Hindawi
Wireless Communications and Mobile Computing
Volume 2023, Article ID 6093443, 11 pages
https://doi.org/10.1155/2023/6093443

Research Article

Financial Audit Method Innovation of Qinghai Energy Enterprises Based on Panel Data Regression Model

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Received 22 June 2022; Revised 4 August 2022; Accepted 10 August 2022; Published 28 April 2023

Academic Editor: Kalidoss Rajakani

In the process of promoting the internal audit work, we can find the operation and management of the enterprise, which is affected by the internal audit work. Therefore, it can be seen that the internal audit plays an important role, and it is also a necessary link in the internal management of the enterprise. With the development of China's current economic market and the corresponding transformation, energy enterprises are facing serious development problems in the process of operation and management. The existence of these problems is concentrated in the internal audit management, mainly because many internal auditors fail to clearly recognize the necessity of establishing a good internal audit during the development of energy enterprises, which will inevitably have a negative impact on the development of enterprises. In addition, internal audit has not been fully recognized and concerned by all leaders, so the emergence of these situations will lead to the difficulty of internal audit in playing its real role to a certain extent. Therefore, in this paper, the author will start from the energy enterprises, study the financial audit method innovation of energy enterprises in Qinghai Province based on the panel data regression model, discuss the problems faced by internal design in enterprise management, and focus on how to effectively solve this problem, hoping to provide more reference for energy enterprises to carry out financial audit in the future.

1. Introduction

With the acceleration of the development of China's market economy, the continuous strengthening and management of China's modern enterprise system, the emergence of internal audit can adapt to the current world development trend and play a certain leverage role in the management of enterprises. Internal audit is an independent and objective supervision and service activity within an organization. It uses systematic and standardized methods to review the legitimacy and effectiveness of business activities, internal control, and risk management, promote the organization to improve management, and help the organization to improve efficiency and achieve goals. Since the reform and opening up, China's internal audit has been gradually carried out, but there are still some problems restricting the development of internal audit, such as the imperfect leadership system and relevant laws and regulations. In order to better ensure that the internal audit can play its real role, it is necessary to establish a perfect management system and standardize the internal management rules and regulations, which can not only improve the awareness of risk of internal energy enterprises but also better avoid relevant risks and ensure the more stable and healthy development of China's energy enterprises in the future [1, 2].

China's oil mainly comes from imports and is the world's largest crude oil importer. Therefore, vigorously developing the new energy industry is a necessary strategic choice for the country. In recent years, with the support of the national subsidy policy and the promotion of relevant measures, China's new energy industry has developed well, especially in the technical research and development of battery and other parts, which is conducive to the development of China's new energy vehicles. However, China's new energy industry started late, with a low level of scale and industrial concentration. There is a big gap between

the core technology mastered by China and developed countries [3–5]. At the same time, foreign new energy enterprises have also entered the domestic market, and the market competition is more intense. Although China's new energy enterprises have certain technology, scale, and management capabilities, they are in a high-risk and uncertain situation, facing risks and challenges caused by uncertain factors [6].

China's new energy industry is an emerging development field. Different from other industries, although it has a good prospect with the support of the national subsidy policy, such a passive development industry, this has not yet mastered the core technology, with high R &amp, D costs, immature development, vulnerable to external factors, and facing high financial risks. It objectively exists and runs through the enterprise's business that links the characteristics of complex and uncertain factors which lead to the instability of enterprise operation. This paper chooses new energy enterprises as the research object, modifies the traditional Z-value early warning model, and predicts and controls the financial risk of new energy enterprises according to the modified early warning model [7, 8]. The research content of this paper has broadened the industry field of enterprise financial risk prevention and control theory to a certain extent and enriched the research content of enterprise financial risk prevention and control theory by studying the financial risk prevention and control of new energy industry. Through the case study and application of the prevention and control system, this paper discusses how to make rational use of means to effectively control financial risks, which has certain reference significance for the prevention and control theory of financial risks of other new energy enterprises [9, 10].

In today's information society, in order to gain a firm foothold in the market and enhance competitiveness, enterprises must strengthen the research on information technology, with big data technology as the core. For modern enterprises, the emergence of big data is both an opportunity and a challenge. Only by paying attention to and actively applying it and breaking through the traditional working methods can we better achieve the purpose of improving the work efficiency and market competitiveness of employees [11–13]. Nowadays, big data has made corresponding optimization progress. Integrating it into the internal financial audit process can realize the optimization and identification of internal data, so as to provide technical support for promoting the healthy development of the financial audit industry [14]. Audit informatization is the general trend, but in the specific implementation of audit informatization, every enterprise has its own way to go. The right is the best. Each enterprise should establish an information-based internal audit system suitable for the development needs of the enterprise according to the actual situation of the enterprise.

Economic theory shows that many important macroeconomic variables and economic phenomena have nonlinear characteristics. If we ignore this nonlinear characteristic and use panel data linear regression model to analyze it, it is likely that the estimation results will deviate and eventually lead to wrong conclusions [15]. Therefore, it is of great theoretical and practical significance to relax the strict linear restrictions and construct and study the panel data nonlinear regression model for the analysis of macroeconomic problems. Therefore, on the basis of combing the modeling methods of nonlinear regression model for panel data, this paper makes an exploratory study on the relevant theoretical issues [16]. At the same time, the panel data nonlinear regression model is also used to analyze some macroeconomic problems. However, due to the short time for China to integrate big data into financial internal audit, there is still much room for expansion in the overall development process. Therefore, this paper will start from the connotation and characteristics of big data and put forward optimization countermeasures for the existing deficiencies.

