The Relationship Between Fss and Enterprise Performance in Chinese Enterprises-based on Data from 2018 to 2021

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Abstract. The digital transformation of finance begins with shared services. The major changes in the information technology environment have subverted the cognition of traditional finance and enterprise management. More enterprises have adopted Financial Shared Services(FSS). The impact on enterprise performance that helps enterprises make decisions on whether to adopt or optimize the Financial Shared Services Center. This paper takes the enterprises listed on Shanghai and Shenzhen Stock Exchange from 2018 to 2021 as the research sample. Then this paper conducts empirical research through hypothesis tests and regression analysis. Research findings: within the scope of this study, there is a transition period in the implementation of FSS, and it is needed that enterprises make reasonable adjustments.The enterprise value and the FSS are significantly positively correlated.This research provides a reference for the enterprises that have implemented FSS in the initial stage or companies to implement this policy.

Keywords: Financial Shared Services; Enterprise performance; Regression analysis.

1. Introduction

According to the 2022 China Research Report on Shared Services, China's shared services industry has entered a new stage of exploration since 2018. Beginning with the era of "Big data, Artificial intelligence, Mobile Internet, Cloud computing, Internet of Things, Blockchain. (BAMCITB)", the shared services industry will transition from a transaction processing centre to a data centre, bringing with it new challenges and opportunities. The maturity and adoption of new technologies like cloud computing and artificial intelligence have significantly increased the data collection and computing capabilities of the shared services centre [1]. He Ying and others first passed the combination of the Wilcoxon correlation test and panel data and demonstrated that the adoption of financial sharing services will have a certain degree of positive impact on the operating efficiency and operating results of enterprises [2]. At present, when Chinese scholars study the relationship between financial sharing services and corporate performance, they mainly focus on case studies with fewer empirical tests. Thus, this paper will take the sample of 164 listed companies in Shanghai and Shenzhen that implemented financial sharing during the period of 2018-2021. to verify the relationship between Financial Sharing Service (FSS, the same below) and corporate performance in the new exploration stage, and to provide a theoretical basis for enterprises to give full play to financial sharing services at this stage. This paper makes a regression analysis on the panel data from two angles of time and section.

2. Literature review

2.1 Origin of Financial Shared Services

Peng et al. believe that shared services is an innovative management model which originated in the 1980s, standardized the process used professional division of labor, and used information network technology as the engine.By concentrating on the repetitive tasks that each unit in the company must complete, the shared service center will be able to better integrate its resources, cut expenses associated with doing so, and increase the effectiveness of its day-to-day operations [3].

In addition, Ulbrich pointed out in the research that the FFS process is very important, and the flawed procedure is probably going to make the shared service center less effective, thus hindering

the organization from reducing costs and improving value [4]. Klimkeit and Reihlen believe that different from the traditional de-standardization features shared service organizations have moved to more complex and knowledge-intensive work in the value chain, considered business process restructuring through professional staff, built accounting information systems, redefined their organizational identity, and achieved pre-planning and in-process control [5].

