

## Research Article

# Loosening of Access Threshold and Downturns in Listed Firms Performance: A Quasi-Natural Experiment from the “IPO Green Channel” for Poverty Alleviation

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The China Securities Regulatory Commission (CSRC) proposed the green channel policy for poverty alleviation Initial Public Offerings (IPOs), aiming to help poverty-stricken areas reduce poverty and increase income, but it has an impact on the business performance of the companies involved. This paper uses data from public annual reports of listed companies to construct a policy intervention group and a control group and comparatively analyzes the degree of annual performance downturn of newly listed companies in A-share from 2016 to 2017 through a counterfactual method, and the results show that the “IPO green channel” policy for poverty alleviation has an obvious negative effect on listed enterprises in poverty-stricken counties. The results show that enterprises listed via the green channel have more significant performance downturn than those listed normally during the same period. This paper suggests that the distortion of the market issuance system causes the declining of the quality of IPO firms. Finally, this paper suggests that regulators should cooperate with local governments actively to ensure the smooth implementation of the government’s poverty alleviation efforts while balancing market equity and efficiency. The SFC should take more consideration of institutional compatibility for policy output in financial poverty alleviation to avoid institutional alienation and distortion of corporate behavior.

## 1. Introduction

Poverty is the primary problem faced by developing countries around the world, and China has made remarkable achievements and rich institutional innovations in the long-term process of benefiting and reducing poverty. In order to achieve the goal of comprehensive victory in the fight against poverty by 2020, the Chinese government has issued many policies to promote poverty alleviation. From early relief-type poverty alleviation to targeted poverty alleviation since 2013, the idea of poverty alleviation has been evolved; meanwhile, various government departments have actively adopted policies and measures within their own authority to help poverty-stricken areas develop. On September 9, 2016, the SFC issued the “*Opinions of the SFC on Playing the Role of Capital Market to Serve the National Strategy of Poverty*

*Alleviation*” (hereinafter referred to as the “*Opinions*”), in which IPOs of enterprises in poverty-stricken areas enjoy special preferential treatment under the policy of “after reporting, the checking job will be immediately done and after checking, it will be immediately issued” (hereinafter referred to as the “IPO green channel” for poverty alleviation). According to the “*Opinions*,” in order to achieve the “IPO green channel” listing, if the enterprises under the jurisdiction of 832 impoverished counties across the country want to achieve the “IPO green channel” listing, they only need to meet any one of the following conditions in that year. (1) The place of registration or the place of main production and operation is classified as a poverty-stricken area, and it has local business and taxation records for three years. (2) In the last fiscal year, the local income tax is paid over 20 million yuan, and after listing, it promises not to

move out of poverty-stricken areas within three years. There is no doubt that the SFC's approach to speed up the pace of listing of enterprises in poverty-stricken counties by relaxing IOP regulation has raised high social concerns.

After the publication and implementation of the Opinions, 13 enterprises from poverty-stricken areas have been listed on the A-share main board market under the "IPO green channel" policy for poverty alleviation, and a total of 7.4 billion RMB has been raised in the capital market. In addition, 66 enterprises from poverty-stricken areas are further preparing for listing related work [1]. The "IPO green channel" policy for poverty alleviation has triggered dramatic social repercussions, and the theoretical circles also have different opinions. Listed enterprises in poverty-stricken areas are often scarce and are the backbone of local output and tax revenue. The original intention of the SFC to introduce this policy is to achieve the plan that listed enterprises in poverty-stricken areas can obtain better financial support through the capital market as soon as possible, improve their business performance, enhance their corporate governance, and develop and strengthen themselves so as to improve poverty alleviation and increase income in poverty-stricken counties. However, issuing and listing are still in the review and approval stage in China's securities market, and ordinary enterprises that plan to go public generally face a queuing period of 2-3 years after submitting their listing materials. The "IPO green channel" policy of SFC has faced fierce criticism, with many scholars questioning the quality of operations of companies listed in poverty-stricken areas and suggesting that there may be more problems for companies that are listed through the green channel unexpectedly. Policies can easily lead to adverse selection, which will make companies that can not succeed in the IPO queue turn to seek "IPO green channel" in poverty-stricken areas [2]. In addition, market fairness issues caused by the special treatment of IPOs have also been criticized widely.

It is because of the controversy that how about the late-stage business performance of companies, which go public quickly through the "IPO green channel," has become a hot issue in the society. From the perspective of the SFC's poverty alleviation policy implementer, this is related to the success or failure of the IPO policy for poverty alleviation; from the perspective of securities market supervision, this is related to the rigor and order fairness of the IPO system construction; from the perspective of listed companies, the distortion of institutional constraints will originate incentives of distort behavior; from the perspective of market participants, the special rule of "IPO green channel," which is closer to the registration system, will result in the adjustment of market valuation of the enterprises concerned. If the companies listed in the "IPO green channel" generally have serious performance changes, the emergence of the market for "lemons" will cause a phenomenon similar to the "Gresham," in which the bad money drives out the good money". And this phenomenon can lead to competition among listed firms and reduce the overall performance of the market.

