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## **FINANCIAL ANALYSIS AS THE MEASUREMENT TOOL OF THE COVID-19 PANDEMIC IMPACT ON COMPANIES LISTED ON REGULATED MARKET**

### **Introduction**

The aim of the article is to assess the impact of the COVID-19 pandemic on the financial condition of companies listed on the regulated market with the methods and tools of financial analysis. After the declaration of the state of a pandemic When in March 2020, there was a breakdown of supply chains and an abrupt economic slowdown in many countries. To achieve the intended research objective, in the theoretical part a review was conducted of the literature on the subject, while in the empirical part an analysis was performed of the changes in the financial condition of business entities that were subject to examination. The article consists of four chapters.

Chapter 1 deals with the cognitive value of financial analysis. Chapter 2 presents the concept of the regulated market and its significance to modern economy. Chapter 3 presents the impact of the COVID-19 pandemic on economy. The empirical part includes an examination of the financial situation of the Enter Air S.A. and Mercator Medical S.A companies. In order to present a significant impact of the pandemic on the financial results of these entities, the examination covered the period before the pandemic, the period of the greatest freezing of the economy as well as the period of a relative stability after the outbreak of the pandemic. On the basis of theoretical considerations and empirical research, conclusions were formulated showing the impact of the COVID -19 pandemic on the financial situation of companies listed on the regulated market and the importance of financial analysis as effective tools for this type of considerations and analyses.

### **1. Cognitive value of financial analysis**

The assessment of the entity's situation is crucial in the decision-making process because adequately selected financial ratios, when based on reliable accounting data, constitute

guidelines for various groups of stakeholders. Ratio analysis is the most effective tool of financial analysis; it is based on ratios which *express the relation of intentionally related values in financial statements which is determined to achieve the intended cognitive objectives.*<sup>1</sup>

There are four main ratio groups<sup>2</sup>: liquidity, debt, profitability and cash flow ratios.

Financial liquidity is one of the most significant elements of the entity's financial condition. Its satisfactory level enables timely payment of current liabilities. The most important liquidity ratios are<sup>3</sup>: current ratio, quick ratio and non-cash ratio.

Liquidity ratio shows the ability to cover short-time liabilities with current assets. It is assumed that the value of liquidity ratio should be in the range of 1,2–2.<sup>4</sup> Cash ratio determines *the part of short-term liabilities that can be settled in cash without delay if they become immediately payable*<sup>5</sup>. It is assumed that its value should be between a few to about a dozen per cent.

Profitability is *the company's ability to generate profit, i.e. to achieve income that exceeds the cost of obtaining it*<sup>6</sup>. The value of profitability ratios is interpreted in line with the company's accounting policy, objectives and strategy. The most important profitability ratios are<sup>7</sup>: ROA (return on assets), ROE (return on equity), ROS (return on sales).

ROA measures the ability of assets to generate profit. The higher the value of ROA, the more effectively and efficiently the company manages its assets<sup>8</sup>. ROE is the main indicator that investors take into consideration. It informs about the profit generated from equity capital. ROS informs about the net profit from sales. The lower the value of ROS, the higher the value of sales the company must achieve to reach the desired level of net profit.<sup>9</sup>

The monitoring of the level of company's indebtedness is conducted through debt ratios. The main debt ratios are<sup>10</sup>: total debt, equity and long-term debt ratio.

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<sup>1</sup> W. Gabrusiewicz, *Metody analizy finansowej przedsiębiorstwa*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2019, p. 220.

<sup>2</sup> Ibidem, p.112.

<sup>3</sup> Z. Gołaś, A. Witczyk, *Pojęcie i metody oceny płynności finansowej przedsiębiorstwa*, „Journal of Agribusiness and Rural Development”, v. 1 (15), Uniwersytet Przyrodniczy w Poznaniu, Poznań 2010.

<sup>4</sup> J. Dyktus, M. Gaertner, B. Malik, *Sprawozdawczość i analiza finansowa*, Difin S.A., Warszawa 2017, p. 113.

