

The Express Delivery Company Goes Public Through a Backdoor Listing based on the Backdoor Listing of Dingtai New Material by SF Express

Fanli Zhou*

School of Data Science and Artificial Intelligence, Dongbei University of Finance and Economics,
Dalian, China

* Corresponding Author Email: 1811031226@mail.sit.edu.cn

Abstract. In China, enterprises face relatively huge costs in going public, resulting in enterprises preferring indirect listing methods such as backdoor listing to Initial Public Offerings (IPO). At the same time, backdoor listing has also saved many traditional industries with declining performance, making both parties win-win. At present, the logistics industry is developing rapidly. In 2016, logistics companies have been backdoor listing, logistics industry competition is becoming increasingly fierce, and more and more logistics enterprises choose to go public in order to enhance competitiveness and improve the status of the industry. Choosing the right timing and backdoor listing with a precise strategy will produce no less wealth than an IPO. This paper takes SF Express' backdoor listing of Dingtai New Material as a case, conducts performance analysis based on a theoretical basis, studies the impact of backdoor listing on the financial performance of enterprises, and provides experience for other logistics enterprises planning to adopt backdoor listing.

Keywords: Backdoor listing, Logistics industry, SF Express.

1. Introduction

To simplify the listing process, reduce the cost of listing, and achieve the rapid allocation of resources, China's capital market has begun to shift to IPO (Initial Public Offerings) under the registration system. However, enterprises still need to wait a long time before listing in various stages, as shown in Table 1. Liu and Xiong analyzed the data and pointed out that the degree of IPO price suppression in China is positively correlated with the waiting period for listing, and the phenomenon is more serious than in developed countries [1]. Qu et al. based on the data found that better firms in China chose backdoor listing rather than IPO [2]. Zhang et al. manually collected data to analyze the impact of compensation commitment on the real earnings management of enterprises [3]. Di et al. took COFCO Capital Holdings as a case to analyze the mutual impact of introducing strategic investment and backdoor listing [4]. Zhang and Chen and other scholars have researched the impact of backdoor listings on financial performance [5].

In recent years, the express delivery industry has developed rapidly, since 2015, logistics enterprises have chosen backdoor listing to expand the scale of assets, and many researchers have launched studies on this. Zhang launched a study on the problem of the backdoor listing of logistics enterprises [6]. Wang and Pan used empirical analysis to point out the impact of market changes on the backdoor listing of logistics enterprises [7]. Lv et al. analyzed the motivation and node control of backdoor listing of logistics enterprises respectively [8,9]. Huang and Liu took Yunda Express as an example to conclude that the backdoor listing behavior brought a good financial performance effect for Yunda [10].

Table 1. Average queue duration by segment for IPO-listed companies since 2022(Days)

Listed Boards	Acceptance → Meeting	Passed the meeting→ Approval/Submit registration	Submit registration → Agree to register	Approval/Agree to register → Listing	Overall (Acceptance→ Listing)
Shanghai and Shenzhen mainboards	335	53	-	31	419
Sci-Tech innovation board	159	37	78	46	320
Growth Enterprise Markets	275	94	58	49	476

(Note: The registration system does not include the IPO of the Beijing Stock Exchange) Data source: Flush iFind

Currently, scholars' studies on the backdoor listing of logistics enterprises are mostly on long-term financial performance. To further improve the impact of backdoor listing on logistics enterprises, this paper will take SF Express backdoor Dingtai New Material as a case study and analyze the short-term impact of backdoor listing on the financial indicators and performance of express enterprises based on reviewing and learning from relevant domestic studies.

2. Overview of SF Express' backdoor listing

2.1. Brief description of the parties to the transaction

2.1.1 Shell Company--Dingtai New Material

Dingtai New Material was founded in 2004, focusing on the research development and application of metal material protection surface anti-corrosion technology in the field of rare earth alloy coating anti-corrosion new materials. It has opened up a new field of application of new materials for anti-corrosion coating of rare earth alloys in China and is a leading unit in the national subdivision industry, a high-tech enterprise in Anhui Province, and a local key backbone enterprise in Ma'anshan City. As China's manufacturing industry is facing economic transformation, the economic benefits of Dingtai New Materials have been affected, as shown in Table 2, so it cooperated with SF Express to go public through backdoor listing.

