HOW COVID 19 LOCKDOWN AFFECTED THE COMPANIES LISTED ON BUCHAREST STOCK EXCHANGE. AN ANALYSIS FROM THE PERSPECTIVE OF LEVERAGES

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Abstract

The year 2020 began under the sign of rumours related to a strange pneumonia that manifests itself in China. Although from an economic point of view things were going under the best auspices, in less than 3 months, the strongest health crisis of the last century generated by the new virus COVID 19 covered the whole planet, generating a high impact on all economies. Companies have stopped or reduced their activities for various periods, as a result of quarantine and measures to stop the spread of the virus. The decrease in production and sales had negative effects on the financial results. In order to analysis the way Romanian companies were affected by the sanitary and financial crisis generated by COVID-19, were analysed companies listed and traded at Bucharest Stock Exchange, using early data evidences from the 3rd quarter 2020 financial reports.

Keywords: *Operating, Financial and Global Leverage*

JEL classification: *G10, G32*

1. Introduction

The year 2020 was marked by the health crisis caused by the COVID 19 virus and the economic difficulties that followed. Most companies recorded declines in activity, caused by the interruption of activity during the state of emergency and quarantine, or due to inactivity of some staff, who contracted the virus. Decrease of international transactions was added to this, the trading partners facing the same problems. In the conditions in which the turnover

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decreased while the fixed costs remaining constant, the operational result of the analysed companies should have decreased, in turn.

According to the economic forecasts for autumn 2020, the euro area economy will shrink by 7.8%. The way in which each country and activity was affected was different, depending on the field of activity, on the spread of the virus, the strictness of public health measures taken to control it and the sectoral composition of national economies.

In the case of Romania, the economic impact was felt more strongly in semester 2, followed by a slight recovery in semester 3. In order to analyse the way the reduction of the activity and sales affected the Romanian companies, the companies listed on the main market of Bucharest Stock Exchange were studied, comparing the dates from financial reports for the 3rd quarter of 2019 and 2020.

2. The operating, financial and global leverage

The current activity of a company is accompanied by specific risks: economic risk, financial risk and global risk, as a result of the two previously mentioned. In national and international specialized literature, business risk is defined as the degree of uncertainty inherent in the forecasts of future earnings generated by assets or equity.

The operating leverage expresses the sensitivity of the operating result to the variation of sales and measures the percentage variation of the operating result, in response to a percentage change of sales (Halpern; 1994). If an enterprise has a high operating leverage coefficient, a small change in sales will have consequences on the operating result: it increases a lot as sales increase, but it decreases just as much when they are reduced; this is the risk of exploitation assumed by the enterprise, which depends on the amount of fixed expenses. (Petrescu; 2005)

The operating lever can be assessed by the Degree of operating leverage (Dol) financial ratio, calculated as follows (Balteș; 2010):

$$\text{Dol} = \frac{\frac{\Delta Operating\ result}{Operating\ result_0}}{\frac{\Delta Turnover}{Turnover_0}}$$

The financial leverage, related to the financial risk, describes the favorable or unfavorable influence the use of borrowed funds has on the return on the company's equity. Exclusive financing based on equity does not involve any financial risk, while financing based on borrowed sources involves financial expenses that directly influence financial profitability (Vasiu; Baltes, 2015). The influence is generated by the fact that interest expenses are fixed and have priority of payment over equity. This provides additional risk, which focuses on the holders of ordinary shares, who bear it.

The analysis of the net profit variability, generated by the company's financing policy, represents a primordial aspect of the financial risk which, through its implications, arouses the interest of the shareholders. The financial risk assessment can be made similarly to the economic risk, by assessing the Degree of financial leverage (Dfl), calculated as follows (Balteș; 2010)

$$\text{Dfl} = \frac{\frac{\Delta Net\ result}{Net\ result_0}}{\frac{\Delta Operating\ result}{Operating\ result_0}}$$

The Degree of financial leverage ratio represents the percentage change of net result in response to a percentage change in operating income, as a result of changes in its capital structure.

The global risk cumulates the economic risk with the financial one, being assessed with the help of the Degree of total leverage “Dtl”. This ratio indicates the change in net result as a result of the turnover change and represents the change in shareholders' income due to the use of operational and financial levers.