Therefore, this paper attempts to adopt a potential outcome framework to assess the impact of the "IPO green

channel" policy on the performance of enterprises listed through the "IPO green channel" in poverty-stricken counties. This paper demonstrated new proof of inefficiency performance, which was reduced by the finance market policy bias. In contrast, many present researches just focus on the exposure of inequity market standing of listed IPO firms. By examining the business indicators of the nine A-share main board-listed enterprises listed through the "IPO green channel" in 2016–2017 compared with those listed in the same period, it is found that the enterprises listed through the "IPO green channel" had a more obvious downturn than those listed through the normal IPO in the same period. Unlike previous studies, the marginal contributions of this paper are (1) differences-in-differences method, and a series of robustness tests are used in this paper to reveal the true characteristics of less performance of IPO companies in poverty-stricken counties, adding consolidation empirical evidence to the research in this aspect; (2) the study confirms that the loosened restriction arrangement of IPO policy has a stronger negative incentive mechanism, and the profits of companies listed through the "IPO green channel" for poverty alleviation have declined more than those of the listed firms in the same period.

## 2. Literature Review and Theoretical Discussion

*2.1. Literature Review.* There are lots of controversy of the theoretical analysis and research of the "IPO green channel" policy for poverty alleviation among domestic scholars. Some argue that the policy gives priority to supporting enterprises in poverty-stricken areas and encourages them to use capital market resources, that is, supporting capital to enter poverty-stricken areas [3]. IPO policy for poverty alleviation is conducive to accelerating the financing process of enterprises in poverty-stricken areas, absorbing their favorable resources to accommodate them; therefore, it can promote the economic development of poverty-stricken areas and coordinate the balanced development between regions [4]. Through the "IPO green channel" policy for poverty alleviation, enterprises in poverty-stricken areas have diversified their financing channels and expanded their financing scale in the capital market. In addition, the policy encourages high-quality enterprises to help enterprises in poverty-stricken areas and supports listed companies to purchase enterprises in these areas, so various resources will flow into the areas, which will promote local development [5]. Contrary to this view, some scholars think that this initiative may have an impact on the equity and efficiency of the securities market. The "IPO green channel" policy for poverty alleviation has prompted listed companies in poverty-stricken areas to enjoy the "super-national treatment" of the securities market issuance process, which actually constitutes eligibility discrimination for the group of enterprises in the long queue for IPO [6]. In the securities issuance market, there were as many as hundreds of companies queuing up for reviewing by the Issuance Examination Committee of the China Securities Regulatory Commission. A company has been queuing for a meeting since the IPO listing counseling period, which lasts for

several years, and the opportunity cost is huge [7]. Some companies even miss the opportunity of listing and withdraw from the IPO pending queuing sequence regretfully due to the high cost of IPO or fundamental changes in the market situation [8]. If the waiting period for IPO issuance approaches or even exceeds three years, some companies may eventually move to the fast track of relocating to poverty-stricken counties, which will lead to policy loopholes in the securities issuance market. Such policies can reduce market fairness and effectiveness when the cost of securities issuance fraud is low, the IPO registration system is not truly realized, and the chances of delisting of poorly listed companies are low [9].

Another study believes that “IPO green channel” policy is essentially an industrial guidance policy. The original intention of the SFC’s policy is not only to help the stock of enterprises in poverty-stricken areas to go public, but also to open a policy window to guide some enterprises to relocate to poverty-stricken counties, so as to help the development of county economic and play a role in poverty alleviation. The formulation of these industrial policies is based on the view that as long as there are imperfections in the market mechanism and “market failures,” it is necessary to give full play to the role of industrial policy [10]. The effectiveness of industrial policy is mainly reflected in whether the object of the policy can respond to the industrial policy. If the object of regulation does not respond to the industrial policy, it is difficult to say that the industrial policy is effective [11]. In emerging markets where government intervention is still prevalent, political capital does create value, and startups typically build political capital to facilitate their entry into the IPO market, but political capital does not bring further benefits to the post-IPO market [12]. Since the State Council promulgated the Outline of Industrial Policy and the Decision on the Main Points of Current Industrial Policy in 1989, a large number of industrial policies have been introduced and implemented in China over the years, but many of them have gradually been tested to be lack of effectiveness and even have negative effects on industrial development. Special IPO channels are a common tool for the SFC to favor policies for different regions, and before that, there were “IPO green channels” priority review for enterprises in Xinjiang and Tibet. The problem of relocating companies to list in poverty-stricken areas can, on the positive side, change the uneven distribution of listed companies and increase the number of listed companies in poverty-stricken areas, while on the negative side, it may have a negative impact on the future development of listed companies. For example, the company faces a new environment after relocation, and the infrastructure conditions in the poverty-stricken areas are relatively limited and unfriendly, which may affect the efficiency of the company. The “IPO green channel” can indeed save the time of queuing and reviewing compared with the normal listing of enterprises, but this phenomenon of “migration wave” should be considered rationally to avoid the phenomenon of “maladjustment” [13].

However, if the “IPO green channel” for poverty-stricken counties is regarded as an industrial policy, its own

effectiveness is strongly questioned by academics. The new policy of industrial poverty alleviation is based on marketing means to promote poverty alleviation, which not only helps poverty-stricken counties form industrial chains and leading enterprises, but also helps establish a market mechanism to drive poverty-stricken areas out of poverty [14–15]. As the securities market environment keeps changing, and the relevant management system keeps improving, the effect of the “IPO green channel” policy for poverty alleviation may be weakened after its release [16]. The effect of industrial policy on equity and debt financing of listed companies proves that industrial policy is effective in the area of corporate finance, and the amount of equity and debt financing of listed companies supported by industrial policy is more than that of listed companies not supported by industrial policy [17]. By observing and sorting out industrial policies in different industries, it is found that for postindustrialized countries, although industrial policies can adequately promote leapfrog economic growth under specific conditions and at specific times, they gradually fail as markets to continue to mature as well as develop, and the role of market mechanisms in resource allocation is fully exploited [18, 19]. Additionally, for China, this change is more significant.

