

The Covid-19 Pandemic and the Global Value of Companies in Emerging Economy Countries

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Abstract

The COVID -19 pandemic that broke out in 2019 in China has impacted the economic growth and economic sustainability of all economies of the world. The effects of this health crisis were generally felt by the private sector, which faced a bottleneck in the supply of raw materials, affecting business operations. The shock of the COVID-19 pandemic is far greater than the 2008 economic crisis, particularly accentuated by large-scale inflation, cessation of commodity exports, price collapses, rising unemployment, reduced foreign direct investment flows, etc. The aim of this research is to identify the determinants of the overall value of companies in emerging economies in the pre- and post-pandemic period. Thus, in order to achieve the proposed purpose, the following objectives have been outlined: O1- analysis of economic indicators reported by companies in emerging countries in the period of 2019-2021; O2- analysis of correlations between economic and financial indicators reported by companies in emerging countries (EVA, Equity EVA, BV of Equity, BV of Capital, Market Capitalization). The research is relevant for academics and also for potential and current investors interested in the impact of COVID-19 on the business.

Key words: COVID-19, emerging economies, performance, bibliometric analysis, scientific output
J.E.L. classification: M40

1. Introduction

Triggered in China in 2019, the COVID-19 pandemic has caused not only a health crisis, but also a global economic crisis through the cessation of exports and labour migration. As a result, many enterprises have had to stop their activities or reduce their production capacity, which has led to a drop in profitability, reduced investment, increased unemployment, etc. The largest emerging economies supplying raw materials and human resources have seen a huge economic decline amid the pandemic crisis, amplified by rising inflation and by the shutdown of many foreign-owned enterprises. The effects of the COVID-19 pandemic have been much more felt in emerging economies than in developed countries, which is explained by the fact that most emerging countries have a weak health system that is struggling to cope with the pandemic.

Emerging economies are the main recipients of foreign direct investment flows and the main contributors to Gross Domestic Product (about one third). During recessions, there is also a liquidity constraint that negatively influences the investment process and mainly the level of investment flows. The reduction in FDI flows has affected the business environment in these countries and the contribution of emerging countries to global GDP has been reduced. To counter the effects of the pandemic on the private sector, governments in emerging countries have adopted a range of fiscal measures/facilities aimed at supporting the business environment. For example, India, one of the largest emerging economies and the largest recipient of FDI inflows, has implemented a number of

measures to encourage investors and support the business environment, such as: "reduction in corporate tax from 30% to 25%, a measure implemented from FY 2019-2020; simplification of labour laws by abolishing the 3 labour codes - Social Security Code, Industrial Relations Code and SSM Code; financial sector reforms; financial inclusion and digitization of India and last but not least human capital"(Melega et al., 2021).

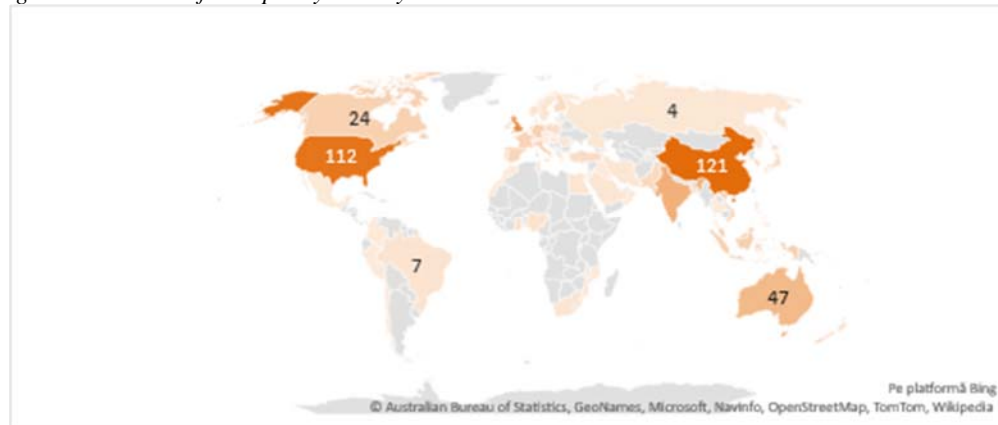
Dependent on foreign direct investment flows, economic indicators reported by emerging economy companies also showed declines in some industry sectors. The market capitalisation of emerging economy companies fluctuated during the pandemic period, with massive falls in share values.

