The Internet in China Financial Research in the Field of Literature Measurement Analysis

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Abstract. In this paper, using bibliometrical method, screening internet financial high correlation literature from the CNKI database, analysis on the author of the post, regional distribution, document keywords and subject categories, such as statistical analysis respectively. The study found, it is blossoming domestically to do research on the internet financial, university and financial sector are the major research institutes. But the research direction is narrow relatively, concerning subjects types are not rich enough. It is the research focus about internet financial technology and risk control. Along with development of internet financial in China, the future research directions might be widen visual angle, multidisciplinary cross connection. Put the technical innovation and risk control of internet financial as the breakthrough point.

Introduction

As a new financial mode, the internet finance has gotten the rapid development, which is paid widely attention to around the world in recent years, stirring up the attention of scholars and institutions, becoming the hot research areas nowadays. In the era of computer that initially introduced to the domestic from abroad, leading scholars only shows an interest in new things, constrained by primary characteristics of the Internet application in the financial sector, studying harder to deep it, and it is scarce. In the 1990s, the integration patterns is increasingly normal in the global economy with the rapid development of computer and network technology, and China's economy of Reform and opening up emerged high speed development situation. At the same time, more prominent Performance is that the number of researchers and achievements represented by paper rise sharply. In this period, domestic research pays more attention to the Internet finance and its business model in the developed countries. Since the 21st century, China's Internet finance enters a period of great development and prosperity. Especially since 2010, relying on the mobile Internet, big data and cloud computing technology, the development of the Internet finance has changed a lot, posing the huge impact on the traditional financial industry, even called a subversion of traditional finance[1].

With the aid of CNKI (China National Knowledge Infrastructure) literature database in this paper, screening high correlation literature concerned Internet finance in the vast literature database, expounding the development of the existing research and using statistics and analysis to explore the research characteristics in order to find the present domestic characteristics and frontier content related research, giving scientific suggestions to prevent Internet finance risk and guide development direction.
Research Methods and Data Sources

The Literature Metrology

Literature metrology measurement, a quantitative statistical analysis method, is mainly for the amount of literature, the author number (including the author affiliation, collective, etc.) and the number of words (a variety of keywords, literature, etc) to make statistical analysis in a variety of publications (mainly journals, newspapers, PhD thesis), adopting the integrated use of mathematics, statistics, philology and other subjects knowledge and using the method of mathematics and statistics to analyze and compare for the retrieved documents in the database, then studying the growth and distribution of scientific articles [2]. This paper mainly use the methods of literature analysis.

The Selection Process Analysis of Data

Naturally, the importance of the data source is self-evident by doing the analysis of literature metrology. Database the article selected is CNKI (China National Knowledge Infrastructure), and the determined retrieve vocabulary is the "Internet" + "financial" at the time of retrieval, the keywords retrieval above may lead to retrieval results is not very comprehensive, but both the retrieval results and research topics have maximum correlation, and the amount of literature that used the form of theme retrieved was 2039 in total. Besides, the year span of the retrieved results is from 2001.01 to 2016.07, and the sample overall is big enough, it covers most of the content, so the selection of search keywords is relatively reasonable, can achieve the desired effect.

According to 20399 search results of the article, the results are as follows: The picture above shows that the Internet financial documents are less before 2013, and the literature volume presents explosive growth in 2013, then it presents the situation of the further growth. At the same time, the year of 2013 is called "the first year of China's Internet finance." In this year, the balance of the treasury appeared, P2P achieved fast development, and the first insurance company was approved, then the bank, brokers, insurance, securities, funds all entered the field of Internet finance, so it become a valuable landmark in the process of China's Internet finance development. This trend continues to increase in power after 2014, and the amount of literature in 2014 is four times more than that in 2013, and the amount of literature in 2015 is five times as many as that in 2013. By the end of July, 2016, statistic number is two times more than that in 2013.

Quantitative Analysis of the Related Indicators in the Field of Internet Finance

Frequency Analyses about the Cited Literature

The cited literature frequency is a cumulative frequency which is cited by other published literature within a certain period of time after the paper publishes formally, and it is an important index to measure the quality of the literature. And the more the paper cites, the higher the quality of literature is. Through the analysis of the situation of cited frequency in papers, it is easy to find the high quality papers in the field of Internet finance, and it also provides a reference and academic standards for other researchers. Due to the quantity of cited literature is larger, this paper just make a statistics for literatures which have the highest cited frequency in the Internet financial sector in order to make the conclusion more clear. The 10 literatures are as follows:
Table 1. Statistical literature citation rates (2001-2016).

<table>
<thead>
<tr>
<th>Rank</th>
<th>Title</th>
<th>Total citations</th>
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<tbody>
<tr>
<td>1</td>
<td>On the Internet financial model</td>
<td>1729</td>
</tr>
<tr>
<td>2</td>
<td>Internet Financial Mode and Its Influence on Traditional Banking</td>
<td>547</td>
</tr>
<tr>
<td>3</td>
<td>The Internet Financial Mode and Development</td>
<td>347</td>
</tr>
<tr>
<td>4</td>
<td>On the Commercial Bank Competition Strategy under the Internal Financial background</td>
<td>318</td>
</tr>
<tr>
<td>5</td>
<td>Research on the Internet Financial based on the electric business platform as the core</td>
<td>264</td>
</tr>
<tr>
<td>6</td>
<td>On the Special Risks and Prevention of Internet Financial in China</td>
<td>225</td>
</tr>
<tr>
<td>7</td>
<td>How to Deal With Internet financial model Challenges on State-owned Commercial Banks</td>
<td>224</td>
</tr>
<tr>
<td>8</td>
<td>PositiveRegard Characteristics and Development of the InternetFinancial</td>
<td>185</td>
</tr>
<tr>
<td>9</td>
<td>Interaction and Fusion:New Pattern of the Internet Financial Era</td>
<td>172</td>
</tr>
<tr>
<td>10</td>
<td>Internet financial supervision: the principle of explore new financial regulation paradigm</td>
<td>158</td>
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You can see from table 1, the papers, "the Internet financial model research", which is cited the most, published in the financial research, belonging to Xie Ping, and it has cited 1729 times so far. This paper published in 2012 when the Internet finance, the new forms, has initial development in mainland of China. The number of this article is 3 times more than that ranked as the second. And it can be considered that this text become iconic and landmark literature in the field of Internet finance. On the whole, it is obvious that we can see the gap about the research level by observing the cited frequency of documents in the field of the Internet finance, and the cited literature exists a typical "depression effect". The "depression" refers to the concept: a handful of literature lie in central position in the subject, have a large amount of references; the most of the literature is in science center periphery, have less amount of references. This phenomenon shows that the domestic study of Internet finance is still at the initial stage, and the most of the researchers imitate and follow authority; on the other hand, it also reflects that the financial research direction to choose is narrow in our country.

