

Research Article

Analysis of Enterprise Financial and Economic Impact Based on Background Deep Learning Model under Business Administration

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Enterprise finance has become an indispensable financial channel for people to invest in their lives, and business management can provide a better economic environment for the development of enterprise finance. The structure of enterprises is gradually becoming more and more complex, and business administration shoulders considerable responsibilities and obligations in the organization and supervision of today's social management structure. How can China play its functions under the new situation after the world economic exchanges are more frequent is an important link to promote the stable development of financial markets. In view of the problems of economic activity behavior and certainty of financial index system under the background of existing business administration, this paper puts forward the deep learning model to make risk analysis, income analysis, profit and loss analysis, and so on. The formula of deep learning model is used to calculate the data graph of financial economy, and finally, various data are compared to get the research of several business management methods on the development of enterprise financial economy. Among them, the model of current management mode belongs to two modes: e-commerce and EPR management. They not only have very unique management characteristics but also greatly promote the development of modern management, and their roles also well interpret the characteristics of modern management. The experiment also analyzes the financial data under the four algorithms for uncertainty comparison, profit and loss comparison, discreteness comparison, volatility comparison, and possibility analysis. Finally, after the source of uncertainty, the risk prediction and risk management are carried out by constructing decision trees, and these structural models are used to bring comprehensive analysis to the financial economy of enterprises and to build the impact of good trends and development prospects.

1. Introduction

With the gradual improvement and deepening of China's economic system reform, the structure of enterprises has gradually become complicated. Business administration plays an important role in today's social management structure. In addition, how can China play its functions under the new situation after more frequent economic exchanges with the world is an important link to promote the stable development of China's market [1]. Efficient business administration based on deep learning model also has an extremely far-reaching impact and development on modern economy and finance. Different business management modes have obvious influence on the financial economy of various enterprises in today's society. Undertaking the

economic development of enterprises is an important cornerstone for the steady progress of society [2]. Business administration is a highly practical discipline in management. It is facing the most important and inseparable extensive industrial and commercial fields in the economy and closely combines the practice of enterprise management to study the business activities of profit-making organizations and the theories, methods, and technologies of enterprise management [3]. At present, as an important ruling part of our government, industrial and commercial management has a very important function. In the management of industrial and commercial functions, the standardized management of market economy system can greatly promote the stable, healthy, and sustainable development of current market finance. The development of socialist market

economy is influenced by its own internal operation law, and the standardization of business administration system is an important content [4]. Combined with deep learning model and uncertainty analysis, it also reflects the diversity, comprehensiveness, and scientificity of business administration. Every management method has its advantages and disadvantages. It needs reasonable combination and application to achieve maximum results [5]. The economy and finance of enterprises also have various changes, from the previous offline real economy to the current offline integration and from the former small-scale economy to the present global economic community structure. All these are inseparable from business administration [6]. Thousands of enterprises have made great contributions and promotion to the present society and human civilization. Steady social development is also based on economy. It also has far-reaching significance for life [7]. In order to understand the impact of different deep learning models and business management methods on the financial economy of enterprises, in this paper, various methods are studied, and data were analyzed [8]. In this way, it is also a good suggestion and choice for the future development trend of enterprises. First, the deep learning model of business administration will be expounded and explained [9], and then the structure and structure of these models will be introduced. Several common formulas of deep learning will be applied to get the data analysis of these models. Then, combined with the evaluation index, we make corresponding evaluation and research explanation for various models [10], and then combined with the formula in enterprise financial economy, we make data comparison on the impact trend of several models on enterprise finance. The following are conducive to the trend of social and financial development: what kind of enterprise is suitable for the business management model, how to influence the enterprise economy and finance, how to rationally plan the business management model, and how to make the enterprise economy move towards a benign model. We use the choice of control variables and invariants to control the profits and losses of enterprises, and compare the risk analysis data to draw conclusions. Finally, it is concluded that risk analysis is also of great reference significance and value embodiment to the economy of enterprises and makes the business administration model more fully displayed [12]. Deep learning is applied to business administration simulation formulation and enterprise management. For the finance of enterprises, easy-to-compare data are formed by means of charts and line charts. To conduct research, most risks can be avoided [13]. Economic uncertainty is the embodiment of business administration. Using Seq2Seq, a complete set of financial index construction scheme can be designated to study and analyze the data, so as to show the research significance of the data [14]. Finally, the obtained data are integrated and summarized to form a complete data analysis legend, which reflects the scientific, objective, and cutting-edge research and analysis of this paper. Among the above studies, the algorithms for business administration methods are based on the analysis of financial data, and there are few studies on the corresponding economic

uncertainties. In the enterprise economy, there are many uncertain factors, which reflect the important characteristics of economic activities. In this paper, the problem of economic uncertainty is deeply studied, the uncertainty index is predicted and analyzed by deep learning model, and the corresponding economic correlation characteristics are obtained.

2. Financial and Economic Uncertainty Indicators

The term uncertainty is a general concept in a particularly wide range, and financial uncertainty can be understood as some uncertain factors under different concepts. From a macropoint of view, there are uncertainty of macroeconomic development concept, uncertainty of market finance, uncertainty of social and economic policies [15], and so on. However, in the macrocontrolled economic system operation model, the modern market of economy and finance, economic policies, and other directions, they influence each other and depend on each other. As long as one aspect is affected, the whole body will change, which is the butterfly effect of financial market [16]. At present, the definition of the uncertainty of various macroeconomic development in the world is not so intuitive and clear, but even so, there are still many experts and bachelors who have done a lot of researches and expressed a lot of their views on the development trend of global [17] macroeconomy from different angles and directions. From these aspects of macroeconomics, since the outbreak of the global financial crisis in 2009, the development direction of the global economic and financial system has entered an unprecedented trough, and the brand-new economic growth point has disappeared in front of the public's vision since then. The frequency of economic market fluctuations in the whole country and even the whole world is very violent and frequent. Black Swan incidents occur frequently in the world, and it becomes more and more difficult to control market risks at this time [18]. Therefore, major economies in the world have raised their expected indexes and expected trend charts against international economic and financial uncertainties. Many Western scholars and media agree that "the only thing that is certain is uncertainty." But as far as these events are concerned, individuals, families, and enterprises are also faced with many uncertain factors and volatility indicators in their life cycle economic activities.

