

Impact of Key Audit Matters on Accounting Information Management by REA Model

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Abstract. High-quality accounting information can help enterprises improve their operating conditions and provide useful information for other stakeholders in the market to make decisions. It plays an important role in optimizing the efficiency of the capital market. Firstly, the relevant literature on key audit matters and accounting information quality is sorted out. Then, the Resource, Event, Agent (REA) model is constructed to analyze the relationship between key audit events and the quality of accounting information. Based on the text characteristics and specific types of key audit items, this paper deeply analyzes the impact on the quality of accounting information. The empirical results show that the key audit disclosure helps improve accounting information management. The improvement effect on accounting information management is more significant in enterprises with high earnings management and analyst concerns. In addition, from the perspective of text characteristics, the more key audit events are disclosed, the more detailed the description and response paragraphs are, and the more significant the improvement effect on the quality of accounting information is. The disclosure of asset impairment types is helpful for the quality of accounting information management. The type of fair value measurement is not conducive to improving the quality of accounting information management. Based on the REA model, the implementation effect of key audit items is verified, which has positive significance for deepening the reform of audit standards and improving the efficiency of the capital market.

Keywords: REA model; key audit matters; accounting information; multi-dimensional analysis; management quality.

1. Introduction

Since the establishment of the capital market, accounting fraud has emerged endlessly, which has seriously damaged the healthy development of the capital market. The root cause of this problem is the imbalance of market information [1]. As an important role in alleviating the information asymmetry in the capital market, audit reports are increasingly trusted by users. The financial crisis in 2008 made the global economy suffer a heavy blow. In order to meet the requirements of the capital market for high-quality accounting information, the reform of audit standards came into being [2]. In this context, China's Ministry of Finance is also actively following the trend. At the end of 2016, the Chinese government completed and promulgated the new audit reporting standards, requiring listed companies to implement the new standards in batches [3]. The core of the reform lies in the disclosure of key audit matters. Firm-specific information provides investors with more incremental information and alleviates the risk caused by information asymmetry. This paper seizes the policy opportunity of audit reform to disclose key audit matters. Chinese listed enterprises

are taken as samples, and several problems are explored. 1. Whether the disclosure of key audit matters affects the quality of accounting information. 2. The impact mechanism of key audit matters on the quality of accounting information. 3. The impact of specific text characteristics and types of key audit items on the quality of accounting information. The exploration of these points provides a theoretical basis for reforming the audit system and improving the quality of accounting information.

2. Literature review

At present, it is generally accepted internationally that key audit matters should be the most representative and important matters found by certified public accountants in the audit process. However, there is no clear specification for the specific selection criteria, quantity, and form. There will inevitably be subjective evaluation criteria with auditor color, which will affect investors' decision-making. Abdullatif pointed out that the auditor should carefully select the key audit matters, and clarify the response methods and corresponding audit work in continuous refinement and revision [4]. Coram stated that

the content of key audit matters disclosed by auditors should be appropriate. If too much information is disclosed, that information will lead to the report users being unable to find the key points. Especially for non-professional investors, it won't be easy to find the required information. If too little information is disclosed, the original intention of audit reform may not be achieved, and the purpose of increasing the information content of audit reports cannot be achieved [5]. Bruce focused on analyzing the specific characteristics of key audit matters from the perspective of industry and accounting firms. The study found that the number of disclosures of key audit matters in the financial industry ranked first and was far higher than the industry average, followed by the real estate industry and agriculture, forestry, animal husbandry, and fishery. This situation is large because the frequent occurrence of financial chaos has attracted more attention from the audit firm [6]. Akther found that more transparent audit reports will increase investors' trust, help reduce the gap between audit expectations, and enhance the relevance of investors' decisions [7]. Köhler found through group experiment research that, compared with the control group, participants receiving audit reports that disclose key audit matters are more likely to change their investment decisions. These investors pay more attention to the description of audit procedures [8].

