Early Warning Model for Dynamic Risk Management of Agricultural P2P Network Loan Platform and Its Application

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Abstract
Aiming at the risk management problems of agricultural P2P network lending platform, an extension early warning model for dynamic risk management of agricultural P2P network lending platform is constructed. According to matter element analysis theory in extenics, establish the matter-element grade model, and construct the dynamic risk management early warning grade evaluation method of agricultural P2P network lending platform. At the same time, the early warning index system of platform dynamic risk management is established. The weight coefficients of early warning indicators are obtained by questionnaire survey and AHP calculation method, and the weight coefficients of early warning indicators are obtained by questionnaire survey and AHP calculation method. Finally, the early warning model is applied to enterprise M of agricultural P2P online lending platform. The correlation degree is calculated by using the programming language of MATLAB, and the results are analyzed. The results show that the model has strong practicability. The establishment of early warning model for dynamic risk management of agricultural P2P network lending platform can enable the platform to take appropriate strategies to effectively prevent risks, and has a certain reference value for agricultural enterprises to enrich capital investment channels.

Keywords: Agricultural P2P Network Loan Platform; Dynamic Risk Management; Matter Element Theory; Extension Early Warning Model

1. Introduction
In recent years, with the promotion of inclusive financial policies and the development of innovative technologies such as internet + big data, and cloud computing Internet finance has achieved leapfrog growth. By the end of April 2019, the total number of P2P lending platforms in China had reached 6,616, and the number of suspended or problematic platforms had reached 5,643, with only 973 in normal operation, which fell below the 1,000 level for the first time since 2014. The specific development chart is shown in Figure 1. Among them, there are 95 agricultural-related online lending platforms (referring to the two major types of P2P online lending platforms which are engaged in rural financial business and take into account the development of rural financial business), 35 normal operation platforms and 60 closed and problematic platforms. The specific development chart is shown in Figure 2. It can be seen from Figure that the cumulative number of platforms tends to be stable in the past two years, while the number of suspension and problem platforms keeps rising, while the number of normal platforms declines. It can be seen that the risk problem of P2P platform has become increasingly prominent, and the risk management of P2P lending has become the focus of scholars’ research in recent years. Especially the risk management of agricultural P2P network lending platform has become a new research hotspot. At the same time, from the latest data of online lending home in 2018 and 2019, it is found that the number of rural financial platforms newly launched by agricultural online lending platform is zero (the trend chart of Figure 2 shows that the characteristics of the past two years are horizontal straight line). It is obvious that how to carry out effective risk early warning management for 35 existing normal operating agricultural online lending platforms is an urgent matter. This is the case.

At present, how to carry out dynamic risk management has become a common concern of many P2P loan platforms and even the whole industry and regulatory level. Some scholars actively study the methods of platform risk management from the perspectives of risk prediction, risk assessment, risk control and so on. Zeping Tong, Fuyu Yao etc. discussions on information disclosure and liquidation safety of P2P online lending industry [1]. Yaqiong Pan, Jun Gao (2017) study the risks of online P2P lending platforms, and analysis the problem of online P2P lending platforms in theory. then to propose some suggestion for the development of lending paltrforms[2]. Mild et al. (2015) proposes a decision support tool to support the estimation of user default risk. Based on the empirical analysis, it is proved that the system can fully evaluate the risk of default, and then significantly improve the return of investors [3]. Hay, Jon (2015) through the study of Wellesley retail bond issuance, proposes that P2P online lending can spread the risk through the diversification of the platform [4]. Knoxville, Philadelphia (2016) establishes a credit risk assessment model. The model can assess the risk
return and loan risk degree to a certain extent through the example test [5]. Liu Qiaoli et al. (2017) believe that P2P platform should pay attention to the construction of risk assessment system, and focus on the improvement of platform authentication mechanism, audit process and borrower historical behavior monitoring [6]. Taking Jiangxi Agricultural-related Platform as an example, the project group of Yingtan Central Branch of the People's Bank of China (2018) analyzed the development status and existing risks of rural P2P online lending platform [7]. Xiong Cao (2019) studied the risk management and control countermeasures of P2P lending platforms in the Internet financial environment [8].

