



## THE DILEMMA OF ANNUAL REPORTING FOR TURKISH COMPANIES FOR 2022

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**Rezumat:** Turcia a avut încă un an de inflație ridicată și de devalorizare ridicată în istoria sa economică. Inflația a fost un fenomen continuu în Turcia timp de mulți ani. Lucrarea analizează consecințele ratelor ridicate ale inflației și devalorizării asupra situațiilor financiare. Aplicarea diferitelor metode de raportare bazate pe IAS va crea discrepanțe între companiile filialelor străine. O altă discrepanță se datorează ratei inflației care trebuie aplicată în scopurile IAS 29. Există două rate ale inflației care sunt discutate de public. Una este declarată de agenția guvernamentală de statistică numită “TurkStat” și cealaltă declarată de organizația neguvernamentală a academicienilor numită “ENAG”. Deoarece guvernul nu va permite aplicarea regulilor contabile privind inflația pentru raportarea financiară în scopuri locale/fiscale pentru anul fiscal 2022, companiile care au venituri care depășesc cheltuielile și active care depășesc pasivele vor declara profituri și vor plăti taxe, în timp ce, de fapt, inflația ridicată și devalorizarea elimină aceste profituri.

**Cuvinte cheie:** inflație, devalorizare, raportare financiară, raportare fiscală

**Abstract:** Turkey has had another year of high inflation and high devaluation in its economic history. Inflation has been a continuing phenomenon in Turkey for many years. The paper analyzes the consequences of high inflation and devaluation rates on financial statements. Inflation and devaluation create difficulties both for local and foreign subsidiary companies' financial reporting. A model company's transactions have been used to show the effects of inflation, devaluation on the financial statements. Application of different IAS based reporting methods will create discrepancies among the companies of foreign subsidiaries. Another discrepancy is due to which inflation rate to be applied for IAS 29 purposes. There are two inflation rates being discussed by the public. One is declared by the government statistical agency called “TurkStat” and the other one declared by the non-governmental academicians' organization called “ENAG”. ENAG's inflation rate-being more than twice of the TurkStat's makes the case even more interesting. Since government is not going to allow the inflation accounting rules for financial reporting for local/tax purposes for 2022 fiscal year, companies with revenues exceeding expenses and assets exceeding their liabilities will be declaring profits and paying taxes whilst in fact, high inflation and devaluation are sweeping away those profits.

**Keywords:** inflation, devaluation, financial reporting, tax reporting

**JEL Classification:** M41

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## 1. INTRODUCTION

This paper explores the dilemma that companies will be in for financial reporting as of December 31, 2022. Turkey has experienced another year of high inflation and devaluation in 2022. The figures on Table 1 below explains the rate of inflation and devaluation in 2022:

	31.12.2020	31.12.2021	31.12.2022	3 Years Cumulative Inflation
Turkish Central (TCB) USD/TL rate	-	13.3290	18.6983	-
TCB annual devaluation %	-	-	40.00	-
TCB annual devaluation index	-	1.00	1.40	-
Turkish Statistical Institute CPI inflation %	14.60	36.08	64.27	156.18
ENAG inflation %	36.72	82.81	137.55	493.73

*Source: ENAG 2020-2022 inflation rate*

There are two Consumer Price Indices (CPI) - inflation rates on the table: one declared by the Turkish Government Statistical Institute (TurkStat) and the other one is by ENAG. ENAG is the Turkish abbreviation of Inflation Research Group-made of economists independent from the government. ENAG`s methodology is similar to TurkStat`s and considers 81% of the items in TurkStat`s inflation calculation basket which translates into 80% of the weight of the basket. There is a large gap between the two sources, not only in 2022 but also in prior years. According to Turkish Monitor *“frequent changes of the president of the Turkish Statistical Institute (TurkStat) and other management positions significantly undermine the institution`s credibility,* said the European Statistical Office (Eurostat) officials citing the European Commission`s 2021 Turkey report.” A former TurkStat President Mr. Birol Aydemir said that: *“there is no transparency in public administration. Politics intervenes in all areas and tries to solve the problems by orders. Intervening the market economics (mechanisms), thinking that economy can be managed by orders.”* Paper will discuss the various reporting alternatives in the light of the high devaluation and inflation rates including the dilemma created by the government with regards to inflation statistics.

