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Research Article

Did the Inclusion of China's A-Shares in the MSCI Index Improve the Information Content of Listed Firms? Analysis Based on Stock Price Synchronisation and Environmental Social Governance

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Chinese A-shares were officially included in the Morgan Stanley Capital International (MSCI) Emerging Markets Index from June 2018. The inclusion of the A-share market into the MSCI Index is one of the most influential events in the opening up of the capital market of China. However, China's A-share market has an imperfect system compared with that of developed countries. Stock price synchronisation is more serious in China than in developed countries, and Environmental Social Governance (ESG) disclosures are imperfect. Excessive stock price synchronicity can affect the information content of stock prices, and imperfect ESG disclosures are not conducive to the investment decisions of investors and thus not conducive to the price mechanism for adjusting the market. From the perspective of stock price synchronisation and ESG disclosure, this study discusses the impact of the exogenous event of the inclusion of A-shares in the MSCI Index on China's capital market. Based on data of listed firms from 2011 to 2019, this study determines whether MSCI target stocks have high stock price information content and explores the ESG disclosure level based on a difference-in-differences (DID) model. In addition, this study conducts a parallel trend hypothesis test and propensity score matching (PSM) to test the robustness of the results. Empirical results show that the inclusion of A-shares in the MSCI Index increased the stock price information content and reduced the stock price synchronisation of MSCI target stocks. At the same time, this study tests the quality of the ESG information disclosure of A-shares after their inclusion in the MSCI Index and finds that the level of disclosure of the underlying stocks improved. This finding indicates that the inclusion of A-shares in the MSCI Index plays a role in improving the quality of ESG disclosure through information channels. The research conclusions have important implications for the active promotion of the expansion of the MSCI Index and further opening up of the capital market of China. In addition, the conclusions can provide a reference for subsequent MCSI decision-making and insights into the capital markets of other emerging-market countries.

1. Introduction

The MSCI Emerging Markets Index is highly recognised in international markets. The MSCI Index mainly tracks the emerging markets as well as the market performance of large-cap and midcap stocks in 24 emerging-market economies and is superior to the MSCI World Index (Global Composite Stock Index) and MSCI-All Countries Global Index. Many countries face the problem of opening up their capital market to the outside world in development. However, the national conditions faced by different countries differ as well as their market system and degree of perfection. Thus, scholars extensively and systematically examined the economic effects of the opening up of capital markets, especially the stocks included in the MSCI Index. Shu et al. [1] found that after the inclusion of the Taiwan stock market in the MSCI World Index, the stock price probability of the included firms rose significantly higher than that of firms not included in the index. Chakrabarti et al. [2] investigated stock market reactions in 29 countries and observed that the price of the stocks included in the MSCI Index

rose sharply after the announcement, whereas the price of stocks excluded from the index fell significantly and steadily. Nevertheless, both types of stocks experienced a sharp increase in trading volume. Chakrabarti et al. [2] examined the reaction of Indian stock indices to the Indian stock market after its inclusion in the international index. The authors argued that after the MSCI Index, Indian stock prices improved significantly owing to positive news. However, the trading volume did not increase significantly.

China's top-level government made introductory statements on the construction of a modern economic system and clarified that it will continue to expand, opening up to the outside world at a high level. Regulators and policymakers in China's capital market implemented a series of reforms to promote development through openness. The degree of internationalisation of China's A-share market is low, as well as the proportion of foreign investors (especially institutional investors) in the A-share market. The main reason for this situation is that the international investment community does not adequately recognise the Chinese stock market. Some A-shares were officially included in the MSCI Emerging Markets Index, which is of considerable and far-reaching significance for promoting China's "Belt and Road" construction and RMB internationalisation. Whether the inclusion of A-shares in the MSCI Index can positively affect China requires further investigation. This study divides A-shares included in the MSCI Index into MSCI underlying and non-MSCI underlying stocks, that is, the processing and control groups, as a quasinatural experiment. Based on the perspective of the inclusion of A-shares in the MSCI Index, this study conducts an empirical test to determine how the opening up of China's capital market affects the information content of stock prices and analyses its action mechanism. By empirically analysing the inclusion of Chinese A-shares in the MSCI Index, this study expands the literature on the economic consequences of the opening up of the capital market.

