

Legal Recognition of Compliance Exemption Mechanisms for AI in ESG Decision-Making

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Abstract

This topic studies the legitimacy of compliance and exemption of artificial intelligence in the fields of environment, society and economy. Artificial intelligence technology has been more and more applied in ESG information disclosure, rating and investment decision-making, which makes the traditional legal liability system face new challenges. The existing research mainly focuses on the attribution of AI responsibility, algorithm transparency and so on, but lacks the research on the exemption mechanism of AI. By means of literature analysis and comparative study, this project intends to analyze the changes of ESG compliance obligations, directors' responsibilities, information disclosure and credit rating of enterprises under AI intervention, explore the applicable conditions of administrative and civil exemption, study the legal connection between AI and AI, and the role of company's prudent responsibility in exemption. In order to establish a corporate governance mechanism that integrates scientific and technological innovation and liability protection and provide reference for relevant legislation and practice in China.

Keywords: AI participation in ESG decision-making; compliance exemption mechanism; legal recognition; corporate responsibility

1. INTRODUCTION

With the rapid development of artificial intelligence in many fields such as environment, society and governance, it has been increasingly used in ESG report generation, investment risk analysis and credit rating evaluation^[1]. While improving the efficiency and accuracy of decision-making, it also poses a severe challenge to the traditional legal liability system based on people. With the development of artificial intelligence technology, there are contradictions between the boundaries of ESG compliance obligations, the performance of directors' diligence obligations and the requirements of disclosure authenticity, and the attribution of responsibility is unclear. In this context, this topic takes "how to adapt the corporate social responsibility system after artificial intelligence intervenes in environmental governance" as the main line, and focuses on the key scientific issue of "how to reshape the corporate social responsibility system after artificial intelligence intervenes in environmental governance"^[2]. The compliance exemption mechanism refers to the exemption of liability for artificial intelligence decision-making errors after an enterprise demonstrates that it has fulfilled its due diligence obligations. The third part analyzes the application of compliance exemption in China. How to achieve an effective connection at the legal level between environmental assessment standards and artificial intelligence algorithm models, thus creating a stable expectation; can a company claim exemption from liability by showing that it has fulfilled its duty of care? This project will systematically analyze the above problems and provide theoretical support and practical path for the construction of environmental liability exemption mechanism in the artificial intelligence environment^[3].

2. STRUCTURAL CHANGE OF ESG LEGAL LIABILITY SYSTEM BY AI INTERVENTION

2.1 EXPANSION AND ALIENATION OF COMPLIANCE OBLIGATIONS

In the traditional ESG compliance system, enterprise compliance relies more on human intervention. According to the established norms, employees collect, collate and verify the data related to corporate social responsibility manually, such as pollutant emission data, employee welfare implementation, and implement compliance assessment based on subjective judgment. Under this mode, the compliance responsibility of enterprises is mainly embodied in ensuring the source of data, the processing process that meets the standards, the content of the final report meets the regulatory requirements, the responsibility boundary is relatively clear, and the control of human behavior is emphasized^[4]. The emergence of artificial intelligence has completely changed this situation. Corporate compliance obligations show a trend of expansion and

alienation. From the point of view of data processing, the operation of AI system is based on massive data, which brings higher demand for data acquisition, storage security, data use compliance and so on. While ensuring that the information collected conforms to laws and regulations, enterprises should also review the third-party data provided by AI systems to prevent infringement or illegal transactions in data sources. At the algorithm level, enterprises have the responsibility to prevent and control the deviation of the algorithm. Because AI algorithms are data-based, they may be biased if the training samples are biased. For example, when an enterprise evaluates CSR, if the sample has some subjective bias towards companies in a certain region or industry, the evaluation results obtained can not truly reflect the actual situation of the enterprise^[5]. The Artificial Intelligence Act of the European Union puts forward higher requirements for the transparency and interpretation of the high-risk AI system, which is embodied in the following aspects: enterprises need to submit sufficient evidence to the regulatory authorities to avoid artificial manipulation and unfair differential treatment when using AI for social responsibility disclosure. This means that companies are responsible not only for their outcomes, but also for the life cycle of AI systems, and the scope for regulatory compliance is greater than ever before^[6].