Analysis of the indicators reported by companies in emerging countries is required because of the importance of these countries for the global economy and the fact that they remain attractive to the investment environment, with a much higher proportion of foreign direct investment flows in emerging economies compared to developed economies.

2. Literature review

The issue of the impact of the COVID-19 pandemic on business performance has attracted the attention of several researchers from different countries and academic backgrounds, who have tried to assess how the health crisis has affected the business environment and the global economy in general. Thus, using the Web of Science platform as a search engine, a total of 373 scientific publications have been generated, over the period 2020-2022, regarding the topic under analysis. Figure 1 shows the distribution of published scientific output over the period of 2020-2022. Most scientific publications are affiliated to institutions based and operating in China, namely about 121 articles out of the total number of publications in the period 2020-2022, followed by USA and India with 112 publications and 55 publications respectively. The hegemony of scientific outputs is held by emerging countries in Asia, followed by North America, Oceania, Europe and South America.

Figure no. 1. Scientific output by country



Source: elaborated by the authors

Following the cartographic analysis of the scientific production we can underline that most publications are affiliated to institutions in emerging countries. The abundance of articles and publications from China and India highlights the research interest on the effects of the COVID-19 pandemic in these countries, with the authors focusing in particular on the analysis of the impact of COVID-19 on the business environment in China, which was the first country affected by the pandemic and the country that first recovered. The main concern of the scientific community in these countries is to assess the response of the business environment to health and economic crises. As far as publications from developed countries are concerned, the research focuses in particular on the study of the relationship between the health crisis and the pandemic crisis and its effects on the business environment, namely on key sectors that have been most affected, for example tourism.

Table no. 1. Classification of authors by number of citations

Paper	Total Citations	TC per Year	Normalized TC
MAZUR M, 2021, FINANC RES LETT	150	75	32.395
KRAUS S, NA, INT J ENTREP BEHAV R	136	NA	44.971
SHEN HY, 2020, EMERG MARK FINANC TR	120	40	4.075
CALIGIURI P, 2020, J INT BUS STUD	96	32	3.26
ALBUQUERQUE R, 2020, REV CORP FINANC STUD	95	31.667	3.226
EGGERS F, 2020, J BUS RES	92	30.667	3.125
CRICK JM, 2020, IND MARKET MANAG	85	28.333	2.887
WANG YG, 2020, J BUS RES	81	27	2.751
GU X, 2020, EMERG MARK FINANC TR	71	23.667	2.411
DING WZ, 2021, J FINANC ECON	64	32	13.822

Source: elaborated by the authors

In terms of number of citations (see Table 1), the most cited paper is "*COVID-19 and the March 2020 stock market crash. Evidence from S&P1500*" by Mazur (2021) with a number of 150 citations. The paper provides an analysis of the impact of COVID-19 on US stock market performance. The results of the study revealed that "natural gas, food, healthcare and software stocks achieve high positive returns, while stock values in the oil, real estate, entertainment and hospitality sectors decline dramatically". At the same time, the authors note that companies react differently to the earnings shocks caused by the healthcare crisis.