2. Literature Review and Hypothesis Development

Theory of information asymmetry refers to how various personnel understand relevant information in market economic activities. Those with adequate information are typically in a favourable position, whereas those lacking information are in a relatively disadvantageous position. The theory holds that sellers in the market have more information about goods than buyers, the party with considerable information can benefit from the market by passing reliable information to the poorly informed party, a buyer and seller with limited information will struggle to obtain information from the other, and the display of market signals can compensate for the problem of information asymmetry to a certain extent [3–6]. Information asymmetry is prevalent in the market. A typical example is the modern enterprise system in the separation of powers caused by the principal agent relationship. Specifically, enterprise management will have considerable inside information, including information on production activities, whereas investors will obtain most of their information about enterprises from the information disclosed by the listed firms. Therefore, a reverse

selection may occur, and moral hazards may exist, which can harm the interests of investors and are not conducive to the rational allocation of resources in the market. Investors with information disadvantages may evaluate firms with an average value, which may induce firms with a below-average value to obtain financing. By contrast, such investors may force firms with a higher-than-average value to withdraw from the market. In this case, the role of the price mechanism in the market will be weakened, and in severe cases, a "lemon market" will be created. In addition, firms' data collection and processing capabilities vary, and market participants have different professional skills, such as institutional investors and individual investors, which may cause information asymmetry.

The core principle of signal transmission theory is the active transmission of information by the information-advantaged party to the poorly informed party. This active transmission can effectively improve the information transmission efficiency between the two parties in the transaction and reduce the degree of information asymmetry. Moreover, the buyer in the transaction can make decisions and optimize the ideas based on the information transmitted [7, 8]. Signal transmission can be classified into three types, namely, profit declarations, dividend declarations, and financing declarations. According to traditional financial theories, the stock price reflects information. Thus, the signal transmission of a stock price is essentially influenced by the information contained in the stock price. Hence, the information contained in the stock price can be enhanced by signal transmission, which can improve the efficiency of resource allocation in the market and is conducive to the stability of the capital market.

After A-shares are included in the MSCI Index, passive tracking is conducted for ETF index funds, and most international investment institutions will arrange their investment proportion in the global security market according to the MSCI Index. At the same time, the inclusion will attract the attention of market analysts, institutional investors, and security analysts through their professional capabilities and industry resources, who will be able to obtain accurate information at low costs. Such analysts tend to dig and search for private trading information and analyse such information for the outside world to enhance firms' information transparency. Such practices can effectively mitigate potential mispricing, accelerate the integration of private information into stock prices [9], and promote the rapid return of stock prices to fundamentals, thereby improving stock price information content.

The opening up of the capital market to the outside world can attract foreign investors and overseas funds, which can generate positive effects that can be reflected in two points. Firstly, the opening up of the capital market to the outside world can promote economic growth and ease the shackles of financing, reduce the cost of capital, and expand the inflow of foreign capital. Secondly, the opening up of the capital market to the outside world can exert a corporate governance effect. In addition, the opening up of the capital market can improve and reduce agency costs, enhance corporate value, promote the improvement of the quality of corporate information disclosure, and raise the level of corporate governance. However, scholars have a negative attitude towards the opening up of the capital market, mainly from the aspects of capital market

TABLE 1: Relevant theories.

Theory	Topic	Literature
Information asymmetry theory	Those with adequate information are typically in a favourable position, whereas those lacking information are in a relatively disadvantageous position.	[3–6]
Signal transmission theory	Active transmission can effectively improve the information transmission efficiency between information-advantaged party and the poorly informed party in the transaction and reduce the degree of information asymmetry.	[7, 8]
Financial risk contagion theory	The risks that a country will face are domestic and global risks, and the risk contagion effect will increase financial risks.	[10, 11]
Information efficiency theory	Stock price synchronisation reflects the ability of a firm to absorb information that is unique to the enterprise. Stock price synchronisation is an essential indicator of the information efficiency of the capital market, which means that the vast majority of stock prices will show the same upward or downward trend over time.	[13–16]

linkage and restrictions on foreign investors. Considering the financial crisis, the linkage of the capital market prompted scholars to rethink the opening up of the capital market to the outside world, believing that the opening up of the stock market will aggravate its volatility. According to an analysis of theory of financial risk contagion, the risks that a country will face are domestic and global risks, and the risk contagion effect will increase financial risks [10, 11]. Some scholars believe that though foreign investors have substantial data collection and analysis capabilities, and they may engage in short-term behaviour owing to a lack of local information, which can affect stock pricing efficiency. Liu and Chang [12] examined managers' incentive to increase surplus manipulation when short-term pressure on foreign investors exists, resulting in a decline in the quality of information disclosure, thereby increasing the synchronicity of stock prices. Table 1 shows the relevant theories and literature.

