | 0.133 | PETUN | 0.223 | 0.197 |
| ISSEN | 0.243 | 0.176 | PNSUT | 0.227 | 0.195 |
| IZMDC | 0.231 | 0.192 | POLTK | 0.242 | 0.185 |
| JANTS | 0.23  | 0.193 | QUAGR | 0.243 | 0.175 |
| KLKIM | 0.232 | 0.193 | SNICA | 0.256 | 0.141 |
| KLSEK | 0.244 | 0.175 | SARKY | 0.228 | 0.195 |
| KRDMA | 0.241 | 0.18  | SASA  | 0.249 | 0.173 |
| KARSN | 0.235 | 0.188 | SAYAS | 0.246 | 0.18  |
| KARTN | 0.241 | 0.18  | SOKE  | 0.212 | 0.201 |
| KATMR | 0.323 | 0.003 | SUNTK | 0.235 | 0.19  |
| KERVY | 0.237 | 0.186 | TARKM | 0.272 | 0.097 |
| KRVGD | 0.239 | 0.181 | TATGD | 0.252 | 0.147 |
| KMPUR | 0.231 | 0.194 | TOASO | 0.22  | 0.199 |
| KCAER | 0.238 | 0.186 | TMSN  | 0.243 | 0.177 |
| KONYA | 0.236 | 0.188 | TUPRS | 0.223 | 0.197 |
| KONKA | 0.242 | 0.178 | TTRAK | 0.239 | 0.188 |
| KBORU | 0.24  | 0.185 | ULUUN | 0.204 | 0.204 |
| KTSKR | 0.247 | 0.161 | USAK  | 0.244 | 0.168 |
| LMKDC | 0.239 | 0.186 | ULKER | 0.235 | 0.188 |
| MEDTR | 0.246 | 0.174 | VESBE | 0.23  | 0.193 |
| NUHCM | 0.23  | 0.193 | VESTL | 0.234 | 0.19  |
| YATAS | 0.236 | 0.187 | YUNSA | 0.243 | 0.176 |
| YYLGD | 0.242 | 0.176 |       |       |       |

\*: Created by TOPSIS Software

**STEP 5: Calculate the relative closeness degree of alternatives to the ideal solution**

In this step, the relative closeness degree of each alternative to the ideal solution is obtained by the following formula. If the relative closeness degree has value near 1, it means that the alternative has a shorter distance from the positive ideal solution and a longer distance from the negative ideal solution.

$$C_i = \frac{d_i^-}{(d_i^+ + d_i^-)} \quad , \quad i = 1, \dots, m$$

The following table shows the relative closeness degree of each alternative to the ideal solution and its ranking.

