

# Summary of Research on Text Information and Enterprise Delisting

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## ABSTRACT

Limited by research means, text information research is always in the situation of small number and small samples. It was not until computer technology was applied to relevant research that a large number of studies on accounting text information emerged, and the trend of publishing literature abroad was impressive. In China, with the expansion of research data acquisition channels, it is difficult to find unique features in simple data research, and text information research gradually enters the attention of scholars. By combing domestic and foreign literature, it is found that at present, the research on text information in China is still in its infancy, and the number and Angle of research have not been explored yet, which is of great research value.

**KEYWORDS:** Text Information; Enterprise Delisting

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## INTRODUCTION

With the emergence of various databases, compared with the difficult to obtain text information, data information has become more convenient and faster. For this reason, in the emerging empirical research literature, the accessibility of data information reduces its competitiveness and rarity, and the extensiveness of access leads to the loss of data uniqueness. In such cases, new and unique sources of information can provide greater competitiveness and value. Therefore, text information gradually attracts researchers' attention. The specific situation of different enterprises is not the same, the comparability of their published accounting information is limited. In the case of asymmetric information between managers and investors, text information disclosed by companies becomes an important supplement to financial data information. Text information can not only explain part of the data information, but also expound the contents that are difficult to be reflected by the data, which can more reflect the management's views and attitudes towards the future operation and development of the enterprise (WenhanXu and ZhaohuiZhu, 2019). Compared with the data information which is simple in form but requires some professional knowledge to interpret, the text information also contains a lot of contents to be mined, which is of great research significance.

### 1. DEFINITION OF ACCOUNTING TREXT INFORMATION

Accounting text was originally defined as text information published by a listed company that is related to accounting content. However, scholars did not limit their perspective to this concept. Through their research expansion and

extension, accounting texts have been endowed with a broader meaning and content. The accounting text is no longer just the annual report, quarterly report, prospectus, performance forecast and other contents disclosed by the company. It also includes analysts' research reports, news media reports and opinions expressed on various economic forums or platforms.

In the era of advanced information, the convenience of the Internet and the development of social media have expanded people's access to information. The social media of an enterprise, to a large extent, represents the image and opinion of an enterprise. Good news and benign interaction can help to improve the image of the company and improve the perception of investors on the enterprise, which can make up the information asymmetry gap to a certain extent. A series of positive influences can also increase the trading volume of enterprise stocks. For non-corporate image promotion information, most of such information is neutral, and few of which can increase the goodwill and trust of investors. Too much non-corporate image promotion information will distract investors' attention to corporate image promotion information and significantly weaken the positive correlation between corporate image promotion information and stock trading volume (DongkaiZhangand Qi Jiayin, 2015). In addition, some researchers classified and sorted the text information of stock bars based on the perspective of investor sentiment, constructed variables to measure investor sentiment from three dimensions and studied the relationship between them and the Shanghai

Composite Index. Investor sentiment index can be used to explain the change of Shanghai Composite Index, and it is very significant to predict the extreme return of decline (XiuJinet al., 2018).

Expanded text information has become more abundant, not only is this in perspective, from the company also joined by expanding outside sources, for the use of cognitive platform investors and related news, let the existing range of text information more fully at the same time, more angles and information source also increases the cost of information collection and sorting. In addition, the researchers also received more intervention during the study. For example, the opinion evaluation published by investors on the platform has strong personal emotion to some extent, and may be persuaded, which may lead to misjudgment of the final result.

## 2. THE RESEARCH PROGRESS OF ACCOUNTING TEXT INFORMATION

In the initial stage of text information research, accounting text information mainly comes from manual reading and manual sorting, which makes the acquisition of text information slow and time-consuming. Therefore, before 2000, only a very small number of scholars paid attention to textual information and conducted research on its economic consequences. LEWIS (1986) and JONES (1994) studied the readability of accounting reports in the 20th century, and LEWIS also expounded the technical application of the readability of accounting reports. Some scholars also studied the information disclosed by the relevant contents of bankruptcy interpretation (TENNYSONBM et al., 1990). Due to the limitation of poor research methods, the sample size of literature research is relatively small, and the conclusions may be biased. Later, computer technology was gradually applied in the field of scientific research. With the development of related technologies, computer was used to collect and organize text information, greatly improving the efficiency and effect of text data analysis, which also provided a foundation for scholars to conduct large-sample research. According to the statistics of some scholars, by 2010, dozens of empirical studies on accounting text information have been published in top international journals, and these papers all use computer technology to collect and sort out the text information (F.Li, 2010). With the passage of time, the literature length in the field of text research continues to grow. Although the international research on text is full of momentum, but the domestic related research is very scarce.

