Capital Market Opening and Audit Fees: Based on the Quasi-Natural Experiment of the Shanghai (Shenzhen) -Hong Kong Stock Connect

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Abstract

This paper takes the implementation of Shanghai (Shenzhen)-Hong Kong Stock Connect policy as a quasi-natural experiment, on this basis establishes a multi-stage DID model, and empirically analyzes the impact of capital market opening policy on audit fees. The study found that the Shanghai (Shenzhen) -Hong Kong Stock Connect policy has increased the audit fees. In addition, this paper finds that after the implementation of the Shanghai (Shenzhen) and Hong Kong Stock Connect policy, the change of the agency cost and change to the international "Big 4" audit are two important mechanisms for the increase of audit fees. Due to the differences in agency cost, enterprises with high agency cost have higher audit fees. When the firm changed to the international "Big 4" audit firms, the audit fees did not increase due to the policy, and audit fees of not changing firms increased significantly. The conclusion of this paper shows that the opening of capital market has an important influence on the information environment of China's capital market and provides policy inspiration for the further opening of China's capital market.

Keywords: Capital Market Opening; Audit Fee; Policy; Emerging Market

1. Introduction

In recent years, China has steadily promoted the opening of the capital market. From the issuance of B shares, cross-listing and QFII, RQFII, QDII etc, the Shanghai-Hong Kong Stock Connect mechanism was officially launched on November 17,2014, and the Shenzhen-Hong Kong Stock Connect mechanism was officially implemented on December 5,2016. All policies and measures show the determination of the Chinese government to open the capital market to the worldwide. As an information intermediary agency, audit plays an important role in the healthy development of the capital market. Investor protection is one of the important mechanisms. Auditing can send positive signals to the outsiders, reduce the degree of information asymmetry between enterprises and investors, improve the information transparency of enterprises, and restrain the encroachment of the interests of major shareholders on minority shareholders (La Porta, 2000; Zhai Shengbao, 2017). Foreign institutional investors directly participate in China's capital market through the Shanghai (Shenzhen) and Hong Kong Stock Connect policy. However, due to the differences in language, region, legal and cultural background and other factors, the information asymmetry between foreign institutional investors and Chinese listed companies has increased, and the agency problem will also be much more serious. As an information intermediary of the capital market, audit is one of the effective mechanisms to alleviate the agency problem. Based on the above analysis, the opening of the capital market may require new audit services or higher audit quality. This paper analyzes the mechanism of the impact of capital market liberalization on audit fees from the auditor's perspective.

Applying the implementation of the Shanghai (Shenzhen) Hong Kong Stock Connect policy as a quasi-natural experimental opportunity, this paper establishes a multi-temporal DID model to carry out the empirical study on the impact mechanism of capital market opening on audit fees. The results show that the opening of the capital market has significantly improved the audit fees of enterprises. The further mechanism analysis shows that the agency cost is one of the important channels of audit fees, and the enterprises with high agency cost have higher audit fees. In addition, whether the target enterprise will replace the auditor with the international "Big Four" has become another mechanism to affect the audit fees of enterprises, the firm do not change the audit firms to the “Big 4”, will be charged higher level of audit fees. After a series of robustness tests, the above results still hold.

The possible contributions of this paper are as follows: First, The verdict is still out on whether the Shanghai (Shenzhen)-Hong Kong Stock Connect policy improved the information environment of China's capital market. This paper empirically examines the impact of policy implementation on the capital market information environment from an audit perspective, which provides sufficient evidence to support the effective implementation of the policy and the subsequent deep opening of the capital market. Secondly, this paper enriches the study of factors influencing audit fees, and the article examines the mechanisms by which policy changes affect audit fees.