From the perspective of market research and research, agricultural P2P loan platform risk management system, risk supervision, default behavior, capital flow speed, platform information technology security and many other issues have buried a crisis for agricultural P2P loan platform risk management. From the point of view of risk management, this paper will establish a dynamic risk management early warning model of agricultural P2P online loan platform based on extension theory, First is to prevent the risk prevention of agricultural P2P online loan platform itself, to diagnose in time and effectively, to prevent the platform from increasing its own risk, and to take remedial measures; Second is to provide investors and borrowers with judgment basis, prevent to bear major risks, and better select. Third, to achieve a sound docking between agricultural-related P2P platform and rural financial services, stable and healthy development. Fourthly, there are few studies on the risks of agricultural-related online lending platforms, especially in early warning. This paper establishes a dynamic early warning model of the platform, which is helpful for the benign development of the agricultural P2P network lending platform. It has great significance for the social and economic development, especially for the development of agricultural enterprises, and enriching the channels of capital investment.

Figure 1. The trend chart of P2P online lending platform in recent 6 years

Figure 2. The trend chart of agricultural P2P online loan platform in recent 6 years
In view of this, this paper uses the theory of Extenics to construct the dynamic risk management and early warning level evaluation method of the agricultural P2P network loan platform from the prior and in-the-case prevention as the target starting point of the Ian Miteff crisis management, and constructs the extension early warning model of the dynamic risk management of the agricultural P2P network loan platform, and the model is applied to the enterprise of the agricultural P2P network loan platform M, to judge the early warning level of M enterprise. The correlation degree is calculated by MATLAB programming statement, and the results are analyzed. The data results show that the extension early warning model has strong practicability and stability.

2. Construction of Extension Early-warning Model for Dynamic Risk Management

Extenics as a kind of practical research tool, it mainly studies the law and method of solving the contradiction problem from two aspects of qualitative and quantitative analysis, and through the establishment of the quality evaluation model of the multi-index parameter, the comprehensive quality level of the research object is fully reflected.

2.1 The Principle of Building the Topological Element Model.

First, according to the theory of matter-element analysis, the name of a given thing \(N\), its value about the feature \(c\) is \(v\), in order of three: the "element, feature, model measure" \(R = (N, c, v)\) is the basic element of the description, which is referred to as the matter element. if there are multiple features of the thing, it forms a matter-element matrix with \(n\) characteristics \(c_1, c_2, \ldots, c_n\) and the corresponding magnitude \(v_1, v_2, \ldots, v_n\).

\[
R = (N, c, v) = \begin{bmatrix}
N, c_1, v_1 \\
c_2, v_2 \\
\vdots \\
c_n, v_n
\end{bmatrix}
\]  

(1)

Second, the classical field-element representation:

\[
R_y = (N_y, c_y, x_y) = \begin{bmatrix}
N_y, c_1, x_{yo1} \\
c_2, x_{yo2} \\
\vdots \\
c_n, x_{yon}
\end{bmatrix} = \begin{bmatrix}
N_y, c_1, (a_{o1}, b_{o1}) \\
c_2, (a_{o2}, b_{o2}) \\
\vdots \\
c_n, (a_{on}, b_{on})
\end{bmatrix}
\]  

(2)

In the form, \(N_y\) represent the division of \(j\) level, \(c_i (i = 1, 2, \ldots, n)\) represent the level of things \(N_{yo}\) Characteristics (early warning indicators); the characteristic \(c_j\) of \(N_{yo}\) is within the range of \(j\) and \(x_{oj1} \ldots x_{ojn} \ldots \), among \((i = 1, 2, \ldots, n)\), that is the range of data for each level of the early warning object with the corresponding feature, referred to as a classic domain.

