

The Impact of ESG Scores on Corporate Performance - A-Share Banks and Securities Firms

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Abstract: Globally, companies are increasingly paying attention to the impact of environmental, social and governance (ESGs) on corporate performance. The objective of the study is to the impact of ESG scores of third-party institutions on the performance of Banks and Securities Firms. Based on the data of A-share banks and securities firms with complete ESG scores from Bloomberg 2011-2021, 19 listed banks and securities firms were selected. A linear regression of their return on assets, E, S, G, and ESG scores, and corporate performance is conducted to analyze which specific factor scores have the most direct impact on the corporate performance of securities firms, and thus help them to better implement ESG strategies. The results of the study revealed that the scores of G factors have the most direct impact on the corporate performance of banks and securities firms, and that securities firms need to improve the scores of G factors faster to achieve higher corporate performance. Therefore, information disclosure, as a part of corporate governance, should also be on the agenda when it is in line with the excess returns of securities firms.

1 Introduction

1.1 Research background

ESG is the strategic behavior of economic organizations that are proactive in three areas: environmental (E), social (S) and corporate governance (G). ESG performance indicates the degree of green sustainability and social responsibility fulfillment ^[1]. In the context of China's commitment to achieve the goal of "carbon peaking and carbon neutrality", it is of great importance for the securities firms to optimize their ESG scores to improve their corporate performance and promote sustainable economic development ^[2], which can be most directly observed by the ESG score of a company under the rating agency system. With the increasing attention, ESG scoring mechanism has been improved. The Bloomberg ESG Index used in this paper covers 88% of the world's market capitalization companies, and the content is updated daily to provide real-time responses to significant governance information. The Bloomberg ESG China Weighted Index also tracks the performance of the RMB bond and Chinese USD bond markets, and therefore supports the research theme of this paper: ESG performance of listed securities and banks.

1.2 Research purpose and problems

As a new socialist market, banks and securities companies

are the main participants and their performance is directly related to the stability of our financial markets. To promote economic development, banks and securities companies have made significant contributions to the country's economic development as leading companies. As of December 31, 2021, for example, the total market capitalization of securities companies was 1.059 trillion yuan, which is one of the highest in the world. At the same time, securities companies in recent years due to the development of economic business continues to have no breakthroughs, still using the form of buying and selling securities, charging commissions as a business model, a relatively single mode of profitability, performance fluctuations. [3] Under the economic downturn caused by the New Crown epidemic, as of January 20, 2023, of the 21 securities companies that have disclosed their 2022 results the performance of 18 companies declined and only 3 companies increased. Therefore, it is urgent for securities companies to incorporate ESG into their strategic planning to improve corporate performance. Given the limited resources, it is also important to know which ESG score can improve the performance of securities firms the fastest. To increase the diversity of the sample, we include the equally important banks as subjects.

1.3 Literature review

Compared to the previous literature, this paper brings marginal contributions: ① The focus of the paper is on the E, S, and G dimensions, using their individual scores

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as important considerations. There is almost no literature on the analysis of the three separate ESG scores in China, so this study has some reference value for single-factor ESG scores. ②In the development of ESG ecosystem, the government and other regulators often use ESG disclosure regulation as an entry point to promote and regulate the ESG practices of banks and financial institutions. This study will also verify the positive corporate performance achieved by ESG disclosure, as it also provides a good reference for regulators to gradually expand the impact of mandatory disclosure.

2 Mechanism analysis and hypothesis formulation

There have been many studies on the topic of ESG in companies, including the development of ESG, the motivation of using ESG as a strategy development, the development of ESG as a strategy development, and the development of ESG as a strategy development. The potential negative consequences of using ESG as strategic planning and the impact on corporate performance are discussed, but the impact of ESG on the performance of listed banks and securities companies, as well as the use of individual factor scores from third-party ESG scoring mechanisms as a measure, have not been found. Regarding the development of ESG, existing studies generally consider ESG as a systematic and extended strategy for corporate social responsibility. It is based on the concept of green development and considers environmental (E), social (S) and governance (G) sustainability in financing and other business activities [4]. However, there is still a great deal of uncertainty as to whether the implementation of ESG strategy can determine the improvement of the performance of a stock company. Chen, Guojin [5] and others showed that green development behaviors such as ESG would receive more financing incentives and thus alleviate financing difficulties. However, there are still very few scholars, such as Zhu Nai Ping, who believe that ESG is not related to short-term performance [6]. Since the literature on the effect of ESG on firm performance is abundant, but the literature on the effect of ESG scores on the Chinese banking and securities industry is relatively small, this paper proposes the first hypothesis on the effect of ESG scores on the performance of A-share banks and listed securities companies based on previous studies on the effect of ESG on firm performance.

