

RESEARCH ARTICLE**A Review of the Cash Holdings on the Domestic Researches Based on CNKI (1996-2015) of Bibliometrics***Li Xijin**Jinan University International Business School, Zhu Hai County, Guangzhou Province, China.***Abstract**

This article, through to the CNKI (1996-2015) to search literature research related to the cash holdings in business or management journals, using scientific measurement analysis method, has analyzed the present situation and the hotspots in the research of the domestic scholars cash holdings. The study found that cash holdings, cash value, financing constraints, corporate governance, the listed company, balance theory, monetary policy is the study hotspots. It is worth mentioning that the number of papers mounted in 2006-2010, and the domestic colleges and universities during this period contributed a lot of high quality papers, but still has great room for improvement. Finally, the article puts forward some suggestions for future research content.

Keywords: *Cash holdings, Literature review, The literature measurement analysis.*

Introduction

Cash and cash equivalents are one of the important assets of the enterprise, that are the blood of the daily operation. Nevertheless, in the past for a long period, people have not given enough attention to the large amount of cash held by enterprises.

This Research on cash holdings by Kim, have enabled domestic scholars to focus attention on cash holdings. Based on the four theories in the field of financial management, namely, the earliest motivational theory trade-off theory Pecking order theory and agency theory by drawing on foreign research theories and achievements, domestic scholars mainly focus on the influencing factors of enterprise cash holdings (management level, governance structure, external environment), dynamic adjustment of company cash holdings and the value of company cash holdings. At the same time, some scholars have made review of the literature on cash holdings Gunaikang et al

[1] Xiao Ming et al [2]. However, due to the difference of sample selection, measurement method and research angle, It's inevitable that the conclusions are not comprehensive and lack of robustness. Therefore, this paper attempts to use the scientific measurement analysis method to make a comprehensive carding and summary of the cash holding problem.

Research Design**Research Methodology**

Scientific quantitative analysis uses mathematical statistics principle and computer analysis means by studying the key words, reference literature, authors and the institutions and countries of the authors and countries [3] to analyze the characteristics, theoretical basis and development trend of the literature. Now, researchers widely use keywords frequency and co-occurrence analysis, author and citation co-cited

analysis technology, and multivariate statistical analysis and other means to analyze the knowledge structure of the subject. These quantitative analysis methods can effectively reduce the influence of previous literature review on subjectivity and knowledge blind area [4]. Therefore, this paper makes use of the cite space visualization software to study the current situation of cash and cash equivalents at home, whose source roots in the CNKI database to retrieve the relevant literature.

Data Collection

This paper is based on the data from CNKI database. At the first time, we make a retrieval to the periodical literature as the condition of "theme = cash holding", then get the relevant literature 2,654 articles. Due to the number of documents, partial research content and the lower level of individual research, some conditions must be screened. This paper selects the source category from the core journal and CSSCI, the retrieval time set to 1996-2016 with the "theme = cash holding". Finally, we access to 480 superior quality articles then download these documents one by one to determine whether it is really related to the theme of cash holding. We download 480 data, then export the ref works text format, at the same time export the excel form, and compare the export form with the original one by one to normalize complete format.