## 2. DEFINING THE RESEARCH PROBLEM

Considering the practical difficulties involved, the best way to get started with the job of measuring the effects of inflation on individual businesses is to use a simplified version of the method proposed in December 1974 by the Financial Accounting Standards Board (FASB). That method would convert the amounts appearing in companies` financial statements to equal units of current general purchasing power, so that current and prior-year financial statements would be comparable in terms of purchasing power. Such converted statements would be supplementary to the actual financial statements based on historical costs, which are shown in units of money of unequal purchasing power. The method proposed by the FASB can be simplified to make it less burdensome to business and modified to answer some of the legitimate objections of its critics (Flynn, 1977).

Thies and Sturrock conducted research over a sample of 50 large manufacturing firms using replacement cost data for the period 1977-1983. The findings showed that rankings of historical cost-based financial ratios did not match well with rankings of replacement cost-based



ratios. The data also indicated that historical cost-based financial ratios often grossly misrepresent the relative financial strengths of companies (Karapinar, 2012).

Inflation accounting, price level adjustments have been in discussion as early as 1919 in US. Statement Financial Accounting Standards (SFAS) No.33 Financial Reporting and Changing Prices was issued in December 1979 and an experiment with reporting the effects of price-level changes began. Seven years later, in December 1986, the experiment ended with the issuance of SFAS No. 89. This statement made the provision of supplementary price-level adjusted information voluntary (Waldron, 1989). Articles written in the past confirm the outcomes of this paper. As expected, inflation-adjusted accounting data confirmed what had been generally understood-that historical cost accounting overstates profitability relative to replacement cost (or current cost) accounting. An analysis of all industrial companies required to make FAS 33 disclosures for 1980 indicates that before-tax income from continuing operations totaled \$172 billion according to historical cost accounting, versus \$107 billion on a current cost basis (Thies, 1987).

Since inflation is a chronic case, it should be accounted for by companies. Thus, the companies can evaluate and adjust financial statements more realistically to overcome the changes made by inflation developments. It is worthy to note that accounting methods estimates, and interpretations of financial statements are recurrent accounting issues. Annual reports must be accurate to make correct organizational decisions, improve business quality and performance. This study highlights the appropriate measures that should be taken during periods of high inflation and prepares companies to use methods that should be applied in the case of high inflation developments in the future (Odunayo, 2020). In reality, financial statements cannot be perfectly objective, since they are prepared by the firm whose financial position is being reported. Moreover, some unavoidable uncertainties and estimates are part of all financial statements, and inflation adds to these uncertainties. The rational objective should be to reduce this uncertainty to a level which is reasonable.

With this point in mind, inflation accounting methods can be utilized to increase the quality of financial data (Odunayo, 2020). In the past few years of high inflation, companies have reported very high profits on the one hand but on the other they have faced real financial difficulties. A possible explanation would be that dividends and taxes have been paid out of capital due to overstated figures of profits arrived at by adopting historical cost concept. Thus, a change from historical cost concept to price level or inflation accounting has been recommended (Eseoghene, 2017).

The accounting profession has made visible progress in proposing methods of reflecting the effects of inflation in financial statements. The first method to be proposed was like price-level accounting. Recently, however, the debate has tended to favor current value accounting. Steps are being taken in Britain and Australia to implement current-value accounting. It is to be hoped that other countries would follow the lead of Britain and Australia to achieve an international improvement in accounting reporting practices. Kenya is among the developing countries which have not yet recognized the importance of proper inflation accounting as a vital element to the reporting of current and more relevant financial information (Nyagari, 1977).

### 3. METHODOLOGY

The methodology used will take a model company, assuming that it is established at January 31, 2022 and goes through one transaction at the end of each month until December 31, 2022. Cost of goods sold (COGS) and depreciation (straight line) calculations are done at the end of the year. Inventory method followed is first in first out (FIFO). Value added tax (VAT) applied is 18% and corporate (income) tax is 25%.

The transactions in 2022 will be as follows:

1. Company XYZ is established with 100,000 LC capital paid as cash on January 31;
2. 100 pieces of goods are purchased on credit 100 LC each + GST (18 %) on February 28;
3. Machinery purchase is made in cash for 50,000 LC + GST (18 %) on March 31;
4. 100 pieces of goods are purchased on credit 120 LC each + GST (18 %) on April 30;
5. 100 pieces of goods are sold to customer A on credit 220 LC each + GST (18 %) on May 31;
6. Payment is made to suppliers for the first purchase (relates to transaction 2) on June 30;
7. 50 pieces of goods are sold to customer B on credit 210 LC each + GST (18 %) on July 31;
8. 25 pieces of goods are sold to customer C on credit 200 LC each + GST (18 %) on August 31;
9. Half of the sale's payment is received from customer A (relates to transaction 5) on 30/09;
10. Payment is received from customer B (relates to transaction 7) on October 31;
11. Payment is received from customer C (relates to transaction 8) on November 30;
12. Calculation of COGS and its entry on December 31;
13. Calculation of depreciation and its entry on December 31.