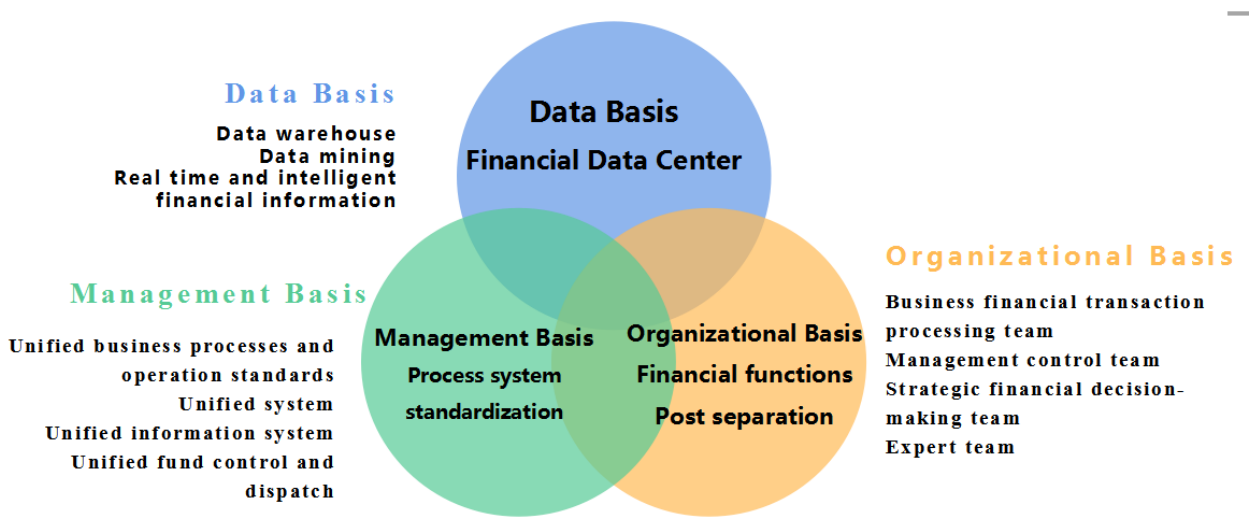

Figure 1. Functional Concept Map of FSSC

Based on previous scholars' literature, this paper considers that FSSC can be divided into three basic aspects as shown in Figure 1. Under the background of the digital era, financial sharing center needs to promote the collection of financial information and data information in real-time through corresponding information technology, store data, and complete the transformation of data. In this process, ensuring the availability of the obtained data will involve the standardization of the processing system. The data flowing to the FSSC needs to be standardized according to the uniform business process and operation standard corresponding to the nature, and unified fund control and scheduling.

Under the background of the operation of the FSSC, the traditional organizational structure model will change and tend to be flat. The financial business will be divided into different teams according to their characteristics. For example, matters involving a large number of daily transactions in the business process will be accounted for by the personnel of the business finance organization and the business related to the strategic development of the enterprise will be weighed by the strategic finance decision-making team. Throughout the operation of the FSSC there is also a professional management control team for direct monitoring.

2.2 Status of Financial Sharing Services

With the development of various digital technologies, many enterprises have completed the construction of financial sharing service centers. Zhang refers to a digital middle station composed of a data middle station and a business middle station, which processes and manages a large number of complete and multi-type data. It related businesses generated inside and outside the enterprise, visualizes the data display, fully provides valuable service information, helps decision makers make more scientific decisions, and realizes intelligent finance [6].

In addition, the digital transformation into corporate financial sharing services at this stage has also accelerated the pace of corporate financial integration and promoted the transformation and upgrading of financial personnel. Su et al. talked about that the adoption of digital technology in the financial sharing center is conducive to the formation of a three-in-one comprehensive effect (financial management operation, business development, and technical means) and promotes the organic integration of front-end and rear-end business accounting systems and management systems.

It frees the accounting personnel from the traditional and repetitive work and enables them to spare no effort to improve the business efficiency and management ability employing technologies such as remote information integration and processing or electronic imaging. At the same time, the financial personnel dig deeply into the value behind the data and move towards the transformation and development path of management-oriented compound talents. Continuous improvement of corporate finance staff's big data awareness and practice level will also help finance staff to further improve [7].

2.3 FSS and Corporate Performance

More domestic enterprises have adopted FSS, and it mproved the accuracy and authenticity of corporate financial data. He, Zhou and Li have used empirical analysis to confirm for the first time the positive impact of FSS on corporate performance from the impact on the corporateoperational efficiency [2]. According to Wang's empirical research, financial sharing can be implemented to increase an organization's competitiveness, quality of operating income, cash inflows, focus on managing surplus funds, best allocate internal capital resources, and improve the benefits of financing and managing an organization [8].