Data Analysis and Results

Analysis of the Number of Posts and Periodicals

From the fig.1, we can see that the number of

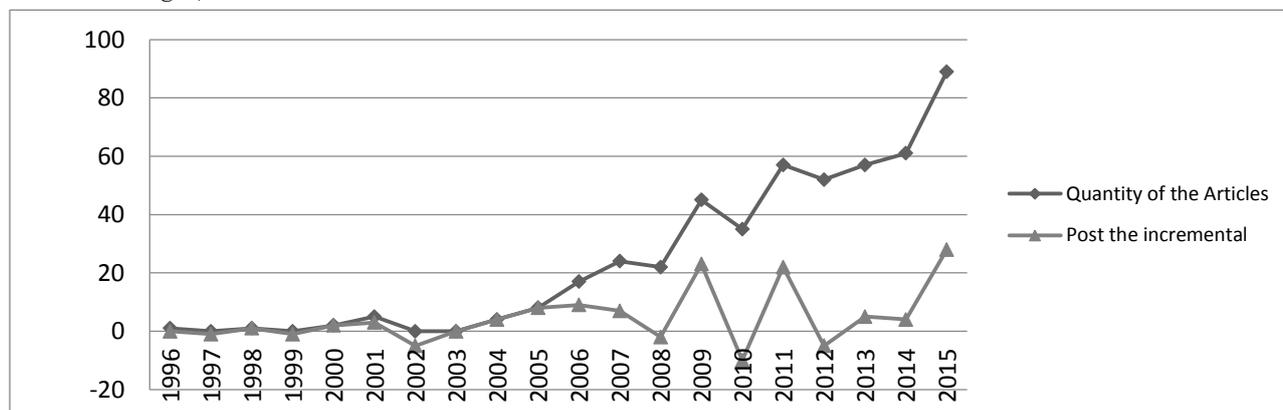


Figure1: The total volume and incremental of the literature related to cash holdings (1996-2015)

Source: According to CNKI database analysis

documents published in the study of cash holdings showed an upward trend, and roughly experienced four stages of development. The first stage is from 1996 to 2000, the development is very slow, the research is still in the initial stage, the average annual paper is less than 1; the second stage is 2001-2005, the overall trend of the development is upward, although there is a small oscillation. The average number of papers published each year is about 4. Compared to the first phase, this stage increased; The third stage is from 2006 to 2010. The number of articles published makes a breakthrough. The average number of papers published 29 article search year. Compared to the second phase, this phase increased more than 100 percent (about 7.41). Due to the impact of the financial crisis in 2008, after this, enterprises gradually increased their holdings of cash and insisted on the principle of "cash as king".

Therefore, this period papers also increased sharply. The fourth stage is 2011 - 2015. The average annual paper has 43 papers. Compared to the third phase, the number of papers issued increased to 14, but the growth rate (51%) has slowed. However, the heat research on cash holdings has not yet receded. To October 2016 incomplete statistics, from the CNKI database, the 2016 relevant cash holdings literature have 59 papers. Therefore, it can be predicted that in the future, with the economic development and economic transition, government reform and the introduction of policies, such as "replace business tax with value-added tax", research and analysis of cash holdings is still important.

Analysis of Focus And hot Spot of Cash Holdings Research

The high-frequency keywords reflect the research hotspot in the paper, so the researchers have paid attention to it. Use the cite space to analyze the keywords of the research object. Set the ref text format derived from CNKI to set the application in the cite space. Set every year for a time partition, and node type select keyword (keyword), setting the threshold (c, cc, cave) of the previous, middle, and back time zones to 2. 2. 16, 3. 3. 20, 3. 3. 20. Then, generate the keyword visualization network atlas of the cash holdings (see figure 2).

Thus, there are 399 keywords in the study of cash holdings from 1996 to 2015, and the whole keywords appear 1239 times. The average keyword appears 3 times. The key words with frequency greater than 10 (including 10) are listed in table 1. At the same time, the key words with the mutation and sigma value greater than 1 are listed in table 1 (the mutation value and sigma value in the Cite space software more than 1, point as the frontier and hot spot of the research).

Therefore, we can see obviously cash holdings, listed companies, monetary policy, trade-off theory and investment efficiency (not listed in the table) are the hot topic of current research. With figure 3, it can be seen clearly that the listed companies, tradeoff theory, cash holdings are the focus of earlier research, and investment efficiency and monetary policy are the focus of the current and future research.

The focuses of researchers are different at different stages. As can be seen from table 3, research on cash holding or cash holding levels and corporate governance has been consistently and has been a contentious issue in academia. In phase I (1996-2000), concerning hotspots are cash holdings, opportunity costs, shortfall costs, best cash holdings, and holding costs. They also suit at that time And studying the initial goal of

