A Study on the Motivation and Governance of Financial Fraud in Listed Companies Based on Bohr's Atomic Model

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Abstract. Financial fraud scandals of listed companies in China have been frequently exposed in recent years, which have seriously damaged the normal operation of the capital market and the interests of relevant investors. In this paper, we choose the listed company - Eastern Golden Jade as an example, and use Bohr's atomic model and factor analysis method as the theoretical basis of fraud motive analysis to analyze the motive of financial fraud of Eastern Golden Jade and put forward relevant suggestions. This paper will help to improve the governance of fraud in listed companies, protect the legitimate rights and interests of investors, maintain a stable market order and a good general environment for listing, and guarantee the effectiveness of policies for developing listed companies.[1]

Keywords: Bohr's atomic model, Financial Fraud, Eastern Gold Jade

1 Introduction

1.1 Overview of Bohr's atomic model theory

In 1913, Niels Bohr proposed a theory based on the structure of the atom. Electrons outside the nucleus can move around the nucleus in circular orbits with precisely measured radii and energies. The energy state of an electron moving in a particular orbit is constant and its energy depends on the distance from the nucleus, the further the orbit is from the nucleus the higher the energy. The electron wants to move to a higher energy orbit further away from the nucleus and is dependent on the atom receiving more electrical energy from outside. At this point the electron is in an unbalanced excited state and can be kept in its lowest energy state by releasing a large amount of light energy and moving to an orbital closer to the nucleus.

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1.2 Bohr's atomic model construction

Applying Bohr's atomic model to the analysis of corporate financial fraud cases requires dynamic model assumptions based on a factor analysis approach, since the motivation for a company to commit financial fraud is non-material. So we propose the following assumptions based on comparing the motivation for fraud to electrons and the financial security of a company to the nucleus of an atom: Firstly, we assume that there are three levels, A, B and C, which indicating the distance to the center of financial security. A-Level is the closest to the nucleus and is the most stable and less prone to financial fraud. C-Level is the furthest from the center of security and is therefore the biggest contributor to financial fraud in a company. Secondly, we assume that in different social and economic contexts, the same fraud driver can shift to different levels and have different impacts on financial security due to different internal and external drivers. Therefore, the A-level factor may also turn out to be a C-level factor, which is the greatest motive driving the company to commit financial fraud. [2]

In general, A-level factors include: inadequate legal regulation, lack of audit function of external accounting firms, problems with corporate governance structure, etc.; B-level factors include: in order to raise funds for listing, prevent delisting, internal control deficiencies, complex related party transactions etc.; C-level factors include: huge profit temptation, lack of integrity of the company's management, low penalties, etc. [2]

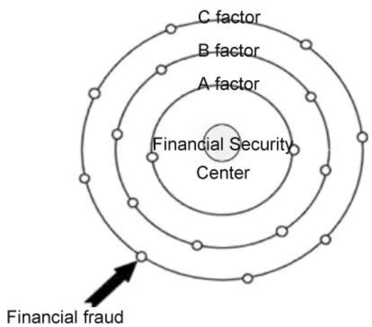

Fig. 1. Diagram of financial fraud motivation model based on Bohr's atomic model [2]

2 Analysis of the causes of financial fraud in Eastern Gold Jade Co., Ltd.

2.1 A-level factor

2.1.1 The absence of an external audit function.

Daxin CPA and Dahua CPA issued standard unqualified audit reports on the financial reports of Eastern Golden Jade for 2016 and 2017 respectively. It was only after the financial fraud was exposed that Dahua CPA issued a qualified audit report on the

2018 annual report. The most unusual aspect of the fraud at Orient Golden Jade was the company's trading commodity, raw jadeite stones. There is no way to value a raw jadeite stone until it is cut. Only after it is cut do we know whether it is a worthless stone or a jadeite worth millions. Regardless of how clever the falsification methods of Eastern Golden Jade are, the common sense of a certified public accountant alone can determine the jadeite raw stone to determine the value of the asset is unreliable, if there is really no evidence can issue a reservation to indicate the risk, but also can request that the income is temporarily not recognized. The auditor's method of avoiding liability is through the signing of a Management Declaration - a written statement by management declaring good faith and providing true financial data, which means that as long as the auditor does not find a problem in accordance with the compliance procedures, then there is no liability on the part of the auditor. The financial fraud at Eastern Golden Jade was committed by targeting a blind spot in the substantive process, while inflating a very small percentage of revenue each year and likely to go unnoticed in the audit to commit financial fraud.

