

## The Effect of the Outbreak of Covid-19 on the Conservative Efficiency of Companies<sup>1</sup>

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Research Paper

### INTRODUCTION

One of the constant challenges in financial sciences is competition in attracting investors. According to the theories of behavioral sciences, a rational person has characteristics such as conservatism, risk aversion and utilitarianism. Based on this, he always has to decide between choosing different positions. (Ahmadkhani et al., 2018). The present researchers found the importance of efficiency from the point of view of decision makers. Because it has a direct role with the investor's cash flows. (Keshavarz et al., 2019). Examining the results of many researches proves the considerable power of data envelopment analysis (DEA) in measuring performance and efficiency (Osta et al., 2019). The rapid spread of the Corona pandemic all over the world since April 8, 2020 and the resulting widespread deaths that followed forced vacations, unprecedented quarantines, transportation bans, industry shutdowns, and unemployment rate growth, including It is the consequences of this pandemic, and without a doubt, each of these challenges is a serious alarm for the efficiency of companies and ultimately the continuation of their activities (SaebNia and Karimi, 2019), which has tested the ability of organizational managers to deal with sudden events. Because they have a very important role in choosing the company's accounting policies and therefore have a significant impact on accounting conservatism. Studies have focused on

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the influence of managers and their team characteristics on firm performance or firm value, while research on accounting conservatism needs to go deeper (Huang, 2021). Several studies [Hartam and Kresnawati, 2022, Khodamipour and Panahi, 2016 and Lara et al., 2016] showed that the phenomenon of increasing the degree of accounting conservatism in financial reports after the global financial crisis is one of the most important controversial issues in accounting thought. It is contemporary (Aldoseri and Aghal, 2022).

### THE PURPOSE AND QUESTIONS OF THE RESEARCH

Corona the of impact the that expected is it, situation critical this in the on pandemic in this critical situation, it is expected that the impact of the Corona pandemic on the efficiency of companies will be negative, and these shortcomings are expected and predictable for the society. Therefore, the management will have an accountability that is far more acceptable to the public and easier than in the past. Here, the question comes to mind, is the efficiency of companies really weakened in this era? And was the weakening of efficiency due to the conservatism of managers? And does the existence of favorable conditions and general acceptance for a relatively weaker performance encourage managers to use conservative accounting methods? Therefore, the researchers tried to investigate the aforementioned relationships. According to the basics in the mentioned field and the explanations given, the following assumptions are suggested:

1. The decrease in efficiency of companies is caused by their conservatism.
2. The outbreak of Corona has become an incentive for companies to use conservative accounting.

### RESEARCH METHOD

$$\frac{P}{E} = \beta_0 + \beta_1 R + \beta_2 DR + \alpha_3 R * DR + \varepsilon$$

$$\frac{P}{E} = \beta_0 + \beta_1 R + \beta_2 DR + \beta_3 R * DR + \beta_4 EFF.R + \beta_5 EFF.DR + \beta_6 EFF.R.DR + \varepsilon$$

$$\begin{aligned} \frac{P}{E} = & \beta_0 + \beta_1 R + \beta_2 DR + \beta_3 R * DR + \beta_4 EFF * R + \beta_5 EFF.DR \\ & + \beta_6 EFF.R.DR + \beta_7 Covid - 19 + \beta_8 Covid - 19.R \\ & + \beta_9 Covid - 19.R.DR + \beta_{10} Covid - 19.EFF \\ & + \beta_{11} Covid - 19.EFF.R + \beta_{12} Covid - 19.EFF.DR \\ & + Covid - 19.DFF.R.DR + \varepsilon \end{aligned}$$

### Companies of Ranking and Evaluation Efficiency for Model Weight Joint of Implementation

In this section, we evaluate the efficiency of companies accepted in Tehran Stock Exchange in different industries. For this, we use DEA models, which must have a set of input and output variables for evaluation. In this research, we use the following inputs and outputs: the sum of total assets and operating costs as the first and second inputs, and operating profit (loss) and accumulated profit (loss) as outputs. So,  $E_j$  is used as the joint weight efficiency score in this research to calculate the efficiency score of the companies.

$$E_j = \frac{\sum_{r=1}^s u^* r y_{rj}}{\sum_{i=1}^m v^* i x_{ij}} \quad j = 1, \dots, n \quad (4)$$

Considering that the format and basis of the current research is a discussion of conservatism, it should be checked whether the sample companies of the research have acted conservatively or not. According to Basu's model (1997), it should be  $2\beta + 3\beta \leq 3\beta$ , which shows the coefficient of the interactive variable of efficiency in the imaginary variable of numerical efficiency equal to -0.31.0 (confirming the tendency to act conservatively).

## RESULTS AND DISCUSSION

### THE FIRST MODEL

The results obtained from the fitting of the first model of the research show the significance of the interaction coefficient of efficiency and the fictitious variable of efficiency, which shows that the selected companies use conservative accounting policies.