The primary view on information efficiency is that stock price synchronisation reflects the ability of a firm to absorb information that is unique to the enterprise. In this view, the lower the stock price synchronisation, the more the firm characteristic information integrated and the less the market and industry information reflected in the stock price. Jin and Myers [13] and Morck et al. [14] are the main proponents of this view. Stock price synchronisation is an essential indicator of the information efficiency of the capital market, which means that the vast majority of stock prices will show the same upward or downward trend over time. Excessive stock price synchronisation means that the price reflects considerable market and industry information, which is not conducive to investors in identifying and screening listed firms through the price mechanism. By contrast, the low synchronisation of stock prices indicates that information about a firm's characteristics is substantially reflected in its stock price. The inclusion of A-shares in the MSCI Index is an important measure for promoting the further opening up of the domestic capital market, which can attract not only an inflow of overseas funds from passive-index and active-tracking funds but also the attention of foreign and institutional investors [15, 16]. As the overseas investment market is relatively developed and perfect, investors have considerable investment knowledge, perfect investment concepts, and robust abilities to collect and process information, which can play a vital role in improving the efficiency of information

TABLE 2: Results of descriptive statistics.

Variables	(1) N	(2) Mean	(3) SD	(4) Min	(5) Max
Syn	21,364	-0.942	1.153	-5.161	1.016
ESG	11,837	18.91	6.536	7.851	40.50
mkex	21,364	0.0698	0.255	0	1
Size	21,364	22.21	1.297	19.58	26.17
Lev	21,364	0.441	0.212	0.0568	0.945
ROA	21,364	0.0365	0.0652	−0.269	0.211
Cashflow	21,364	0.0433	0.0702	−0.174	0.240
BM	21,364	1.077	1.125	0.0914	6.599
SOE	21,364	0.377	0.485	0	1
ListAge	21,364	2.246	0.714	0.693	3.258
Top1	21,364	0.344	0.148	0.0850	0.743
Big4	21,364	0.0561	0.230	0	1
After	21,364	0.404	0.491	0	1

transmission in the capital market [17, 18]. The improvement of information transmission efficiency can promote the rapid reflection of information in stock prices and improve the price discovery function of the capital market by transmitting favourable information on the development of an enterprise to the market, that is, improving the stock price information content and reducing stock price synchronisation. When A-shares are included in an international index, they will garner attention from global investors and engage in competition for high-quality stocks. Moreover, listed firms will need to strengthen their information disclosure and corporate governance to cope with international shareholders' supervision and management to retain their position in the MSCI Index. Improving the quality of information disclosure and optimisation of corporate governance mechanisms can reduce the difficulties and cost of obtaining firm-level information, help investors obtain information, and promote the integration of information into stock prices.

H1: The inclusion of A-shares in the MCSI Index can reduce the stock price synchronisation and improve the stock price information content of MSCI underlying stocks.

In recent years, corporate social responsibility became an essential part of firms' business decisions, from government and social issues to emphasis on corporate social responsibility

TABLE 3: Results of correlation analysis.

	Syn	Size	Lev	BM	SOE	Cashflow	Top1	ListAge	Big4	ROA
Syn	1									
Size	0.157***	1								
Lev	0.039***	0.457***	1							
BM	0.187***	0.659***	0.562***	1						
SOE	0.142***	0.341***	0.279***	0.327***	1					
Cashflow	0.00700	0.071***	−0.177***	−0.086***	0.00100	1				
Top1	0.027***	0.236***	0.060***	0.131***	0.251***	0.101***	1			
ListAge	0.093***	0.336***	0.359***	0.290***	0.438***	−0.039***	−0.062***	1		
Big4	0.039***	0.353***	0.101***	0.215***	0.138***	0.080***	0.151***	0.074***	1	
ROA	−0.023***	0.041***	−0.367***	−0.193***	−0.076***	0.369***	0.126***	−0.178***	0.042***	1

***$p < 0.01$, **$p < 0.05$, and *$p < 0.1$.

TABLE 4: Results of correlation analysis.

