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 on the Guidelines, we incorporated two additional common topics, corporate governance information and risk management, within the governance dimension. Integrating these ideas, the ESG factor library of Xingzheng Financial Engineering will be categorized into three dimensions: environmental, social, and governance (sustainable development-related), encompassing 11 key topics and a total of 38 key indicators. The comprehensive library comprises roughly 500 underlying indicators. Furthermore, we also provide special indicator factors, including 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 prioritize disclosing sustainable information, with a particular focus on pollution prevention and control, ecosystem protection, employee-related issues, corporate behavior, and governance information. These areas display relatively high coverage. Additionally, industry heterogeneity emerges in ESG information disclosure, with notable excellence in the banking and non-bank financial sectors, 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 of the correlation between 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 perform better in ESG terms. Notably, ESG metrics are medium- to long-term indicators, which is reflected in their relatively weak correlation with short-term, technical indicators such as momentum, growth, liquidity, and Beta factors. Specifically, ESG factors appear to 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 strong, overall correlation between ESG factors and fundamental performance indicators, particularly in the value metrics. This suggests a natural alignment between ESG investing and long-term value investing, as companies with sound ESG practices tend to exhibit superior financial health and profitability. This, in turn, enables them to sustain consistent dividend payouts. Furthermore, they demonstrate greater efficiency in resource allocation and cost management, ultimately generating stronger cash flows and driving stock prices upward, thereby attracting 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 research highlights the stock selection effectiveness of environmental, social, and governance (ESG) factors, specifically environmental sustainability, technological ethics, and employee welfare, which drive strong stock selection outcomes in broad-based index sample pools with average IC scores above 0.02. Additionally, the governance dimension focuses on the stock selection effectiveness of corporate governance information. The ESG factors we constructed exhibit excellent stock selection effectiveness in the CSI 800 sample stocks, with a strong positive correlation between factor scores and individual stock returns in subsequent periods.

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.

* This article adheres to the Sustainability Accounting Standards Board's standards and exchange disclosure guidelines, mapping and organizing the comprehensive ESG scoring system under the Shenwan Secondary Industry Dimension. To illustrate, we applied the IC effectiveness framework to calculate the performance of substantive topic indicators in the non-ferrous metals industry, classified according to Shenwan's framework. Our analysis reveals that sustainable indicators related to industry operations are more impactful in stock selection, with notable indicators including greenhouse gas emissions, energy efficiency, and water resource management, as well as social relationships and labor management practices.

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 rapidly shifting market landscape and evolving corporate behavior, the factor library model necessitates ongoing refinement and recalibration to maintain its relevance and efficiency across diverse market conditions and periods. As ESG disclosure becomes standardized and mandatory for an increasing number of companies, data coverage and accuracy within the factor library are likely to improve significantly, thereby enhancing investors' ability to conduct in-depth analysis and make informed decisions in the ESG sphere.