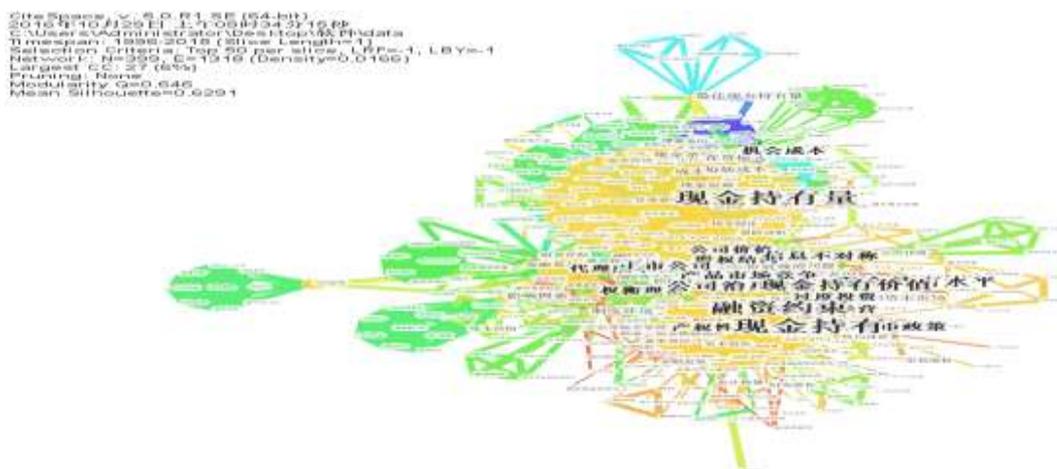
cash holdings is to address how much cash the enterprise should hold. Only when the opportunity cost and the cost of the shortage are minimized, the optimal level of cash holding is determined. The second stage (2001-2005), focuses are corporate governance, listed companies, information asymmetry, agency costs, cash holdings and impact factors. In the strict sense, the study on cash holdings began in the second phase.

The first stage is only how to use the model, that estimate the best holdings of gold, so as to ensure the normal operation of the company, but not take influence the cash holding factors (or influence factors) into consideration. Phase III (2006-2010), focuses are cash holdings and financing constraints [5-6] cash holdings, cash Holdings cash holdings, product market competition [7] [8] trade-off theory and equity structure listed companies, corporate governance [9-10].

This stage, following the research perspective of the second stage, focus on the internal nature of the enterprise, financial characteristics how to affect the level of cash holdings. In addition, scholars have begun to study from a macro perspective, such as monetary policy economic cycle Phase IV (2011-2015), focuses on cash holdings, financing constraints, cash holdings, cash holdings, cash holdings, corporate governance, monetary policy, product market competition, information asymmetry, dynamic adjustment [11-12]. After more than 10 years of exploration and development, the research of 2011-2015 phase is gradually mature.

The perspective of scholars research is also more open, and the scope of the tentacles extension is broader. The scholars began to look at the dynamic perspective of cash holdings, that are how to adjust the cash holdings and how to adjust the speed. At the same time, to study how to directly or indirectly influence the level of cash holdings from the macro level is much deeper, such as

government quality macroeconomic discrimination [14] political impact [15]
 uncertainty [13] monetary policy and credit



Source: According to the data obtained by keyword search, generated by the citespace software

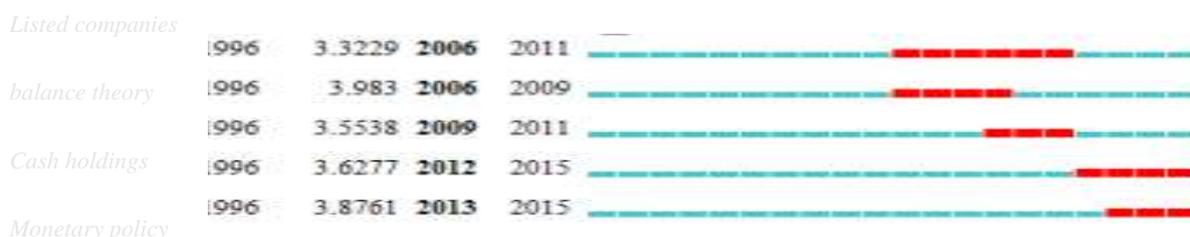


Figure 2: Key Words of The Relevant Cash Holdings Study (1996 - 2015)

Table 1: keywords with frequency exceeding 8 (including 8)

Mutation Centrality					Mutation Centrality				
F	Sigma	value	Keywords	N	F	Sigma	value	Keywords	N
158			cash holding	11	14			opportunity costs	11
113	7.92	3.55	cash holdings	12	14			agency costs	12
75			financing constraint	13	12			equity structure	13
35			cash holding value	14	12	1.2	3.98	balance theory	14
33			corporate governance	15	11			over - investment	15
30			cash holding level	16	10			property	16
18	1.1	3.32	listed company	17	10			diversified business	17
17			product market competition	18	10			dynamic adjustment	18
16			information asymmetry	19	10			company value	19
15	1.07	3.62	monetary policy	20	8			shortage cost	20