	ESG	Size	Lev	BM	SOE	Cashflow	Top1	ListAge	Big4	ROA
ESG	1									
Size	0.409***	1								
Lev	0.168***	0.518***	1							
BM	0.245***	0.682***	0.556***	1						
SOE	0.172***	0.350***	0.277***	0.287***	1					
Cashflow	0.00800	0.032***	−0.176***	−0.097***	−0.017***	1				
Top1	0.043***	0.182***	0.045***	0.077***	0.250***	0.097***	1			
ListAge	0.155***	0.327***	0.328***	0.228***	0.420***	−0.031***	−0.056***	1		
Big4	0.313***	0.442***	0.182***	0.348***	0.157***	0.051***	0.118***	0.061***	1	
ROA	−0.059***	0.00700	−0.357***	−0.179***	−0.071***	0.371***	0.126***	−0.175***	0.019***	1

***$p < 0.01$, **$p < 0.05$, and *$p < 0.1$.

activities. Thus, a firm's social responsibility will have a significant impact on its corporate performance, value, and other aspects. As the concept of ESG continues to expand and develop globally, major financial institutions have begun to regard ESG factors and corporate social responsibility as vital reference components of their methodological strategies and investment practices [19–21]. As a worldwide composite investment firm, the MSCI is no exception. ESG principles and responsible investments are steadily growing in developed and emerging markets. As an important participant in and supporter of new investments, the MSCI Index must also consider the evaluation of the ESG responsibilities of an enterprise when including it in subshares, as an excellent ESG responsibility performance can provide investors with numerous responsible investment options. Therefore, the inclusion of A-shares in the MSCI Index will incentivise listed firms to fulfil their social responsibilities and improve the quality of their ESG disclosure.

H2: The inclusion of A-shares in the MCSI Index can enhance the level of ESG disclosure and increase the stock price information content of MSCI underlying stocks.

3. Research Design

3.1. Data Selection. In this study, all the A-share firms in China listed from 2011 to 2019 are included as the research object, and the individual stocks' daily returns and related financial data are collected. To calculate the stock price synchronisation, firms with stock notes with annual trading days fewer than 100 days and those with missing financial data are excluded. Roll [22] and Morck et al. [14] proposed representing stock price synchronisation with R^2, where individual stock returns represent the market returns. On this basis, a stock price synchronisation indicator is constructed in this study, and the following estimation model is designed, using the daily return of the stock in one trading month and corresponding market daily return, as follows:

$$r_{i,t,w} = \beta_0 + \beta_1 rm_{t,w} + \varepsilon_{i,t,w},$$
$$\mathrm{Syn}_{i,t} = \ln\left(\frac{R_{i,t}^2}{1 - R_{i,t}^2}\right). \tag{1}$$

TABLE 5: Results of DID regression analysis.

Variables	(1) Syn	(2) Syn	(3) Syn
mkex	−0.1638***	−0.1238***	−0.0935**
	(−3.66)	(−2.75)	(−2.14)
After	−0.1631***	−0.1618***	−0.3928***
	(−8.99)	(−8.85)	(−12.00)
mkex × After	−0.4378***	−0.4337***	−0.3828***
	(−6.35)	(−6.31)	(−6.62)
Size	0.1377***	0.1345***	0.1147***
	(15.05)	(14.28)	(12.47)
Lev	−0.1441***	−0.1531***	−0.1163***
	(−6.39)	(−6.70)	(−5.80)
BM	0.0555***	0.0538***	0.0498***
	(8.86)	(8.38)	(8.62)
SOE	0.2260***	0.2180***	0.2159***
	(10.85)	(9.98)	(9.94)
Cashflow	0.2091**	0.2710***	−0.0515
	(2.11)	(2.68)	(−0.58)
Top1	−0.2571***	−0.2635***	−0.1486**
	(−4.22)	(−4.20)	(−2.45)
ListAge	0.0164	0.0286*	0.0254*
	(1.18)	(1.94)	(1.80)
Big4	−0.0652	−0.0736*	−0.0692*
	(−1.64)	(−1.84)	(−1.77)
ROA	−0.3983***	−0.4138***	−0.3202***
	(−4.21)	(−4.34)	(−3.84)
Constant	−3.9495***	−4.1819***	−3.3955***
	(−20.88)	(−18.61)	(−15.44)
Industry	No	Yes	Yes
Year	No	No	Yes
Observations	21,364	21,364	21,364
Number of codes	3,412	3,412	3,412

z: statistics are in parentheses. ***$p < 0.01$, **$p < 0.05$, and *$p < 0.1$.

TABLE 6: Results of DID regression analysis.