Third, the joint-domain matter-element representation:

\[
R_p = (P, c, x_p) = \begin{bmatrix}
P, c_1, x_{p1} \\
c_2, x_{p2} \\
\vdots \\
c_n, x_{pn}
\end{bmatrix} = \begin{bmatrix}
P, c_1, (a_{p1}, b_{p1}) \\
c_2, (a_{p2}, b_{p2}) \\
\vdots \\
c_n, (a_{pn}, b_{pn})
\end{bmatrix}
\]  

(3)

In the form, \(p\) is the whole of the early warning level. Interval \(x_p = (a_p, b_p)\) about The range of values \(c_i (i = 1, 2, \ldots, n)\) taken is called The node domain of \(p\).

Fourth, for the object \(p\) to be identified To represent its test data or results in matter-element terms:
Formula (4) is called object \( p \), in which \( p \) represents an object, and \( x_i \) is the quantity value of \( p \) feature \( c_i \), that is, the specific data of the object to be identified relative to each feature.

Fifth, the weight coefficient of each feature \( \lambda_i (i = 1, 2, \ldots, n) \) is not satisfied for the non-satisfied condition, if weight coefficient is expressed as \( \lambda_i \), if the \( k \) feature element is a non-satisfied condition, \( \sum_{i=1,i\neq k}^n \lambda_i = 1 \).

Sixth, to evaluate the object \( p \) to be identified first, use magnitude \( X_k \) of non-satisfied feature \( k \) to evaluate.

1. if \( X_k \not\subseteq X_{oij} \), it is considered that do not meet the "necessary to meet the conditions", as a Unqualified object;
2. If \( X_k \subseteq X_{oij} \), go to that next step.

Seventh, the relational degree calculation formula of the object to be identified with respect to each grade:

\[
K_j(x) = \begin{cases} 
\rho(x, x_{qj}) & \text{if } \rho(x, x_{qj}) = \rho(x, x_{qj}) \\
\left| \frac{\rho(x, x_{qj}) - \rho(x, x_{p})}{\rho(x, x_{p}) - \rho(x, x_{qj})} \right| & \text{if } \rho(x, x_{qj}) \neq \rho(x, x_{qj}) 
\end{cases}
\]  

In the form of

\[
\rho(x, x_{qj}) = \left| x_i - \frac{a_{qj} + b_{qj}}{2} \right| - \frac{b_{qj} - a_{qj}}{2} \\
\rho(x, x_{p}) = \left| x_i - \frac{a_{p} + b_{p}}{2} \right| - \frac{b_{p} - a_{p}}{2} \\
\rho(x, x_{qj}) \rho(x, x_{p}) \text{ separate represent the distance of } X_i, x_{qj}, x_{p}. 
\]

Eighth, calculate the grade correlation degree and evaluate the grade:

Correlation degree of each feature of the object to be identified \( p \) with respect to each level \( j \) is expressed as follows:

\[
K_j(p) = \sum_{i=1}^{n} \lambda_i K_j(x_i)
\]  

If

\[
K_{jo}(p) = \max_{j=1,2,\ldots,m} K_j(p)
\]  

judge \( p \) belong to \( jo \).

2.2 Evaluation Method of Dynamic Risk Extension Early Warning Level of Agricultural P2P Online Loan Platform.

The evaluation process of the dynamic risk management early warning level of the agricultural P2P network loan platform is actually a monitoring process of the dynamic risk management index of the online loan platform. the early warning level of the platform risk management status is judged through the extension method, so that the prediction is timely carried out, and an alarm signal is sent out so as to effectively solve the
strategy in time, and provide feedback information for the effective establishment of the risk prevention mechanism for the agricultural network loan platform, and can prevent the risk of the platform from being increased and take remedial measures in a targeted manner; meanwhile, the investors and the borrowers are provided with the judgment basis, the significant risks are prevented, and the selection is better. The method for judging the specific early warning level is as shown in flow figure 3 below.

**Figure 3.** Flow chart of extension evaluation method for dynamic risk early warning level of agricultural-related P2P network lending platform

### 2.3 Selection of Indicators and Classification of Grades

In this paper, six pre-warning evaluation indicators, namely: legal risk, market risk, credit risk, platform risk, operational risk and operational liquidity risk, are designed by reference to the literature research and market research of agricultural P2P online loan platform by many scholars. The main meaning is as follows:

**Legal risk (X1):** due to the rise of the Internet, P2P, as an innovative Internet financial format, is not perfect in many aspects, a series of legal policies and regulatory means for agricultural P2P online loan industry will bring uncertain risks to the platform. This is mainly reflected in the fact that some platforms may have irregular operation, loopholes in trading mechanism, fund pool phenomenon, insufficient supervision and so on, which will cause platform risk.