2. Literature Review and Hypothesis Development

2.1 Literature Review

Audit fees are an audit pricing decision made by an auditor when he/she understands and evaluates the audit risk (Wang Fang et al., 2018). Audit risk is composed of three parts: customer operation risk, audit risk and firm operation risk. A large number of studies have shown that the characteristics of clients and auditors are the factors affect audit fees, such as the size of the audit firm (Qi Jiangna et al., 2004; Zhang Qifeng et al., 2006), enterprise size (Wang Xiongyuan et al., 2014), earnings management behavior (Wu Lina, 2003; Cao Qiong et al., 2013), etc. Previous studies have shown that the opening of the capital market has improved the efficiency of China's capital market (Zhong Kai et al., 2018; Zhong Qinlin and Lu Zhengfei, 2018), improved the investment efficiency (Chen Yunsen and Huang Jianqiao, 2019), the increase of cash dividend payouts (Chen Yunsen et al., 2019), and discourage corporate irregularities(Zou Yang et al., 2019). However, few literature pays attention to the impact of capital market opening on audit fees. Zhou Donghua et al. (2018) found that the Shanghai-Hong Kong Stock Connect policy promotes audit quality and induces firms to pay higher audit fees.

The difference between this paper and the aforementioned studies is that this paper focuses on the mechanisms of the effect of capital market opening on audit fees and intends to analyze it from two perspectives: agency costs and audit firm replacement.

2.2 Hypothesis Development

The important impact of the Shanghai(Shenzhen)-Hong Kong Stock Connect policy on the corporate governance and information environment of China's capital market has been confirmed in previous studies. For example, Bae and Goyal (2010) showed that the opening of stock market can promote private information disclosure of listed enterprises, increase the level of analysts' attention, reduce enterprise earnings management, and improve enterprise information environment; Li Chuntao et al (2018) found QFII improve the quality of external supervision; Zhong Qinlin and Lu Zhengfei (2018) found that foreign investors can improve the information disclosure initiative of listed companies, promote the stock price to better reflect the characteristic information of enterprises and improve the information transparency of listed enterprises. Foreign institutional investors may directly participate in China's capital market after the implementation of the Shanghai (Shenzhen) and Hong Kong Stock Connect policy, which may play a "supervision effect" or "adapt to the environment". No matter what role foreign institutional investors play, the premise is that they need to obtain all kinds of information about enterprises in China's capital market. In terms of information access, existing studies have concluded that foreign institutional investors have more professional knowledge and more resources, so they have information advantages (B ae et al., 2012）。Some scholars also believe that due to the differences in language, region, cultural background and other factors, foreign institutional investors are at a disadvantage compared with domestic investors in terms of information acquisition (Chan et al.,2007）。

Under the perspective of information advantage, foreign institutional investors can play a "supervision effect" on the target enterprises. However, in the perspective of information disadvantage, foreign institutional investors may be "not acclimatized", which is manifested in the high degree of information asymmetry between foreign institutional investors and enterprises, and the higher agency cost. As an information intermediary, the auditor can alleviate or reduce the degree of information asymmetry between them. In order to gain the attention of foreign institutional investors, enterprises are willing to pay higher costs to choose firms with higher audit quality, transmit the signal of high quality of their information to the market, and reduce the degree of information asymmetry. Foreign institutional investors have a strong sense of investment protection, which may cause the auditors face higher litigation risk after audit failure. Therefore, in the context of capital market opening, auditors may raise the level of their audit fees. Based on the above analysis, we propose a set of competitive hypotheses in this paper:

Hypothesis 1a: The opening of the capital market improves the level of audit fees.
Hypothesis 1b: The opening of the capital markets reduces the level of audit fees.

3. Research Design

3.1Sample selection and data source

This paper apply the data of China's listed companies from 2012 to 2020 as the research sample. The lists of Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect, financial data and corporate governance data are all from CSMAR data base. The data is screened according to the following criteria: (1) the samples of the enterprises of Shanghai (Shenzhen) -Hong Kong Stock Connect that were removed or added during the study sample period are eliminated; (2) the samples of missing data and st companies are eliminated; (3) the

samples of financial enterprises are eliminated; (4) the samples issued in B shares and H shares are not included. In the end, this paper obtained the annual sample observation number of 1054 enterprises in Shanghai (Shenzhen)-Hong Kong Stock Connect.

