

Impact of ESG strategy on Sinopec's financial position

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Abstract: Sustainability is the development goal of our society, and the old model of capital for profit is clearly outdated. In this context, the implementation of ESG strategies becomes a powerful way to achieve sustainable development. Taking Sinopec as an example, this paper first analyses the literature on ESG, listed companies, and the crude oil industry using the literature research method. In the specific analysis of the impact on Sinopec's financial position, the event study method was used to analyze the short-term financial position impact and concluded that the disclosure of information on participation in ESG events had a positive impact on changes in Sinopec's share price and share count in the short term. The analysis of the long-term financial position in terms of profit and assets shows that the implementation of the ESG strategy has led to the optimization of Sinopec's asset structure. The impact of the implementation of the ESG strategy on financial indicators is then analyzed using DuPont analysis in conjunction with relevant Sinopec financial reports, leading to the conclusion that the overall investment trend in Sinopec is moving towards medium to long-term investment. Overall, the disclosure of information on participation in ESG events has a favorable impact on its share price volatility in the short term and the implementation of ESG strategy has a positive impact on Sinopec's financial position.

1. Introduction

ESG is a strategic deployment for internal and external stakeholders, a guarantee of internal governance and control, and an important way to enhance the loyalty and confidence of internal and external stakeholders in the company, and a powerful tool to reflect the concept of sustainable development to the outside world under the "double carbon" policy. ESG is different from traditional social responsibility reports in that it places greater emphasis on the organic integration of environmental protection, social responsibility, and corporate governance. The ESG strategy is gradually expanding its influence in China, and many companies in various industries have started to participate in ESG in recent years.

Sinopec is at the forefront of ESG strategy deployment in its industry, having been listed on the SSE A-share in 2001 and having published an information report on its ESG engagement in 2014.²⁹ The company's actions were forward-looking in terms of the domestic environment and policies in place at the time. It is also evident that although Sinopec is located in the oil industry with heavy pollution and national influence, the Board of Directors and senior management of Sinopec still attach great importance to sustainable development efforts and strengthen the management of environmental protection, social responsibility, and corporate governance. The concepts of risk management, environmental protection, safety development, and social responsibility are integrated into the company's production and operation and corporate culture to promote high-quality development.

However, there is currently less research on the impact of ESG strategies on the financial position of the crude oil industry in China.

This paper examines the short-term and long-term impact of the implementation of ESG strategy on the financial position of Sinopec Corporation, using Sinopec as an example. The study of the short-term impact of disclosure of information on ESG participation events on Sinopec's financials focuses on the impact of disclosure of ESG participation on the company's share price volatility before and after the release of ESG participation information through the event study method. It can be concluded from the analysis that Sinopec's share price showed an upward trend in the short term after the release of the disclosure of ESG participation and that society has a positive outlook on the company after the company has actively assumed social responsibility. The long-term impact of the implementation of the ESG strategy on Sinopec's finances is illustrated by an analysis of its assets on the one hand. The analysis shows that the assets have increased after the implementation of the ESG strategy. On the other hand, Sinopec's financial indicators are analyzed using the DuPont analysis in conjunction with its financial statements. The analysis shows that the asset and liability structure has been optimized following the implementation of the ESG strategy and that Sinopec's medium and long-term investments have increased as a result of the ESG strategy deployment. Overall, the company's share price trended upwards in the short term as a result of the implementation of the ESG strategy deployment. In the long term, the company's asset and liability structure and strategic deployment are more complete.

The first part of this paper is a literature review, the second part is an analysis of the short-term impact of information disclosure on Sinopec's financial position by participating in ESG events, the third part is an analysis of specific measures to implement Sinopec's ESG strategy, the fourth part is an analysis of the long-term impact of implementing ESG strategy on Sinopec's financial position and the fifth part is a conclusion.

2. Review Of the Literature

2.1 ESG philosophy

In recent years, sustainable development has become a topic of social concern and an important consideration in corporate development, and ESG concepts relating to the environment, society and governance have received widespread attention. Most of the relevant literature has focused on one of these aspects, while a small number of papers have studied all three aspects together. In this paper, the findings of each aspect of ESG will be summarized separately.