However, there are some problems in the initial stage of the construction of financial sharing services. In their research, Liu used Tobin’s Q, the rate of return on human input and the proportion of financial personnel, and other indicators for empirical analysis. The results show that financial sharing services can improve Tobin’s Q and the rate of return on invested capital to increase the market value of the enterprise. The improvement of free cash flow and the reduction of management fee rates have brought positive effects to the operation of the enterprise. However, in the initial stage of construction, the effectiveness of cost control is limited in the short term [9]. Wu and Xiang used the propensity score matching method to analyze several operating performance indicators and earnings performance indicators of the enterprise and also concluded that the enterprise's operational performance may be significantly impacted by the introduction of financial sharing, but there is a possibility that the performance will decrease in the short term in the initial stage of implementation [10].

3. Research assumptions and design

3.1 Research assumptions

To sum up, in an important stage of the exploration of China's financial sharing service industry, Xu et al. said in their latest research that the impact of financial sharing intelligence on corporate performance showed a weak retrogression in efficiency from 2018 to 2020 [11]. Therefore, further empirical research is needed to explore the relationship between FSS and enterprises during this period.

This paper refers to the previous research and puts forward two two-level assumptions concerning corporate performance.

H1: FSS can significantly improve corporate performance.

H1a: FSS can significantly improve the return on assets ROA.

H1b: FSS can significantly improve Tobin Q value.

3.2 Research design

3.2.1 Sample Selection

This paper needs to study the relationship between data display and corporate performance before and after the adoption of financial sharing center. As the financial information disclosure of listed companies is relatively complete and subject to corresponding supervision, the companies listed in Shanghai and Shenzhen are chosen as the research sample in this paper. In view of the research on the exploration stage of shared services in China (2018 to date) and considering the possibility of a short-term decline in performance during the initial implementation period mentioned in the previous

literature review, the research time involved in this paper will be delayed by one year to study the data for the period 2017-2021. Excluding some enterprises with incomplete financial information disclosure, 164 listed companies were selected as the research objects. The data in this paper are from CSMAR database.

3.2.2 Variable Selection

(1) Interpreted variables

To evaluate the performance of the enterprise, this paper selects the rate of return on assets (ROA) to reflect the impact of financial sharing center on the performance of the enterprise. ROA refers to the relationship between the enterprise's profit after tax plus interest expense and the total assets. The return on assets measures the ability of an enterprise to generate profits from all its assets and reflects the comprehensive effect and overall operating efficiency of the use of all its assets. On the one hand, ROA reflects the profitability of owners and creditors to provide capital, i. e. input-output capacity; On the other hand, it also reflects the efficiency of enterprises in managing assets and using resources. The level of this indicator is closely related to the enterprise's asset stock, asset structure and asset increment, which comprehensively reflects the management level of the enterprise.

Dai pointed out in the research that Tobin Q value is an index to measure the market value of listed companies. With the continuous increase of management's supervision over listed companies in recent years, the improvement of laws and regulations, and the significant improvement of the reliability of financial statements, the performance of the business is significantly positively correlated with Tobin Q [12]. The market value of an enterprise is measured by the Tobin Q value, which can reflect not only the intangible assets and goodwill of the company but also the future value of the company. Moreover, the Tobin Q value can more accurately reflect the market value of an enterprise because it is difficult for humans to influence.

(2) Explanatory variables:

There are two explanatory variables in this study. The first is whether to establish a financial sharing service center (FSSC, the same below). If it is established, take 1, otherwise take 0. The second explanatory variable is the TIME to implement financial sharing, i.e., time, if not implemented, value 0, value 1 in the first year of implementation and value 2 in the second year of implementation.

(3) Control variables:

In addition to the research variables, corporate performance is affected by a variety of factors. This paper selectS enterprise SIZE, asset-liability ratio LEV, equity concentration TOP10 and asset growth rate Grow. Where the value of SIZE is too large, the logarithm is used. Finally, dummy variables Year and Industry were added to control the possible impact of industry and year on it.

