



Bankruptcy Forecasting Models as a Tool of ISA 520 “Analytical Procedures” -Application of the ZMIJEWSKI Model to the El-Aurassi Hotel Chain during the period 2018 - 2023 -

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Abstract: This study aims to determine the role of the Zmijewski bankruptcy forecasting model, which is considered as one of the tools of the International Standards on Auditing ISA520, because it is a mathematical equation that includes a set of financial ratios, which is a tool of analytical procedures, so that by dropping our study on the El-Aurassi Hotel Chain, which is one of the companies listed on the Algiers Stock Exchange, and therefore its financial statements are characterized by reliability and accuracy. Our study concluded that the Zmijewski model is an effective tool that facilitates the work of the external auditor in predicting bankruptcy, and the study also concluded that the El-Aurassi Hotel Chain is not exposed to bankruptcy during the years of our study (2018-2023).

Key words: ISA 520, Bankruptcy, Forecasting, ZMIJEWSKI, El-Aurassi.

Jel Classification Codes : C53, G33, M42.

Introduction:

The continuity of company's operation is one of the most significant aims that every company's management seeks to achieve, by focusing on all parts that go into the company's activity, whether internally or externally.

However, given the current business environment, which has become very complex and requires highly competent managers, because the company is affected by internal and external factors that may affect its operations and lead it to the stage of bankruptcy.

To ensure that the company's operations remain viable, the external audit function is one of the mechanisms that contribute to the early prediction of bankruptcy, through its reliance on the International Standards on Auditing (ISA), so that ISA520 is among the standards relied upon in forecasting bankruptcy, because it uses several tools, including financial ratios, so that the external auditor uses them within specialized models in forecasting bankruptcy.

The Zmijewski model is one of the most important models that the external auditor relies on for early forecasting of bankruptcy, because it is a mathematical relationship that includes a set of financial ratios.

In this study, we applied the Zmijewski model, one of the most important tools of ISA520, to the El-Aurassi Hotel Chain during the time period (2018-2023), as a listed company on the Algiers Stock Exchange.

In order to cover all the variables of the study, we bring up the following problematic:

What is the role of the Zmijewski model, which is considered as an ISA520 tool, in forecasting bankruptcy at the level of the El-Aurassi Hotel Chain?

In order to answer the research question, we propose the following hypotheses:

- **The first hypothesis:** The Zmijewski model is an ineffective ISA520 tool for forecasting bankruptcy in the El-Aurassi Hotel Chain;

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- **The second hypothesis:** The Zmijewski model is an effective ISA520 tool for forecasting bankruptcy in the El-Aurassi Hotel Chain.

The ultimate objective of this study is to determine the extent to which the Zmijewski model, which is one of the tools of ISA 520 ‘Analytical Procedures’, contributes to the early forecasting of bankruptcy in the El-Aurassi Hotel Chain.

To evaluate the theoretical ideas and interpret the results, we employed a deductive and an inductive approach, respectively.

1. Literature review

1.1 Bankruptcy

1.1.1 The concept of bankruptcy

The origin of the term “ Bankruptcy “ dates to middle ages Italy. The term is derived from the term “Banca Rotta”, which means “Broken Bench”. The destruction of the bench was an Italian tradition, linked to the degradation of the store of an unpaid merchant. In France, we also find the genealogy of the word “Bankruptcy”, it designates a debtor who constantly turns away from his lenders while escaping legal proceedings (Pasternak-Malicka et al., 2021).

Bankruptcy refers to a financial situation where a company or individual is not able to meet their current or future debts to creditors (Satyanarayana Puchakayala & Veluchamy, 2023).

1.1.2 Factors causing bankruptcy

The causative factors are (Sriwiyanti et al., 2024):

- Limited quality and quantity of personnel;
- Product realization does not meet customer expectations;
- Unfeasible budget and sale price;
- The company is failing to stay up with technological and ecological advances;
- Marketing action fails to reach target audience;
- The industry fails to adjust to the socio-cultural conditions in which it operates, leading to bankruptcy;
- Products are not reaching the intended market due to poor distribution;
- The company finds itself in a difficult financial situation due to macroeconomic factors like fiscal policy, inflation and monetary policy;
- The rules applied in the places where the company operates may cause financial difficulties for it.

1.2 Analytical procedures (ISA 520)

1.2.1 The concept of analytical procedures

Analytical procedures have been defined by many professional organizations, with the “AICPA” defining them as “ the examination of financial data performed through the analysis of financial and nonfinancial information” (Razzak Alshehadeh & Atieh, 2020), the “IAASB” defined it as “ Analyses financial information by examining possible connections between financial and non-financial information” (Kritzinger & Barac, 2017).

1.2.2 Justifications for employing analytical procedures

The justifications for employ are as follows (Matrood et al., 2019):

- To determine whether the company is able to continue operations;

- In order to capture the client’s type of activity and determine potential risk areas;
- In order to reduce extensive testing;
- Identify possible errors or distortions in financial reports;
- In order to reduce the cost associated with carrying out an audit .

1.2.3 Importance of analytical procedures

Its importance lies in the following points:

- The analytical procedure is an assessment technique used to find and ascertain the reason behind unforeseen changes in financial ratios and account balances (Almeida & Imoniana, 2023) ;
- The analytical procedure contrast the auditors’ forecasts regarding the customer’s financial statements statistics and associated financial ratios with concrete results (Abdullatif et al., 2021).

1.2.4 Categories of use of analytical procedures

It is as follows (Al-Hajaia, 2022):

- **Analysis and judgment method:** this technique is based on the verification or comparison of two aspects, such as comparing the commercial revenues of this year with those of the year prior;
- **Basic quantitative method:** relies on plausibility tests and incorporates non-financial information to determine the balance sheet of the account. For example, salary expenses can be estimated by multiplying the workforce’s size by the working hours and the mean pay rate. In addition, sales and accounts receivable turnover rates are used to estimate salary expenses;
- **Advanced quantitative techniques:** anticipatory techniques such as time series and regression are utilized, mathematical procedures guaranteeing optimal anticipation of existing information.