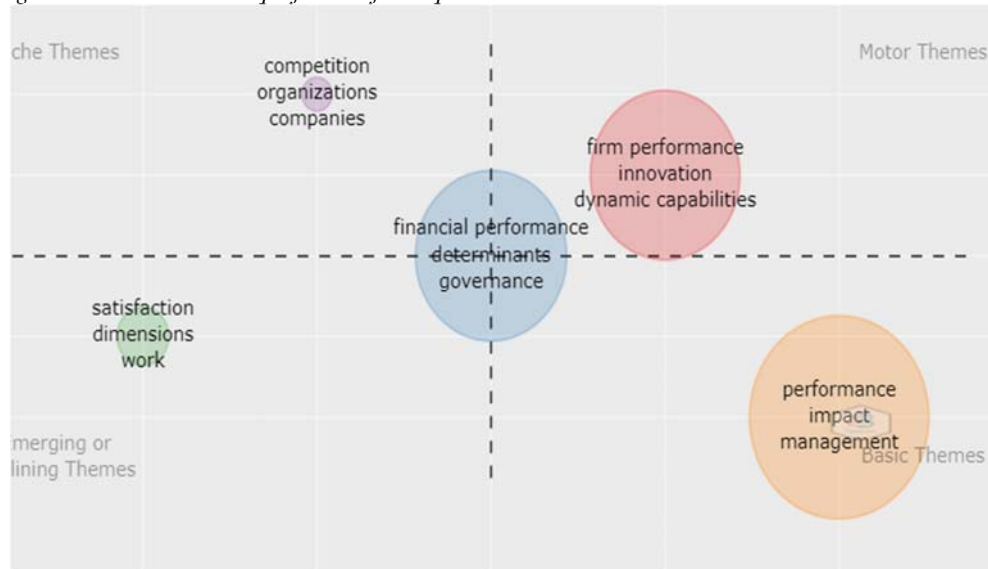
Shen et al. (2020) studied the impact of COVID-19 on corporate performance of Chinese companies. The authors concluded that the COVID -19 pandemic negatively influenced the corporate performance of Chinese companies, and "the negative impact of COVID-19 on firm performance is more pronounced when the scale of investment or sales revenue of firms is lower". Caligiuri et al. (2020) argue that "the pandemic has led to increased cross-border remoteness issues (e.g. as a result of travel bans and reduced international mobility) and often also to new intra-firm remoteness challenges imposed on previously placed employees". At the same time, the authors consider that the COVID-19 pandemic requires a redefinition of organisational performance of the enterprise.

Eggers (2020), starting from the premise that SMEs are the "backbone of any economy", has conducted a literature review analysing SMEs in previous crises and proposes ways to overcome economic downturns in the areas of finance, strategy and institutional environment. Gu et al. (2020) argue that the COVID-19 pandemic had a major negative effect on manufacturing firms, "while industries such as construction, information transfer, computer and software services, health care and social assistance were positively affected by COVID-19".

Anh et al. (2021) explored the effects of COVID-19 on daily stock returns of listed firms in Vietnam, finding that increasing the number of COVID-19-infected individuals negatively impacts stock returns. Vietnam is a rapidly developing economy that has managed to control the pandemic with a rejuvenated stock market after the lockdown.

Using the Bibliometrix software, we have carried out an analysis of the research areas according to the centrality and density of the themes. According to Wasserman and Faust (1994), "the network density of each cluster ranges from 0 to 1, where a value of zero indicates that there is no relationship between cluster members and a value of 1 indicates that all clusters are interconnected, this being a maximum level of relationship that can exist between cluster members. Vertical axis - the area of centrality is an attribute that identifies the node with the most connections in the network". The strategic dilemma consists of four quadrants: niche themes - segments of themes with a specialised character and marginal importance; motor themes - are located in the right quadrant and represent developed and relevant themes with a strong centrality and density linked to outside concepts; emerging or declining themes - are marginal, poorly developed or disappearing research themes with low centrality and density; basic themes - are important but poorly developed research areas (Callon et al. 1991; Courtial and Michelet, 1994; Coulter et al. 1998; López-Herrera, 2011).

Figure no. 2. Thematic map of scientific output 2020-2022



Source: developed by the authors with Bibliometrix

In the period of 2020-2022, five research themes have been identified (see Figure 2) according to the publications, classified into niche themes, motor themes, emerging or declining themes and basic themes. Niche themes with a specialised focus are grouped in a cluster, consisting of themes such as competition, organisations and companies. However, these themes are of negligible importance for scientific production and are only well developed internally. The most frequent research themes according to the number of appearances of the keyword plus are the basic themes, which are grouped in a cluster made up of the following topics: performance (147), impact (91), management (58), firms (28), capabilities (21), crisis (19), resilience (18), competitive advantage (13) and entrepreneurship (13). The motor themes, which represent a large part of the scientific production, with a high density and centrality are the following: firm performance (47), innovation (32), dynamic capabilities (22), business (20), moderating role (17), antecedents (13), mediating role (13), knowledge (12), perspective (12) and strategy (11).