<sup>5</sup> Ibidem., p. 220

<sup>6</sup> W. Gabrusiewicz, *Analiza finansowa przedsiębiorstwa. Teoria i zastosowanie*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2014, p. 338.

<sup>7</sup> K. Stępień, *Rentowność a wypłacalność przedsiębiorstw*, Difin, Warszawa 2008, p. 92.

<sup>8</sup> J. Dyktus, M. Gaertner, B. Malik, *Sprawozdawczość i analiza finansowa*, Difin S.A., Warszawa 2017, p. 121.

<sup>9</sup> W. Gabrusiewicz, *Metody analizy finansowej przedsiębiorstwa*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2019, p. 239.

<sup>10</sup> *Wskaźniki zadłużenia, które musi znać każdy przedsiębiorca*, <https://nfg.pl/blog/wskaźniki-zadluzenia-ktore-musi-znac-kazdy-przedsiębiorca> (accessed: 21 August 2022).

Total debt ratio is used to evaluate company's methods of financing its activities; it informs about the level of its total debt and the importance of total liabilities in financing the assets. Its value over 50% indicates the increase in the financial risk and the deterioration of company's creditworthiness<sup>11</sup>. Equity ratio shows how many times overall liabilities exceed equity value. Thus, it determines the extent to which all obligations are secured with the company's equity (which among other things, has a guarantee function, i.e. it secures the repayment of company's liabilities<sup>12</sup>). Long-term debt ratio complements the analyses of total debt ratio with the long-term debt burden. When its value significantly exceeds 100%, the company is considered to be over-indebted, which may pose a threat to its financial security.<sup>13</sup>

Cash flow account is used to calculate the following ratios<sup>14</sup>: the net profit share in operating flows and the source of funding index.

The net profit share in operating flows should ideally amount to 100%, which practically does not happen. The optimal value of this indicator is within 50-150%; when the value exceeds 150% or is negative, it should not be interpreted<sup>15</sup>. The ratio of the investment funding sources shows the coverage of investment expenditure by current income. In the calculation of the index only negative values of investment flows are considered by calculating their absolute value. The value of the index in the range 0-100% indicates that the company's investment expenditure is covered by its accumulated funds<sup>16</sup>.

## 2. Regulated market

The regulated market is a system of trading in financial instrument in which investors have equal access to market information<sup>17</sup>. Pursuant to Art. 4 item 14 of the Law in the Public Trading in Securities, the market operates in a permanent and organized way<sup>18</sup>.

The regulated market in Poland includes <sup>19</sup>:

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<sup>11</sup> *Analiza zadłużenia*, <https://analizy-prognozy.pl/analiza-prognoza-finansowa/analiza/wskaznikowa/zadluzenia/>, (accessed: 21 August 2022).

<sup>12</sup> *Wskaźnik zadłużenia kapitałów własnych*, <https://eanaliza.pl/wskaznik-zadluzenia-kapitalow-wlasnych> (accessed: 21 August 2022).

<sup>13</sup> P. Figura, *Zróźnicowanie zadłużenia w zależności od wielkości przedsiębiorstwa*, Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach, No. 298, Katowice 2016.

<sup>14</sup> *Wskaźniki przepływów pieniężnych*, <https://www.biznesradar.pl/sloownik-wskazniki/przeplywow-pienieznych>, (accessed: 30 August 2022).

<sup>15</sup> *Ibidem* (accessed: 30 August 2022).

<sup>16</sup> *Ibidem* (accessed: 30 August 2022).

<sup>17</sup> Act of 29 July 2005 on Trading in Financial Instruments, Art. 4.

<sup>18</sup> *Ibidem*, Art. 4.

<sup>19</sup> W. Dębski, *Rynek finansowy i jego mechanizmy*, Wydawnictwo Naukowe PWN, Warszawa 2014.

