

## **ROMANIAN AVIATION INDUSTRY: AN ANALYSIS OF THE FINANCIAL INDICATORS**

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*Abstract: The Romanian aviation industry has passed through several stages: an inception phase, a number of diversification stages, a number of new programmes and capacity development phases, as well as several years of searches and new beginnings. Being in its development stage, the Romanian aviation industry sector is exerting an increased interest to local and foreign investors. In order to attract and maintain their attention it is useful to develop a common financial language that can easily be understood and that portrays a clear picture of the company's financial position in order for all stakeholders involved to make the right decisions.*

*Having an overview of the financial indicators used in one of the key industry sectors in Romania, may provide useful insights into a world which indirectly impacts a very large audience. Even if the number of specialised companies in the Romanian aviation market is low, the impact in the overall industry sector is significant due to the number of employees and of the overall turnovers.*

**Key words:** *aviation, industry, financial, statement, indicators*

### **Introduction**

Economic practice show that one of the most important factors for success business of enterprise is considered to be the ability to react in time to all changes or variations that occur in its internal and external environment. (Duda-Daianu and Piroi, 2013) Most preferably, the economic inflections can be observed over amore detailed analysis of annual financial statements.

Financial statements provide valuable information regarding the financial position and performances of any entity, the success of its operations, policies and management strategies. The data derived is useful to a wide range of stakeholders, helping in the decision making process: owners, investors, managers, creditors, government regulators as noted in previous studies (Honu, 2014).

The financial analysis field of this study has recently extended by taking into consideration the integration of entity' environment studies according to sector trends and development. Also analyzing all information in the context of a competitive field, has left its mark over the financial statement case studies. Due to increasing complexity of the decision making process information provided by the financial analysis, it is considered to be an input of strategic diagnosis.

The results of the financial analysis depends on the quality, accuracy, relevance and effectiveness of collected and processed economic information. Primary sources of information for financial analysis are the financial statements, which are considered to be the raw material in the analysis process.

One of the financial statements set, the balance sheet, provides information about assets, liabilities and equity, as main elements, and liquidity, solvency, risk as financial flexibility as derived indexes. (Monea, 2013)

To achieve the goal of this paper, we will analyze a number of indicators used in performance analysis. The selected indicators applied on the aviation industry market segmentation were: solvability, liquidity and return indicators.

### Research methodology

This paper aims to illustrate and to clarify an important technique for assessing the entities on the aviation industry market, to be precise, the fundamental analysis of the balance sheet in several significant aspects.

In order to test the research question, ten entities operating in the aeronautic industry, some listed on the Bucharest Stock Exchange (Tier I, II and III), were selected (as it can be seen in Table 1). All these companies were analyzed through a period of eight years, from 2006 until 2013.

*Table 4 Sample Data*

Company name	NACE Code	Analyzed period
1 Aerostar	3030 – Manufacture of aircraft and spacecraft	2006-2013
2 Eurocopter		
3 Unison Engine Components		
4 Romaero		
5 Turbomecanica		
6 Avioane Craiova		
7 Motorstar		
8 ConstructiiAeronautice		
9 Aero Consulting		
10 FlugWerk International		

The methodological approach for the determination of the common set of indicators was based on the requirements of local national aviation companies. On these grounds, we tried to identify a set of indicators jointly accepted both from the academic point of view, but also which can subsequently be transmitted for applicability.

In order to conduct the analysis, entities` annual reports, financial statements and all related documents were consulted; further, the relevant information was integrated into the operational database.

### Literature review

The most important attributes that reveal the usefulness of the information provided by financial statements are considered to be the qualitative features of information from financial statements (OMF 3055/2009; OMFP 1802/2014).

As part of the financial statement set, we focused more on the balance sheet, also called the statement of financial position. This is due to the fact that it is a logical starting point in assessing an entity's financial position. The balance sheet provides a wealth of valuable information about a business, especially when examined over a period of time (several years) and evaluated in relation with other financial statements. (Monea, 2013)

Fundamental analysis of the balance sheet by specific techniques, can emphasize an economically diagnosis of the financial position. For an easier recognition of the difficulties faced by an economic entity, any review shall be based on calculating and interpreting the financial and economic indicators.

