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 established guidelines, we supplemented the framework with two additional topics: corporate governance and risk management, both subsumed under the governance dimension. Building upon these ideas, Xingzheng Financial Engineering's ESG factor library will comprise three dimensions: environmental, social, and governance-related information focused on sustainable development. The library will encompass 11 key topics and 38 corresponding indicators. Notably, the entire ESG factor library covers 500 underlying indicators. Furthermore, we have included specialized indicators, such as green revenue and penalty impact level, to provide more nuanced 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 listed companies prioritize the disclosure of sustainable information, with a greater emphasis on ESG factor coverage and industry distribution. The reporting of pollution prevention and control, ecosystem protection, employee-related issues, business behavior, and corporate governance information is notably comprehensive. Notably, ESG information disclosure exhibits industry heterogeneity, with distinct patterns emerging across sectors. Notably, the banking and non-bank financial industries stand out in multiple ESG disclosure areas, particularly in social contributions, supplier and customer relationships, employee welfare, and sustainable development-oriented 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 superior ESG performance. Notwithstanding, the correlation with short-term, technical indicators, such as momentum, growth, liquidity, and Beta factors, is relatively weak due to ESG's nature as a medium- to long-term indicator. From a specific perspective, ESG factors can provide incremental information that is valuable 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. This association underscores the inherent compatibility between ESG investment and long-term value investment. Specifically, companies with strong ESG performance tend to exhibit favorable financial conditions and profitability, enabling them to deliver consistent dividend payments. Furthermore, they demonstrate superior resource management and cost control, generating stronger cash flows and resulting in 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 findings suggest that the environmental, social, and governance (ESG) dimensions of addressing climate change, preventing pollutants, and protecting ecosystems have a significant impact on stock selection effectiveness in multiple broad-based index sample pools, with average excess returns above 0.02%. The governance dimension focuses on the efficacy of corporate governance information in informing stock selection. Furthermore, our constructed ESG factors for the issue dimension demonstrate excellent stock selection effectiveness in a sample of 800 CSI stocks, exhibiting a strong positive correlation with individual stock returns in subsequent periods across 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.

* Building upon the Sustainability Accounting Standards Board (SASB) standards and exchange guidelines, this article develops a comprehensive ESG scoring system aligned with the Shenwan Secondary Industry Dimension. Utilizing the non-ferrous metals industry as a case study, we analyzed and calculated the effectiveness of the industrial classification's substantive topic indicators, with a particular focus on operational sustainability metrics such as greenhouse gas emissions, energy efficiency, and water resources management, as well as social responsibility indicators like labor relations and social interactions.

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.

* Amidst the dynamic shifts in market conditions and corporate behavior, the factor library model necessitates ongoing optimization and refinement to guarantee its relevance and efficacy across various time periods and market environments. As more companies adopt standardization and mandatory disclosure of ESG information in the future, the library's data coverage and accuracy will likely improve, subsequently bolstering investors' capacity for in-depth analysis and informed decision-making within the ESG context.