Regarding the environment, environmental information disclosure policy implementation is largely ineffective in the financial route, and Fang Ying and Guo explored the reasons for this, finding that the low cost of environmental violations is an important reason for the ineffectiveness of environmental information disclosure in China, while investors' awareness of environmental protection, media coverage, and social concern are also influential factors.[1] And Shen Hongtao et al., from two perspectives, the signaling theory of economics and the legitimacy theory of political science, found a significant U-shaped relationship between corporate environmental performance and environmental information disclosure through a large data sample test, breaking through studies based on a single perspective and linear relationship.[2]

Regarding the social aspect, Tian and Wang used the double-difference method and proposed the hypothesis of the social responsibility masking effect, in which companies may use social information disclosure to mask problems in corporate operations.[3] In the foreign-related literature, Agniuis and Glavas argue that corporate fulfillment of social responsibility is a positive aspect for companies and that corporate profits and social responsibility are mutually reinforcing.[4] Related studies have further explored the impact of CSR on corporate value, with Lin et al. finding that CSR affects corporate value through the relationship with government, while Bonnie et al. 's study illustrates the influence of corporate value through the percentage of shareholding by institutional investors.[5][6]

With regard to corporate governance, Bhagat and Bolton's study shows a positive relationship between director shareholding and performance.[7] Regarding external governance, Li Wei'an argues that based on the inertia of thinking formed in China in the past under the planned economy, the rule of law and market governance have been neglected, thus limiting the level of corporate governance.[8]

Combined with the research of scholars at home and abroad, ESG-related studies are mostly analyzed from one of these aspects. This paper, therefore, integrates three aspects to consider the development of ESG strategies for companies.

2.2 Impact of implementing an ESG strategy on listed companies

As the national sustainable development policy and the "double carbon" target are promoted, the domestic capital market is increasingly concerned about ESG (environmental, social, and governance). In terms of the environment, early research suggested that environmental governance was negatively correlated with financial performance, but over time, people have come to recognize the importance of protecting the environment, and that implementing sustainable development strategies and optimizing resource allocation is the only way for companies to grow in the long term. By taking an active role in social responsibility and correctly understanding the relationship between environmental performance and financial performance, companies will improve their reputation, which in turn will improve their competitiveness and influence, thus promoting financial performance and achieving a win-win situation for both the environment and the economy.[9] In terms of social responsibility, most social responsibility has a positive effect on financial performance and is significantly more significant, so companies that actively fulfill their social responsibility not only earn themselves a good reputation and enhance the overall value of the company; on the other hand, it also facilitates investors to effectively identify risks and opportunities that cannot be identified by traditional criteria. [10-11] On the other hand, it can also facilitate investors to effectively identify risks and opportunities that cannot be identified by traditional standards, and more accurately assess the financial return potential of companies.[12] And CSR in China has a group-to-individual contagion effect. Social network relationships are the basis for the contagion effect of CSR, and the influence of group-level traits in the same industry on individual firms is characterized by "conformity". The contagion effect of CSR in the same industry is enhanced as individual CSR increases.[13] In terms of corporate governance, the higher the level of corporate governance, the higher the financial performance of the firm; the better the quality of internal control, the better the financial performance of the firm.[14] In addition, the better the separation of powers and checks and balances in the corporate governance structure, the better the monitoring function of the securities market.[15]

Reviewing previous scholarly research, listed companies can significantly improve their financial performance by strengthening their practice of ESG concepts, enhancing environmental, social, and corporate governance, leading green development, fulfilling social responsibility, and improving governance standards.

2.3 The significance of implementing an ESG strategy for the crude oil industry

Under the "Double Carbon" policy proposed on 22 September 2020, the crude oil industry has been pushed to the forefront of the sustainability debate, and ESG, as an environmental, social, and governance (ESG) performance measure, is rightly considered as an indicator to assess the sustainability of the industry. It is suggested that the non-ferrous metallurgical industry and the crude oil industry have many ESG risks such as environmental problems, safety accidents, occupational health problems, community complaints, poor risk control, and weak internal control awareness, and these potential ESG risks pose a greater challenge to the non-ferrous metallurgical industry in achieving carbon reduction targets and sustainable development. In the context of the country's "double carbon" target, the article further suggests that enterprises in this industry should focus on how to apply the ESG system and support their further development.[16]

In terms of corporate earnings, good ESG can significantly increase the value of the firm in the market of its industry and can lead to higher stock returns and increase its excess return.[17]

3. The short-term impact of participating in ESG disclosure on Sinopec's financial situation

China Petrochemical Co., Ltd. was listed on the Shanghai Stock Exchange in 2001 and participated in the information disclosure of ESG in 2014. Under the background of insufficient development of

ESG in China, the company released the Report on the Society, Environment, and Governance of Sinopec Shale Gas, which is environmentally friendly and sustainable in the oil industry. The degree of attention can be at the forefront. The Fuling shale gas field to which Sinopec belongs is the first large-scale shale gas field in China. In response to some people's doubts about shale gas pollution of groundwater, the report especially introduces Sinopec's technical measures in preventing shale gas from polluting water sources. As an enterprise that pays attention to environmental issues while internal production in the early crude oil industry, this section will take Sinopec as an example to study the financial impact of information disclosure involved in the ESG incident on Sinopec.