3.2.3 Modeling

In this paper, panel data is used for analysis. The panel data can be regressed from two dimensions time and section. According to the hypothesis H1, a model can be constructed:

$$Y_{i,t}=\alpha_0+\beta_1 FSSC_{i,t}+\beta_2 SIZE_{i,t}+\beta_3 LEV_{i,t}+\beta_4 TOP10_{i,t}+\beta_5 GROW_{i,t}+\sum YEAR+\sum INDUSTRY+\theta_{i+\varepsilon,t} \quad (1)$$

4. Empirical results and analysis

4.1 Descriptive Analysis

To initially understand the characteristics of variables, this paper describes the sample size, mean, standard deviation, minimum value, median value, and maximum value of each variable respectively, as shown in Table 1.

Table 1. Variable definition

Variable type	Variable name	Variable symbol	Variable description
Interpreted variable	Profitability	ROA	Return on total assets = Net profit/ Total assets = Net profit from sales x asset turnover
	Market value	TQ	TQ= Enterprise Market Value/Replacement Cost
Explanatory variable	Has FSSC been established	FSSC	If the enterprise has established FSSC, the value is 1; otherwise, the value is 0.
	FSSC setup time	TIME	The value of FSS is 1 in the first year of implementation, 2 in the second year of implementation, and so on. If not implemented, the uniform value is 0.
Control variable	Company Scale	SIZE	Natural logarithm of year-end total assets
	Asset-liability ratio	LEV	Gearing ratio = total liabilities/total assets * 100%
	Ownership concentration	TOP10	The percentage of shares held by the company's top ten investors
	Asset growth rate	GROW	Total assets growth rate = Total assets growth for the year/ Total assets at the beginning of the year * 100%
	Annual variable	YEAR	Annual virtual variable
	Industry variable	INDUSTRY	Industry virtual variable

To understand each variable's characteristics, this study provides information on its sample size, mean, standard deviation, minimum value, median value, and maximum value.

Table 2. Descriptive Statistics of Main Variables

	N	MEAN	SD	MIN	MEDIAN	MAX
ROA	743	0.0352	0.0539	-0.3216	0.0317	0.2022
ROE	743	0.0130	0.9848	-18.5689	0.0792	0.4328
TQ	743	1.4845	0.9231	0.7561	1.1698	9.7975
COS	743	0.9471	0.1101	0.5366	0.9538	1.7429
CashFlow	743	0.1888	0.2181	-0.4904	0.1571	1.4973
FSSC	743	0.8331	0.3731	0.0000	1.0000	1.0000
Time	743	4.0081	3.7033	0.0000	3.0000	17.0000
Size	743	24.4205	1.5780	20.2832	24.2689	28.2930
Lev	743	0.5582	0.1682	0.0742	0.5689	0.9820
Top10	743	66.1267	16.1765	27.7592	67.4961	95.4598
Growth	743	0.1624	0.3387	-0.6068	0.1205	3.2405

The descriptive statistical results demonstrate that each variable's statistical characteristics match within a tolerable range, as listed in table 2.

The average value of Tobin's Q is 1.4845, which exceeds 1, indicating that the overall market value of the sample enterprises is relatively high. The standard deviation of enterprise SIZE size is 1.5780, indicating that the sample enterprise size level is relatively average.

The average value of the asset-liability ratio LEV was 0.5582, which was lower than 60%, indicating that the overall risk of the sample enterprises was low. It shows that some enterprises have different attitudes towards operational risks.

The average value of TOP10 is 66.1267, which indicates that the ownership concentration of the sample enterprises is relatively high as a whole. The majority shareholders will strengthen the supervision of the enterprise operators, and help prevent the moral hazard and agency risk of the management.