- Stock exchange market - an important role is played by investors and companies that issue shares and bonds. On the regulated market there are also bank and government bonds<sup>20</sup>. In Poland the regulated market includes the Warsaw Stock Exchange.
- Over-the-Counter Market (OTC) – is formed by the BondSpot company. The transactions on the OTC market involve securities that are and are not admitted to exchange trading. Trading is performed between brokers, banks and customers<sup>21</sup>.
- Commodity market of financial instruments – trading in Poland is performed through the commodity exchange. It concerns such commodities as crude oil, coffee, gas, etc.<sup>22</sup>

It should be remembered that a prerequisite for operating in the regulated market is the preparation of an issue prospectus. In the next step, the issue must be accepted by the Financial Supervision Authority (UKNF)<sup>23</sup>. The next formal requirement for the participation in the regulated market is the development of a report for the first six months of operations which must be accepted by an auditor<sup>24</sup>. Only joint-stock companies are admitted to trading on the regulated market<sup>25</sup>. Trading in the regulated market involves several benefits; however, one should remember that entering this market does not only have positive aspects. Table 1 presents benefits and barriers involving the entry into the regulated market.

**Table 1. Benefits and barriers of the regulated market**

Benefits of entering into the regulated market	Barriers of entering into the regulated market
<ul style="list-style-type: none"> <li>• Acquisition of capital,</li> <li>• Increase in share liquidity,</li> <li>• Improvement of reputation,</li> <li>• Stability of financial results,.</li> </ul>	<ul style="list-style-type: none"> <li>• High entry costs: to move from the NewConnect market into the regulated market, capitalization at the level of 12 million euros and a free float of 25% are required ,</li> <li>• Many formal requirements that regulate the market,</li> <li>• Significant costs related to information policy.</li> </ul>

Source: based on the Authors' research from M. Masionek-Schweda, *Koszty i korzyści transferu spółki z NewConnect na Rynek Regulowany GPW S.A.*, „Zeszyty Naukowe Uniwersytetu Szczecińskiego. Finanse, Rynki Finansowe, Ubezpieczenia”, No. 55, Szczecin 2012, pp. 140-143.

<sup>20</sup> Ibidem, p. 158.

<sup>21</sup> Ibidem.

<sup>22</sup> Ibidem, p. 150.

<sup>23</sup> D. Kordela, *Przejścia z NewConnect na rynek regulowany – nowy trend czy naturalna droga rozwoju spółki?*, „Zeszyty Naukowe Uniwersytetu Szczecińskiego. Finanse, Rynki Finansowe, Ubezpieczenia”, nr 37, Szczecin 2011, p. 474.

<sup>24</sup> Ibidem, p. 474.

<sup>25</sup> Act of 29 July 2005 on Trading in Financial Instruments, Art. 22 .

### **3. COVID-19 pandemic**

The COVID-19 global pandemic started in March 2020. This led to, among others, the suspension of supply chains and increase in the demand for medical products. Numerous companies suffered losses due to the restrictions imposed by governments. Because of sudden changes, companies were not able to react promptly; for example airline companies could not inform their customers about flight cancellations and the loss of financial liquidity made them unable to pay back the money. This led to an immediate loss of reputation and, consequently, the loss of the customers themselves. On the other hand, the Covid-19 pandemic proved to be an advantageous time for companies dealing with the production and distribution of medical products which became goods of necessity at that time. Companies were given the opportunity to develop, make investment decisions and generate record sales. As a result, many companies extended their operating range by increasing the number of customers on foreign markets and spent the generated surplus cash on investments.