3.1 The impact of information disclosure involved in ESG events on stock price fluctuations

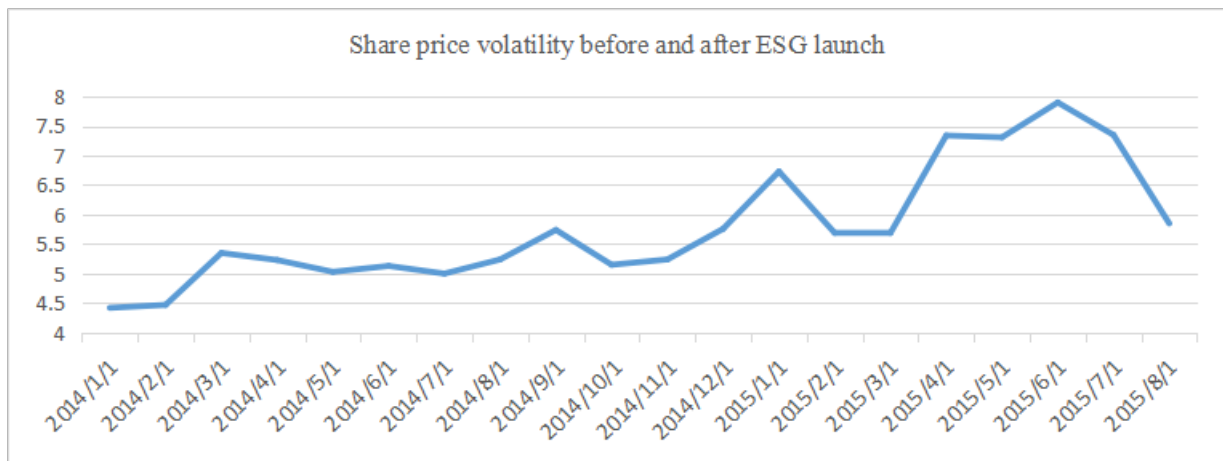


Figure 1. Change in share price before and after disclosure of ESG participation

The short-term event research method is used to analyze and sort out the stock price fluctuation before and after the information disclosure of the ESG event, and use Stata to design the regression model and calculate the excess return (AR) cumulative excess return (CAR) of its individual stocks, and analyze it to draw a conclusion that the specific impact of the information disclosure time involved in the ESG event on its stock price fluctuation.

3.1.1 The impact of information disclosure involved in ESG events on stock price fluctuations

Due to the company's participation in the ESG strategy, the information disclosure was held on December 29, 2014, so we call that day the event disclosure date, that is, the date of the incident, and define it as the 0th day in the event window period. The purpose of determining the event window period is to reflect the impact of the event on the change of the enterprise's stock price over different time periods. The estimated window period refers to the period when the company's stock price is not affected by an event. Using the event window definition method commonly used by domestic scholars, ten trading days before and after the event disclosure date, that is, [-10,10], as the event window period and [-120, -11] as the estimated window period.

3.1.2 Calculating the expected rate of return of a business for each day during the event window

Generally speaking, there are four methods of calculating expected returns, namely the mean-adjusted model method, the market model method, the market-adjusted model method, and the constant return model method, with the market model method being the most commonly used. Therefore, this method is also used in the study of this paper. Based on the market model approach, the following regression model was developed using data from the estimation window [-120, -11] as the sample, the return of the market in which the firm's stock is located as the explanatory variable and the return of individual stocks as the explanatory variable.

Where represents the actual rate of return of the stock on day t during the estimation period. represents the real rate of return of the market on day t during the estimation period. and are estimated using the least-squares method. represents the regression residuals.