The Cia Value and Ranking

|       | Ci    | rank |       | Ci    | rank |       | Ci    | rank |
|-------|-------|------|-------|-------|------|-------|-------|------|
| CMBTN | 0,891 | 1    | BRISA | 0,448 | 19   | ALCAR | 0,433 | 32   |
| BOBET | 0,742 | 2    | GOODY | 0,448 | 19   | KRVGD | 0,431 | 33   |
| AYGAZ | 0,508 | 3    | EGGUB | 0,447 | 20   | TEZOL | 0,429 | 34   |
| BFREN | 0,507 | 4    | VESTL | 0,447 | 20   | GUBRF | 0,428 | 35   |
| ULUUN | 0,499 | 5    | SUNTK | 0,446 | 21   | KARTN | 0,428 | 35   |
| FROTO | 0,491 | 6    | CEMAS | 0,445 | 22   | KRDMA | 0,427 | 36   |
| SOKE  | 0,486 | 7    | KARSN | 0,445 | 22   | DESA  | 0,426 | 37   |
| OBAMS | 0,477 | 8    | ULKER | 0,445 | 22   | ALKIM | 0,425 | 38   |
| TOASO | 0,475 | 9    | AKSA  | 0,444 | 23   | EGEEN | 0,425 | 38   |
| PETKM | 0,472 | 10   | KONYA | 0,444 | 23   | KONKA | 0,424 | 39   |
| TUPRS | 0,47  | 11   | EUREN | 0,443 | 24   | CEMTS | 0,423 | 40   |
| HATSN | 0,468 | 12   | OYAKC | 0,443 | 24   | SAYAS | 0,422 | 41   |
| PETUN | 0,468 | 12   | PNLSN | 0,443 | 24   | TMSN  | 0,421 | 42   |
| AKCNS | 0,462 | 13   | AEFES | 0,442 | 25   | YYLGD | 0,421 | 42   |
| BTCIM | 0,462 | 13   | EKSUN | 0,442 | 25   | ISSEN | 0,42  | 43   |
| PNSUT | 0,462 | 13   | YATAS | 0,442 | 25   | OTKAR | 0,42  | 43   |
| AFYON | 0,46  | 14   | ASTOR | 0,441 | 26   | YUNSA | 0,42  | 43   |
| SARKY | 0,46  | 14   | DGNMO | 0,441 | 26   | ERBOS | 0,419 | 44   |
| BSOKE | 0,456 | 15   | TTRAK | 0,441 | 26   | QUAGR | 0,419 | 44   |
| GOLTS | 0,456 | 15   | BUCIM | 0,44  | 27   | GOKNR | 0,418 | 45   |
| JANTS | 0,456 | 15   | KERTV | 0,44  | 27   | KLSEK | 0,418 | 45   |
| KMPUR | 0,456 | 15   | KCAER | 0,44  | 27   | MEDTR | 0,415 | 46   |
| NUHCM | 0,456 | 15   | ARCLK | 0,439 | 28   | BIENY | 0,414 | 47   |
| VESBE | 0,456 | 15   | EUPWR | 0,437 | 29   | SASA  | 0,41  | 48   |
| IZMDC | 0,454 | 16   | LMKDC | 0,437 | 29   | USAK  | 0,408 | 49   |
| KLKIM | 0,454 | 16   | PARSN | 0,437 | 29   | ADEL  | 0,401 | 50   |
| ALVES | 0,453 | 17   | KBORU | 0,435 | 30   | BAGFS | 0,399 | 51   |
| CCOLA | 0,453 | 17   | ASUZU | 0,434 | 31   | KTSKR | 0,395 | 52   |
| EGPRO | 0,453 | 17   | GIPTA | 0,434 | 31   | ATAKP | 0,393 | 53   |
| CIMSA | 0,45  | 18   | POLTK | 0,434 | 31   | BORSK | 0,389 | 54   |
| EMKEL | 0,386 | 55   | SNICA | 0,355 | 60   |       |       |      |
| DEVA  | 0,379 | 56   | HEKTS | 0,344 | 61   |       |       |      |
| EKOS  | 0,376 | 57   | TARKM | 0,263 | 62   |       |       |      |
| ELITE | 0,372 | 58   | KATMR | 0,01  | 63   |       |       |      |
| TATGD | 0,369 | 59   |       |       |      |       |       |      |

\*: Created by TOPSIS Software

According to the final findings of the analysis obtained from TOPSIS Software, CMBTN had the best financial performance with the highest ci value of 0,891 while KATMR had the worst financial performance with the lowest ci value of 0,01. Nevertheless, CMBTN couldn't comply with all three disclosure requirements of IAS 29. As presented in Table 1, the degree of meeting the Standard was equal to 67 %, and disclosure requirement 2 was missing in the annual financial report of CMBTN. Ironically, the worst entity – KATMR regarding its financial performance had fully complied with all three disclosure requirements of IAS 29 in its annual financial report. That was a concrete indicator of a weak relationship between financial performance, and the reporting performance of the sample entities. Also, the financial performance of all of the top five entities which are comprised of BOBET, AYGAZ, BFREN, ULUUN including CMBTN couldn't match their reporting performance, completely. ULUUN couldn't comply with the disclosure requirement-2 like CMBTN. Only the three entities (BOBET, AYGAZ, BFREN) could comply with all of the disclosure requirements. But, surprisingly all of the last five entities (TATGD, SNICA, HEKTS, TARKM, KATMR) which had the lowest financial performance were in accordance with all of the disclosure requirements. As a result, no significant or reasonable relationship was able to be found between financial performance and reporting performance, statistically within the comparison of the findings of TOPSIS analysis and descriptive analysis explained in 3.1.