3.2 Model setting and Variable Definition

3.2.1 Opening of the capital market. In this paper, the companies listed in the Shanghai (Shenzhen) -Hong Kong Stock Connect from 2014 to 2020 are counted as Treat, and in the year of listing and subsequent years is defined as Post. Treat*Post is interaction items of Treat and Post and means the policy effect of Shanghai(Shenzhen)-Hong Kong Stock Connect, so that the opening of the capital market is expressed by Treat * Post.

3.2.2 Audit fees: This paper draws on the research of Wang Fang et al. (2018), and takes the natural log of enterprise expenditure on audit fees.

3.2.3 Control variables: Size, Roe, Bigshareholder, Age, Institue, SOE, CFO, Loss. In addition, this paper apply the dummy variables of year and industry. Specific variable definitions are shown in Table 1.

Table 1 Variable definition table

type of variable	Variable name	variable symbol	Variable description
explained variable	Audit Fee	Auditfee	Audit costs take the natural log.
explanatory variable	Shanghai (Shenzhen)-Hong Kong Stock Connect	Treat	If the company is the target company first included in the Shanghai (Shenzhen) -Hong Kong Stock Connect during the sample period and is not removed, the value is 1, otherwise the value is 0.
	After the policy is implemented	Post	If the company becomes the year after the Shanghai (Shenzhen) -Hong Kong Stock Connect, the value is 1; otherwise the value is 0.
	Capital market opening	Treat*Post	After the implementation of the Shanghai-Hong Kong Stock Connect policy
Intermediate variables	Audit change	Auditchgbig4	If the auditor is changed to the big4, the value is 1, otherwise the value is 0.
	Agency cost	Agency	(Sales expense + administrative expenses) / sales revenue
Control variables	company size	Size	The company's sales revenue takes the natural log number.
	Property nature	State	The value of state-owned property is 1 and that of non-state property is 0.
	Loss	Loss	Dummy variable, if the annual net profit of the enterprise is less than zero, the value is 1, otherwise the value is 0.
	Return on equity	Roe	Net income / net assets
	The proportion of cash flow to net profit	Cfo	The proportion of net cash flow from operating activities to net profit。
	Listing years	Age	The number of years of listed companies is the natural log.
	Institutional shareholding ratio	Institute	The sum of the shares held by institutional investors.
	The largest shareholder shareholding ratio	Bigshareholder	The shareholding ratio of the company's largest shareholder.
	The International Big4 accounting firms	Big4	Whether the listed company employs the big four international accounting firms, the value is 1, otherwise the value is 0.
	Company growth	Growth	Growth rate in operating income.
	Industry	Ind	The dummy variable of the industry.
	Year	Year	The dummy variable of the year.

4. Model construction: Drawing on the practice of Zhou Donghua et al. (2018), this paper constructs a multi-period DID model to test the impact of the Shanghai (Shenzhen)-Hong Kong Stock Connect policy on audit fees.

$$Auditfee_{i,t} = \alpha + \beta_1 Treat_{i,t} \times Post_{i,t} + \beta_2 Controls_{i,t} + \sum Year + \sum Ind + \varepsilon ...(1)$$

5. Empirical results and analysis

5.1 Descriptive statistics

The results in Table 2 are descriptive statistics of the main variables. As can be seen from the table, the average audit cost of the enterprise, indicating that the enterprise needs to pay the audit cost of 938,200 RMB on average. The average value of the underlying enterprises of Shanghai(Shenzhen)-Hong Kong Stock Connect is 0, indicating that an average of 25% of the enterprises in the sample come from the underlying range of Shanghai (Shenzhen) -Hong Kong Stock Connect.