Source: the statistical results of the citespace software are collated

The Author Group Analysis of Cash Holdings Research

The research on cash holdings in China started relatively late. Before 1996, although scholars began to pay attention to the issue of cash holdings, but the number and significance of reference is small. Since 1996, in the recent ten years, the literature of cash holdings has a blowout growth. Therefore, this paper selects 480 documents from 1996 to 2015 tapping the Cite space to analyze.

The authors' visualization network atlas of cash holdings research literature is defined as a time partition, node type (node), select author (author), the threshold value (c, cc, ccv) of the three time zones (c, cc, ccv) are respectively 2, 3, and generated and collated, and the results show that there are 18 scholars in more than five articles, as shown in table 4. On the one hand, the number of papers reflects the direction of concern, and represents its influence in the research field.

As can be seen from table 4, there are only 2 authors published more than 10 articles. From the research field, it is not difficult to see that the majority of the research direction of these scholars is corporate finance, with a slightly different emphasis. There are many aspects such as energy economics and random boundary analysis, which are similar to the financial aspect, but it is all scholars.

The difference in the research direction is to inject new " blood ",to make the content of cash holding research much broader. In addition, the statistical analysis shows that most of the authors choose to cooperate with other authors and form a relatively fixed cooperative team in the process of research. In the past two cases, the largest number of communications was Yang xingquan, during which 15 papers were published with their collaborators: Cengyi, Wu hao, Sun Jie, Zhang zhaonan, Xieguangxia. Yang xingquan and Cengyi jointly published five

papers. Secondly, the Gunaikang published 10 papers,with its collaborators---Sun jinjun, Wan xiaoyong, Liu bai, Zhang chao. Among them, Gunaikang and Sun jinjun cooperated 7 times.

The Analysis of the Publication Mechanism of Cash Holding Research

By using the citespace software for analysis, we can see table 5 in detail, from which can be concluded that the top five posts are domestic institutions of higher learning. The total number of papers issued by these five universities amounts to 122, accounting for 25.42 % of the total (480), indicating that university researchers are the backbone of the research on cash holdings.

The Hot Literature Citation Analysis

An important path to discover the frontier and important theoretical foundation in the research progress is to analyze the hot literature. As can be seen from table 5, the top 10 hot spots refer to most of the frequency of more than 200, the first three articles cited frequency of more than 300 times. And, it can be found that the ten classical papers published in the time from 2006 to 2010, that is the third phase described earlier. It may also be argued that scholars' research on cash holdings matures in this period from 2006 to 2010.

First, Wang yanchao [5] published in the Financial Research titled "Financing constraints, cash holdings and over-investment".

In this paper, from the perspective of financing constraints, he studied the decision of financing constraints on cash holding policy, whether the financing constraints can reduce the agency cost of cash, and at last he concluded that the financing constraints is an important factor affecting the cash holdings of an enterprise. Similar from financing constraints angle, there are Lianyujun et al. [6] and so on. published the"

Monetary policy, enterprise growth and cash holdings "papers in managing the world, which was ranked second in terms of citations. This paper examines the impact of monetary policy on cash holdings at the macro level, or from an external perspective, and finds that "how much corporate cash holdings will change with the severity of the state's monetary policy ". In the third place, published the "Agent theory or trade-off theory" in the Accounting research. this paper uses empirical method to verify: " compared with agency theory, the tradeoff theory is more suitable to explain the high cash holding behavior of Chinese enterprises ".

Conclusion and Discussion

In this paper, we use the CNKI database to search the relevant cash holdings literatures, and use the knowledge mapping method (Cite space software) to analyze the key words, the author analysis, the agency analysis and so on. The results show that the cash holding, cash holding value, financing constraints, corporate governance, listed companies and so on are the research hotspots in this field, and in different periods, the domestic scholars' research focus is different. In the last two decades, the research stage of cash holding largely goes through the course of starting, developing, mature and stable. A large number of papers spring up, and scholars have contributed a lot of high level papers in the third stage (2006-2010). From the issue journals, it is mainly the college, but there are still large vacancies in excellent journal article and that will require scholars to keep studying the cash holdings from a broader, comprehensive perspective in the future.

