

PANDEMIC'S IMPACT ON THE STOCK MARKET EVOLUTION (ON THE EXAMPLE OF DAIMLER AG)

ВЛИЯНИЕ ПАНДЕМИИ НА ЭВОЛЮЦИЮ ФОНДОВОГО РЫНКА (НА ПРИМЕРЕ DAIMLER AG)

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Abstract: Пандемия коронавируса (COVID-19) - это не только беспрецедентный кризис для человечества, но и, как выяснилось, одна из самых экономически затратных пандемий в новейшей истории. Последние финансовые отчеты показывают, что вспышка COVID-19 серьезно подорвала мировую экономику и финансовые рынки. Многие фондовые рынки по всему миру пережили сильное падение после вспышки пандемии. Чтобы понять влияние данной пандемии на фондовые рынки, в этой статье была рассмотрена эволюцию фондового рынка на примере немецкого производителя автомобилей DAIMLER AG.

Ключевые слова: фондовый рынок, технический анализ, фундаментальный анализ, экономическое развитие, COVID-19.

JEL CLASSIFICATION: G11, G32, P45

INTRODUCTION

The rapid spread of the unprecedented COVID-19 pandemic has changed the global outlook unexpectedly. This pandemic is not only a global health emergency but also a significant global economic downturn too. As many countries adopt strict quarantine policies to fight the unseen pandemic, their economic activities are suddenly shut down. Most importantly, consumers and firms have prevented their usual consumption patterns due to the creation of panic among them and created market abnormality. Uncertainty and risk created due to this pandemic, causing significant economic impact all over the globe affecting both advanced and emerging economies. In this context, the stock market has responded with dramatic movement and adversely affected. From the perspective of stock market participants, the COVID-19 health crisis translated into a broader economic and financial crisis. The results of empirically investigated effects of social distancing policies on activities of the economy and indices of the stock market, showed that the increasing number of lockdown days, decisions of monetary policy, and restrictions on international travel seriously influenced the level of economic activities as did the closing, opening, and lowest and highest stock price of major stock market indices.

Thus, Financial reports show spectacular losses recorded by major stock market indices in the world due to the COVID-19 pandemic sweeping across the globe. Statistics show that MSCI World index, which includes stocks from 23 developed countries and 24 emerging markets lost 10.7 percent of its value between January 23 to March 6, 2020. In the same period, STOXX Europe 600 index, which includes stocks of 600 companies from 17 European countries, fell by more than 12 percent. Approximately the same drop was recorded by the CSI 300 Index, which includes the 300 largest stocks in the Chinese Class-A share market, in the same period.

European shares plunged again due to coronavirus fears. The pan-European STOXX 600 fell 8.7% to its lowest level since 2013. The latest fall means the index has lost more than a third of its value. Paris was down 8.4%, London's FTSE100 fell by 4%, Milan lost 6% and Spain retreated nearly 8%. Germany's benchmark DAX was down 7.1%. Just four weeks after its record high, the bluechip index was down 40% to a five-and-a-half-year low. Never before in its history did the German leading index fall so drastically so quickly. The DAX failed to rally above 9,000 points as the coronavirus

pandemic continued to rattle the markets. At the end of trading, the DAX's 30 blue-chip companies had shed 5.31%, floundering on 8,742.25 points. At the same time, the imposed restriction on internal movement and higher fiscal policy spending positively affected the level of economic activities and capital market indicators. For a more illustrative example of the impact of pandemic effects, this paper analyzes the evolution of the stock market using the example of the transnational automobile manufacturer, the largest company in Germany in terms of turnover, Daimler AG.

PROPOSED RESEARCH METHODS AND SOURCES

This article uses both empirical and theoretical research methods, which include comparison, measurement, analysis, synthesis, induction, functional and statistical analysis, as well as an integrated approach. The analysis was carried out according to the data obtained from Annual Reports of DAIMLER AG and financial portal Investing.com. Implemented investigation are based both on technical and fundamental methods. For estimation of DAIMLER AG equities quality, in article were calculated and analyzed the following indicators: payout ratio, earning per share, dividend per share, price-earning ratio, intrinsic value, profitability of the company and return on stock.

RESEARCH OF EMPIRICAL ASPECTS

There are many tools and methods in technical analysis, but all of them are based on one assumption - the dynamics of price movement is determined by the psychology of the behavior of market participants who, in similar circumstances, under the influence of human instincts - greed, herd, fears, etc. - behave the same way, forming flows of supply and demand, and the degree of imbalance between them. This allows us to predict price movements.