Table 2. Dingtai New Materials 2012~2015 Financial Summary (Million)

Balance sheet items	2012	2013	2014	2015
Liquid asset	105.19	120.44	91.96	82.85
Monetary funds	17.32	30.48	15.21	13.11
Inventory	16.66	21.68	21.62	21.02
Non-current assets	39.52	40.04	42.41	40.59
Fixed assets	30.31	30.48	32.21	30.39
Total assets	144.72	160.49	134.38	123.43
Current liabilities	41.96	58.51	26.82	23.81
Accounts payable	7.84	1.52	2.04	1.61
Non-current liabilities	3.52	0.93	7.48	0.93
Long-term borrowing	0.93	0.93	7.48	0.93
Ownership Equity	99.24	101.06	100.08	98.70
Share capital	10.85	10.85	10.85	16.28
Income statement items	2012	2013	2014	2015
Operating income	116.18	100.65	113.29	93.19
Net profit	6.66	5.62	3.36	3.50

2.1.2 Backdoor Party - SF Express

Born in 1993, SF Express was founded to build a comprehensive express logistics service system. As an intelligent logistics operator with the advantage of network scale, SF Express has strong control of the whole network business model. In order to expand the scale of assets, the company valued assets in 2016 and achieved indirect listing through backdoor listing. Through three decades of development, it has become a logistics enterprise that competes with the "Four links and one up", as shown in Fig.1.



Fig. 1 SF Express backdoor Dingtai new material listing process diagram

2.2. Backdoor listing motivation

2.2.1 Policy support

To create a favorable environment for the development of the express delivery industry, Several Opinions of The State Council on Promoting the Development of the Express Delivery Industry (Guofa [2015] No. 61) put forward the relevant requirements and measures to strengthen the synergy and increase support. What's more, the State Council Communiqué No. 1 of 2020, shows China's positive attitude towards the reform of the mixed-ownership of private enterprises.

2.2.2 Financing needs

Although SF Express had developed overseas markets, there was still a big gap compared with foreign express delivery companies (such as UPS, FedEx, USPS, etc.). Entering the capital market can not only improve the competitiveness of SF in the same industry but also improve the international reputation, which needs SF to enhance its resource integration and comprehensive service capacity. Therefore, SF needed to use the capital market to raise more funds. The process cycle of backdoor listing is shorter than IPO, and each link is more flexible, which is favored by more private enterprises.

2.2.3 Increased competition in the industry

In 2016, China's two express industry giants YTO Express and STO Express chose to go public to expand financing channels to fight for market share. In October 2016, YTO Express was listed on the main board of the Shanghai Stock Exchange through the backdoor of DALIAN DAYANG TRANDS, becoming the "first A-share express stock". On December 30, 2016, STO Express was listed on the Shenzhen Stock Exchange through the backdoor of ADEX, becoming one of the earliest listed express delivery companies, with a market capitalization of RMB 47.1 billion on the day of listing. Forced by the pressure of competition in the industry, SF gave up its IPO plan and chose to enter the capital market through a backdoor listing of Dingtai New Material.

3. Financial performance of S.F. Holding after its backdoor listing

3.1. Financial performance

3.1.1 Profitability

Profitability can reflect the operating performance of enterprises, and Return on Assets (ROA), the ratio of net profit to total assets, is one of the indicators that can best reflect the profitability of

enterprises. This paper selects the operating income, net profit, total assets, and ROA indicators of SF Holding from 2015 to 2018 for profitability analysis, which is shown in Table 3.

Table 3. Profitability analysis data of SF Holding

	2015	2016	2017	2018
Operating income (million)	93.19	8,013.42	9,910.96	12,677.94
Net profit (million)	3.50	580.04	662.44	622.35
Total assets (million)	123.43	6,152.66	8,038.16	9,983.49
ROA (%)	2.72	18.48	9.34	6.91

In 2016, SF Express successfully listed Dingtai New Material through the backdoor, and the net profit indicator was greatly improved. The ROA increased by 579.41% compared with 2015. From 2016 to 2018, the three indicators of operating income, net profit, and total assets were enhanced and improved, but the growth rate of total assets was faster than the growth rate of net profit, and finally, ROA fell to 6.91% in 2018.

