

Tunneling Behavior and The Impact Caused by The Major Shareholder - A Case Study of Yunnan Bio valley Pharmaceutical Co., Ltd.

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Abstract. With the development of China's economy and capital markets, some companies have faced the problem of high capital needs. In this context, the phenomenon of shareholders of companies occupying the company's capital to hollow out the company for other purposes has emerged for a while. This paper presents a case study of Yunnan Biovalley Pharmaceutical Co., Ltd., in which the controlling shareholder appropriated the company's funds. The study found that the following conditions made the situation of hollowing out easy to occur. First, there is a high equity concentration of major shareholders. Secondly, the company's internal governance is negligent. Finally, external supervision has insufficient strength. The auditors or sponsors do not rigorously implement the review and supervision process. Based on this situation, this paper uses the event study method to analyze the movements of share prices of the company before and after the event to find out the impact of the event of hollowing out on the minority shareholders. Through analyzing the hollowing out on the company's short-term solvency and profitability according to the company's financial indicators, so as to find out the impact of the tunneling behavior on the company's business development. Finally, the paper makes some relevant recommendations to reduce the frequency of tunneling. First, for the corporation, they should adjust the company's internal shareholding rate, improve the company's internal self-examination, and set up a relevant highly efficient accountability system. Secondly, external auditors and sponsor institutions should strengthen the supervision and punishment of the company's information disclosure to effectively prevent the occurrence of hollowing out.

Keywords: Tunneling, Major Shareholders, Capital Occupation.

1. Introduction

1.1. Background of the study

In recent years, tunneling has frequently occurred in China's capital market. Due to the late start point of the Chinese capital market, although management and supervisory measures have been taken in respect of matters such as information disclosure, there is still some room place for improvement in the existing system, which makes it possible for large shareholders to take advantage of tunneling. The occurrence of such event has had a negative impact on all parties in various aspects, such as share price volatility leading to serious damage to the interests of minority shareholders. Against this background, this paper selects Yunnan Biovalley Pharmaceutical Company Limited, an A-share listed company on the Beijing Stock Exchange, as the object of this study.

1.2. Objective

This paper presents a case study of the tunneling behavior that happened in Yunnan Biovalley Pharmaceutical Company by its controlling shareholder and actual beneficiary, Lin Yanhe. And analyzing the economic consequences of the tunneling using the event study method. Finally, recommendations are made to curb the occurrence of the practice in order to reduce the frequency of the phenomenon.

2. Literature review

Zhang et al. found that having excess control right disrupts effective incentives and leading to collusion between executives and controlling shareholders, which may increase the frequency of tunneling [1]. Johnson et al. examined how tunneling behaviors pass the legal review [2]. Jiang et al. concluded that controlling shareholders use loans between companies as a means of tunneling by studying Chinese firms' tunneling behavior using loans between companies from 1996 to 2006 [3]. Jiang G et al. found that non-operational fund occupation is often used by controlling shareholders as a method of tunneling [4]. Li classified the means of hollowing out into three ways: capital occupation, related party transactions, and ultra-ability dividends payout [5].

Ye et al. found that media opinion and negative news had inhibitory effects on the occurrence of tunneling [6]. Shan found that a strong connection between the supervisory board and the company's top management may lead to inadequate supervisory functions of the supervisory department, thus suggesting that companies should control the proportion of internal executives in supervisors and establish functional committees [7]. Li concluded that inquiry letter supervision can reduce the occurrence of tunneling [8]. Bennedsen and Wolfenzon found that an appropriate reduction in the concentration of shareholdings is useful in increasing the efficiency of companies and preventing the occurrence of tunneling [9]. Gao and Kling concluded that improving the quality of audits has effects on reducing controlling shareholders' tunneling behavior after analyzing the situation of Chinese companies [10].