Variables	(1) ESG	(2) ESG	(3) ESG
mkex	1.2992***	1.3828***	1.9874***
	(3.18)	(3.36)	(4.81)
After	1.4596***	1.4847***	3.6708***
	(14.21)	(14.33)	(16.54)
mkex × After	1.6833***	1.6640***	1.6851***
	(8.92)	(8.83)	(9.05)
Size	1.4470***	1.5376***	1.1245***
	(15.96)	(16.38)	(11.20)
Lev	−3.1456***	−3.0294***	−1.7697***
	(−7.07)	(−6.66)	(−3.84)
BM	−0.2479***	−0.2594***	−0.2271***
	(−5.28)	(−5.30)	(−4.39)
SOE	0.6776***	0.7368***	1.1334***
	(3.09)	(3.28)	(5.03)
Cashflow	0.4116	0.1863	−0.8593
	(0.61)	(0.28)	(−1.28)
Top1	0.1031	0.5512	0.9362
	(0.18)	(0.95)	(1.61)
ListAge	1.6222***	1.6434***	0.7693***
	(10.54)	(10.44)	(4.44)
Big4	1.8195***	1.7964***	1.7073***
	(6.42)	(6.31)	(6.05)
ROA	−3.0292***	−2.9743***	−0.7387
	(−3.21)	(−3.14)	(−0.77)
Constant	−16.2355***	−19.5948***	−10.3482***
	(−8.54)	(−8.07)	(−4.05)
Industry	No	Yes	Yes
Year	No	No	Yes
Observations	7,925	7,925	7,925

z: statistics are in parentheses. ***$p < 0.01$, **$p < 0.05$, and *$p < 0.1$.

The ESG data in this study are from the Bloomberg database, and the other data are from the CSMAR database.

3.2. Empirical Models. For the model design, a difference-in-differences (DID) model (Ashenfelter and Card [23]) is used to construct a processing group and control group. The exogenous event node is used to divide the time before and after the processing, and the product term of the processing group and control group is set as the primary explanatory variable, and the studied variable is set as the explanatory variable. After the experimental data are regressed, the policy effect is evaluated by interacting the terms. The traditional static comparative research method cannot rule out endogeneity issues, in other words, various factors may affect the experiment results, and controlling each factor would be difficult. Natural experiments are required for testing double-differential models, which are not as demanding as other types of experiments.

Moreover, other factors that change over time will not bias the study. The double difference between the treatment and control groups will reduce the likelihood of endogeneity and eliminate individual effects not observed in the panel data regression. The DID model also has a prerequisite, that is, the parallel trend assumption, stating that the trend should change in the processing group and control group during the observation. If they are not affected by exogenous issues, then the treatment group and control group will change according to the same trajectory to exclude the differences in the characteristics of the different models and other factors at different times.

PSM and the DID model can analyse and overcome the endogeneity issues in stock price information content and capital market opening in this study. After the exogenous event of A-share inclusion in the MSCI Index, the capital market opening suffered from an exogenous impact, which roughly rules out the possibility of reverse mutual causality. In addition, the inclusion in the MSCI Index divides the research objects

TABLE 7: The balance test results of the PSM.

| Variable | Unmatched Matched | Mean | | %reduct | | t-test | | $V(T)/V(C)$ |
		Treated	Control	%bias	|bias|	t	$p > \|t\|$	
Size	U	24.398	22.042	175.1		73.25	0.000	1.64*
	M	34.351	24.385	-2.5	98.6	-0.65	0.513	1.13*
Lev	U	.50922	.44762	14.1		4.06	0.000	0.12*
	M	.50965	.51294	-0.8	94.7	-0.46	0.645	1.26*
BM	U	1.8122	1.0516	42.3		17.82	0.000	1.68*
	M	1.8054	1.8959	-5.0	88.1	-1.39	0.166	1.85*
SOE	U	.5996	.36029	49.3		18.54	0.000	.
	M	.5947	.59487	-0.0	99.9	-0.01	0.993	.
Top1	U	.41417	.33863	47.0		18.89	0.000	1.39*
	M	.40967	.41928	-6.0	87.3	-1.54	0.124	0.99*
ListAge	U	2.4709	2.23	36.7		12.60	0.000	0.67*
	M	2.4714	2.4622	1.4	96.2	0.42	0.676	0.95*
Big4	U	.2951	.03819	73.4		43.36	0.000	.
	M	.28649	.0943	-2.2	97.0	-0.47	0.641	.

z: statistics are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, and $^{*}p < 0.1$.

into a target experimental group and nonstandard control group; thus, measuring the openness of the capital market is unnecessary, and measurement errors can be avoided.