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

Using the data from the estimation window to build a regression model, the market return for each day of the event window can be used to estimate the expected return of a stock, denoted as.

$$E[R_{it}] = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (2)$$

3.1.3 Calculating the excess return (AR) and cumulative excess return (CAR) of individual stocks

$$AR_{it} = (R_{it} - E[R_{it}]) \quad (3)$$

$$CAR_{it} = \sum_{t=-10}^t AR_{it} \quad (4)$$

Where denotes individual shares at point-in-time excess return, and denotes the individual stocks at the cumulative excess return of the stock at the point in time.

3.1.4 Results and analysis of the event study

The specific calculations, based on the event study method described previously, are shown in Table 1.

Table 1. Excess Return (AR) and Cumulative Excess Return (CAR) Calculation Results

Trading Days	Window period	Individual Share Yield	Market Yield	Excess return (AR)	Cumulative excess return (CAR)
2014-12-15	-10	-0.174%	1.330%	-0.824%	-0.824%
2014-12-16	-9	2.609%	0.336%	2.511%	1.687%
2014-12-17	-8	1.864%	-1.188%	2.614%	4.302%
2014-12-18	-7	-0.499%	0.152%	-0.494%	3.807%
2014-12-19	-6	4.013%	-0.257%	4.245%	8.052%
2014-12-22	-5	2.090%	-3.662%	4.215%	12.267%
2014-12-23	-4	-5.039%	-1.806%	-3.946%	8.321%
2014-12-24	-3	-2.819%	1.423%	-3.521%	4.800%
2014-12-25	-2	2.389%	1.989%	1.373%	6.173%
2014-12-26	-1	2.833%	1.175%	2.269%	8.442%
2014-12-29	0	1.297%	-0.886%	1.879%	10.320%
2014-12-30	1	0.160%	-1.757%	1.226%	11.546%
2014-12-31	2	3.674%	1.304%	3.038%	14.585%
2015-01-05	3	10.015%	2.286%	8.834%	23.418%
2015-01-06	4	-1.961%	0.994%	-2.424%	20.994%
2015-01-07	5	2.571%	0.330%	2.477%	23.471%
2015-01-08	6	-4.596%	-0.863%	-4.027%	19.444%
2015-01-09	7	-1.752%	-1.039%	-1.085%	18.359%
2015-01-12	8	-2.377%	-1.985%	-1.184%	17.175%
2015-01-13	9	0.152%	1.068%	-0.352%	16.822%
2015-01-14	10	0.000%	-0.623%	0.436%	17.258%

Table 1 reports the calculated excess return (AR) and cumulative excess return (CAR) of Sinopec (600028) for the 10 trading days before and after the disclosure of information on its participation in the ESG event. It can be found that the excess return of Sinopec (600028) reached 1.879% on the event day, and showed a positive trend in the following three trading days, and reached a peak excess return of 8.834% on the third trading day after the event; from the calculation of the cumulative excess return (CAR), the cumulative excess return increased steadily from 10.320% on the event day to The CAR calculation shows that the cumulative excess return increased steadily from 10.320% on the day of the event to 23.471% on the fifth trading day after the event, reaching the maximum within the event window. All of the above indicate that the event had a significant positive impact on Sinopec's (600028) share price.

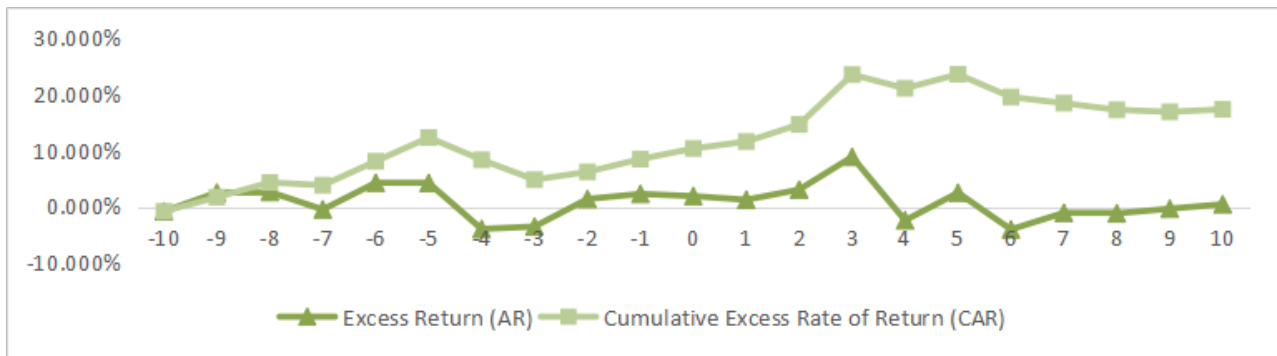


Figure 2. Excess Return (AR) vs Cumulative Excess Return (CAR) line graph

The figure 2 presents the excess return (AR) versus cumulative excess return (CAR) for the event window period [-10,10]. It can be visually seen that the cumulative excess return (CAR) shows a steady upward trend during the event window [-10,5] and a downward trend on the 6th trading day after the event. This indicates that the occurrence of the event had a positive impact on Sinopec's (600028) share price.