### Accounting Text Analysis Method

With the development of text information research, scholars mainly summarize two methods of text analysis. One is the common dictionary method, which quantifies text information by counting the word frequency of specific statements. The other is a statistical algorithm with learning ability. A supervised machine learning algorithm is called a supervised machine learning algorithm if the classification label of the words has been determined; otherwise, an unsupervised machine learning algorithm is called an unsupervised machine learning algorithm.

### Study On The Characteristics Of Accounting Texts

When the text information is studied and sorted out, the research focus of scholars on accounting text gradually shifts to the study of specific text characteristics. The text features extracted by these researchers can be roughly divided into

two categories. This paper defines these two types of accounting text characteristics as the first type of accounting text characteristics and the second type of text characteristics. The first is the analysis and refinement of the text content, mainly including risk, competition, financing constraints, RESEARCH and development, falseness and forward-looking characteristics (HaoXiao et al, 2016), these characteristics are closely related to the specific content of the text. The other is not concerned with the characteristics of the text content, they are mainly reflected from the overall perspective rather than a specific perspective. Such accounting text features mainly include tone, readability, repeatability, and manager characteristics (Hao Xiao et al, 2016).

The first type of accounting text features the analysis and refinement of the text content, mainly including risk, competition, financing constraints, RESEARCH and development, falseness and forward-looking characteristics (Hao Xiao et al, 2016), which are closely related to the specific content of the text.

The risk of a company mainly involves the analysis from two perspectives, namely the type of risk and the severity of risk. The most common measurement method is the dictionary method. Risk information is mainly expressed in the form of text, which is better for investors to understand than data information. Even the information recipients who do not know much about relevant knowledge can understand the meaning expressed in the text (YiYao andMeiZhao, 2016). Compared with financial data requiring professional analysis, textual risk tips are paid more attention by investors, who will make more accurate responses to the information conveyed. It can be seen that the market has a stronger response to risk reduction in the textual form, which is more likely to trigger the dramatic stock price volatility (XiongyuanWang et al., 2017). Not only will the investor respond to the text risk prompt, but the debtor will also receive the message conveyed by the text risk prompt. The more disclosure of risk tips in this form of the annual report, the less bank borrowing companies have access to, and the stronger the response to long-term borrowing than short-term borrowing.

Presentiveness refers to the expression of future operation and development in the text, which often appears in the module of "Manager analysis and Discussion". Foresight often includes the company's current financial status and operating status, as well as the company's future opportunities and challenges, as well as the company's development plan in the next year. Therefore, the content of forward-looking is the most direct communication between management and investors, which usually includes the management's attitude towards the operation of the company. If investors can fully understand this part of the content, it will be of great help to future investment, the most intuitive is that this forward-looking text information can predict the company's financial crisis status. The more optimistic the forward-looking information is, the less likely the company will have financial crisis in the future (BingchengLi et al., 2019). Through further analysis of the company found that the influence of the external environment of financial crisis prediction, analyst attention, the degree of competition in the market will also impact on the relationship between the two, analyst attention and negatively correlated with the close degree between the two relations, product market competition and

close degree is positive correlation between (XiaMiao and BingchengLi, 2019).

In addition to the degree of optimism in tone, other scholars analyzed the role of prospective text from the perspective of sincerity in tone. A sincere tone will make investors feel the "sincerity" of the company and make investors more willing to believe the information conveyed in the text. In this way, investors will consider disclosing more characteristics of the company, and the improvement of sincerity will attract more tracking and forecasting from analysts. After the stock price synchronization decreases, it is more conducive to the pricing of the company by the capital market (YunchenWang et al., 2020).