Hypothesis ①: ESG scores have a significant positive impact on the corporate performance of A-share companies

Some scholars also have some opinions about the impact of focusing on E, S, and G single-factor indicators on financial capability. Studies have shown that there is a significant positive relationship between environmental (E) performance and corporate performance, and that the prevention of environmental pollution promotes ROA improvement. Regarding (S) social layer In face, according to the human capital-centered extraction analysis conducted by Crook, Ketchen, Combs, and Todd (2008), a highly significant positive relationship was also

found between social real practices and financial performance. In the last aspect of corporate governance (G), the cumulative The study of the favorable impact of extreme governance on firm performance is also supported by numerous articles (Dalton, Daily, Johnson & Ellstrand, 1999). Also in reviewing the G (governance) related literature, a chain of findings elicited by (Freeman, 1984: Jomes, 1995), Fatemi, Fatemi and Tehranian (2015) suggest that G disclosure mitigates the negative impact of ESG concerns on firm performance, while the other two factors do not have this effect, thus based on these literature reading the second hypothesis is proposed.

Hypothesis ②: The scores of each of the three factors E, S, and G have a positive effect on the corporate performance of A-share banks and securities companies, with the G factor being the most positive one.

3 Models, Data & Variables

3.1 Data source

In this paper, we select the initial samples of banks and listed securities firms in China's A-share financial enterprises from 2011 to 2021, standardize the samples, and conduct regression analysis.

(i) Data Sources:exclude the samples of banks and listed securities firms that are specially treated by the Securities and Futures Commission and have the risk of delisting;

(ii) Data Filtering Method:screen out the samples with ESG performance data and exclude the samples of banks and listed securities firms with more missing data. The sample of listed banks and brokerage firms with ESG performance data was screened out. Except for ESG and E, S, G performance data from the Bloomberg database, the data of other variables was obtained from the Guotai Junan database. After collation, the final sample consists of 209 annual observations of 19 listed companies for 11 years with balanced panel data.

3.2 Variable design

3.2.1 Stressor variable: business performance

Banks, the realization of economic interests of listed brokerage firms is performance-oriented and mainly reflected in performance performance. Referring to Weilongbao et al, return on total assets (ROA) and return on net assets (ROE) are used as proxies for corporate performance. Among them, ROA is measured by the ratio of net profit to total assets, and ROE is measured by the ratio of net profit to net assets

3.2.2 Independent variables: ESG and E, S, G performance

The Bloomberg ESG composite index and E, S, G performance data are used as proxy indicators for ESG and E, S, G performance of listed agricultural companies, based on the methodology of Qiu, Mu Yuan et al. Among

the many ESG rating indicators, Bloomberg uses the ESG index of global listed companies as a proxy for ESG and E, S, G performance. In addition, due to the lack of data on the performance of some ESG companies, this paper has taken into account the performance of some ESG companies. In addition, due to the lack of data on some ESG performance, this paper refers to The above-mentioned scholars' practice is examined to fill in the missing values with annual industry averages.

3.2.3 Control variables

In order to control other factors that may affect the performance of banks, brokerage firms listed companies, control variables such as financial leverage (Leverage), enterprise size (Sise), growth rate of main revenue (Growth), net cash flow from operating activities (cfo), cash flow indicator (cfi), and total asset turnover ratio (tato) are set, and the original control variables data of price-toearnings ratio (pe) is too highly correlated with other control variables, so it is excluded. And further control for year fixed effects.

3.3 Model Setting

To examine the effect of ESG performance on listed companies such as banks and brokerage firms, regression model (1) is set up. In equation (1), the dependent variable is performance, and four regressions are set up with ESG, E, S, and G as independent variables, respectively. The control variables are shown above. β_0 is the constant term, β_1 is the estimated coefficient of the independent variable, β_2 is the estimated coefficient of the control variable, ϵ_i, t is the random disturbance term.

$$Performance_{i,t} = \beta_0 + \beta_1 ESG_{i,t} + \beta_2 Controllers_{i,t} + \epsilon_{i,t} \quad (1)$$

4 Analysis of empirical results

4.1 Descriptive Statistics

The following summary statistics is a table of descriptive statistics for the main variables.

Table1: Summary Statistics

VarName	Obs	Mean	SD	Min	Median	Max
roe	209	0.07	0.051	-.185687	.063883	.230887
roa	209	0.17	0.651	-.595408	-.051842	2.74026
esg	209	31.78	9.167	12.373	29.5041	57.63
e	209	9.05	11.916	0	1.0873	45.6962
s	209	15.71	8.607	0	12.7267	39.48
g	209	70.44	11.987	34.5274	75.1957	96.1168
leverage	209	28.15	357.673	-151.7095	-.8492571	5112.425
growth	209	0.14	0.541	-.756955	.061737	5.923445
cfo	209	-8.12e+08	2.06e+10	-1.04e+11	-5.59e+08	1.02e+11
cfi	209	-1.49e+08	1.45e+09	-5.76e+09	-6.42e+07	5.79e+09
tato	209	0.09	0.157	.003751	.04813	.937261

Note: e is an expression in scientific notation that represents a power of 10.