Compared with the previous research results, the main innovations include: 1. the effect of existing key audit matters is more reflected in the auditor's perspective, such as the impact on audit fees, responsibilities, and quality. Unlike previous studies, from the perspective of the usefulness of investment decisions, this paper adds empirical evidence on the implementation effect of key audit items. It verifies that key audit items can improve the quality of accounting information management. 2. This paper constructs the Resource, Event, Agent (REA) model, which is more conducive to analyzing the relationship between key audit matters and accounting information quality. In this way, it analyzes the impact on accounting information quality from the text characteristics and specific types of key audit matters.

3. Materials and Methods

3.1 Concept of Key Audit Matters

The key audit matters are the matters that the auditor must disclose according to professional judgment and are considered the most important for the audit of the current period's financial statements. According to the disclosure requirements, the certified public accountant shall establish a separate key audit event segment, including the event name, the event description segment (a detailed description of the reasons for determining the key audit events indexed to the relevant disclosure of the financial statements), and the audit response segment (a description of the audit procedures implemented) [9]. The standard setters believe that the reform of adding key audit matters can disclose more "personalized information" about enterprises, increase the content of information, improve

the usefulness of decision-making, and reflect the audit value.

3.2 Introduction of REA Model

The REA model records business activities using resources, business risk management events, participants, and their relationships. Its core idea is to start from the three general directions of resources, events, and participants, find the instances of various business activities in three directions, and record them and their attributes to record business activities [10] completely. Up to now, many scholars have expanded the REA model. In addition to resources, events, and participants, they have expanded the REA model from multiple dimensions of location, business process, and commitment, which provide more perspectives for recording business. The process of establishing the REA model is shown in Figure 1:

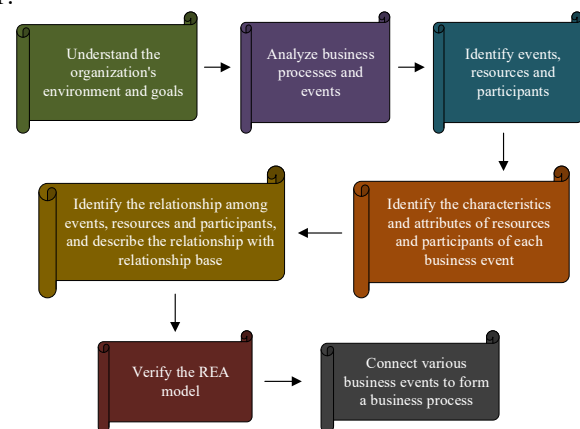


Figure 1: Construction process of the REA model

In Figure 1, understanding business processes and events are the basis for designing an accounting information system based on REA. When decomposing the business process into business events, the principle of practicality shall be followed; that is, the degree of decomposition shall be subject to the level that the manager wants to plan, implement, control, and evaluate.

3.3 The Structure of Accounting Information Management System Based on REA

When building the management accounting information system based on the REA model, its theoretical basis is the decision support system, which connects the method model base and the management accounting database. The selection and support of the model and the personalized scheme of informatization can be further improved. The ideal system and structure need to be supported by several basic databases, namely database, and method model library. The database records the basic items of economic business, and the method library is used to place diversified confirmation and measurement methods and analysis models. When designing the REA database, the information requirements of the target export are taken as the principle. Various indicators of management decision-making are decomposed into the basic unit of the REA model-attributes. Then, the relevant

entities and the auditors are required to correspond according to the occupation in accordance with the *Auditing Standards for Chinese Certified Public Accountants No. 1504 issued by the Ministry of Finance* to determine the process. The structure of the management accounting information system based on the REA model is shown in Figure 2:

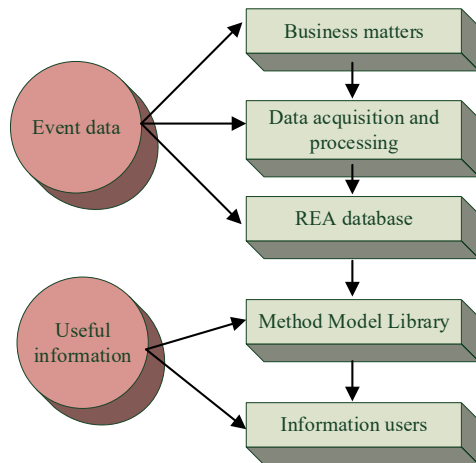


Figure 2: System structure of accounting information management based on the REA model

In Figure 2, there are relatively fixed methods for managing accounting information processing in the method model base, including model, knowledge and method, and reporting tools. These methods allow accounting information users to process, mine and analyze data from multiple perspectives.