In summary, there are a lot of discussions on the “IPO green channel” policy for poverty alleviation. There are many academic disputes from the perspective of industrial poverty alleviation, regional development, market supervision, and corporate performance. However, most of the debates occur during the policy launch period, and the evaluation of the policy implementation effect is rare, and also empirical analysis is mainly used, while positive analysis rarely used. In addition, there is still a lack of comparative research on events at the listed company level regarding the impact of the “IPO green channel” policy for poverty alleviation in the securities market under the current domestic listing review system. The situation of profit management before listing and performance deterioration after listing has occurred in both China’s and international securities markets. There is no convincing empirical evidence on whether the performance downturn after listing is different from that of IPO companies in the same period as companies listed through the “green channel” lack effective withdraw mechanisms under the environment of loosened listing supervision. Will such performance changes be exacerbated under the attempts of China’s securities market regulatory authorities to alleviate poverty through IPOs? This paper attempts to answer this question through empirical quantitative analysis of the same history period.

*2.2. Mechanism Exploration.* The law of securities market for many years shows that a large number of companies have deteriorated performance before IPO issuance and during a financial period after IPO listing, which is manifested as a precipitous decline in ROA and ROE [20–22]. And this phenomenon is called “performance change” by secondary market participants. Studies at abroad have generally focused on the management of profits during the IPO counseling period of companies listed in the industry and

the question that leads to “performance changes” [22–25]. Satta et al. found that the long-term aftermarket performance of IPOs was poor through conducting an OLS regression analysis by using the long-term performance of IPOs in the seaport industry [26]. Falconieri et al. even noted that the impact of poor post-IPO performance is pervasive, which could lead to higher underpricing and lower valuation of newly listed companies in the market [27].

China’s A-share market listing resources have become scarce due to the approval system, and the delisting companies are quite rare, which invisibly increases the responsibility of the market supervision department and also aggravates the “performance change” of listed companies. Under the approval system, all companies that are going to be listed must line up to pass the review of all the reviewed companies by the Issuance Examination Committee of the China Securities Regulatory Commission. And qualified companies obtain the endorsement of listing qualifications, forming the so-called “paternal love” [28]. Since listed companies are considered to have the invisible guarantee of the government because of the prelisting information quality and performance endorsement by the government regulator, there is a phenomenon of manipulating the performance of the listing counseling period through profit management to win “paternal love” for the company [29]. The direct consequence of this practice is that firms lose the incentive to manage their surplus after listing, which directly leads to performance collapse.

The limited market response to postregulation is a problem that the A-share market has been facing for a long time [30]. Therefore, under the strong supervision, the SFC has extended the queuing process of companies before listing, which has increased the cost of companies manipulating their earnings to obtain listing qualifications in terms of time span. Conventional research suggests that the waiting time for IPOs is longer under the approval system than under the registration system, and the “performance change” of that firm is more severe [31]. Because high profit levels are conducive to a high premium for IPO valuation, firms are generally eager to improve their pre-IPO valuation through profit management [32]. However, that firms hire issue counseling agencies to maintain a high profit manipulation for a longer period of time directly pushes up the indirect cost of the issue [33], and after the listing, it will inevitably lead to a compensatory downturn in the level of corporate profits. Also, the company’s total assets will expand due to the expansion of the listing, while its net earnings per share performance decline significantly.

It is doubtful that the mechanism of “performance change” of listed companies in poverty-stricken counties skips the queuing process and goes directly through the “IPO green channel” for listing. One possibility is that companies listed through “IPO green channel” in poverty-stricken counties are expected to reduce profit manipulation and lower the degree of “performance changes.” Because of the short time of profit management in the early stage of the through train listing, the indirect issuance cost of IPO companies is reduced, and theoretically, it is not easy to have a compensatory fall in profit after listing.

Accordingly, this paper proposes hypothesis 1a: the “IPO green channel” mitigates the performance downturn of listed firms in poverty-stricken areas.

At the same time, there is another possibility that the “IPO green channel” listing becomes an attempt to deregulate [34], which will attract a group of “secondary” companies that do not have average performance and have difficulty in the traditional IPO queue to choose to go public, thus triggering more serious “performance changes”.

In summary, this paper proposes hypothesis 1b: the “IPO green channel” exacerbates the performance downturn of listed firms in poverty-stricken areas.

### 3. Research Design

*3.1. Variable Descriptions and Data Sources.* The study is done based on the specific approach of Zhang, Wang and Zhou [35], takes the A-share main board enterprises listed in 2016–2017 as the overall sample, and selects 9 enterprises listed through the “IPO green channel” as the treatment group, including 3 listed in 2016 and 6 listed in 2017. The other 596 enterprises were selected as the control group, of which 166 were listed after September 9, 2016, and 430 were listed in 2017. After excluding the samples with incomplete data, the firm-level unbalanced panel data for the period 2017–2020 for 556 samples are constituted. The data are mainly from the CMARS database, with some supplementary data from individual companies’ public annual reports and the Straight Flush Finance Database. ROA, ROE, fixed assets ratio, quick ratio, current ratio, net value of inventory, total asset, and operating receipt are taken as observed variables. And for the sake of data stability, the variables using price as the unit are all adjusted with the constant value of RMB in 2016 to perform CPI reduction and logarithmic processing.

*3.1.1. Policy Variables.* This paper sets whether to go public through the “IPO green channel” for poverty alleviation as the policy variable, for example, if the enterprise that is listed through the “IPO green channel” is set as 1, while other listed enterprises of the same batch are set as 0.