3.1.2 Solvency

Solvency is the ability of enterprises to repay current liabilities with current assets, reflecting the strength of enterprises to pay daily maturing debts, and its indicators include asset-liability ratio, current ratio, and quick ratio. This paper analyses the solvency of SF Holding from 2015 to 2018 through the above indicators, as shown in Table 4.

Table 4. Solvency analysis data of SF Holding

Solvency	2015	2016	2017	2018
Asset-liability ratio (%)	20.04	53.42	43.23	48.45
Current ratio (%)	3.48	1.16	1.46	1.21
Quick ratio (%)	2.60	1.14	1.44	1.18

Comparing the pre- and post-backdoor listing, it can be seen from Table 4 that SF Express's solvency decreased significantly after the backdoor listing, with the asset-liability ratio reaching 53.42%, the current ratio falling to 1.16%, and the quick ratio falling to 1.14%. As of December 31, 2018, compared to 2016 the solvency has improved overall, with the current ratio and quick ratio being 1.21% and 1.18% respectively.

3.1.3 Operating capacity

Inventory turnover and accounts receivable turnover indicate the time it takes for inventories and accounts receivable to be convertible into cash. By selecting these indicators of SF from 2015 to 2018 for analysis, it can more comprehensively reflect the company's financial liquidity and the company's operating capacity.

According to the data in Table 5, the operating cycle after the backdoor listing decreased from 251.05 days to 17.28 days, and the speed of capital turnover accelerated. The inventory turnover and accounts receivable turnover increased to 168.86 times and 23.76 times respectively. As time passed on the backdoor listing, operating capacity has been slightly impacted, but compared with before the backdoor listing, the overall operating capacity index has been significantly improved, as shown in Table 5.

Table 5. Operating capacity analysis data of SF Holding

Operating capacity	2015	2016	2017	2018
Operating cycle (days)	251.05	17.28	28.94	29.15
Inventory turnover (times)	3.74	168.86	134.91	118.07
Accounts receivable turnover (times)	2.32	23.76	13.79	11.53

3.1.4 Market value

Dingtai New Material was suspended from trading on April 5, 2016, and issued a restructuring announcement on May 23, 2016, and resumed trading with SF Holding on May 31, 2016. Since the suspension period exceeds 1 month, the observation time window is truncated into three segments: before the suspension date, during the suspension period, and after the resumption date. The event announcement date is the event date, the estimated period is from 110 to 10 days before the suspension date, as shown in Table 6, and the two trading days before the suspension date to the two trading days after the resumption of trading is the window period. The expected return and cumulative abnormal return (CAR) are calculated using the market model and the market index adjustment model, respectively.

Calculation models for estimating expected returns with market models:

$$R_{it} = (R_{it} - P_{it-1}) / P_{it-1} \quad (1)$$

$$R_{mt} = (P_{mt} - P_{mt-1}) / P_{mt-1} \quad (2)$$

Where R_{it} is the daily return of Dingtai New Material stock and R_{mt} is the daily return of the CSI 300 Index. Where P_{it} is the closing price of Dingtai New Material's stock on day t , and P_{it-1} is the closing price of Dingtai New Material's stock on day $t-1$, the capital asset pricing model is established:

$$R_{it} = \alpha + \beta * R_{mt} \quad (3)$$

On this basis, OLS is used to perform linear regression on the stock price of the estimated period, and the constant terms α and β are obtained. Bring in the regression equation to get the expected return of the SF Holding window period.