1.2.5 Types of analytical procedures

The types are as follows (Phuong, 2023):

- **Financial ratios:** employs ratios to examine the relationship between two or more changes in the components of financial statements. Ratios are often chosen that remain constant over time or have minimal difference between different companies. Common groups of ratios include profitability, solvency, efficiency, liquidity and others. The study of ratios has helped the customer to better understand the company’s situation and assess its overall financial position and profitability. This gives the auditor the ability to quickly determine significant changes to the customer’s financial and company attributes. For this reason, the examination of ratios is frequently used as a method of analysis;
- **Trend analysis:** analyzing the pattern of changes in data over time helps identify unusual patterns. In this case, the auditor is able to assess the current period by observing the movement of an item or the amount of an account between different previous accounting periods;
- **Examining reasonableness:** this approach allows identifying unusual differences and determining only their source, where the auditor is able to design an estimation model that takes into account all the important variables affecting the analysis. However, the information must be considered for its autonomy and reliability.

2. Methods

2.1 The study sample

The study sample is the “El- Aurassi Hotel Chain” , it is five-star hotel was inaugurated and put into service on May 2, 1975, it is a “joint stock company” with a capital of 1.500.000.000 DA, 80% owned by the State and 20% by institutions and small shareholders, this hotel chain includes four units (Chaine el-aurassi, 2022).

The reason we chose this hotel chain, because it is listed on the Algerian Stock Exchange and discloses its financial statements annually, which makes our study based on more accurate information.

2.2 Model of study

In the academic literature, the forecasting of company bankruptcy is a long-standing topic. In 1966, “ Beaver “ first introduced the study of financial ratios in his calculation of bankruptcy forecasts (Zhao et al., 2024) , thus, the analysis and determination of bankruptcy dangers are crucial for leaders in the decision-making process aimed at optimizing the financial profitability of the company (Agustina & Hilaludin, 2024), and to set up a number of essential procedures to eliminate the diminution of the financial assets (Heidary et al., 2024).

There are many models that aim to forecast the bankruptcy, so in this study we selected one of these models, which is the “Zmijewski model” , which is considered the most reliable model in terms of results.

Mark E. Zmijewski developed this analysis model, also called (X- Score) in 1983, using the “ probit technique “ , or according to specialists the probability method. This model is based on the examination of ratios that evaluate the performance, leverage and liquidity of a company. Return on assets (ROA), debt ratio and current ratio are among the variables used in the Zmijewski model equation (X-Score) (Anwar & Utami, 2022).

For the purpose of its prediction model, this model measures a company's liquidity, performance and leverage using ratio analysis. At the time, Zmijewski utilized probability estimation to 800 surviving companies and 40 companies that failed (Gunanto, 2023).

The Zmijewski model's formula is as follows (Yendrawati & Adiwafi, 2020):

$$X = - 4.3 - 4.5 X1 + 5.7 X2 - 0.004 X3$$

Where:

$$X1 = ROA$$

$$X2 = Debt Ratio$$

$$X3 = Current Ratio$$

So the process of calculating x1, x2 and x3 is as follows (Simatupang et al., 2024):

$X1 = \text{Net Income} / \text{Total Assets}$; $X2 = \text{Total Debt} / \text{Total Assets}$; $X3 = \text{Current Assets} / \text{Current Liabilities}$.

Before interpreting the X-Score values, the financial ratios X1, X2 and X3 must be explained:

- **ROA:** The return on operating income from investments in operating capital expenditures is measured by the Return on Assets (ROA) (De Luca, 2023), It provides the shareholder of the company with a clear picture of how successfully the assets produce profits, or, to put it another way, how quickly a product turns into cash and when the company may reinvest the money. Over 5% is regarded as an excellent return on assets(Okunev, 2022);
- **Debt Ratio:** The debt ratio, which calculates a company's total obligations as a percentage of its total assets, is a measure of solvency. In a way, the debt ratio illustrates how well a company can use its assets to settle its debts. Put otherwise, this illustrates the number of assets that must be sold by the company in order to cover all of its debts.

This aids creditors and investors in assessing the company's total debt load and its capacity to settle debt in unpredictable future economic periods(Lessambo, 2022). Since interest on debt must be paid regardless of a company's profitability, a ratio of 0.4 or less is regarded as preferable. Therefore, if the ratio is greater than 0.6, the company might find it difficult to borrow funds(Okunev, 2022);

- **Current Ratio:** Evaluates the company's capacity to settle its immediate debt(Chang, 2023). A company that has a current ratio below one might not have enough cash on hand to cover its short-term debts. In general, a company is performing well if its current ratio is higher than 1.5 (Okunev, 2022).

The results of the Zmijewski model are interpreted as follows:

The company is in good health or not bankrupt if the X-score is negative or less than zero ($X\text{-Score} < 0$). In contrast, it is unhealthy or has a tendency to cause bankruptcy if the X-score is positive or more than 0 ($X\text{-Score} > 0$) (Pandoyo et al., 2022).

3. Result and Discussion

In order to calculate X-SCORE, a set of steps must be followed, which we will detail in detail.

3.1 Extracting the components of financial ratios from financial statements

3.1.1 Net Income

The following table shows the values of Net Income:

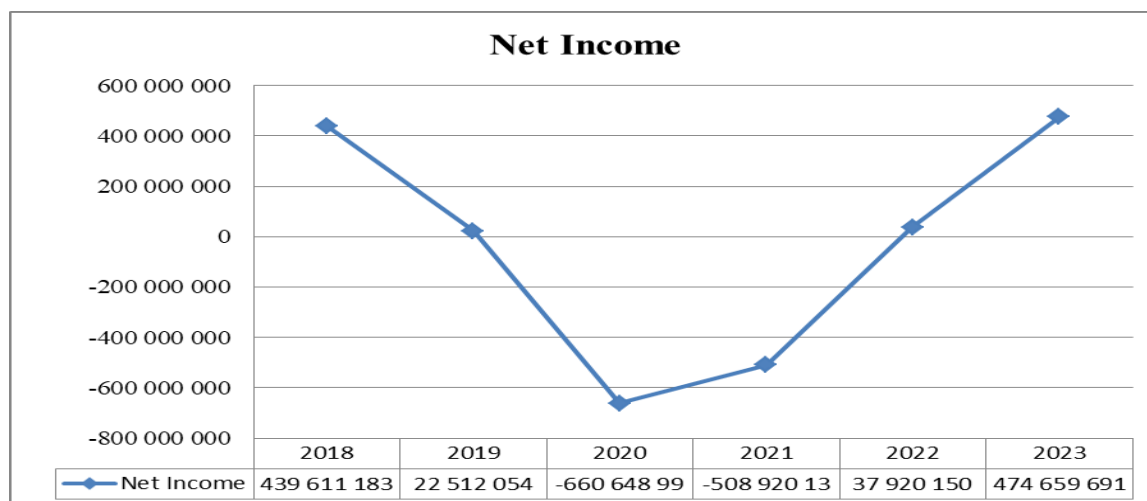
Table 1. Values of Net Income

Years	2018	2019	2020	2021	2022	2023
Net Income	439 611 183	22 512 054	-660 648 992	-508 920 133	37 920 150	474 659 691

Source : Prepared by the researcher based on the financial statements of the company

In order to illustrate the evolution of Net Income values, the following figure shows its evolution:

Fig.1. Evolution of Net Income



Source: Prepared by the researcher

Through Table 1 and Figure 1, we notice a decrease in the value of net income in 2019 due to the political conditions of Algeria during that year, and we noticed a further decrease in value during 2020 due to the quarantine applied due to the coronavirus pandemic, then we noticed an increase from 2021 to 2023 due to the reduction of quarantine measures and the improvement of the political situation in Algeria.

3.1.2 Total Assets

The values of Total Assets are displayed in the table below:

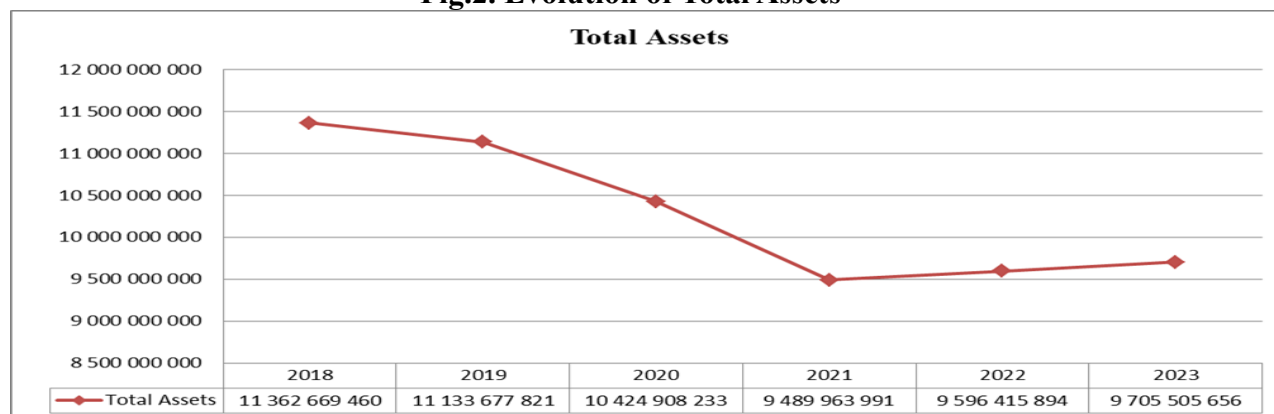
Table 2. Values of Total Assets

Years	2018	2019	2020	2021	2022	2023
Total Assets	11 362 669 460	11 133 677 821	10 424 908 233	9 489 963 991	9 596 415 894	9 705 505 656

Source: Prepared by the researcher according to the financial statements of the company

In order to illustrate the evolution of Total Assets values, the following figure shows its evolution:

Fig.2. Evolution of Total Assets



Source: Prepared by the researcher

Through Table 2 and Figure 2, we notice that the values of Total Assets decreased from 2019 to 2021 due to the political conditions and the Corona pandemic that affected Algeria, and then we noticed an increase in the values of Total Assets from 2022 to 2023 due to the reduction of quarantine measures and the improvement of the political situation in Algeria.

3.1.3 Total Debt

The following table shows the values of Net Debt:

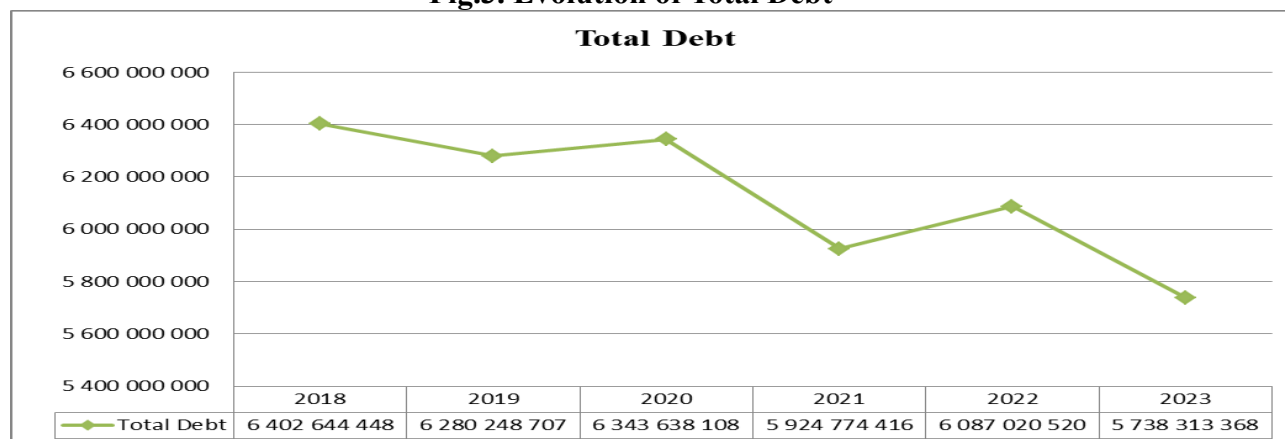
Table 3. Values of Total Debt

Years	2018	2019	2020	2021	2022	2023
Total Debt	6 402 644 448	6 280 248 707	6 343 638 108	5 924 774 416	6 087 020 520	5 738 313 368

Source: Prepared by the researcher based on the financial statements of the company

In order to simplify the evolution of Total Debt values, the following figure shows its evolution from 2018 to 2023:

Fig.3. Evolution of Total Debt



Source: Prepared by the researcher

Through Table 3 and Figure 3, we observe a continuous decrease in the Total Debt despite the difficult circumstances faced by the El-Aurassi Hotel Chain, especially during the COVID-19 pandemic, due to the financial subsidies provided by the Algerian state.