The foresightedness of the text has produced a lot of influence, at the same time also has the influence factor. The annual inquiry letter is a source of accounting text information, and investors generally pay attention to the contents of the inquiry letter received by the company. When a company receives an inquiry letter, the quality of the text of forward-looking information will be improved, the company's performance forecast enthusiasm will be enhanced, and the accuracy will be more accurate, and the more severe the inquiry letter is, the stronger the legal risk and external supervision will be, the greater the degree of improvement will be (XiaoxiLi et al., 2019).

The second type of accounting text features do not focus on the text content, they are mainly reflected from the overall perspective rather than a specific perspective. Such accounting text features mainly include tone, readability, repeatability, and manager characteristics (HaoXiao et al., 2016).

Tone, or intonation, is an essential characteristic. In general, the tone should be divided into three types: optimistic, positive and positive, neutral and pessimistic, negative and negative. Most of the words are neutral mood, that is, it does not contain the explicit emotional tendency of the expresser. The words of this mood cannot be compared as subjects of study, so the research on mood usually only involves positive mood and negative mood.

Management's tone and next year's performance was positively related to relationship, management positive tone more positive, next year's performance is better, the tone of the management, the more negative, next year's performance is not ideal (DerenXie, and LeLin, 2015), suggesting that earnings report on the meeting, the tone of the management can provide incremental information about future performance, and reliability. There was a positive relationship between investor response and management tone. When the management tone is positive, investors will make a significant positive response. On the contrary, when the management adopts a negative tone, investors will react negatively significantly, so investors can receive the increment of information conveyed by the management tone (LeLin and DerenXie, 2016). Investors will take a series of relevant actions after receiving the information, and the stock return also changes positively with the optimistic tone of the text message. However, when the tone is overly optimistic, the text message may be out of touch with reality. At this time, investors will reduce their trust in the information conveyed by the text, and the market will also pay less attention to the text and weaken the response (ZhaohuiZhu and WenhanXu, 2018), which fully indicates

that China's information disclosure and capital market are both effective.

The subjects concerned with the meaning expressed by the tone of the text include not only investors, but also analysts who analyze and evaluate enterprises will pay attention to this hidden information, and they will especially make their own predictions and early warnings about risks and r&d related projects. However, if it is found that the response of text information is inconsistent with the actual situation, analysts will also reduce their attention to overly optimistic text information (WenhanXu and ZhaohuiZhu, 2019). When the company's performance is poor, the optimistic tone is positively correlated with the performance, while the negative tone is negatively correlated with the performance. Moreover, the more positive mood words there are, the higher the optimism degree of the analysts is. In other words, it is difficult for the company with poor performance to improve its image in the eyes of investors through operating tone. They may reduce investors' expectations of themselves by distracting negative rhetoric. On the other hand, investors not only pay attention to the content of information transmission, but also pay attention to the way of information transmission, that is, the tone will have an impact on the receiver of information, and the distribution of mood words also has a certain influence (HuiZhao et al., 2018).

Foreign studies have shown that text information disclosure of listed companies will have an impact on analysts' forecasts, and analysts have better ability to process and interpret information. Companies provide a lot of text information at earnings briefings, which is a good place for research analysts to focus on text. The positive tone at earnings briefings increases the probability and proportion of analysts changing their forecasts after the briefings, as well as the level of ratings. Unfortunately, the study found that only the positive tone had an impact on analysts' forecasts, not whether there was a link between the negative tone and the change in analysts' forecasts. These results all indicate that there is information content in the corporate performance statement, and also provide a point of view for the disclosure of listed companies and market regulation.