**High Frequency Keywords Econometric Analysis**

Paper keywords refers to the center point of the paper concerns and the core concept of the article, and it is not only a core point of the article to grasp fully the content structure of the document through analysis for document keywords, but it also can deduce a specific research focus and direction in the academic field and gives researchers some references about academic topic selection, so it is better to carry out the frontier research topics in this field in future[3].
We can see that keywords is a total of 3831 in the search results, and the quantity is large, so we need to make integrate and analysis. In this article, the map above was made by SPSS software. Considering the meaning of the keywords, we consolidated the key words that have similar meaning in the course of drawing, such as "P2P" and "lending to P2P network", "innovation" and "financial innovation". Thus meaning close key words merged, making presented graphics more accurately. In addition, the three key words, "Internet", "finance" and "the Internet finance", are clearly associated directly with the retrieval themes, and the recurring rate is too high, but these three words did not involve research direction and focus, so it will produce certain effect on the statistical results. In order to overcome the adverse effect, we threw the three key words out. The picture above lists 22 document keywords that emerged frequently in the form of a pie chart. Analysis of the keywords are as follows:

The Proportion of Keyword. The purpose of keyword analysis is to follow the frontier and hot issue in the study field and grasp the direction of the current study and find out the bias and insufficiency of research, in order to provide a reasonable reference and suggestion for further research and relevant personnel. We can see the four keywords that ranked top from the above drawing, and they are respectively "commercial banks", "financial innovation", "regulation" and "The balance of the treasure", account for half of the total number of keywords. And the 12 key words that ranked last more than 50% of the 22 keywords, they almost account for between 1% and 3%, but the sum of the total number of keywords only account for less than a quarter, and it showed less attention. Overall, keyword gap is vast between before and after. Of course, this is the intuitive reflect of focused heat for researchers.

Cause Analysis of Keywords Heat. Of all the keywords, "Commercial Banks" ranked first in a ratio of 17.51%, this is consistent with our basic understanding. In the financial system in China, the bank located absolutely the core position, is the physical basis and realistic point of strength for the most of the financial activities in reality, this is also consistent with the conclusion of cited frequency analysis for the previous papers. We can see that the researchers realize fully the importance of innovation in the financial field from the proportion that the keywords "financial innovation" accounted for 11.78%; Keywords "regulation", which is the third largest proportion, is 11.25%, this conclusion photograph echo with disciplines statistical results. As a new thing, the rapid development of Internet finance produced the risk, which is the inevitable result. The financial is regarded as the blood of economies, and risk control and prevention is always the focus of any country and the attention of its government. Therefore, the scholars’ attention is both natural and reasonable for the Internet financial laws and regulations. In addition, "the balance of the treasure", the hot word, is fashionable in recent years, and its heat is unabated, ranking fourth with 8.03%, which shows the theoretical research concerned the current social hot. "The balance of the treasure" has triggered a series of research questions, such as financial regulation and innovation. And the social hot issues are often the "catalyst" of academic research, and we can see that the spirit of advancing with the times and the attitude of keeping learning belong to the researchers.

Reflected by the Keyword Research

Existing literature shows that the researchers gave high attention on the Internet finance and get rich achievements, but we also found that the existing research focused more on the macroscopic field, including commercial banks, regulation and innovation etc., and the
solution of the problem like technology and risk problem is less. Furthermore, the technology matters represented by big data and the risk problem of Internet finance represented by P2P lending platform are the key issues about development direction and concern. Big data is the inevitable result of social informatization development to a certain degree, and the big data study of financial field can let us find regularity and nature in social economic life which is full of a lot of complication, it can provide the basis and the reference for our social and economic development and economic problems. Social lending level is an important symbol of a country's economic prosperity, and P2P can solve the problem of micro, small and medium enterprises financing difficulties effectively, it can help the birth and growth of the micro, small and medium enterprises, and it can also pour the power into our social development. Insufficiently, the ratio of keyword like big data and P2P lending representing the forefront is low, they are not paid enough attention to the bulk of the researchers. Although these studies have advanced constantly, it still own rich and constructive element.

Conclusions

Although the various deficiencies lie in the field of Internet financial research, as long as the researchers further broaden the research Angle of view and grasp multidisciplinary utilization along with the Internet financial development in China, on the basis of existing research to explore the health and sustainable development of the Internet finance, regarding technological innovation and risk prevention and control as the breakthrough point, then the prospect of this field is broad, and the space is huge. With the push of country and the accumulation of the various social forces, we believe that China's Internet financial research will enter into a new stage, and Internet financial will walk into each person's life; it will bring us more convenience at the same time.

References

