

The Research on the Relation between Accountancy Firm's Expertise and IPO Approval —— Empirical Studies based on SSE STAR Market

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Abstract. The registration system reform with information disclosure as the core is a major institutional innovation in China's capital market in recent years. Compared with the "government-led" approval system, the pilot registration-based review system for the Science and Technology Innovation Board is characterized by "market-led, government-supervised". In this context, how to better play the role of intermediaries and realize the benign interaction of "gatekeeper" supervision to protect the interests of investors is an important issue. An empirical analysis is made on IPO approval and IPO time used using the measurement of accountancy firm expertise model. The results of both models show that accountancy firm expertise have no significant impact on IPO approval and IPO time used, by contrast, ROA and LnA have significant impact on IPO approval and IPO time used, that is to say, it depends more on the financial situation of the enterprise to influence the IPO approval and IPO time used of the enterprise.

Keywords: Accountancy Firm's Expertise; IPO Approval; SSE STAR Market.

1. Introduction

The registration system reform with information disclosure as the core is a major institutional innovation in China's capital market in recent years. The smooth implementation of the Science and Technology Innovation Board marks the long-awaited registration system reform that promotes the marketization and the rule of law of China's capital market has finally come to fruition. Compared with the "government-led" approval system, the pilot registration-based review system for the Science and Technology Innovation Board is characterized by "market-led, government-supervised" [1]. Under the background of the registration system of the Science and Technology Innovation Board, information disclosure is the core, the role of the CSRC will be weakened, and the functions and roles of intermediaries will become more prominent. As an intermediary agency, accounting firms have ushered in unprecedented opportunities, but at the same time they are also faced with greater challenges. Investors choose the quality of securities more through intermediaries, and the market's feedback to intermediaries will be more sensitive than before. The "play" of the intermediary agency will be more abundant, and its role will be more important. In this context, how to better play the role of intermediaries and realize the benign interaction of "gatekeeper" supervision to protect the interests of investors is an important issue [2].

2. Literature review and hypothesis

2.1 IPO Pass or not

In the studies of auditor industry specialization, Xia shows that analysis for auditors, developing industry specialization is critical to improving audit quality and avoiding audit risks [3]. But Cai and Xian show that in the Chinese listed company audit market, generally speaking, the industry specialization of audit firms is negatively correlated with audit quality [4]. The reasons of this result is that the overall independence of audit firms in China is relatively low, vulnerable to the negative impact of economic dependence within the industry, and the low degree of development of industry specialization is the main reason for this negative correlation. Ma et al. find that the domestic top 10 (non-top 10) audit firms with industry specialization have lower probability of informed transactions than those without industry specialization [5]. Further examination also shows that audit industry specialization is more effective in reducing the probability of informed trading in firms with institutional investor ownership.

2.2 The time used of IPO Approval

The waiting period before the successful listing of an enterprise applying for IPO is often the most difficult moment for the company to be listed. The shorter the waiting period, the more favorable it is for the company to be listed. Many factors affect the IPO time of an enterprise. Luo and Wang find that the better the performance, the lower the debt ratio, and the smaller the scale of the company to be listed, the shorter the application time will be [6]. The sponsor's reputation will affect the meeting time of the company to be listed. The higher the sponsor's reputation is, the shorter the listing time used will be. Zheng et al. find in their study that venture capital investment not only improves the probability of initial IPO filing of the invested company but also shortens the total time used and time used of the IPO process [7]. The influence of venture capital on the probability and time of IPO failure is mainly caused by the high reputation venture capital, but the proportion of venture capital, ownership nature, and joint investment have no consistent influence on the probability and time used of the IPO process. Fu et al. find that in China's capital market, venture capital institutions can play a good role in accelerating the IPO of start-ups [8]. More qualified venture capital firms can help Chinese start-ups IPO more quickly; the matching difference between venture capital institutions and start-ups will also affect the IPO speed of enterprises. The matching between "bad venture capital" and "good enterprise" and the matching between "good venture capital" and "bad enterprise" will accelerate and decelerate the IPO speed of enterprises respectively. Zhao and Lu find that negative media reports have a delaying effect on the IPO process of enterprises, which is reflected in the lower approval rate of IPO companies and the longer elapsed time [9]. However, they also find that positive media reports do not speed up the IPO process.