The average Growth rate was 0.1624, which exceeded 15%, indicating that most of the enterprises have a fast growth rate with large standard deviation and range. At the same time, it shows that the development of various enterprises is not balanced.

The average value of FSSC is 0.8331, i.e., during the sample period, the year in which the financial sharing service was implemented accounted for 83.31%, more than 50%, indicating that most of the sample enterprises have started to implement the financial sharing service in recent years.

4.2 Correlation Analysis

A descriptive statistical analysis of the sample data was conducted in the previous part. It is determined that, to a certain extent, the data used in this study is accurate and reasonable. Next, this study will use correlation analysis to determine the degree of correlation between the variables on the one hand and assess whether there is a clear multicollinearity issue between the variables on the other.

The correlation between each variable is examined in this section using the Pearson and Spearman coefficients. Table 3 displays the test results, with the Pearson correlation coefficient test, result in the lower left corner and the Spearman correlation coefficient test result in the upper right.

Table 3. Results of correlation analysis between variables

	ROA	ROE	TQ	COS	CashFlow	FSSC	Time	SOE	Size	Lev	Top10	Growth
ROA	1.0000	0.9161***	0.3791***	-0.7133***	0.4800***	-0.0340	0.0229	-0.1812***	-0.0196	-0.4677***	0.1336***	0.3901***
ROE	0.4739***	1.0000	0.2851***	-0.6960***	0.3585***	-0.0238	0.0247	-0.2123***	0.1558***	-0.1472***	0.1366***	0.4272***
TQ	0.3468***	-0.0130	1.0000	-0.1675***	0.1514***	0.0055	0.0146	-0.2565***	-0.4933***	-0.3790***	-0.1583***	0.1594***
COS	-0.7275***	-0.4758***	-0.1835***	1.0000	-0.4666***	0.0655*	0.0303	0.1289***	-0.0735**	0.2972***	-0.1499***	-0.3621***
CashFlow	0.4666***	0.1372***	0.2063***	-0.4696***	1.0000	0.1133***	0.1119***	0.0394	0.0185	-0.4360***	0.2309***	0.1695***
FSSC	-0.0282	-0.0343	0.0458	0.0641*	0.1215***	1.0000	0.6501***	-0.0501	0.1339***	0.0316	0.1273***	-0.0962***
Time	0.0116	0.0337	0.0253	0.0202	0.0551	0.4847***	1.0000	-0.1070***	0.1622***	0.0014	0.0793**	-0.1010***
SOE	-0.0803**	-0.0394	-0.1311***	0.0579	0.0805**	-0.0501	-0.1199***	1.0000	0.0719*	-0.0197	0.1009***	-0.0946***
Size	-0.0074	0.0672*	-0.2623***	-0.0691*	0.0132	0.1458***	0.1477***	0.0972***	1.0000	0.4449***	0.2653***	0.0631*
Lev	-0.4446***	-0.1767***	-0.3189***	0.3165***	-0.4705***	0.0165	0.0071	-0.0329	0.4337***	1.0000	-0.0606*	-0.0297
Top10	0.1087***	0.0499	-0.1143***	-0.1067***	0.2009***	0.1400***	0.0330	0.0849**	0.3053***	-0.0389	1.0000	0.0424
Growth	0.3048***	0.1319***	0.0473	-0.3224***	0.1071***	-0.0808**	-0.0345	-0.0380	0.0110	-0.0082	0.0248	1.0000

*Note: *, * *, * * * are significant at the significance levels of 10%, 5% and 1%, respectively (double-tailed test).*

According to Lawrence, when the correlation coefficient between variables is more than 0.75 in absolute terms, the multicollinearity problem is more serious and the correlation degree between the variables is higher, which would finally cause a certain variance in the empirical results [13].

The correlation analysis results show that there is no multicollinearity issue among the variables and that there are numerous indicators with significant levels. The absolute values of the correlation coefficients of the variables used in this paper do not exceed 0.75. The empirical regression model is trustworthy for this reason.

