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Assessing Audit Risks in Enterprises on the Growth Enterprise Market: A Grounded Theory Approach

Abstract: - This paper adopts the research method of grounded theory, based on the annual report audit of 66 pharmaceutical manufacturing enterprises on the Growth Enterprise Market, exchange supervision and inquiry letters, the CSRC penalty announcement and online public comment materials, and based on the actual situation, to study the audit risk of pharmaceutical enterprises on the Growth Enterprise Market. . The study found that the misstatement risk of pharmaceutical companies on the GEM is divided into the overall level and the specific level. Among them, the overall misstatement is related to the external environment, operating risks, corporate governance, internal control, and related party transactions, while the specific misstatement risks are reflected in revenue recognition, goodwill impairment, R&D expense recognition, inventory valuation, and the availability of accounts receivable. Recoverability and other five aspects. In the context of big data, construct appropriate risk profiles analytical models are critical to the efficiency and quality of audit oversight. Through the research of this paper, it is helpful to assist intermediaries and regulatory authorities to systematically assess the misstatement risk of pharmaceutical companies on the GEM, and to take targeted risk response measures.

Keywords: Growth Enterprise Market, manufacturing companies, audit risk, grounded theory

I. INTRODUCTION

On June 12, 2020, with the promulgation and implementation of a series of documents including the Administrative Measures for Securities Issuance and Registration of Companies Listed on the Growth Enterprise Market (for Trial Implementation), the registration system was officially implemented on the Growth Enterprise Market. On the one hand, the conditions for listing companies on the ChiNext Board are relaxed. On the other hand, because the registration-based review committee only conducts formal review of registration materials without making substantive judgments, it further compresses the responsibilities of intermediaries.

GEM pharmaceutical companies are often in the early stages of development, their management and control systems are not perfect, and they face greater technical, operational and compliance risks. As of March 2022, a total of 66 pharmaceutical manufacturing companies were listed on the Growth Enterprise Market. Among them, Jiayin enterprises were punished 45 times due to failure to disclose important information as required, false disclosure,

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inaccurate and untimely disclosure, etc. In terms of non-punitive supervision, 45 GEM pharmaceutical manufacturing companies received 153 exchange inquiries, including 48 annual report inquiries[1].

As one of the market players, the compliance of pharmaceutical manufacturing enterprises not only affects the resilience and vitality of the enterprise, the efficiency of resource allocation in the capital market, but also concerns the livelihood of the people. The financial fraud scandal of Kangmei Pharmaceutical in 2019 shocked the capital market and once again brought the pharmaceutical industry to the focus of attention. In 2020, the Chinese Institute of Certified Public Accountants reminded accounting firms to focus on the pharmaceutical field in the annual report audit through industry risk disclosure and firm interviews. Therefore, in GEM listed companies, the role of certified public accountants in auditing is becoming more and more important.

II. LITERATURE REVIEW

In recent years, the application of a new generation of information technology such as blockchain and big data has promoted the change of audit mode [2]. Practical discussions on big data auditing techniques and methods are increasingly enriched [3][4][5]. In the field of informatization and digitization, relevant practical exploration often precedes theoretical research, but theoretical sublimation is the scientific refinement and summary of practical problems [6]. Without systematic theoretical guidance, the results of big data analysis are likely to be misinterpreted [7]. Therefore, under the data-based auditing mode in the context of big data, the identification and assessment of risks need to be guided by scientific theories.

Existing literatures are mostly empirical tests on audit risk, and no scholars have used grounded theory to conduct qualitative research on audit risk. Grounded theory has gradually emerged in the field of qualitative research in recent years, emphasizing the acquisition of primary data and the analysis of unstructured data. Using grounded theory to study audit risk issues in a specific industry can get rid of the constraints of theory and explore the factors that affect audit risk from practice. Not only can the concepts and levels related to the research problem be clearly defined, but also the motivation of the problem can be revealed. Therefore, this paper selects the pharmaceutical manufacturing industry, and applies the grounded theory to the field of corporate financial fraud risk and the audit risk of certified public accountants, which is the basis and innovation of this paper.

III. RESEARCH DESIGN

This paper applies the grounded theory to the research on the audit risk of the pharmaceutical manufacturing enterprises on the GEM, and the purpose is to extract the industry characteristics of the audit risk of the pharmaceutical manufacturing enterprises on the GEM from a large amount of data. The pharmaceutical industry is known as the "eternal sunrise". It is an industry that integrates traditional and modern industries and three major industries. It is an indispensable and important part of the national economy.