**Market risk (X2):** is the ability to control the agricultural market, affected by national policy, industry off-peak season and other factors. On the one hand, it is reflected in the price fluctuation caused by some systematic factors, which leads to the loss of investment value and the platform crisis; on the other hand, there is a common debt problem, that is the same borrower borrows on multiple platforms, the debt is too high, which exceeds the existing repayment capacity, resulting in a crisis caused by the increased risk of the platform.

**Credit risk (X3):** that is, default risk, because of asymmetric information between both of the borrowers, borrowers provide personal false information for obtaining funds, resulting in borrowers failing to fulfill their repayment obligations on time, which may cause the platform to be unable to cash in the principal and expected returns of the investors. The influencing factors of credit risk are mainly reflected in the repayment ability and willingness of borrowers, and the overdue risk will be produce in different types of borrowers or at different age levels.
Platform risk (X4): the risk caused by the financial disclosure problem of the platform, difficult disposal of agricultural non-performing assets, the large and irregular behavior of employees, the insecurity of information technology and so on. There will be a large number of customer information in the platform, which may lead to the risk of information disclosure due to various problems such as the management of the platform itself.

Operation risk (X5): mainly concentrated on the contents of three aspects: first, the design of the platform wind control process is not reasonable, the execution is not in place, a serious vulnerability has occurred, the other is the risk of the employee's moral quality problem, perform a refresh operation and the third is the operation error of the investor.

Operational liquidity risk (X6): In the operation of the P2P network loan platform, the speed of the fund flow of the investor is slow, so that the debt or the inability to repay the debts due to the normal repayment of the assets can not be paid on schedule, thus the risk to the platform can be reduced. The liquidity of the fund is the basic guarantee that the P2P network loan platform can operate normally.

In order to obtain the pre-warning of each evaluation index through a unified standard platform, the fuzzy clustering analysis and the empirical value method are used to define 6 early warning evaluation indicators and corresponding value intervals of 4 early warning levels. The principle of definition is to establish fuzzy similarity matrix R to determine the similarity degree of its indicators, so as to obtain the similarity coefficients \( \lambda \), and select the value appropriately to disperse the value interval. The fuzzy clustering is carried out for each index in R by direct classification. Finally, comprehensive analysis is carried out to complete fuzzy clustering of evaluation index and level. At the same time, according to the degree of risk, the standard grade is divided into four levels: zero risk, low risk, medium risk and high risk. According to the level of risk, the alarm level is roughly divided into four levels: unreported, first, second and third.

As shown in Table 1.

<table>
<thead>
<tr>
<th>Early warning Grade</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>X6</th>
<th>Call the police Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero risk</td>
<td>0~2</td>
<td>0~2</td>
<td>0~0.2</td>
<td>0~0.2</td>
<td>0~0.25</td>
<td>0~0.2</td>
<td>No alarm</td>
</tr>
<tr>
<td>Low risk</td>
<td>2~6</td>
<td>2~5</td>
<td>0.2~0.45</td>
<td>0.2~0.5</td>
<td>0.25~0.5</td>
<td>0.2~0.45</td>
<td>Level 1</td>
</tr>
<tr>
<td>Medium risk</td>
<td>6~8</td>
<td>5~8</td>
<td>0.45~0.7</td>
<td>0.5~0.7</td>
<td>0.5~0.75</td>
<td>0.45~0.7</td>
<td>Level 2</td>
</tr>
<tr>
<td>High risk</td>
<td>8~10</td>
<td>8~10</td>
<td>0.7~1.0</td>
<td>0.7~1.0</td>
<td>0.75~1.0</td>
<td>0.7~1.0</td>
<td>Level 3</td>
</tr>
</tbody>
</table>

2.4 Determination of the Weight of Early Warning Indicators

First of all, according to the principle of Richter scale, the agricultural P2P online loan risk management index weight questionnaire is designed, and then select 20 middle and senior managers from five representative agricultural online loan platforms Fill in the questionnaire, including 10 at the top and 10 at the middle, with a recovery rate of 100%. By using the method of expert scoring, the agricultural P2P online loan risk management index weight questionnaire is graded. Finally, the recovered questionnaire is sorted out and the effective data are extracted.