The scientific output from 2020-2022 focused on assessing the impact of the health crisis on the business environment, studying the performance of firms in the context of the crisis, management decisions on countering the effects of the COVID-19 pandemic. By the end of 2021, researchers' concerns are focused on analysing how the world's economies are recovering from the retreating COVID-19 pandemic. Our study complements the existing scientific output by elucidating the impact of the COVID-19 pandemic on indicators reported by companies in emerging economy countries.

3. Research methodology

The first stage of the research consisted of a quantitative and qualitative analysis of the literature on the topic "impact of COVID-19 on firm performance". Thus, articles published in the period 2020-2022 were selected from the Web of Science platform, a period in which scientific production focused on analysing the impact of the pandemic on the global economy and in particular on the business environment. Applying as search filters the keywords: firm performance, emerging countries and COVID-19, it resulted in 373 articles.

The second stage of the research is the overview analysis of EVA, Equity EVA, BV of Equity, BV of Capital and Market Capitalization indicators that are reported by companies in emerging economy countries during 2019-2021 and the impact of COVID-19 pandemic on them. For this purpose, we collected data from the financial reports of 21,977 companies, grouping them into 94 industries, from emerging economy countries.

4. Findings

Economic indicators reported by companies aim to highlight the health of the companies and to demonstrate to their stakeholders the sustainability of the business (Grosu et al. 2022) In times of economic/social downturn, the analysis of performance indicators is an important process for investors in analysing investment risk.

Market capitalisation is an important indicator for investors in Value-at-Risk analysis (an indicator that measures investment losses in an investment package), representing the market value of a company's shares and being calculated by multiplying the total number of outstanding shares of a company by the current market price of a share. According to researchers (Bloom et al.,2009; Schwert, 1998) - during economic downturns - market capitalization affects Value-at-Risk, the market volatility during this period being much higher.

The performance of the EVA indicator value leads to the increase in stock returns, i.e. the increase or decrease in stock price being strongly associated with the performance of the EVA indicator (Behera, 2020). According to researchers, EVA provides broader explanations for stock returns than other accounting measures (Behera, 2019). Economic value added (EVA), is "an indicator of a company's performance calculated as the difference between net operating income and the cost of capital employed to produce that income".

The Book Value of Equity (BVE) indicator represents the fund that belongs to shareholders, being available for distribution to them and being calculated as the net amount remaining after deducting all the company's liabilities from its total assets. Fama and French (2008) argue that "past change in equity and book price provide independent information about expected cash flows that can be used to improve estimates of expected returns." Bali et al. (2013) note that "the change in equity capital says much more about expected stock returns than price changes."

Book Value of Capital (BVC) is the book value of liabilities plus the book value of equity, which measures the amount of capital invested in existing assets.

The Economic Value Added to Shareholders (Equity EVA- EEVA) represents the excess return earned by investors from shares and is calculated as:

$$EEVA = (ROE - Cost\ of\ equity) * Book\ value\ of\ equity. \quad (1)$$

Thus, based on the analysis of the relationships between market capitalization and the indicators economic value added (EVA), book value of equity (BVE), book value of capital (BVC) and number of firms, we constructed an econometric model which is presented as:

$$MC = \alpha + \beta_1 * BVE + \beta_2 * EEVA + \beta_3 * BVC + \beta_4 * EVA + \beta_5 * NF + \varepsilon \quad (2)$$

This econometric model aims to highlight the influence of EVA, BVE, BVC and number of firms indicators on market capitalisation in the post-pandemic period (2019), during the pandemic (2020) and in 2021, which is considered the restart year of the world economies.