Table 2 Descricriptive statistics of the variables

Variables	Num	Mean	Median	Minimum	Maximum	sd
Auditfee	1054	13.557	13.473	12.346	16.031	0.582
Auditcost	1054	938201.700	710000	10000	9170000	793223.00
Auditchgbig4	1054	0.028	0.000	0.000	1.000	0.164
Treat*Post	1054	0.141	0.000	0.000	1.000	0.349
Post	1054	0.670	1.000	0.000	1.000	0.470
Treat	1054	0.250	0.000	0.000	1.000	0.433
Agency	1030	0.270	0.163	0.003	11.896	0.728
Growth	1054	0.967	0.038	-0.998	332.095	12.868
Roe	1054	0.027	0.030	-0.250	0.250	0.074
Size	1054	20.297	20.301	12.120	25.884	1.448
Bigshareholder	1054	31.387	28.385	3.000	75.000	13.943
Loss	1054	0.000	0.000	0.000	0.000	0.000
Cfo	1054	1.448	0.870	-44.133	60.804	9.305
Big4	1054	0.028	0.000	0.000	1.000	0.164
Institute	1054	3.325	0.776	0.000	27.979	5.430
Age	1054	9.291	10.000	1.000	14.000	2.901
State	1054	0.105	0.000	0.000	1.000	0.307

5.2 Baseline model results

The Shanghai (Shenzhen) -Hong Kong Stock Connect and audit fees

Figure 1 shows the comparison of the audit charge trend of the Shanghai (Shenzhen)-Hong Kong Stock Connect and non-Shanghai (Shenzhen)-Hong Kong Stock Connect. The results in the figure show that the audit fees of the target enterprises have been higher than those of the non-target enterprises after the implementation of the Shanghai (Shenzhen) -Hong Kong Stock Connect policy. In general, the audit fees are on a growing trend.

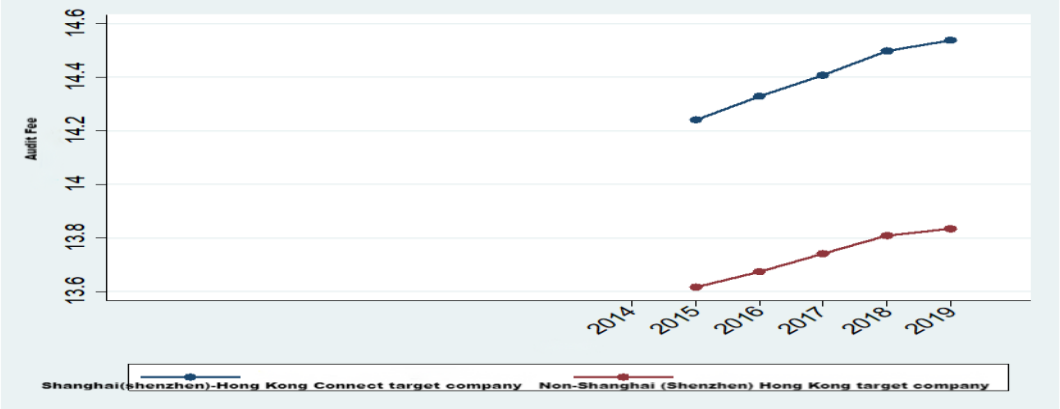

Figure 1 Comparison of audit fee fluctuation trend between Shanghai (Shenzhen)-Hong Kong Stock Connect enterprises and non-Shanghai (Shenzhen)-Hong Kong Stock Connect enterprises

Table 3 is empirical research results of the capital market opening and audit fees , the column(1) is in the control the influence of the year and the industry, the impact of Shanghai (Shenzhen)-Hong Kong Stock Connect Policy on audit fees, the results show that the capital market opening significantly increased the level of audit fees and

significantly positively correlated at the 1% level(0.356***, 7.82). In column (2), the impact of capital market opening on audit fees after adding the control variables, the effect of capital market opening on audit fees, both are significantly positively correlated at the 1% level (0.247***,5.36). The above results support the hypothesis H1a.