Financial diagnosing an entity involves more key elements. Thus, at least two aspects can be taken into account, namely the analysis of financial position through balance sheet analysis and the analysis of financial activity through Profit and loss account.

As a derived benefit, the credibility of annual financial statements is increased by the existence of a company's audit report. For investors, the unqualified opinion of the independent auditor represents an important element in making a decision for mainly for the purpose of supporting a business.

### Research Design

The analysis indicators were chosen bases on the national and international literature review, namely Stancu (2006), Trenca (2006), Pierre(2004), Lezeu (2004), Chirilă and Droj (2010) and Brealey et. all (2004). In this study from the 20 selected common indicators, only 4 were used.

First indicator, the global financial autonomy rate ( $R_{GFA}$ ) - indicates the percentage of the company's assets that are financed from their own resources. It can be calculated using the following equation:

$$R_{GFA} = \frac{Equity}{Total\ liabilities} \times 100$$

*Table 5 Global financial autonomy rate in the aviation industry sector*

	2006	2007	2008	2009	2010	2011	2012	2013
<b>Aerostar</b>	226.26 %	260.39 %	213.49%	417.58%	586.60 %	565.94 %	318.56 %	310.98 %
<b>Eurocopter</b>	141.72 %	139.01 %	151.82%	50.14%	202.47 %	108.76 %	112.40 %	71.23%
<b>Unison Engine Component s</b>	11.52%	184.80 %	328.31%	354.30%	581.23 %	489.98 %	1096.47 %	881.80 %
<b>Romaero</b>	1097.83 %	1112.89 %	1154.53 %	1013.70 %	796.62 %	645.24 %	385.41 %	328.21 %
<b>Turbomecani ca</b>	321.06 %	196.54 %	110.94%	122.85%	106.71 %	74.97%	40.12%	32.32%
<b>Avioane</b>	34.20%	0.69%	-45.50%	73.16%	81.03%	51.51%	-	-

<b>Craiova</b>							57.06 %	63.21 %
<b>Motorstar</b>	19.18%	23.37%	39.69%	31.48%	47.17%	46.99%	59.11%	60.04%
<b>Constructii Aeronautice</b>	0.10%	37.60%	48.46%	58.24%	55.31%	59.83%	- 63.79 %	- 66.31 %
<b>Aero Consulting</b>	67.35%	65.68%	88.12%	57.78%	32.37%	35.39%	37.10%	44.05%
<b>FlugWerk International</b>	83.23%	1.26%	10.96%	6.43%	4.68%	1.28%	-3.09%	-6.44%

Source: own processing based on the data retrieved from Ministry of Public Finance

The table of global financial autonomy rate presents an unique representation of the equity in overall debt. At market level we can observe a fluctuation in the value of this indicator. It mainly differs due to stakeholder policy, entity type (SME, large, subsidiary, etc.) or market condition.

Aerostar's financial autonomy rate portrays a rather unwavering equity to debt rate, with the exception of the crisis and post-crisis stages, when it increased to almost 400-500% due to debt reduction. Eurocopter SA, subsidiary of the Airbus conglomerate, registered an financial economic rate between 100-150%. The only noticeable variability was recorded in 2008-2009 due to capital fluctuation.

A company's equity is regarded as an indicator of its financial health. Since equity is negative due to the recorded losses, the companies must either increase their social capital or to dissolve, according to the Romanian Companies' Law 31/1990. Throughout 2012-2013, Avioane Craiova, Constructii Aeronautice and FlugWerk International have a negative overall rate of financial autonomy (RGFA).