2. The Related Works

2.1. Overview of Financial Audit under the Background of Big Data Era

2.1.1. Current Problems Faced by Energy Enterprises in Carrying out Internal Audit. With the development of China's current economic market, enterprises must adapt to the market development and achieve appropriate transformation. At the present stage, China's energy enterprises are facing great difficulties in promoting internal management. At present, many enterprises focus on audit work, which will lead to great loopholes in mechanism construction and system construction. In the process of operation and management, energy enterprises face serious development problems. The existence of these problems is concentrated on internal audit management [17, 18]. The internal audit work in China is still in a relatively marginalized position. Some enterprise leaders do not pay enough attention to the internal audit work, the internal audit system is not perfect, and the internal audit work lacks standardization and authority in the process of carrying out, so that the internal audit cannot play its corresponding functions and due effects.

At present, the internal audit work must focus on supervision, so the CSRC established by the state is required to manage and supervise the enterprise. According to the regulations proposed by China Securities Regulatory Commission, the board of directors is mainly responsible for promoting the internal audit of the company. At present, in the practice and management process of China's energy enterprises, the internal audit organization is mainly staffed by the financial department, and the financial director is usually the chief financial officer [4, 19–21]. The general manager of the company is responsible for the internal audit, and the management committee set up under the board of directors is responsible for the internal audit. According to the above management mode, it can be reflected that in the current enterprise, the internal audit work lacks a unified positioning, so it also lacks a unified service object and audit function, as shown in Figure 1.

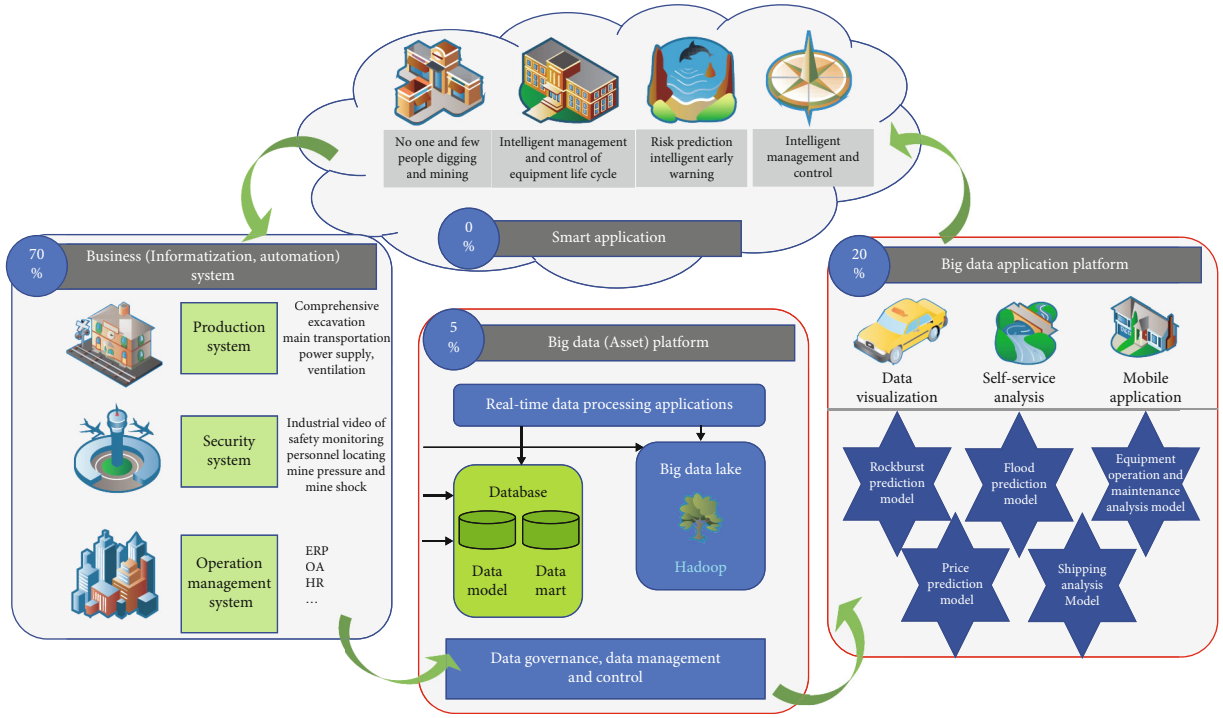

Figure 1: Smart big data road of energy enterprises.

2.1.2. Characteristics of Financial Audit in the Era of Big Data

(1) Shareability Enhancement. Through the network and big data platform, employees of all units can access the company's financial data at any time and share information at any time, so that auditors can cooperate with each other and improve the efficiency of financial audit. At the same time, different data analysts can share data synchronously, which greatly improves the accuracy and reliability of data.

(2) Expansion of Financial Audit Scope. The traditional financial audit is limited by the audit object and audit method and covers a small area. However, with the rapid development of network technology and big data technology, its application scope is expanding. This requires enterprise financial auditors to carry out multilevel information exchange and interaction, so as to improve the level of financial supervision and promote the rapid progress and development of enterprises. The big data audit in the new era is not only based on advanced technology but also comes from multiple departments, which effectively improves the reliability of the audit work and strengthens the relevance of the economic business of the audited units. The massive characteristics of big data itself will make auditors' work become heavy and complex. If we can successfully obtain the correlation between data, we can reduce the impact of causality on the effectiveness of audit work and then better play the role of correlation evidence.