3. Case study of hollowing out of Yunnan Biovalley Pharmaceutical Co. Ltd.

3.1. Introduction of Yunnan Biovalley Pharmaceutical Co., Ltd and its shareholders

Yunnan Biovalley Pharmaceutical Co., Ltd. was established in 1999, located in Kunming, Yunnan Province. The company is a high-tech pharmaceutical enterprise, that integrates research, production, and sales of calendula series drugs. It was formerly known as Yunnan Biovalley Calendula Pharmaceutical Co. It was listed on the NEEQ in August 2015, entered the Innovation Layer in June 2016, entered the Select Tier in July 2020, and became one of the first batch listed companies on the BSE in November 2021. Their main products are Dengzhan Shengmai Capsule, Dengzhanxixin Injection, Dengzhanhua Dripping Pills, and Dengzhanxixin Soft Capsule, which are the exclusive products for the prevention and treatment of cardiovascular diseases in China and also are the necessary Chinese medicine for emergency treatment in Chinese medicine hospitals nationwide.

Shenzhen Jinshajiang Investment Co., Ltd, with a shareholding of 23.44%, is the largest shareholder. And the second shareholder is Lin Yanhe, who is the chairman of Shenzhen Jinshajiang Investment Co., Ltd with a shareholding rate of 16.84% of Biovalley company. The following table 1 are the top ten shareholders of Biovalley Pharmaceutical Co., Ltd in terms of the number of shares held in descending order.

Table 1. Top ten shareholders in Yunnan Biovalley Pharmaceutical Co., Ltd

Number	Name of shareholder	Number of shares held	Percentage of total share capital
1	Shenzhen Jinshajiang Investment Co.	30,000,000 shares	23.44%
2	Lin Yanhe	21,550,000 shares	16.84%
3	Tan Xiangfang	6,500,000 shares	5.08%
4	Yunnan Biovalley Pharmaceutical Co.	4,000,000 shares	3.13%
5	Zhang Moufang	2,028,900 shares	1.59%
6	Wu Youhui	2,000,000 shares	1.56%
7	Shanghai Zhanrui Xinfu Equity Investment Fund Management Co., Ltd.—Zhanrui Xinfu Golden Monkey No. 1 Bio Valley Fixed Income Private Equity Investment Fund	1,780,000 shares	1.39%
8	Zhang Zhixiong	1,648,900 shares	1.29%
9	Gao Nianwu	1,473,000 shares	1.15%
10	Liu Wei	1,380,000 shares	1.08%

3.2. Basis of judgment for the tunneling of BioValley

On May 24, 2022, Yunnan Biovalley Pharmaceutical Co., Ltd. announced that the controlling shareholder, Shenzhen Jinshajiang Investment Co., Ltd., and the actual controller, Lin Yanhe was filed for information disclosure irregularities. Biovalley then became the first company to be filed for investigation since the opening of the BSE.

On 11 May 2022, Biovalley company issued an equity pledge announcement stating that Shenzhen Jinshajiang Investment Company decided to pledge 0.18 billion shares, representing 14.29% of the total share capital, or 60.97% of its shares in bio valley. Lin Yanhe pledged 0.22 billion shares, representing 16.84% of the total share capital of the Company, or 100% of his shares in Bio Valley.

The details of tunneling are as follows: From August 2021 to March 2022, the company's controlling shareholder, Shenzhen Jinshajiang Investment Co. has appropriated a total of 356 million RMB of the company's capital by way of endorsing bank acceptance bills to third parties. On 5 November 2021, the accumulated amount of wealth management entrusted by the Company to Yinfengtai Fund Management Co., Ltd. did not reach the information disclosure requirements, but the company failed to fulfill its information disclosure obligations on time as required, and the information of subsequent purchase of wealth management was not disclosed, too. In response to the aforementioned fact, Shenzhen Jinshajiang company and Lin Yanhe, the actual controller, undertook to return all the appropriated capital and fund by 30 June 2022, provided joint and several liability guarantee. But as at 30 June 2022, the funds that aforementioned undertaking to return had not been fully fulfilled. In respect of the aforesaid violations of Yunnan Biovalley Pharmaceutical Co., Ltd, presented that the sponsor institutions and sponsor representatives failed to effectively supervise the company and establish a sound and continuous information disclosure system during the period.