Discussion

This paper only selected the CNKI database, so it only analyzes the domestic research status, and does not involve the development of foreign countries. At the same time,

limited to the means of software analysis, this paper is only a cursory analysis, the deeper layers of information contained in the literature cannot be excavated and analyzed, such as the development and innovation of research methods. At the same time because of the software limitations, we may omit some low attention, low citation frequency, but novel literature, such in that paper, they investigated the impact of social burden on corporate financial behavior.

So, The future research can be carried out from the following points: (1) In theory, the theory about cash holding is ripe, so it is difficult to start up new financial theory. However, we can use the theory of other fields to expand the radius of cash holdings, such as the social trust in sociology has been used in literature He organizational behavior theory whether we can presume combining the type of leaders in organizational behavior, style, even investigate the existence of apple-polish behavior between the shareholders and managers, so as to further clarify how these factors affect the enterprise cash holdings [2]. From the previous research hotspots, the current domestic research angle are apt to from internal to external environment, such as monetary policy, political connection, the change of local officials, the relationship between banks and enterprises.

Because China is a special human country, and the word "relationship" always runs through all aspects of people's production and management, also affects people's production decision. Therefore, in the future research we can consider the "relationship" factor.

Although the political connection, the relationship between the bank and bank have already touched "relationship ", but how to measure it accurately will be a difficult problem in the future research [3]. At present, most of the scholars choose to study the object of the listed companies, but there is little literature on unlisted studies [4].

Domestic scholars have combined supply chain [16-17] to research cash holdings. With the development of globalization and network technology, the supply chain between enterprises will be more complex, and that the supply chain involved in the business activities, investment activities, fund-raising activities, must also have a tight relationship with cash holdings. This suggests whether

these subjective factors should be studied in the future to consider the upstream and downstream partnership, the trust degree, and so on. (5) As can be seen from the sudden emergencies mentioned above, the researchers should study cash holdings from a macro perspective, particularly monetary policy, and it will remain the focus of research in the next few years. [18-37]

References

- Gunaikang Wanxiaoyong, Chen Hui (2010) Macroeconomic conditions, financing constraints and cash holdings [J]. Management study of Sun Yat-sen University, 04:33 -53.
- Xiao Ming, Wu Huixiang, Zhang qun, yanrui (2013) research on cash holdings of listed companies in China from macroeconomic perspective [J]. China management science, 03:28-34.
- Chen yue, Wang Xukun, Zheng gang (2007) Frontier analysis of management theory based on knowledge map [J]. Scientific research, S1: 22 -28.
- Houjianhua Chen yue (2007) Research on visualization of frontier evolution of strategic management [J]. Scientific research, S1:15 -21.
- Wang yanchao (2009) Financing constraints, cash holdings and excessive investment [J]. Financial research, 07:121 133.
- Lianyujun SuZhi (2008) Cash holdings of listed companies: static or dynamic weighing [J]. World economy, 10:84 -96.
- Yang xingquan, Zhang Zhaonan, Wu Hao min (2010) Governance environment, excess cash holdings and overinvestment - analysis based on panel data of China's listed companies [J]. Nankai business review, 05: 61-69.
- Yang xingquan, Cengyi Wu hao (2014) Competitive affects of monetary policy, credit discrimination and corporate cash [J]. Financial studies 02:133-144.
- Xinyu Xu, Liping (2006) Influencing factors of cash holdings of listed companies: financial characteristics, equity structure and governance environment [J]. China accounting review 02:307 -320.
- Zhang Zhaonan, Yang xingquan (2009) Governance environment, cash holdings and corporate value - evidence from listed companies in China [J]. Economics and management study, 02:88 -94.
- Zhonghaiyan Ran maosheng (2013) Product market competition and dynamic adjustment of cash holdings [J]. Economic and management research 02:88-95.
- Zhang Xizheng, Liu Zhiyuan (2016) why the adjustment of enterprise cash holdings is incomplete [J]. Nankai business review, 02:100 -113.
- Liang Quanxi, Tiancunzhi Zhanxuesi (2012) Macroeconomic uncertainty, financing constraints and corporate cash holdings: empirical evidence from China's listed companies [J]. Economy, 04:3-16.
- Yang xingquan, Wu Hao, Cengyi (2015) Competition effect of corporate governance and cash holdings: an empirical study based on the intermediation effect of capital investment [J]. China industrial economy, 01:121-133.
- Jiang peng Wang, Wenzhong Lei guang (2015) Political shock, uncertainty and corporate cash holdings [J]. Nankai business review, 04:130 -138.
- Wang Yong, Liu Zhiyuan (2016) supplier relationship and enterprise cash holdings - empirical evidence from Chinese manufacturing listed companies [J]. audit and economic research, 01:83 -91.
- Li Yanping, Chen Zheng, Zhu Yilin (2016) The impact of enterprise supplier, customer relationship and supply chain integration on cash holdings [J]. Statistics and decision, 14: 171 -174.
- Zhang Huili Wu, Youhong (2014) Internal controls, cash holdings and economic consequences [J]. Accounting research 03:71-78.
- Yang xingquan, Zhang Liping, Wu Hao (2014) Mercerization process, executive authority and corporate cash holdings [J] 02:34-45.
- Zhang liangliang, Huang Guoliang (2014) Executive government background and company's excess cash holdings [J]. Finance and trade research 05:120-129.