Table 3 Baseline regression: Capital market opening and audit fees

	(1)	(2)
VARIABLES	Auditfee	Auditfee
Treat*Post	0.356***	0.247***
	(7.82)	(5.36)
Size		0.078***
		(6.68)
Growth		0.002*
		(1.85)
Roa		-1.271***
		(-6.05)
Cfo		0.001
		(0.97)
Bigshareholder		0.000
		(0.30)
Big4		0.707***
		(8.08)
Institute		0.003
		(1.18)
Age		0.019***
		(3.47)
State		-0.130***
		(-2.83)
YEAR	YES	YES
INDUSTRY	YES	YES
Constant	13.839***	12.303***
	(124.07)	(47.93)
Observations	1,054	1,054
R-squared	0.331	0.462
Pseudo R2	0.318	0.444
t-statistics in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

5.3Consideration of endogeneity issues: a test based on the PSM-DID

In order to avoid the endogenous problems caused by sample self-selection, this paper applies the method of Chen Yunsen (2018), selected four indicators as matching variables (Earnings, BM, Beta, Growth), and used the propensity score matching method (PSM) to construct control samples similar to the sample enterprises, and obtained 471 annual observations. The results of PSM test are listed in Table 4. The results in Table show that there is no significant difference between the paired variables of the sample enterprise and the control sample enterprise after PSM matching, and the results of Pannel B in Table 4 show that the mean deviation of the sample population is not significant after matching. The above results indicate that the sample met the hypothesis requirements of PSM.

Table 4: The PSM balance test

Variable	Sample	Mean(treat=1)	Mean(treat=0)	%bias	t-test	p>|t|
Earning	U	0.065	0.041	37.2	7.50	0.000
	M	0.063	0.061	2.7	0.55	0.581
BM	U	0.587	0.600	-6.5	-1.33	0.190
	M	0.587	0.578	4.3	0.77	0.439
Growth	U	7.623	2.016	16.1	3.46	0.001
	M	2.204	3.710	-4.3	-1.13	0.260
Beta	U	1.086	1.198	-37.0	-7.55	0.000
	M	1.093	1.097	-1.3	-0.25	0.799
Panel B: Deviation test of the sample population mean						
Sample		LR chi2	Mean Bias			p>chi2
Unmatched		132.19	24.2			0.000***
Matched		2.06	3.2			0.725

In this paper, the PSM method selected matched samples and performed DID tests, and the results are shown in Table 5. The empirical research results show that the implementation of the Shanghai (Shenzhen) -Hong Kong Stock Connect policy has promoted the increase of audit fees, which is consistent with the previous conclusion.

Table 5 Shanghai (Shenzhen) -Hong Kong Stock Connect and audit charges: based on PSM-DID

	(1)	(2)
VARIABLES	Auditfee	Auditfee
Treat*Post	0.777***	0.380***
	(6.14)	(3.93)
Size		0.132***
		(3.86)
Growth		0.003***
		(5.37)
Roa		-1.934***
		(-3.24)
Cfoni		0.004
		(1.53)
Bigshareholder		0.001
		(0.37)
Big4		1.117***
		(6.36)
Institute		0.016
		(1.51)
Age		-0.020*
		(-1.72)
State		0.407***
		(2.98)
YEAR	YES	YES
INDUSTRY	YES	YES
Constant	13.853***	10.983***
	(32.61)	(8.63)
Observations	471	471
R-squared	0.539	0.762
Pseudo R2	0.521	0.745
Robust t-statistics in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

5.4 Impact mechanism analysis

In order to explore the impact of capital market opening on audit fees, this paper will analyze the mechanism from the perspectives of agency cost and change of audit firm to Big4.

5.4.1 Agency cost: According to the above mechanism analysis, First, this paper compares the differences in agency costs between the subject and non-subject firms of Shanghai (Shenzhen)-Hong Kong Stock Connect before and after the implementation of the policy, and the results are shown in Table 6, which show that there are significant differences in agency costs between the two before and after the implementation of the policy.