### **4. Methods and results of the Authors' research**

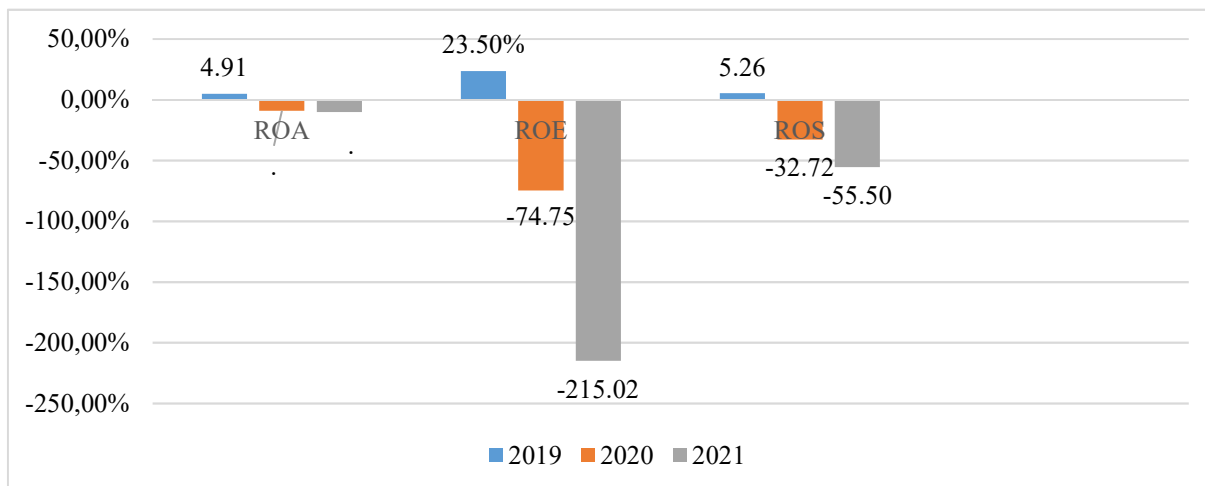
The aim of the research was to analyze the impact of the COVID-19 pandemic on the financial situation of companies listed on the regulated market which operate in two different sectors: the airline industry and the medical industry. The literature research covered current literature on the subjects of financial analysis, regulated market and NewConnect market. The empirical (quantitative) research included ratio analyses of selected companies in 2019-2021 on the basis of the financial statements published by the Enter Air company and Mercator company.

EnterAir company is a leader in charter flights in Poland. It operates in all of the biggest charter markets in Europe. Enter Air also handles flights on foreign routes for agencies outside Poland, which accounts for 1/3 of its revenue. Graph 1. below presents the profitability analysis of the Enter Air company.

In 2019, Enter Air generated a positive ROA ratio of 4.91%. In 2020, at the beginning of the COVID-19 pandemic, the company started generating significant losses. In 2020, the ROE was negative (-74.75%). This means that the company did not generate a surplus of the earnings over the costs. In 2021, ROE was very low (-215.02%). As regards ROS, the company's ratio was positive until the global pandemic started. In 2019, ROS was 5.26%, while in 2020 it started

decreasing sharply and in 2021 it was -55.50%. In 2019, the company was highly profitable but 2020 was extremely disadvantageous.

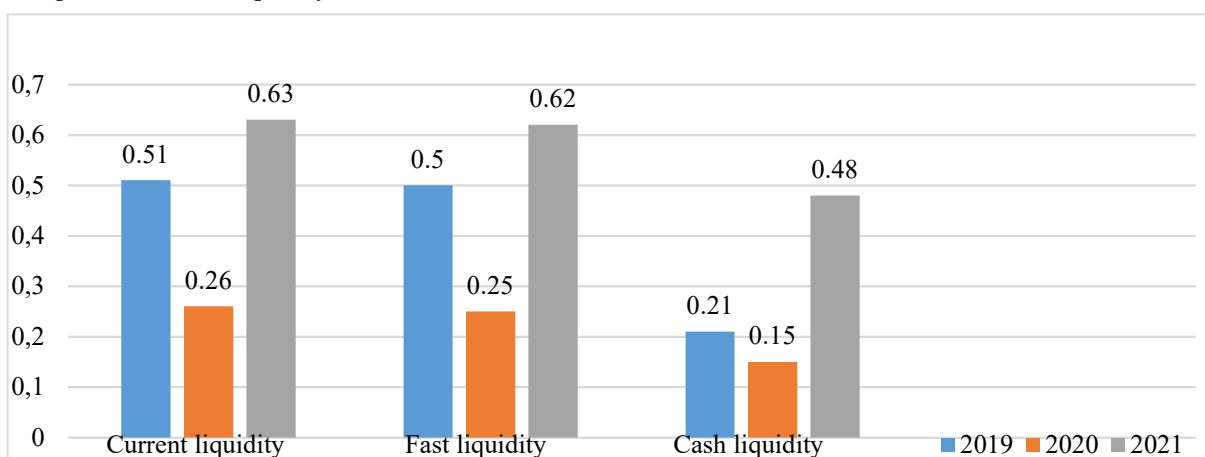
**Graph 1. Profitability ratios of the Enter Air company in 2019-2021**



Source: based on the Authors' own research from the financial statements of the Enter Air company.