21. Tan Yanyan, Liu jinwei, Yang Hanming (2013) Financing constraints, excess cash holdings and enterprise value [J]. Journal of Shanxi University of finance and economics 01:95 - 105.
22. He Qing, Li Haopeng (2013) financing constraints, cash holdings and investment timing [J]. Nankai economic study, 03:67-82.
23. luzhengfei Han, Feichi (2013) how does macroeconomic policy affect the economic effects of corporate cash holdings? Based on the two perspectives of product market and capital market [J].management world,06:43-60.
24. Liang Quanxi, Tiancunzhi Zhanxuesi (2012) Macroeconomic uncertainty, financing constraints and corporate cash holdings: empirical evidence from China's listed companies [J]. Economy, 04:3-16.
25. Wang Fusheng, Song Haixu (2012) ultimate controllers, diversification strategy and cash holdings [J]. Managing the world 07:124-136.
26. Jiang Long, Liu Xiaosong (2011) Economic cycle fluctuation and cash holding behavior of listed companies [J].Accounting research 09:40 -46.
27. Chen Deqiu Li, is Wang Cong (2011) Government quality, ultimate property rights and corporate cash holdings [J]. Managing the world, 11: 127-141.
28. Zheng Lidong, Chengxiaoke, Yaolijie (2014) Economic policy uncertainty, industry periodicity and cash holdings dynamic adjustment [J].Journal of central university of finance and economics ,12: 68-78.
29. Yang xingquan, Wu Hao, Cengyi (2015) Competition effect of corporate governance and cash holdings: an empirical study based on the intermediation effect of capital investment [J]. China industrial economy, 01:121-133
30. Maolamei Wang Juan, Yang Yanwen (2015) Trust, company growth and cash holdings: based on the panel numbers of Chinese A-Share listed companies Ananalysis [J]. JAC forum ,03: 72.
31. Hejingtong Fanruoying (2015) Social trust level and corporate cash holdings: an interpretation based on tradeoff theory [J]. Journal of Shanghai University of finance and economics, 04:30-41.
32. Jiangpeng Wang, Wenzhong Lei guang (2015) Political shock, uncertainty and corporate cash holdings [J]. Nankai business review, 04:130 -138.
33. Zhang jun, Zhang Jianguang, Wang Lina (2009) Empirical study on the relationship between enterprise life cycle and cash holdings [J]. Management review, 1:101-112.
34. Gunaikang, Sun Jin, Zhang Chao (2008) Theory and empirical research on cash holdings [J]. Modern management science, 01:6-9.
35. Liu Boyan, Han Li (2010) corporate governance, uncertainty and liquidity management [J]. World economy 02:141 -160.
36. Wang Yong, Liu Zhiyuan (2016) supplier relationship and enterprise cash holdings - empirical evidence from Chinese manufacturing listed companies [J].audit and economic research, 01:83 -91.
37. Tuzhiping Song, Zhibo (2016) Application of institutional theory in the management of economic organization: bibliometric [J]. Economic management, 10:184 –99.