### 4. PRESENTING THE RESEARCH FINDINGS

We will have five discussion parts:

First part will treat the Turkish Lira (TL) transactions as they are and convert them to United States Dollar (USD/\$) at year end rate assuming  $1\$ = 1\text{TL}$ . This treatment of numbers assumes that this is a local company and preparing its financial statements based on local reporting rules and not adjusting them in accordance with International Financial Reporting Standards (IFRS), specifically International Accounting Standards (IAS) 21-The Effects of Changes in Foreign Exchange Rates nor with IAS 29-Financial Reporting in Hyperinflationary Economies, even though TurkStats and ENAG's last three years cumulative inflation rates exceed 100%. According to IAS 29, one of the characteristics of the economic environment of a country which indicate the existence of hyperinflation is the cumulative inflation rate over three years approaches, or exceeds, 100%. And also, Turkey has been included in the list of the inflationary countries in the world.



The second part of the discussion will treat the TL transactions in accordance with IAS 21-Temporal Method as if the company is reporting its USD numbers to its parent company for consolidation in United States of America (USA) considering the 40% devaluation in 2022.

The third part of the discussion will treat the TL transactions in accordance with IAS 29 and use the TurkStat`s annual inflation rate of 64.27% for 2022 and the fourth part will present the numbers in accordance with IAS 29 but this time applying the ENAG`s annual inflation rate of 137.55%. In both scenarios the restated TL figures will be converted to USD considering the 40% devaluation in 2022 and the company is reporting its numbers to its US parent for consolidation.

Finally in Discussion part 5 we will compare the outcomes of various accounting technics and present the changes in shareholders` equity numbers because of different accounting treatments. All numbers will be presented in USD to allow the apple-to-apple comparison with realistic inflation and devaluation rates.

### Discussion part 1

Our first presentation is a local company`s balance sheet. In this presentation a local company runs through the TL transactions explained above-in the introduction part and presents the following balance sheet as of December 31, 2022:

Current assets	89,410	Current liabilities	24,493
Office equipment	50,000	Paid up capital	100,000
Accumulated depreciation	-4,167	Net income/(loss)	10,750
Office equipment-net	45,833	Total shareholders` equity	110,750
Total assets	135,243	Total liabilities and shareholders` equity	135,243

\*All figures have been converted to USD at December 31, 2022 currency rate. 1\$=1TL

This balance sheet represents that the local company ended up with a positive profit after paying its local income tax (25%). The company started business with paid up capital of TL100,000. It paid income taxes of TL3,583. According to above balance sheet the company`s shareholders` equity is \$110,750 as it has not been affected by the devaluation per local reporting rules. No deferred tax has been calculated since there were no temporary differences between local and adjusted figures.

### Discussion part 2

In this part, the company will report based on IAS 21 rules and present the following balance sheet:

Current assets	64,403	Current liabilities	19,979
Office equipment	45,966	Paid up capital	97,235
Accumulated depreciation	-3,831	Net income/(loss)	-10,675

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Office equipment-net	42,136	Total shareholders` equity	86,560
Total assets	<u>106,539</u>	Total liabilities and shareholders` equity	<u>106,539</u>
* All transactions have been converted to USD at the date of the transaction and foreign exchange gains and losses have been calculated on December 31, 2022 exchange rate.			

In the above IAS 21 based balance sheet all transactions have been converted to USD at the time of the transaction and monetary losses have been calculated on monetary items at closing rates. According to the above table the company (subsidiary) lost its capital/shareholders` equity. It started business on January 31, 2022, with an equivalent of \$97,235 paid up capital and closed the year with \$86,560. A loss of \$10,675 (nearly 11% of the paid-up capital in \$ terms). The composition of the loss is as follows (all figures USD):

Net income before any tax calculation:	-5,632
Local income tax:	-2,560
Deferred tax due to temporary differences:	-2,484
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Total loss:	-10,675

The \$5,632 loss is due to TL`s depreciation against the USD throughout the year. The \$2,560 loss is due to the company`s paying local tax (25%) out of its income before tax since it is subject to and profitable in accordance with the local tax laws. Deferred tax should be calculated and deducted from income due to temporary differences between local TL (converted USD) and IAS 21 non-monetary assets and liabilities. It is not paid to the government but is deemed to be calculated and deducted from the income due to taxable temporary differences according to IAS 12 Income Taxes. Its rate is the same as local income tax of 25%.