If we want to quantify the uncertainty, the first thing we need to determine is a way to replace the uncertain index value. At present [19], there are two ways to replace it. The first way is to choose the approximate range value of our existing economic index to replace the uncertain index. The second way is to dig out the uncertainty of economic and financial development in most economic and financial variables by modeling business administration data. Using other similar variables as alternative variables of uncertainty has the advantage that variables are convenient to select and calculate [20], and researchers only need to choose appropriate alternative variables and then pay attention to academic problems related to uncertainty. However, the

shortcomings of doing so are also very obvious. First, alternative variables often cannot completely replace uncertainty; that is, variables only contain part of uncertainty. Second, alternative variables often contain other attributes besides uncertainty. For example, if volatility is used instead of uncertainty, volatility inevitably contains risks. Third, it is difficult to summarize the uncertainty in the complicated economic and financial operation by using a single or a small number of economic and financial indicators [21]. For this reason, it is inevitable to explore uncertain factors from more comprehensive data in today's society. Cullen et al. [22] reported that, with the development of big data, mobile Internet era, and the improvement of computer computing performance, using deep learning method to deal with massive data has become a hot topic gradually tried in various fields in recent years. The emergence of big data has allowed the use of larger-scale measurement data to measure economic development. At the same time, researchers in the field of economics are increasingly using statistical measurement methods in adjacent fields to study economic and financial problems [23], which greatly complement the traditional econometric techniques. For Asia, economic uncertainty indicators are showing an increasing trend year by year relative to global economic uncertainty indicators, as shown in Figure 1.

In addition, in the current economic policy uncertainty and other aspects, generally speaking, specific quantitative indicators equivalent to global news information are used to replace the policy uncertainty of market economy in various countries. For example, Baker has collected, counted, and sorted out a large number of words related to "uncertain factors" mentioned in newspapers and magazines in different periods around the world. By combining other economic indicators, the financial and economic policy uncertainty (EPU) of major economic systems in the world (including China, the United States, India, and other countries) is constructed. Because the global financial and economic policy uncertainty index (EPU) is more inclined to some complex information about financial and economic policies, EPU pays great attention to quantifying the uncertainty factors at the macroeconomic policy level. This will lead to other incomplete and small-scale alternative indicators that cannot be coordinated and representative. Jurado et al. [24] and their use of financial and economic data variables forecasting error will represent the dependent variables of economic policy uncertainty factors instead of the indicator data volume. Scotti uses the extent of the range selected by the public in the process of publishing relatively extensive data as the independent variable index of the uncertainty factor index instead of the data.

3. Application of Deep Learning Model in Business Administration

Summary of the application of deep learning in financial market deep learning has achieved good results in the research of financial market, volatility of financial assets (stocks, bonds, and futures), and price prediction. Many scholars have applied the deep learning model to the variable

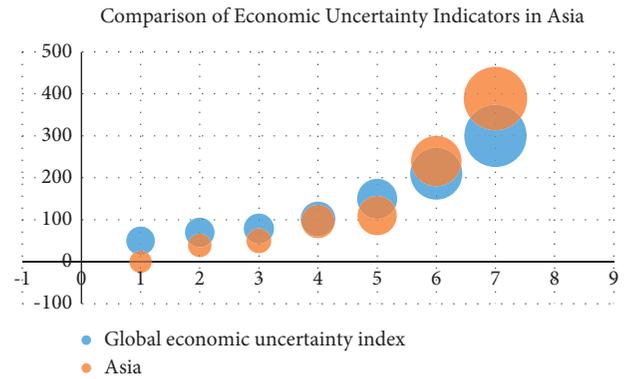


FIGURE 1: Comparative chart of Asian economic uncertainty index.

prediction of economic and financial markets and compared it with the traditional model. Most of the pieces of literature have come to the conclusion that the deep learning method can improve the accuracy of variable prediction. Using Google domestic trend to represent public sentiment factor and macroeconomic development factor and using long-term and short-term memory model (LSTM), this paper studies the influence of these factors on the volatility of S&P 500 from October 19, 2004, to July 24, 2015. Dixon introduced an artificial deep neural network into the research of the future market and used an artificial neural network to predict the changing direction of 45 commodities and futures prices in Chicago Mercantile Exchange. The research pointed out that the average prediction accuracy of the artificial neural network reached 73%. Then, according to the analysis data of this research, it can be shown that when this deep learning neural network model is constructed in depth, combined with business administration, the time delay value of the fluctuation time series of the world market, finance, and economy, the influence of many factors, such as market equilibrium, mobile data, and global economic and financial correlation, can be discussed in depth to expand the scope of the financial field in turn. The research used the same conventional method to control 75 kinds of mass-scale commodities and global foreign exchange predicted by dependent variables and independent variables. When the interval between foreign trade futures is 6 minutes, after this discussion, they further analyzed the subtle price trend changes and price formation trends caused by the median price of foreign exchange of these futures commodities, which was called a simple long-term trading retest rate, and then reduced the error range index of the study. The research results show that, on average, their model can predict the direction of price changes with an accuracy rate of 42%, and in some cases, the prediction rate can reach 68%. The additional back-test results show that when using this model, the market economic index can obtain an annualized Sharpe rate as high as 4.29.

3.1. Basic Ideas of Constructing Financial Uncertainty through Deep Learning Model Business Administration. First of all, through the collation and research of uncertainty index and related deep learning models for neural network model

methods, in this paper, we will use the conventional uncertainty measurement methods, select higher-dimensional and multidimensional economic and financial data for research, and simulate to build the uncertainty index of China's financial and economic market. Then, in order to construct a model to predict the future expectations of a large number of financial variables as well as possible, this paper will further explore the prediction function of deep learning (Seq2Seq) model in financial markets based on LSTM neural network. Finally, the error variance of economic and financial variables predicted by the neural network is used as the uncertainty index of China's financial market in Figure 2.