On 13 September 2022, BioValley's controlling shareholder and beneficial owner were punished for breach of law in relation to information disclosure.

3.3. Analysis of BioValley's motives for hollowing out

3.3.1. Meeting the company's capital requirements

Against the situation of the difficulty and high cost of raising capital for listed companies, shareholding is increasingly valued by companies as a means of raising capital due to its high liquidity. Moreover, banks and other financial institutions prefer equity pledges as the measurement method is relatively fixed compared to other non-current assets. The funds occupied by Lin Yanhe are mainly used for the day-to-day operations of Shenzhen Jinshajiang Investment Co., Ltd and to finance tourism projects controlled by Shenzhen Jinshajiang company.

3.3.2. Increasing control over the company

When a company requires capital for its operations and future development, it is difficult to obtain a large supply of capital in a short period of time due to the high requirements of investment of banks and other financial institutions. If the company wants to obtain funds from these institutions, it will have a high cost. Shareholders wish to maintain their control right of the company for their benefit, In the case that they are optimistic about the company's future development a pledge of equity is a reasonable option.

3.3.3. Reducing shareholder's own risk

There are two options after making an equity pledge decision, either to choose to redeem the equity or to forego redemption. When the share price falls, the value of the redeemed equity will be less than the cost of the equity. And in such a situation that needs a trade-off, a rational pledgee will choose not to redeem their equity. The opposite is true when the share price rises. This behavior shifts much of the risk of operating losses to the pledgee of the company when something wrong has happened or risky business decisions are made, but the pledgee maintains effective control of the company at the same time.

3.4. Analysis of BioValley's hollowing out conditions

3.4.1. Concentration of equity to facilitate hollowing out to proceed

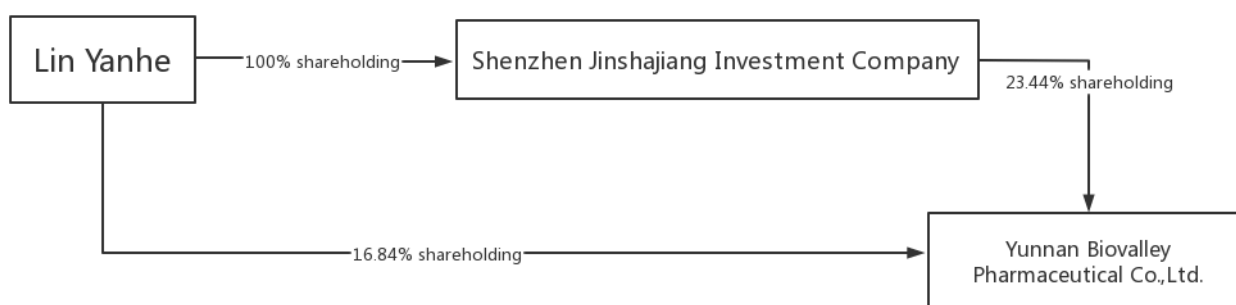


Figure 1. Change of shareholding in Bio Valley

Since Bio Valley was listed in BSE in 2020, the controlling shareholder has always been Shenzhen Jinshajiang Investment Co., Ltd., which holds 23.44% of the shareholding. Lin Yanhe is the joint chairman and director of Bio Valley and is also the majority shareholder and actual controller of Shenzhen Jinshajiang Investment Co., Ltd. The shareholding of Bio Valley is highly concentrated (Figure 1).