### **3.3. Considering the Effect of Hyperinflationary Economy on the Independent Auditor's Reports by Content Analysis**

As a result of the hyperinflationary economy in Türkiye, hyperinflationary accounting came to the fore in the year 2023 based on the announcement of POAASA at the date of November 23, 2023, and that has changed the extent of independent auditors' reports. Hyperinflationary accounting has begun to be a subject in independent audit reports, and addressed by independent auditors as a challenging matter. Although it is really challenging, it is still a non-consensual matter regarding which section of independent audit reports it should be addressed. There is no strict or formal rule about how to determine and communicate hyperinflationary accounting in the context of independent audit reports. There are only International Standards on Auditing: ISA (701) and (706) issued by the International Auditing and Assurance Standards Board (IAASB) that are taken as a reference or guideline in practice. In the study, the effect of a hyperinflationary economy, thus hyperinflationary accounting on independent audit reports of the sample entities was considered by a content analysis containing analysis of dataset drawn from the independent auditor's reports of the sample entities based on consideration of the objectives of ISA (701) Communicating Key Audit Matters in the Independent Auditor's Report & ISA (706) Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor's Report. The research explored which sections were preferably used more or less in practice to communicate matters of hyperinflationary accounting to financial statement users, and how this matter was addressed by independent auditors in general. The results of the research are summarized in the following Table 4.

Table 4: Distribution of the Sections of the Independent Auditor's Reports

|          | KAM<br>(Key audit<br>matters) | Emphasis<br>of matter<br>paragraphs | Other<br>matter<br>paragraphs | KAM & Emphasis of<br>matter paragraphs | KAM &<br>Other matter<br>paragraphs | Null | Total |
|----------|-------------------------------|-------------------------------------|-------------------------------|----------------------------------------|-------------------------------------|------|-------|
| Quantity | 76                            | 6                                   | 1                             | 6                                      | 4                                   | 6    | 99    |
| Weight   | 77 %                          | 6 %                                 | 1 %                           | 6 %                                    | 4 %                                 | 6 %  | 100 % |

\*: Author's own work.

In Table 4, the distribution of the sections of the independent auditor's reports of the sample entities was shown based on the quantity and weight of the reports. According to the results, the vast majority of the independent auditors of the sample entities have addressed the matter of hyperinflationary accounting as “*key audit matters*” in their reports while the minority of them have stated it in “*other matters paragraphs*”. According to the results of the analysis, KAM (Key Audit Matters) was the most frequently used section (77 %) while other matters paragraphs were the least used one (1%). It is seen that 76 out of 99 entities (77 %) have communicated the matter of inflation accounting to financial statement users in the section of key audit matters and aligned to (ISA) 701, 6 out of 99 entities (6 %) in the section of emphasis of matters paragraphs and 1 out of 99 (1 %) entities in the section of other matters paragraphs referring to (ISA) 706, but 6 out 99 entities ( 6 %) haven't addressed the matter of inflation accounting in any sections in the context of the independent audit reports. All in all, the section on key audit matters was prominent regarding the independent auditor's reports of the sample entities although the fact that addressing the matter of hyperinflationary accounting in different sections of the reports by the independent auditors of the sample entities resulted in a lack of uniformity. That way of reporting has shown that there were no standardizations or uniformity.

### 3.4. Textual Analysis of the Annual Financial Reports and Independent Auditor's Report of the Sample Entities

Textual analysis is the application of natural language processing (NLP) to textual data for automated information extraction or measurement. It has been often used by accounting researchers to measure disclosure sentiment, readability, and disclosure quantity to compare disclosures to determine similarities or differences and detect themes (Bochkay et al., 20203). Textual analysis is an emerging area in accounting and finance. This analysis might be considered as a subset of what is sometimes labeled qualitative analysis (Loughran and McDonald, 2016). In this study, textual analysis was used to understand reporting trends based on the requirements of the Standard, IAS-29, and independent auditor's reports as an integral and supporting part of the research explained in 3.1. and 3.3. The analysis focused on three attributes (weight & frequency, boilerplate, and comparability) that are likely to be of interest to investors, regulators, managers, and other stakeholders, as well as affecting the content of the annual financial reports and independent auditors' reports. Textual analysis was mainly focused on a specific event, IAS-29 adoption in a hyperinflationary economy to understand and assess the effects of hyperinflationary accounting on disclosures for the first part of the research. It was expected that, mandatory IAS adoption would be associated with increases in the quantity of textual disclosure. In line with the expectation, the analysis has

shown that nearly all of the sample entities had extended the scope of disclosures stated in footnote No. 2. in their annual financial reports as a result of hyperinflation in Türkiye for the reporting period. Table 5, summarizes the extended scope and characteristics of disclosures in footnote No. 2. as follows:

Table 5: Categorization of Characteristics of the Textual Disclosures of the Annual Financial Reports

| Categories             | Name of the textual disclosure related to hyperinflation & inflation accounting                      | Quantity  | Weight      |
|------------------------|------------------------------------------------------------------------------------------------------|-----------|-------------|
| <b>Main headline-1</b> | <b>Basis of presentation of the financial statements</b>                                             | <b>56</b> | <b>57 %</b> |
| Sub-headline 1         | Basis for Presentation                                                                               | 28        | 50 %        |
| Sub-headline 2         | Amendments to financial statements in hyperinflation periods                                         | 18        | 32 %        |
| Sub-headline 3         | Financial reporting in hyperinflationary economies                                                   | 5         | 9 %         |
| Sub-headline 4         | Restatements of financial statements in hyperinflation periods                                       | 1         | 2 %         |
| Sub-headline 5         | Principles of preparation of financial statements                                                    | 1         | 2 %         |
| Sub-headline 6         | Applied financial reporting standards                                                                | 1         | 2 %         |
| Sub-headline 7         | Basis for preparation and presentation of financial statements                                       | 1         | 2 %         |
| Sub-headline 8         | Summary of significant accounting policies                                                           | 1         | 2 %         |
| <b>Main headline-2</b> | <b>Basis of presentation of the financial statements and chosen accounting policies</b>              | <b>1</b>  | <b>1 %</b>  |
| <b>Main headline-3</b> | <b>Basis of presentation of the consolidated financial statements</b>                                | <b>39</b> | <b>39 %</b> |
| Sub-headline 1         | Basis for presentation                                                                               | 22        | 56 %        |
| Sub-headline 2         | Amendments to financial statements in hyperinflation periods                                         | 8         | 21 %        |
| Sub-headline 3         | Financial reporting in hyperinflationary economies                                                   | 7         | 18 %        |
| Sub-headline 4         | Basis for preparation of financial statements                                                        | 1         | 3 %         |
| Sub-headline 5         | Applied financial reporting standards                                                                | 1         | 3 %         |
| <b>Main headline-4</b> | <b>Basis of presentation of the consolidated financial statements and chosen accounting policies</b> | <b>2</b>  | <b>2 %</b>  |
| <b>Null</b>            | <b>Null</b>                                                                                          | <b>1</b>  | <b>1 %</b>  |

\*: Author's own work.

Based on the measurement of weight and frequency, hyperinflationary accounting was associated with the presentation of the financial statements of the sample entities, mostly. Unlike this, it was rarely associated with the chosen accounting policies of the sample entities, rarely. 56 out of 99 entities gave disclosure associated with hyperinflationary accounting under “*the name of presentation of financial statements (57 %)*”, and 39 out of 99 entities under “*the name of presentation of consolidated financial statements (39 %)*”. All in all 95 out of 99 entities (96 %) gave disclosure associated with hyperinflationary accounting in their annual financial reports. Also, one entity (BORSK) addressed hyperinflationary accounting nowhere in its annual financial report although its functional currency was the Turkish Lira for the related reporting period. That might be considered a huge discrepancy since the entity was required to give related disclosures about hyperinflationary accounting for a related period. In addition, it was a sign of reporting failure reflecting no information, and application of hyperinflationary accounting even though it was required by the Standard. The measurement of comparability was estimated by comparing how similar the headlines and sub-headlines an entity had

used in its annual financial report with the other sample entities. The keywords that were searched for in textual information were “inflation” and “TAS-29 (*Turkish version of IAS-29*)” to find out the main and sub-headlines related with hyperinflationary accounting. The main titles referred to the basis for the presentation of financial statements, intensively so the sub-titles were. The main titles were categorized into four different groups. These are “*basis for presentation of financial statements*”, “*basis for presentation of consolidated financial statements*”, “*basis for presentation of financial statements and chosen accounting policies*”, and “*basis for presentation of consolidated financial statements and chosen accounting policies*”. The sub-headlines were comprised of the *basis for presentation, amendments to financial statements, financial reporting, a restatement of financial statements, principles of preparation of financial statements, applied financial reporting standards, the basis for presentation and preparation of financial statements, and significant accounting policies in hyperinflationary economies*. The main and sub-titles were similar to each other, ferforthly although that wasn't enough to reflect an exact standardization. Surprisingly, all of the entities had given the information in the same footnote which was footnote 2, and provided a standardization in one way as regards the number of the footnotes in the contents of the annual financial reports. On the other hand, that might make it easier to search for information about hyperinflationary accounting for investors, regulators, and other stakeholders in annual financial reports. Nonetheless, footnote 2 has been already available in annual financial reports containing detailed information about various financial aspects, and has a broaden scope. It isn't a new part of annual financial reports. Therefore, giving the information in the scope of footnote 2, and compression of the information in it might cause significant points of the matter to be glossed over. That means the significance of the matter of hyperinflationary accounting for the year 2023 in Türkiye might be neglected. So, that would be likely better to give the information in a separate new footnote named the Standard – IAS 29 to stress the significance and specification of the matter including paying more attention to investors on this matter. In the second part of the research, the reflection of hyperinflation on the independent auditors' reports of the sample entities for the reporting period was analyzed. This analysis was particularly conducted by searching the related textual disclosures with hyperinflationary accounting in related sections of independent auditors' reports of the sample entities. Based on the results of the analysis, the related audit report sections and the sub-titles of the textual disclosures used by the independent auditors were presented in Table 6 presented below.

