

Japan Equity Opportunities: The Stock Market Watches for Expectations and Risks of Developing New Coronavirus Vaccines



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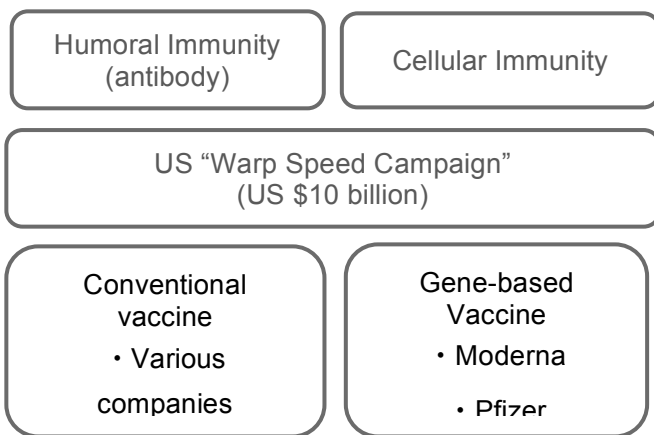
Wait and see mode in the Japanese equity market as competition to develop COVID-19 vaccines accelerates

- Competition to develop new coronavirus vaccines is accelerating. On July 27, Moderna, a US biotechnology company, began the final phase of clinical trials involving 30,000 patients (a joint development with the US National Institutes of Health). Meanwhile, the US government is currently pursuing a \$10 billion project called 'Operation Warp Speed' for developing vaccines. If vaccines are deemed promising, financial assistance will be provided both domestically and overseas supporting the manufacturing system even before the vaccines' official approvals. As for a Japanese company, Fujifilm received a funding of approximately 27 billion yen and announced that it would start mass production in US Texas early next year.
- There are two types of immunity: "Humoral immunity (so-called antibody)" which prevents the virus from entering the cells, and "cellular immunity" which directly attacks the cells into which the virus has entered. A vaccine developed by Moderna aims to enhance both immunity. It is expected to be highly effective because it prevents the virus from "entering the cells" with a "humoral immunity" and, even if it does, kills the virus with a "cellular immunity" to "prevent infection".
- There also are two types of vaccines: "Conventional vaccines" make use of the virus itself and "gene-based vaccines" use only part of the virus's genetic information. The vaccine under development by Moderna is categorised as "nucleic acid vaccine" which is one of the gene-based vaccines. Gene-based vaccines have the advantage of early entrance into clinical trials early because it does not require the time-consuming mass production of the virus as required when developing conventional vaccines. On the other hand, "gene-based vaccines" are viewed to face challenges as well as they have not been approved or commercialized yet. Most of the

vaccines developed by Pfizer and AstraZeneca are gene-based vaccine, and the series of trials for the first time in history is attracting attention.

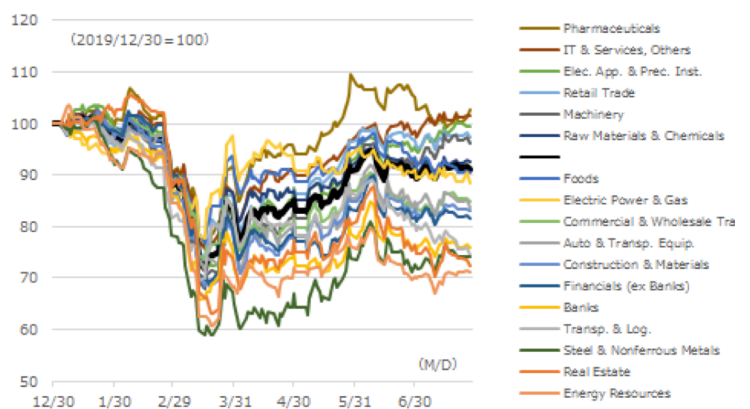
- The stock market has been in lull across all industries since July appearing to be much affected by such intense competition. "Gene-based vaccines" are said to officially appear as early as this summer, but the market is viewed to have entered into a wait and see mode for the time being to observe the level of development and its actual effectiveness.

Fig. 1. Overview of Vaccine Development



Source: NAM based on various sources

Fig. 2. TOPIX-17 Industry Based Performance



Note: From Dec 30, 2019 to Jun 26, 2020, daily.
Source: NAM based on Bloomberg

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