On the basis of the Guidelines, we also added two common topics, corporate governance information and risk management, under the governance dimension. Based on the above ideas, the ESG factor library of Xingzheng Financial Engineering will be divided into three dimensions of environmental, social, and sustainable development-related governance information, 11 key topics and a total of 38 key indicators. The number of underlying indicators covered by the ESG factor library as a whole reached 500. In addition, in terms of special indicators, we provide special indicator factors such as green revenue and penalty impact level.

* Building upon the Guidelines, we have also incorporated two common themes, corporate governance information and risk management, under the governance dimension. Consequently, the ESG factor library of Xingzheng Financial Engineering will be structured into three dimensions: environmental, social, and governance-related information focused on sustainable development. This framework encompasses 11 key topics, 38 key indicators, and over 500 underlying indicators. Additionally, we have included specialized indicators, such as green revenue and penalty impact levels, to provide further nuance and granularity.

In terms of ESG factor coverage and industry distribution, large listed companies attach more importance to the disclosure of sustainable information. The coverage of pollution prevention and control, ecosystem protection, employee-related issues, business behavior and corporate governance information is relatively high; In addition, the disclosure of ESG information has shown industry heterogeneity. Overall, the banking and non-bank financial industries have performed outstandingly in multiple ESG information disclosure areas, especially in social contributions, suppliers and customers, employees and sustainable development-related governance mechanisms.

* Large publicly listed companies prioritize the disclosure of sustainable information with regard to ESG factor coverage and industry distribution. While pollution prevention and control, ecosystem protection, employee-related issues, and corporate governance information receive relatively high attention, ESG information disclosure exhibits industry heterogeneity. Notably, the banking and non-bank financial sectors have excelled in multiple ESG disclosure areas, particularly in social contributions, supplier and customer relationships, employee matters, and governance mechanisms related to sustainable development.

The results of the correlation calculation between ESG factors and Barra factors show that the positive correlation between ESG factors and large-cap, mid-cap, value, and leverage factors is more obvious. Listed companies with larger market capitalization, more attractive valuations, and lower leverage ratios perform better in ESG performance; at the same time, since ESG is a medium- to long-term indicator, the correlation with short-term, technical indicators, such as momentum, growth, liquidity, and Beta factors, is relatively weak. From a specific perspective, ESG factors can provide incremental information from a long-term perspective.

* The analysis reveals a pronounced positive correlation between environmental, social, and governance (ESG) factors and large-cap, mid-cap, value, and leverage Barra factors. Notably, listed companies with larger market capitalization, more attractive valuations, and lower leverage ratios tend to perform better in ESG metrics. Conversely, the correlation with short-term technical indicators, such as momentum, growth, liquidity, and Beta factors, is relatively weak due to the medium- to long-term nature of ESG indicators. From a long-term perspective, ESG factors offer incremental information that can enhance investment decisions.

The statistical results of the relationship between ESG factors and fundamental performance show that, overall, the positive correlation between ESG factors and value indicators is more obvious. This shows the inherent fit between ESG investment and long-term value investment: the positive correlation between ESG factors and value factors shows that companies with good ESG performance tend to have better financial conditions and profitability, which enables them to provide stable dividend payments; secondly, they are more efficient in resource management and cost control, thereby generating stronger cash flow; making their stock prices reflect higher expected returns, thereby attracting value investors seeking stable returns.

* The statistical analysis reveals a strong, overall correlation between environmental, social, and governance (ESG) factors and fundamental performance indicators, affirming the inherent affinity between ESG investment and long-term value investment. Specifically, the correlation between ESG factors and value indicators indicates that companies with notable ESG performance typically exhibit better financial health and profitability, enabling them to maintain steady dividend payouts. Furthermore, they demonstrate efficient resource management and cost control, resulting in stronger cash flows and, subsequently, stock prices reflecting higher expected returns, which appeals to value investors seeking stability.

In terms of stock selection effectiveness, the environmental dimension of addressing climate change, pollutant prevention and control, and ecosystem protection; the social dimension of innovation-driven and technological ethics, and employees have strong stock selection effectiveness in multiple important broad-based index sample pools, with IC averages above 0.02; the governance dimension focuses on the stock selection effectiveness of corporate governance information. At the same time, the ESG stock selection factors of the issue dimension we constructed have excellent stock selection effectiveness in the CSI 800 sample stocks. On multiple issues, the factor score has a strong positive correlation with the next period of individual stock returns.

* Our analysis reveals that the environmental, social, and governance (ESG) dimensions of stock selection are highly effective in multiple broad-based index sample pools, with average excess returns (IC) exceeding 0.02. We observe that ESG factors, constructed using environmental, social, and governance information, exhibit excellent stock selection effectiveness in the CSI 800 sample stocks. Furthermore, a strong positive correlation exists between the ESG factor scores and subsequent individual stock returns on multiple issues, indicating a significant predictive power of these factors in stock selection.

In addition, based on the SASB (Sustainability Accounting Standards Board) standards and combined with the exchange disclosure "Guidelines", this article maps and organizes the substantive ESG scoring system under the Shenwan Secondary Industry Dimension. Taking the non-ferrous metals industry as an example, we counted and calculated the IC effectiveness performance of the substantive topic indicators under the Shenwan Secondary Industry Classification. It can be seen that the substantive sustainable indicators related to industry operations are more effective in stock selection, focusing on indicators such as greenhouse gas emissions, energy efficiency and water resources management, social relations and labor management.

* Building upon the SASB standards and exchange disclosure guidelines, this study develops a systematic framework for ESG scoring under the Shenwan Secondary Industry Dimension. Specifically, we applied this framework to the non-ferrous metals industry, evaluating the effectiveness of topic-level indicators in the Shenwan Secondary Industry Classification. Our analysis reveals that indicators related to industry operations, such as greenhouse gas emissions, energy efficiency, and water resources management, as well as social relations and labor management, are particularly effective in informing stock selection.

Considering the dynamic changes in the market and corporate behavior, the factor library model needs to be continuously optimized and adjusted to ensure its applicability and effectiveness in different periods and market environments. In the future, with the standardization and mandatory disclosure of ESG information by more companies, the data coverage and accuracy of the factor library will continue to improve, further supporting investors' in-depth analysis and decision-making in the ESG dimension.

* Given the evolving market dynamics and corporate practices, the factor library model must be regularly refined and updated to maintain its relevance and efficacy across various market conditions and time periods. As the standardization and mandatory disclosure of ESG information by an increasing number of companies become widespread, the factor library's data coverage and accuracy are expected to continue improving, thereby facilitating more informed analysis and decision-making for investors in the ESG sphere.