*3.1.2. Control Variables.* Fixed assets ratio, quick ratio, current ratio, net value of inventory, total assets, and operating income are used as control variables in this paper. These indicators are all financial indicators, among which fixed assets ratio is used to examine whether the company has idle funds. According to the aspect of the company’s operating capacity, the higher the fixed assets ratio is, the weaker the operating capacity is. The quick ratio and current ratio indicate the company’s solvency, and if they are lower, the company’s short-term solvency is weaker. The net value of inventory indicates the net realizable value of the company’s inventory, which also reflects the company’s profitability. Total assets represent the total assets of the company. Operating income indicates the income from main business and other businesses of the company. These financial indicators are used to indicate the operating ability of

enterprises, so they are selected to measure the operating ability of enterprises listed through the “IPO green channel” and normal listed enterprises.

**3.1.3. Outcome Variables.** In this paper, the return on assets and return on net assets are used as outcome variables. The return on assets is an important indicator of the profitability of an enterprise, and if the return on assets is higher, it indicates that the profitability of the enterprise is higher. The return on net assets indicates the efficiency of capital use and is generally used to analyze the profitability of an enterprise. Using the return on assets and the return on net assets as the outcome variables in this paper, the impact of IPO green channel policy on enterprise performance and the effectiveness of pro-poor “IPO green channel” policy can be analyzed more accurately.

**3.2. Research Ideas.** For the sake of completeness and validity of the sample data, this paper tries to compare the business indicators of enterprises listed through the IPO green channel on the A-share main board from 2016 to 2017 with those of other enterprises listed in the same batch, because the policy requirement of “IPO green channel” in poverty-stricken counties may lead enterprises to relocate to poverty-stricken counties for three years to seek green channel listing. From 2016 to 2017, a total of nine enterprises from poverty-stricken areas were listed on the A-share main board through the “IPO green channel.” This paper takes “IPO green channel” policy for poverty alleviation as a quasi-natural experiment and will use the differences-in-differences (differences-in-differences) method to examine the impact of the IPO green channel policy on corporate performance and the effectiveness of “IPO green channel” policy for poverty alleviation. The study uses a multiphase differences-in-differences method to conduct a counterfactual study by selecting nine A-share main board firms listed through the “IPO green channel” as the treatment group and other A-share main board firms listed in the same batch as the control group. The reliability of the results is then further verified by replacing the outcome variable, replacing the estimation method, and replacing the counterfactual method with a series of robustness tests.

**3.3. Measurement Model Setting.** According to the model setting of differences-in-differences method, the econometric model of this paper is as follows:

$$Y_{it} = \beta_0 + \beta_1 P_i + \beta_2 T_t + \beta_3 (P_i \times T_t) + \theta X_{it} + \mu_t + \lambda_i + \varepsilon_{it}. \quad (1)$$

In this formula,  $Y_{it}$  represents the effectiveness of the explained variable “IPO green channel” policy,  $i$  denotes the sample firms, and  $t$  refers to time.  $P_i$  represents the treatment group dummy variable representing whether the sample enterprises participate in the “IPO green channel” for poverty alleviation. If the company is listed through the “IPO green channel,” it is set to 1, and other companies in the same batch are set to 0.  $T_t$  denotes the time dummy variable,

and since the “IPO green channel” policy for poverty alleviation was proposed in 2016,  $T_t$  is set to 0 for the year 2016 and before, and 1 for the year after 2016.  $P_i \times T_t$  is the interaction term between the variables in the treatment group and the time dummy variable after the implementation of the “IPO green channel” policy.  $X_{it}$  represents the vector set of control variables, and the control variables in this paper include fixed asset ratio, quick ratio, current ratio, net value of inventory, total assets, and operating income.  $\theta$  is the coefficient of control variables.  $\mu_t$  refers to time fixed effects,  $\lambda_i$  represents individual fixed effects, and  $\varepsilon_{it}$  is the random disturbance term.

## 4. Empirical Analysis

**4.1. Baseline Regression.** This paper uses differences-in-differences method to estimate the impact of “IPO green channel” policy for poverty alleviation on firm performance. Table 1 shows the benchmark regression results, in which model 1 and model 2, respectively, represent the effect of policy intervention on return on assets without control variables and with control variables; model 3 and model 4, respectively, show that the return on net assets without control variables and the return on net assets with control variables are affected by policy intervention. The results show that, under the four models, ROA and ROE are significantly negative in response to “IPO green channel” policy, and the average processing effect coefficients of corporate performance are  $-6.216$ ,  $-3.690$ ,  $-12.558$  and  $-8.756$ . That these results are all significant at the 1% level indicates that the implementation of the “IPO green channel” obviously reduces the business performance of enterprises, which explained that the enterprises listed through the “IPO green channel” have a more significant downturn in performance than the normal IPO enterprises during the same period. From the regression results, the return on net assets in model 3 and model 4 is more likely to be influenced by the “IPO green channel” policy for poverty alleviation. ROE is considered as the ratio of net profit to net assets. A decrease in ROE indicates a decrease in net profit or an increase in net assets. This means that the company’s performance declines after going public through the “IPO green channel,” and the net profit decreases or the net assets increases, resulting in a change in the company’s performance. Therefore, hypothesis 1a is falsified, and hypothesis 1b holds that the pro-poor “IPO green channel” increases the performance collapse effect of enterprises listed through this opportunity.