(3) Improving the Timeliness of Financial Audit. The traditional financial audit cannot find the problems existing in the enterprise financial management in time, which leads to the lack of real-time and effectiveness of financial audit, so that the enterprise financial audit cannot be carried out in a timely and effective manner. The use of big data can make the enterprise financial audit timely and carry out financial audit anytime and anywhere, thus greatly improving the efficiency of audit supervision. The enterprise financial audit department should seize the opportunity, break through the traditional working mode and thinking mode, overcome technical difficulties, make big data better integrated into the enterprise financial audit work, and improve the work quality and efficiency.

2.1.3. Development Status of Financial Audit under Big Data Environment. With the rapid development of big data technology, financial audit has gradually entered the enterprise. Big data plays an important role in financial audit. With the application of big data, financial audit data has gradually increased. With the deepening of economic reform, the economy has made great progress. The state has issued a series of policies to encourage mass entrepreneurship and innovation.

In this context, the exchanges between enterprises are more and more frequent, the number of trade is also more and more, and the financial data and audit data are also more and more. At the same time, with the development of economy, the data information structure of financial audit has changed accordingly. The financial audit data needs to develop in a diversified direction, which brings a lot of workload to the financial auditors. With the continuous development and progress of science and technology in China, the financial audit model is gradually developing towards the "Internet +" direction. This is mainly because with the

support of network technology, financial audit business can be carried out at the same time with other businesses, which can more effectively reflect the current income status of the enterprise and provide reference for the development objectives and decision-making of the enterprise.

In addition, with the application of network technology, the statistical work of financial audit information is more authentic and accurate, and the arrangement of information is more standardized, which improves the efficiency of audit work and the accuracy of financial audit work. In addition, with the arrival of the big data era, the emergence of "cloud" technology has brought a new development model to financial audit, and the emergence of cloud computing has greatly promoted the development of financial audit. Financial audit distinguishes between ownership and use right. Previously, financial audit required content accounting software and independent maintenance. Software update and maintenance are also part of financial audit. With the cloud financial audit mode, enterprises do not need to purchase a full set of working software but only need to purchase "cloud" technology to transfer and graft, and financial auditors do not need to be responsible for later maintenance and update. At the same time, cloud financial audit improves the quality and efficiency of financial audit to a certain extent, realizes data sharing and transmission, and realizes remote monitoring and real-time monitoring of financial audit information.

2.2. Introduction to Bayesian Quantile Regression Model for Panel Data. Panel data quantile regression model is one of the most discussed models in academic circles. Panel quantile model has the advantages of quantile model and panel model. It can not only control individual heterogeneity, have more information, greater variation, and weaker collinearity between variables but also identify and measure the impact that cannot be estimated by using cross-section or time series data alone. It has strong resistance to the estimation of nonnormal distribution or abnormal values, can provide more complete information, and more clearly explain the whole segment of dependent variables and deal with the heterogeneity of data. If the variables of Bayesian quantile regression model of panel data can be selected through elasticnet penalty method, on the one hand, the ability of the model to process high-dimensional data can be enhanced; on the other hand, the problem of group effect can be solved, and the prediction accuracy of Bayesian quantile regression model in processing highly correlated data can be improved, to facilitate the study of highly relevant data. Therefore, the research on elasticnet variable selection of Bayesian quantile regression model of panel data has strong practical significance.

This part introduces the panel data model with multiple random effects, which covers a wide range. The Bayesian elasticnet quantile regression model of panel data proposed in this paper is based on this model.

The panel data model with multiple random effects can be expressed as:

$$y_{it} = x_{it}'\beta + z_{it}'\alpha_i + \varepsilon_{it} \quad i = 1, \cdots, N \quad t = 1, \cdots, T, \tag{1}$$

where I is the cross-sectional unit, t is the period, and Y_{it} is the observed value of the ith individual in period T; X_{it} is the observed value of k-dimensional explanatory variable of individual I in period T; β is a k-dimensional fixed effect coefficient vector, assuming that it does not change with time; α_i is the p-dimensional random effect vector of individual I, usually assuming that:

$$\alpha_i|\varphi \sim N_p(0, \varphi I_p). \tag{2}$$

Z_{it} is a p-dimensional covariate corresponding to random effects; ε is a random error, assuming that $\alpha I \varepsilon$ is its independence. Assume that given:

$$X = x_{it}, Z = z_{it}, \alpha = \alpha_i. \tag{3}$$

The linear condition of response variable y is τ; the quantile regression function is

$$Q_Y(\tau|x_{it}, z_{it}, \alpha_i) = x_{it}'\beta_\tau + z_{it}'\alpha_i, \tag{4}$$

of which

$$Q_Y(\tau|x_{it}, z_{it}, \alpha_i) = \inf\{y : F(y|x_{it}, z_{it}, \alpha_i) \geq \tau\}. \tag{5}$$

$Y\,\tau\,(0 < \tau < 1)$ is quantile. For a group of random samples of Y, the parameters can be obtained by minimizing the following equation with an estimated value of β:

$$\sum_{i=1}^{N}\sum_{T=1}^{T}\rho_\tau\left(y_{it} - x_{it}'\beta_\tau - z_{it}'\alpha_i\right), \tag{6}$$

of which

$$\rho_\tau(u) = u(\tau - I(u \leq 0)). \tag{7}$$

It is called the test function, and $I(\cdot)$ is the indicative function.

