Voluntary Delisting at Stages of Corporate Life Cycle

Delisting is a termination of company's stock listing at the stock exchange. According to the World Bank data, since 2014 the total number of public companies worldwide has been decreasing by 1% annually, and the delisting-to-IPO ratio for the last 10 years is accounted as 2,5 in the EU and 1,4 in the US. Delisting can be classified as a *forced* (initiated by the exchange) or a *voluntary* one (Macey et al, 2008). The basic assumption represented in the literature is that a company shall delist from the exchange in case it seeks to remove the listing costs, as they exceed the benefits of listing (Martinez and Serve, 2013). Such firms are usually *underperforming* (Thompsen et al., 2014), *undervalued* (Wier et al., 2014) and have a *low financial visibility* (Achleitner et al., 2014). At the same time, delisting can be caused by the change in compliance requirements, as companies may refuse to adopt new regulations, such examples being SOX (Vulcheva, 2011) or IFRS (Pounell and Vieshinska, 2012). Delisting is studied with logistic regressions that value the impact of financial and non-financial factors on the probability of this decision. This method shows a high level of heterogeneity, which is represented by inability to observe corresponding effects for similar samples (geographically, timewise, industry-wise and etc.), and due to this matter can be used only to define relative dependencies for the compared samples.

In our research we, *first,* introduce the corporate life cycle to the regression model, which allows us to perform a study that is naturally based on sample comparison (for every stage) and reduces heterogeneity; *second*, we demonstrate the influence of the life cycle stage on the delisting probability; *third,* we examine the delisting factors of Russian-registered public companies; *fourth,* we define specific delisting determinants for high- and low-innovative enterprises.

Our study consists of three parts. In the first part, we identify the corporate life cycle stage for every company in the sample using the cash flow sign framework (V. Dickinson, 2005). We limit the number of stages to four: *start, growth, mature* and *decline* by distributing the *shake-out* stage companies through assessing the ones with positive cash flow from operations to *mature* and the rest to *decline* stages.

In the second part, we regress the financial factors and life cycle stage in order to find their influence on the delisting probability. The financial factors that we test are *low-performance, undervaluation, financial leverage, investing activity, volatility of stocks, current liquidity.* After this, we test the model for each life cycle stage respectively.

In the third part, we test the model for samples of high-innovative and low-innovative firms and define the delisting determinants that are significant for these types of companies. In order to assign the level of innovativeness for the companies in sample, we use the industry-based classification suggested by the OECD.

We use the data of Bloomberg database to construct a sample of 170 Russian-registered companies from 2011 to 2019 calendar years, including 75 delisted firms.

We identify that the life cycle stage does influence delisting probability, and the *growing* and *declining* firms are less likely to delist. At the same time, we demonstrate that companies at the *start* stage are likely to delist due to investment reduction; *growth* stage companies would delist when the stock volatility is increased. More interestingly, we find that overperforming *mature* firms and *declining* enterprises with high liquidity often refuse public status. Additionally, we establish a positive influence of liquidity on probability of high-innovative firms delisting.

The research method used in the study is based on comparing samples for every life cycle stage. As mentioned before, the delisting research method that is based on using logistic regressions is applicable for defining relative dependencies. This is why the method suggested in the study combines the benefit of sample comparison with theoretically justified corporate life cycle theory, and, *in our opinion*, allows to improve the explanatory power of the model.