3.2. Construction of Financial Uncertainty Index. The uncertainty index of financial indicators is mainly measured by the following two formulas. In formula (1), the uncertainty of financial variable W in the future period is first measured. In this step, the conditional expectation calculated by available information N_1 of prediction error conditional fluctuation of financial variable N_t in the future period is used. In formula (2), we use a certain weight to sum up a large number of financial variables' uncertainty index Y_t , which can represent the financial market situation in China, to get the sum uncertainty, and then measure the uncertainty of China's financial market.

$$u_t^y(h) = \sqrt{E[(Y_t + h - E[Y_t - h])\sqrt{I_t}]}, \quad (1)$$

$$FN_t(h) = \text{plim} N_1 \sum_1^{N_Y} W_y u_t^y(h) = E_w[u_t^y(h)]. \quad (2)$$

In order to avoid dimensional disasters, the principal component (PCA) coefficient method is used to reduce the dimension of economic and financial prediction variable X_t . The common factor F_t is extracted from the variable X_t . The prediction variable X_{it} has the following structures of formulas (3) and (4). Here, the error value of the dependent variable y_t in the future h period is defined by the following formula:

$$X_{it} = A_i^F F_t + e_{it}^X, \quad (3)$$

$$v_{i+h}^y = y_{t+h} - E[y_{t+h}\sqrt{I_t}]. \quad (4)$$

When the common factor F_t is used instead of the independent variable X_{it} , the following model formula is constructed, in which the independent variable X_{it} is assigned to obtain the Seq2Seq deep learning error value, and the neural model is used to calculate the E value and I_t to obtain the error square value. Finally, the uncertainty index equation is obtained by calculating the value of the dependent variable H as shown in formula (8).

$$\partial_{i+h}^y = E\left[\left(v_{i+h}^y\right)^2 \frac{\sqrt{I_t}}{2} = v_t^y(h), \quad (5)$$

$$\text{Seq2Seq}(X_{it}) \longrightarrow y_{i+h}^2 w \sqrt[3]{I_t} + X_{it}(h), \quad (6)$$

$$E[v_{i+h}^y]^2 | I_t = (\partial(e_i))^2, \quad (7)$$

$$H = \varphi(XW_{xh} + B_h), H \in R^{n \cdot h}. \quad (8)$$

When designing the neural network, we need to consider the time series characteristic when we face the time series data. Let the value of X_t be the data input at time T , the value of H_t be the hidden layer variable at time T , and the value of H_{t-1} be the hidden layer variable at time $H(T-1)$, so that we can analyze and get the time series data designed by the neural network and calculate the time series eigenvalue.

$$H_t = \phi(X_t W_{xh} + H_{t-1} W_{hh} + b_h). \quad (9)$$

The output data on the output layer of time step t is

$$W_t = O_t - H_t W_{hq} + b_q. \quad (10)$$

The output data on the output layer of time step u is

$$u = \sqrt{\frac{(1-k)E}{(1+k)(1-2k)p}}, \quad (11)$$

$$MPC = \frac{\Delta C}{\Delta Y} - \beta \quad (\beta \in E).$$

In the above formulas, the data of E and K respectively correspond to the dependent variable and independent variable of the neural network model.

(1) In the type of depth model, it is very difficult to get the distance difference and value range in the time step of interval function in the application research of cyclic neural network model in real life. This is quite directly related to the model dependencies of its connected application structures. It will also cause a large-scale impact on the trend of data and the scale of volatility. Therefore, in the current recurrent neural network model and the early long-short-term memory neural network, scientist Hochreiter used a new concept to reduce the number of time step captures in order to minimize the occurrence of this situation. This concept is the gate concept, so that the cyclic neural network model can control the data in different time scale areas, respectively, then the error value of compressed output data at time t can be further reduced by the data overall calculation method, and the fluctuation interval can be reduced.

$$\begin{aligned} I_t &= \partial(X_t W_{xi} + H_{t-1} W_{hi} + b_i), \\ F_t &= \partial(X_t W_{xf} + H_{t-1} W_{hf} + b_f), \\ O_t &= \partial(X_t W_{xo} + H_{t-1} W_{ho} + b_o), \end{aligned} \quad (12)$$

$$\partial(x) = \frac{1}{1 + e^{-x}},$$

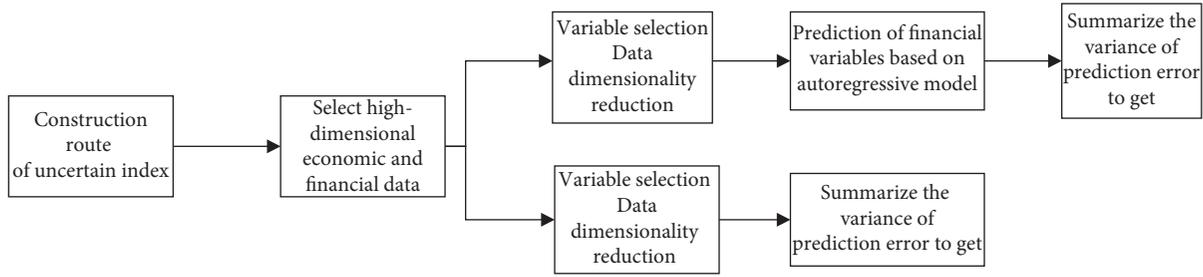


FIGURE 2: Roadmap for the construction of business administration financial uncertainty index in China market deep learning model.

where X_t is the input at time t , the number of samples is n , the dimension of data is d , H_{t-1} is the hidden state at time $(T-1)$, h is the number of hidden units, I_t , F_t , and O_t are the input gate, forgetting gate, and output gate at time t , respectively, W_{xi} , W_{xf} and W_{xo} are weight parameters, and b_i , b_f and b_o are deviation parameters. Parameters need to be trained in neural network to get corresponding values. In the

hidden cell, the cyclic neural network has the following parameter calculation formula to obtain the power number and weight of the error value, which makes the corresponding financial index analysis more comprehensive and favorable and can minimize the error value and the cyclic output value at time point T .

$$F_i^r = \iint I_t \sqrt{W_{xf} + H_2} \lim_{x \rightarrow \infty} \sqrt{I^2 \cdot W_{ho} + T_x^2}, C = \alpha + \beta \sqrt{X^2 + Y^2}, APS = \frac{S}{P} - 1 - MPC - \beta. \quad (13)$$

H_2 is the second hidden state of the loop, and it can be seen from the formula that the value of F depends on the size of W , which minimizes the value error of T_x . From this analysis, the data and cyclic structure diagram can be obtained.

$$i_{t_1 t_2} = \frac{A(t_2) - A(t_1)}{A(t_1)} = \frac{I_{t_1 t_2}}{A(t_1)},$$

$$1 + i = \left(1 - \frac{d^p}{p}\right)^p, \quad (14)$$

$$d = \frac{i}{1+i} \leq i, i = \frac{d}{1-d}.$$

The above are the conventional financial calculation formulas of macroeconomy, which are the calculation formula of market interest rate, the conversion formula of clear discount rate, and the conversion formula of interest rate and discount rate, respectively. In these three formulas, i is the variable, d is the dependent variable, P is the discount rate, and t_1 and t_2 are the independent variables.