The difference between the R_{it} and the R_t is the daily excess return AR_t and the daily excess return of the cumulative window period obtains the cumulative excess return CAR, as shown in Equation (4) and Equation (5):

$$AR_t = R_{it} - R_t \quad (4)$$

$$CAR = \sum AR_t \quad (5)$$

Table 6. Estimated Window Period Market Returns and SFH Returns

Trading day	Estimated period	CSI 300 Index increase/decrease(%)	SF Holding increase/decrease(%)	Trading day	Estimated period	CSI 300 Index increase/decrease(%)	SF Holding increase/decrease(%)
2015-12-14	-110	2.8619	4.3956	2016-01-29	-64	3.2354	8.9529
2015-12-15	-109	-0.4562	0.2716	2016-02-01	-61	-1.5288	-1.4897
2015-12-16	-108	-0.2423	3.1493	2016-02-02	-60	2.0779	7.3171
2015-12-17	-107	1.9116	2.1011	2016-02-03	-59	-0.4285	0.3636
2015-12-18	-106	0.3200	-1.1254	2016-02-04	-58	1.2250	4.0761
2015-12-21	-103	2.6022	1.6260	2016-02-05	-57	-0.7026	0.4787
2015-12-22	-102	0.2786	4.3200	2016-02-15	-47	-0.5763	0.6063
2015-12-23	-101	-0.2670	-0.3681	2016-02-16	-46	3.0655	3.2716
2015-12-24	-100	-0.9564	-0.3079	2016-02-17	-45	0.8653	0.1251
2015-12-25	-99	0.2298	0.6485	2016-02-18	-44	-0.3140	-0.1665
2015-12-28	-96	-2.8808	-4.3572	2016-02-19	-43	-0.0694	-0.4170
2015-12-29	-95	0.9186	1.9249	2016-02-22	-40	2.2051	2.5963
2015-12-30	-94	0.0880	3.8716	2016-02-23	-39	-0.9462	-2.1633
2015-12-31	-93	-0.9078	-3.0000	2016-02-24	-38	0.6535	0.3337
2016-01-04	-89	-7.0204	-9.9032	2016-02-25	-37	-6.1359	-9.9376
2016-01-05	-88	0.2799	1.1789	2016-02-26	-36	1.0032	-0.1385
2016-01-06	-87	1.7544	0.2742	2016-02-29	-33	-2.3935	-4.9931
2016-01-07	-86	-6.9334	-9.9795	2016-03-01	-32	1.8495	3.5037
2016-01-08	-85	2.0392	-1.4806	2016-03-02	-31	4.1164	4.6074
2016-01-11	-82	-5.0307	-6.7437	2016-03-03	-30	0.2324	-1.0787
2016-01-12	-81	0.7286	-0.2893	2016-03-04	-29	1.1597	0.6815
2016-01-13	-80	-1.8606	-6.7551	2016-03-07	-26	0.3539	3.5199
2016-01-14	-79	2.0815	2.0000	2016-03-08	-25	0.0911	-0.4795
2016-01-15	-78	-3.1922	-5.9259	2016-03-09	-24	-1.1507	-2.9347
2016-01-18	-75	0.3848	3.2422	2016-03-10	-23	-1.9128	-1.5343
2016-01-19	-74	2.9511	10.0045	2016-03-11	-22	0.1703	-0.4125
2016-01-20	-73	-1.5122	-1.3866	2016-03-14	-19	1.5708	3.6815
2016-01-21	-72	-2.9306	-2.5228	2016-03-15	-18	0.2965	0.0888
2016-01-22	-71	1.0421	0.3394	2016-03-16	-17	0.4960	3.6364
2016-01-25	-68	0.4956	2.3256	2016-03-17	-16	1.1058	2.6102
2016-01-26	-67	-6.0207	-9.9174	2016-03-18	-15	1.5287	2.2102
2016-01-27	-66	-0.3455	-4.8165	2016-03-21	-12	2.4427	1.5096
2016-01-28	-65	-2.6137	-7.9518	2016-03-22	-11	-0.7278	2.8537

The results obtained are shown in table 7. In order to further judge the short-term impact of SF Holding's backdoor listing, this paper uses SPSS software to conduct a regression analysis, and its correlation, model summary and model coefficients are shown in Table 8, Table 9 and Table 10, respectively.