3.4 Model Design of the Impact of Key Audit Events on Accounting Information Management Based on REA

The REA model believes that the origin of economic business processes and events determines how data is stored and used. The accounting information system based on this model can provide the information needed for using various views and avoid data inconsistency and repeated storage. The structure design of key audit matters based on REA is shown in Figure 3:

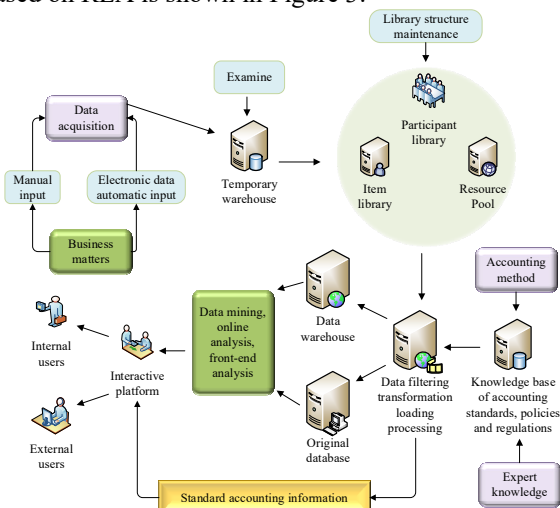


Figure 3: Structural design of key audit matters based on REA

In Figure 3, the data related to key audit matters are manually collated based on the China Research Data Service Platform and <http://www.cninfo.com.cn> (annual financial reports of listed companies). The shareholding ratio of institutional investors and the annual average turnover rate is from Wande Database. Other financial data are from CSMAR Database. In order to explore the mechanism between key audit matters and the quality of accounting information, this paper launches from two aspects: earnings management and analysts' attention. This paper uses the REA model to measure the level of earnings management. The greater the absolute value of the operable accruals, the more serious the degree of earnings management. The definition of the main variables is shown in Table 1:

Table 1: Definition of main variables

Variable symbol	Variable name	Definition
SYNC	Share price synchronization	The stock price synchronization of the next year is calculated by Eq. (1)
AUD	Auditor Size	Virtual variable, one out of four transactions, otherwise 0
ROA	Return on assets	The ratio of net profit to the average balance of total assets
SIZE	Company size	Natural logarithm of ending total capital balance
LEV	Leverage	The ratio of company liabilities to total assets
BOOK	Book-to-market ratio	The ratio of total assets to market value
SHAR	The shareholding ratio of the largest shareholder	The shareholding ratio of the largest shareholder
NAT	Nature of property right	Virtual variable, 1 for state-owned enterprises, otherwise 0
ANN	The annual average turnover rate	The average annual turnover rate of stocks
INS	Institutional shareholding ratio	The shareholding ratio of institutional investors

Double difference method is used for calculation, as shown in Eq. (1):

$$SYNC_{i+1} = \beta_0 + \beta_1 post + \beta_2 adopter + \beta_3 post * adopter + \beta_{i,t} controls + \varepsilon_{i,t} \quad (1)$$

Double difference test for all listed companies, $SYNC_{i+1}$ is the stock price synchronization of the next year, which is used to measure the quality of accounting information. $\varepsilon_{i,t}$ is the stock i yield considering the reinvestment of cash dividends in week t . The coefficient of the model to be tested is β . $post$ is the policy of key audit matters. $adopter$ is a processing group. $controls$ is the control group. In order to explore the mechanism between key audit matters and the quality of accounting information, this paper launches from two aspects: earnings management and analysts' attention.