3.1.4 Current Assets

The following table shows the values of Current Assets:

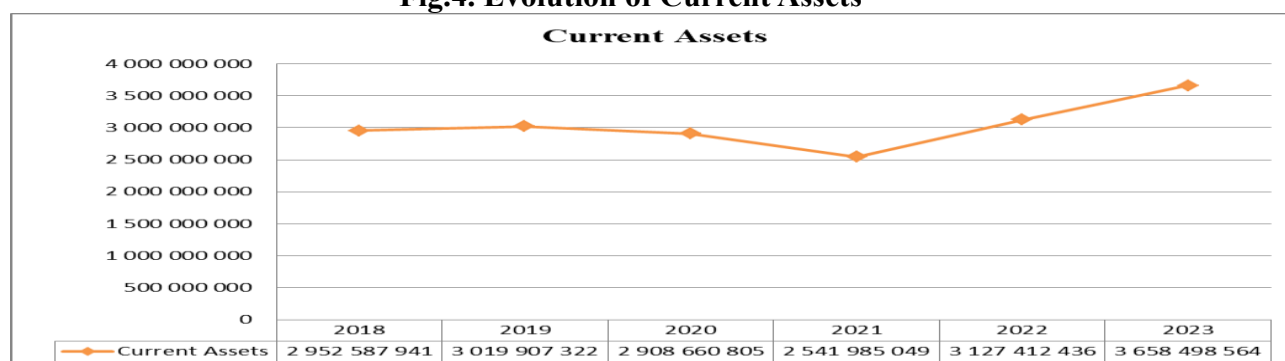
Table 4. Values of Current Assets

Years	2018	2019	2020	2021	2022	2023
Current Assets	2 952 587 941	3 019 907 322	2 908 660 805	2 541 985 049	3 127 412 436	3 658 498 564

Source: Prepared by the researcher according to the financial statements of the company

To make it easier to understand, the following figure illustrates how Current Assets values changed between 2018 and 2023:

Fig.4. Evolution of Current Assets



Source: Prepared by the researcher

Through Table 4 and Figure 4, we observe almost constant stability in current asset values from 2018 to 2023, except for a slight decrease during 2021 due to the coronavirus pandemic.

3.4.5 Current Liabilities

The following table shows the values of Current Liabilities:

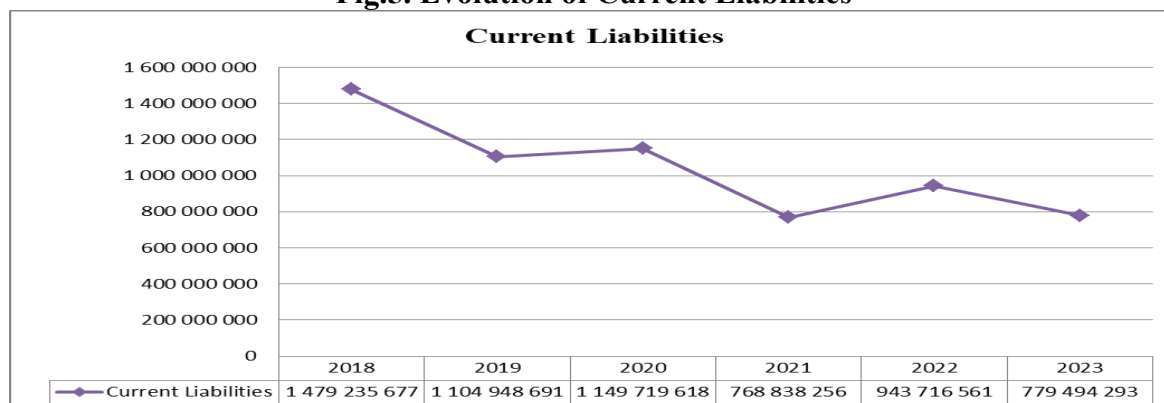
Table 5. Values of Current Liabilities

Years	2018	2019	2020	2021	2022	2023
Current Liabilities	1 479 235 677	1 104 948 691	1 149 719 618	768 838 256	943 716 561	779 494 293

Source: Prepared by the researcher based on the financial statements of the company

In order to illustrate the evolution of Current Liabilities values, the following figure shows its evolution:

Fig.5. Evolution of Current Liabilities



Source: Prepared by the researcher

Through Table 5 and Figure 5, we observe a continuous decrease in Current Liabilities, due to the El-Aurassi Hotel Chain’s reliance on medium and long term loans.

3.2 Calculate financial ratios

3.2.1 Calculate the ROA (X1)

The following table displays the Return On Assets (ROA) values:

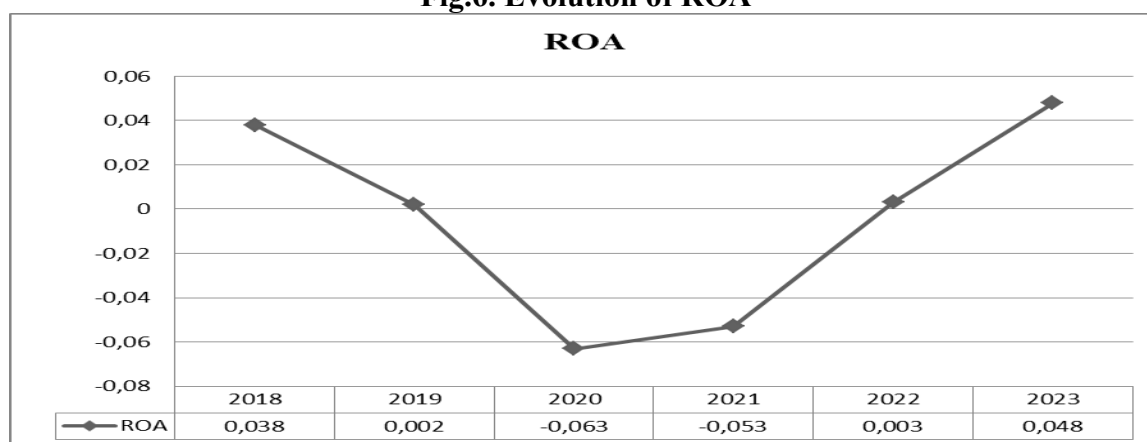
Table 6. Values of ROA

Years	2018	2019	2020	2021	2022	2023
ROA	0.038	0.002	- 0.063	- 0.053	0.003	0.048

Source: Prepared by the researcher based on the tables No 1 & 2

In order to illustrate the evolution of ROA values, the following figure shows its evolution:

Fig.6. Evolution of ROA



Source: Prepared by the researcher

Figure 6 and table 6 show that all Return On Assets ratios are below 5%, which is below the permitted rate of 5%. As a result, it is challenging to generate profits from the assets.

3.2.2 Calculate the Debt Ratio (X2)

The Debt Ratio values are shown in the following table:

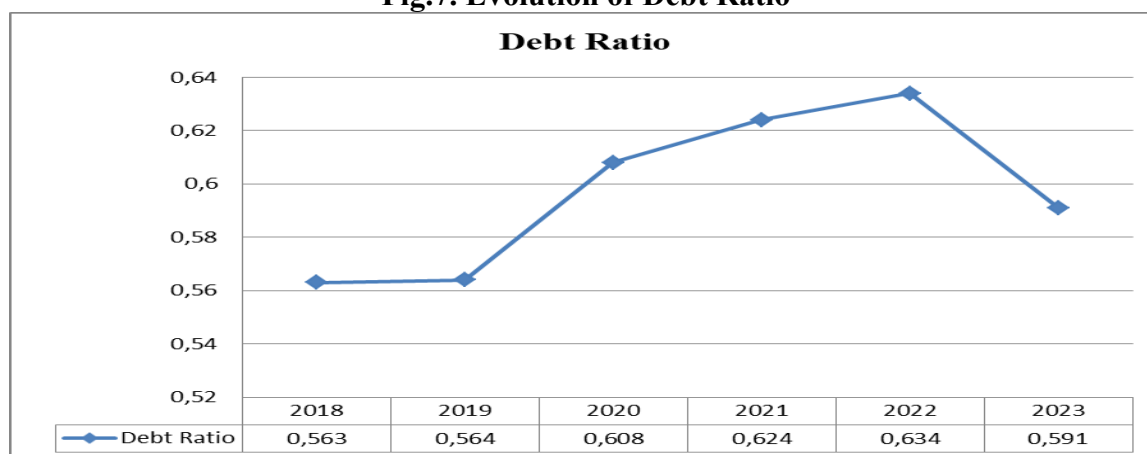
Table 7. Values of Debt Ratio

Years	2018	2019	2020	2021	2022	2023
Debt Ratio	0.563	0.564	0.608	0.624	0.634	0.591

Source: Prepared by the researcher according to the tables No 2 & 3

To demonstrate how debt ratio numbers have changed from 2018 to 2023 , the following figure depicts that evolution:

Fig.7. Evolution of Debt Ratio



Source: Prepared by the researcher

Through Table 7 and Figure 7, we can see that the debt ratios from 2018 to 2023 are more than the recommended 0.4, which means that El-Aurassi Hotel Chain is having difficulty obtaining loans.

3.2.3 Calculate the Current Ratio (X3)

The Current Ratio values are shown in the following table:

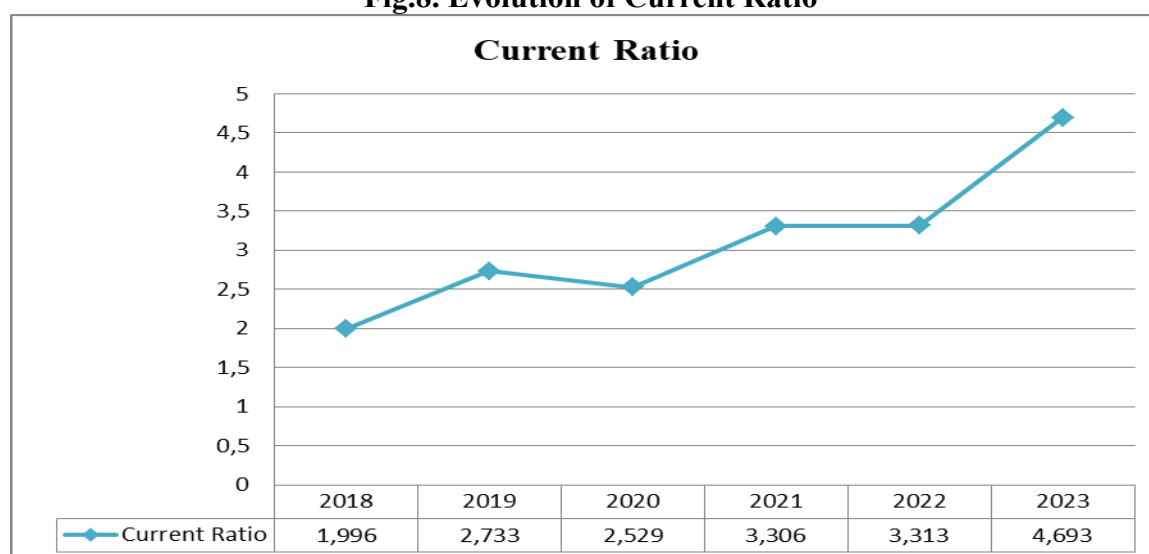
Table 8. Values of Current Ratio

Years	2018	2019	2020	2021	2022	2023
Current Ratio	1.996	2.733	2.529	3.306	3.313	4.693

Source: Prepared by the researcher based on the tables No 4 & 5

In order to illustrate the evolution of Current Ratio values, the following figure shows its evolution:

Fig.8. Evolution of Current Ratio



Source: Prepared by the researcher

From Table 8 and Figure 8, we can see that the current ratios from 2018 to 2023 are more than the recommended 1.5, it indicates that El-Aurassi Hotel Chain has sufficient cash on reserve to pay down its immediate debts.