3.2 The impact of disclosure of participation in ESG events on the number of shareholders' holdings and the number of shareholders

3.2.1 Increase in the number of shares held by shareholders with original shareholdings

Table 2. (Source: Sinopec annual financial reports for 2014 and 2015)

Projects	2015 (RMB yuan)	2014 (RMB yuan)	Increase or decrease in the current year over the previous year (%)
Basic earnings per share	0.266	0.406	-34.5
Diluted earnings per share	0.266	0.406	-34.5

Table 3. Shareholdings of top ten shareholders (Source: Sinopec annual financial reports for 2014 and 2015)

Name of shareholder	Shareholding (%)	Total number of shares held	Change in shareholding
China Petroleum & Chemical Corporation	70.86	85,792,671,101	72,000,000
Hong Kong (CCASS) Nominees Limited 2	20.96	25,374,341,620	(27,994,089)
China Securities Finance Corporation Limited	1.46	1,764,832,313	1,496,675,457
Central Huijin Asset Management Company Limited	0.27	322,037,900	322,037,900
Guotai Junan Securities Co.	0.11	134,537,906	(158,353,930)
Hong Kong Securities Clearing Company Limited	0.06	76,933,232	76,681,610
Industrial and Commercial Bank of China - SSE 50 Exchange Traded Open-ended Index Fund	0.06	76,637,780	39,150,086
Huaxia Life Insurance Company Limited - Universal Product	0.05	62,817,900	62,817,900
Cheung Kong Securities Co.	0.04	47,268,824	47,105,824
Orient Asset - CITIC Bank - A Fu No. 1 Client Specific Asset Management Plan	0.03	42,065,922	42,065,922

Compared to the previous year, the number of shares in the hands of major shareholders increased. On the one hand, this indicates that the existing shareholders have a positive attitude towards the company's future prospects and values following the release of the ESG report. As can be seen from

Table 3, the new capital injection on top of the existing capital also reflects the increased loyalty and trust of the existing majority shareholders after the disclosure of information on ESG events. On the other hand, it also shows that the number of minority shareholders who injected new capital after the disclosure of the ESG event increased, and most of the existing shareholders increased their total shareholding in order to retain or increase the value and proportion of their existing shareholding. Table 2 shows that the increase in the number of minority shareholders will inevitably dilute the shareholding value and proportion of the existing major shareholders, and most of the existing shareholders will choose to buy new shares in order to maintain the original shareholding value and proportion.

3.2.2 Rise in the number of new minority shareholders

Table 4 number of new minority shareholders (Source: Sinopec annual financial reports for 2014 and 2015)

Projects	2015 (RMB million)	2014 (RMB million)	Increase or decrease in the current year over the previous year (%)
Equity attributable to shareholders of the parent	675,370	594,483	13.6
Total share capital (thousands of shares)	121,071,210	118,280,396	2.4

From the comparison before and after the release of the report on ESG participation, it can be seen from Table 4 that the total share capital increased, inferring a significant increase in the number of new minority shareholders and a more diversified source of funding for the company. This can reflect that the disclosure of information on the participation in the ESG event has led to a positive outlook of zero retail shareholders on the future development prospects of Sinopec Corporation. The change in the company's share price following the disclosure of its participation in the ESG event showed a significant increase in the share price within a few months, reaching a peak in April and May of the following year. The volatility and movement of the share price reflect that the positive effects of the disclosure of information on ESG participation outweigh the negative effects, with potential stock buyers becoming holders of the company's shares and non-potential stock buyers becoming potential stock buyers in the short term. The overall equity structure of the company is more optimized compared to companies in the industry over the same period, with increased shareholder loyalty and greater corporate influence.

4. Specific measures to implement Sinopec's ESG strategy

Sinopec actively implements ESG strategy, adheres to the mission of "fueling a better life", creates the "value-creating CSR - Responsible Oil Drops" model, insists on value creation as the primary goal of corporate management and development and promotes the company's fulfillment of responsibilities in the five areas of innovation, coordination, green, openness, and sharing. The company's mission is to "fuel a better life", create a "value-creating CSR - Responsible Oil Drop" model, insist on value creation as the primary goal of business development, promote the company's five major aspects of innovation, coordination, green, openness and sharing, and promote the sustainable development of the enterprise and stakeholders in economic, social and environmental aspects.