Technical analysis does not consider the reasons why the price changes its direction (for example, due to low stock returns, fluctuations in the prices of other commodities, or changes in other conditions), but only considers the fact that the price is moving in one direction or another, or in a certain way, for example being within a certain price interval for some time.

The beginning of 2020 was generally neutral on the German stock market. The maximum growth of the DAX index by the end of February was about 4%. The positive trend was interrupted by two falls amid tensions between the US and Iran, as well as a general correction caused by reports of an outbreak of coronavirus infection at the end of January. The largest decline in German stock exchanges was shown in the last decade of February and the first half of March. COVID-19 from China began to spread rapidly around the world, including in Europe and the United States, and as a result, quarantine restrictions began to be imposed around the world. The DAX index reacted to these events very sharply, showing a fall of 40% over 23 calendar days, which was comparable to the overall dynamics on the world's leading exchanges. First, let's look at the chart of price changes over the past year (figure 1).

When examining the line chart, it can be noted that at the beginning of the period, exactly a year ago, the share price was \$ 22, and today the shares are already trading at \$ 73.5. This means an increase of 234 percent. The bottom of the fall was reached at the end of March, which can be seen in the presented chart. However, thanks to the adoption by the monetary and fiscal authorities of active measures to support the economy. The markets have experienced one of the fastest bullish trends in years. By mid-June, the DAX was up 57%. The same thing happened with DAIMLER. Share prices returned to normal within a year.



Figure 1: Daimler AG share price changes over the past year

Source: <https://www.investing.com/equities/daimler-chart>

Next, let's look at the Japanese candlestick chart (figure 2) for a more detailed analysis of the patterns over the past 5 months. In this chart, we can see the dominance of the bullish engulfing on November 11, December 4, January 20 the bearish engulfing only on January 25. Most of the figures for the 5 analyzed months are stars and doji - more than 15 pieces. We also can see a falling wedge in December, a bearish pennant in early January, and a bullish pennant in early February. There is also an evening star on the chart on December 1 and January 22. And the morning star on October 29 and January 11. At the end of the period, an evening star is traced on the chart, and accordingly the price will most likely fall.



Figure 2: Japanese candlestick chart of Daimler AG over the past 5 months

Source: <https://www.investing.com/equities/daimler-chart>

Next, let's look at a line chart over the past 10 (fig. 3) years to determine a possible price trend. During this time, a huge number of events took place on the world market: "Flash Crash", the Occupy Wall Street protest movement, the crisis of sovereign debts of the eurozone countries, the bursting of the bubble in the Chinese stock market, the election of Donald Trump and many other events that had a sharp effect in the stock market. But none of them even comes close to the pandemic, the impact of which has spread everywhere.

