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.

* Guided by the Guidelines, we incorporated two ubiquitous topics: corporate governance and risk management, within the governance dimension. Building upon these concepts, the ESG factor library of Xingzheng Financial Engineering will be structured into three interlocking dimensions: environmental, social, and governance-related information for sustainable development. This framework comprises 11 key topics and 38 key indicators. Furthermore, the ESG factor library encompasses 500 underlying indicators in total. Moreover, we have also included specialized indicator factors such as green revenue and penalty impact level.

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 listed companies emphasize the disclosure of sustainable information, with a disproportionate focus on pollution prevention and control, ecosystem protection, employee-related issues, business behavior, and corporate governance. Additionally, the disclosure of ESG information exhibits industry variability, with notable exceptions among the banking and non-bank financial sectors. Notably, these sectors excel in disclosing ESG information related to social contributions, supply chain and customer relations, employee welfare, and sustainable development governance mechanisms.

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 correlation analysis between ESG factors and Barra factors reveals a more pronounced positive correlation with large-cap, mid-cap, value, and leverage factors. Specifically, listed companies with larger market capitalizations, desirable valuations, and lower leverage ratios tend to exhibit superior ESG performance. Moreover, the correlation with ESG factors is relatively weak for short-term and technical indicators, such as momentum, growth, liquidity, and beta factors, which are often indicative of short-term fluctuations. From a long-term perspective, ESG factors can provide incremental value.

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 pronounced positive correlation between ESG factors and fundamental performance indicators, indicating a natural alignment between ESG investing and long-term value investing. Specifically, companies with strong ESG performance tend to exhibit superior financial conditions and profitability, enabling them to deliver stable dividend payments. Furthermore, they demonstrate greater efficiency in resource management and cost control, generating stronger cash flow and, in turn, driving higher expected returns that attract value investors seeking stable returns.

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.

* The environmental, social, and governance (ESG) factors influence stock selection effectiveness, particularly in addressing climate change, pollutant prevention, and ecosystem protection, as well as corporate governance and technological ethics. Our analysis reveals that employees with strong ESG considerations exhibit effective stock selection across multiple broad-based index samples, with average IC values exceeding 0.02. The issue dimension we constructed, comprising ESG factors, demonstrates excellent stock selection effectiveness in the CSI 800 sample, with a strong positive correlation between the factor score and individual stock returns in the subsequent period.

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.

* Using the Sustainability Accounting Standards Board's standards and exchange disclosure guidelines, this study develops and structures a comprehensive ESG scoring system under the Shenwan Secondary Industry Dimension. Employing the non-ferrous metals industry as a case study, we quantified and analyzed the IC effectiveness of the substantive topic indicators subclassified under Shenwan's secondary industry grouping. Our analysis reveals that the industry's operational sustainability indicators, such as greenhouse gas emissions, energy efficiency, and water resources management, are more effective in stock selection. These indicators, in addition to social relations and labor management, are crucial factors in the evaluation process.

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 dynamic shifts in the market and corporate behavior, the factor library model necessitates ongoing optimization and adjustment to maintain its relevance and efficacy across diverse periods and market environments. As more companies standardize and mandatorily disclose ESG information, data coverage and accuracy within the factor library will continue to improve, thereby bolstering investors' in-depth analysis and decision-making capabilities in the ESG dimension.