Next, we introduce the following definition of asymmetric Laplace distribution, so as to give a method to solve Equation (6) from the perspective of distribution:

Say that the random variable y obeys the asymmetric Laplace distribution, if its probability density function is:

$$f(y|\mu, \sigma, \tau) = \frac{\tau(1-\tau)}{\sigma}\exp\left\{-\rho_\tau\left(\frac{y-\mu}{\sigma}\right)\right\}, \tag{8}$$

recorded as:

$$\mathrm{Y} \sim ALD(\mu, \sigma, \tau), \tag{9}$$

of which τ is the skewness parameter, σ is the scale parameter, and μ is the position parameter, if it is assumed in Equation (9):

$$y_{it}|\alpha_i \sim ALD\left(x_{it}'\beta_\tau + z_{it}'\alpha_i, \sigma, \tau\right). \tag{10}$$

Then the likelihood function of the sample is

$$L(\beta, \sigma; y, \alpha_i, \tau) = \left(\frac{\tau(1-\tau)}{\sigma}\right)^{NT} \exp\left\{-\sum_{i=1}^{N}\sum_{t=1}^{T}\rho_\tau\left(\frac{y_{it} - x_{it}'\beta_\tau - z_{it}\alpha_i}{\sigma}\right)\right\}, \tag{11}$$

of which

$$y = \left(y_{11}, y_{12}, \cdots, y_{1T}, \cdots, y_{N_1}, y_{N^2}, \cdots, y_{NT}\right)'. \tag{12}$$

For simplicity, this article omits parameters β, subscript of $\tau_\circ$.

If σ is regarded as an annoying parameter, the maximization (12) is equivalent to the minimization (9). Because the asymmetric Laplace distribution has no conjugate prior, it is difficult to construct the Gibbs sampling algorithm for parameter estimation. In order to solve this problem, we give an important decomposition of the asymmetric Laplace distribution

(Kozumi and Kobayashi's design (2009)):

$$\eta \sim \mathrm{N}(0,1), \quad \xi \sim \mathrm{E}\left(\frac{1}{\sigma}\right) \quad \mathrm{Y} \sim ALD(\mu, \sigma, \tau). \tag{13}$$

Then y can be expressed as:

$$\mathrm{Y} = k_1\xi + \sqrt{k_2\sigma\xi}\eta + \mu, \tag{14}$$

of which

$$k_1 = \frac{1-2\tau}{\tau(1-\tau)}, \quad k_2 = \frac{2}{\tau(1-\tau)}. \tag{15}$$

From the above decomposition, Equation (14) can be expressed equivalently as:

$$y_{it} = x_{it}'\beta + z_{it}'\alpha_i + k_1\xi_{it} + \sqrt{k_2\sigma\xi_{it}}\eta_{it}, \quad i = 1, \cdots, N, \quad t = 1, \cdots, T. \tag{16}$$

Remember

$$\xi_i = (\xi_{i1}, \cdots, \xi_{it})', \quad i = 1, \cdots, N, \quad \xi = (\xi_1, \cdots, \xi_N). \tag{17}$$

The Bayesian hierarchical quantile regression model can be established for the following panel data:

$$\begin{cases} y_{it}|\eta_{it} = x_{it}'\beta + z_{it}\alpha_i + k_1\xi_{it} + \sqrt{k_2\sigma\xi_{it}}\eta_{it}, \quad \eta_{it} \sim \mathrm{N}(0,1) \\ \xi|\sigma \sim \prod_{i=1}^{N}\prod_{t=1}^{T}\frac{1}{\sigma}\exp\left(-\frac{\xi_{it}}{\sigma}\right), \quad \sigma \sim \mathrm{IG}(c_0, d_0) \\ \alpha_i|\sigma \sim N(0, \phi), \quad \phi \sim \mathrm{IG}(k_0, w_0) \\ \beta \sim \pi(\beta), \end{cases} \tag{18}$$

where IG is the inverse gamma distribution.

3. Construction of Bayesian elasticnet Quantile Regression Model for Panel Data

3.1. Model Construction. Lucas et al. improved the Solow model. The basic form of the model is shown in Figure 2.

Based on the analysis of the interaction of various factors in different development stages, this study found that the main influencing factors of enterprises or organizations' innovation activities can be considered from the perspective of endogenous and exogenous. The so-called endogenous factors mainly refer to the analysis of some factors that take the organization as the core and are different from other organizations. Exogenous factors are other external factors related to organizational development, including institutional arrangements, macroeconomic environment, government policies, and other factors. Through the analysis of internal factors such as the internal innovation cultural atmosphere, organizational processes, talents, funds, knowledge, technical resources and external factors from market demand and competition, independent innovation laws and regulations, and national policies to support independent innovation, we can know the different effects of internal and external factors on independent innovation of enterprises. In general, there is still much room to improve the independent innovation ability of Chinese enterprises.

Energy enterprises in our province are facing the dilemma of "supply and demand dislocation," and the adjustment and reform of economic structure are an urgent process for enterprises. The production and consumption structure of traditional fossil energy dominated by coal can no longer meet the needs of consumers and the development standards of the industry, as shown in Figure 3.

On the other hand, the traditional fossil energy industry has a serious surplus, especially coal. According to the data of the National Bureau of statistics in 2017, the domestic coal production capacity is more than 5 billion tons, but the domestic consumption capacity is only more than 4 billion tons, and there is a large amount of excess capacity. A large number of overcapacities lead to large-scale idle production capacity of enterprises, resulting in a great waste of resources, increasing the cost of economic operation, and making it more difficult to change the mode of economic development. By comparing the average values of some financial indicators of 27 major industries in 2015 and 2016, it is found that the industries with the most serious overcapacity are mainly concentrated in the field of traditional fossil energy, showing a poor financial situation.