3.3. Selection of Financial Indicators and Data Sources. When studying macroeconomics, uncertainty is a complex concept with many factors and angles. It is difficult to say which index and data can perfectly and comprehensively cover all the uncertainties related to macroeconomy. Therefore, in the third chapter, the construction of financial uncertainty index should widely select economic and financial variables and related indicators. Each factor variable used in this paper is monthly data or daily data less than monthly frequency. In daily data, this paper uses the method

of monthly average to transform daily data into monthly data. The data were selected from March 2006 to October 2020. China's macroeconomic variable data and financial variable data come from wind database, wide quantification platform, and Tushare API; there are 629 kinds of economic and financial variables used in the construction of an uncertain index of the financial market, including 346 kinds of domestic macroeconomic variables and 242 kinds of financial variables. Among the financial variables, there are 27 kinds of domestic financial indexes, 18 kinds of international financial indexes, and 197 kinds of industrial financial data. Select the source of the data as shown in Figure 3.

As can be seen from the above table, the indicators selected in this paper include four major aspects. Macrodata include domestic real estate data, monetary data, trade data, investment data, macroindex, and household consumption. These data mainly reflect the stability of domestic economic operation at the macrolevel and are the concrete representatives of the domestic economic vane. Selecting these entity data is helpful to dig deep into the stable and unstable components of the financial market. Domestic financial data include the index of the domestic financial market, financial statements of listed companies, and financial real-time transaction data. These data directly reflect the operation of the financial market and the direct embodiment of domestic financial operation. In addition, the selected data also include international financial index data and domestic financial data of various industries. The global financial index often includes the important index series of international finance, which is used to comprehensively evaluate the global economic operation state. The economic and financial data of domestic enterprises will adopt the classification evaluation method of Shenwan first-class enterprises,

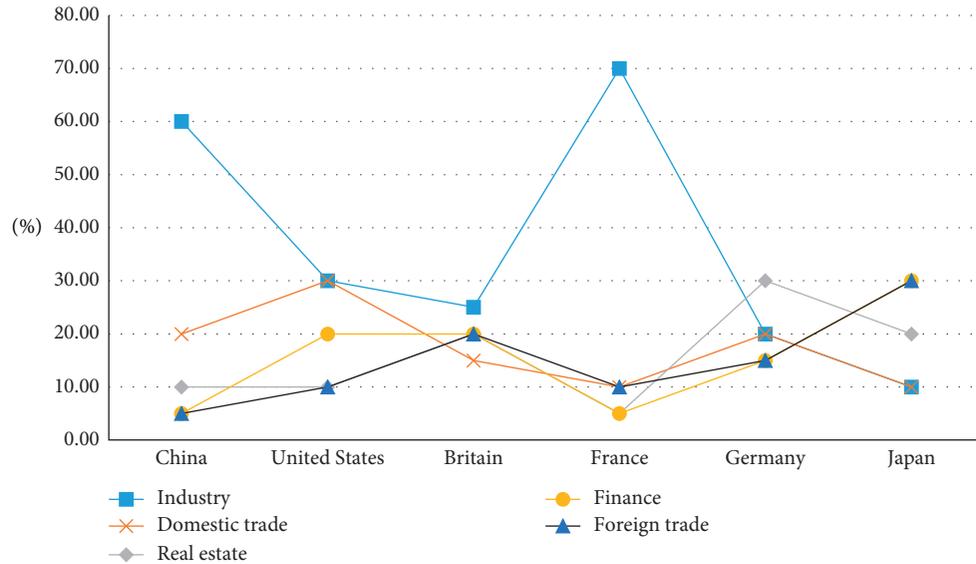


FIGURE 3: Financial number selection and source chart.

including the estimated value data of domestic stock market and the daily market data of industry finance. Different error values lead to the change curve of financial index, as shown in Figure 4.

4. Experimental Analysis of Deep Learning Model in Business Administration

When constructing the uncertainty index, the deep learning model is used to predict the economic and financial variables; the advantage of this is that the prediction model is more accurate and the uncertainty part is more accurate. The disadvantage is that the parameters of the neural network model are huge, which is not conducive to analyzing the causes of the model results. If we want to analyze the source of uncertainty, we must take a certain way to explore the interior of neural network. Since the development of neural network, especially in the recent ten years, it has made great achievements in industry and academia. Many scholars have made a series of explorations on interpretable neural networks. One of the ways to interpret the results of neural networks is as follows. First, a simple model that can be interpreted is constructed. For example, this model can be a linear model or a decision tree model. Then, the same data of the neural network is used as the characteristic (independent variable), and the output result of the neural network is the label (dependent variable). Then, an interpretable simple model is used to compare the above training set and test set. In the method design of business administration using two deep learning models, four deep learning models, namely, neural network diagram, cyclic neural network, recurrent neural network, and self-encoder, are used to designate the business administration experiment. Finally, the four

models have an impact on the financial economy of enterprises. After obtaining the data, the four models are analyzed and studied in turn.

The business management of neural network mainly lies in data preprocessing, which is to transform various data and nonquantitative data into positive data indicators and adopt different transformation methods according to the different properties of indicators. The data of the macrovariable evaluation index in this paper is often invariant data. Usually, the lowest score is marked as zero. The highest score is marked as five points. It has no reversible parameter index. We assume that the preprocessed data value is an X -dimensional matrix, N is the number of samples of data, that is, the number of people being evaluated, and M is the index quantity of data evaluation, that is, M input data sequences of artificial neural network in deep learning. As shown in Figure 5, under the structure construction of this model, enterprises are randomly selected in combination with business administration to select financial data and economic finance directionally, the neural network model is applied to collect and sort out the data in turn, and finally, the data amount is obtained to understand the influence and connection of this model on enterprise financial economy at each time point.

Among the four deep learning models, the model of cyclic neural network mainly introduces the construction of cyclic neural network whose input data sequence length T_x and output data sequence length T_y are the same. But in fact, we will encounter more RNN loop construction structures in business management applications. For example, when we classify emotional problems, the output data usually only has a scalar value. At this time, it is a many-to-one structural model. Whenever music is generated and

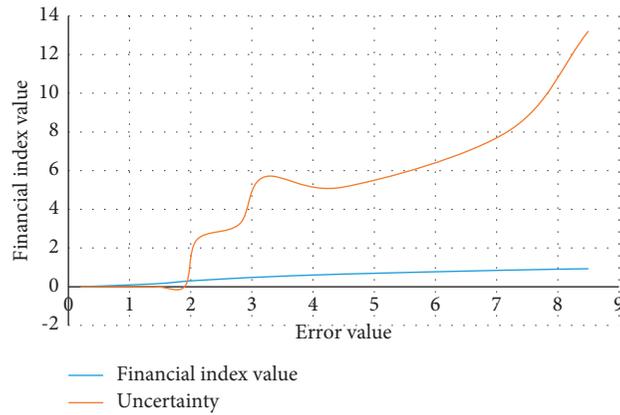


FIGURE 4: Financial index line chart.