### Discussion part 3

In this part, the company will report based on IAS 29 rules applying TurkStat`s 2022 CPI index (64.27%) and present the following balance sheet:

Current assets	64,701	Current liabilities	21,395
Office equipment	51,819	Paid up capital	112,576
Accumulated depreciation	-4,318	Net income/(loss)	-21,769
Office equipment-net	47,501	Total shareholders` equity	90,807
Total assets	<u>112,202</u>	Total liabilities and shareholders` equity	<u>112,202</u>
* All non-monetary transactions have been restated to the year-end purchasing power based on Consumer Price Index (CPI) from the date of transaction and monetary gains and losses have been calculated as of December 31, 2022, then all year end stated/restated local currency, figures have been converted to USD on December 31, 2022 closing rate.			

In the table above all figures are carried to year and at purchasing power of TL as of December 31, 2022, and converted to USD at the closing rate to compare with other balance sheet tables. Here, in this balance sheet company starts with a paid-up capital of \$112,576 but



ends up with a loss of \$21,769 (a 19.3% loss of its paid-up capital). The composition of the loss is as follows (all figures USD):

Net income before any tax calculation:	-15,309
Local income tax:	-2,559
Deferred tax due to temporary differences:	-3,901
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Total loss:	-21,769

Net income is negative due to TL's inflation-losing purchasing power throughout the year. I.e., paid-up capital is TL100,000 in local currency terms but its year end purchasing power adjusted value should be TL157,616 (Dec. 31 index/Jan. 31 Index), thus creating a TL57,616 restatement loss (an equivalent of \$41K in 40% appreciated year end USD terms). There are restatement gains included in the income statement, however, paid-up capital is creating a big chunk of the loss. Local income tax is paid to the government since the company keeps its records in accordance with local tax laws and being profitable accordingly. Deferred tax is calculated per IAS 12 basis due to having temporary differences as explained in discussion part 2.

#### Discussion part 4

In this part, the company will report based on IAS 29 rules, but this time applying ENAG's 2022 CPI index (137.55%) and present the following balance sheet:

Current assets	65,532	Current liabilities	25,388
Office equipment	68,332	Paid up capital	157,863
Accumulated depreciation	-5,694	Net income/(loss)	-55,080
Office equipment-net	62,638	Total shareholders` equity	102,783
Total assets	128,170	Total liabilities and shareholders` equity	128,170
* All non-monetary transactions have been restated to the year-end purchasing power based on Consumer Price Index (CPI) from the date of transaction and monetary gains and losses have been calculated as of December 31, 2022, then all year end stated/restated local currency figures have been converted to USD on December 31, 2022 closing rate.			

In the table above all figures are carried to year and at purchasing power of TL as of December 31, 2022, and converted to USD at the closing rate to compare with other balance sheet tables. Here, in this balance sheet company starts with a paid-up capital of \$157,863 but ends up with a loss of \$55,080 (a 34.5% loss of its paid-up capital). The composition of the loss is as follows (all figures USD):

Net income before any tax calculation:	-44,628
Local income tax:	-2,560
Deferred tax due to temporary differences:	-7,892
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Total loss:	-55,080

Net income is negative due to TL's inflation-losing purchasing power throughout the year. I.e., paid-up capital is TL100,000 in local currency terms but its year end purchasing power adjusted value should be TL221,022 (Dec. 31 index/Jan. 31 Index), thus creating a TL121,022 restatement loss (an equivalent of \$87K in 40% appreciated year end USD terms). There are restatement gains included in the income statement, however, paid-up capital is creating a big chunk of the loss as was explained in the previous part. Local income tax is paid to the government since the company keeps its records in accordance with local tax laws and being profitable accordingly. Deferred tax is calculated per IAS 12 basis due to having temporary differences as explained in discussion part 2 and 3. The notable distinction between discussion part 3 and 4 is that: As the inflation rate increases the rate of loss as a percentage of paid-up capital increases. This is an expected result due to the detrimental effect of inflation on financials on profitable companies where assets are greater than liabilities. The more inflation the greater the losses on paid-up capital and earnings.