The Degree of total leverage “Dtl” is calculated as follows

$$\text{Dlt} = \text{Dol*Dtl} = \frac{\frac{\Delta Net\ result}{Net\ result_0}}{\frac{\Delta Turnover}{Turnover_0}}$$

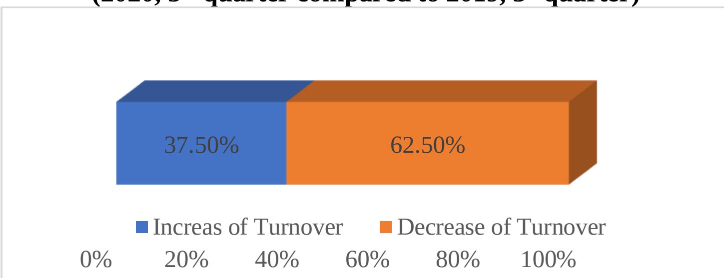
3. Case study

The impact of the financial crisis has strongly affected all Romanian companies, but the analysis cannot be performed in all cases, considering the legal requirements regarding the obligation to publish financial reports. As small firms publish only annual financial statements, the way the COVID-19 economic and sanitary crisis affected them can only be analysed starting with the next year. In the case of large companies, listed on Bucharest Stock Exchange, half-yearly and quarterly reports are already available.

In order to analysis the way the reduction of the activity determined by the COVID-19 crisis affected the companies from Romania, the companies listed and traded on the main market, Premium and Standard category, at Bucharest Stock Exchange was analysed. The companies from the financial and banking field were not selected, considering the homogeneity of the activity and of the financial reporting for analysed companies. Thus, all of the 64 companies were analysed, taking into account the elements available for the financial reports related to the third quarter, of 2019 and 2020, available on each companies' website, bvb.ro and tradevile.ro.

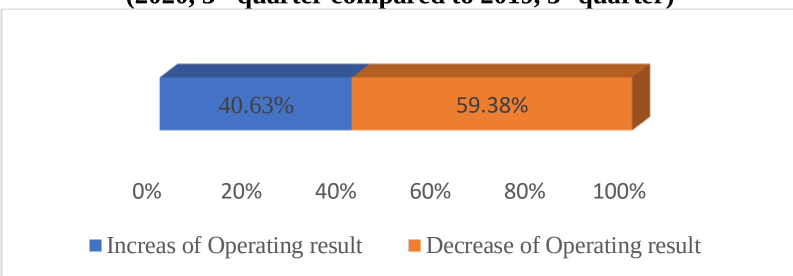
Considering that the variation of the operational result depends on the variation of the turnover, was analysed the proportion in which companies registered an increase of the turnover, compared with the proportion in which companies registered an increase of the operational result.

Figure 1: The Increase and Decrease in Turnover (2020, 3rd quarter compared to 2019, 3rd quarter)



Source: own processing

Figure 2: The Increase and Decrease in Operating Result (2020, 3rd quarter compared to 2019, 3rd quarter)



Source: own processing

When comparing 2020, 3rd quarter to 2019, 3rd quarter, a significant part of the companies, of over 62% registered decreases of the Turnover, similar to the share of companies that recorded decreases in operating income.

Calculating the Degree of operating leverage (Dol) financial ratio according to the presented model, the following situations were noticed:

- 34,38% of the companies recorded a negative value of the Degree of operating leverage, meaning that the change in operating income is the opposite of the change in turnover.
- 65,62% of the companies recorded a positive value of the Degree of operating leverage, meaning that if Degree of operating leverage is x and sales volume increases by y%, operating profit will increase by x * y%.

The negative values were recorded in the following situations:

- although there was an increase in turnover, a decrease in operating income occurred
- in both periods there was an operational loss, and this was accentuated from one year to another
- turnover decreased, but the company went from loss to operating profit, which mathematically led to a negative value of the Degree of operating leverage coefficient

Thus, the mathematically obtained negative values must be interpreted with caution, if the negative result is only the result of a mathematical calculation.

In case of positive values of the Degree of operating leverage coefficient, the reaction of the operational result to the changes of the turnover has different amplitudes:

- for 21% of the companies, a 1% change in turnover results in a less than 1% change in operating profit
- for 9% of the companies, a 1% change in turnover results in 1% change in operating profit
- for 32% of the companies, a 1% change in turnover results in more than 1% change in operating profit, two of these being significantly large, of 39 and respectively 240 times
- for 40% of companies, a 1% change in turnover generated a change of up to 5% in profit

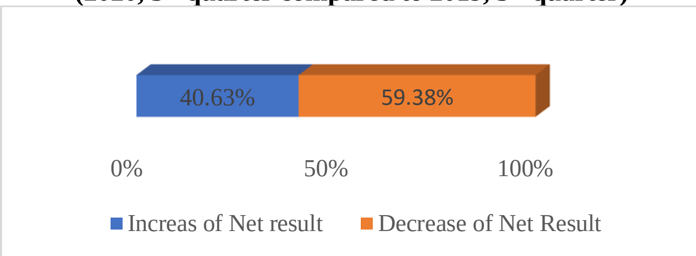
Table 1: Companies' classification, based on the Degree of operating leverage coefficient values

Degree of operating leverage coefficient values	Companies (%)
below 0	34,38%
[0-1)	21,88%
[1-2)	9,38%
[2-3)	6,25%
[3-4)	6,25%
[4-10)	7,81%
over 10	14,06%

Source: own processing

Considering that the variation of the net result depends on the variation of the operational result, was analysed the proportion in which companies registered an increase of the net result compared with the proportion in which companies registered an increase of the net result

Figure 3: The Increase and Decrease in Net Result (2020, 3rd quarter compared to 2019, 3rd quarter)



Source: own processing

In the case of the operating and net result, the evolution is similar, a significant part of the companies of over 59% registered decreases of both operational and net result.