To explore whether the stock price information content of the MSCI constituent stocks increased after the inclusion of A-shares in the MSCI Index, the following double-difference model is designed.

$$\text{Syn}_{i,t} = \alpha_0 + \alpha_1 \text{mkex}_i + \alpha_2 \text{After}_t + \alpha_3 \text{mkex}_i \times \text{After}_t \\ + \sum \text{Controls}_{i,t} + \text{IND}_{i,t} + \text{Year}_t + \mu_{i,t}, \quad (2)$$

$$\text{ESG}_{i,t} = \alpha_0 + \alpha_1 \text{mkex}_i + \alpha_2 \text{After}_t + \alpha_3 \text{mkex}_i \times \text{After}_t \\ + \sum \text{Controls}_{i,t} + \text{IND}_{i,t} + \text{Year}_t + \mu_{i,t}. \quad (3)$$

Firstly, the research object is divided into two groups, namely, processing group and control group, with mkex representing the grouping. The processing group is the MSCI target stocks, with mkex = 1, and the control group is the non-MSCI target stocks, with mkex = 0. Based on the cutoff point at which the event occurred, After = 0 before the event, and After = 1 after the event. In this study, After represents the time of the announcement of the inclusion of A-shares in the MSCI Index in June 2017. Thus, the year 2017 or later is labelled as 1, and a year before 2017 is labelled as 0. The model focuses on the coefficients of the interaction term mkex × After. If the α_3 coefficient of the interaction term in Equation (2) is significantly smaller than 0, then the inclusion of A-shares in the MSCI Index can effectively reduce stock price synchronisation. The stock price synchronisation of the listed firms can improve the stock price information content; thus, H1 is supported. If the α_3 coefficient of the interaction term in Equation (3) is significantly larger than 0, then the inclusion of A-shares in the MSCI Index can effectively enhance the

level of ESG information disclosure and increase stock price information content; thus, H2 is supported.

Referring to Kacperczyk et al. [24], the control variables that may affect the stock price information content include the firm model (size), asset-liability ratio (Lev), return on assets (ROA), operating cash flow (Cashflow), book-to-market ratio (BM), state ownership (SOE), listing years (ListAge), largest shareholder (Top1), and audit by the Big Four accounting firms (Big4).

4. Empirical Results and Analysis

4.1. Descriptive Statistics. The results of the descriptive statistics are reported in Table 2. To avoid the effect of extreme values on the results, 1% winsorisation is performed for all the continuous variables. Columns 1–6 report the variable names, number, means, SDs, minimum values, and maximum values. For Syn, the minimum value is -5.161, the maximum value is 1.016, the mean is -0.942, and the SD is 1.153, thereby indicating differences in the Syn of the listed firms in the sample. For ESG, the minimum value is 7.851, the maximum value is 40.50, the mean is 18.91, and the SD is 6.536; this shows that the disclosure of ESG in China has just started, and there is a large gap in the level of disclosure among various listed firms. For size, the minimum value is 19.58, the maximum value is 26.17, the mean is 22.21, and the SD is 1.297, thereby indicating differences in the size of the firms in the sample. The size of a firm may cause information asymmetry and affect the information transmission efficiency. Lev has a minimum value of 0.0568, maximum value of 0.945, an average of 0.441, and an SD of 0.212. For ROA, the minimum value is –0.269, the maximum value is 0.211, the mean is 0.0365, and the SD is 0.0652. For BM, the minimum value is 0.0914, the maximum value is 6.599, the mean is 1.077, and the SD is 1.125, thereby

TABLE 8: Results of DID regression analysis.

Variables	(1) Syn	(2) Syn	(3) Syn
mkex	−0.2180***	−0.1694**	−0.0504
	(−3.27)	(−2.51)	(−0.79)
After	−0.4994***	−0.5020***	−0.3076***
	(−9.73)	(−9.64)	(−3.43)
mkex × After	−0.1181	−0.1284	−0.2426***
	(−1.41)	(−1.52)	(−3.25)
Size	0.1014***	0.1082***	0.0766***
	(3.74)	(3.87)	(2.86)
Lev	−0.9580***	−0.9682***	−0.7794***
	(−5.96)	(−5.71)	(−5.04)
BM	0.1572***	0.1671***	0.1462***
	(7.98)	(7.99)	(7.42)
SOE	0.2335***	0.1823***	0.2355***
	(4.12)	(2.96)	(4.13)
Cashflow	0.3689	0.5196	−0.3558
	(1.10)	(1.50)	(−1.14)
Top1	−0.2566	−0.1142	−0.0566
	(−1.64)	(−0.70)	(−0.38)
ListAge	0.1253***	0.1854***	0.1433***
	(3.00)	(4.21)	(3.51)
Big4	−0.0978	−0.0941	−0.1080*
	(−1.40)	(−1.33)	(−1.66)
ROA	−2.2538***	−2.1105***	−1.3889***
	(−5.58)	(−5.06)	(−3.68)
Constant	−2.9214***	−3.3036***	−2.3913***
	(−5.12)	(−4.70)	(−3.63)
Industry	No	Yes	Yes
Year	No	No	Yes
Observations	3,399	3,399	3,399