For Qinghai, the golden period of traditional fossil energy market has ended. The fall in the price of traditional energy has greatly reduced the efficiency of enterprises. From the perspective of industry trends (as shown in Figure 4), the dislocation of energy supply and demand and overcapacity will continue. The sluggish industry market and insufficient effective supply are the main problems facing Qinghai's traditional energy industry. At the same time, the continuous poor economic benefits make it urgent for enterprises to carry out innovation activities.

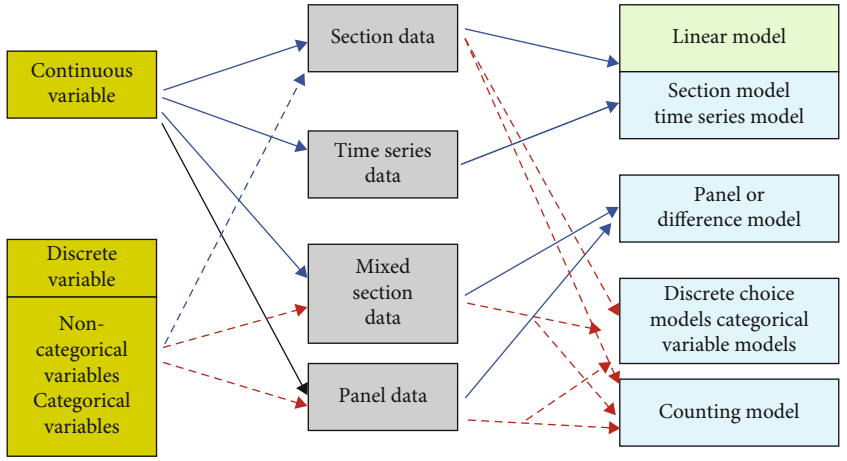

Figure 2: Construction flow chart of Bayesian quantile regression model.

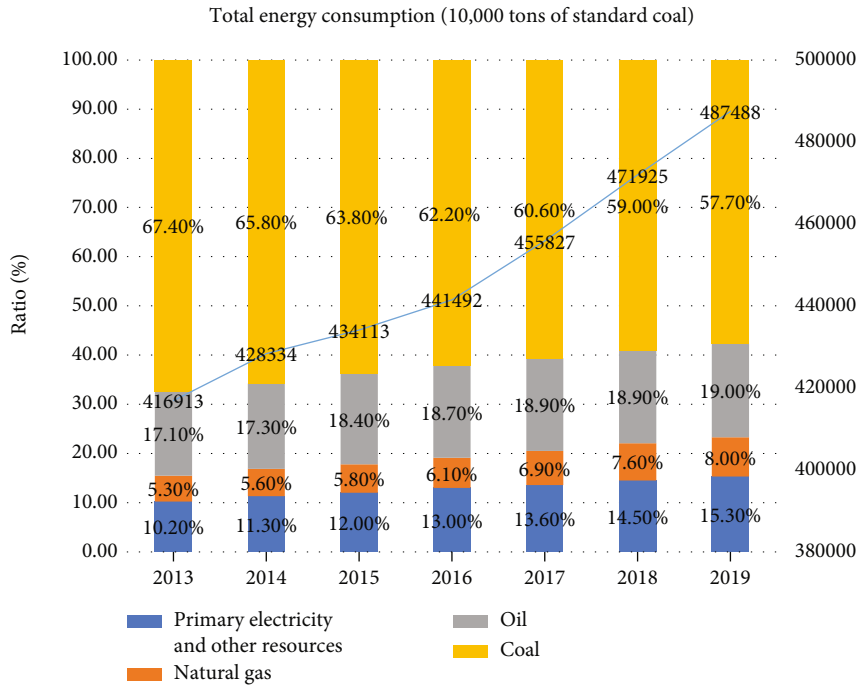

Figure 3: Change trend of China's energy consumption and production in recent years.

3.2. BQR, BLQR, BALQR, and BQREN Simulation Comparison. Logistic regression (a special case of the generalized linear model) is suitable for these data because the response variables have a binomial distribution (see Figure 5).

Luo et al. compared traditional methods such as the Bayesian quantile regression estimation (BQR) and mixed data ordinary least squares estimation (LS) under the assumption that the prior distribution of fixed effect coefficients is normal distribution. The results show that the BQR method is superior to other traditional methods, especially when the error distribution is a nonnormal distribution. The quantile regression estimation method is obviously superior to the traditional mean estimation method. Lihanfang et al. improved the prior distribution assumption of fixed effect coefficient on the basis of Bayesian quantile regression estimation method (BQR) and proposed the Bayesian lasso quantile regression method (BLQR) corresponding to the lasso penalty method, so that the explanatory variables in the model can be automatically selected while establishing the quantile regression model of panel data. Moreover, an easy-to-implement Gibbs sampling algorithm is constructed to realize the posterior sample extraction. Through simulation and comparison, it is found that the BLQR method has stronger ability to exclude "noise" variables than other methods in the existing literature. Liziqiang et al. improved the BLQR method. Considering that the weight coefficient compression degree of explanatory variables with different importance should be different, and the constructed prior information has the characteristics of adaptability, they proposed an adaptive lasso quantile regression method (BALQR) for panel data. The