2.3 Accountancy Firm's Expertise

There are many factors effecting the IPO pass rate. Sun, Wang, Shan elaborate on five reasons for the failure of IPO application for Growth Enterprise Markets: 1) insufficient reasons for financing 2) lack of growth potential 3) poor ownership structure 4) unobvious industry advantages 5) finance data in doubt. Accountancy firms play an important role in the IPO process, considering their responsibility of audit [10]. Du, Lai, Du analyze data concerned with IPO enterprises and Issuance Appraisal Committee from 2006 to 2010 and suggest intermediates (sponsor, accountancy firm, law firm) serving in Issuance Appraisal Committee significantly increase the IPO pass rate [11]. Yang indicates that the accountancy firm that had association with policy reduced the IPO pass rate of enterprises it served [12]. Huang adopts data of 1379 enterprises applying for CSRC between Apr, 2014 and Dec, 2018, and both detect that reputation of the accountancy firm could not influence the enterprise's IPO pass[13].

2.4 Hypothesis

We mainly analyze the impact of audit firms' industry expertise on the IPO pass rate from two aspects: 1. Audit quality. Suzanne Lowensohn et al. confirm a positive relation between measures of audit firm specialization and audit quality [14]. Therefore, it may issue a higher quality audit report for companies in a specific industry, which may have a positive impact on the company's IPO passing rate. 2. Reputation of the audit firms: Financial information is the core part of the IPO application materials of an enterprise, so accountants play a vital role in the IPO process of an enterprise. In order to meet the financial index requirements for listing or strive for a stronger issue price, some companies planning to be listed may adopt fictitious financial statements to achieve the illusion that their main business is outstanding and their performance continues to grow. So, accounting firms play an important role. The reputation of the accounting firm also has an important impact on the credibility of the final financial data. An audit firm with industry expertise and a high reputation in the industry may have a positive impact on the business performance of the company.

H1: The accountancy firm's expertise has positive effects on the IPO approval rate of the firm.

We mainly analyze the impact of audit firms' industry expertise on the IPO pass efficiency from two aspects: 1. Audit efficiency: Before a company is listed, an enterprise must go through a series of standardized processes of restructuring, counseling, and reporting. The audit firm has played an important role in helping companies rectify their internal financial structures, adjust and upgrade their management systems, issue audit papers, and more. Ahsan Habib and Md. Borhan Uddin Bhuiyan say that industry-specialist auditors are able to develop industry-specific knowledge and expertise and to familiarize themselves quickly with the clients' business operations and, therefore, are likely to complete the audit sooner than their non-specialist counterparts [15]. Gramling and Stone believe that industry-specialized firms have more specialized audit skills and experience; have low cost due to economies of scale or expertise due to scale of knowledge [16]. Therefore, the industry expertise of accounting firms will have a positive impact on audit efficiency, which may also have a positive impact on IPO passing efficiency. 2. Audit firm reputation: According to Cai and Xian learn that if an audit firm provides an audit to a company in a specialized industry, the company has a higher passing efficiency, which is bound to have a positive impact on the reputation of its industry expertise [4]. So, this also incentivizes industry specialist firms to provide high quality and efficient audit reports. The high-quality and efficient audit report provided may have a positive impact on the efficiency of the enterprise.

H2: The accountancy firm's expertise has negative effects on the firm's IPO approval time used.

3. Data and methods

3.1 Data Processing

The data is obtained from CSMAR, Choice, iFinD and Shanghai Stock Exchange (SSE) official website. First, we obtain initial samples, 594 companies that file IPO on the SSE STAR Market, from CSMAR, Choice and iFinD between July 22, 2019 and December 31, 2021. There are 378 companies that pass the IPO and 216 companies that do not pass the IPO in these samples.