3.4.2. The gap in the internal corporate governance

According to the Company Law, the number of supervisory board members of listed companies should not be less than three, while the number of supervisory board members of Bio Valley is exactly at the lower limit of the law, which may have a weaker effect in the supervision. And according to the company's public announcement, the education level of the members of the supervisory board in the past is relatively ordinary. Some of them only have post-secondary education, which may not be

able to provide more professional advice and opinions. The board of supervisor's meetings between 2020 and 2022 were basically held with the supervisory board's unanimous approval and did not have any dissenting opinions, which shows that the extent of their supervisory and management role is not efficient. In addition to being a member of the supervisory board of Bio Valley, Cai Zeqiu is also the financial manager and chief financial officer of the controlling shareholder, Jinshajiang Investment Company. They are aligned in their interests.

3.4.3. Inadequate external regulation of the company

At present, the external regulators are not strong enough to monitor the disclosure of information and the relevant system is not perfect, giving the opportunity to some of the major shareholders to take action about tunneling. Huarong Securities Company Limited, which is the sponsor of Bio Valley, did not play a role in monitoring Bio Valley to fulfilling the duties of information disclosure. Bio Valley has made several investments in financial products since August 2021. When they were asked by the sponsor whether the financial products purchased by them were low-risk financial products, Bio Valley did not respond or provided any of the relevant materials, The companies invested by Bio Valley were not effectively proved by the China Association of Fund Industry. Based on the situation, the sponsor did not make any further risk predictions. Social media collected a lot of information but did not disseminate it to the public to reduce the information gap between the minority shareholders and the majority shareholders, helping the minority shareholders to play the role of check and balance.

4. The consequences caused by the tunneling of BioValley

4.1. Reducing the interests of minority shareholders

This article analyzes the stock prices based on the event research method. And relevant data are from China Galaxy Securities. Firstly, the event date is on 11 May 2022, CSRC filed a case against Shenzhen Jinshajiang Investment Co., Ltd and Lin Yanhe, the chairman of the Board of Directors and the beneficial owner of BioValley. So, May 11 was selected as the event date. A window period is 15 trading days before and after the event period, starting and ending on 22 April and 25 May 2022 respectively. This paper will use the market model approach for the calculation of Bio Valley's earnings yield with the following market model formula.

$$R_{it}=\alpha_i+\beta_i*R_{mt} \quad (1)$$

After spss regression analysis, α was calculated to be equal to 0.003 and β to be equal to 0.393. so the formula is:

$$R_{it}=0.003+0.393R_{mt} \quad (2)$$

In addition, R_t stands for the expected earnings yield, AR_t represents the excess earnings yield, and CAR_t stands for cumulative earnings yield, as shown in Table 2.

Table 2. Expected rates of return for Bio Valley

Time	Rt	ARt	CARt
2022/04/22	0.30%	-2.26%	-2.26%
2022/04/25	-0.91%	-7.06%	-9.33%
2022/04/26	-0.06%	-2.36%	-11.69%
2022/04/27	3.06%	-0.56%	-12.25%
2022/04/28	-0.04%	-4.42%	-16.67%
2022/04/29	1.59%	-6.66%	-23.33%
2022/05/05	0.77%	-3.59%	-26.91%
2022/05/06	0.65%	-2.13%	-29.04%
2022/05/09	0.20%	2.39%	-26.65%
2022/05/10	1.85%	0.73%	-25.92%
2022/05/11	1.46%	-1.46%	-27.39%
2022/05/12	0.77%	-1.55%	-28.94%
2022/05/13	0.18%	17.37%	-11.56%
2022/05/16	-0.41%	0.41%	-11.15%
2022/05/17	0.91%	-2.39%	-13.55%
2022/05/18	0.20%	-7.87%	-21.41%
2022/05/19	1.14%	8.58%	-12.83%
2022/05/20	0.70%	1.35%	-11.48%
2022/05/23	0.15%	-5.39%	-16.87%
2022/05/24	-1.07%	-7.50%	-24.37%
2022/05/25	0.42%	2.21%	-22.16%

It can be concluded from the table that before the date of 11 May, Bio Valley's share price was already on a downward trend due to public opinion. From the occurrence date of 11 May, excepting the catharanthine they researched and developed were extremely attended by the market causing the stock price to rocket suddenly, and the excess earnings yields were highly volatile. In addition, cumulative earnings yield continued to decline. Between 22 April and 25 May 2022, its highest and lowest closing prices were 12.61 and 7.26 per share respectively, which shows the high volatility of the stock price. Bio valley has a large number of shareholders, but as shown in the above analysis, most of the stocks are in the hands of the major shareholders and only a small number of stocks belong to the minority shareholders. In this event, the interests of small shareholders have been deeply damaged. Thus, some of them are preparing to file a lawsuit against Bio Valley to claim compensation.