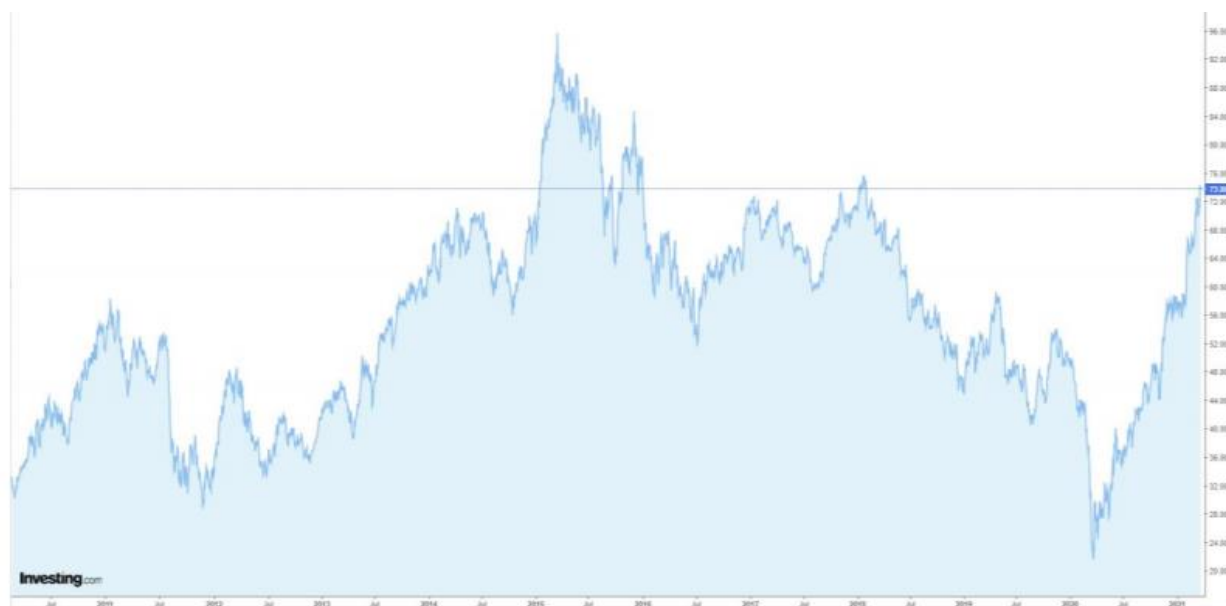


Figure 3: Daimler AG share price changes over the past 10 years

Source: <https://www.investing.com/equities/daimler-chart>

As we can see from the graph, gradual growth from 2012 to 2015, which raised the price by almost three times, is replaced by a long-term price decline by almost 5 times in 2020. The situation with the pandemic brought the share price down below their historical low, but gradually it returned to the average value. This happened due to the adoption by the monetary and fiscal authorities of active measures to support the economy. The German government has approved a 750 billion euro aid package to cope with the negative effects of the pandemic. In addition, a € 600 billion fund was created to save businesses from bankruptcy. The US Senate approved a \$ 2 trillion economic stimulus program, and the FED cut rates to zero with an increase in asset purchases from the market. All of these moves have bolstered investor confidence in the equity markets thanks to a massive influx of liquidity. Tech companies have taken the lead in recovery growth. The trend is upward and promises further price increases.

In combination with technical analysis, fundamental analysis gives the highest quality assessment of the issuer's investment attractiveness. First we analyze the ratios of a security. The initial data for DAIMLER AG's analysis were taken from "Annual Report 2020" and compiled into a table 1.

Table 1. Initial data for fundamental analysis "DAIMLER AG" (in euro)

Indicators	2018	2019	2020
Dividend	3 477 000 000	963 000 000	1 444 000 000
Net profit	7 963 000 000	3 057 000 000	4 199 000 000
Dividends on preferred shares	-	-	-
Number of shares outstanding	1 069 840 000	1 069 840 000	1 069 840 000
Stock price	73,7	53,23	73,5
Stock profitability	3,25	0,9	1,35
Equity	66 053 000 000	62 841 000 000	62 248 023 200
Capitalization	78 847 208 000	56 947 583 200	78 633 240 000

Source: <https://www.daimler.com/investors/>

Based on the information presented in the table 1, were calculated a number of indicators to estimate a quality of "DAIMLER AG" shares. The obtained results are shown in table 2.

Table 2. The main indicators of "DAIMLER AG"

Indicators	2018	2019	2020
Payout ratio, %	43,66	31,5	34,4
Earning per share, EUR	7,44	2,86	3,92
Dividend per share, EUR	3,25	0,9	1,35
Price-earning ratio	22,68	59,44	54,44
Intrinsic value, EUR	1,19	0,91	1,26
Profitability of the company	0,12	0,49	0,067
Return on stock, %	4,41	1,69	1,84

Source: calculated by the author

Payout ratio did not exceed the permissible limits throughout the entire period under review. In connection with the recent events, the company received a very low net profit and reduced its dividend payments, but nevertheless paid them. The company correctly evaluates its financial capabilities and pays dividends to its investors based on profit, and therefore it manages to avoid financial problems.

Although the value of this indicator is in decline, there are no definite norms for earning per share, since it should be compared with that of other companies. Sometimes the decline or growth is characteristic of the entire industry as a whole and affects all companies, so first you need to draw a parallel. And if we take into account the events of the past year, then such a recession was typical for almost everyone. Dividend per share reflects the attractiveness of securities in the stock market, and the larger it is, the better. It is analyzed together with the previous indicator. And if the earnings per share for the three analyzed years decreased, then the dividends per share decreased accordingly, and this is much more important for potential investors, since this is what they can eventually get.

Price-earning ratio shows how many monetary units the investor is willing to pay for one unit of the company's net profit and how many years this share will pay off. For strategic investors, an increase in this indicator is more attractive, and for investors aimed at profit, on the contrary, a decrease. Still, a value of 60 or even 55 is quite high and speaks of an overvalued stock.

The value of intrinsic value in 2019 went beyond acceptable limits, which indicates that the company was not as well rated on the stock market and needed a little growth. And in 2020, growth has brought this ratio back to normal.

Profitability of the company reflects the amount of profit received by the company at the expense of equity capital and for "DAIMLER AG" this indicator has significantly decreased, which calls into question the feasibility of such a large equity capital.