Table no. 2. Correlation coefficients calculated on the basis of indicators reported by emerging market companies in 2019

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Mr
		B	Std. Error	Beta		
1	(Constant)	56064.918	20061.533		2.795	.006
	BV of Equity 2019	1.989	.283	1.455	7.018	.000
	Equity EVA 2019	10.058	1.220	.540	8.243	.000
	BV of Capital 2019	-.620	.157	-.948	-3.947	.000
	EVA 2019	2.560	.717	.183	3.572	.001
	Number of firms 2019	246.096	70.018	.120	3.515	.001

a. Dependent Variable: Market Capitalization 2019

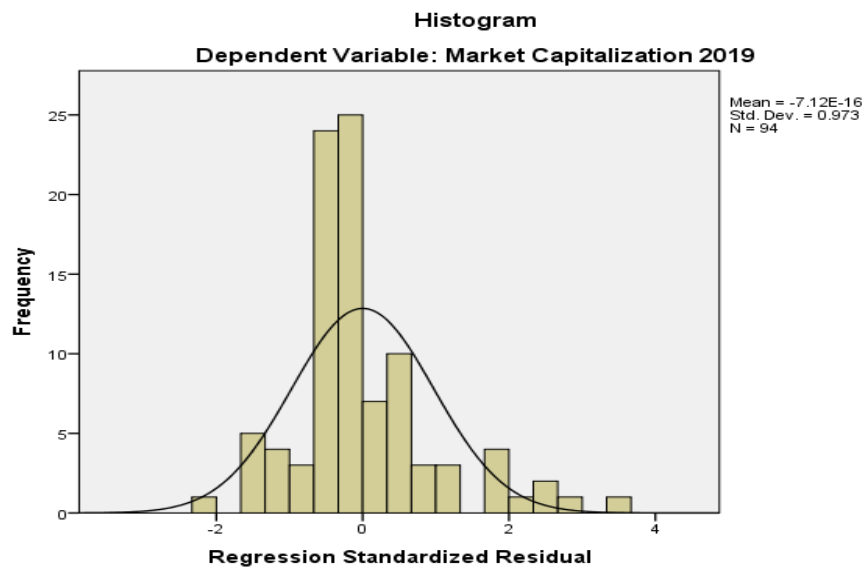
Source: developed by the author using IBM SPSS Statistics, version 26

According to the data in Table 2, the estimated equation of the multiple linear regression model looks like this:

$$MC = 56064,918 + 1,989 * BVE + 10,058 * EEVA - 0.620 * BVC + 2,560 * EVA + 246,096 * NF \quad (3)$$

According to the correlation coefficients, it can be observed that the market capitalization of companies in emerging economies in 2019, therefore before the COVID-19 pandemic crisis was influenced by the economic value added (EVA) indicator in the proportion of 2.56, followed by the economic value of equity (EVA) indicator, respectively 1.98 and economic value added for shareholders (EEVA). In this regard, we estimate that the development of EVA, EEVA and BVE indicators contributed to the increase in the market value of companies, while the increase in economic value of equity (EVA) leads to a decrease in the market value of shares. There is a strong correlation between EVA and stock price and the indicator provides important information regarding the performance of the firm (Behera, 2020; Ahmed, 2015; Bhasin, 2013). Banerjee (2000) argues that "the market value of the firm could be predicted by the present value of EVA". The economic value added indicator plays a key role in "predicting the market value of equity by adding the book value of equity with the present value of EVA under the assumption of constant required return and constant return on equity" (Stewart, 1991). Economic value added is an important indicator for assessing firm performance and also for evaluating and predicting the stock price, i.e. the market value of the firm, providing valuable information for stakeholders in evaluating and anticipating investment risk.

Figure no. 3. Histogram



Source: developed by the author using IBM SPSS Statistics, version 26

In 2019, the market value of emerging economy companies operating in the semiconductor, electronics, brokerage & investment banking sectors, saw massive declines in share prices. Instead, the companies in the Computer Services, electronics (consumer & office) and oil/gas distribution sectors recorded share price increases, with a significant number of financial transactions on the stock markets.