Table 6. Double differential analysis of agency costs

	(1)	(2)	(3)
	Post=0	Post=1	Diff-in-Diff
Treat=0	0.512	0.586	
Treat=1	0.465	0.571	
Diff(1-0)	0.008***	0.008*	0.011***
	(5.96)	(1.86)	(2.81)

Through further analysis, according to the average value of the agency cost before and after the implementation of the policy, the samples are divided into the group with high agency cost and the group with low agency cost, and then conduct empirical tests respectively. The results are shown in Table 7. Based on the results of column (2) - (3) in Table 7, we found that the influence of capital market opening on company audit fees was significantly positive. The correlation coefficient was significantly positive at 1% (0.959**, 2) and (0.208 ***, 4), but is clearly greater in the sample with high agency costs, with a coefficient of 0.959, while it is only 0.208 in the sample with low agency costs, and the difference between the two is significant at the 1% level(0.001***, 14.85). Taken together, the level of audit fee enhancement will indeed vary after the opening of capital markets due to high agency costs.

Table 7 Capital market opening and audit fees: agency costs

	(1)	(2)	(3)
VARIABLES	Auditfee ALL	Auditfee Agencyhigh=1	Auditfee Agencyhigh=0
Treat*Post	0.247***	0.959**	0.208***
	(5.36)	(2.95)	(4.41)
Diff(3)-(2)=0		P=0.001***	
		(14.85)	
Size	0.078***	-0.073	0.104***
	(6.68)	(-0.92)	(8.03)
Growth	0.002*	-0.315	0.002
	(1.85)	(-1.66)	(1.63)
Roa	-1.271***	-3.549*	-1.204***
	(-6.05)	(-2.13)	(-5.68)
Opinion	-0.287***	-0.350	-0.294***
	(-4.81)	(-0.90)	(-4.81)
Recday	0.000***	0.000	0.000***
	(4.95)	(0.32)	(5.12)
Cfo	0.001	0.034	0.002
	(0.97)	(1.18)	(1.07)
Bigshareholder	0.000	0.002	0.000
	(0.30)	(0.11)	(0.27)
Institute	0.003	-0.014	0.003
	(1.18)	(-0.34)	(0.93)
Age	0.019***	-0.022	0.017***
	(3.47)	(-0.39)	(3.08)

State	-0.130***	-0.296	-0.151***
	(-2.83)	(-0.74)	(-3.26)
Dual	-0.014	-0.378	-0.014
	(-0.48)	(-1.25)	(-0.48)
Constant	12.303***	14.824***	11.806***
	(47.93)	(8.10)	(42.46)
YEAR	YES	YES	YES
INDUSTRY	YES	YES	YES
Observations	1,054	30	1,024
R-squared	0.462	0.876	0.467
Pseudo R2	0.444	0.401	0.449
t-statistics in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

5.4.2 The change of the audit firm

According to the above mechanism analysis, first of all, this paper compares the differences between the changes of the audit firms to Big4 before and after the Shanghai (Shenzhen)-Hong Kong Stock Connect before and after the implementation of the policy. According to the results in Table 8, we find that the changes of the target enterprises and the non-target enterprises differ significantly before and after the implementation of the policy.

Table 8 Double differential analysis of audit firm changes

	(1)	(2)	(3)
	Post=0	Post=1	Diff-in-Diff
Treat=0	0.028	0.049	
Treat=1	0.125	0.207	
Diff(1-0)	0.010***	0.014***	0.017***
	(9.57)	(11.54)	(3.59)

Through further analysis, this paper divides the sample into the sample group of changing firms and the sample group of not changing firms according to whether the firms change their audit firms to the "Big4" or not, and then conducts the empirical test separately, and the results are shown in Table 9. Based on the results in columns (2)-(3) of Table 9, the paper finds that the impact of capital market opening on audit fees is mainly reflected in the group of firms that did not change to the "Big4", and the correlation coefficient between the two is significantly positive at the 1% level(0.217***， 4.63).The correlation coefficient between the group that changed to the "Big Four" is positive but not significant (1.792, 2.22), and the coefficient on the impact of capital market opening on audit fees is significantly different at the 1% level between the sample that changed firms and the sample that did not change firms (0.000***, 21.39). The above analysis shows that after the opening of the capital market, audit fees will indeed vary depending on whether the company changes its audit firm to one of the "Big4".