4.2. Declining profitability

This paper examines the profitability of Bio Valley in two aspects. The first aspect to measure profitability is ROE, return on earning, which measures the efficiency of a company's utilization of its capital and its ability to transport its capital into net profits by the ratio of profit after tax to net assets. The higher the value of ROE, the more utilization will be more efficient. According to the company's third-quarter report in 2022, which was released after the event, the ROE for the period was 0.78%. In the same period last year, the figure of ROE was 1.96%, for a decrease of 60.20%. The second aspect is the earnings per share. During the period of the event, the average earnings per share was \$0.05, with a decrease of 76.9%, compared with the previous period. From the above, it can be seen that the hollowing out has weakened its profitability and operating capacity to some extent.

4.3. Leading to instability within the company management

The hollowing out has led to a huge change in the management of Bio Valley. In the interim announcement issued by Bio Valley on 7 July after the tunneling behavior was exposed, it was mentioned that three directors, two independent directors, and one supervisor had left the company. One of them, Cai Zeqiu, who was the chairman of the supervisory board, left the company precisely because Lin Yanhe was unable to repay the huge amount of capital he had taken in time after the

event. Following Lin Yanhe's departure because of personal reasons, Xu Tianshui, who only formally joined the company in July 2022, succeeded Lin as Chairman of Bio Valley. However, Xu Tianshui has no previous experience in relevant positions, and most of the positions he held were in the financial sector, such as customer relationship specialist of China-Britain Life Insurance Company Limited or the assistant to the president of Shenzhen Zhaoyinguojin Investment Company Limited. The fact that Xu Tianshui, who has been in the position for less than a month, became the chairman of the board of Bio valley, reflects the stability of the management of Bio Valley after the hollowing out was influenced.

5. Conclusion

5.1. Internal shareholding restructuring to strengthen the checks and balances on corporate decision-making

This paper found that the shareholding of Lin Yanhe, the beneficial owner of Biogu, accounted for 40.28% of the total share. So, the shareholding was highly concentrated, which gave him absolute dominance over the company's decision-making. The information gap between the controlling shareholder and the minority shareholders makes it more difficult to detect and monitor such tunneling behavior by the minority shareholders. Shareholdings should be dispersed by external institutional investors. Institutional investors, with their experience in investment and strong supervisory capabilities, can have a certain inhibiting effect on the occurrence of tunneling. Establishing and improving the company's system for capital management and investment to external investment. The company should also strengthen the role of the supervisory board and independent directors in supervision and management. Introducing advanced talents and urging them to improve their studies in relevant fields to enhance their ability to perform their working duties are also necessary. The company should also clarify the division of labor between the rules in the supervision work and try to avoid the occurrence of improper performance of duties. Improve the department's system and rules for holding the company accountable for its decisions and supervision, so that responsibility for incidents is broken down and put into practice for individuals.

5.2. Strengthen external supervision and management to effectively prevent the occurrence of hollowing out

In this event, CITIC Yonghe, as the audit firm, did not detect the occurrence of tunneling promptly and acted as a check and balance during the audit process. External auditors should strengthen their scrutiny and enhance the rigor of the audit process. It is also important to reduce the possibilities of the same audit firm performing audit procedures for the same company for many years, to avoid unnecessary losses due to shareholder pressure or partnerships that result in the withholding of corporate information from minority shareholders. The media should also inform the public in a timely manner once they have obtained the relevant information through their investigations, so as to fulfill their duty of monitoring public opinion.

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