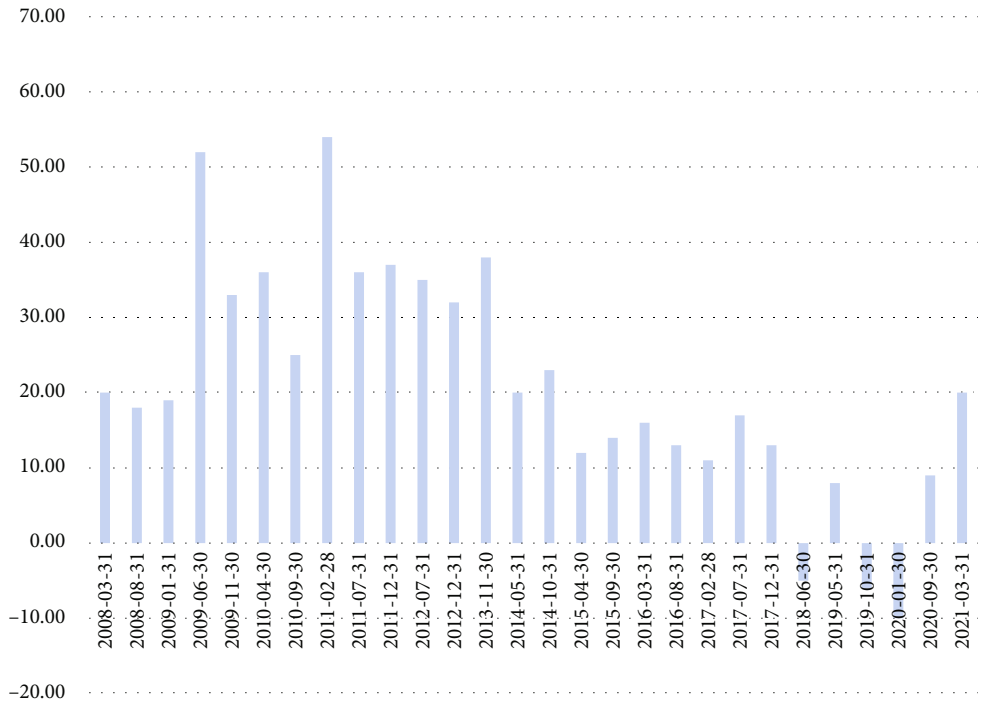

Figure 4: Cumulative year-on-year fixed investment of energy enterprises in Qinghai Province.

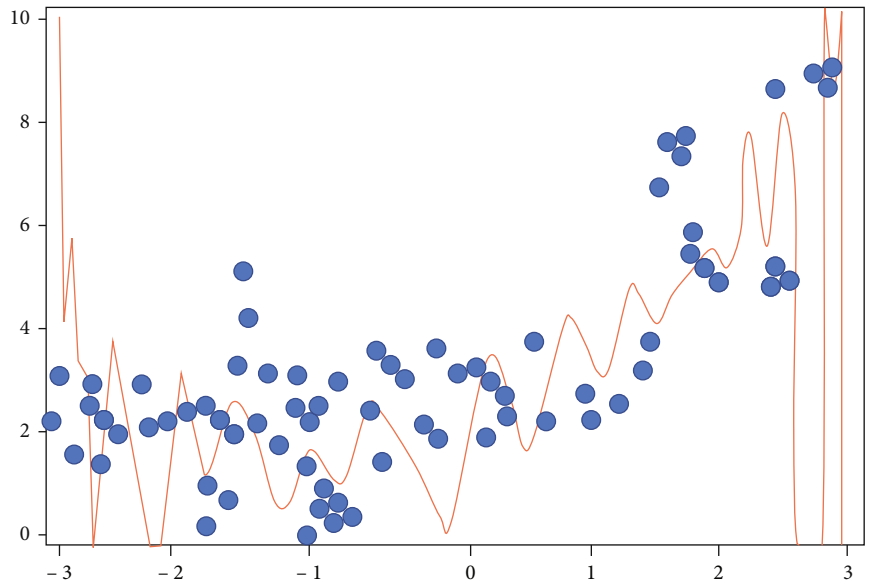

Figure 5: Logistic regression model.

simulation results show that the BALQR method is superior to the BQR method and BLQR method in parameter estimation accuracy and variable selection accuracy. This paper presents a Bayesian elasticnet quantile regression method (BQREN) for panel data.

It can be seen from the results in Table 1 that when the regression coefficient is highly sparse and the correlation coefficient between two adjacent explanatory variables is 0.5, in terms of MSE index, it is at the median point $\tau = 0$. In 5 places, the BALQR model outperformed the BQREN model, the BQR model, and the BLQR model, at extreme quantile $\tau = 0$. In 9 places, the BALQR model is superior to the BLQR model, the BQREN model, and the BQR model, visible both at the median point $\tau = 0\,5$ and at the extreme quantile $\tau = 0$. In 9 places, the BALQR model performs best and has the highest estimation accuracy, which is consistent with the expectation. The main reason is that lasso has good sparsity and can better compress the regression coefficient before irrelevant explanatory variables to 0. The performance of the BQREN model is also good, and the estimation

Table 1: Comparison of estimation results of four methods in simulation 1.