At the environmental level, in the refining business, Sinopec increased its efforts to restructure its plants, resulting in significant growth in gasoline and jet fuel production; optimized resource allocation increased efforts to control costs and actively leveraged the advantages of specialized operations, resulting in significant growth in the refining business; and in the chemical business, optimized the diversified product structure, improved the comprehensive product utilization rate and increased the proportion of high value-added chemical products. In 2015, Sinopec developed the first phase of a large commercial shale gas field in China and completed its commissioning. Shale gas development not only allows for energy restructuring but also environmental protection; Sinopec has also continued to increase research and development of clean products, continued to promote oil quality upgrades,

and provided society with a continuous supply of clean energy, while developing the "Blue Water Blue Sky" environmental protection special action and "Energy Efficiency Doubling". Sinopec also continues to promote the research and development of clean products, continuously upgrade the quality of oil products and provide continuous clean energy to the society.

At the level of social responsibility, Sinopec has upgraded its production safety system, promoted the decomposition and implementation of production safety responsibilities and safety process performance management, strengthened the safety monitoring work in the production process, increased the investigation and treatment of safety hazards, prevented and controlled safety risks, and ensured the safety of employees; Sinopec has actively served the society by taking advantage of its corporate strengths, participating in youth aid and Tibet aid, targeted poverty alleviation, and supporting major national activities; participating in charity activities Sinopec has been awarded the "Top 10 Global Competitive Brands in China" for six consecutive years, and has been awarded the "National Science and Technology Progress Grand Prize". Sinopec was awarded the "Top Ten Green Initiatives of Chinese Enterprises", "Best Overseas Image Enterprise Award", "Ten Years of Witnessing China's Corporate Social Responsibility - Model Enterprise" and "Bright Merit Special Award". The "Bright Merit Special Award" and other awards have received recognition and appreciation from all walks of life.

In terms of corporate governance, Sinopec established its first overseas refining project, actively responding to the national "One Belt, One Road" initiative and practicing overseas responsibilities; Sinopec also applied the Internet, big data, cloud computing, and other technologies to develop Sinopec's industrial products e-commerce "YiPaiKe" to promote the openness of the procurement process and provide customers with fast services; Sinopec is strict in the production process and actively optimizes after-sales service. Sinopec has also applied Internet data and cloud computing technologies to develop Sinopec's industrial products e-commerce "YiPaiCustomer" to promote open and transparent procurement process and provide customers with fast and efficient services; Sinopec has strictly controlled the whole production process and actively optimized after-sales services, with the passing rate of petrochemical products, oil quality sampling and after-sales services reaching 100%. Sinopec has continued to strengthen the optimization of resources among the exploration and development, refining, chemical, sales and new business segments, promote the coordinated development of the upstream, midstream and downstream industrial chains, promote the synergistic development of traditional and emerging businesses, enhance the overall strength and competitiveness of the company, while further strengthening the ability to safeguard national energy security and economic security and promote the sustainable and healthy development of the national economy.

Sinopec will adhere to the development concepts of innovation, coordination, green, openness and sharing, implement the five major development strategies of value leadership, innovation drive, resource coordination, openness and cooperation, and green and low-carbon, focus on promoting structural adjustment and transformation, increase supply-side structural adjustment, provide cleaner products and better services to society, better meet people's needs, and strive to build a world-class resource-saving and We are committed to building a world-class resource-saving and environment-friendly enterprise.

5. Long-term impact of implementing ESG strategy on Sinopec's financial position

Many traditional ideas that a company's biggest goal is to gain maximum profit are no longer relevant in the new era of development, so implementing an ESG strategy has become a major trend. Engaging in ESG has many implications for listed companies under the three concepts of environment, social responsibility and corporate governance, which influence the day-to-day operations of companies. We will use Sinopec as an example to present the long-term impact of its strategy.