The pairwise comparative judgment matrix is obtained by calculation, as follows.

\[
\begin{bmatrix}
1 & 1/2 & 1/6 & 1/4 & 1/3 & 1/5 \\
2 & 1 & 1/5 & 1/3 & 1/2 & 1/4 \\
6 & 5 & 1 & 3 & 4 & 2 \\
4 & 3 & 1/3 & 1 & 2 & 1/2 \\
3 & 2 & 1/4 & 1/2 & 1 & 1/3 \\
5 & 4 & 1/2 & 2 & 3 & 1 
\end{bmatrix}
\]

Secondly, using MATLAB statement and judgment matrix to solve the root method, the calculation and verification are carried out at the same time.
\[
\lambda_{\text{max}} = \frac{1}{n} \sum_{i=1}^{n} \left( \frac{1}{W_j} \sum_{j=1}^{n} a_{ij} W_j \right) = 6.0397
\]

Accurately obtain the maximum eigenvalue of the above judgment matrix 6.0397 and the corresponding eigenvectors.

\[
W_j = [0.0306, 0.0502, 0.4245, 0.1502, 0.0863, 0.2582].
\]

The consistency test is carried out again: the consistency index \( CI = \frac{\lambda_{\text{max}} - m}{m-1} = (6.0397 - 6)/(6-1) = 0.00794 \)

and the average random consistency index \( RI = 1.24 \) are obtained by looking up the table, then

\[
CR = \frac{CI}{RI} = 0.0064 < 0.1
\]

the inconsistency is acceptable, that is, the acceptance judgment matrix.

Finally, the weights of dynamic risk early-warning evaluation index of agricultural-related P2P network lending platform are obtained. The weights of various indicators are obtained as follows: \( \omega = (0.0306, 0.0502, 0.4245, 0.1502, 0.0863, 0.2582) \), This set of coefficients shows the attention paid to various factors affecting the dynamic risk management of agricultural-related P2P online lending platform.

2.5 Construction of Matter-element Model of Early Warning Level

Let the alarm level be: \( R_{\text{alarm}} \), \( c(i = 1, 2, 3, 4, 5) \) Indicators in Table 1 are represented, Then the corresponding matter element model of alarm level is expressed as:

\[
R_{01} = \begin{bmatrix}
\text{zero-risk,} & x_1, & (0, 2) \\
x_2, & (0, 2) \\
x_3, & (0, 0.2) \\
x_4, & (0, 0.2) \\
x_5, & (0, 0.25) \\
x_6, & (0, 0.2)
\end{bmatrix}
R_{02} = \begin{bmatrix}
\text{low-risk,} & x_1, & (2, 6) \\
x_2, & (2, 5) \\
x_3, & (0.2, 0.45) \\
x_4, & (0.2, 0.5) \\
x_5, & (0.25, 0.5) \\
x_6, & (0.2, 0.45)
\end{bmatrix}
R_{03} = \begin{bmatrix}
\text{medium-risk,} & x_1, & (6, 8) \\
x_2, & (5, 8) \\
x_3, & (0.45, 0.7) \\
x_4, & (0.5, 0.7) \\
x_5, & (0.5, 0.75) \\
x_6, & (0.45, 0.7)
\end{bmatrix}
R_{04} = \begin{bmatrix}
\text{high-risk,} & x_1, & (8, 10) \\
x_2, & (8, 10) \\
x_3, & (0.7, 1.0) \\
x_4, & (0.7, 1.0) \\
x_5, & (0.75, 1.0) \\
x_6, & (0.7, 1.0)
\end{bmatrix}
R_{05} = \begin{bmatrix}
\text{ grade,} & x_1, & (0, 1) \\
x_2, & (0, 1) \\
x_3, & (0, 1) \\
x_4, & (0, 1) \\
x_5, & (0, 1) \\
x_6, & (0, 1)
\end{bmatrix}