Method	MSE	$\beta 1 = 8$	$\beta 2 = 0$	$\beta 3 = 0$	$\beta 4 = 0$	$\beta 5 = 1$	$\beta 6 = 1$	$\beta 7 = 1$	$\beta 8 = 1$
BQR	0.187	8.083	0.112	-0.087	-0.084	-0.072	-0.136	0.124	0.062
BLQR	0.203	8.032	0.021	-0.081	-0.118	-0.051	0.172	0.039	-0.078
BALQR	0.167	7.895	0.013	0.036	0.052	-0.026	0.121	0.024	-0.041
BQREN	0.182	7.984	0.015	-0.093	0.073	-0.081	0.128	-0.058	-0.066

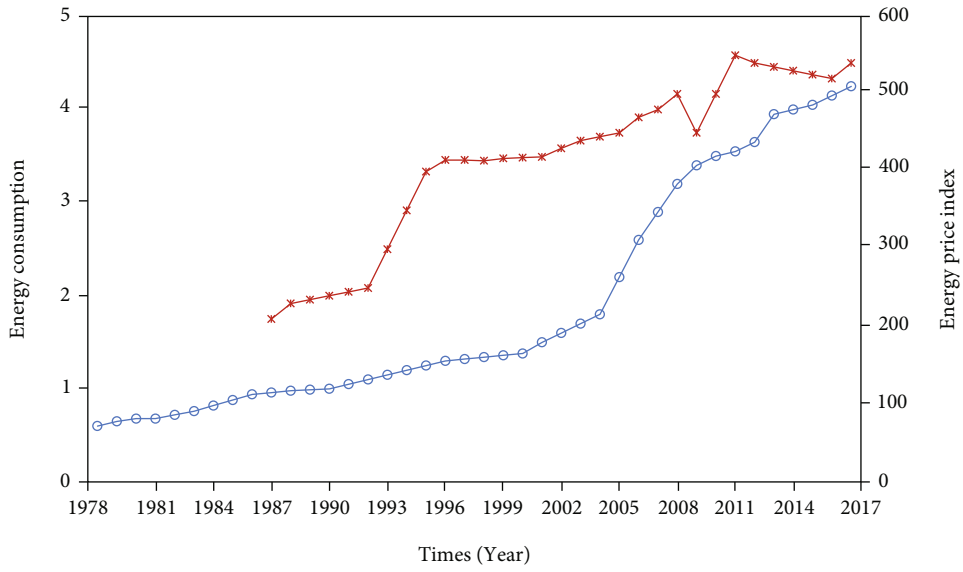

Figure 6: Z value line chart of an energy enterprise over the years.

effect of the BALQR model, BQREN model, and BLQR model with penalty function terms is better than that of the BQR model without penalty function terms, at the median point $\tau = 0$. At 5 locations, the performance of the BQR model and the BLQR model was similar, at the extreme quantile $\tau = 0$. At 9 points, the estimation accuracy of the BQR model is very low.

4. Application of Financial Audit Methods in Energy Enterprises

4.1. Basic Profile and Z-Value Calculation and Analysis of an Energy Enterprise. Among the fields involved in new energy, an energy enterprise is outstanding in the field of new energy vehicles, and the revenue of new energy accounts for more than 40%. As a representative enterprise in the new energy industry, the research on its prevention and control work can be used for reference by other new energy enterprises. The company was established in 1995 and listed on the Shenzhen Stock Exchange in June 2011. An energy enterprise has unique competitive advantages in new energy vehicles and batteries. The lithium iron phosphate battery and ternary battery developed in the field of power batteries have solved consumers' concerns about the safety and life of electric vehicle batteries and established a technology-based competitiveness with strong scientific research capabilities and integration advantages. However, an energy enterprise failed to keep up with the market changes and paid too much attention to the lithium iron phosphate battery. At the same time, its competitor Ningde times developed a ternary lithium battery to achieve overtaking in corners, gradually seizing the market share of an energy enterprise in the field of power batteries with its cycle life and stronger safety.

Table 2: Statistics of total asset growth rate ($x1$) and current asset turnover rate ($x2$) of an energy enterprise.

Year	Growth rate of total assets	Turnover rate of current assets
2011	0.2391	2.5054
2012	0.047	2.1613
2013	0.1118	2.1072
2014	0.2306	1.6487
2015	0.2285	1.6818
2016	0.2562	1.56
2017	0.2277	1.1708
2018	0.0925	1.1937
2019	0.0055	1.1499

Bring the financial data of an energy enterprise from 2011 to 2019 into the modified model $z = 0.956\,(x1) + 0.376\,(x2)$, where $x1 = growth\ rate$ of $total\ assets$ and $x2 = turnover\ rate$ of $current\ assets$, and the statistics over the years are sorted out. The trend of the Z value over the years is shown in Figure 6.

