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.

* Accordingly, we incorporated two widely recognized topics - corporate governance information and risk management - under the governance dimension, as specified in the Guidelines. Building on these concepts, the ESG factor library of Xingzheng Financial Engineering is structured into three dimensions: environmental, social, and governance information related to sustainable development, encompassing 11 key topics and a total of 38 key indicators. The library's comprehensive coverage extends to 500 underlying indicators. Moreover, specialized indicators are provided, including metrics such as green revenue and penalty impact level, to offer additional insights.

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 sustainability information, with a notable focus on pollution prevention, ecosystem protection, employee-related issues, and corporate governance. Furthermore, the coverage of ESG factors demonstrates industry heterogeneity. Specifically, the banking and non-bank financial sectors excel in ESG disclosure, particularly in areas such as social contributions, supplier and customer relationships, employee practices, and governance mechanisms linked 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 correlation analysis reveals a pronounced positive link between ESG factors and large-cap, mid-cap, value, and leverage Barra factors. Our findings suggest that companies with larger market capitalization, more attractive valuations, and lower leverage ratios tend to perform better in ESG metrics. Notably, ESG scores operate as a medium- to long-term indicator, resulting in a relatively weak correlation with short-term, technical indicators such as momentum, growth, liquidity, and Beta factors. 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 clear positive correlation between environmental, social, and governance (ESG) factors and fundamental performance indicators, indicating a strong association between ESG investment and long-term value investment. This correlation suggests that companies exhibiting good ESG performance tend to possess stronger financials and profitability, enabling them to sustain stable dividend payments. Furthermore, they demonstrate greater efficiency in resource allocation and cost management, generating stronger cash flows and, subsequently, stock prices that reflect higher expected returns, 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.

* Our analysis reveals that the environmental, social, and governance (ESG) dimensions of a company's operations have a significant impact on its stock selection effectiveness. In particular, the environmental dimension, which encompasses climate change mitigation, pollutant prevention and control, and ecosystem protection, demonstrates strong stock selection effectiveness in multiple broad-based index sample pools, with average IC scores above 0.02. Meanwhile, the social dimension, characterized by innovation-driven and technological ethics, also exhibits robust stock selection effectiveness in these sample pools. Notably, the governance dimension focuses on the stock selection effectiveness of corporate governance metrics. Furthermore, our constructed ESG factors have excellent stock selection effectiveness in the CSI 800 stock sample, with a strong positive correlation between the factor score and subsequent individual stock returns on multiple 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 exchange disclosure guidelines, this article develops a comprehensive ESG scoring system tailored to the Shenwan Secondary Industry Dimension. Using the non-ferrous metals industry as a case study, we analyzed the effectiveness of the substance-specific indicators under the Shenwan Secondary Industry Classification, finding that the sustainability metrics related to industry operations are more impactful for stock selection. Specifically, indicators such as greenhouse gas emissions, energy efficiency, and water resources management, as well as social relations and labor management, are most relevant and effective.

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 market and corporate behavior, the factor library model must be continuously refined and updated to maintain its relevance and effectiveness across varying market conditions and periods. Moreover, with the increasing standardization and mandatory disclosure of environmental, social, and governance (ESG) information by more companies, the factor library's data coverage and accuracy will likely improve, thereby enhancing investors' ability to conduct in-depth analysis and make informed decisions in the ESG arena.