

An Analysis of Korea Stock Market's Representativeness of Real Economy

-Focusing on Comparison among Industries

Kim Do Wan,* Kim Dong Hun,** and Lee Jin Ki***

The Korea stock market and the real economy have shown dramatically different paces of recovery since the spread of COVID-19. The accommodative stance of domestic and global macro-financial policy and economic agents' expectations for asset price increases have been frequently cited as major factors behind this gap. This article analyzes various aspects of the Korea stock market's representativeness of the real economy, based on the recognition that the difference in the pattern of recovery is partially attributable to a structural factor of the stock market by which it fails to fully reflect shocks on the real economy.

Based on the methodology of Schlingemann & Stulz (2021), this article analyzes how well changes in market capitalization of listed companies capture changes in their value added and employment using unrepresentativeness measures and the determination coefficient of a regression analysis. It also analyzes whether there is a stable relation between market capitalization for each industry and real economic indicators through a co-integration test from a macroeconomic perspective.

The results of the analysis show that the Korea stock market properly represents the value added of manufacturing industries but provides a relatively weak representation of the value added of all industries and the service industries. This was consistently seen in both a cross-sectional analysis using

data of listed companies and a time series analysis using macro indicators.

In the case of the employment representativeness of listed firms, it is generally lower compared to value added representativeness. The employment representativeness in both the manufacturing and service industries has shown a downward trend since the financial crisis. This is attributable to the rapidly increase in the market capitalization portion of the IT manufacturing and IT service industries, both of which have relatively low job creation effects.

The results of the aforementioned analysis are closely associated with the facts that the industrial structures of the Korea stock market and the real economy differ, and the share of listed companies in the real economy (10% level in terms of value added and 4% level in terms of employment) is low. The difference in the industrial structures comes from the fact that the manufacturing industries, led by the IT industries, account for a large share of the Korea stock market, while the service industries account for a large share of the real economy.

In conclusion, the analysis results provide a couple of important implications. First, if a shock with uneven impacts on the manufacturing and service industries occurs in the future, like that seen during the COVID-19 pandemic, the Korea stock market and the real economy could show different patterns, since the KOSPI represents listed companies mainly in the manufacturing industries rather than the real economy as a whole. Second, the Korea stock market could be vulnerable to external shocks, because it mainly represents export and manufacturing industries rather than domestic demand and service industries. Third, when stock prices are used as a leading business indicator for economic forecasts, it should be noted that Korea stock prices provide

information mainly about manufacturing production and exports, not the entire economy.

* Economist, Macroeconomic and Fiscal Research Team, Research Department, Bank of Korea (Tel: +82-2-759-4334, e-mail: kim.dowan@bok.or.kr)

** Junior economist, Macroeconomic and Fiscal Research Team, Research Department, Bank of Korea (Tel: +82-2-759-4244, e-mail: dhkim17@bok.or.kr)

*** Junior economist, Macroeconomic and Fiscal Research Team, Research Department, Bank of Korea (Tel: +82-2-759-4238, e-mail: suop456@bok.or.kr)

■ We thank Mr. LEE Hong Jig, Team Head, Mr. KIM, Hyung Suk, Team Head, Mr. YOO Jae Hyun, Team Head, and Dr. LEE Nam Gang for their useful comments.

■ The contents of this paper represent the personal opinions of the authors and do not necessarily reflect the official view of the Bank of Korea. Any report/citation of this paper should specify the names of the authors.

I. Backgrounds

II. Literature Review

III. Stock Market's Representativeness of Real Economy: Qualitative Analysis

IV. Stock Market's Representativeness of Real Economy: Quantitative Analysis

V. Summary and Implications