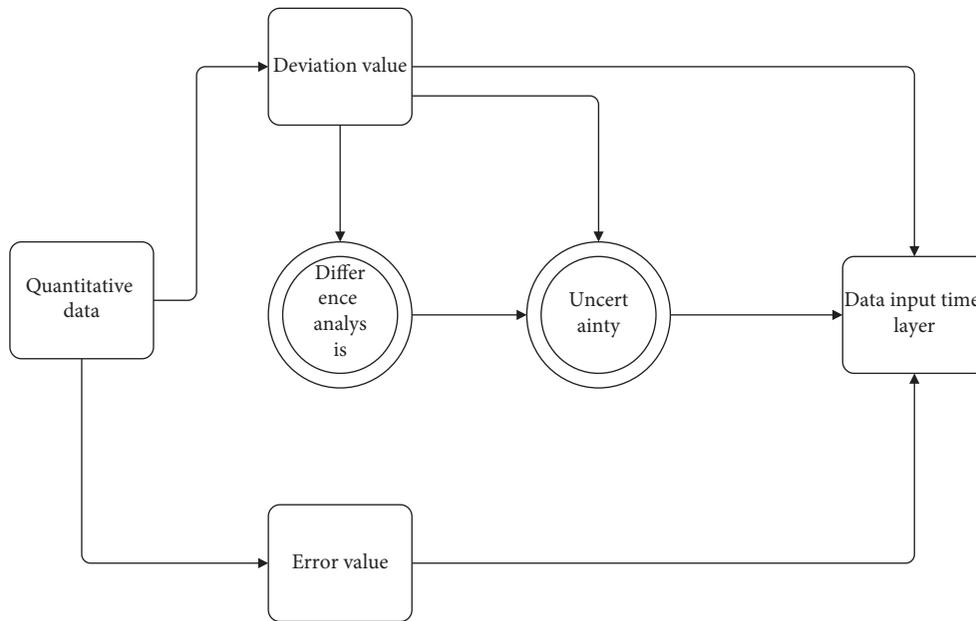


FIGURE 5: Business administration construction diagram of neural network model.

applied, it usually uses the network structure of a single controllable variable to multiple variables. When there is one or no input data, then there are output data of multiple variables. The network structure used in machine language translation task is a structure of multiple variables to multiple variables with different lengths of input data sequence and output data sequence. As shown in Figure 6, the cyclic neural network is equivalent to the upgraded deep learning model construction diagram of the neural network model. However, the processing quantity and accuracy are much higher than those of the neural network model because the error value of data obtained by multiple cycles is far less than that of the neural network model, but the calculation method is much more complicated than that of the neural network model.

The recurrent neural network model in the depth model is a depth learning model with branch tree computing. Recursive algorithm has a changeable topological layer structure, and this is a reliable deep learning regression model. For business administration, the recursive algorithm has advantages and disadvantages, and its diversity and sustainability are excellent. In dealing with business administration, the analysis and induction of data are more diverse, which can be used for complicated calculation methods. It is composed of multiple nodes and is connected by multiple frames. The output nodes are usually located at the top of the tree, and then the algorithm flow is carried out in turn, which can be divided into multiple sections to process data and reduce the uncertain factors in finance. As shown in Figure 7, it can be seen that the recurrent neural

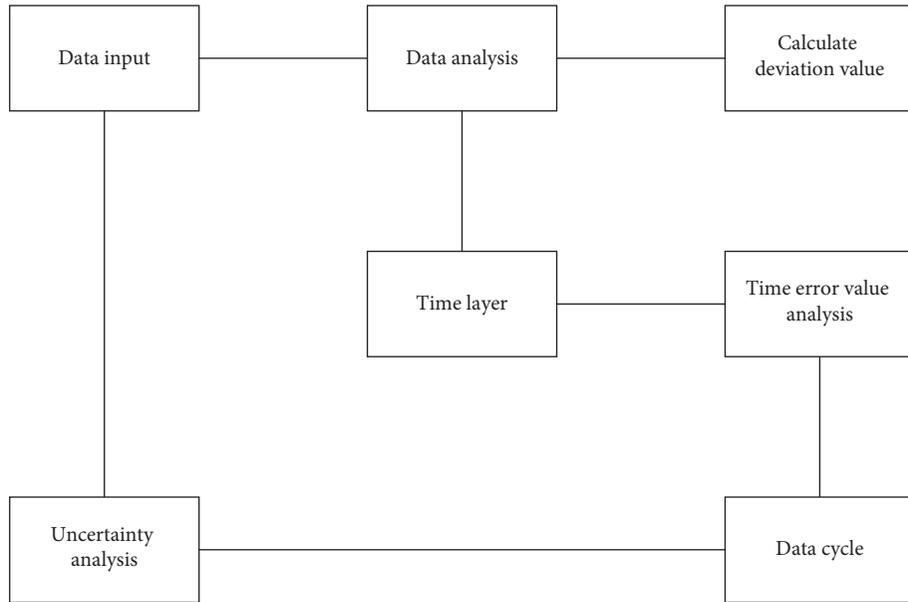


FIGURE 6: Business administration construction diagram of cyclic neural network model.

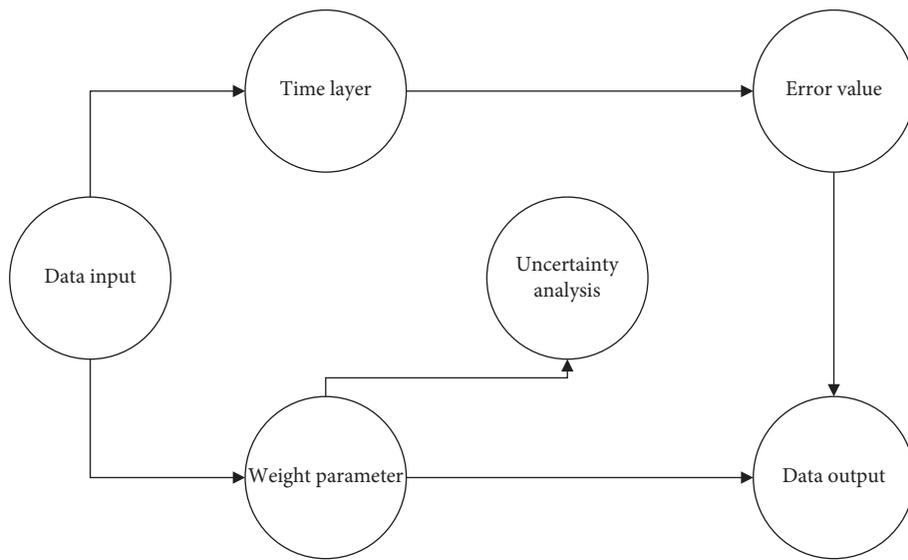


FIGURE 7: Business administration construction diagram of recurrent neural network model.

