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Analysis of Artificial Intelligence System Based on Financial Risk under Big Data

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Abstract: ***The focus of contemporary enterprises is to prevent financial risks. The focus of new financial risk management under the influence of big data is to identify and manage the major financial risks that may arise in order to avoid the transition from financial risks to survival crisis, so that enterprises can achieve sustainable development. This paper combines the current technology to design a preliminary artificial intelligence system to discuss its specific application in preventing financial risks.***

Keywords: Financial risk; big data analysis; artificial intelligence; risk identification

1. Research background

China has comprehensively promoted the strategic deployment of ruling the country according to law, and the financial supervision environment and methods of enterprises have undergone major changes. At the same time, the rapid development of Internet big data has profoundly changed the development environment of enterprises. Enterprises rely on traditional labor to solve many financial risks such as the acceleration of policy information update in the big data environment, the verification of bill authenticity and the quantitative evaluation of financial data. Financial risks are more urgent.

2. Analysis of the causes and harms of corporate financial risks

2.1 Analysis of the causes of financial risks

2.1.1 From the economic point of view,the financial risks of enterprises mainly come from three aspects.

1) **Procurement stage:** With the development of big data and e-commerce platforms, the supply channels upstream of the supply chain are more diversified. Diversified supply channels have spawned different market purchase prices. Unreasonable price screening mechanisms will cause companies to fall into the virtual hypothetical price trap of suppliers.
2) **Management stage:** The financial risks in the internal management stage of the enterprise are mainly caused by problems such as irregular reimbursement mechanism and “moral hazard” of internal personnel. On the other hand, employees have the problem of “reverse selection” and “moral hazard”. Employees and accounting personnel have internal frauds, and false invoices are used to defraud reimbursement.
3) **Sales stage:** The financial risks of the products in the sales stage are mainly caused by the phenomenon of counterfeiting of payment instruments and fraudulent payment means. The false invoice provided by the purchaser will result in the company's accounts receivable failing to return normally and the capital turnover rate will drop.

2.1.2 The financial risks at the policy level mainly come from two aspects: monetary policy and fiscal policy.

1) The tone of monetary policy constitutes a systemic risk factor for corporate financing, and the loose or tight information orientation of monetary policy has a direct impact on corporate financing loans. When the current loan interest rate and other policy information updates and revisions are quickly released through the mutual benefit network, enterprises can not capture the detailed information in time by manual, and the time of manual receiving and execution is delayed, which may lead to the company missing the best financing opportunity and intensifying the enterprise.
2) The introduction of the new fiscal policy is bound to impose new norms on corporate financial operating standards and supervision methods. Reasonable tax avoidance is one of the ways for enterprises to reduce costs. Reasonable tax avoidance on the basis of guaranteeing tax payment according to law can reduce the cost of capital of enterprises and ensure the compliance of tax avoidance operations.

2.1.3 From the perspective of development, the size of corporate risk is mainly determined by the degree of realization of shareholder value and goodwill.

In order to meet performance appraisal, obtain commercial loans, some companies will carry out financial statements to achieve the corresponding purpose.

2.2 Risk hazard analysis

First of all, in the production procurement stage, the unreasonable pricing screening mechanism will lead to an increase in the cost of sunken enterprises, and the pursuit of low prices will easily lead to the low price trap of enterprises falling into suppliers. In the management stage, the unreasonable reimbursement mechanism will increase the internal management costs and additional capital expenditures, causing financial losses. In the sales stage, the payment method fraud and other circumstances will lead to the failure of the company's accounts receivable to arrive at the account, the capital turnover rate declines, the capital chain breaks, and serious profit losses occur.

Secondly, at the policy level, enterprises often encounter problems such as whether the financing method is legal or not. Unintentional mistakes also occur from time to time due to changes in legal or policy terms. At the same time, it may result in missed the best financing time and cause huge economic losses.

Finally, from the perspective of the company's own development, if human fraud occurs in the process of dynamic adjustment of financial statements, it will lead to the loss of compliance and authenticity of financial data.

3. Artificial intelligence system design based on financial risk

1) **Economic level:** data collection and analysis and early warning mechanism. Through the natural language processing function, the files and consultations are automatically edited according to the keywords, and the automatic screening mechanism of price data is established. The price data is automatically compared and the qualified enterprises are selected. Based on the data records, the finance staff considers the cumulative number of times the employee is near the reimbursement red line standard, as appropriate.
2) **Policy level:** recommendation system and data mining module. The network information is collected by the crawling system or other information collection methods in data mining, and the data is classified by the recommendation system, and the labels are listed and collated by the collaborative filtering. Filter the information and select the digital information you need.
3) **Development level:** intelligent forecasting and information feedback monitoring module. Intelligent prediction mainly analyzes and selects the decision model given by the recommendation system through genetic algorithm and decision tree model. It is mainly used for auxiliary intelligent decision-making at the level of enterprise development, helping senior management to comprehensively analyze policy guidance and market dynamics to avoid decision-making mistakes.

4. Conclusion

Enterprises to guard against new financial risks are an important part of the Internet environment. Enterprises in a new environment must have a sense of risk that keeps pace with the times and prevent them in time. Artificial intelligence has been selected as the most potential investment direction at the moment. Combining the Internet with the financial system early can reduce the impact of new financial risks on enterprises.

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