Table 7. Cumulative excess return during the window period

window period	Rt(%)	ARt (%)	CAR (%)
-2	1.5529	1.9237	1.9237
-1	1.5628	-1.4905	0.4332
1	1.5806	8.4279	8.8612
2	1.4700	8.5564	17.4176

Table 8. Correlations

		Increase/decrease in CSI 300 Index%	SF Holding increase/decrease %
increase/decrease in CSI 300 Index %	Pearson Correlation	1	.865**
	Sig. (2-tailed)		.000
	N	66	66
SF Holding increase/decrease %	Pearson Correlation	.865**	1
	Sig. (2-tailed)	.000	
	N	66	66

**. Correlation is significant at the 0.01 level (2-tailed).

Table 9. Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.865 ^a	.749	.745	2.1258378297

a. Predictors: (Constant), increase/decrease in CSI 300 Index %

b. Dependent Variable: SF Holding increase/decrease %

Table 10. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.1598	.262		.610	.544
	Increase/decrease in CSI 300 Index %	1.5439	.112	.865	13.813	.000

Normal P-P Plot of Regression Standardized Residual

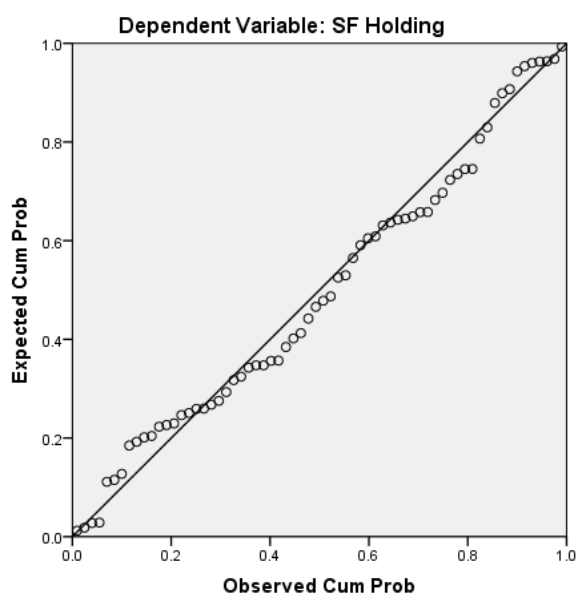


Fig. 2 Normal P-P plot of standardized residuals

Scatterplot

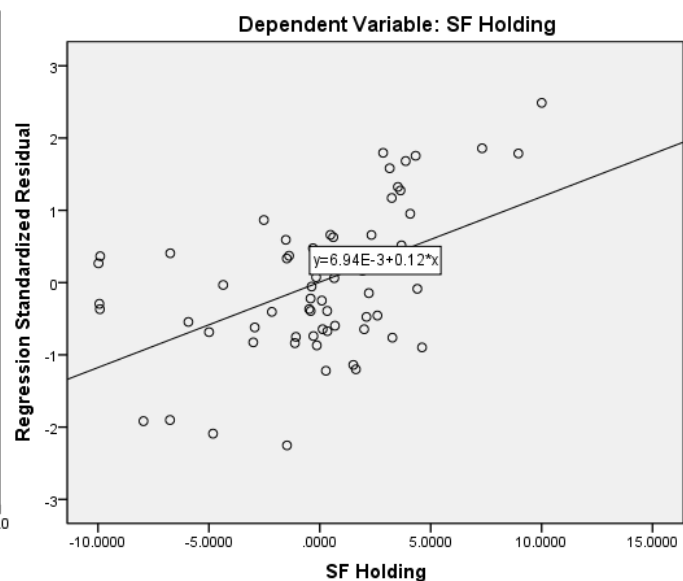


Fig. 3 Fitted scatterplot Figure

Through the statistical software SPSS for regression analysis and drawing the normal P-P plot and fitted scatter plot, it can be directly seen from Figure 2 and Figure 3 that the expected return of the CSI 300 Index has a functional relationship with the expected return of SF Holding, and the

relationship is positive. Where $\beta = 1.5439$, $\alpha = 0.1598$. It can be seen that the correlation coefficient p-value of the increase and decrease of the CSI 300 Index and the increase and decrease of SF Holding in the 100 estimated window period, that is, Sig. (2-tailed) is 0.00, which is much lower than the set significance level of 0.05, and it can be considered that there is a high positive correlation between the expected return of the CSI 300 Index and the expected return of SF Holding, as shown in Fig.4.