2.2 B-level factor

2.2.1 Decline in operating capacity.

Policies such as supply-side structural reform in 2016 have put the jewelry industry under pressure of industrial adjustment and transformation. At the same time, consumer demand for mid- to high-end products such as jadeite and jewelry has gradually decreased. The profits of Orient Golden Jade declined year by year, and in order to maintain the company's leading position in the jadeite industry and keep its shares from being delisted, it had to make false transactions and inflate its revenue and profits.

2.2.2 Complex related party transactions.

The case of financial fraud at Eastern Golden Jade began by finding six people to pose as suppliers, opening 19 bank accounts in their names and transferring money to these accounts. Then they were sold at a price above cost. Assuming the company transferred $200 million in purchases, doubled the price and sold half again, the sales revenue would be $200 million, the profit and cost would be $100 million each, and $100 million would be in inventory. Not only does the money transferred out come back in, but there is an extra 100 million in profit out of thin air. The process, bank documents, etc. are all authentic and hard to find fault with. In the same way, the company found six more customers who used the same method to increase their profits out of thin air. These 12 people were in fact all under the control of the company.

2.3 C-level factor

2.3.1 Low cost of fraud and the great lure of profit.

The China Securities Regulatory Commission (CSRC) issued the CSRC Administrative Penalty Decision in September 2020, imposing a fine of only $600,000 on

Eastern Golden Jade. The other responsible persons, including Zhao Ning, were warned and fined between RMB30,000 and RMB300,000.As the violations committed by the parties concerned, namely Zhao Ning, Yang Yuanyuan, Cao Xia and Yin Meng ting, were relatively serious and egregious, seriously disrupting the order of the securities market and seriously damaging the interests of investors, Zhao Ning was subject to a 10-year market entry ban and Yang Yuanyuan, Cao Xia and Yin Meng ting were subject to a 5-year market entry ban in accordance with relevant regulations. From 2016-2018, Eastern Golden Jade inflated its net profit by $358.5 million, causing a lot of losses to many small shareholders. The maximum fine of $300,000 and the 10-year market ban penalty are no deterrent to the parties involved in financial fraud compared to the huge amount of profits. The cost of financial fraud is therefore too low as the biggest incentive.[3]

3 Insights into financial fraud prevention

3.1 The digital transformation of audit

With the innovation of business models and iterative upgrading of fraudulent practices, the digital transformation of auditing is imminent in order to identify transaction falsification type of income fraud. Not only can CPAs draw on existing financial fraud identification systems or tools to intelligently obtain early warning signals or indications of financial fraud in the audited entity from multiple dimensions, including industry business, financial taxation, corporate governance, internal control and digital features, in order to formulate targeted fraud risk response strategies. It is also possible to build a database of audit verification information and access to as many different sources of data as possible with the help of information technology such as big data and artificial intelligence. [4] In addition, non-financial data such as business and judicial data can be fully utilized to identify financial fraud in advance by identifying hidden connections through transaction information and objects of transactions.

3.2 Enhanced penalties for financial fraud

The benefits of financial fraud far outweigh the costs and are the primary motivation for most companies to commit financial fraud. In March 2020, the new securities law included many stricter penalties for listing violations. The fines for disclosure violations by listed companies have been increased from a cap of RMB 600,000 to RMB 10 million, a multi-fold increase. Fines of up to RMB10 million are imposed on persons in actual control who make false statements, organize or direct the making of false statements.[3] This will be better deterred in the future when stricter penalties make the costs of financial fraud far outweigh its benefits.

In the future, penalties should be increased and those responsible should be held legally responsible to protect the interests of investors. The amount of penalty should not be set rigidly at the upper limit of the standard, but should be determined reasonably, taking into account the illegal profits gained by the listed companies as well as the investment losses incurred by the general investors. In addition, criminal penalties should be gradually introduced to nip in the bud any improper gains made through financialmalpractice.[5]

4 Conclusion

China's capital markets have long been affected by financial fraud, weakening stakeholders' access to information and posing significant information asymmetry risks.[6] This paper uses the theoretical perspective of Bohr's atomic model to analyse the dynamics of financial fraud in listed public companies. A combination of external regulation and internal controls is needed to prevent as much financial fraud as possible in listed companies.

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