2.2 EXTENSIONS AND CHALLENGES OF DIRECTORS' RESPONSIBILITIES

In the traditional environmental responsible investment decision-making model, board members only rely on their own professional knowledge and experience, and rely on manually collected data to make judgments and decisions. Their division of responsibilities is very clear, mainly based on the "business judgment standard" to decide whether to fulfill the duty of due diligence and loyalty^[7]. When board members attend the meeting, they will carefully review a written report on major environmental issues of the enterprise, such as investment in environmental protection projects, social responsibility strategies and so on. Personal liability is usually excused if the decision is made in accordance with the law, bylaws, articles of incorporation, and on the basis of appropriate information^[8].

With the deep involvement of artificial intelligence in the environment, society and environment, the responsibility of company directors has also expanded. Cheng Wei pointed out in his book Reconstruction of Director Responsibility System that the decision-making process and results of AI require directors to have certain technical content to ensure the selection and efficient operation of AI mode, and to make its output conform to the long-term ESG strategic objectives of enterprises^[9]. The board of directors shall review the quality of data used in the artificial intelligence model, the scientificity of the algorithm logic, and whether the model can be updated regularly to adapt to changing environmental and social responsibility standards. If directors fail to perform the review of AI decisions, leading to corporate decision-making errors on social and environmental issues, such as investing in seemingly beautiful but actually risky projects, directors will still be responsible for this^[10]. The core issue of the current controversy is the uninterpretability of AI models. The black-box mechanism of AI refers to its internal decision-making logic being difficult to explain, making it challenging for directors to establish a decision chain. Under such circumstances, it will be very difficult to perform the duty of prudence for oneself in a conventional way^[11]. The traditional "business judgment standard" requires directors to clarify the information source, analysis process and judgment reasons, but in the artificial intelligence mode, the uncertainty of its output makes it difficult for directors to construct a clear decision-making chain to prove their obligations, which leads to the dilemma of directors' liability determination, and it is urgent to study new judgment standards and liability standards^[12].

2.3 DIFFICULTIES IN THE ADAPTATION OF INFORMATION DISCLOSURE AND RATING SYSTEM

With the development of artificial intelligence, the efficiency of information disclosure of environmental protection enterprises has been greatly improved. Using natural language processing and automated data capture technology, enterprises can quickly integrate social responsibility information scattered in various business areas, and generate the first report according to the existing template, thus greatly shortening the disclosure time^[13]. Artificial intelligence not only improves work efficiency, but also brings potential risks to information credibility. The research of Che Xiaoli, Hu Qingyu and others found that even AI, the data it relies on has some accuracy problems, such as some errors in the collected data, or the slow update speed of the data, which will lead to deviations in the results^[14]. Due to the opacity of AI algorithm itself, its generation process is difficult to be accurately tracked and confirmed by the outside world. In order to ensure its credibility, enterprises need to disclose its operation mechanism, operation mode and its own defects, which increases the complexity and cost of its disclosure. In the field of ESG evaluation, the existing subjective evaluation indicators such as corporate social reputation and stakeholder satisfaction mainly depend on human judgment and qualitative analysis^[15]. However, the artificial intelligence model is based on data-driven, focusing on quantitative output, through the analysis of a large number of objective data, to get the evaluation results. This leads to the difficulty of effective connection between AI evaluation criteria and AI models, and also leads to the ambiguity of legislative expectations^[16]. The evaluation results generated by artificial intelligence are quite different from the traditional subjective evaluation, which has caused great trouble to the stakeholders^[17]. When using the ESG rating generated by AI to make investment decisions, it is difficult to

determine the liability for compensation due to the loss caused by the rating deviation according to the existing laws and regulations, whether it is the reason of AI itself, the reason of data, or the problem of the rating standard itself, all of which have a great impact on the credit and law of the ESG rating^[18]. It is necessary to establish a new matching mechanism to coordinate the relationship between them.