3.3 Calculate the values of X-Score

The following table shows the values of X-Score:

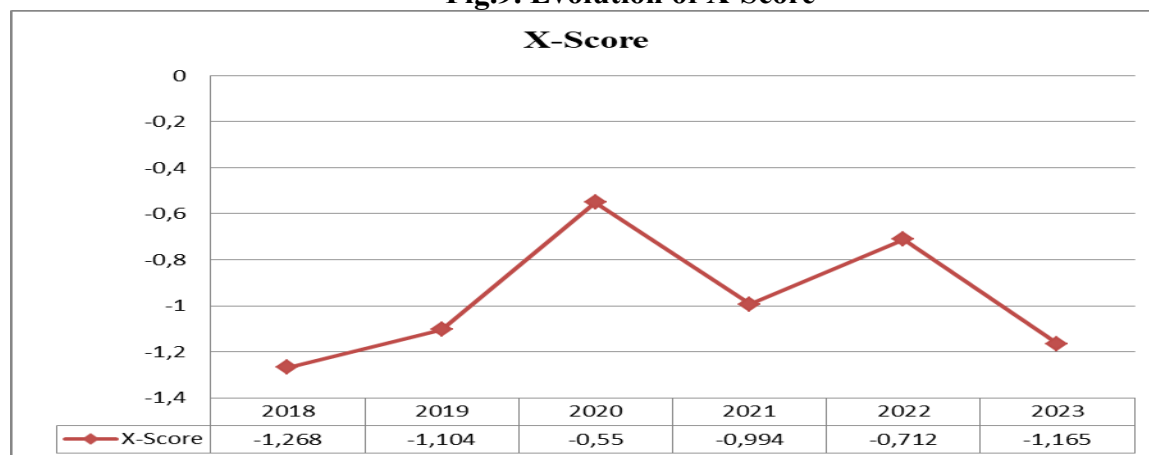
Table 9. Values of X-Score

Years	2018	2019	2020	2021	2022	2023
X-Score	-1.268	-1,104	-0.550	-0.994	-0.712	-1.165

Source: Calculated by the Author based on the tables No 6, 7 & 8

In order to illustrate the evolution of X-Score values, the following figure shows its evolution:

Fig.9. Evolution of X-Score



Source: Prepared by the researcher

From Table 9 and Figure 9, we can see that all X-Score values are negative, which means that according to Zmijewski's model, the El-Aurassi Hotel Chain is not at risk of bankruptcy.

Conclusion

Through the concepts and findings, we came to the following conclusions:

- The International Standard on Auditing ISA520 ‘*Analytical Procedures*’ is an important tool that assists the external auditor in optimizing their work outputs;
- ISA 520 relies on financial ratios to analyze and interpret the results of the financial statements;
- Financial ratios are used in many bankruptcy forecasting models, including the Zmijewski model, which makes it easier for the external auditor to predict in advance the occurrence of bankruptcy, in order to inform the parties that hired him of the true state of the company;
- We reject the first hypothesis and confirm the second hypothesis;
- By applying Zmijewski's model to the El-Aurassi Hotel Chain, we observe that this chain is not at risk of bankruptcy, as all X-score values are negative.

Therefore, some suggestions can be made:

- Increased focus by external auditors on the use of bankruptcy forecasting models, as these models rely on financial ratios, which is one of the analytical procedures tools set out in ISA520;
- It is recommended that the external auditors of the El-Aurassi Hotel Chain apply the Zmijewski model, as it provides very reliable results that enhance the quality of their report.

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Appendices:

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ETATS FINANCIERS DE LA CHAINE EL AURASSI AU 31/12/2023

BILAN ACTIF CUMULE

Du 01 JANVIER 2023 Au 31 DÉCEMBRE 2023

ACTIF	Note	Montants Bruts	N	Net	N-1
			Amortissements, provisions et pertes de valeurs		Net
ACTIFS NON COURANTS					
Ecart d'acquisition - goodwill positif ou négatif		0,00		0,00	0,00
Immobilisations incorporelles	01	78 584 128,90	72 883 671,66	5 680 457,24	4 844 446,38
Immobilisations corporelles	02	15 181 585 934,98	9 339 124 581,60	5 842 441 353,38	6 281 830 569,25
Terrains		544 678 397,50		544 678 397,50	544 678 397,50
Bâtiments		8 211 305 150,46	4 021 251 231,84	4 190 053 918,62	4 399 337 584,28
Autres immobilisations corporelles		6 425 582 387,00	5 317 873 349,76	1 107 709 037,24	1 317 814 577,47
Immobilisations en concession		984 059,95		984 059,95	984 059,95
Immobilisations en cours	04	57 005 484,46		57 005 484,46	57 005 484,46
Equipements neufs en stocks		0,00		0,00	0,00
Immobilisations financières	03	172 791 882,98	145 876 681,19	26 815 181,79	32 312 880,15
Titres mis en équivalence		0,00		0,00	0,00
Autres participations et créances rattachées		22 625 000,00	750 000,00	21 875 000,00	21 950 000,00
Autres titres immobilisés		0,00		0,00	0,00
Prêts et autres actifs financiers non courants		150 188 882,98	145 228 681,19	4 940 181,79	10 382 880,15
Impôts différés actif		114 070 555,19		114 070 555,19	112 226 018,26
TOTAL ACTIF NON COURANT		15 605 002 028,44	9 557 984 934,45	6 047 007 091,99	6 469 003 458,43
ACTIFS COURANTS					
Stocks et encours	05	881 228 935,39	55 342 627,37	825 887 308,02	820 897 058,84
Créances et emplois assimilés	06	1 043 380 318,73	133 687 081,78	909 693 224,95	1 188 800 206,51
Clients		743 794 770,88	133 687 081,78	610 127 679,10	908 077 492,22
Autres débiteurs		148 835 114,02		148 635 114,02	125 802 440,64
Impôts et assimilés		152 930 431,83		152 930 431,83	154 820 273,65
Autres créances et emplois assimilés		0,00		0,00	0,00
Disponibilités et assimilés	07	1 929 870 454,18	8 952 423,43	1 922 918 030,75	1 117 715 172,47
Placements et autres actifs financiers courants		0,00		0,00	0,00
Trésorerie		1 929 870 454,18	8 952 423,43	1 922 918 030,75	1 117 715 172,47
TOTAL ACTIF COURANT		3 854 480 706,30	195 862 142,58	3 658 488 563,72	3 127 412 435,82
TOTAL GENERAL ACTIF		19 459 482 732,74	9 753 957 077,03	9 705 505 655,71	9 596 415 894,25