3. Model Application Analysis

The above risk management early warning model is applied to agricultural P2P online loan platform M enterprises, and an example is given to analyze the actual situation of M enterprises. M enterprises have gone through the development history of more than six years, and the operation is relatively stable. and get the Internet credit certification. With the accelerated development of the Internet age, the flexibility and efficiency of P2P online loan platform itself, some hidden risk problems slowly surfaced, for example, the platform adopts the principal guarantee mode to bear the risk that the principal lender needs to bear, thus aggravating the liquidity risk of the platform operation. In this paper, the online loan platform M is investigated by questionnaire. The current situation of risk management in enterprises was investigated, and the recovery rate of effective questionnaire reached 100%. The number of enterprises participating in the questionnaire survey was about 30, of which 50% were managers and 50% were professional and technical personnel. The effective data
of recovery are sorted out, counted and analyzed, and the evaluation matter-element model of risk management status of M enterprise is obtained, as follows:

\[
R = \begin{bmatrix}
    P, & x_1, & (4) \\
    & x_2, & (6) \\
    & x_3, & (0.2, 5) \\
    & x_4, & (0.3) \\
    & x_5, & (0.5) \\
    & x_6, & (0.3)
\end{bmatrix}
\]

Obtaining the value of correlation function by using the Formula of Relational degree calculation:

**Table 2**: M Relevance Degree of Enterprise Risk Management Level

<table>
<thead>
<tr>
<th>Value of correlation function</th>
<th>K_j(X1)</th>
<th>K_j(X2)</th>
<th>K_j(X3)</th>
<th>K_j(X4)</th>
<th>K_j(X5)</th>
<th>K_j(X6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R_01</td>
<td>-0.3333</td>
<td>-0.5000</td>
<td>-0.1667</td>
<td>-0.25</td>
<td>-0.3333</td>
<td>-0.2500</td>
</tr>
<tr>
<td>R_02</td>
<td>1</td>
<td>-0.2000</td>
<td>0.6667</td>
<td>0.5000</td>
<td>0</td>
<td>0.5</td>
</tr>
<tr>
<td>R_03</td>
<td>-0.3333</td>
<td>-0.3333</td>
<td>-0.4444</td>
<td>-0.4</td>
<td>0</td>
<td>-0.3333</td>
</tr>
<tr>
<td>R_04</td>
<td>-0.5</td>
<td>-0.3333</td>
<td>-0.6429</td>
<td>-0.5714</td>
<td>-0.3333</td>
<td>-0.5714</td>
</tr>
</tbody>
</table>

The correlation function value is combined with the weight of early warning evaluation index, and the comprehensive correlation degree can be calculated by MATLAB programming statement, so as to evaluate the risk early warning grade of M enterprise.

\[
K_j(p) = \sum_{i=1}^{n} \lambda_i \cdot K_j(x_i) = \begin{bmatrix}
-0.3333 & -0.5 & -0.1667 & -0.25 & -0.3333 & -0.25 \\
1 & -0.2 & 0.6667 & 0.5 & 0 & 0.5 \\
-0.3333 & -0.3333 & -0.4444 & -0.4 & 0 & -0.3333 \\
-0.5 & -0.3333 & -0.6429 & -0.5714 & -0.3333 & -0.5714
\end{bmatrix} = \begin{bmatrix}
0.0306 \\
0.0502 \\
0.4225 \\
0.1502 \\
0.0863 \\
0.2582
\end{bmatrix}
\]

\[
K_j(p) = \max_{j \in [1, m]} K_j(p) = 0.5064
\]

The calculation results show that the early warning level is zero risk, low risk, medium risk and high risk respectively. According to the extension evaluation level method, the position of the maximum correlation degree is the early warning level of the enterprise. \( K_j(p) = \max_{j \in [1, m]} K_j(p) = 0.5064 \). It shows that M enterprises are at low risk according to the current survey data, and the first level alarm can be carried out in time. M enterprises should take corresponding measures immediately to get rid of the danger in time and avoid unnecessary losses.