z: statistics are in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, and $^{*}p < 0.1$.

indicating that the book-to-market ratio of the A-share listed firms fluctuates significantly, and the growth of the firms in the sector is uneven. The differences among the other variables are not noticeable and controlled within a reasonable range.

4.2. Correlation Analysis. To ensure the accuracy of the regression analysis, a Pearson test is conducted for the correlation analysis to judge the relationship between the variables in this study. If the test results show that the correlation between the variables is not significant, then the regression analysis results using the variables are highly reliable. Multicollinearity may exist if a significant correlation exists between the variables. Thus, the reliability of the multiple regression is diminished to a certain extent. Tables 3 and 4 list the results of the correlation analysis of the variables. No multicollinearity is observed between Syn, ESG, and the explanatory variables as well as between the explanatory variables.

4.3. DID Regression Analysis. Table 5 presents the regression results of the DID model, which shows that the model (1) does not control the industry and year, (2) controls only the industry, and (3) controls the industry and year at the same time. The table also shows that regardless of whether or not the industry and year are controlled, the coefficient of the interaction is significantly negative at the 1% level, and the coefficient size is approximately −0.4, thereby indicating that after A-shares were included in the MSCI Index, the stock price synchronisation of the MSCI target stocks decreased significantly, and their stock price information content increased significantly.

Table 6 shows that the explanatory variable is the firms' ESG disclosure score, and the core explanatory variable is the DID regression result of the intersection term mkex ∗ After. The results reveal that the coefficient of the core explanatory variable, mkex ∗ After, is 1% regardless of whether or not the industry and year are controlled. The level is significantly positive, thereby indicating that the inclusion of A-shares in the MSCI Index significantly improved the ESG disclosure level of the underlying listed firms.

5. Robustness Testing

5.1. PSM. The presence of bias and confounding variables in an experiment may generate biased estimates, which can be solved by PSM. The fundamental role of PSM is to make a reasonable comparison between the process group and control group. To avoid the influence of the selection bias of the sample on the results, DID regression is performed after the propensity scores of the original sample are matched. The balance test results of the PSM are shown in Table 7, and no apparent difference exists between the variables of the listed firms included in the MSCI Index and those of the listed firms not included in the MSCI Index after matching; thus, the balance test is passed.

Table 8 shows the DID regression results after the propensity scores are matched. After the industry and year are controlled, the multiplication coefficient became significantly negative at the 1% level, which once again verifies that after A-shares were included in the MSCI Index, the stock price synchronisation of the MSCI underlying stocks decreased significantly, and their stock price information content increased significantly.

5.2. Parallel Trend Assumption Test. The DID model must satisfy its prerequisite, and the processing and control groups must demonstrate the same temporal trend, that is, they must satisfy the "parallel trend assumption." Parallel trends allow for differences between the processing and control groups but require the differences between the two groups to not change over time. Therefore, the double difference between the MSCI underlying stocks and non-MSCI underlying stocks in the processing group should be double trended and tested to determine whether a common trend exists. Specifically, the trend of the ESG disclosure level of the MSCI underlying stocks and non-MSCI underlying stocks should be tested before and after the inclusion of A-
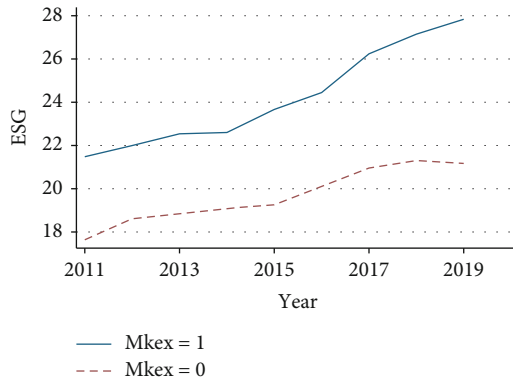
Figure 1: Results of parallel trend test.

shares in the MSCI Index to determine whether the two groups exhibit the same change trend as shown in Figure 1.