The mean value of the first dependent variable ROE is 0.07, the standard deviation is 0.051, and the minimum value is - The mean value of the second dependent variable ROA is 0.17 with a standard deviation of 0.651, the minimum value is - 0.596 and the maximum value is 2.74. It indicates that the sample banks and securities listed companies have some profitability and there is volatility in the level of profitability. It also indicates that there is variability in the performance of different banks, securities listed companies. The mean value of independent variable ESG is 31.78 and the standard deviation is 9.167, which indicates that the sample banks and securities listed companies support ESG strategy and actively implement it and get good external evaluation, but there are also large fluctuations in ESG performance of the sample listed companies in different individuals, time. The independent variable E has a mean value of 9.05 and a standard deviation of 11.916, which indicates that the sample companies have less layout in the environmental aspects of ESG and there are fluctuations in the level of layout. The independent variable S has a mean value of 15.71 and a standard deviation of 8.607, indicating that the sample companies also have a smaller

layout in the social aspects of ESG and a more stable layout level. The independent variables The mean value of G is 70.44 and the standard deviation is 11.99, indicating that the sample companies have the most active strategy implementation and the best external evaluation in terms of corporate governance in ESG. Among other control variables, leverage, growth, cfo, cfi, tato mean values are 28.15, 0.14, - 8.12e+08, - respectively. 1.49e+08, 0.09 with standard deviations of 357.673, 0.541, 2.06e+10, 1.45e+09, 0.157 respectively, reflecting the information that the sample of listed banks and securities companies use financial leverage, have faster growth rate of main revenue, normal total asset turnover, and healthier cash flow.

4.2 Correlation Analysis

Table2 shows the statistical table of correlations. To initially determine whether there is a correlation between the variables and to avoid multicollinearity, correlation analysis was conducted in this paper.

Table2: Correlation Coefficient

	roe	roa	leverage	growth	cfo	cfi	tato	esg	e	s	g
roe	1										
roa	0.115*	1									
leverage	-0.095	0.329***	1								
growth	0.043	0.126*	-0.000	1							
cfo	0.041	0.176**	0.009	0.030	1						
cfi	-0.014	0.168**	0.013	0.041	0.921***	1					
tato	-0.100	-0.007	-0.016	-0.037	0.004	0.015	1				
esg	0.156**	-0.174**	-0.123*	0.030	0.120*	0.166**	-0.155**	1			
e	0.076	-0.123*	-0.064	0.034	0.150**	0.178**	-0.058	0.877***	1		
s	0.141**	-0.129*	-0.113	-0.017	0.075	0.143**	-0.239***	0.840***	0.702***	1	
g	0.180***	-0.185***	-0.137**	0.047	0.074	0.102	-0.127*	0.819***	0.514***	0.511***	1

Note: ***, **, a n d * indicate significant at the 1%, 5%, and 10% levels, respectively.

The results of Pearson and Spearman correlation coefficient test shown in Figure In the same regression, the correlation coefficient between different independent variables is generally less than 0.5, the variance inflation factor VIF is significantly lower than 10, and the model does not have the problem of multicollinearity. Moreover, ESG and E, S, and G are positively correlated with ROE at least at 10% significance level, respectively, which tentatively verifies the hypothesis of this study that banks, securities listed companies are approximately active in implementing ESG strategies and their performance levels

are approximately high. While ESG and G are negatively correlated with ROA, although the results are not significant, the strain variable ROA is deleted for the sake of research rigor.

4.3 Hybrid model analysis

Table 3 introduces the main research relationships of this study.

Table3: Pooled modle Regression

	(1) model 1	(2) model 2	(3) model 3	(4) model 4
esg	0.001** (2.16)			
leverage	-0.000 (-1.10)	-0.000 (-1.31)	-0.000 (-1.13)	-0.000 (-1.04)
growth	0.004 (0.59)	0.004 (0.59)	0.004 (0.70)	0.003 (0.53)
cfo	0.000** (2.16)	0.000** (2.00)	0.000** (2.27)	0.000** (2.12)
cfi	-0.000** (-2.20)	-0.000** (-1.97)	-0.000** (-2.26)	-0.000** (-2.12)
tato	-0.023 (-1.03)	-0.030 (-1.33)	-0.019 (-0.84)	-0.024 (-1.07)
e		0.000 (1.04)		
s			0.001** (2.02)	
g				0.001** (2.43)
_cons	0.041*** (3.00)	0.066*** (12.86)	0.054*** (6.28)	0.017 (0.80)
N	209	209	209	209
R ²	0.061	0.044	0.058	0.066
Adj. R ²	0.03	0.02	0.03	0.04

Note: ***, **, a n d * indicate significant at the 1%, 5%, and 10% levels, respectively. The t-values after robust standard error treatment are in parentheses. In addition, _Cons denotes the constant term, N is the total number of samples, and AdjR2 is the fitted indicator correction R2.