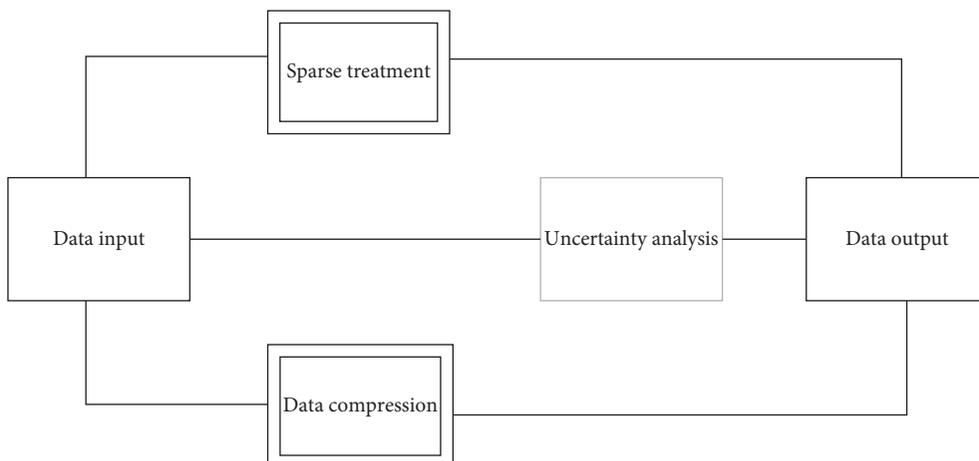


FIGURE 8: Self-coding model business administration building diagram.

network model uses supervised learning and unsupervised learning to build training, and the recursive algorithm can use the backpropagation calculation method to calculate the weight parameters of financial data.

Among the four deep learning models, the computing concept adopted by the self-encoder is one of the non-comprehensive supervised and unsupervised models. Also known as the artificial neural network construction model, this model is a practical model that can be simply constructed in deep learning model. It can be decomposed and constructed in two parts, the first part is the built-in encoder system of self-encoder, and the second part is the external decoder system of self-encoder. In business administration, the self-encoder can decompose the uncertainty factors and calculate them in one direction to obtain the weight parameters of enterprise finance. Then, the macroerror value in the time layer can be solved. As shown in Figure 8, the trend of the financial economy can be calculated, and the economic value can be analyzed. Then, the time difference between the enterprise economic characteristic value and the economic output data with the smallest range can be calculated through the weight parameters. It can be used for simple enterprise financial data analysis. The coding of the self-encoder model is mainly characterized by compression processing at the beginning of data input, sparse processing structure, and output compression at the end of data, which constructs a deep learning model.

4.1. Comparative Analysis of Uncertainty. After the construction of these four models of business administration, adopt random selection of enterprise financial data to make model embedding. Then, after integrating the data of enterprises, we conduct experiments to compare the data to study the impact of deep learning business administration on the financial economy of enterprises. In view of the uncertain comparison of enterprise financial economy, compare the data of these four deep learning business management models. The uncertainty comparison diagram is shown in Figure 9. For uncertain factors in many aspects, the algorithms of the four models can be used for comparison, and their impacts on corporate finance are also different. In comparison, self-encoder has the greatest influence on uncertainty; therefore, in the deep study of business administration, the self-encoder has the best economic and financial impact on enterprises. It can find out the uncertain indicators and factors to the greatest extent, and for macroeconomics, it can also maximize its index effect and improve the predictability and randomness of enterprise financial economy in the field of market economy. It can minimize the economic fluctuation of enterprises, and the scale of business administration can gradually expand the fields involved. It can be seen that the recurrent neural network model has the smallest analysis of uncertain data and the largest fluctuation of enterprise financial economy.

4.2. Comparative Analysis of Profit and Loss. It is most important to analyze the profit and loss of enterprises under four deep learning models. The profit and loss of any

enterprise in the economic field can explain the viability and competitiveness of an enterprise in today's society, so at this time, for one of the important indicators of enterprises, the analysis data of the four models are of special significance for this indicator. When a deep learning model has less influence on data, the data reflected at this time will be particularly cutting-edge, and the dimension of sustainable degradation will be higher, which affects the discrete indicators of business administration, which is also one of the important indicators affecting its enterprise economy. The continuous uncertainty exponent labels are discretized, and the value of uncertainty exponent is divided into five parts equidistantly. Mark the level of uncertainty index with discrete integer values from 1 to 5. The larger the value, the higher the uncertainty index. Decision tree regression prediction is carried out on the above data. When training the decision tree model, we need to give full play to the approximation degree of decision tree to neural network, so we do not split the training set and test set, and we do not need to consider the overfitting problem of the model. From Figure 10, we can get the comparative data indicators of the four models for the profit and loss of enterprise finance and economy.

4.3. Comparative Analysis of Discreteness. Discrete comparative analysis is also an important index in enterprise financial economy; what it affects is the ability of enterprises to accept the outside world and the profit and loss rate under different pressures and environments. Under the analysis of deep learning model business administration, this indicator will be more or less reflected in different fields. From the profit and loss analysis in the above figure, it can be seen that the recurrent neural network has a great influence on improving the profit and loss value. However, the loss value is also the highest among the four deep learning models, which will lead to the lowest profit and loss rate. It can be seen that the profit and loss rate of cyclic neural network is the highest among the four models, which is the defect of recurrent neural network in business administration and is not applicable to business administration. It is suitable for some medical research and computer network weight parameter analysis, but not for enterprise economy and finance. Therefore, in discrete analysis data, all four indicators have expected values, which lie in the prediction of variables and the influence of volatility. Discrete analysis can reflect advantages and disadvantages. The discreteness analysis diagram of the four models of business administration is shown in Figure 11.