We use the first level of the industry classification criteria of Commission's GUIDANCE FOR ARTICLES OF ASSOCIATION OF LISTING CORPORATION (2012 Revision) published by China Securities Regulatory Commission, as well as the accountancy firm which is responsible for the firm's IPO audit to classify the sample of companies.

Based on initial samples, we first drop firm samples, classified by the industry and the accountancy firm responsible for IPO, of which volume is less than 10. After that, we obtain 264 IPO approving enterprises and 151 IPO failing enterprises and then, using the IPO filing date as the benchmark, we manually collect financial statistics from the latest annual reports, before the IPO filing date, of 415 firm samples. Then, we drop firm samples with non-positive gearing ratio, non-positive ROA and

missing financial statistics. Finally, we obtain the valid sample of 341 enterprises, including 242 IPO approving firms and 99 IPO failing firms.

3.2 Data Description

Table 1. Data Description of Explanatory Variable IMS of 341 Firm Samples.

Accountancy Firm	Number	Average	Standard Deviation	Minimum	Median	Maximum
RSM	9	0.155	0.024	0.000	0.122	0.499
an-China	9	0.137	0.010	0.008	0.128	0.310
BDO	9	0.099	0.011	0.000	0.037	0.253
BTI	9	0.046	0.002	0.000	0.035	0.116
Da Hua CPAs	9	0.045	0.003	0.000	0.012	0.126
Shinewing	9	0.064	0.005	0.000	0.044	0.211
ZHONGHUI	9	0.035	0.002	0.000	0.012	0.106
PWC	9	0.183	0.092	0.000	0.032	0.768
WUYIGE	9	0.032	0.001	0.000	0.031	0.076
Grant Thornton	9	0.063	0.004	0.000	0.069	0.180
EY	9	0.141	0.091	0.000	0.007	0.925

Table 1 is a comprehensive statistic broken down by industry market share (IMS). It gives a comprehensive assessment of each accounting firm's field. From industry C26 to I25, PwC, RSM and an-China with strong comprehensive strength can be preliminarily assessed according to the mean and median. The only person with a positive peak, i.e. the steepest statistic, is EY. At the same time, it is also a company with a wide range of involvement and excellent quality in the industry. Compared to the normal distribution, all samples have a skewness greater than zero or more than they are all right-biased.

Table 2. Data Description of the Non-Explanatory Variables Value of 341 Firm Samples.

	Number	Average	Standard Deviation	Minimum	Median	Maximum
Time (PASS)	241	184.000	4357.902	21.000	189.000	374.000
DR (PASS)	241	0.377	0.080	0.049	0.350	3.846
ROA (PASS)	241	0.504	0.305	0.002	0.350	5.503
ATR (PASS)	241	0.762	0.395	0.001	0.657	8.904
ASSETS (PASS) (Unit: Billion)	241	2.101	85346580000	1.669	698.500	114.800
DR (NO PASS)	99	0.424	0.030	0.095	0.407	0.856
ROA (NO PASS)	99	0.147	0.248	0.002	0.113	0.852
ATR (NO PASS)	99	0.904	0.202	0.186	0.817	3.667
ASSETS (NO PASS) (Unit: Billion)	99	119.600	87459530000	64.270	459.700	24.010

Table 2 shows descriptive statistics of the financial condition of the IPO passed and IPO failing firms, which include the mean, standard deviation, minimum, median and maximum values. It can be seen that the average passing time used is around 6 months and the situation fluctuates normally.

Compared with IPO failing firms, the debt asset ratio is more distributed among the passing companies. Also, the ROA of firms that passed is significantly higher than that of the firms that do not pass, with the average of 2.84. Besides, the minimum of failed firms are higher than that of passed firms, while the total asset turnover ratios are approximately the same.