First, the modle1 regression in Table3 shows the effect of ESG on ROA with a correlation coefficient of 0.001 in A significant positive correlation was demonstrated at the 5% level. modle2 substituted the core explanatory variable E for ESG with a correlation coefficient of 0.000, and the correlation was not significant. modle3 substituted the core explanatory variable S for ESG with a correlation coefficient of 0.001, and a significant positive correlation was demonstrated at the 5% level. modle4 substituted the core explanatory variable G for ESG with a correlation coefficient of 0.001, proving a significant positive correlation at the 5% level. While the core explanatory variables in modle1, modle2, and modle4 are all significant at the 5% level, their p-values are 0.032, 0.045, and 0.016, respectively. conclude that the core explanatory variable G in modle4 is the most significant, and its correlation with roe is the strongest and strongest explanation. Among the three specific measures of ESG disclosure, better corporate governance makes ESG is more rewarding for financial investors and other key stakeholders.

4.4 Fixed effects model analysis

To test the applicability of the model, the Hausman test was first conducted and the results showed that the p-value 0.000, rejecting the original hypothesis and supporting the continuation of the regression using the fixed-effects model. Table 4 shows the regression results based on the fixed effects model, where column (1) does not control for the year effect and column (2) controls for the year effect. The purpose is to explore whether the annual effect affects the benefits of G implementation status on the performance of banks, brokerage firms listed companies. In columns (1) and (2), the performance of G is measured at $p < 5\%$, $p < 1$

The estimated coefficients are all 0.001, indicating that regardless of whether or not the annual effect is controlled for, i.e., regardless of changes in the annual economic environment, banks, brokerage firms listed on G The better the performance, the higher the return on total assets and the positive economic consequences

Table 4: Fixed effect model Regression

	(1) model 1	(2) model 2
g	0.001** (2.43)	0.001*** (2.62)
leverage	-0.000 (-1.04)	-0.000 (0.15)
growth	0.003 (0.53)	0.002 (0.66)
cfo	0.000** (2.12)	0.000** (0.04)
cfi	-0.000** (-2.12)	-0.000* (0.06)
tato	-0.024 (-1.07)	0.511*** (0)
year	0	-0.000 (0.919)
_cons	0.017 (0.80)	0.275 (0.933)
N	209	209
R ²	0.066	0.066
Adj. R ²	0.04	0.04

Note: ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. The t-values after robust standard error treatment are in parentheses. In addition, _Cons denotes the constant term, N is the total number of samples, and AdjR2 is the fitted indicator correction R2.

5 Conclusion

5.1 Research conclusion

In recent years, as green and sustainable development actions are gradually put on the agenda, the ESG strategic planning of securities firms has also attracted much attention. In this paper, we select the listed securities firms in China's A-share financial enterprises from 2011-2021 as the sample, and draw the following conclusions after systematic empirical analysis: ① The mixed model test shows that good ESG scores and E, S, G scores have a positive effect on corporate performance, while the significance and fitting effect of G scores can still be judged as the best factor after the time effect model test. The conclusion 1 is valid as the best factor.

The experimental results show that the overall ESG score has a lower impact on firm performance than the G score, the S score has the third highest impact on firm performance, and the E score does not pass the significance test on firm performance and does not have a reference value. It also proves that the overall ESG score has a lower impact on firm performance than the G score when compared with the weighted calculation of the E, S, and G scores, and the conclusion 2 holds.

5.2 Suggestions and prospects

In the light of the above findings, this paper makes the following recommendations: ① The country should strongly advocate the ESG concept so that more companies understand the importance of ESG, which not only protects the environment but also promotes the improvement of corporate performance. And it is not limited to the financial industry, but should issue a call to the whole industry to develop a sustainable economy. ② In the strategic deployment of ESG, banks and securities companies can most effectively promote the development

of corporate performance by improving their G-factor scores. Therefore, the government should introduce relevant policies to make companies pay more attention to improving their G-factor scores. ③ Disclosure of information is the easiest of the G factors to improve. The government should also improve the ESG disclosure system by rewarding ESG companies for good performance and punishing those who do not. The government should also improve the ESG disclosure system by rewarding ESG companies for good performance and imposing penalties for poor performance. It is believed that the transition from semi mandatory to mandatory disclosure will lead to high quality and sustainable economic development for banks and securities companies.

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