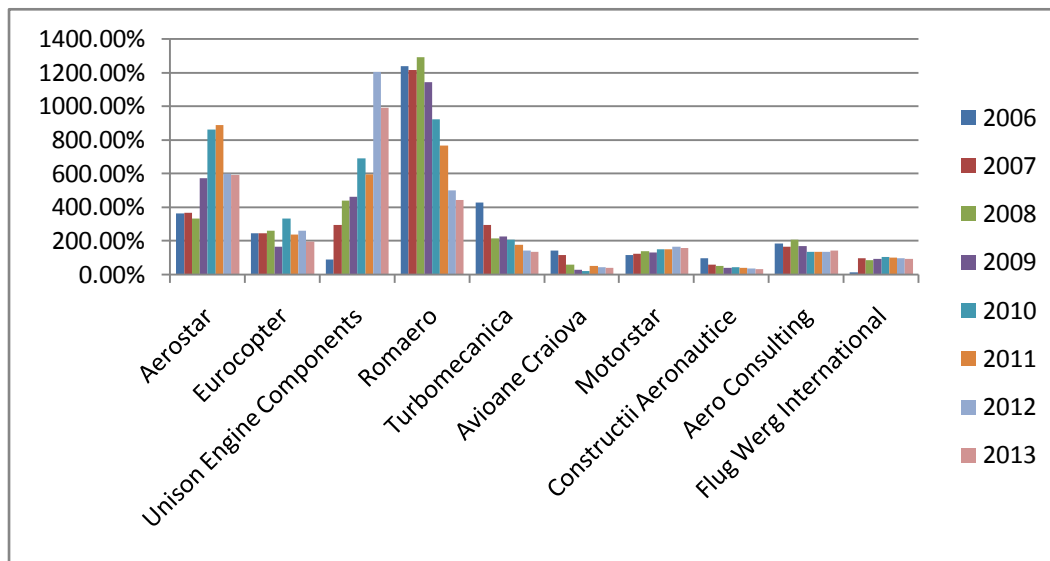
These companies recorded outstanding debts. This loss generates illiquidity, as a result the company survives during this period by delaying or missing payments to its suppliers, by appealing to the state budget or bank loans.

Lastly, companies from lower part of the table, also identified with companies on the lower position on the market, do not have a certain logic to it, they are in fact random.

Another indicator chosen for analysis is the solvability rate. It shows the extent to which total debts are covered by total company assets, and therefore reflects the security enjoyed by creditors, as well as the credit worthiness of the company.

$$R_{SLV} = \frac{\text{Total assets}}{\text{Total debt}} \times 100$$

Figure 1 Solvability rate



Source: own processing based on the data retrieved from Ministry of Public Finance

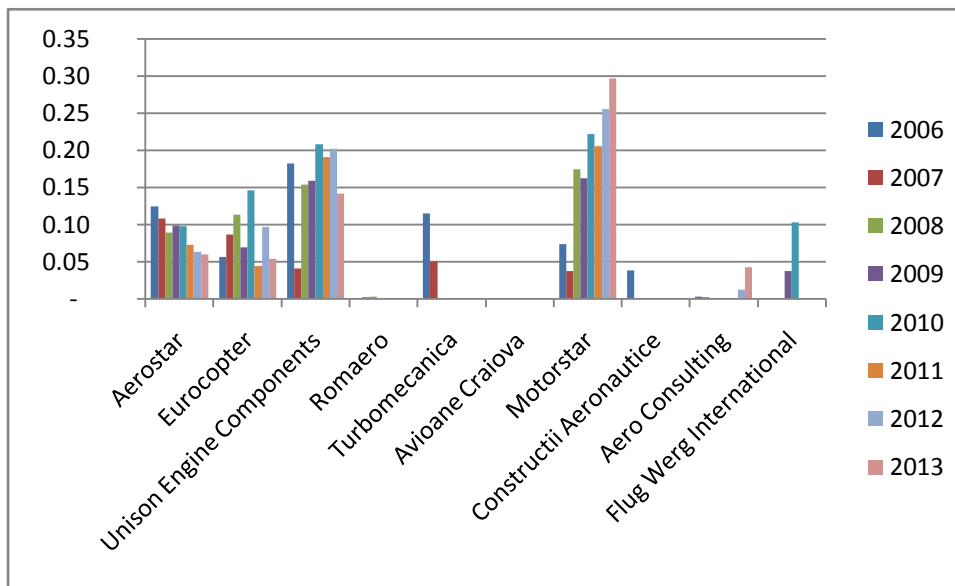
As we can observe in Figure 1, the company with the best solvability rate over time is Romaero SA, company with a well known history, currently the fourth company in the sector. Slowly, it swaps places with Unison Engine Components that portrays an upward solvability trend.