5.1 Sinopec Cash Flow Analysis

Comparing before and after the implementation of the ESG strategy, PetroChina's capital flow from operating activities decreased, by roughly 14% compared to 2014. This is because Sinopec's ESG investment is a combination of environmental, social, and corporate governance, which requires

investment upfront and brings increased costs, such as implementing energy-saving and emission reduction, participating in public welfare activities, improving employee welfare, etc. In the medium to long term, the company provides high-quality products and services, accumulates social trust capital, improves social credibility, builds a responsible and committed corporate image, and improves customer stickiness, which is expected to increase asset income, enhance the company's growth potential and create sustainable economic development capacity and profitability. The implementation of the ESG strategy is time-sensitive, and in the short term, expenses will increase significantly and Sinopec's operating income and net profit will decrease, but as time grows and enhances medium and long-term capital growth, the company's cash turnover ratio will increase and the company's assets will gradually increase.



Figure 3. Comparative chart of cash flow statement for 2014 and 2015

5.2 Analysis of Sinopec's investment activities

BP neural network is back-propagating, mainly composed of three parts: input layer, middle layer and output layer. The number of nodes in the input and output layers is relatively easy to determine, but the determination of the number of nodes in the hidden layer is a very important and complex problem.

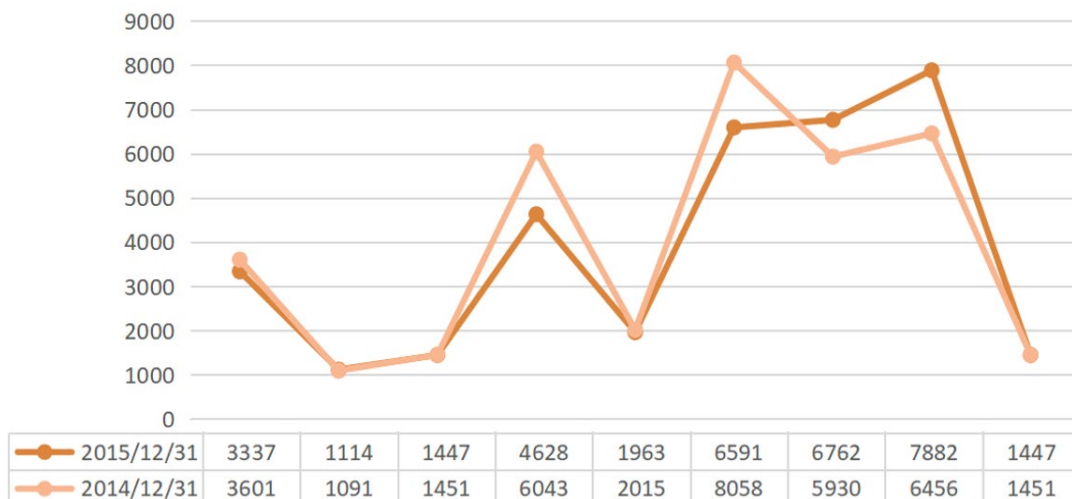


Figure 4. Comparative balance sheet for 2014 and 2015

The implementation of the ESG strategy has increased Sinopec's shareholders' equity by approximately 18% compared to 2014 and reduced total debt. ESG has enabled the company to improve its risk management capabilities helping more people to understand the company's operations, increasing investors' trust in the company and attracting more investors to enter into partnerships with the company, thereby reducing financing costs. By implementing an ESG strategy, companies generally receive a higher credit rating, enhance their reputation and brand influence, obtain lower

financing costs, reduce expenses, increase the company's shareholder capital, reduce total debt and reduce operational risk.

5.3 Impact of ESG on Sinopec's financial metrics

We have collected data from Sinopec's 2014 and 2015 annual financial reports and applied the DuPont analysis to analyse the financial indicators relating to its profit, assets and equity interests.

