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# Using Text Mining to Read Integrated Reports in Banking Industry

## *Visualizing hot topics such as ESG and DX*

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### Summary

- In recent years, interest in ESG related information published by corporations has been increasing in response to the rapid expansion of ESG investment. As the disclosure of ESG related information is expanded, how to analyze textual information related to ESG is one of the new challenges. In this report, we attempted to visualize hot topics using text mining and machine learning on integrated reports of banking industry.
- Based on the analyses, we were able to extract differences in awareness of the ESG field and related subjects by bank type, as well as priority items in management strategies. Specifically, the city bank group's strong awareness of environmental issues and its emphasis on addressing digitalization, and regional banks' awareness of contributing to local communities and economics (the first-tier regional banks) were noted. On the other hand, the low frequency of digital technology-related words appearing in the second-tier regional banks search suggests that these banks are behind in digitalization.
- Text mining and machine learning technologies will be among most useful tools for analyzing non-financial information, including ESG related information, which will continue to grow in importance in the future.

#### Attention

This report is a summary translation. The official document is only in Japanese.