Financial liquidity also illustrates company's financial condition. Graph 2 includes the values of financial liquidity ratios for Enter Air in 2019-2021.

**Graph 2. Financial liquidity ratios for Enter Air in 2019-2021**



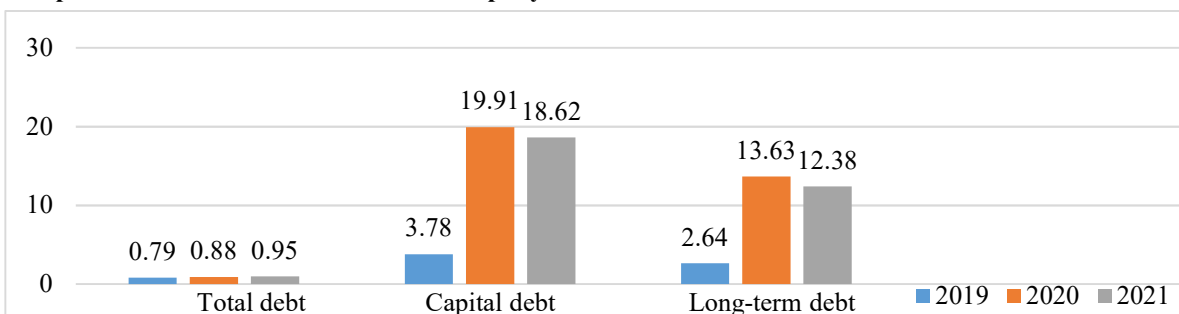
Source: based on the Authors' own research from the financial statements of the Enter Air company.

The company's current liquidity ratio in 2019 was 0.51; in 2020 it was lower by 0.25, while in 2021 its value was the highest and amounted to 0.63. As regards fast liquidity ratio, it was the lowest in 2020, in 2019 its value was 0.50; it was the highest in 2021 at 0.62. The cash

liquidity ratio was 0.21 and 0.15 in 2019 and 2020, respectively, which shows a difference of 0.06. Graph 2 illustrates that the cash liquidity ratio increased significantly in 2021 to the value of 0.48, which shows a change of 0.27 in comparison to 2019.

Debt ratios are another element of financial analysis under examination. Graph 3 presents their values in the Enter Air company.

**Graph 3. Debt ratios of the Enter Air company in 2019-2021**

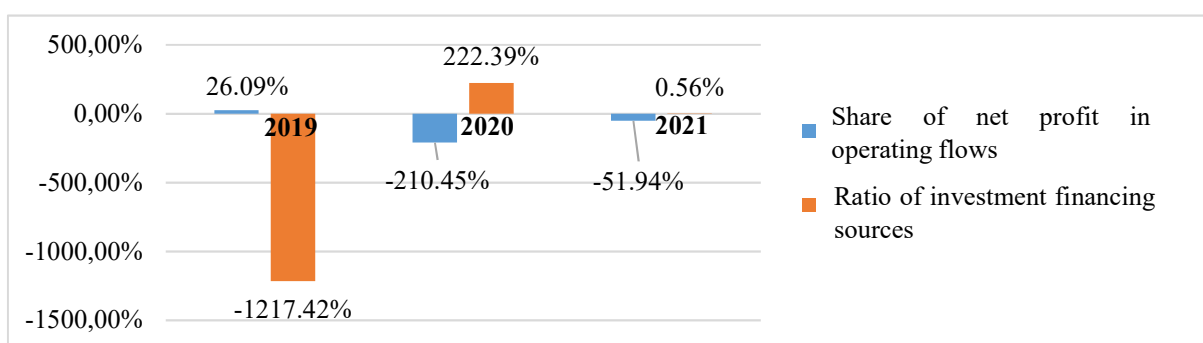


Source: based on the Authors' own research from the financial statements of the Enter Air company.