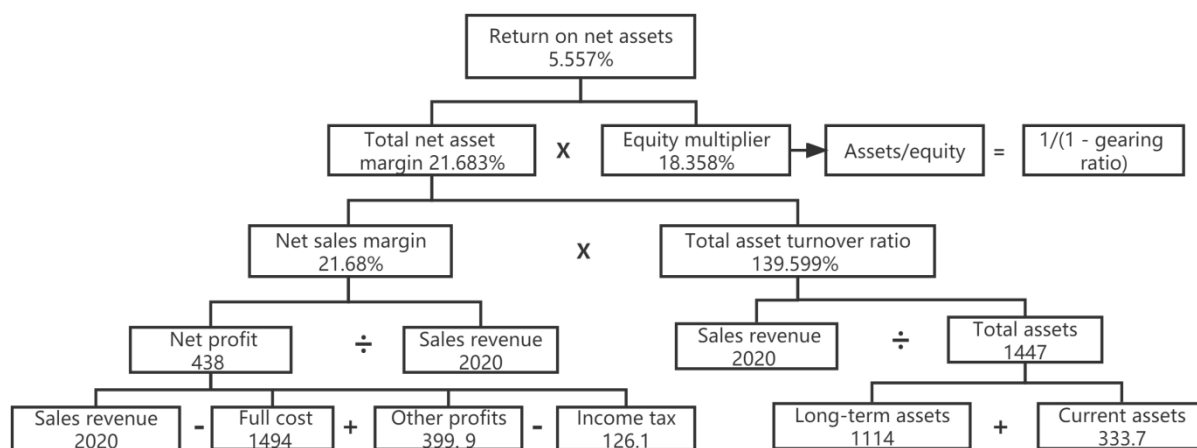


Figure 5. DuPont analysis model (in 2015) in billions

Table 5. Comparison of 2014 and 2015 financial results

Year	2015	2014
Net profit	438	482.5
Total shareholders' equity	7882	6456
Operating income	2020	2828
Total assets	1447	1451

Table 6. Comparison of 2014 and 2015 data

Year	2015	2014
Return on net assets	5.557%	7.474%
Net profit	21.683%	17.062%
Funds turnover rate	139.599%	194.900%
Equity multiplier	18.358%	22.475%

From the table, it can be seen that the NAV index trended down from 2014 to 2015, from 7.474% to 5.557%. One of the possible reasons for the decrease in NAV in 2015 is that Sinopec started to implement its ESG strategy in 2015 and released its ESG report. An analysis of the asset turnover ratio for both years shows that Sinopec's capital turnover ratio decreased by 55.301%, from 194.900% to 139.599%. The decrease in the turnover ratio of assets indicates that Sinopec has increased its long-term investment, increased its investment in ESG strategy, used technology to practice sustainable and environmentally friendly growth strategies, actively participated in socially responsible investment, optimized corporate governance, and transformed its marketing and service. At the same time, this will reduce the company's short-term financing capacity and expose it to high short-term financial risk. However, Sinopec's financial leverage ratio decreased to 18.358%, indicating that the company's lower operating debt can effectively control financial risk and reduce the company's operational risk, shrink the company's loss and improve the net equity margin. Sinopec's net profit margin rose from 17.062% to 21.683%, mainly due to changes in marketing and services, optimization of the feedstock structure, and leveraging the scale advantage after the implementation of the reform of domestic refined oil prices and taxes, resulting in a turnaround in the refining business, which was the main reason for the substantial increase in earnings. Sinopec expanded its own scale and despite the increase in procurement costs, the net profit margin also increased, and shareholders' and other equity also

increased to varying degrees, indicating that Sinopec is optimizing its debt structure.

6. Conclusion

In the context of global sustainability trends, Sinopec is the first company in China's crude oil industry to implement an ESG strategy, and therefore Sinopec is selected as the subject of this paper. This paper uses an event study approach to analyze the impact of information disclosure on Sinopec's participation in ESG events on share price volatility in the short term, descriptive analysis to analyze Sinopec's asset position in the long term, and DuPont analysis to analyze the changes in Sinopec's financial indicators in a comprehensive manner.

Through the analysis, it can be concluded that Sinopec's share price showed an upward trend in the short term after the disclosure of information on the participation in ESG events, the number of existing shareholders increased their shareholding, the number of new minority shareholders increased, and the society had a positive outlook on the company after the company actively assumed social responsibility. The long-term impact of the implementation of the ESG strategy on Sinopec's finances shows that assets have increased after the implementation of the ESG strategy. Analyzing the changes in financial indicators before and after the implementation of the ESG strategy, the asset and liability structure was optimized after the implementation of the ESG strategy, and Sinopec's medium and long-term investments increased due to the ESG strategy deployment. Overall, the ESG strategy deployment has led to an upward trend in the company's share price in the short term. In the long term, the company's asset and liability structure and strategic deployment are more complete. In summary, the implementation of the ESG strategy has had a positive impact on Sinopec's financial position.

This paper analyses the short-term impact of the disclosure of information on Sinopec's participation in ESG events on share price volatility through an event study and the long-term impact of the implementation of ESG strategies on Sinopec's financial position through a DuPont analysis, but not only ESG-related decisions have an impact on the financial position of the company, other relevant factors have different degrees of impact on the financial position. A follow-up study will consider the integration of all relevant factors into a disaggregated analysis to produce more specific results.

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