Table 9 Capital market opening and audit fees: change of audit firms

	(1)	(2)	(3)
VARIABLES	Auditfee ALL	Auditfee Changebig4=1	Auditfee Changebig4=0
Treat*Post	0.242***	1.792	0.217***
	(5.25)	(2.22)	(4.62)
Diff （3）-（2）		P=0.000***	
		(21.39)	
Size	0.081***	0.459	0.083***
	(7.03)	(2.24)	(7.10)
Roa	-1.288***	-12.544	-1.312***
	(-6.13)	(-1.84)	(-6.35)
Opinion	-0.293***	-1.751*	-0.287***
	(-4.91)	(-3.01)	(-4.90)
Recday	0.000***	-0.000	0.000***
	(4.98)	(-0.09)	(4.85)
Cfo	0.001	-0.015	0.001
	(0.96)	(-0.36)	(0.80)
Bigshareholder	0.000	0.038	0.001
	(0.22)	(1.43)	(0.55)
Institute	0.003	-0.013	0.004
	(1.20)	(-0.07)	(1.50)
Age	0.019***	-0.264	0.024***
	(3.52)	(-1.80)	(4.37)
State	-0.133***	-1.704	-0.157***
	(-2.88)	(-1.45)	(-3.39)
Dual	-0.013	0.454	-0.001
	(-0.45)	(0.41)	(-0.05)
Constant	12.241***	7.144	11.960***
	(48.04)	(1.13)	(46.29)
YEAR	YES	YES	YES
INDUSTRY	YES	YES	YES
Observations	1,054	40	1,014
R-squared	0.460	0.967	0.433
Pseudo R2	0.443	0.642	0.416
t-statistics in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

5.5 Robustness test

5.5.1 Parallel trend test

To verify the previous findings, this paper conducts a parallel trend test by setting dummy variables (YR) for several years 2012, 2013, 2015, and 2016 and generating interaction terms with the subject firms (Treat*YRX),for subsequent balanced trend tests. The results are shown in Table 10, the coefficients of Treat*YR2012 and Treat*YR2013 are positively but not significantly correlated, and the coefficients of Treat*YR2015 and Treat*YR2016 after the implementation of the policy are significantly positively correlated at the 5%-10% level, respectively, indicating that the level of audit fees significantly increases after the implementation of the policy, which is consistent with the previous findings consistent with the previous findings. The above findings suggest that the increase in corporate audit fees is indeed caused by the implementation of the policy.

Table 10 Parallel trend test

	(1)	(2)	(3)	(4)
VARIABLES	Auditfee	Auditfee	Auditfee	Auditfee
Treat*YR2012	-0.037			
	(-0.50)			
Treat*YR2013		-0.047		
		(-0.68)		
Treat*YR2015			0.181*	
			(1.87)	
Treat*YR2016				0.563***
				(4.77)
Size	0.175***	0.175***	0.170***	0.177***
	(15.27)	(15.28)	(14.66)	(15.58)
Roa	-1.883***	-1.881***	-1.892***	-1.865***
	(-7.90)	(-7.89)	(-7.94)	(-7.88)
Opinion	-0.474***	-0.474***	-0.475***	-0.486***
	(-6.54)	(-6.54)	(-6.56)	(-6.75)
Recday	0.000**	0.000**	0.000**	0.000***
	(2.34)	(2.35)	(2.35)	(2.59)
Cfo	0.003**	0.003**	0.003**	0.003*
	(2.01)	(2.00)	(2.04)	(1.72)
Bigshareholder	-0.003**	-0.003**	-0.003**	-0.003***
	(-2.52)	(-2.50)	(-2.52)	(-2.66)
Big4	1.404***	1.402***	1.387***	1.354***
	(20.25)	(20.27)	(19.96)	(19.51)
Institute	0.001	0.001	0.000	-0.000
	(0.17)	(0.20)	(0.14)	(-0.11)
Age	-0.022***	-0.022***	-0.023***	-0.023***
	(-4.46)	(-4.45)	(-4.60)	(-4.64)
State	0.157***	0.156***	0.154***	0.155***
	(3.44)	(3.40)	(3.37)	(3.40)
Dual	-0.017	-0.017	-0.015	-0.021
	(-0.52)	(-0.51)	(-0.46)	(-0.66)
Constant	10.836***	10.828***	10.922***	10.800***
	(41.65)	(41.56)	(41.45)	(41.82)
YEAR	YES	YES	YES	YES
INDUSTRY	YES	YES	YES	YES
Observations	1,507	1,507	1,507	1,507
R-squared	0.522	0.523	0.524	0.530
Pseudo R2	0.514	0.514	0.515	0.521
t-statistics in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