3. UNDERTAKING AND EXEMPTION CONDITIONS OF CORPORATE LIABILITY

3.1 THE PRINCIPLE OF RESPONSIBILITY: THE LIMITED CONTINUATION OF THE TRADITIONAL SYSTEM

Under the background of artificial intelligence intervening in environmental governance, the social responsibility of enterprises still needs to be based on the traditional legal framework, that is, to maintain the stability of social legal system and transaction security^[19]. With the development of artificial intelligence technology, the traditional legal system of enterprise compliance, information disclosure and prudent decision-making has not been completely abolished. For example, enterprises using artificial intelligence to issue false information about the environment, environment, social responsibility and other fraud, still need to bear the relevant legal responsibility, which is the extension of "statutory responsibility"^[20]. However, this inheritance is not absolute, and the damage caused by technical characteristics should be regulated. When the decision of AI has nothing to do with the actual control of the enterprise, such as using a closed "black box" algorithm, the enterprise will not be able to know its operation logic. Guardi and Cordella's "techno-law" theory provides a way of thinking about the allocation of responsibility in such situations: in this case, the responsibility between an enterprise and a technology company is no longer just an enterprise, but a company or a technology company. For example, when a third-party AI service provider conceals its algorithm defects and causes ESG rating errors, the enterprise can request it to bear the main fault on the premise of fulfilling its reasonable review obligations, so as to avoid its excessive liability, which is in line with the basic principle of "risk" and "benefit" balance^[21].

A. TYPES OF EXEMPTIONS AND APPLICABLE SCENARIOS

a) Administrative immunity The core issue of the administrative exemption system is whether the enterprise meets the statutory requirements and whether there are losses caused by uncontrollable technical risks^[22]. According to the risk classification idea of the European Artificial Intelligence Act, high-risk AI systems need to submit compliance reports in advance, including algorithm principle description, risk assessment report, emergency response and so on^[23]. When enterprises strictly follow the above rules, and the decision-making errors of AI are caused by sudden technical loopholes, not by negligence, they can apply for exemption from administrative punishment^[24].

b) Civil immunity The application of civil liability exemption should be based on the premise that the company has no subjective fault, and the specific circumstances include:

(1) Misleading information: If the report generated by AI has data bias, but the enterprise can prove that it has been audited by a third party and has established a manual audit mechanism, the enterprise can defend the investor according to the principle of explanatory priority. For example, a listed company, because of the change of the statistical caliber of the industry data, there are some errors in the calculation of AI's carbon emissions, but the company's report clearly stipulates the upper limit of the data, so the court can find that it is not at fault^[25].

(2) Corporate social responsibility investment decision-making errors: If the enterprise clearly indicates the scope of application of AI recommendation in the decision-making document, such as unable to predict the risks brought by sudden policy changes, making decisions in accordance with industry practices, and obtaining the consent of more than two-thirds of the ESG committee, it can also apply for exemption even if the final loss occurs^[26]. For example, a fund company uses AI to screen ESG topics, but the sudden tightening of environmental protection policies has led to investment losses, but it has stated the policy risks in the prospectus, so the court can conclude that it has fulfilled its obligation to inform^[27].

B. PERFORMANCE OF PRUDENTIAL OBLIGATION AND LIABILITY EXEMPTION

If an enterprise applies for exemption from liability, it must prove that it has properly implemented the decision-making of AI^[28].

(1) Technical audit responsibilities: establish AI model training data sources, algorithm logic, iteration records and other documents, and regularly entrust third-party technical institutions to evaluate. For example, when a manufacturing enterprise uses artificial intelligence to monitor wastewater discharge data, it must keep the sensor calibration records of data collection and deal with the operation rules of outliers. (2) Risk prevention responsibility: implement real-time

monitoring and error correction for AI's behavior, for example, set an index deviating from environmental responsibility, for example, when carbon emissions exceed 10%, the system will automatically give an alarm, and professionals will complete the rectification within 2 hours. For example, a bank, through the credit system of artificial intelligence, links the environmental rating with the lending rate^[29]. Once it finds a deviation in the environmental rating of an enterprise, it must be checked manually and adjusted within 24 hours.