4.4. Comparative Analysis of Volatility. Volatility analysis is an important index to test the stability of the four deep learning models. Financial market volatility is closely related to financial uncertainty. This experiment will explore the relationship between China's financial uncertainty index and stock market volatility and their mutual influence. The volatility of the stock market cannot be observed directly, and the volatility of the financial market corresponding to the uncertainty index of China's financial market should be

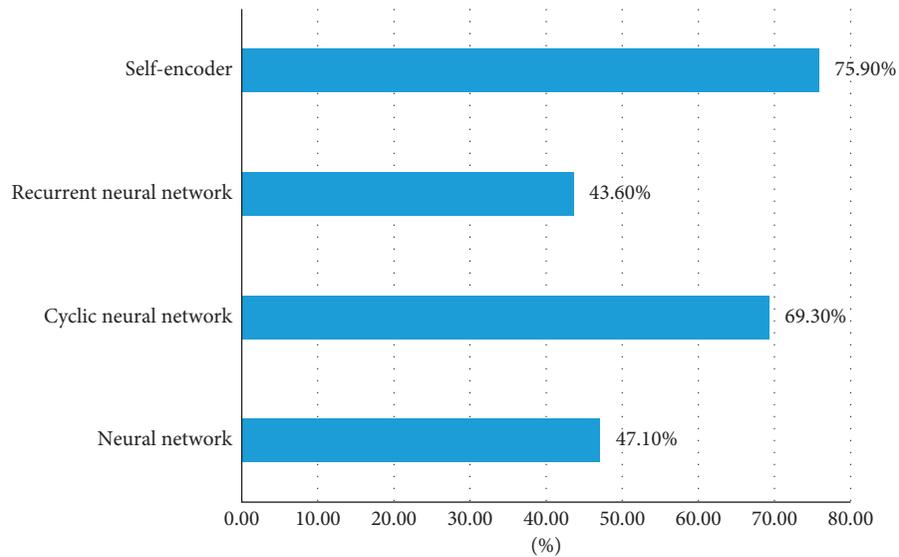


FIGURE 9: Analysis of enterprise economic uncertainty data by four deep learning models.

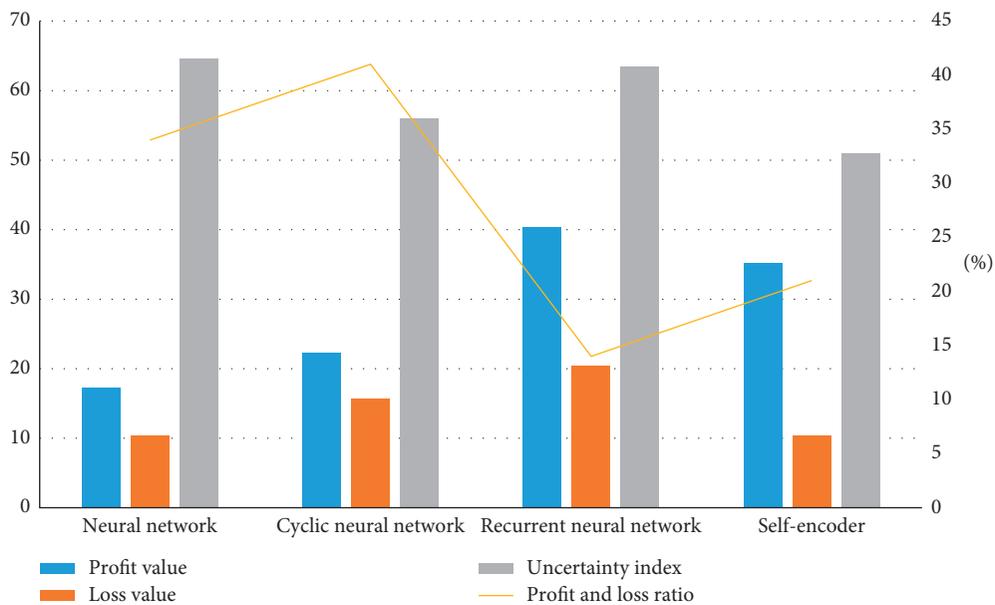


FIGURE 10: Profit and loss data comparison chart.

the volatility of the whole financial market. However, when looking for indicators that can replace the volatility of the financial market in practice, it is found that there is no index data that can fully represent the volatility of China’s financial market. Therefore, this time, the index data of various stock markets are selected, and then calculate the volatility of index data. From the influence of four models on the volatility of the stock market, it can be seen that the choice of debt ratio and bonds of enterprises by these four models is full of bond analysis of enterprises. When the volatility is great, the data cannot be directly put into the market and

operation. This is an important indicator that must be controlled to protect market stability. Therefore, through this analysis, it can be concluded that the four models have an impact on the sustainable development of enterprise economy and finance. The comparison chart of volatility data is shown in Figure 12.

4.5. *Possibility Analysis and Comparison.* The possibility analysis of the four models is in the unknown market field, the influence and predictability of the financial and

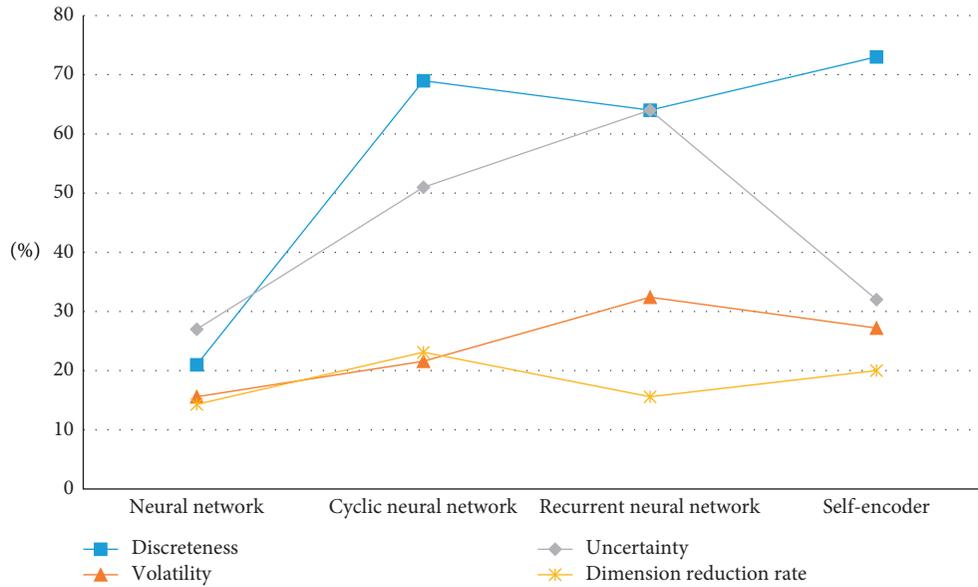


FIGURE 11: Discrete data comparison diagram.