In world practice, return on stock is compared with the average deposit rate in the banking sector in order to understand whether it is worth investing in the issuer at all or it is more profitable to keep money in the bank (and much more reliable). A halving of this indicator does not have a good effect on the attractiveness of stocks for investors. The company needs to raise this indicator at least to the level of 2018.

Further, we will consider some news related to the DAIMLER AG company for a better understanding of the situation:

- Daimler recalls 1.3M U.S. vehicles for emergency-call location error
- U.S. imposes \$30 million penalty on Daimler for delayed truck recalls
- Daimler Revenue, Profit Drops as Coronavirus Slows Auto Sales
- Daimler will pay \$ 1.5 billion in the framework of the settlement in the United States on the case of manipulation of data on emissions

Over the past 2 years, the amount of negative news has far exceeded positive: fines, car recalls, falling stocks throughout the industry; DAIMLER AG will have to work hard in 2021 in order to maintain the current volume of investments in innovative technologies and the development of electric vehicles and at the same time remain attractive to investors. In addition, the instability of the political situation in the world does not play into the hands of either DAIMLER AG or any other company. In addition, COVID-19 is not going to give up at all and is undermining sales worldwide. We can only hope for a profitable year without unprofitable quarters and investor interest, as well as for the company's chastity and legal

activity, which will not entail any more fines. Moreover, of course it would be nice to get rid of the pandemic that is poisoning the entire world market.

CONCLUSION

By far, the coronavirus pandemic has been the worst blow to the economy and all areas of human life in the past 10 years or more. Humanity will take a long time to recover from its consequences. The pandemic had a negative impact even on companies that, in theory, were supposed to benefit from it. Amazon and Google, taking into account the specifics of their activities, instead of increasing profits, received a huge increase in the cost of adapting and reorganizing their activities.

However, if you look at the stock market, you will notice that after not such a long period, it has already begun to bounce back. The example considered in the work clearly shows this. DAIMLER AG, whose activity was very much undermined, after the fall of shares below the historical minimum, already a year later restored prices to their normal level and it is quite possible that the growth will continue. All this is happening thanks to the competent policy of the European Union. Moreover, the European Union has signed contracts for the supply of vaccination products with six developers: AstraZeneca, Sanofi-GSK, Janssen Pharmaceutica, BioNTechPfizer, Moderna and CureVac.

In the first half of 2021, a large-scale vaccination campaign should take place in Europe, the result of which should be the lifting of the lockdown and the return of everyday life to the usual rhythm. In addition, the European regulator in 2020 launched the Pandemic Emergency Purchase Program (PEPP), which is the purchase of government and corporate securities from the market. The volume of this program was increased to 1.85 trillion euros, the period of its implementation was extended until March 2022. The ECB is also extending other assistance programs, in particular the purchase of bonds for 20 billion euros per month, and simplified conditions for attracting loans for banks, maintains soft rules for providing collateral until June 2022 and adopted four new emergency long-term refinancing programs that will help with liquidity. All these measures will contribute to the recovery of the EU economy in 2021. The German government also intends to stimulate economic recovery. 22 billion euros of assistance will be received by small companies with a turnover of up to 200 thousand euros per month, as well as self-employed with an income of up to 5 thousand euros per month. These funds will be transferred in the first half of 2021 to cover fixed costs. The German economy was one of the best in Western Europe, showing the smallest decline in 2020 due to its optimal structure. The year 2021 should be successful for the country, thanks to large-scale vaccinations, the continuation of unprecedented fiscal and monetary assistance for the economy of Germany and the EU. In general, the economy is adjusting and normalizing.

BIBLIOGRAPHY:

1. BODIE, Z., KANE, A., MARCUS J. Investments, McGraw-Hill Education, tenth edition, 2013, 1080 p.
2. DAIMLER AG. Annual Reports. [online] [accessed 21.04.2021] available on: <https://www.daimler.com/investors/reports-news/annual-reports/>
3. MACHMUDDAH Z. etc. Stock Market Reaction to COVID-19: Evidence in Customer Goods Sector with the Implication for Open Innovation. Journal of Open Innovation: Technology, Market, and Complexity, MDPI, vol. 6(4), 2020
4. REILLY, F., BROWN, K. Investment Analysis and Portfolio Management, tenth edition, South-Western Cengage Learning, 2012, p. 1082.
5. Stock market quotes platform and financial news. [online] [accessed 21.04.2021] available on: <https://www.investing.com/>
6. Investor relations from the official website. [online] [accessed 21.04.2021] available on <https://www.daimler.com/investors/>
7. <https://www.statista.com/statistics/1103739/ftse-100-index-uk/>

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