Calculating the Degree of financial leverage (Dfl) financial ratio according to the presented model, the following situations were noticed:

- fewer companies, only 17,19% recorded a negative value of the Degree of financial leverage, usually due to the recording of a net loss even in the case of an operating profit

- 82,61% of the companies recorded a positive value of the Degree of financial leverage, and in their case, the amplitude of the reaction of the net result to the change of the operational result is not so high. For 71% of the companies, a 1% change in the net result led to an up to 5% change of in the net result.

Table 2: Companies' classification, based on the Degree of financial leverage coefficient values

Companies (%)	Companies (%)
below 0	17,19%
[0-1)	37,50%
[1-2)	25,00%
[2-3)	10,94%
[3-4)	3,13%
[4-10)	3,13%
over 10	9,38%

Source: own processing

Calculating the Degree of total leverage (Dtl) financial ratio was analysed as total net income elasticity to changes in sales, the findings being presented in table No. 3

Table 3: Companies' classification, based on the Degree of total leverage coefficient values

Companies (%)	Companies (%)
below 0	34,38%
[0-1)	18,75%
[1-2)	9,38%
[2-3)	7,81%
[3-4)	4,69%
[4-10)	9,38%
over 10	15,63%

Source: own processing

In this case, the results obtained are similar to those obtained for the operational leverage. Regarding the very high change in the net result, as a response to the change in turnover, there are two extreme situations, of 114 and respectively 303 times, for the same companies which registered significant variations in the case of operational leverage.

4. Conclusions

The health crisis generated by COVID-19 and the economic and financial problems that followed, starting with March 2020, affected the companies listed on the main market at Bucharest Stock Exchange acting in nonfinancial domains, over 60% of them registering decreases of turnover, operational and net result, based on financial data reported for the third quarter 2020, compared to the third quarter 2019.

These companies faced a higher economic risk, compared to the financial one, in over 25% of cases, a change of 1% of the turnover generating a change of more than 5% of the operational, respectively net result. The situation is explained by the fact that most of the analysed companies are acting in industry, constructions and tourism, areas where fixed assets have a high share, which generates high fixed costs. Given the lockdown and declining sales, fixed assets continued to generate costs, which negatively impacted the result.

An atypical situation was recording negative values of the levers, which appeared in 34% of cases for the Degree of operational and of total leverage coefficients. The negative result is either a mathematical result, when the operational loss is accentuated, or an inversely proportional reaction of the result as a response to a change in turnover (although turnover increased, the result decreased)

The financial leverage registered reduced values of up to 4 in the case of most companies. Therefore, the favourable or unfavourable influence that the use of borrowed funds had on the return on equity of the company was relatively limited in the first part of the economic COVID crisis. In this context, the incentive measures adopted by the authorities during the state of emergency must be taken into account, which aimed postponing bank rates, interest and taxes. These made the fiscal result have a lower impact on the net result in the 2^{nd} and 3^{rd} quarters of 2020.

In interpreting these results, prudence must be maintained. Although the negative effects of the COVID-19 crisis have been noted since the second half of the year 2020 and reported in the financial reports for the second quarter, the real impact of the COVID-19 crisis must be monitored in the context of the 2^{nd} COVID 19 wave, started in November, and the international worldwide economic context. Also, the economic protection measures for companies must be considered, whose effects are not concluded yet. At the same time, the availability of financial reports for all companies, starting with January 2021, will provide a more relevant image of the economic and financial situation for all companies in Romania and how the partial lookdown impacted the financial results obtained in 2020.

5. References

- Baltes, N. (2010), *Analiză și diagnostic financiar*, Editura Universității “Lucian Blaga”, Sibiu
- Balteş, N.; Vasiu, D.E. (2015), *Analiza performanţei financiare a entităţii economice*, Editura Universităţii "Lucian Blaga" Sibiu
- Halpern P., Weston J.F., Brigham E.F., (1998) *Finanţe manageriale*, Editura Economică, Bucureşti
- Petrescu, S. (2005), *Performanţă şi risc în analiza financiară* , Analele Ştiinţifice ale Universității "Alexandru Ioan Cuza" din Iași
- www.bvb.ro
- www.tradeville.eu
- www.europa.eu