**Table 6:** Categorization of Characteristics of the Textual Disclosures of the Independent Auditor's Reports

| <b>Audit Report Sections</b>                    | <b>Sub-title of the textual disclosure related to hyperinflationary accounting in the section</b> | <b>Quantity</b> | <b>Weight</b> |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------|---------------|
| <b>KAM</b>                                      | Application of the Standard – “IAS 29 Financial Reporting in Hyperinflationary Economies”         | 56              | 74 %          |
|                                                 | Application of Hyperinflationary Accounting                                                       | 20              | 26 %          |
|                                                 |                                                                                                   | <b>76</b>       | <b>77 %</b>   |
| <b>KAM &amp; Emphasis of Matters Paragraphs</b> | Application of the Standard – “IAS 29 Financial Reporting in Hyperinflationary Economies”         | 5               | 83 %          |
|                                                 | Application of Hyperinflationary Accounting                                                       | 1               | 17 %          |
|                                                 |                                                                                                   | <b>6</b>        | <b>6 %</b>    |
| <b>KAM &amp; Other Matters Paragraphs</b>       | Application of Hyperinflationary Accounting                                                       | 4               | 100 %         |
|                                                 |                                                                                                   | <b>4</b>        | <b>4 %</b>    |

|                     |               |   |       |
|---------------------|---------------|---|-------|
| Emphasis of Matters | No sub-titles | 6 | 100 % |
| Paragraphs          |               | 6 | 6 %   |
| Other Matters       | No sub-titles | 1 | 100 % |
| Paragraphs          |               | 1 | 1 %   |
| Null                | Null          | 6 | 100 % |
|                     |               | 6 | 6 %   |

\*: Author's own work.

According to the analysis, the related independent audit report sections preferred by the independent auditors to address the matter of hyperinflationary accounting were “KAM”, “emphasis of matters” and “other matters” paragraphs. Also, 10 out of 99 independent auditors (10 %) had adopted two different combined approaches (KAM and other matters paragraphs). The keywords which were searched in textual information of the independent auditor's reports to find out the disclosures and explanations about hyperinflationary accounting were “inflation”, “hyperinflationary accounting” and “IAS-29”. The word of IAS 29 had been used 193 times, the word of inflation had been used 108 times and the word of hyperinflationary accounting had been used 26 times in the independent auditors' reports of the sample entities. Also in the scope of the analysis, the top three explanations used by the independent auditors in the completely same way were as follows;

1. *“Based on the consideration of the significant impact of IAS 29 on the Group's reported results and financial position, hyperinflationary accounting was assessed as a key audit matter.”*
2. *“The application of IAS 29 has a common and consistently significant impact on financial statements. In addition to these reasons, considering the risk that the data used in the implementation of IAS 29 is not accurate and complete, and the additional audit effort expended, the implementation of IAS 29 has been identified by us as a key audit matter.”*
3. *“Due to the existence of estimates used in the restatements, the high complexity of the calculation, and the risk that the data used in the restatement might be incomplete or inaccurate, the implementation of IAS 29 has been identified as a key audit matter.”*

Usage of extremely similar words & phrases, completely the same explanations by the independent auditors in their reports, or choosing boilerplate reporting as illustrated above from the research sample pose an obstacle regarding useful financial information. That kind of information is unlikely client-specific information beyond being less informative. Also, it likely damages the individuality of professional judgments of independent auditors in their reports.