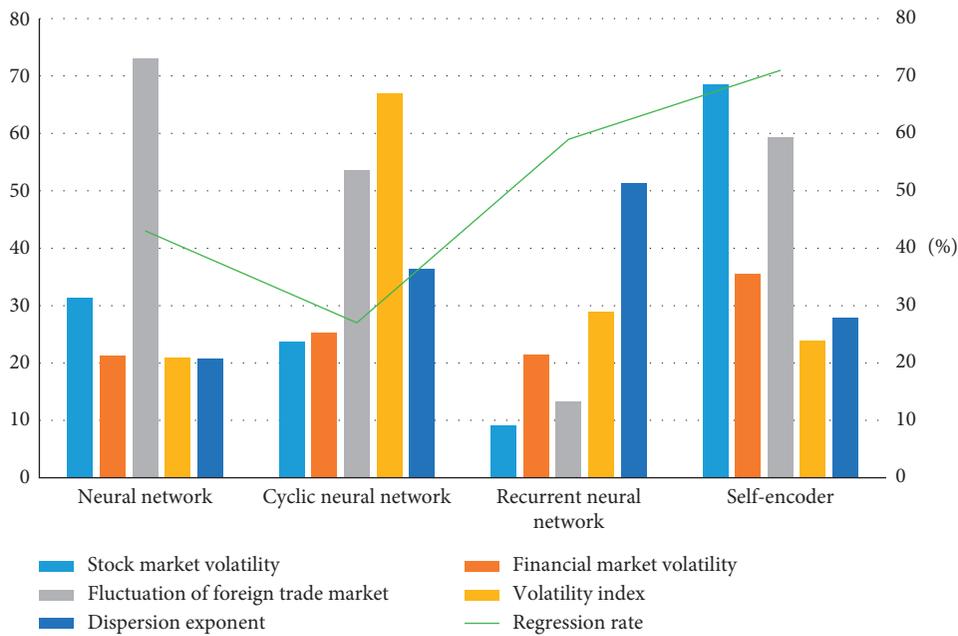


FIGURE 12: Comparison chart of volatility data analysis.

economic level of enterprises, and the ability of this sought model to predict the later trend data. It is also an impact index for predictive evaluation of the financial and economic level of enterprises. Although this assessment is for reference only, persuasive influence is not enough, but it has an unfathomable relationship with the future direction of an enterprise's finance. From the comparative analysis of the

above four kinds of data, it can be seen that the data analysis is objective, scientific, and rigorous, and the establishment of possibility analysis lies in the fact that the enterprise can make a rough simulation and exercise prevention for the follow-up regulation and development and the future risk assessment. This is a medium priority data study in the evaluation index, so we roughly make the data comparative

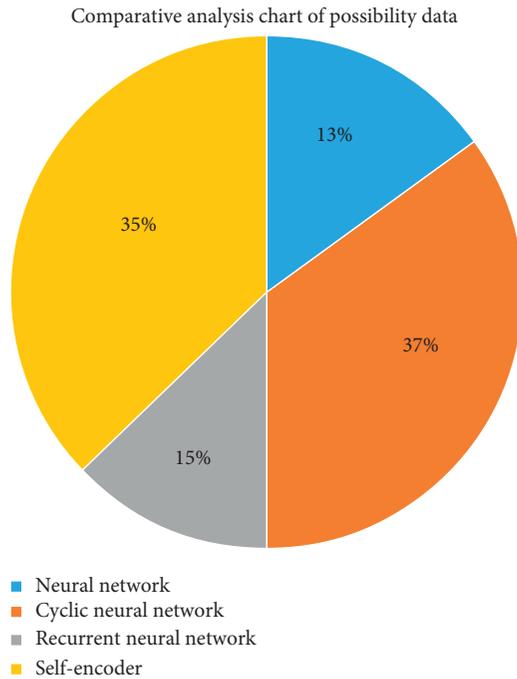


FIGURE 13: Possibility data comparative analysis chart.

study experiment in Figure 13 to get the data. It is of great significance to the risk assessment of enterprises, which can avoid risks and market fluctuations to the maximum extent.

5. Conclusion

Through the above experimental comparison and comprehensive analysis of evaluation index parameters, the experimental evaluation is summarized into four depth models. The financial and economic impact of business administration on enterprises mainly lies in the fluctuation effect caused by the reduction of profit-loss ratio and the different calculation methods of time layer error value because the weight parameters of the butterfly effect in the financial economy are particularly large. As a result, the finance of enterprises fluctuates obviously in market finance. In the uncertainty analysis, the calculated value of the self-encoder deep learning model is 75.9%, and the value is the highest among the four models. The values of the recurrent neural circulation network are 43.6% and 47.1%. As a result, the self-encoder of uncertainty analysis can effectively reduce the error value of finance. There will be very high results in macrocontrol. In the profit and loss analysis, the profit and loss rate caused by the neural network model is 41%, while that caused by the recurrent neural network is 16%. It can be seen that the impact of the recurrent neural network on the financial profit-loss ratio of the enterprise market is significantly reduced. In terms of profit and loss, the recurrent neural network has significantly improved the market supervision of business administration due to multiple regression calculations. In terms of dispersion and volatility, the cyclic neural network model can make the market produce a larger regression rate of return with a rate of return of 71%. It makes enterprises greatly improve in the

stock market and financial market and can play its greatest role in the market flow economy. Because the algorithm of the cyclic neural network is complex, it can be reduced to 16% uncertainty in the enterprise economy, and the time difference power value becomes smaller. The calculation of evaluation index parameters can improve the financial and economical rate of return of enterprises. In the aspect of possibility research, the cyclic neural network model brings future expectation estimation to enterprise finance with a risk assessment rate of 37%, thus reducing market financial risks, improving the predictability of enterprises in future financial and economic markets, reducing unknown parameters, and effectively avoiding risks caused by market fluctuations.

Through the research and experiment of this paper, we can draw a conclusion. In the current index range of uncertain factors of enterprise finance and economy in the global market, facing all aspects of the combination of deep learning model and business administration, first of all, what we should do is to talk about the decomposition and structure of uncertain factors in the current market economy. Macroeconomic uncertainties in the current international and domestic environment can be divided into four kinds of domestic uncertainties and international uncertainties. Then, the advantages and disadvantages of the four learning models are selectively combined with the aspects of business administration, and the economy and finance of the enterprise are integrated to influence the finance and economy of the enterprise. Finally, the source of uncertainty is obtained, and then the risk prediction and risk control are carried out by constructing decision trees. These models are used to bring comprehensive analysis to the financial economy of enterprises and to construct the influence of good trends and development prospects.

Data Availability

The experimental data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The author declares no conflicts of interest regarding this work.

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