Figure 1 shows the parallel trend test plot for the ESG model with explanatory variables, and that the information disclosure index change trend of the MSCI underlying stocks and non-MSCI underlying stocks is parallel; thus, the parallel trend test is passed.

6. Conclusions

This study empirically analyses the economic effect of the inclusion of A-shares in the MSCI Index based on a DID model. This research shows that the exogenous event of the official announcement of the inclusion of A-shares in the MSCI Index significantly reduced the stock price synchronisation of MSCI underlying stocks, improved the ESG disclosure level of listed firms, and increased their stock price information content. This study shows that the inclusion of A-shares in the MSCI Index exerted a positive effect on China's capital market and plays a role in promoting the active reform of China's capital market and liberalising the quota of foreign capital without affecting foreign exchange management. The MSCI's inclusion of Chinese A-shares can boost the investment philosophy of the country's stock market and promote investor maturity. The history of China's stock market is relatively short, and many aspects have yet to mature. Specifically, the proportion of individual investors is relatively high, who tend to engage in short-term speculation and lack medium- and long-term investments, thereby making the securities market fluctuate, the bull short, and the bear long. The introduction of overseas investors and direct display of mature investment ideas in the market can help the market mature. In the late 1980s, the MSCI created the Emerging Markets Index including 13 emerging countries, with South Korea and Taiwan "gradually incorporating," similar to Chinese A-shares. The inclusion of Taiwan, China, and South Korea in the MSCI Index shows that the impact on the market expected to absorb international capital owing to the inclusion in the MSCI Index is as follows. Firstly, foreign capital inflows will accelerate near the initial point of the MSCI inclusion, and the market is expected to demonstrate a short-term rise (including a phased rebound of the downward trend). Sec-

ondly, with the gradual incorporation of the capital market into the MSCI Index, in the long run, the net inflow of the market will experience a qualitative leap and increase the liquidity of the market. Thirdly, inclusion in the MSCI Index and international capital flows may not be determinants of long-term market trends, and after short-term market trends, the overall market trend may need to be determined by economic fundamentals. The development of the capital market of any sovereign country will follow its unique laws, and changing the trend because it is accepted by an index compiled by an overseas commercial institution would be impossible. The behaviour of Chinese stocks is determined by China's macroeconomy, market policies, investor behaviours, and other factors. However, the MSCI Index will change many internal and external conditions in the operation of the market, and its role in facilitating the maturity of the market deserves considerable attention.

The law is the guarantee of all reforms. The reform of the A-share stock market requires legal support. When formulating relevant laws, referring to international standards and norms whilst considering the country's actual economic situation is necessary to develop China and the global economy. China is an emerging stock market, and the problem of lax laws and regulations must be solved urgently. However, as an emerging stock market, China's A-share market has specific latecomer advantages, and its reform can be based on the premise of analysing China's actual market situation, drawing on the reform experience of other countries, objectively analysing various prospects, and improving market laws and regulations.

Integration into the international capital market increased the complexity of China's capital market, with considerable sources of funds, significant amounts, and complex investors and investment concepts. Thus, maintaining the stability of the capital market is crucial. Solving the problem of the "excessive sensitivity" of A-share stock prices to policies and making stock prices deviate from the state of the "policy market" are necessary. At the right time, playing the role of the government to ensure that A-share stock prices conform to market laws and fluctuate at normal and reasonable levels is also necessary. At the same time, China can strengthen its policy coordination with major economies, including exchanges and cooperation in monetary policies, exchange rate policies, and regulatory policies, to create a stable development environment for its domestic capital market.

The inclusion of Chinese A-shares in the international mainstream index can generate a large amount of funds and bring international advanced investment concepts and resource allocation methods to the country, which can optimise the investor structure of China's capital market, increase the number of institutional investors, improve the stability of the long-term development of the capital market, and provide a satisfactory environment for firms' long-term development. At the same time, firms' corporate governance structure should be further optimised, and the level of corporate governance should be improved. Individual investors should properly understand their risk appetite and improve their risk identification ability to choose investment strategies according to their risk tolerance.

Data Availability

The data used to support the findings of this study are included within the article.

Conflicts of Interest

The authors declare that they have no competing interest.

Acknowledgments

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