In this paper, the research object C27 is determined by the industry classification of the China Securities Regulatory Commission.

Table 1 Classification of pharmaceutical manufacturing enterprises

Category	Medium class	General category	Category name
C manufacturing	27 pharmaceutical	272	Chemical preparation

	manufacturing		manufacturing
		273	Decoction pieces of traditional Chinese medicine plus
		274	Chinese patent medicine production
		275	Veterinary medicine manufacturing
		276	Manufacturing of biological drug products
		277	Health materials and medical supplies system
		278	Pharmaceutical excipients and packaging materials

By collecting all aspects of information of gem pharmaceutical manufacturing enterprises (with emphasis on audit information), using grounded theory, processing and analyzing the original data, this paper obtains the elements that affect the audit risk of gem pharmaceutical manufacturing enterprises, and forms a systematic analysis model for the risk of misstatement of gem pharmaceutical manufacturing enterprises, so as to assist audit institutions and regulators to take targeted countermeasures.

IV. THE GEM BASED ON GROUNDED THEORY

4.1 Data collection

Taking the end of March 2022 as the node, a total of 66 pharmaceutical manufacturing companies on the Growth Enterprise Market were selected, and the original data were collected and sorted through multiple channels. Sources of data include: (1) descriptions of key audit matters in the audit reports of various companies collected by www.cninfo.com.cn; (2) inquiries from the exchange received by companies on the official website of Shenzhen Stock Exchange (including annual report inquiries and letters of concern) (3) Announcement of punishment on the official website of the China Securities Regulatory Commission or other regulatory agencies; (4) Article comments on other platforms such as Oriental Fortune.

4.2 Data analysis

After the data is collected, the collected data is extracted from the bottom up according to the fixed process of grounded theory, and manual finishing code.

The general procedure includes several stages of data collection - labeling - conceptualization - categorization. Among them, the abstraction of concepts and categories needs to be repeated many times. By constantly asking

questions, carrying out concepts and types, comparing new materials with the refined concepts and categories, and repeatedly studying the nesting, the concepts and categories that best reflect the essence of the data can be obtained. type, reaching the relative saturation of the theory.

By dividing, summarizing and labeling the original text data, the labeling of the data is realized. This article uses code analysis method to decompose and summarize the data of 66 GEM pharmaceutical manufacturing companies, decompose them into individual sentences, and use simple words to summarize the basic meaning of each sentence as much as possible. Company names are identified as "Lmi, Aki, Bli, Hri, Jyi" and so on. An example of labeling is shown in Figure 1 below, and 412 labels are finally obtained.