4. Model

4.1 Variables

Table 3. Definition of Variables.

Type of Variable	Name	Name and Form in the Model	Meaning
Explained Variables	IPO Approval	Approval	When the company approved by the Issuance Examination Committee, we defined that IPO Approval=1; otherwise, we defined that IPO Approval=0.
	IPO Approval Time	Time	The number of days between the date of IPO application acceptance and the date of approval
Explanatory Variables	IMS	IMS	IMS is the IPO auditing share of accountancy firm in industry
	IMS_D	IMS_D	If IMS is $\geq 10\%$, firm i is defined as the specialty firm of industry k, and the dummy variable IMS_D=1; otherwise, IMS_D= 0.
	IPS	IPS	IPS is the proportion of IPO auditing income of accountancy firm in industry.
	IPS_D	IPS_D	The highest value of IPS is interpreted as the expertise industry k of accountancy firm n and is defined that IPS_D=1, Otherwise, we define that IPS_D=0.
Control Variables	Debt Asset Ratio	DR	The asset-liability ratio of the company in the year prior to IPO Approval
	Total Asset	lnA	The natural logarithm of the company's total assets in the year before listing
	ROA	ROA	ROA in the year before the company listing
	Total Asset Turnover Ratio	ATR	Total Asset Turnover Ratio in the year before the company listing
	Year FE	Year FE	Annual dummy variable, when company belongs to a certain year, we defined it as 1; otherwise, we defined it as 0
	Industry FE	Ind FE	Annual Industry variable, when company belongs to a certain industry, we defined it as 1; otherwise, we defined it as 0

4.2 Model 1

$$\begin{aligned} \text{Approval}_{nki} = & \alpha_0 + \alpha_1 \text{IMS}_{nk} + \alpha_2 \text{DR}_{nki} + \alpha_3 \text{ROA}_{nki} + \alpha_4 \text{ATR}_{nki} \\ & + \alpha_5 \ln A + \alpha_6 \text{Ind FE} + \alpha_7 \text{Year FE} \end{aligned} \quad (1)$$

$$\begin{aligned} Approval_{nki} = & \alpha_0 + \alpha'_1 IMS_{D_{nk}} + \alpha_2 DR_{nki} + \alpha_3 ROA_{nki} + \alpha_4 ATR_{nki} \\ & + \alpha_5 \ln A + \alpha_6 Ind\ FE + \alpha_7 Year\ FE \end{aligned} \quad (2)$$

$$\begin{aligned} Approval_{nki} = & \alpha_0 + \alpha''_1 IPS_{nk} + \alpha_2 DR_{nki} + \alpha_3 ROA_{nki} + \alpha_4 ATR_{nki} \\ & + \alpha_5 \ln A + \alpha_6 Ind\ FE + \alpha_7 Year\ FE \end{aligned} \quad (3)$$

$$\begin{aligned} Approval_{nki} = & \alpha_0 + \alpha'''_1 IPS_{D_{nk}} + \alpha_2 DR_{nki} + \alpha_3 ROA_{nki} + \alpha_4 ATR_{nki} \\ & + \alpha_5 \ln A + \alpha_6 Ind\ FE + \alpha_7 Year\ FE \end{aligned} \quad (4)$$

4.3 Model 2

$$\begin{aligned} IPO\ Approval\ Time_{nki} = & \beta_0 + \beta_1 IMS_{nk} + \beta_2 DR_{nki} + \beta_3 ROA_{nki} + \beta_4 ATR_{nki} \\ & + \beta_5 \ln A + \beta_6 Ind\ FE + \beta_7 Year\ FE \end{aligned} \quad (5)$$

$$\begin{aligned} IPO\ Approval\ Time_{nki} = & \beta_0 + \beta'_1 IMS_{D_{nk}} + \beta_2 DR_{nki} + \beta_3 ROA_{nki} + \beta_4 ATR_{nki} \\ & + \beta_5 \ln A + \beta_6 Ind\ FE + \beta_7 Year\ FE \end{aligned} \quad (6)$$