5.5.2 Placebo test

This paper verifies the previous findings through a placebo test by artificially moving the implementation of the policy forward by three and four years, respectively, to see whether the impact of the policy has changed through the results of the study. Therefore, this paper takes 2010 and 2011 as the years when the policy was implemented and constructs a double difference model test, and the results are presented in Table 11. The results in columns (1)-(2) in Table 11 show that the correlation coefficients of Treat*Post2010, Treat*Post2011 and Auditfee are no longer significant, and the above results indicate that the change in the level of audit fees is brought about by the implementation of the policy.

Table Table 11: Placebo test

	(1)	(2)
VARIABLES	Auditfee	Auditfee
Treat*Post2010	-0.073	
	(-1.46)	
Treat*Post2011		-0.047
		(-0.68)
Size	0.175***	0.175***
	(15.31)	(15.28)
Roa	-1.875***	-1.881***
	(-7.86)	(-7.89)
Opinion	-0.472***	-0.474***
	(-6.51)	(-6.54)
Recday	0.000**	0.000**
	(2.48)	(2.35)
Cfo	0.003**	0.003**
	(1.98)	(2.00)
Bigshareholder	-0.002**	-0.003**
	(-2.34)	(-2.50)
Big4	1.408***	1.402***
	(20.33)	(20.27)
Institute	0.001	0.001
	(0.40)	(0.20)
Age	-0.021***	-0.022***
	(-4.32)	(-4.45)
State	0.157***	0.156***
	(3.42)	(3.40)
Dual	-0.016	-0.017
	(-0.49)	(-0.51)
Constant	10.812***	10.828***
	(41.49)	(41.56)
YEAR	YES	YES
INDUSTRY	YES	YES
Observations	1,507	1,507
R-squared	0.523	0.523
Pseudo R2	0.514	0.514
t-statistics in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

6.Conclusions and enlightenment

The implementation of the Shanghai (Shenzhen) Hong Kong Stock Connect policy, an innovative mechanism for opening up China's capital market in recent years, has attracted foreign institutional investors to participate directly in the construction and operation of China's capital market, with a view to improving the information environment and enhancing the efficiency of China's capital market through this policy. Then audit, as an important link in the healthy development of capital market, but few studies have analyzed the impact of this policy on audit. Therefore, this paper explores the impact mechanism of the implementation of the Shanghai(Shenzhen) -Hong Kong Stock Exchange policy on auditing, using audit fees as a research perspective, and constructs a multi-period DID model to empirically analyze the impact mechanism of the implementation of the policy on auditing. The study finds that the level of audit fees increases significantly after the implementation of the policy, and finds that: firstly, enterprises' efforts to reduce agency costs with foreign institutional investors is an important channel for the impact of the policy on audit fees; specifically, after the implementation of the policy, the audit fees of enterprises with high agency costs are significantly higher than those of enterprises with low agency costs; secondly, enterprises change

their audit firms to international “Big4”. After the implementation of the policy, the increase of audit fees is mainly reflected in the enterprises that have not changed their firms to the "Big4", and the enterprises that have changed to “Big4” have not significantly increased their audit fees.

The opening up of the capital market is one of the important economic policies in China in recent years, and the spirit of the 19th Party Congress proposed "expanding the opening up of the financial market and serving the real economy in finance". The findings of this paper help to understand the impact of Shanghai(Shenzhen)-Hong Kong Stock Connect policies on China's capital market, and provide policy insights for the in-depth opening up of China's capital market.

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