#### Discussion part 5, the comparison

Table 6: Comparison of Discussion Parts (USD)	Shareholders` Equity	Profit/(Loss)	Total Assets	Profit/(Loss) as a % of Shareholders` Equity	Profit/(Loss) as a % of Total Assets
Discussion part 1-Nominal TL converted to USD	110,750	10,750	135,243	9.71	7.95
Discussion part 2-IAS 21 application	86,560	-10,675	106,539	-12.33	-10.02
Discussion part 3-IAS 29 application-TurkStat	90,806	-21,770	112,201	-23.97	-19.40
Discussion part 4-IAS 29 application-ENAG	102,783	-55,080	128,170	-53.59	-42.97

Table 6 compares the results of the discussion parts 1 through 4. Shareholders` equity keeps shrinking in all discussion parts except 1. It is because the first discussion part does not consider any devaluation, nor any inflation effects in the economy. In other words, the government, knowing this situation did not allow the application of "inflation accounting" rules to collect its taxes. In general, had they applied inflation accounting rules (as our model purports) none of the profitable companies whose assets are greater than their liabilities would have paid income/corporate taxes for 2022.

Discussion part 2 has the minimum loss as compared the remaining two IAS 29 examples. This is due to TL depreciating the highest 40% against the \$ (32.1% against the Euro) which is still lower than the rate of inflation. Therefore, all other things being equal, those





Turkish subsidiaries who are reporting their financials based on IAS 21 to their parents are the luckiest ones since they would report the lowest loss figure.

Discussion part 3 has the second highest loss percentage per shareholders` equity and total assets within the four discussion parts or it has the lowest loss figure of the two IAS 29 applications. The reason is that TurkStat`s inflation is lower than ENAG`s. Even though its credibility is zero in the public eye, this is the rate used in many official agreements including rental rate increases, retirement pension adjustments. Those subsidiaries who are reporting based on IAS 29 to their parents will probably use this (64.27%) inflation rate for their adjustments and divide the adjusted (and unadjusted) yearend figures with the closing \$ rate which has appreciated only 40% against the TL. Had the \$ appreciated more against the TL then their USD converted TL loss figures would have been lower but still it would not have changed our conclusions.

In intercompany accounts between the parent and the subsidiary in a hyperinflationary country may create a problem. The inflation rate in a hyperinflationary economy and the deterioration of the FX rate are often not correlated. This can produce distortions in the consolidated accounts for a sustained period. In the consolidated financial statements eliminations are made such as:

- intercompany items such as unrealized profits on inventory are deducted from the local inventory to calculate the consolidated inventory value;
- share capital/equity is eliminated against the investment of the holding company;
- however, these items are revalued locally in line with IAS 29. Such inflation adjustments should be zero in the consolidated accounts if inflation and devaluation go hand in hand. To the extent that this is not the case, the consolidated accounts show movements in the income statement which IAS 29 intended to eliminate based on the capital maintenance concept.

Discussion part 4 has the highest loss figure both in terms of numerical losses and loss percentages. It is due to the higher percentage (more than double) than the TurkStat`s inflation rate (137.55%). ENAG`s inflation rate alone for 2022 is good enough indicator for inflation adjustment per IAS 29, also TurkStat`s last three years` cumulative inflation (156.18%) would trigger the inflation adjustment but Turkish government did not allow any of these treatments, even though inflation adjustment was part of the Turkish Law # 5024 Changing the Procedural Tax Law, item 2, changes the item 298 of the Procedural Tax Law # 213 saying that: If the latest year`s inflation rate is more than 10% and cumulative inflation of the last three years is more than 100% then the financial statements must be restated. Here, in this law the adjustment must be done on the basis of TurkStat`s Wholesale Price Index (WPI). So far in our explanations we have always used CPI. In fact, WPI ran well above the CPI in the last three years in the analysis. Even though the related law enforces it, the government (having legislative majority in the parliament) changed the law and postponed the inflation adjustments till the end of 2023.

## 5. CONCLUSIONS

We have explained four different accounting treatments with their reasons. In the light of the above four different accounting treatments which one reflects reality most? Either be it a local company or a subsidiary, the rational way is the one discussed in part 4-the ENAG's inflation rate is the answer. It is the rate that is most reliable in the public's eye and dividing restated figures with closing USD rate on December 31, 2022, which has appreciated 40% against the Turkish TL since January 1, 2022. This is the reality. Had we applied the law in full then even these figures and losses would have reflected less than the truth. The true figures (losses) would have been higher since WPI rates were higher. Turkish government, wanting to collect tax revenues, did not allow the law to take its effect on the financial statements. Because companies with losses do not pay corporate/income taxes and can carry over tax losses five years forward. Despite the irregularities on the legal platforms, Turkey must go back to "inflation accounting" application at once to lead the financial statements to reflect the true financial position of the companies and transparency.

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