As shown in Table 1, the effects of fixed assets ratio, quick ratio, net value of inventory, and total assets are all obviously negative. It can be seen that, in order to enjoy the policy bonus of “IPO green channel,” the enterprise in question has a stronger incentive to whitewash its previous performance statements to meet the criteria for listing and meet the purpose of listing. In fact, the “IPO green channel” policy is used to reduce the listing queuing time and raise capital, while that whether the enterprise can help poverty-stricken areas out of poverty is unknown, which is contrary to the original intention of the “IPO green channel” for poverty

TABLE 1: Baseline regression results.

Variables	Model 1 ROA	Model 2 ROA	Model 3 ROE	Model 4 ROE
$P_i \times T_i$	-6.216*** (1.362)	-3.690*** (1.219)	-12.558*** (2.662)	-8.756*** (2.508)
Fixed assets ratio		-0.103*** (0.014)		-0.168*** (0.029)
Current ratio		0.015*** (0.003)		0.003 (0.006)
Quick ratio		-0.020*** (0.004)		-0.011 (0.007)
Net value of inventory		-1.529*** (0.498)		-1.903* (1.025)
Total assets		-11.968*** (0.653)		-19.639*** (1.344)
Operating revenue		11.175*** (0.866)		18.379*** (1.783)
Constant	7.511*** (0.185)	27.357*** (3.510)	12.184*** (0.361)	40.961*** (7.223)
Sample fixed	Fixed	Fixed	Fixed	Fixed
Time fixed	Fixed	Fixed	Fixed	Fixed
Observations	3, 451	3, 261	3, 451	3, 261
R-squared	0.198	0.355	0.247	0.342
Number of id	556	534	556	534

Note. \*\*\*, \*\*, and \* indicate, respectively, significance at the 1%, 5%, and 10% levels. The t-values are in parentheses.

alleviation. From the postlisting performance, the business performance and operational strength of these enterprises are far below the listing standards. After controlling for the reduction of fixed assets ratio, quick ratio, net value of inventory, and total assets, the performance of enterprises in the intervention group declines significantly. To sum up, the initial intention of the SFC is good, but it is necessary to strictly follow the listing standards to avoid policy speculation in the “IPO green channel” for poverty alleviation.

#### 4.2. Robustness Test

**4.2.1. Replacement of Result Variables.** Taking robustness into consideration, two result variables are selected in this paper, namely, the return on assets and return on net assets, and these two variables are replaced to avoid the contingency of empirical results. As shown in Table 1, when the return on net assets is used as a result variable, policy intervention has a significant negative effect, which verifies the robustness of the benchmark regression results.

**4.2.2. Replacement of the Model Estimation Method.** The differences-in-differences method is based on the premise that the trends of the treatment group and control groups share the same trend before the implementation of the policy; namely, if there is no “IPO green channel” policy for poverty alleviation, there is no significant difference in the trends of listed enterprises in poverty-stricken areas and those in other areas over time. At this point, the differences-in-differences method may not be able to fully prove it, and the above benchmark regression results are not reliable if the performance of the “IPO green channel” companies is lower than that of other companies in the same period before the implementation of the policy. Therefore, in order to

eliminate the sample active selection bias of the listed enterprises through “IPO green channel,” improve the comparability of the two groups, and avoid the error of the treatment and control groups in the trend of changes before the implementation of the policy, this paper uses the PSM-DID to replace the benchmark differences-in-differences for robustness test. Based on matching estimators, the basic idea of PSM-DID is to find neighboring enterprises with similar characteristic variables among other enterprises listed in the same batch, so that the observable variables of the enterprise and those listed through “IPO green channel” policy for poverty alleviation can be matched, and thus the two can be compared with each other.

The results from PSM-differences-in-differences estimation are presented in Table 2. The PSM-differences-in-differences coefficients of models 5 to 8 are significantly negative, which are consistent with the results of benchmark differences-in-differences. The only difference is that the return on equity estimated by PSM-differences-in-differences model is more affected by policy. The above regression results test that the “IPO green channel” policy for poverty alleviation has a significant negative effect on the performance of the enterprises involved, which is listed through “IPO green channel” policy for poverty alleviation.

**4.2.3. Replacement of Counterfactual Method—SCM.** To further verify the robustness of the empirical results and to avoid the performance of individual samples affecting the significance of the whole intervention group, this paper replaces the counterfactual estimation method with synthetic control method to estimate the test for a single enterprise sample. Two enterprises listed through the “IPO green channel” in 2016, namely, Gaozheng Explosive and Emin Pharma, and two enterprises listed through the “IPO

TABLE 2: Regression results based on PSM-DID.

Variables	Model 5 ROA	Model 6 ROA	Model 7 ROE	Model 8 ROE
$P_i \times T_t$	-4.353** (1.791)	-2.465* (1.471)	-10.717*** (3.374)	-7.758** (3.067)
Fixed assets ratio		-0.033 (0.026)		-0.087 (0.054)
Current ratio		0.085*** (0.030)		0.057 (0.062)
Quick ratio		-0.090*** (0.031)		-0.065 (0.064)
Net value of inventory		0.348 (0.778)		0.691 (1.622)
Total assets		-9.852*** (1.443)		-17.788*** (3.009)
Operating revenue		5.084** (1.974)		8.986** (4.115)
Constant	8.364*** (0.393)	38.128*** (8.457)	13.417*** (0.740)	70.286*** (17.635)
Observations	907	822	907	822
R-squared	0.165	0.287	0.231	0.307
Number of id	233	223	233	223

Note. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively. The t-values are in parentheses.

green channel” in 2017, namely, Xinjiang Torch and Huabao Oil and Gas, are selected for the study. Among them, Gaozheng Explosive and Xinjiang Torch belong to heavy industry enterprises, and Emin Pharma and Huabao Oil and Gas belong to light industry enterprises. The enterprises in different years are selected to avoid time and other instabilities; different industries are selected to avoid the particularity of the same industry, which would influence the experimental results. Therefore, the selection of these four enterprises can better reflect the effectiveness of the “IPO green channel” policy.

