



SECTORAL MARKET RISK PREMIUMS IN TURKEY

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ABSTRACT

Purpose- This empirical study aims to measure the sectoral market risk premiums in the Turkish stock market for the period of 2016 and 2021 and also estimate the sectoral market risk premiums for the years 2022, 2023 and 2024. Capital Asset Pricing Model (CAPM) is the most widely used and popular method in the analysis of investment projects, stock valuation, firm valuation, mergers and acquisitions, initial public offerings, and secondary public offerings. The market risk premium in CAPM is defined as the the difference in between expected market returns and interest rates. The determination of market risk premium is one of the most important inputs in the application of the CAPM. This study intends to calculate the market risk premiums and volatilities for the sectors of Borsa Istanbul for the periods of pre-Covid (2016-2017-2018) and in the Covid-19 era (2019-2020-2021).

Methodology- The monthly data from the Reuters Database are collected for the BIST100 and 17 different sectoral indexes and short-term interest rates between the years 2016 and 2021. A total of 1296 observations are obtained. Based upon the historical observations, the market risk premiums are defined as the difference between the market index returns (BIST100 and 17 sectoral indexes) and the average short-term interest rates on monthly basis. Then, using the ARIMA forecasting method, the market risk premiums are estimated for the years 2022, 2023, and 2024. A total of 576 data points are forecasted.

Findings- The average risk premium on the BIST100 index is about -2.44% for the pre-Covid era and 14.01% for in-Covid era. The market risk premiums sharply increased from the pre-Covid period to the Covid period. The average volatility on the BIST100 index is about 0.23% for the pre-Covid era while 0.34% in the Covid era. The volatility of the market returns also incresed significantly. Moreover, the Cusum Square Test results point a structural break in the Covid-era. The ARIMA estimates of market risk premiums are 1.87% for 2022, 0.43% for 2023 and 0.42% for 2024. The ARIMA estimates of volatilities are 0.70% for 2022, 0.72% for 2023 and 0.71% for 2024.

Conclusion- The empirical evidence strongly support a structural change in the Covid era with higher market risk premiums and volatilities. The forecasted market risk premiums for the next three years show a diminishing trend while the forecasted volatilities show high and persistent level.

Keywords: Market risk premium, BIST100, ARIMA forecasting, sectoral market risk premiums, volatility.

JEL Codes: G10, G12, G17

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