Table no. 3. Correlation coefficients calculated on the basis of indicators reported by emerging country companies in 2020

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Mr
		B	Std. Error	Beta		
1	(Constant)	61790.867	28931.901		2.136	.035
	BV of Equity 2020	2.574	.324	2.445	7.950	.000
	Equity EVA 2020	1.786	1.766	.068	1.011	.315
	BV of Capital 2020	-.885	.191	-1.625	-4.632	.000
	EVA 2020	1.216	1.009	.097	1.206	.231
	Number of firms 2020	247.005	85.801	.139	2.879	.005

a. Dependent Variable: Market Capitalization 2020

Source: developed by the author using IBM SPSS Statistics, version 26

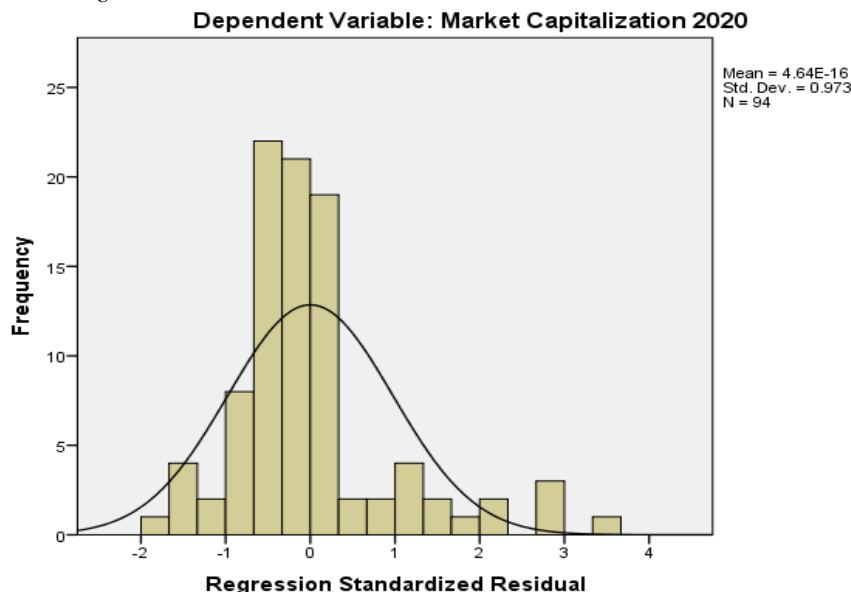
The estimated equation of the multiple linear regression model for the year 2020 is as follows:

$$MC = 61790,867 + 2,574 * BVE + 1,786 * EEVA - 0.885 * BVC + 1,216 * EVA + 247,005 * NF \quad (4)$$

During the COVID-19 pandemic, the increase in the book value of capital (BV of Capital) leads to a much greater decline in the market value of companies compared to the pre-pandemic period. At the same time, it is observed that the economic value added decreased significantly compared to 2019, from 2.56 to 1.21 in 2020. The economic value of capital in 2020 increased significantly compared to 2019, from 1.98 to 2.57. The economic value added to shareholders or the excess return earned by investors from shares decreased drastically in 2020 compared to 2019, from 10.05 to 1.78.

During the pandemic period, firms in emerging economies performed poorly, the investment risk during this period being very high.

Figure no. 4. Histogram



Source: developed by the author using IBM SPSS Statistics, version 26

If in 2019, companies belonging to the Beverage (alcoholic), Software (entertainment), Brokerage & Investment Banking, Oil/Gas (Integrated) sectors saw increases in share price, then in 2020 these saw a decline in share price value. Meanwhile companies in the Healthcare, Utilities, Retail,

Computers/Peripherals sectors have seen an increase in share market value, given the fact that due to the COVID-19 pandemic, there has been an increase in demand. The market capitalization rate is influenced by external shocks, macroeconomic environment respectively economic and social crises that have repercussions on the business environment (Kurihara, 2006; Rad, 2011).