$$\begin{aligned} IPO\ Approval\ Time_{nki} = & \beta_0 + \beta''_1 IPS_{nk} + \beta_2 DR_{nki} + \beta_3 ROA_{nki} + \beta_4 ATR_{nki} \\ & + \beta_5 \ln A + \beta_6 Ind\ FE + \beta_7 Year\ FE \end{aligned} \quad (7)$$

$$\begin{aligned} IPO\ Approval\ Time_{nki} = & \beta_0 + \beta'''_1 IPS_{D_{nk}} + \beta_2 DR_{nki} + \beta_3 ROA_{nki} + \beta_4 ATR_{nki} \\ & + \beta_5 \ln A + \beta_6 Ind\ FE + \beta_7 Year\ FE \end{aligned} \quad (8)$$

4.4 Explained Variables

4.4.1 IPO Approval Time

$$IPO\ Approval\ Time_{kni} = IPO\ Registration\ Date_{nki} - IPO\ Filing\ Date_{nki} \quad (9)$$

Where $IPO\ Approval\ Time_{kni}$ is the time of corporation i in industry k with accountancy firm n spending on IPO approval, which is defined as the time used from the date of IPO registration and that of IPO filing.

4.4.2 IPO Approval

$IPO\ Approval_{nki}$ Is defined as dummy variable. If the IPO of the corporation is approved, we assume that $IPO\ Approval_{nki} = 1$; otherwise, we assume that $IPO\ Approval_{nki} = 0$.

4.5 Explanatory Variables

Following CAI and Xian, Accountancy Firm Expertise is explained by its Industry Market Shares (IMS) and its Industry Portfolio Shares (IPS), which are specified as follows:

$$IMS_{nk} = \frac{\sum_{i=1}^I REV_{nki}}{\sum_{n=1}^N \sum_{i=1}^I REV_{nki}} \quad (10)$$

$$IPS_{nk} = \frac{\sum_{i=1}^I REV_{nki}}{\sum_{k=1}^K \sum_{i=1}^I REV_{nki}} \quad (11)$$

Where IMS_{nk} , is the IPO auditing share of accountancy firm n in industry k , IPS_{nk} , is the proportion of IPO auditing income of accountancy firm n in industry k , REV_{nki} , is the main business income of accountancy firm n in industry k . IMS_{nk} And REV_{nki} are both continuous variables [4].

If $IMS_{nk} \geq 10\%$, we assume that $IMS_{nk_D} = 1$. If $IMS_{nk} < 10\%$, we assume that $IMS_{nk_D} = 0$. The highest value of IPS_{nk} is interpreted as the expertise industry k of accountancy firm n and is defined that $IPS_{nk_D} = 1$. Otherwise, we define that $IPS_{nk_D} = 0$.

4.6 Control Variables

Considering eligibility criteria for an IPO and following Huang, we use Total Assets, Debt Asset Ratio, ROA and Total Asset Turnover Ratio respectively assess the asset size, the short-term liquidity, the long-term liquidity, the profitability and the efficiency of a corporation, which are specified as follows[13]:

$$Debt\ Asset\ Ratio = \frac{Total\ Liabilities}{\frac{(Ending\ Balance\ of\ Total\ Assets + Beginning\ Balance\ of\ Total\ Assets)}{2}} \quad (12)$$

$$ROA = \frac{Net\ Profit}{Total\ Assets} \quad (13)$$

$$Toal\ Asset\ Turnover\ Ratio = \frac{Proceeds\ of\ Sale}{\frac{(Ending\ Balance\ of\ Total\ Assets + Beginning\ Balance\ of\ Total\ Assets)}{2}} \quad (14)$$

5. Results

5.1 Results of Hypothesis 1

Table 4. Results of Module 1.