In this paper, the control group enterprises, which are not listed through the “IPO green channel” policy, are regarded as the counterfactual substitution of the treatment group enterprises through the “IPO green channel” policy in the synthetic control method with ROA as the outcome variable. The results of the study are shown below. Figures 1–3 all reflect that the trends of the treatment group and the control group basically share the same trends before the enterprises are listed through the “IPO green channel,” but after the implementation of the policy, the curve of the treatment group drops sharply, and there is a significant gap with the control group, and the policy has a negative effect. This indicates that the performance of enterprises listed through the “IPO green channel” is far inferior to that of enterprises listed through the normal channel and that these enterprises have changed their performance after being listed through the policy, which further questions the effectiveness of the “IPO green channel.” Contrary to the results of the previous three figures, the performance of Huabao Oil and Gas has improved after being listed through the “IPO green channel” (Figure 4). In the figure, the solid line shows the actual ROA of the “IPO green channel” listed firms, and the dash line shows the counterfactual targets. The SCM results show the differences between synthesis control term and actual term.

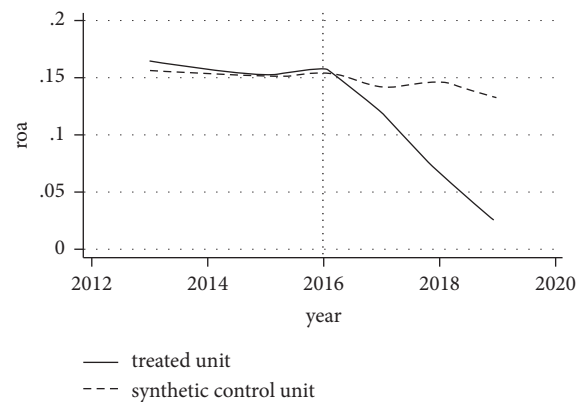


FIGURE 1: ROA figure of Gaozheng explosive. Note: Gaozheng explosive was listed through the “IPO green channel” for poverty alleviation in 2016, and the development trends of the treatment group and control groups were basically the same before the IPO policy for poverty alleviation was proposed in 2016, and there was a change by the time the policy occurred in 2016, with a sharp decline trend in the treatment group fold and a flattening trend in the control group fold. There is a large difference between the two (the figure is directly exported by Stata software).

Although there are exceptions, most of the results indicate that the “IPO green channel” has led to a decline in performance, which is consistent with the above empirical regression results and further verifies the robustness of the empirical results.

4.3. Mechanism Analysis. The previous paper can adequately verify that “IPO green channel” policy for poverty alleviation has a negative effect on the listed enterprises in poverty-stricken areas through the benchmark regression and further robustness tests. However, the specific mechanism of “IPO green channel” policy for poverty alleviation that leads to the



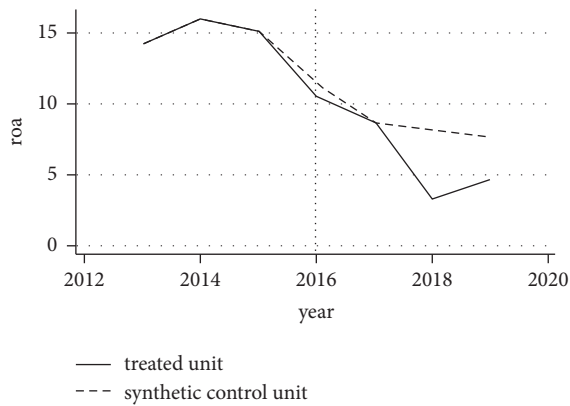


FIGURE 2: ROA figure of Yiming pharma. Note: Yiming pharma was successfully listed in Tibet through this policy in 2016. The trend of treatment group and control groups was basically the same before the occurrence of the policy in 2016. After 2016, both treatment group and control group showed a significant downward trend, but the decline of treatment group was more drastic and the gap between them was getting bigger (the figure is directly exported by Stata software).

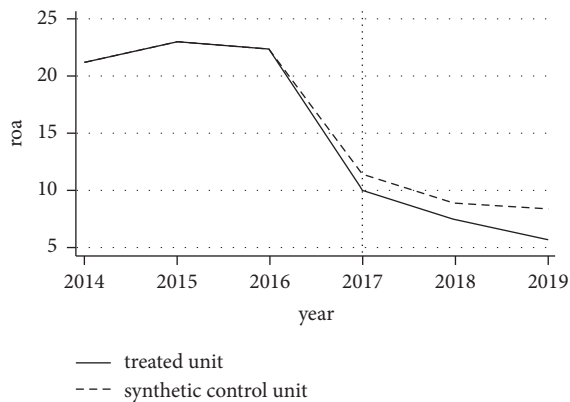


FIGURE 3: ROA figure of Xinjiang torch. Note: Xinjiang torch was listed through the IPO green channel in 2017. And before its being listed, the treatment group and control group fold share the same trend. After 2017, both experienced a decline, but the decline in the treatment group was more severe, which indicates that Xinjiang Torch has experienced a change in performance after being listed through this policy (the figure is directly exported by Stata software).