(3) Information disclosure obligation: in the report or decision-making document, clearly state the scope of application, limitations and possible deviation risks of artificial intelligence, and clearly state the scope of application, limitations and possible deviation risks of artificial intelligence, which should be easy to understand, such as avoiding excessive use of technical terms^[30].

Based on Rawls' theory of distributive justice, Zheng Shaofei and Yao Jianzong proposed that the performance of prudent obligation should reflect the rational allocation of risks. That is to say, enterprises can not transfer all decision-making risks to stakeholders, but should bear the corresponding risks through technology investment, process optimization and so on. For example, if an enterprise relying on artificial intelligence for ESG evaluation has an error in its credit rating due to imperfect models, its liability for compensation should be proportional to the benefits it can provide, so as to achieve the purpose of technological innovation, rather than empty liability^[31].

4. ESG RATING AND LEGAL EXPECTATION CONSTRUCTION OF AI MODEL

4.1 DOCKING PATH: FROM TECHNICAL ADAPTATION TO LEGAL NORMS

In order to realize the organic combination of ESG evaluation index and AI model, it is necessary to promote the quantitative transformation of ESG evaluation index. At present, there are many fuzzy and abstract indicators in ESG evaluation system, and it is difficult to extract and process them accurately by using artificial intelligence model^[32]. This project intends to clearly quantify the core indicators such as carbon emissions, employee wages and benefits, and the incidence of safety accidents, and transform them into rigid parameters that can be directly identified and manipulated by artificial intelligence models. For example, by setting carbon emission limits, the rights and interests of employees are divided into quantifiable data, such as labor contract signing rate, social security payment rate, etc., so as to minimize the impact of human factors and make the output of AI model more objective and consistent.

On this basis, it is very necessary to establish a third-party algorithm audit mechanism. Third-party audit institutions should have strong technical strength and independent legal personality, regularly conduct a comprehensive review of the artificial intelligence model used by the company, focusing on whether its algorithm logic meets the core requirements of ESG rating, whether there is bias in the processing of quantitative indicators, and whether the model operation process is carried out in accordance with established standards and procedures^[33]. Through continuous and standardized audits, the consistency between AI model and rating standards is ensured, the distortion of evaluation results caused by the factors of the model itself is reduced, and the legitimate expectations of investors for credit rating are enhanced, so that all parties can make reasonable decisions.

4.2 FORMATION OF LEGAL EXPECTATIONS: WITH TRANSPARENCY AS THE CORE

In ESG evaluation, the transparency of AI model is an important prerequisite for establishing the expectation of rule of law. This requires enterprises to actively disclose the relevant information of AI models, including algorithm logic, data sources and validity^[34]. The disclosure of algorithm logic should let all stakeholders clearly know how a model is weighted distribution and comprehensive calculation of different environmental indicators; when publishing information to the outside world, it is necessary to clarify the way and time limit of information collection to ensure the authenticity and reliability of information; The publication of the test method is to explain how the enterprise tests and corrects the input data and output to prove the scientific operation of the model^[35].

The core idea of the credit rating evaluation system proposed by Novelli and other scholars is an important part of the credit rating system. Only after the enterprise fully discloses the above information, can stakeholders clearly understand the operation mechanism and evaluation basis of AI model, and then make reasonable legal expectations for it^[36]. The research results of this project will help to reduce disputes arising from information asymmetry, and will also promote the company to be more normative and prudent in using AI model for ESG rating, thus promoting the orderly operation of the overall ESG rating system under the legal framework^[37].

5. CONCLUSION

After artificial intelligence intervenes in environmental decision-making, the liability system of enterprises needs to adapt to its technical characteristics under the traditional framework: the assumption of liability is based on the principle of continuing the traditional rules, exemption is an exception, and exemption must be based on the premise of fulfilling compliance obligations and prudent obligations. Administrative exemption focuses on the integrity of compliance procedures, while civil exemption focuses on subjective innocence and risk disclosure; at the same time, it is necessary to establish a stable legal expectation through the quantitative conversion of ESG ratings and the transparency of AI models, so as to strike a balance between technological innovation and social responsibility protection.

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