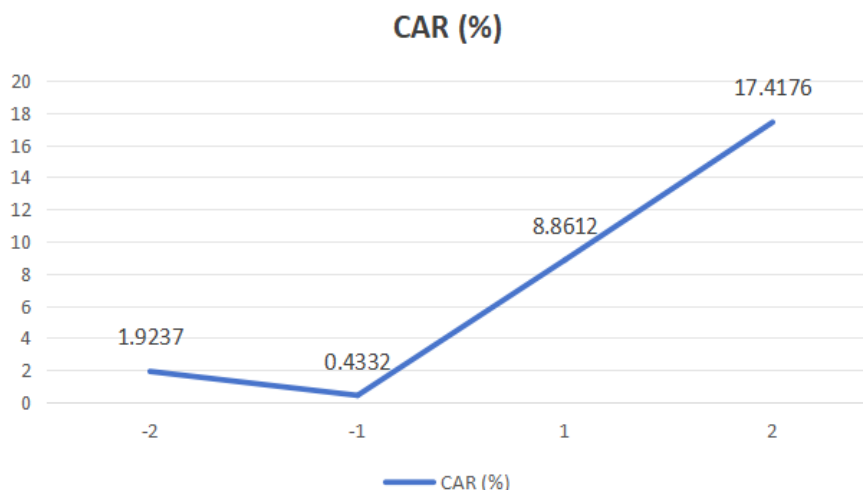


Fig. 4 Graph of cumulative excess returns during the window period

The results of the analysis show that before the event $[-1,0]$, the ART was negative, indicating that the expected return was greater than the actual return. Before the announcement date $[-2,0]$ the stock price fluctuated within the normal range, and the market did not react significantly, indicating that the information of the mergers and acquisitions, and the integration event was not leaked or leaked on a large scale. Throughout the CAR line graph, there is an upward trend, changing in the same direction as ART, as shown in Figure 4. Moreover, the excess return was positive on three days during the four-day window, and the cumulative excess return was positive on all of them. In the interval of $[0,2]$, CAR compared with the announcement date, the slope changed significantly, the curve is steeper, indicating that this restructuring event has raised investor expectations, increased the company's stock price, SF Holding's backdoor listing has had a positive effect on the company's performance in the short term, which created wealth for shareholders.

4. Problems of SF Express' backdoor listing

4.1. Decline in profitability

The ROA trend in Table 3 shows that SF's profitability significantly improved in the year when it bought back Dingtai New Materials. With time, the ROA indicator from 2017 to 2018 showed negative changes, but the level of operating income, net profit, and total assets gradually increased. SF Holding's business model gradually matured, and although it had a stable cash inflow, its performance growth encountered bottlenecks.

4.2. Decline insolvency

After the listing of SF Express' backdoor Dingtai New Material, the scale of assets continued to expand, and the speed of expansion also increased. As SF Holding needed more external financing after its backdoor listing, it tended to expand debt financing, resulting in a year-on-year increase of 141.77% in its asset-liability ratio in 2018 compared with 2015. If the growth rate of the asset-liability ratio cannot be controlled in time, it may cause enterprises to borrow too blindly and cause enterprises to fall into a debt crisis. In 2018, the current ratio of SF Holding was 1.21, which was less than 2, the current debt capacity was less than the good index, and the liquidity ability was poor. If the strategy

is not adjusted in time, it will eventually reduce the operating capacity and reduce the value of the enterprise.

5. Countermeasures and recommendations

Backdoor listing can effectively expand the asset scale of the backdoor enterprise, promote the marketization of SF Holding, and make its flow in the secondary market faster. Since the original business of Dingtai New Material was the research and development and application of new materials, it was not related to SF Express' business, and after the backdoor listing, SF Holding's asset management efficiency did not match the asset scale expansion speed, and the asset management was poor. In addition, there were many differences in the operating businesses of the two parties before listing, and SF Holding did not quickly adjust its business after the merger and restructuring, which eventually led to a sharp decline in profitability and solvency.

For enterprises that go public after backdoor listing, the above problems are very easy to arise in short-term financial performance. First of all, enterprises need to prevent non-performing assets and credit risks while ensuring the speed of asset expansion. Strengthen the dynamic supervision of asset-liability ratio indicators and improve the level of cash flow. Second, adjust the asset structure and establish an effective capital operation system and debt-paying plan. Enterprises need to estimate the liabilities they can bear at different stages, and at the same time rationally use capital allocation resources and optimize asset structure, to improve solvency, promote operating capabilities, and achieve economic growth and profitability. In addition, it is a necessary condition to promote the long-term development of the enterprise to rectify the business operation, and precise strategic positioning, accelerate the speed of integration, and optimize the allocation of resources for the backdoor listing enterprises.