Graph 3 shows that debt ratios increased significantly after the outbreak of the pandemic. In 2020, the capital debt ratio went up by 16.13 points and the long-term debt ratio increased by 10.99 points which might discourage creditors from crediting the company under examination.

Finally, the cash flow ratio for Enter Air is given in Graph 4.

**Graph 4. Cash flow ratios for the Enter Air company in 2019-2021**



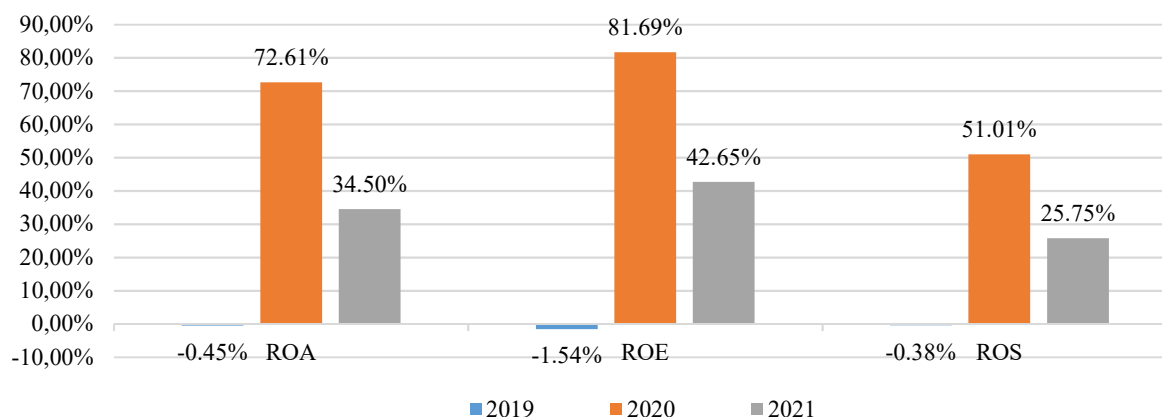
Source: based on the Authors' own research from the financial statements of the Enter Air company.

Operating flows consist mainly of net profit and also of several various adjustments (depreciation, valuation differences, etc.). Graph 4 shows that the share of the net profit in operating flows was positive only in 2019 and it amounted to 26.09%. After the outbreak of the

COVID-19 pandemic, there was a sudden decline to the negative value (-210.45%). The analysis of Graph 4 leads to the conclusion that Enter Air invested significantly more than it had actual cash. When the pandemic started, the revenues of the company decreased significantly, which had an impact on the ratio of the investment funding sources.

The other company which was subject to analysis was the Mercator Medical S.A. company, a manufacturer of medical gloves and a distributor of disposable medical materials. As a manufacturer, the company sells its products to almost 70 countries in the world and its global share on the market is 2%. As a distributor it operates on the European market. Mercator Group consists of the Mercator Medical S.A. parent company based in Krakow and 8 subsidiaries in other countries (Thailand, Romania, Italy, the Netherlands). Graph 5 presents the profitability analysis of Mercator Medical S.A. in 2019-2021.

**Graph 5. Profitability analysis of Mercator Medical S.A. in 2019-2021**



Source: based on the Authors' own research from the financial statements of Mercator Medical S.A

Graph 5 shows that the value of all profitability ratios was negative in 2019, which was undesirable for many groups of stakeholders. In 2020, the profit of the company rose over 46 000 times, which resulted in a sharp increase in the value of all profitability ratios. ROA went up by over 73 p.p. , ROE was 82% and ROS amounted to over 51%. In 2021, company sales decreased significantly; this was reflected by lower values of all the indicators under examination which went down by about 50 p.p. in relation to the previous year.