4.3 Regression analysis and hypothesis testing

In this paper, the least square method (GLS) is used for regression estimation, and the specific results are shown in table 4.

Table 4. Principal effect regression results with FSSC as the explanatory variable

	(1)	(2)	(3)	(4)
	ROA	ROA	TQ	TQ
FSSC	-0.0045		0.1285*	
	(-0.96)		(1.69)	
L.FSSC		-0.0006		0.0343
		(-0.13)		(0.40)
Size	0.0080***	0.0060**	-0.0673	-0.0643
	(3.32)	(2.60)	(-1.41)	(-1.23)
Lev	-0.1792***	-0.1658***	-1.1779***	-1.2436**
	(-7.88)	(-7.96)	(-2.72)	(-2.49)
Top10	0.0001	0.0001	-0.0055	-0.0037
	(0.66)	(0.58)	(-1.22)	(-0.78)
Growth	0.0480***	0.0458***	0.1133	0.1708*
	(4.92)	(4.53)	(1.20)	(1.67)
_cons	-0.0939*	-0.0309	4.4365***	4.0797***
	(-1.73)	(-0.64)	(4.93)	(4.02)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	743	572	743	572
R^2	0.411	0.403	0.240	0.235
adj. R^2	0.390	0.378	0.213	0.203

*Note: The double-tailed test results indicate that *, * *, and * * are significant at significance levels of 10%, 5%, and 1%, respectively; the T-test results corrected for the cluster at the enterprise level are displayed in brackets.*

From the regression results in column (1), it can be seen that FSSC will harm ROA, but the effect of this impact is not significant. From the regression results in column (2), it indicates that FSSC lagging one stage will have a negative impact on ROA, but this impact is not obvious. This result is inconsistent with the assumption of H1a. This paper argues that this is due to the lagging performance of enterprises after the implementation of financial shared services, as proposed by Li that a large amount of cost will be required to establish a financial sharing service center at the beginning. For example, based on an ERP system, IT needs to be upgraded and optimized, business process and information management model are designed, risks and alternatives are selected, etc., which will generate a large amount of consulting service fees, IT development, and maintenance fees. Secondly, enterprises need to consider the issue of smooth transition while building a financial sharing service center. Some state-owned enterprises will not consider large-scale layoffs. At the same time, they also need to consider the recruitment of professionals. The cost of human resources in enterprises will not drop but increase [14].

This paper takes into account one year without FSSC and compares it with the lag phase one data. The negative impact of constructing FSSC on ROA has slightly increased, which indicates that the implementation of FSSC cannot immediately have a significant positive impact on the corporate ROA profitability index. During the period covered by the study, companies that adopt financial sharing services incur significant initial costs. Although financial sharing services can improve financial efficiency and reduce accounting costs, it cannot cover upfront costs, which results in a decrease in profit. The corresponding assets were increased due to the construction of finance shared services center, which would also have a slight negative impact on ROA.

It is evident from the regression findings in column (3) that FSSC will have a favorable impact on TQ, and that this impact is significant at the level of 10%. It is clear from the regression results in column (4) that TQ will improve if FSSC lags by one stage, although this effect is not immediately apparent.

The results verify the hypothesis that H1b and Tobin Q represent the performance of corporate value in the market, which is often used as an important indicator to measure corporate performance or corporate growth. Gao and He tested the positive correlation between Tobin Q value and financial leverage, corporate performance, and stock value [15]. Investors are also gradually becoming rational. The newly implemented FSSC is an essential digital change for the enterprise. The more favorable the company is, the higher the market value of the enterprise's shares will be and Tobin Q will rise accordingly.

4.4 Robustness test

To test the robustness of the research conclusions, this paper adds three indicators to test the robustness, ROE, COS, and CashFlow rate as indicators to measure performance in the above model for testing.