VARIABLES	(1) Approval	(2) Approval	(3) Approval	(4) Approval
IMS	-0.129 (-0.65)			
IMS_D		-0.025 (-0.49)		
IPS			0.210 (1.27)	
IPS_D				0.061 (1.02)
DR	0.193 (1.39)	0.188 (1.35)	0.200 (1.44)	0.201 (1.45)
ROA	0.377*** (7.24)	0.378*** (7.21)	0.370*** (7.11)	0.373*** (7.17)
ATR	-0.089 (-1.53)	-0.088 (-1.51)	-0.093 (-1.61)	-0.093 (-1.60)
lnA	0.102*** (4.12)	0.099*** (4.13)	0.090*** (3.70)	0.093*** (3.86)
Constant	-1.454*** (-2.86)	-1.404*** (-2.81)	-1.242** (-2.45)	-1.289** (-2.56)
Observations	341	341	341	341
R-squared	0.211	0.211	0.214	0.213
Ind FE	YES	YES	YES	YES

T-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In the results of model 1, namely the regression results with Approval as dependent variable, IMS have no significant impact of expertise in accountancy firm on Approval. By contrast, the test T values of ROA were 7.24, 7.21, 7.11 and 7.17, which are significantly positively correlated with IPO Approval at the significance level of 0.1%. The test T values of lnA are 4.12, 4.13, 3.70 and 3.86, which have a significant positive correlation with IPO Approval at the significance level of 0.1%. In general, ROA and lnA have significant positive correlation with IPO approval.

5.2 Results of Hypothesis 2

Table 5. Results of Module 2.

VARIABLES	(1) Time	(2) Time	(3) Time	(4) Time
IMS	38.418 (1.02)			
IMS_D		-0.197 (-0.02)		
IPS			11.770 (0.38)	
IPS_D				6.774 (0.61)
DR	-28.268 (-0.97)	-26.180 (-0.90)	-26.096 (-0.90)	-25.201 (-0.86)
ROA	-26.371*** (-2.81)	-25.195*** (-2.67)	-25.496*** (-2.72)	-25.397*** (-2.72)
ATR	3.497 (0.27)	3.127 (0.24)	2.988 (0.23)	2.581 (0.20)
lnA	-12.509** (-2.49)	-10.370** (-2.19)	-10.909** (-2.29)	-10.962** (-2.35)
Constant	435.703*** (4.20)	398.084*** (4.04)	408.383*** (4.06)	410.416*** (4.14)
Observations	242	242	242	242
R-squared	0.136	0.132	0.133	0.134
Ind FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES

T-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In the results of model 2, The impact of accountancy firm expertise variables in model 2 are not significant to IPO time, The test T values of ROA are -2.81, -2.67, -2.72 and -2.72, which are significantly negatively correlated with the IPO Approval time at the significance level of 0.1%. The test T values of lnA are -2.49, -2.19, -2.29 and -2.3, which are significantly negatively correlated with IPO Approval time at the significance level of 1%. In general, ROA and lnA have significant negative correlation with IPO time.

6. Robustness test

In order to verify that the level of expertise of the accounting firm has a positive impact on the firm's IPO approval rate, this paper uses the annual fixed effect of the company and the cluster analysis.

6.1 Robustness test of Hypothesis 1

Table 6. Robustness test of Hypothesis 1.

VARIABLES	(1) Approval	(2) Approval	(3) Approval	(4) Approval
ims	-0.129 (-0.58)			
ims_d		-0.025 (-0.53)		
ips			0.210 (1.75)	
ips_d				0.061 (1.32)
dr	0.193 (1.26)	0.188 (1.20)	0.200 (1.28)	0.201 (1.29)
roa	0.377*** (5.37)	0.378*** (5.88)	0.370*** (5.10)	0.373*** (5.19)
atr	-0.089** (-3.14)	-0.088** (-3.06)	-0.093*** (-3.54)	-0.093*** (-3.50)
lnA	0.102*** (3.52)	0.099*** (3.79)	0.090** (3.17)	0.093*** (3.40)
Constant	-1.500** (-2.56)	-1.454** (-2.74)	-1.308* (-2.26)	-1.342** (-2.41)
Observations	341	341	341	341
R-squared	0.181	0.180	0.184	0.182
Number of Industry	9	9	9	9
Industry FE	YES	YES	YES	YES