4. Conclusions and Suggestions of the Study

The dynamic risk management and early warning model of the agricultural P2P network loan platform can be established, and the possible risk management problems can be effectively prevented, and corresponding strategies can be taken in a timely and accurate manner to deal with the unexpected events. The dynamic early-warning model not only can identify the risk level of the early-warning object, but also can identify the risk degree of a single index; For multiple incidents, the same method can be used to determine. The research results show that the early-warning model is easy to be programmed, has the advantages of convenient operation and strong practicability, and provides an effective way for the dynamic risk management early warning of the agricultural P2P network loan platform.

From the main performance of dynamic risk management of agricultural P2P online loan platform, this paper puts forward the following suggestions:

1) Strengthen the implementation of laws and regulations
   In-depth interpretation of agricultural P2P online lending laws and regulations, analyze the new rules of key content, and combining with the reality of the platform itself, the implementation of the "three rural"
document is carried out, prevent the development road from deviating, put an end to illegal fund-raising and other illegal acts, and achieve healthy development.

(2) Improve agricultural market control ability

Set up an expert agricultural market risk research team, pay attention to the trend of agricultural market volatility in real time, effectively resist the negative impact of market irresistible factors, and do the job of prevention and early warning in advance. Update all kinds of data in real time, pay attention to hot issues, control the network public opinion, investor behavior and other trends, adopt the corresponding management strategy.

(3) Establish own risk rating system

At present, the domestic P2P network lending platform is not mature enough in the development of rural financial business, and is in the early stage of development. According to its own actual situation, the agricultural platform can establish a risk rating system that meets the requirements of the agricultural platform's own characteristics, improve the construction of the credit system, and effectively enhance its own risk assessment ability and credit risk prevention and control ability. Through the identification and rating of the borrower's credit level, it is determined whether to contribute or authorize different loan interest rates. Under the prescribed conditions, the information of risk rating system between agricultural P2P platforms can be shared moderately, and it can also be docked with commercial banks to realize dynamic real-time supervision.

(4) Strengthening the information security technology of the platform

Standardize the operation process of the platform, improve the high-tech technology of the platform, protect the personal privacy data and the transaction data of the customers, and prevent the illegal leakage. And the encryption processing is carried out in the transmission process of the data, so that the hacker intrusion is prevented. Check and upgrade the platform's various systems on a regular basis to prevent vulnerability.

(5) Improving the moral literacy of employees

Strengthen the training of education, so that the staff strictly abide by the industry rules, know the business process, carry out the work within the scope of the business license, and meanwhile conduct business operation guidance to the investors, prevent the low-level errors such as operation errors. In the platform, the corresponding anti-operation punishment measures shall be formulated, and the punishment shall be increased, and the personal responsibility book shall be signed.

(6) Establish big data monitoring and management system

The operational liquidity index is an important core index of the normal operation stability of the platform, which should be attached great importance to. With the help of the background of the information age, the agricultural platform big data monitoring and management system should be established to monitor the borrower's every loan use, borrowing frequency, historical default record, rate of return, repayment ability and other important indicators in real time. In case of any problem, immediately take corresponding measures to prevent unnecessary losses to the maximum extent.

The above six aspects mainly focus on strengthening risk prevention and control measures from the situation of agricultural-related platforms. At the same time, the government can also strengthen the risk early warning management of agricultural-related P2P online lending platforms by improving the supervision regulations and risk prevention mechanism of agricultural-related online lending platforms, speeding up the construction of Internet credit information system in rural areas, and so on, so as to realize agricultural-related P2P online lending. The platform develops healthily and steadily.

Acknowledgements

This work was supported by Project of Hunan Natural Science Foundation (2018J5045); Project of Hunan Social Science Achievement Evaluation Committee (Key Points) (XSP19ZD1009); Scientific Research Project of Hunan Education Department (General) (18C1153).

References