#### 4. Conclusion and Discussion

This study has shown that the matter of hyperinflation has a significant impact on disclosures of both financial reports and independent auditor's reports. The significant points identified in the related analyses within the scope of this study might be synthesized into five major findings. First, the study assesses the degree of meeting the requirements of Standard – IAS 29 based on the three disclosure requirements and reveals that there are several entities whose financial reports are unable to fully

follow all of these three disclosure requirements. In other words, these entities have reporting failures in adapting all of the disclosure requirements stated by IAS 29. Furthermore, and related, the study marks the points of the mostly problematic disclosure requirement uncovering that disclosure requirement 2 is the most neglected one by the research sample compared to other disclosure requirements. This finding offers a valuable insight that future research might focus on searching the reasons for this neglect from client entity financial reporting choices. Second, the study uncovers that the financial performance of the sample entities is not reasonably related to their reporting performance. Empirical findings of TOPSIS analysis including the results of the descriptive analysis indicate that there is no significant or reasonable relationship between financial performance, and reporting performance of these entities, statistically. Third, this study establishes the way of reporting the matter of hyperinflation from independent auditor's choices. According to the results, the section on key audit matters (KAMs) is prominent in the independent auditor's reports of the sample entities. That means independent auditors preferably choose the section of KAMs more than other sections (emphasis on matters, other matters) to communicate the matter of hyperinflationary accounting to financial statement users. This finding demonstrates an essential sign of independent auditors' professional judgment about the matter of hyperinflation, and their reporting choices in practice besides ongoing uncertainty on this matter. To this extent, the study suggests the need to add new regulations and disclosures referring to the matter of hyperinflation to the existing related international auditing standards (ISA 701 & ISA 706) by Standard-Setters. Fourth, the adoption of the new Standard – IAS 29 in the mandatory adoption year increases report length and alters textual approaches. There is clear evidence of this increase in new textual disclosures of annual financial reports, and independent auditor's reports. It is seen that in footnote No. 2. of the annual reports all of the sample entities contain a more extended scope containing additional textual paragraphs related to the matter of hyperinflation. To the same extent, the content of independent auditor's reports shows an alteration in different sections based on the need to communicate the matter of hyperinflation to financial statement users. To this extent, an alternative of generating a new separate footnote unique to the matter of hyperinflation rather than an existing footnote would be likely better to indicate this matter in a more emphasized way beyond it making it easier to reach the related information about the matter. Fifth, this study reveals a lack of uniformity including some reporting failures such as boilerplate reporting, notable reporting mistakes, etc. That finding strongly suggests the need to pay particular attention to the reporting attitudes or choices by entities and independent auditors to incorporate new requirements made by new Standards to their annual financial reports, and independent auditor's reports in a more accurate, comparable, and simple concept. In doing so, they might be more adaptive.

The study is not without limitations. The limitation that should be noted is that this study only involves the ISE Star Market alone, and therefore it is peculiar to the Turkish economy, and financial markets. In addition to this limitation, only manufacturing entities that were quoted on ISE Star at a certain date are in the scope of the research sample. Since the number of these entities that are quoted on ISE Star might be variable (less or more) from day to day. Thus, the results of the study should be interpreted without overgeneralizing the impact of hyperinflation on disclosures of financial reports, and independent auditor's reports. Despite the limitations, these manufacturing entities chosen from

the ISE Star Market, are the entities that would be likely one of the most adhered ones to IFRSs & ISAs requirements regarding their certain prestige in the market, but above all the mostly affected and risky one in any hyperinflationary economic conditions in turn their sector. This ensures a reliable research instrument while also representing the most relevant sample group with financial reporting including independent auditor's reports in hyperinflationary periods. The empirical findings of the study are significant in that they provide a complete map from a broader research perspective while allowing a comprehensive understanding. Moreover, it raises awareness about the reporting challenges of hyperinflation for the prospective hyperinflationist periods that might occur in the foreseeable future.

It is obviously seen that the matter of hyperinflation has a challenging and altering impact on financial reporting and audit practices. Although hyperinflation is a rare event especially for developed countries, there is always a possibility of hyperinflation erosion. Hence, the matter of hyperinflation occurred many times in developed countries such as Germany, Russia, China throughout history as well as other countries. Policymakers, standard-setters and practitioners have a great responsibility in this regard. Policy makers should adopt policies like contractionary monetary policy or smart fiscal policy including related stabilisation programmes to tackle with the challenges of hyperinflation. Also, the relevant standard-setters should generate more strict, formal rules and directive explanations, peculiarly about how to determine and communicate the matter of hyperinflation though IFRS & ISAs requirements because it is still relatively emerging topic and an additional specific area. Finally, the relevant practitioners should go above and beyond universal tasks and tendencies including due care to be fully competent to address the specific matters in this area. Given the current situation, it would be recommended that collaboration among these three parts is needed.

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## Resume

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