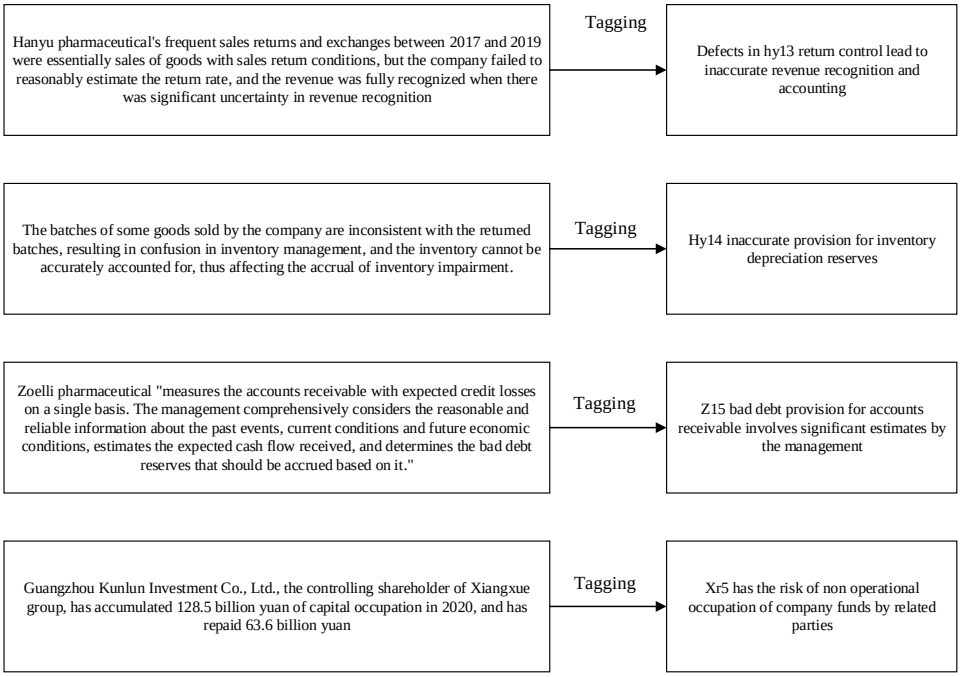

Figure 1 open coding

organize labels with the same or similar meanings and condense them into one of the most important or frequently used labels, that is, commonly used sayings or concepts. Summarize and sort out the tags formed in the previous stage. Considering that the extracted concepts should be generally representative of pharmaceutical manufacturing companies on the GEM, in the process of sorting out similar tags, the frequency of tag occurrences is considered, leaving a higher frequency of occurrence. A total of 76 concepts are extracted, which are represented by the letters ai. The conceptualization of tags in this paper is a simplified classification of tags based on their repetitive keywords and semantic understanding.

The labels are grouped into one concept "a28 concealment of related party transactions", resulting in 76 concepts.

Table 2 Open coding

Label	Conceptualization
HS2 exists that the management uses improper revenue recognition to achieve specific goals or expectations	a6 there are inherent risks in revenue determination

In gs8, the management manipulates the time point of revenue recognition in order to achieve specific goals or expectations	
Kz2 has various business models and different revenue recognition methods	a14 diversified business models and different revenue recognition methods
Lmn2 Lidman's revenue recognition of domestic and foreign products needs to meet different conditions	
FX4 domestic and foreign revenue recognition time points are different	

further divide relationships such as association relationship, unified relationship, and total score relationship into "free nodes", and combine concepts with strong logical correlations to form the initial category of rooted coding. Through continuous comparison, classification , abstraction, promotion and synthesis. Finally, the above concepts are divided into 33 categories according to the logical relationship, which are represented by Ai. In this paper, the classification of initial categories is to summarize the conceptualized phrases according to their semantics and merge them into representative initial categories.

A total of 33 initial categories, such as “risk”, “A4 fixed asset related risk”, “A5 continuing operation capability”, “A6 internal control operation defect”, “A7 related party transaction risk”, etc., are listed in Table 3.

Table 3 Open coding initial range

76 concepts	33 initial categories
a1 significant amount of goodwill	A1 accuracy of goodwill impairment provision
a2 goodwill impairment test involves significant judgments of the management	
a30 there is a risk of "big bath" by withdrawing large impairment	
A3 the judgment of capitalization conditions of R & D expenses includes significant accounting judgments and estimates made by the management	A2 accuracy of capitalization of R & D expenses
a6 inherent risk of fraud in revenue determination	A3 revenue recognition risk
a14 diversified business models and different revenue recognition methods	
a40 the specific time point of revenue recognition varies according to the specific terms and conditions of the sales contract	
a15 asset impairment test evaluation is complex and requires high judgment	A4 risks related to fixed assets

a20 low turnover rate of fixed assets and construction in progress	
a23 there is a risk of inadequate provision for depreciation of fixed assets and amortization of intangible assets	
a37 the amount of fixed assets carried forward after the completion of construction in progress accounts for a significant proportion of the total assets	
a19 uncertain ability to continue as a going concern	A5 going concern ability
a22 behaviors with internal control system	A6 defects in internal control operation
a48 disordered receipt and delivery management	
a24 concealing related party transactions	A7 risks in related party transactions
a27 there is a risk that related parties occupy the company's funds for non operational purposes	
a34 related party transactions increased significantly	
a57 failure to disclose related party transactions reasonably	
a67 related parties illegally occupy funds	
a44 excessive reduction of shares	A8 reduction of major shareholders
a46 illegal deduction	
a4 the fair value measurement of the third level financial instruments involves significant judgments of the management	A9 fair value of financial instruments
a5 Next business combination frequency under non return control	A10 M & a related
a10 frequent acquisitions	
a16 high premium acquisition	
a8 pledge proportion of major shareholders' equity	A11 pledge of major shareholders' equity
a43 information disclosure lag	A12 nonstandard disclosureA12 nonstandard disclosure
a45 large difference in performance forecast	
a64 punishment for delayed disclosure	
a35 failure to perform necessary approval procedures and disclosure obligations for	