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ETATS FINANCIERS ARRETES AU 31 DECEMBRE 2023

BILAN PASSIF CUMULE

Du 01 JANVIER 2023 Au 31 DÉCEMBRE 2023

PASSIF	Note	N	N-1
CAPITAUX PROPRES			
Capital émis (ou comptes d'exploitation)		1 500 000 000,00	1 500 000 000,00
Capital non appelé			
Primes et réserves (Réserves consolidées (1))		2 858 802 821,01	2 858 802 821,01
Ecart de réévaluation			
Ecart d'équivalence (1)			
Résultat net - Résultat net part du groupe (1)		474 659 690,60	37 920 150,24
Autres capitaux propres - Report à nouveau		-886 070 023,58	-887 127 397,27
Part de la société consolidante (1)		3 987 192 288,03	3 509 395 373,98
Parts de minoritaires (1)			
TOTAL I	08	3 987 192 288,03	3 509 395 373,98
PASSIFS NON-COURANTS			
Emprunts et dettes financières		4 574 298 870,84	4 572 372 067,76
Impôts (différés et provisionnés)			
Autres dettes non courantes		984 059,95	984 059,95
Provisions et produits constatés d'avance		383 536 343,72	-569 947 831,21
Compte de liaison		0,00	-0,00
TOTAL II	09	4 958 819 074,51	5 143 303 956,92
PASSIFS COURANTS			
Fournisseurs et comptes rattachés		169 470 304,10	184 063 458,19
Impôts		157 229 745,22	182 086 422,39
Autres dettes		452 794 243,95	597 576 880,77
Trésorerie passif		0,00	0,00
TOTAL III	10	779 494 293,17	943 716 561,35
TOTAL PASSIF (I+ II + III)		9 705 505 655,71	9 596 415 894,25

(1) à utiliser uniquement pour la présentation d'états financiers consolidés

BILAN ACTIF CUMULÉ
DU 01 JANVIER 2021 AU 31 DÉCEMBRE 2021

ACTIF	Note	Montants Bruts	N		N-1
			Amortissements, provisions et pertes de valeurs	Net	Net
ACTIFS NON COURANTS					
Ecart d'acquisition – goodwill positif ou négatif		0,00		0,00	0,00
Immobilisations incorporelles	01	75 678 573,90	69 063 089,70	6 615 484,20	9 290 551,84
Immobilisations corporelles	02	15 129 374 319,81	8 382 978 355,14	6 746 395 964,67	7 311 122 777,60
Terrains		544 678 397,50		544 678 397,50	543 853 597,50
Bâtiments		8 197 636 233,20	3 577 113 182,77	4 620 523 050,43	4 862 345 959,66
Autres immobilisations corporelles		6 387 059 689,11	4 805 865 172,37	1 581 194 516,74	1 904 923 220,44
Immobilisations en concession		984 059,95		984 059,95	984 059,95
Immobilisations encours	04	57 005 484,46		57 005 484,46	57 830 284,46
Equipements neufs en stocks		0,00		0,00	0,00
Immobilisations financières	03	176 054 711,34	145 869 181,19	30 185 530,15	30 208 030,15
Titres mis en équivalence		0,00		0,00	0,00
Autres participations et créances rattachées		22 625 000,00	642 500,00	21 982 500,00	22 005 000,00
Autres titres immobilisés		0,00		0,00	0,00
Prêts et autres actifs financiers non courants		153 429 711,34	145 226 681,19	8 203 030,15	8 203 030,15
Impôts différés actif		106 792 418,97		106 792 418,97	106 811 724,04
TOTAL ACTIF NON COURANT		15 545 889 568,43	8 597 910 626,03	6 947 978 942,40	7 516 247 428,04
ACTIFS COURANTS					
Stocks et encours	05	895 432 201,95	66 439 148,01	828 993 053,94	843 707 391,53
Créances et emplois assimilés	06	941 423 819,39	123 276 457,52	818 147 361,87	1 264 887 418,76
Clients		587 846 392,61	123 276 457,52	464 569 935,09	379 354 564,85
Autres débiteurs		127 524 535,19		127 524 535,19	662 448 984,86
Impôts et assimilés		226 052 891,59		226 052 891,59	223 083 869,05
Autres créances et emplois assimilés		0,00		0,00	0,00
Disponibilités et assimilés	07	901 797 056,48	6 952 423,43	894 844 633,05	800 065 994,25
Placements et autres actifs financiers courants		0,00		0,00	0,00
Trésorerie		901 797 056,48	6 952 423,43	894 844 633,05	800 065 994,25
TOTAL ACTIF COURANT		2 738 653 077,82	196 668 028,96	2 541 985 048,86	2 908 660 804,54

