

# **The impact of the stock split on the investment decisions of individual investors on the Warsaw Stock Exchange**

Doctoral dissertation written in the Collegium of World Economy under  
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## **Abstract**

A split is a division of the nominal value of shares in a specific ratio. As a result of the split, the share price is divided by an agreed share ratio and the number of shares in the exchange trade increases proportionally. The distribution of the nominal value of shares should, in principle, be merely technical and unaffected by investors' decisions. The split of the nominal share value is used primarily to improve the liquidity of the exchange trading. The split of the nominal share value should maintain the optimum parameters of the split, as the share price influences investors' perception of the company. A share price that is too low can cause a company hitherto regarded as a strong and stable entity to start being perceived as speculative.

The volatility of share prices on the stock exchange undoubtedly has a major impact on an investor's decision to buy shares. Often, the risks that an investor takes on are due to their unawareness. Investors, especially inexperienced ones, underestimate the existence of investment risks and take decisions that deviate from the strategy originally envisaged. It is not

uncommon for investors to abstain from realising the profits earned for too long and, as a result, their investments end up with much lower rates of return or losses.

The aim of the dissertation is to present the process of splitting the nominal value of shares of companies listed on the Warsaw Stock Exchange and to attempt to determine the impact of the split on the decisions of market participants. In particular, it is important to see whether the split can be a factor that induces investors to buy shares in companies that split the nominal value of their shares.

In order to investigate whether the split of the nominal value of the shares can be a factor affecting investors' decisions to choose this rather than another company as an object of investment, splits were analysed in terms of 10 and 20 sessions before and 10 and 20 sessions after the date of the split of the nominal share value. A comparison was made between the return on investment in the shares prior to the scheduled par value distribution date and the return on the WIG index. In addition, an analysis of the return on investment in shares between the date of the split (i.e. the first trading session at which the new, lower share price was applicable) and the end of the relevant calendar year was carried out.

The following thesis was formulated in the dissertation: Between 1993 and 2019, individual investors purchasing shares before the split of par value achieved above-average returns, while those purchasing shares on the day of the split recorded lower rates of return over the following 10 and 20 trading sessions, or incurred losses compared to the rate of return achieved on investments in the broad market index, the WIG. The most important period for triggering the split effect, i.e. a significant increase in the share price and simultaneous herding behaviour of investors, was the period prior to the day of the split of the nominal share value.

In addition, the author verified the following statistical research hypotheses:

Hypothesis 1. The performance of investments in shares of companies making a nominal value split and the returns of the WIG index are the same.

Hypothesis 2 The rate of return on investment in shares of companies before the split is statistically higher than the investment in the WIG.

Hypothesis 3 The return on investment in shares after the split is statistically lower than the investment in the WIG index.

The positive verification of the aforementioned hypotheses is important in relation to the thesis that by investing in shares before the split, historically above-average returns could be achieved. In addition, an investment in shares on the first day after the split carried a risk of loss, as the rate of return on such an investment was lower than the rate of return on the WIG index.

The following research methods became helpful in proving the thesis and achieving the intended purpose of the dissertation:

1. An analysis of companies performing the share par value split between 1993 and 2019;
2. An analysis of the returns on investment in the companies' shares making the split compared to the returns on the WIG index at different time intervals (10, 20 trading sessions before and 10 and 20 trading sessions after the split date);
3. Analysis of the split's impact on the investment decisions of market participants (individual investors);
4. An analysis of the impact of initial public offerings on the number of stock splits carried out;

In order to present precise research results, the analytical material comprises 126 splits conducted between 1993 and 2019 by companies listed on the Main Market of the Warsaw Stock Exchange.

Accordingly, the dissertation consists of an introduction and four chapters, from which the theoretical (Chapters I-III) and empirical (Chapter IV) parts are distinguished. The timeframe of the analysis is 1993-2019.

The first part of the dissertation presents the principles of share trading and characterises its participants in Poland. In addition, the mechanism for the distribution of the nominal value of shares is presented and discussed in detail, including its origins and legal and economic considerations. Examples of individual investor behaviour in the light of behavioural finance theory are also identified.

The empirical part of the dissertation contains an analysis of companies that have carried out par value share splits and the period prior to the date of the share split is discussed in detail. The listing period of the companies after the splits (covering 10 and 20 trading sessions) was also analysed.

The thesis presents the regulations applied in Poland and in developed countries to increase the security of trading and the transparency of issuers.

The research methods used in the dissertation included: analysis of the literature on the subject, descriptive method, analysis of statistical data, the author's research, and analysis of the content of the companies' statutes listed on the Warsaw Stock Exchange.

Statistical summaries, which are mainly the result of the author's work, were used for the way the results were presented. There were also analyses of source materials such as data from the Warsaw Stock Exchange, the Central Securities Depository of Poland, reports, statements and announcements of the Polish Financial Supervision Authority.

The results are presented in the form of tables, figures and graphs. In addition, data presented by the Central Statistical Office (CSO) and the Institute for Market Economy Research, legal acts of the Republic of Poland, as well as scientific publications (monographs and loose-leaf publications) in the fields of financial theory, economics and behavioural finance were used.