Table no. 4. Correlation coefficients calculated on the basis of indicators reported by emerging country companies in 2021

Model		Unstandardized Coefficients		Standardized Coefficients	t	Mr
		B	Std. Error	Beta		
1	(Constant)	79931.270	34027.578		2.349	.021
	BV of Equity 2021	2.399	.413	1.896	5.815	.000
	Equity EVA 2021	7.711	2.107	.347	3.659	.000
	BV of Capital 2021	-.908	.222	-1.422	-4.093	.000
	EVA 2021	.029	1.049	.002	.028	.978
	Number of firms 2021	425.510	99.143	.198	4.292	.000

a. Dependent Variable: Market Capitalization 2021

Source: developed by the author using IBM SPSS Statistics, version 26

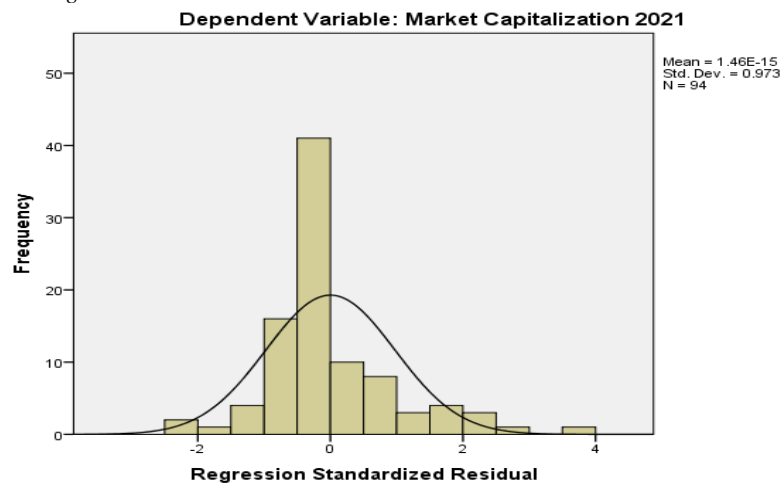
For the year 2021, the regression equation of the multiple linear model is outlined as:

$$MC = 79931,270 + 2,399 * BVE + 7,711 * EEVA - 0.908 * BVC + 0,029 * EVA + 425,510 * NF \quad (5)$$

In the 2021 period, the increase in the book value of capital (BV of Capital) leads to a much larger decrease in the market value of companies compared to the pre-pandemic period. At the same time, it is observed that, the economic value added (EVA) decreased significantly compared to 2020, namely from 1.21 to 0.29 in 2021, having an upward trend from the beginning of the pandemic until now.

The economic value of capital in 2021 decreased compared to 2019, from 2.57 to 2.39. The economic value added to shareholders or excess return earned by investors on equity increased in 2021 compared to 2020, namely from 1.78 to 7.71.

Figure no. 5. Histogram



Source: developed by the author using IBM SPSS Statistics, version 26

The year 2021 is characterized as a good year in terms of market value of shares for companies in the Telecom (wireless, services) and retail sectors. Companies in the oil/gas, air transport, beverage and semiconductor sectors continue to be affected by the effects of the COVID-19 pandemic, with declines in share market value.

The recovery of the business environment is difficult and slow, hampered by high inflation, the energy crisis and speculative market effects.

5. Conclusions

Even though a number of measures have been taken by governments to support the business environment, the effects of the pandemic are still strongly felt today, as evidenced by the downward trend in economic indicators reported by companies in emerging economies. At the same time, companies are coping differently with the shocks caused by the pandemic crisis, which also triggered the global economic crisis, amplified by rising inflation.

The determinants of overall firm value are economic value added, economic value of equity and shareholder value added. These are important factors for predicting the market value of the firm and anticipating investment risk. Research results show that during the pandemic period, the companies in emerging economy countries performed poorly and the market value had a fluctuating trend during and after the COVID-19 pandemic. Thus, companies need to identify tools to increase the level of performance, either by first identifying and reducing non-essential business expenses and second, by assessing the level of productivity of the company.

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