Table 5. Regression Results of Robustness Test

	(1)	(2)	(3)	(4)	(5)	(6)
	ROE	ROE	COS	COS	CashFlow	CashFlow
FSSC	-0.1994		0.0136		0.0639***	
	(-1.65)		(1.23)		(2.83)	
L.FSSC		-0.0301**		0.0064		0.0429*
		(-2.06)		(0.69)		(1.94)
Size	0.1356*	0.0241***	-0.0155***	-0.0108**	0.0259***	0.0268***
	(1.80)	(3.01)	(-2.90)	(-2.41)	(3.13)	(3.19)
Lev	-1.7774*	-0.4424***	0.3383***	0.3022***	-0.6594***	-0.6903***
	(-1.93)	(-4.90)	(6.35)	(7.21)	(-6.66)	(-6.94)
Top10	-0.0016	0.0005	-0.0000	0.0000	0.0009	0.0008
	(-0.56)	(0.98)	(-0.16)	(0.07)	(1.56)	(1.40)
Growth	0.4318**	0.1865***	-0.1017***	-0.0993***	0.0622***	0.0713***
	(2.35)	(3.84)	(-4.48)	(-4.04)	(2.71)	(2.96)
_cons	-2.6098*	-0.3625**	1.1832***	1.0349***	-0.2636	-0.1751
	(-1.77)	(-2.21)	(8.89)	(9.55)	(-1.38)	(-0.93)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
N	743	572	743	572	743	572
R^2	0.100	0.253	0.351	0.357	0.388	0.391
adj. R^2	0.067	0.221	0.328	0.330	0.365	0.365

*Note: *, * *, * * * are significant at the significance levels of 10%, 5%, and 1%, respectively (double-tailed test); The T-test values adjusted by the cluster at the enterprise level are shown in brackets.*

The regression results in column (1), show that FSSC will harm ROE, but this impact is not obvious. The regression results in column (2) reflect that FSSC lagging one stage will hurt ROE and this impact is significant at the level of 5%.

The results from column (3) display that FSSC will have a positive impact on COS, but this impact is not obvious. From the regression results in column (4), COS is beneficial from FSSC lagging by one phase, although this impact is not obvious.

From the regression results in column (5), it is significant at 1% that SSC will have a positive impact on CashFlow. It can be seen that regression results in column (6), it indicates that FSSC lagging in one stage impacts CashFlow positively, and this impact is significant at the level of 10%.

Through the above regression analysis, this paper obtains similar results to the previous, which shows that this research has good robustness.

5. Conclusions and Prospects

With the arrival of the era of "BAMCITB", China's shared service industry has entered a new stage of exploration. Chinese domestic policy placed a strong emphasis on the advancement of national policies and demanded a comprehensive merger of real economy and digital technologies. The tremendous growth of China's digital economy will be facilitated by empowering traditional sectors to reform and upgrade and by fostering the emergence of new industries, new formats, and new models.

Based on the sample of companies listed in Shanghai and Shenzhen from 2018 to 2021, this paper considers the implementation time of financial sharing services, including the lag phase, and analyzes the impact of the implementation of financial sharing services on corporate performance. Within the scope of this study, the following conclusions are drawn: First, corporate financial sharing has a transition period during the implementation and development of the sample, which cannot immediately have a significant positive impact on the profitability index ROA, which reflects corporate performance. A smooth and efficient transition is vital for corporate development. Second, carrying into execution FSS has a significant positive impact on Tobin Q, which reflects the relevant indicators of corporate performance. Within the scope of the sample study, actualizing FSS can make the market value and future value of enterprises tend to be better.

This paper's investigation on the connection between financial sharing services and corporate performance is helpful for businesses as they better restructure and advance in the digital era. Enterprises that have implemented financial sharing at the initial stage or those that are about to implement it need to realize the importance of the transition period and adjust the pace of implementing financial sharing reasonably according to the company's situation.