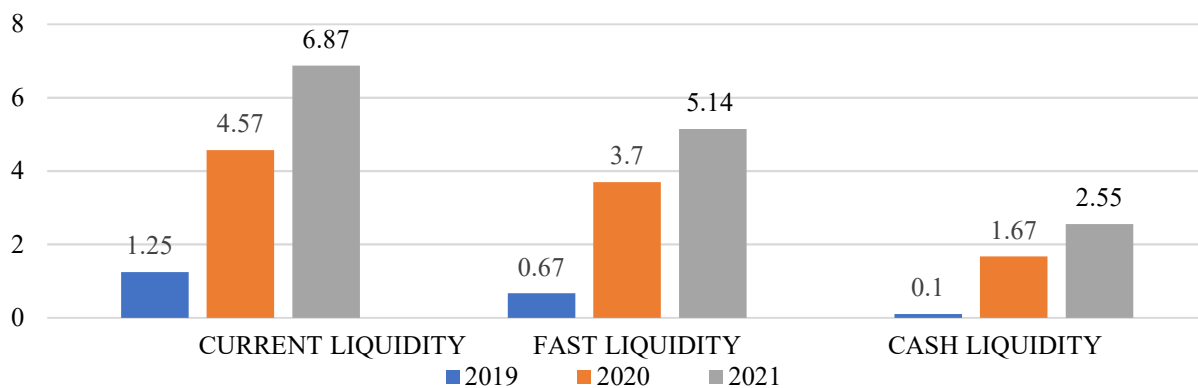
Graph 6 presents the analysis of changes in the financial liquidity of Mercator Medical S.A. in 2019-2021.

The values of the company's liquidity ratios show a growing trend in the period under analysis. A positive phenomenon is the fact that their value was not negative in this period.



However, it should be pointed out that in 2020 and 2021 the value of the ratios was significantly above the standards, which testifies to the fact that cash assets were not used effectively.

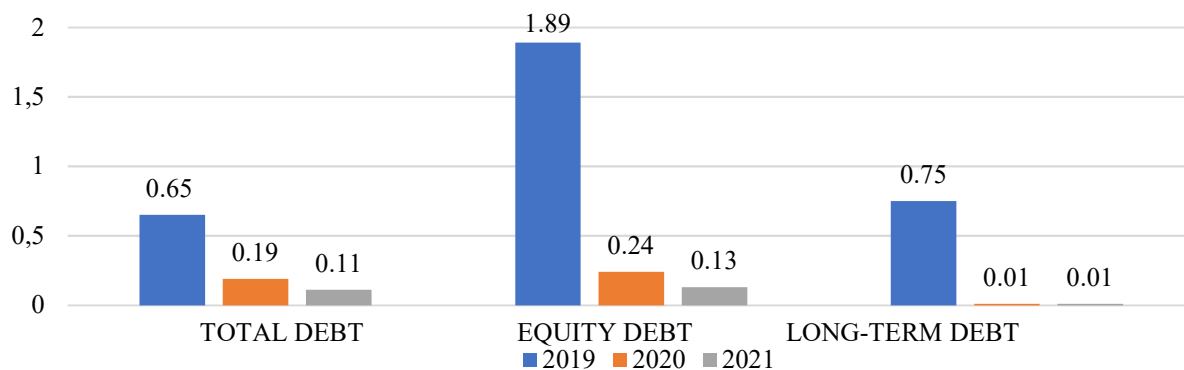
**Graph 6. Analysis of changes in the financial liquidity of Mercator Medical S.A. in 2019-2021**



Source: based on the Authors' own research from the financial statements of Mercator Medical S.A.

Another important step in the examination of the company's financial conditions is its debt analysis. Graph 7 shows the values of the debt ratios in 2019-2021.