Textual message tone can not only provide valuable incremental information to information recipients, but also become a tool for management to cover up earnings management and mislead investors. The existing research is mainly about the relationship between the tone of text information of earnings forecast and earnings management. The study found that the two are mutually compatible. Optimistic tone is negatively correlated with real activity earnings management and positively correlated with accrual item earnings management (ZhaohuiZhu and WenhanXu, 2018). When the accrual manipulation is positive, the manipulable tone of the annual report text information is significantly positive. When the accrual manipulation is negative, the manipulable tone of the annual report text information will be significantly negative (HuajieWang and KeminWang, 2018). Further research shows that the coordination effect of tone manipulation on earnings management is enhanced with the increase of the degree of non-efficient investment. Moreover, the manipulation of data information and text information by managers is not split. Text information manipulation has a supplementary effect on digital information manipulation, and they all have the function of masking managers' motivation (ZhaohuiZhu and

WenhanXu, 2018). It can be seen that voluntary disclosure does not restrain managers' earnings management activities, but may lead investors to accept misinformation and be misled. Not only in earnings management, which is the most widely studied and discussed, but also from the perspective of political relevance, some scholars have discussed the manipulation of management tone. Finally, it is found that the relationship between the two is significantly positive, and the relationship is more significant in private enterprises with strong resource effect and media attention. The same as the political correlation, there is also a significant positive correlation between the issuance of stock and the tone manipulation of the management, but there is no significant correlation with the future business performance of the company.

Readability is another major aspect of text research. Readability includes many specific details, such as the complexity and ambiguity of the text. There are many ways to increase the complexity, such as adding more negative logical words, adding more complex expressions, and adding rare or professional words. All these operations will bring difficulties to readers, thus reducing the readability of the text. For self-interested purpose, managers will control the information in the annual report. The manipulation of digital information and text information of annual report are mutually coordinated. The manipulation of text information not only includes the tone of text, but also includes the complexity of text. Through the study of managers' self-interested behavior and annual report text information, it is found that managers will increase the complexity of text information to cover up the negative news of the company, and the negative correlation between the two is more significant when the earnings management space is smaller, the management shareholding ratio is larger, the integration of two jobs and the legal risk is lower. For managers, the increasing complexity of annual report text information can increase managers' excess salary (KeminWang et al., 2018). However, the readability of text information is also affected by the business conditions of enterprises.

In recent years, micro-profit phenomenon has attracted the attention of many scholars. Micro-profit phenomenon refers to the situation where the enterprise has no loss, but the profit is very thin. In that case, companies can evade their tax obligations and have good reason to reject dividends. In the case of delisting, earnings management can also help enterprises avoid delisting risks to achieve a small profit. The research on the text information of the annual report of micro-earning enterprises finds that the text information of the report is less readable in the case of micro-earning, and the text information of the report will be less readable if the micro-earning situation is achieved through earnings management. In 2014, the newly revised delisting system normalized the situation of misleading statements in text information, and formulated corresponding penalties, and the contents suspected of misleading statements and warnings by the CSRC were added to the situation of delisting warning. From the perspective of policy implementation effect, the system has a restraining effect on earnings management of enterprises to achieve micro-profitability, which indirectly proves the effectiveness of policy implementation (WenhanXu and ZhaohuiZhu, 2019). The readability of the annual report is positively correlated with the information content received by the receiver. The higher the readability of the annual

report is, the more information the receiver gets. When the readability of the report text information in that year is low, the attention level of analysts will also decrease, and the quality of earnings forecast will be lower (HuiqinLiu and XianwangShi, 2020).

Repeatability can actually be viewed from two perspectives. One is the repetitive or approximate expression of content in the same text. There is another Angle that I personally think can be categorized in it, that is, inertial disclosure, that is, directly adopting similar or similar expression content in non-text. The text information similarity of management discussion and analysis in the report has a significant positive correlation with the cost of equity capital (YanhuiJiang et al., 2014).The characteristics of managers include self-serving bias psychology and power characteristics. There are relatively few studies on this feature, but there are some that use first-person frequency as a measurement variable of self-serving bias.

### 3. SUMMARY

Generally speaking, the research on text information in China is still in its infancy, and the research on delisting text information is even more "check no one". Most of the research focuses on earnings management and management analysis and discussion module. The relationship between the research variables is relatively simple, the research angle and research path are relatively scarce, there is no more in-depth exploration, and there is no systematic theoretical support. In the case of a shortage of research references, this is a challenge as well as an opportunity.

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