4. Results

The main variables are described. The data comes from the output of Stata, as shown in Figure 4.

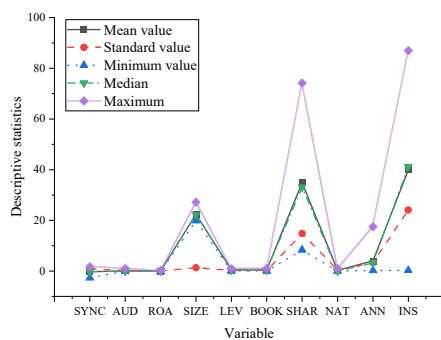


Figure 4: Descriptive statistics of main variables

In Figure 4, 1. the synchronization of stock prices caused by different sample companies is obviously different. There is a large gap in the quality of accounting information. 2. In the control variables, the average value of AUD is 0.070, indicating that the proportion of enterprises audited by the four major accounting firms in the sample is 7%, which is relatively small. The sample companies' profitability distribution is different, but the difference is relatively small. 3. There is a large gap between the company size levels of different enterprises, and the capital structure of sample companies is also different. 4. The equity of listed companies is relatively concentrated. The "one share is dominant" phenomenon is obvious, and needs further research. 5. Among the sample companies, the proportion of state-owned companies has reached 31.3%, which is basically consistent with China's capital market situation. The data indicates that the shareholding ratio of institutional investors in different listed companies is obviously different. The statistical results are consistent with the existing studies. Figure 5 shows the sample regression results, which are derived from the sorting of Stata output results.

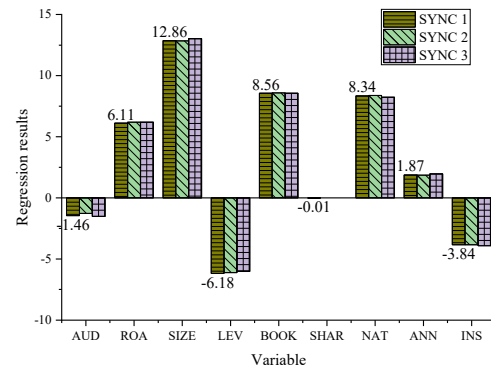


Figure 5: Results of regression analysis

In Figure 5, the more detailed the disclosure of key description and response segments, the lower the synchronization of stock prices and the higher the quality of accounting information. It may be that the more key audit matters are disclosed, the more audit procedures they represent. Deeper audit communication will impose greater constraints on earnings manipulation on management, which will improve the quality of accounting information. Additionally, the more detailed the content disclosed, the more understandable the report users are, and the lower the information cost, the more it can make up for the lack of information set and improve the quality of accounting information.

5. Conclusion

Based on the REA model, this study analyzes the accounting information management of key audit matters. It conducts empirical research on the impact of text characteristics and specific types on the quality of accounting information. The relationship between key audit matters and accounting information quality is analyzed. The empirical test shows that: 1. the disclosure of key audit matters is helpful to improve the quality of accounting information management, reduce the cost of reporting users to obtain "personalized information" of enterprises, promote information transparency, and improve information content. 2. The improvement effect of key audit matters on the quality of accounting information is more significant in enterprises with high earnings management. The improvement effect of their disclosure on the quality of accounting information is more significant in enterprises with high analyst concerns. 3. From the perspective of text characteristics, the more the number of key audit matters and the more detailed the disclosure of description and response paragraphs, the better the quality of accounting information management. However, there are still some deficiencies to be improved. 1. The selection of control variables is mainly focused on the company's profitability indicators and capital structure, and the coverage of influencing factors on accounting information management is not wide enough. Future research can select more control variables, such as management characteristics. 2. The text analysis of key audit items only tested the quality of accounting

information from the quantity, level of detail, and specific types of disclosure. In the future, this paper can study the disclosure form of key audit matters, the tone of disclosure, and the different reasons for the determination.

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