BILAN PASSIF CUMULÉ
DU 01 JANVIER 2021 AU 31 DÉCEMBRE 2021

PASSIF	Note	N	N-1
CAPITAUX PROPRES			
Capital émis (ou comptes d'exploitation)		1 500 000 000,00	1 500 000 000,00
Capital non appelé			
Primes et réserves (Réserves consolidées (1))		2 858 602 621,01	2 858 602 621,01
Ecart de réévaluation		0,00	0,00
Ecart d'équivalence (1)			
Résultat net - Résultat net part du groupe (1)		-506 920 133,02	-660 648 992,29
Autres capitaux propres - Report à nouveau		-286 492 912,81	383 916 495,80
Part de la société consolidante (1)		3 565 189 575,18	4 081 270 124,52
Parts de minoritaires (1)			
TOTAL I	08	3 565 189 575,18	4 081 270 124,52
PASSIFS NON-COURANTS			
Emprunts et dettes financières		4 639 353 516,28	4 582 097 733,80
Impôts (différés et provisionnés)			
Autres dettes non courantes		984 059,95	984 059,95
Provisions et produits constatés d'avance		515 598 584,18	610 836 696,16
Compte de liaison		0,00	-0,00
TOTAL II	09	5 155 936 160,41	5 193 918 489,91
PASSIFS COURANTS			
Fournisseurs et comptes rattachés		196 785 847,50	128 309 381,89
Impôts		101 909 796,43	74 143 047,28
Autres dettes		470 142 611,74	947 267 188,98
Trésorerie passif		0,00	0,00
TOTAL III	10	768 838 255,67	1 149 719 618,15
TOTAL PASSIF (I+ II + III)		9 489 963 991,26	10 424 908 232,58

(1) à utiliser uniquement pour la présentation d'états financiers consolidés.

Du 01/01/2019 Au 31/12/2019

BILAN ACTIF

ACTIF	Note	Montants Bruts	N		N-1
			Amortissements, provisions et pertes de valeurs	Net	Net
ACTIFS NON COURANTS					
Ecart d'acquisition – goodwill positif ou négatif		0,00		0,00	0,00
Immobilisations incorporelles	01	70 893 194,47	61 502 410,90	9 390 783,57	10 494 047,34
Immobilisations corporelles	02	13 515 648 792,25	7 207 546 713,11	6 308 102 079,14	6 747 064 093,60
Terrains		543 853 597,50		543 853 597,50	543 853 597,50
Bâtiments		7 117 933 600,20	3 079 966 484,37	4 037 967 115,83	4 195 627 597,68
Autres immobilisations corporelles		5 853 861 594,55	4 127 580 228,74	1 726 281 365,81	2 007 582 898,42
Immobilisations en concession		984 059,95		984 059,95	984 059,95
Immobilisations encours	04	1 650 928 462,96		1 650 928 462,96	1 528 922 952,32
Equipements neufs en stocks		0,00		0,00	0,00
Immobilisations financières		173 894 861,34	145 776 681,19	28 118 180,15	12 459 096,10
Titres mis en équivalence		0,00		0,00	0,00
Autres participations et créances rattachées	03	22 625 000,00	550 000,00	22 075 000,00	7 348 700,00
Autres titres immobilisés		0,00		0,00	0,00
Prêts et autres actifs financiers non courants		151 269 861,34	145 226 681,19	6 043 180,15	5 110 396,10
Impôts différés actif		116 246 933,11		116 246 933,11	110 157 269,81
TOTAL ACTIF NON COURANT		15 528 596 304,08	7 414 825 805,20	8 113 770 498,88	8 410 081 519,12
ACTIFS COURANTS					
Stocks et encours	05	829 971 598,45	17 998 613,26	811 972 983,19	864 765 405,68
Créances et emplois assimilés	06	1 350 880 785,28	131 563 753,73	1 219 317 031,55	1 315 638 140,14
Clients		499 958 045,49	131 563 753,73	368 392 291,76	465 959 077,47
Autres débiteurs		660 301 248,02		660 301 248,02	636 538 006,06
Impôts et assimilés		190 623 491,77		190 623 491,77	213 141 056,61
Autres créances et emplois assimilés		0,00		0,00	0,00
Disponibilités et assimilés	07	995 569 730,62	6 952 423,43	988 617 307,19	772 184 395,38
Placements et autres actifs financiers courants		0,00		0,00	0,00
Trésorerie		995 569 730,62	6 952 423,43	988 617 307,19	772 184 395,38
TOTAL ACTIF COURANT		3 176 422 112,35	156 514 790,42	3 019 907 321,93	2 952 587 941,20
TOTAL GENERAL ACTIF		18 705 018 416,43	7 571 340 595,62	11 133 677 820,81	11 362 669 460,32

Du 01/01/2019 Au 31/12/2019

BILAN PASSIF

PASSIF	Note	N	N-1
CAPITAUX PROPRES			
Capital émis (ou comptes d'exploitation)		1 500 000 000,00	1 500 000 000,00
Capital non appelé			
Primes et réserves (Réserves consolidées (1))		2 858 602 621,01	2 688 602 621,01
Ecart de réévaluation		0,00	0,00
Ecart d'équivalence (1)			
Résultat net -Résultat net part du groupe (1)		22 512 054,63	439 611 183,43
Autres capitaux propres - Report à nouveau		472 314 437,75	331 811 207,86
Part de la société consolidante (1)		4 853 429 113,39	4 960 025 012,30
Parts de minoritaires (1)			
TOTAL I	08	4 853 429 113,39	4 960 025 012,30
PASSIFS NON-COURANTS			
Emprunts et dettes financières		4 542 787 721,91	4 267 510 756,91
Impôts (différés et provisionnés)		0,00	21 905 526,55
Autres dettes non courantes		984 059,95	984 059,95
Provisions et produits constatés d'avance		631 528 235,03	633 008 427,25
Compte de liaison		-0,00	0,00
TOTAL II	09	5 175 300 016,89	4 923 408 770,66
PASSIFS COURANTS			
Fournisseurs et comptes rattachés		200 000 285,05	350 697 260,64
Impôts		72 999 308,78	166 861 697,92
Autres dettes		831 459 653,21	959 303 694,39
Trésorerie passif	11	489 443,49	2 373 024,41
TOTAL III	10	1 104 948 690,53	1 479 235 677,36
TOTAL PASSIF (I+ II + III)		11 133 677 820,81	11 362 669 460,32

(1) à utiliser uniquement pour la présentation d'états financiers consolidés