Considering certain economic factors as market share evolution, in conjunction with market dynamics, the three tier classification is confirmed. Therefore we note companies that thrive through rough periods (Aerostar, Unison Engine Components, Motorstar), those who are influenced to a small extent (Eurocopter, Aeroconsulting, FlugWerk International) and, thirdly, entities that have lowered their credit worthiness (Romaero, Turbomecanica, Constructii Aeronautice).

The following analyzed indicator, Return on Assets, reflects the difference between the economic result (net profit, known in literature as EBIT) and the assets used for its achievement (Pierre, 2004).

$$ROA = \frac{Netprofit}{Totalassets}$$

Figure 2 Return on Assets



Source: own processing based on the data retrieved from Ministry of Public Finance

The return on assets is calculated, as noted above, by using the net profit. In more than 40%, companies operating in aviation industry have registered negative values regarding the financial result. As a consequence, only four entities portray a more realistic evolution of the index: Aerostar, Eurocopter, Unison Engine Components and Motorstar.

Despite the fact that Aerostar SA is the market leader in the 2006-2012 (in 2013 the benchmarking considers Premium Aerotec – overlooked due to activity period – opened in 2009), ROA index portrays a downtrend. In other words the total assets increased faster than net profits. Opposite to this situation stands Motorstar SA, where the return on assets has increased from 0,07 to 0,30 in eight years.

Eurocopter and Unison Engine Components (U.E.C.) portray positive values of the index, but their value only fluctuates between 0.04 and 0.15 for Eurocopter and 0.04 and 0.21 for U.E.C.

Lastly we evaluated the return on equity at sector level. Also known in literature as the “financial return rate”, this indicator points out the efficiency of shareholders invested capital. Taking into consideration the number of stakeholders (e.g. company owners or potential investors in the decision-making process) that use the index, we can state that it is one of the most important return indicators. The formula is as follows:

$$ROA = \frac{Netprofit}{Equity}$$

Table 6 Financial return rate from 2006-2013

	2006	2007	2008	2009	2010	2011	2012	2013
<b>Aerostar</b>	0.20	0.15	0.14	0.14	0.14	0.11	0.12	0.11
<b>Eurocopter</b>	0.10	0.15	0.19	0.23	0.24	0.10	0.23	0.15

<b>Unison Engine Components</b>	1.45	0.07	0.21	0.21	0.25	0.23	0.22	0.16
<b>Romaero</b>	-	0.00	0.00	0.00	0.00	0.00	-	-
<b>Turbomecanica</b>	0.15	0.08	-	-	-	-	-	-
<b>Avioane Craiova</b>	-	-	-	-	-	-	-	-
<b>Motorstar</b>	0.45	0.20	0.61	0.68	0.71	0.66	0.71	0.79
<b>ConstructiiAeronautice</b>	36.59	-	-	-	-	-	-	-
<b>Aero Consulting</b>	0.01	0.00	-	-	-	-	0.04	0.14
<b>FlugWerk International</b>	-	-	-	0.54	2.30	-	-	-

Source: author's processing based on the data retrieved from Ministry of Public Finance

As we analyze the financial return rate, we note that, their results are similar to ROA: four out of ten companies have positive results throughout the eight years. Aerostar SA exhibits a decrease of the investment decision-making result. On the other hand, Eurocopter, Unison Engine Components and Motorstar managed to improve the company-client relationship and, therefore, increase the return on equity.

## CONCLUSIONS

The outcome of the financial analysis are notably influenced by: the amount, quality, accuracy and efficiency of economic and financial information. (OMFP 3055/2009)

The analysis of financial data reported in the balance sheet is, for an economic entity, the basis of a principle diagnosis by determining specific indicators of economic and financial analysis.

The analysis in this paper is based on an updated and specific bibliography of economic and financial analysis, which interprets calculated indicators on the main balance sheet items by using real data. This case study is dynamically conducted over a period of eight years and it portrays a diagnosis on the company's financial background and thus, we conclude that the present analysis may reveal a proper representation of the financial position, resulting the relevancy and usefulness of balance sheet studies.

Although the techniques and practices regarding financial diagnosis and presented in this paper cannot be exhaustive, in practice, the dynamic analysis of the main balance sheet items, working capital and financial rates of return can provide a fair picture of the economic entity's financial position.

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