6. Conclusion

This paper focuses on SF Express's backdoor listing and conducts relevant data analysis and empirical research on the financial performance of backdoor listing. From the results of the research, the backdoor listing has a certain effect on SF Holding's short-term profitability and operating capacity. Backdoor listing behavior and the market interact with each other, strengthening the short-term positive effect of shell listing, and the cumulative return also reflects an upward trend in the short term. However, backdoor listing has also led to a decline in SF's profitability and solvency. Due to the large scale of SF's mergers and acquisitions and restructuring, the business strategy positioning and asset management efficiency in a short period cannot match. In addition, there are many differences in the operating business of the shell company and the backdoor enterprise, and the backdoor enterprise needs to rectify and restructure the business of both parties after the backdoor listing. These led to a decline in profitability and solvency. By using SF Express as a case study to analyze the financial indicators and performance impact of backdoor listing, this paper provides relevant data and suggestions for express delivery enterprises that need to adopt backdoor listing in the future to formulate strategies after the backdoor listing process. This author hopes that future scholars can integrate long-term performance analysis based on short-term financial performance analysis based on current scholars' research on financial performance and provide more comprehensive guidance for express delivery companies with such needs.

References

- [1] Liu Yuhui, Xiong Peng. Equity Separation, Government Regulation and IPO Price Suppression in China[J]. *Economic Research*,2005(05):85-95.
- [2] Qu Yuanyu, Wu Weixing, Shen Tao. IPO or backdoor listing: What influences the listing choices of Chinese firms? [J]. *Management World*,2018,34(09):130-142+192.DOI:10.19744/j.cnki.11-1235/f.2018.09.011.

- [3] ZHANG Haiqing, WEN Wen, SONG Jianbo. Performance compensation commitment and real earnings management in backdoor listing[J].Journal of Shanxi University of Finance and Economics,2020,42(05):99-111.DOI:10.13781/j.cnki.1007-9556.2020.05.008.)
- [4] Di Congzhi, Pang Qing, Zhang Mei." Research on the path and effect of the two-stage mixed reform of introducing strategic investors + overall backdoor listing——Taking COFCO Capital Holdings as an example[J].Finance and Accounting Newsletter,2022(06):104-109+115.DOI:10.16144/j.cnki.issn1002-8072.2022.06.022.
- [5] Zhang Liqiong, Chen Zhangwang. Financial performance of listing through backdoor lending enterprises[J].Finance and Accounting Bulletin,2021(18):122-128.DOI:10.16144/j.cnki.issn1002-8072.2021.18.023.)
- [6] Zhang Luwen. Research on the problem of backdoor listing of logistics enterprises[J]. New Finance,2019(03):61-64.
- [7] WANG Bing, PAN Yan. Backdoor listing cost-benefit and market change empirical analysis based on the listing of express enterprises[J]. China Circulation Economy,2017,31(06):72-81.DOI:10.14089/j.cnki.cn11-3664/f.2017.06.009.
- [8] Lv Weiyi, Ao Hui. An analysis of the motivation of logistics enterprises' backdoor listing--Taking SF Holdings' backdoor listing of Dingtai New Material as an example[J]. Finance and Accounting Newsletter,2017(11):89-91.DOI:10.16144/j.cnki.issn1002-8072.2017.11.023.
- [9] ZHANG Shijie,ZHANG Yongmei. An analysis of key node control in the process of backdoor listing--Taking S.F. Holding as an example[J]. Finance and accountingnewsletter,2017(31):11-15.DOI:10.16144/j.cnki.issn1002-8072.2017.31.003.
- [10] Huang Hongbin, LIU Zhao. Has backdoor listing fuelled the improvement of corporate financial performance[J]. Finance and Accounting Monthly,2020(23):44-51.DOI:10.19641/j.cnki.42-1290/f.2020.23.007.