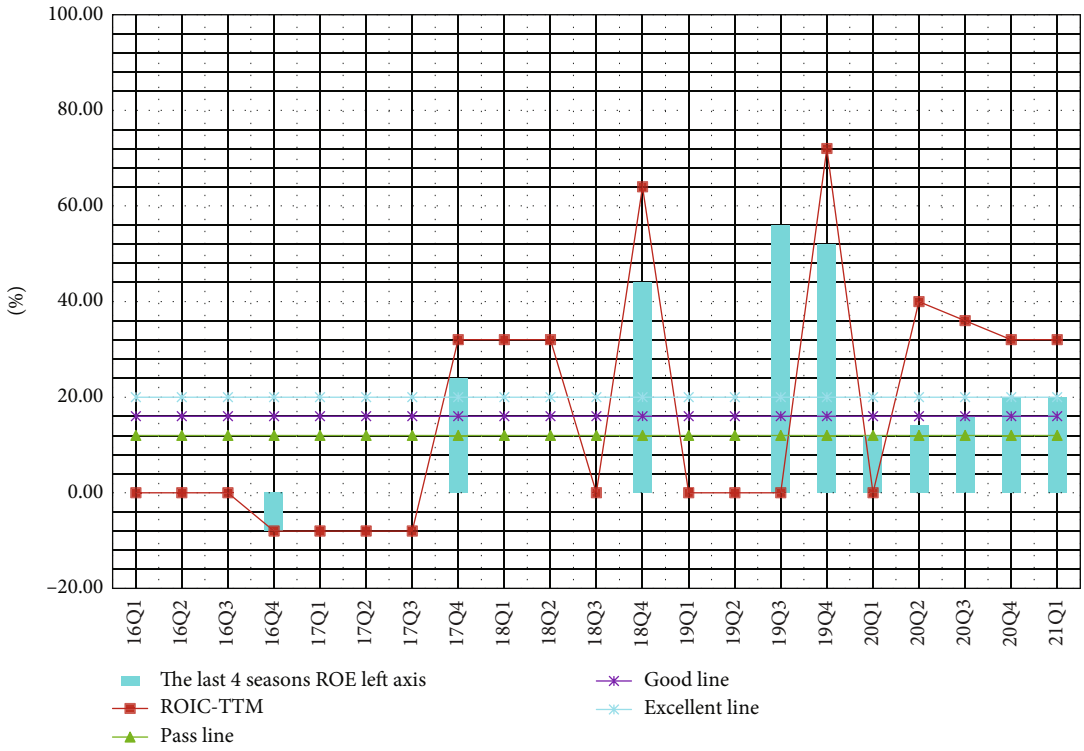

Figure 7: Trend chart of profit related indicators of an energy enterprise.

The financial risk of an energy enterprise fluctuated and decreased from 2010 to 2019. In particular, the financial risk increased greatly in the past two years due to the impact of national policy changes. According to the critical point analysis of Z value in the previous chapter, the financial situation of an energy enterprise before 2018 was in the safe zone, but the Z value in 2019 was in the light alarm zone, which needs to be paid close attention.

4.2. Financial Audit Method Decomposition of an Energy Enterprise. At present, the potential financial risks of an energy enterprise are increasing. According to the statistical values of $X1$ and $X2$, the modified Z value is the early warning model (see Table 2).

The income of new energy enterprises is generally realized through operating assets, which indicates that enterprises can obtain income by expanding the asset scale. However, if the asset scale is excessively expanded, and most of the funds come from the raised loans, once the operating income does not bring more income to cover its costs, it will make the enterprise face greater debt repayment pressure. The turnover rate of current assets reflects the utilization efficiency of the enterprise for the working capital, and the reduction of this ratio will affect the short-term repayment ability of the enterprise to a certain extent. It can be seen that these two indicators show that the solvency of enterprises is also the source of financial risks.

In recent years, the profitability of an energy enterprise has been relatively stable and has not been negative. However, according to the trend chart 8, it can be seen that the profitability of an energy enterprise has been rising steadily before 2016. However, since 2016, its profitability index data has declined year after year, which is basically consistent with the trend of the previous main indicators, indicating that the performance of the indicators related to the profitability of the enterprise is poor as shown in Figure 7.

There are many reasons for the poor performance of the profitability indicators of an energy enterprise: from the perspective of external factors, the decline of the national subsidy policy since 2016, coupled with more competitors intensifying the market competition, led to the reduction of the enterprise's operating income. From the perspective of the enterprise itself, an energy enterprise that relies too much on state subsidies adopts the way of credit sales in order to expand its income, but this way leads to too many accounts receivable and slow collection, which reduces the speed of asset turnover and affects the profitability of an energy enterprise to a certain extent. This means that an energy enterprise needs to take measures such as strengthening cost control and improving asset turnover efficiency to efficiently allocate resources to achieve enterprise development.

As previously analyzed, the weak long-term and short-term solvency of an energy enterprise belongs to the financing risk. Low efficiency of internal and external investment belongs to investment risk. However, the weak liquidity and turnover efficiency of assets are operational risks. In general, the Z value of an energy enterprise decreases year by year, and the financial risk increases gradually every year. The subsequent control measures need to control these three aspects.

5. Conclusion

With the development of China's current economic market and the corresponding transformation, energy enterprises are facing serious development problems in the process of operation and management. The existence of these problems is concentrated in the internal audit management, mainly because many internal auditors fail to clearly recognize the necessity of establishing a good internal audit during the development of energy enterprises, which will inevitably have a negative impact on the development of enterprises. In addition, internal audit has not been fully recognized and concerned by all leaders, so the emergence of these situations will lead to the difficulty of internal audit in playing its real role to a certain extent. To sum up, in the process of promoting the internal audit work, the staff should be required to have a high ideological awareness and take the initiative to build a sound internal audit construction. By improving the efficiency of internal audit and ensuring the independence of the audit department in its work, the status of the audit department can be effectively improved in the management of energy enterprises. In addition, a sound internal audit institution should be established to ensure that the internal audit function of energy enterprises is transformed and the audit scope is expanded. Only by doing this can we ensure that energy enterprises play a real role in the management process of energy enterprises.

Data Availability

The figures and tables used to support the findings of this study are included in the article.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Acknowledgments

The authors would like to show sincere thanks to those techniques that have contributed to this research.

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