Robust t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

As shown from the chart, the relationship between the time of the interpreted variable and the explanatory variables ips and ims is not significant. At the same time, the test T-values of ROA at the level of 0.1% were 5.37, 5.88, 5.10 and 5.19, respectively, which were significantly positively correlated with IPO approval. The test T-values of lnA were 3.52, 3.79, 3.17 and 3.40, respectively, and were significantly positively correlated with IPO approval at a significance level of 0.1%. Overall, there was a significant positive correlation between ROA and IPO approval.

6.2 Robustness test of Hypothesis 2

Table 7. Robustness test of Hypothesis 2.

VARIABLES	(1) Time	(2) Time	(3) Time	(4) Time
ims	38.418 (1.23)			
ims_d		-0.197 (-0.02)		
ips			11.770 (0.39)	
ips_d				6.774 (0.66)
dr	-28.268 (-0.82)	-26.180 (-0.72)	-26.096 (-0.72)	-25.201 (-0.71)
roa	-26.371*** (-5.08)	-25.195*** (-4.59)	-25.496*** (-4.75)	-25.397*** (-5.03)
atr	3.497 (0.23)	3.127 (0.19)	2.988 (0.19)	2.581 (0.16)
lnA	-12.509 (-1.32)	-10.370 (-1.20)	-10.909 (-1.26)	-10.962 (-1.35)
Constant	446.654** (2.33)	407.231** (2.32)	416.124** (2.37)	418.040** (2.51)
Observations	242	242	242	242
R-squared	0.076	0.072	0.072	0.073
Number of Industry	9	9	9	9
Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES

Robust t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

In the chart results, the impact of the accounting firm expertise variable on the timing of the IPO is not significant, and the test T-values of ROA are -5.08, -4.59, -4.75 and -5.03, respectively, which are significantly negatively correlated with the IPO approval time at a significance level of 0.1%. The test T-values of lnA were -1.32, -1.20, -1.26 and -1.35, respectively, which were significantly and negatively correlated with the IPO approval time at the significance level of 1%. Overall, ROA was significantly negatively correlated with IPO timing.

The hypothesis of this article is verified, so the conclusions of this article are robust.

7. Conclusion and shortages

7.1 Conclusion

Based on two results, we find that the choice of the accountancy firm does not have significant effects on whether a company passes the IPO or not. It can be seen in table 4 and table 5: explanatory variables IMS, IMS_D, IPS, IPS_D all fail to pass the significance test.

However, results suggest that whether a firm can pass the IPO depends on this firm's own financial situation, which is within our expectations. It can be seen in two results: (1) the total asset and ROA of a firm have a positive and significant effect on the firm's IPO passing probability. (2) The total asset and ROA of a firm have a negative and significant effect on the firm's time used for passing IPO.

7.2 Shortages

First, control variable values (ROA, total asset turnover and so on) of IPO passing firms that is chosen from financial statements for the latest year before the IPO filing date and the impact of these variables would lead to discrepancies. We consider that greater the difference between the timing of a firm's annual report and the month of the listing filing, the greater discrepancies are.

Second, we control some of the financial indicators of the company, but we still miss firm and market factors that would have significant impacts on the company's IPO passing.

Third, when analyzing, we lack the IPO filing data of IPO failing firms, so the time effect cannot be taken into account when taking the regression of Model 1, which may cause bias in results.

Lastly, we just simulate from the perspective of institutions and businesses, while ignoring investors. Although investors diffuse and uncontrollable, it is still an important factor that can influence IPO approval.

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