change of enterprises' performance after being listed still needs further discussion. This paper explores the effectiveness of the "IPO green channel" from two perspectives, net profit and total profit, which are the main indexes to measure the operating efficiency of enterprises. The higher the net profit and total profit, the better the operating efficiency of the company. The higher the net profit and total profit, the better the company's operating efficiency. Starting from these two indicators, respectively, the performance change factors of the enterprises can be reflected more effectively. And it reflects that the "IPO green channel" policy of deregulate a significant deterioration of the profit of listed companies in the average treatment effect value. The regression coefficients of model 9 and model 10 are  $-4.353$  and

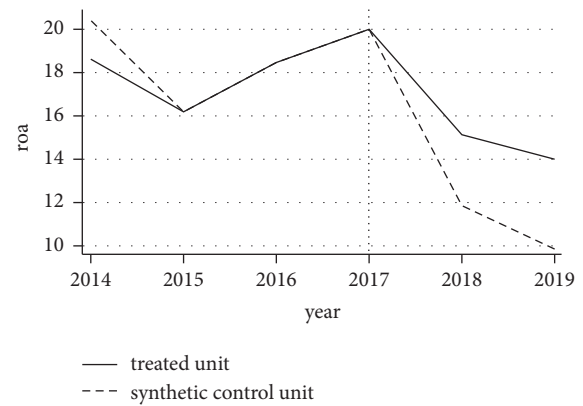


FIGURE 4: ROA chart of Huabao oil and gas. Note: Huabao oil and gas was listed through the "IPO green channel" in 2017. Before the occurrence of the policy, the trend of the treatment group and the control group are roughly the same. However, after the policy occurred, the control group declined more severely than the treatment group with observable differences from the first three figures (the figure is directly exported by Stata software).

$-7.758$ , both of which are negative and significant at the level of 10%, indicating that the policy intervention reduces corporate profitability by more than 10%. After the implementation of "IPO green channel" policy for poverty alleviation, there is a significant decline in net profit and total profit, indicating a direct causal relationship between the "IPO green channel" policy and the change of corporate performance. The outcome variable in the baseline regression is return on assets, which represents the ratio of net profit after tax to total assets. A decrease in return on assets means a decrease in net profit or an increase in total assets. After being listed, enterprises can use the securities market to raise funds and absorb more capital, so the asset size of enterprises listed through the "IPO green channel" is increased. The result of Table 3 shows that the net profit of the enterprises decreases after being listed, which leads to a rapid decrease in ROA due to the combination effect of increasing asset size and decreasing net profit. The analysis of the mechanism shows that the net profit of enterprises listed through the "IPO green channel" decreases instead of increasing, the return on assets decreases, and the level of performance declining is much faster than that of other enterprises listed in the same batch.

**4.4. Discussion.** Although CSRC plays a crucial role of the stock market equilibrium, it was difficult to balance efficiency and justice when the regulation policy distorted to eliminating the poverty. We demonstrated the main results of DID estimation that the "IPO green channel" policy not only reduced market justice, but also damaged market efficiency in the operation performance indicators including ROA and ROE. The robustness tests verified our main results solidly. There were nine enterprises listed from the "IPO green channel" as a poverty-aid tool. Unfortunately, all these listed companies showed their less profit ability after IPO. Compared with the other new listed companies in the same period from Sep 2016 to Dec 2017, the listed companies



TABLE 3: Mechanistic analysis of net profit and total profit.

Variables	Model 9 $\ln\_netprofit$	Model 10 $\ln\_totalprofit$
$P_{it} \times T_{it}$	-0.1060* (0.0549)	-0.1182* (0.0629)
Fixed assets ratio	-0.0042*** (0.0006)	-0.0040*** (0.0007)
Current ratio	-0.0002 (0.0001)	-0.0002 (0.0002)
Quick ratio	0.0003* (0.0002)	0.0004** (0.0002)
Net value of inventory	-0.1802*** (0.0225)	-0.1936*** (0.0257)
Total assets	-0.3194*** (0.0298)	-0.3564*** (0.0342)
Operating revenue	1.3114*** (0.0400)	1.3529*** (0.0458)
Constant	0.7386*** (0.1600)	0.8310*** (0.1832)
Observations	3, 231	3, 227
R-squared	0.3873	0.3242
Number of id	534	534

Note. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively. The t-values are in parentheses.

coming from poverty areas exhibited the lower ROA and ROE performance. Our mechanism analysis revealed that great loss of net profit and total profit contribute the big strike to these “bad” companies. The IPO rules of more than two years waiting prevent the risk of listed companies by lasting the IPO applying period. The “IPO green channel” policy broke out the rules. The implementation of policy gathered the risk of listed companies.

The public should not be surprised by performance drop pattern of new listed companies in China. But they could not endure the faster speed and deeper collapse of these upstarts, which were released from “IPO green channel” by the name of poverty alleviation. China have already claimed the goal of poverty elimination that has already been gained comprehensively. The benefits of local economic are not clarified, though, of course, the listed companies received more money from the stock market and have more economic power to improve the local situation of poverty. The cost of loosening restriction leaved the big problem of performance degradation.