**Graph 7. Debt ratios of Mercator Medical S.A. in 2019-2021**

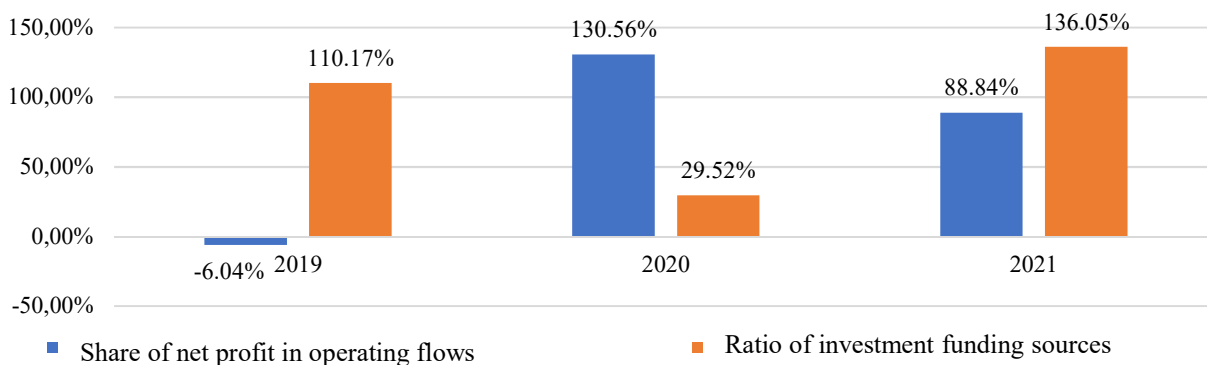


Source: based on the Authors' own research from the financial statements of Mercator Medical S.A.

The value of the debt ratios was on a satisfactory safe level every year. However, the value of the each of them had a decreasing trend in 2019-2021. Such a phenomenon was valued positively as it testified to a financial independence of the company.

Finally, an important assessment factor of company's financial situation is the analysis of the cash flow ratios. Graph 8 presents their values for 2019-2021.

**Graph 8. Analysis of the cash flow ratios for Mercator Medical S.A. in 2019-2021**



Source: based on the Authors' own research from the financial statements of Mercator Medical S.A.

The share of the net profit in operating flows in 2019 was -6.04%. In 2020 and 2021, its value grew significantly and was 130% and over 88%, respectively. In theory, the higher the value of this ratio, the better. However, it is crucial that the ration should not exceed 150%. Both in 2020 and 2021 the ratio values were in an optimal range. The ratio of investment funding sources was over 100% in 2019 and 2021, and only in 2020 it had the value of approximately 30%. This means that the company spent more on investment than it generated economic benefits from the remaining operations while in 2020 the investment expenditure was covered by current revenues.

## Conclusions

A proper use of financial analysis tools makes it possible to assess the impact of external factors on the financial situation of investigated entities and the profitability of particular investment operations. The profitability and the ratios of financial liquidity of Enter Air went down significantly after the COVID-19 outbreak. This resulted in the company's problems with effective cash management. The debt ratios of Enter Air increased substantially after 2020. As an airline company, Enter Air had significantly deteriorating financial results after the imposition of sanitary restrictions and the lockdown.

Mercator Medical, as a manufacturer and distributor of personal protective equipment that was in short supply during the pandemic, was in an advantageous position, which had a direct impact on spectacularly good financial results and a positive change in all groups of financial indexes. Profitability ratios went up a dozen times or so, which made Mercator Medical an attractive investment for shareholders. The liquidity improved and the company's

debt level decreased; these are certainly some of the most significant elements that are considered when analyzing company financial condition especially during the pandemic when many companies were in trouble. The fact that during the pandemic, Mercator Medical entered WIG- 20 index - one of the most prestigious indexes on the Warsaw Stock Exchange – illustrates the beneficial impact of the COVID-19 pandemic on the company's financial situation.

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## **Abstract**

Financial analysis is an important issue both for businesspeople and investors. The COVID-19 pandemic had a real impact on the finances of companies. The aim of the article is to assess the impact of the pandemic on the financial condition of companies listed on the regulated market with the methods and tools of financial analysis.

## **Key words**

Financial analysis, COVID-19, regulated market, companies, financial analysis tools, airline sector, medical sector.