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.

* Based on the guidelines, we incorporated two prominent topics - corporate governance and risk management - as components of the governance dimension. Building upon this notion, the ESG factor library of Xingzheng Financial Engineering will be categorized into three hierarchical dimensions: environmental, social, and governance information related to sustainable development. The library comprises 11 key topics and a total of 38 key indicators. Notably, the cumulative number of underlying indicators spanned across the entire library reached 500. Furthermore, we have also provided special indicator factors, including green revenue and penalty impact level, to facilitate more precise analysis.

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 traded companies prioritize the disclosure of sustainable information, with a significant focus on pollution prevention and control, ecosystem protection, employee-related issues, business behavior, and corporate governance. Notably, the extent of ESG factor coverage exhibits industry variations. While banking and non-bank financial institutions excel in multiple ESG disclosure areas, including social contributions, supplier and customer relations, employee matters, and sustainable development-related 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 Environmental, Social, and Governance (ESG) factors and Barra factors reveals a more pronounced positive correlation with large-cap, mid-cap, value, and leverage factors. Companies with larger market capitalization, attractive valuations, and lower leverage ratios tend to exhibit better ESG performance. Meanwhile, the correlation with short-term technical indicators, such as momentum, growth, liquidity, and beta factors, is relatively weaker due to ESG's medium- to long-term nature. From a specific perspective, ESG factors can provide incremental information from a long-term perspective.

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 metrics, suggesting a natural alignment between ESG investment and long-term value investing. Specifically, companies with excellent ESG performance tend to exhibit better financial health and profitability, enabling them to deliver stable dividend payments. Moreover, they demonstrate greater resource efficiency and cost control, leading to stronger cash flow generation and subsequently, 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.

* Our analysis reveals that environmental, social, and governance (ESG) factors exhibit strong stock selection effectiveness in multiple broad-based index sample pools, with outperformance relative to the market index averaging above 2% per annum. Specifically, the ESG factors addressing climate change, pollution prevention, and ecosystem protection, as well as the social dimension of innovation-driven ethics and employee engagement, demonstrate exceptional stock selection effectiveness. Similarly, the governance dimension focuses on the strategic importance of corporate governance information, which contributes to superior stock selection outcomes. Furthermore, we constructed ESG factors and found that they show excellent stock selection effectiveness in the CSI 800 sample stocks, with a strong positive correlation between the factor score and subsequent individual stock returns on various issues.

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.

* Based on the Sustainability Accounting Standards Board (SASB) standards and the Exchange Disclosure Guidelines, this article establishes a comprehensive ESG scoring system under the Shenwan Secondary Industry Dimension. Using the non-ferrous metals industry as a case study, we quantitatively evaluated the effectiveness of the industry classification's topic-level indicators. The results suggest that ESG indicators linked to industry operations, such as greenhouse gas emissions, energy efficiency, and water resources management, are more effective in informing stock selection, alongside indicators like social relations and labor management.

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 market conditions and corporate behavior, the factor library model must be continually refined and adapted to maintain its relevance and efficacy across various time periods and market environments. With increased standardization and mandatory ESG disclosure by companies, the factor library is expected to benefit from enhanced data coverage and accuracy, ultimately facilitating more informed analysis and decision-making by investors in the ESG realm.