## 5. Conclusions and Recommendations

**5.1. Research Conclusions.** In this paper, through differences-in-differences, nine enterprises listed on the main board through the “IPO green channel” in the A-share market from September 2016 to December 2017 are used as the experimental group, and other enterprises listed in the same batch are used as the control group to analyze of the effectiveness of “IPO green channel” policy for poverty alleviation. The article further verifies the repetitiveness of the results by replacing the outcome variables, replacing the estimation method, and replacing the counterfactual method to conduct robustness tests. This paper analyzes the

mechanism of the “IPO green channel” policy through the perspective of net profit and total profit and concludes that the specific mechanism of the “IPO green channel” policy for poverty alleviation leads to the change in the performance of enterprises after being listed. The results of the study include the following:

First, the negative impact of the key indicators such as the return on assets is common among the enterprises that are listed through the “IPO green channel” for poverty alleviation. The empirical results show that the implementation of the “IPO green channel” policy for poverty alleviation significantly reduces the business performance of related listed enterprises and that, on the basis of the general performance deterioration of newly listed enterprises in domestic A-share listed enterprises, enterprises that are listed through the “IPO green channel” have a more significant performance decline than other enterprises listed in the same period. There are two reasons: on the one hand, most enterprises choose to be listed through “IPO green channel” in poverty-stricken areas, and the driving factor is not in response to the National Poverty Alleviation policy, but to obtain the relaxed preferential treatment of the entry threshold of listing and shorten the time cost and compliance approval cost of listing. After being listed, various defects and deficiencies of enterprises have been exposed, and their performance is far inferior to that of normally listed enterprises. On the other hand, there are also some enterprises that meet the criteria for listing in the “IPO green channel” for poverty alleviation, but there is a gap between the actual situation of the enterprise and the development capacity of the region to which the enterprise has moved, and there is a possibility that the business performance of the enterprises will fluctuate significantly after moving to the poverty-stricken areas.

Secondly, through the mechanism analysis from the perspective of net assets and total assets, this paper finds that the net profit of enterprises decreases after they are listed through the “IPO green channel” for poverty alleviation. After being listed, enterprises can raise funds and absorb more capital, so the asset size keeps increasing. On the other hand, in order to carry out continuous surplus management, enterprises have the impulse to actively reduce profits after being listed, resulting in a significant decrease in ROA. This may be that the mechanism of “IPO green channel” policy for poverty alleviation has a mitigating effect on enterprises’ performance. However, enterprises listed through “IPO green channel” for poverty alleviation generally show a stronger impulse to change their performance, which is beyond social expectations.

**5.2. Policy Implications.** As a major industrial policy for poverty alleviation, the implementation of the “IPO green channel” policy for poverty alleviation has tried to make some enterprises move to poverty-stricken areas to stimulate the vitality of local industrial development, promote the employment of local residents, and increase the total economic scale of poverty-stricken counties. However, in practice, the listed enterprises themselves do not improve

their performance because of being listed, but rather show performance changes, and compared with other enterprises listed in the same batch, this part of the enterprises show serious shortcomings and weak points in performance and operating ability.

In order to better implement the “IPO green channel” policy for poverty alleviation and effectively promote industrial poverty alleviation, this paper suggests that regulatory departments should actively cooperate with local governments to ensure the smooth implementation of the government’s poverty alleviation efforts while taking market equity and efficiency into account.

First of all, the regulatory departments should strictly review and verify the listing standards of enterprises, and the standard of enterprises listing can not be lowered. The original purpose of the SEC’s “IPO green channel” policy for poverty alleviation is to help the industry alleviate poverty and change “blood transfusion” to “blood creation.” In order to attract enterprises to move to poverty-stricken areas, the requirements for enterprises listing may be relaxed. However, this will lead to some enterprises failing to meet the listing standards and low quality enterprises being listed, which is not beneficial to the long-term development of enterprises and poverty-stricken areas. Therefore, the regulatory departments should strictly review the listing capacity of enterprises. The regulatory departments should control the total number of enterprises listed through the “IPO green channel” policy for poverty alleviation. The work of poverty alleviation lies in the quality rather than in the number, and controlling the total number of listed enterprises is not only conducive to improving the quality of listed enterprises, but also conducive to easing the pressure of new share issuance and building a healthy and harmonious stock market environment. Regulatory departments also need to do a good job of information disclosure and to accept the supervision of all aspects of society.

Secondly, the local government should make differentiated choices according to the actual local situation. The local government should take local conditions into account and encourage enterprises that can promote local economic development to move into the area based on a comprehensive consideration of factors such as industrial structure and various resources. Many enterprises move their empty shells into poverty-stricken areas in order to be listed, but their main business does not move on. This has no practical effect on the development of poverty-stricken areas but provides a channel for enterprises to speculate. The local government is required to strengthen supervision and strictly make differentiated choices according to the actual local situation. After enterprises are listed, the local government should not relax its supervision on the listed enterprise but strengthen the supervision.

Third, enterprises should enhance their sense of integrity, combine their actual development needs, and apply for listing in strict accordance with the requirements of the “IPO green channel” policy for poverty alleviation. Enterprise managers should continue to implement the sense of honesty and integrity and shoulder social responsibility without falsifying data and whitewashing performance

statements for the sake of listing under the guise of responding to government policies, which is contrary to the original intention of the “IPO green channel” policy for poverty alleviation. By relocating to poverty-stricken counties to achieve listing through the “IPO green channel” policy, enterprises should be based on the actual situation of poverty-stricken counties to complete the transformation of strategic management, to effectively protect the interests of minority shareholders through the fulfillment of their own business responsibilities, rather than being busy with the performance changes emptying the resources of listed enterprises. Only in this way can listed enterprises give full play to the operational advantages to realize the win-win situation of economic development of poverty-stricken areas and improvement of listed companies’ operational quality.

### Data Availability

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

### Conflicts of Interest

It is declared by the authors that this article is free of conflicts of interest.

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