related party transactions as required	
a24 concealing related party transactions	A7 risks in related party transactions
a27 there is a risk that related parties occupy the company's funds for non operational purposes	
a34 related party transactions increased significantly	
a57 failure to disclose related party transactions reasonably	
a67 related parties illegally occupy funds	
a44 excessive reduction of shares	A8 reduction of major shareholders
a46 illegal reduction	
a4 the fair value measurement of the third level financial instruments involves significant judgments of the management	A9 fair value of financial instruments
a5 frequent business combinations not under the same control	A10 M & a related
a10 frequent acquisitions	
a16 high premium acquisition cash	
a9 there is a phenomenon of selective disclosure and stock price speculation	A13 selective disclosure
a12 significant amount of sales expenses	A14 accuracy of confirmation of sales and R & D expenses
a32 confirmation of marketing and maintenance fees	
a23 insufficient provision for depreciation of fixed assets and amortization of intangible assets	
a13 products	A15 business order
a38 the main business income accounts for a very high proportion of the total income	
a41 most of the operating revenue is from main business	
a17 high asset liability ratio	A16 high asset liability ratio
al8 patent related litigation and arbitration matters	A17 litigation and arbitration matters
a26 Great changes have taken place in business strategy, business performance and other aspects	A18 business strategy change
a28 frequent changes in management	A16 high asset liability ratio

a29 unstable corporate governance and management structure	A17 litigation and arbitration matters
a31 company management team has insufficient experience and competence	A18 business strategy change
a33 change the accounting policy of withdrawing bad debt reserves for accounts receivable and other receivables	A19 unstable corporate governance and management structure
a36 accounts receivable accounts for a high proportion of revenue	A20 company management team is incompetent
a39 high proportion of distribution revenue	A21 proportion of distribution revenue

V. CORPORATE GOVERNANCE AND INTERNAL CONTROL (M2, M4)

GEM companies are mostly private companies, often accompanied by a family governance model and entrepreneurial corporate culture, manifested in the “governance layer participating in management” and the management above internal control. Without internal audit or internal audit in name only, it is impossible to form the board’s role in senior management. There are great loopholes in the internal governance mechanism of the organization due to the checks and balances at the top of the board, and the independent supervision of internal audit under the leadership of the audit committee of the board of directors.

First, the timing of revenue recognition is diverse, which increases the risk of corporate revenue recognition. On the one hand, many pharmaceutical manufacturing companies on the Growth Enterprise Market have overseas sales markets. Due to differences in the locations of sales markets, the timing of revenue recognition is also different. For example, in the labelled statement, "Gt2 domestic sales shall ship or deliver the goods to the designated place, and the time point of revenue confirmation shall be after the customer's acceptance" and "Gt3 export sales shall be carried out after the goods are shipped out of the warehouse and the customs declaration and export procedures are completed, and the electronic The date of export declaration at the port is the time of revenue recognition.”

Second, the revenue realized by dealers’ sales accounts for a high proportion of operating income, and the supply chain is highly dependent, which may lead to the risk of hoarding unreasonable inventory through distributors and confirming revenue in advance.

Third, goodwill is extremely important to pharmaceutical manufacturing companies on the Growth Enterprise Market. The frequent mergers and acquisitions of pharmaceutical manufacturing companies on the Growth Enterprise Market have resulted in a large book value of goodwill. "Big bath" phenomenon, resulting in the risk of inaccurate measurement of goodwill value.

From 2017 to 2020, the key audit matters of 66 listed pharmaceutical manufacturing companies on the Growth Enterprise Market were compared and classified, and it was found that in the audit reports of different years, revenue recognition was the most frequent item, and the frequency of goodwill impairment matters remained basically. Stablize. Both are the most important items considered by the CPA in this audit.

Table 4 Frequency of revenue and goodwill impairment risk as a key audit matter

Particular year	2017	2018	2019	2020
Number of revenue recognition as key audit matters	34	51	47	51
Number of occurrence of goodwill impairment as a key audit event	20	24	22	23

VI. CONCLUSION

The research in this paper is still applicable to pharmaceutical companies on the Science and Technology Innovation Board. The purpose of this risk model is to help audit institutions pay close attention to high-risk points when undertaking the audit business of pharmaceutical manufacturing companies on the GEM, and make use of expert work to make up for their own professional deficiencies when necessary. At the same time, the firm should strengthen risk awareness and firm management, and maintain a high degree of professional sensitivity when dealing with high-risk audit fields.

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