The limitations of this article include, but are not limited to, that in future studies, expanding the number of enterprise samples in the research and taking account of the new crown epidemic's impact, it is possible to take it as a variable in the study, to obtain more accurate results.

References

[1] Zhongxingxin Cloud Service Co., Ltd. Striding for World Class: A Survey Report on Shared Services in China in 2022. [A/OL]. (2022-05-21) [2022-08-14]. https://www.ztcfol.com.cn/h-nd-456.html?fromMid=3&groupId=86.

[2] He Ying, Zhou Fang, Li Jiao. An Empirical Study on the Effectiveness of Financial Sharing Services Implemented by Chinese Enterprise Groups-Empirical Data from 2004 to 2008 [J]. Research on Economics and Management, 2013 (08): 57 - 65. DOI: 10.13502/j.cnki.issn1000 - 7636.2013.08.007.

[3] Peng Juan, Chen Hu, Wang Zexia, et al. Digital Finance [M]. Beijing: Tsinghua University Press, 2020.

[4] Ulbrich F. Shared service trajectories [J]. Finance Bundling and Finance Transformation, 2013: 117 - 132.

[5] Klimkeit Dirk, Reihlen Markus. No longer second-class citizens: Redefining organizational identity as a response to digitalization in accounting shared services [J]. Journal of Professions and Organization, 2022, 9 (1).

[6] Zhang Qinglong. Digital Transformation of Financial Sharing Services Driven by Digital China and Taiwan [J]. Finance and Accounting Monthly, 2020 (19): 32 - 38. DOI: 10.19641/j.cnki.42-1290/f.2020.19.003.

[7] Su Long, Yuan Yongyou, Zhang Lanno. Thoughts on financial sharing service and digital transformation of international group enterprises [J]. Finance and Accounting Monthly, 2022 (09): 135 - 139. DOI: 10.16144/j.cnki.issn1002 - 8072.

[8] Wang Weixing, Yu Tianwen. The relationship between financial sharing service and enterprise competitiveness-an empirical test based on double difference model [J]. Journal of Jishou University (Social Sciences), 2021, 42 (03): 101 - 111. DOI: 10.13438/j.cnki.jdxb.2021.03.012

[9] Liu Menghui, Liu Xindan. Empirical test of financial sharing service and enterprise performance-empirical evidence of Chinese listed companies [J]. Journal of Zhengzhou Institute of Aeronautical Industry Management, 2019, 37 (01): 72-82.DOI: 10.19327/j.cnki.zuaxb.1007 - 9734.2019.01. 008.

[10] Wu Ping, Xiang Ying. The impact of financial sharing service on enterprise performance [J]. Journal of Chongqing University of Technology (Natural Science), 2021, 35 (05): 102 - 111.

[11] Xu Hanyou, Yue Rufei, Zhao Jing. Research on the Impact of Intelligent Financial Sharing Level on Enterprise Performance [J]. Friends of Accounting, 2022 (07): 141 - 147.

[12] Dai Yuan. A study on the correlation between Tobin Q and financial leverage, performance and stock price [J]. Science Mosaic, 2008 (06): 200 - 202.

[13] Lawrence Hamilton. Statistical analysis with STATA [M]. Chongqing University Press, 201106.425.

[14] Li Wenyi, Liu Jiao, Lu Wen. Review, trends and suggestions on the construction of financial sharing service center [J]. Friends of Accounting, 2020 (09):14 - 20.

[15] Gao Dan, He Qian. Analysis of the influence of financial leverage, company performance and stock price on Tobin's Q-value-real estate investment and development industry based on China's A-share market [J]. Economic Research Guide, 2013 (30): 164 - 165.

[16] Xi Jinping. Constantly strengthen, improve and enlarge China's digital economy-qstheory.cn [J/OL]. (2022-01-15) [2022-08-20]. http://www.qstheory.cn/dukan/QS/2022-01/15/c_.