### THE SECOND MODEL

In the examination of the second model of the research, which is proposed to test the first hypothesis, in the examination of the interaction coefficient of efficiency and the fictitious variable of efficiency, it can be concluded that the sample companies, as it was said in the first model, tend to use conservative accounting methods. Examining the efficiency variable shows that independently, efficiency does not have the ability to influence the price, profit and the price-to-profit ratio of each share, because the value obtained for the efficiency variable is more than critical and this problem is in the coefficient. The interaction of efficiency, the imaginary variable of efficiency and efficiency of companies, this lack of significance is again observed and the important point of increasing significance has been obtained, that is, in the first view, both efficiency

alone and the effect of efficiency on conservatism cannot be confirmed. and be accepted. But a closer examination shows the double weakening of this effect, which means that the decrease in efficiency in increasing the tendency to use conservatism of the sample companies cannot be accepted, because the obtained significance has increased from 0.21 to 0.39 and As a result, the first research hypothesis cannot be accepted.

### **THE THIRD MODEL**

In the second hypothesis, the assumption of the present researchers is that the spread of Corona has increased in the application and use of conservative accounting methods by companies and acted as an incentive. The obtained results confirm the assumption of the researchers that in the third model of the research, as it is clear, the interactive variable of efficiency and the imaginary variable of efficiency show the tendency of the sample companies to act conservatively, and the interesting thing to note is that in the period Corona, the interactive variable of efficiency, the imaginary variable of efficiency and efficiency at the accepted confidence level, shows the significance of the effect of the company's efficiency on the use of conservative procedures, because the aforementioned variable has a significance of 0.04. As it was said in Basu's basic research (1997), the coefficient obtained for  $\beta_3$  in order to detect conservative behavior of companies should be negative, now any other variable that is mentioned in the interactive variable is multiplied by  $\beta_3$  and is used as a new interactive variable. It should be added that it should have this feature, the interactive coefficient of Covid in the interactive variable of efficiency and the imaginary variable of efficiency is negative, as a result, it shows that the presence of Corona alone in the world and in the economic and commercial environment of the market has caused companies to Force the use of conservative procedures. It is noteworthy that the period of covid caused the efficiency of the company, which alone had no significant effect on the use and selection of conservative procedures in the non-corona period, also has this effect, in other words, the period of corona forced the companies to The use of conservative methods has had a double effect on the use of these procedures to increase their efficiency, because during the Corona period, as it is clear from the test of the first hypothesis, the efficiency of companies has decreased drastically, and in order to compensate for this decrease The efficiency of companies has forced them to use conservative procedures.

### **CONCLUSSION AND SUGGESTIONS**

Due to the decrease in sales of many industrial items, related industries as well as industries related to transportation (especially in the early period

of the outbreak due to frequent quarantines) experienced a very poor performance and in contrast to the consumer industries involved and the industries used in Prevention and treatment, including detergents, disinfectants, mask and glove manufacturers, as well as industries related to entertainment and virtual space, flourished. For this reason and according to the structure that this epidemic created in the world community as well as in Iran, the researchers were willing to study the direct and non-future effect of this epidemic on efficiency as well as the effect of this efficiency and disease on the conservatism of companies. Measure The reason for this is that companies have experienced a rapid weakening of their efficiency during this period, and to reduce the adverse effect of this efficiency reduction, researchers have believed that companies are encouraged to use conservative methods and procedures. Have been, as a result of this research in the form of two hypotheses for the companies accepted in the Tehran Stock Exchange, for the years 1996 to 1400 and in the form of a sample of 90 companies, according to the restrictions applied in the selection of companies from different industries and Homogenize the sample. In order to increase the generalizability of the research results, the research sample has been selected as a cluster of all industries, that is, both groups of industries that have had a positive or negative effect from Corona. The results of the research show that due to the negative beta coefficient of 3, it can be concluded that the studied companies have used conservative methods in the mentioned period, and according to the modified and expanded Basu models, the researchers have been to check whether the decrease in efficiency was an incentive for companies to increase the use of conservative procedures or not? The results show that regardless of the period of the spread of Covid-19, companies do not use conservative methods to neutralize their efficiency reduction, the reason for this is the non-significance of the interaction coefficient of efficiency and efficiency and the imaginary variable of efficiency, and the results obtained from the examination of the most complete model The research is very significant, in this way that companies have been encouraged to use more conservative procedures during the Corona period, and in addition, the reduction in efficiency in creating and increasing this incentive has increased significantly during the Corona period, if in the study The previous hypothesis, the results showed that regardless of the Corona period, companies have no desire to increase the use of conservative procedures to increase efficiency. Therefore, the following topics are suggested for future research:

1. Since the corona period has had different effects on different industries, the occurrence of financial crisis has increased significantly during this period. Therefore, the hypotheses for the financial crisis can be tested.

2. In behavioral financial researches, great attention has been paid to the behavioral effect of capital market players on indicators. As a result, it can be suggested that considering the Corona period and social distancing, whether this is through reducing and increasing the analytical power of people involved in the management of companies. Has it increased the operational efficiency of companies or not?
3. Investigating the relationship between the period of the corona epidemic and the financial, operational and economic efficiency of companies.

**Keywords:** Corona Pandemic (Covid-19), Efficiency, Conservatism, Conservative Efficiency.

**JEL Classification:** M41.

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