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THE EVOLUTION OF ESG AND ITS PRACTICE AND DEVELOPMENT IN CHINA

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ABSTRACT

Starting from the evolution of Environmental, Social, and Governance (ESG), we attempt to explore the boundary of ESG: what can be done and what cannot be done (limitation), and the influence of ESG classification and evaluation system on economic activities, social development, and ecological environment. Since the abbreviation "ESG" was introduced by the United Nations in 2004, its influence has been growing among businesses worldwide as an important embodiment of the concept of sustainable development. With the development of ESG-related theory, we analyze its application and practice in the industry and its impact on enterprise value management. Especially for investors, ESG can be a new direction for judging corporate performance and investment value. In addition, we analyze China's policy trends in daily consumption and industry, from large to small, give out how to combine ESG with effective corporate governance and explain the positive effects of ESG.

INTRODUCTION

The concept of ESG received high attention in 2004, when the United Nations Global Compact (UNGC) launched an initiative entitled "Who Care Wins" as can be seen in Table 1(UNEPFI, 2004), which calls for financial institutions to take fully into account the environmental, social, and governance-related transactions. In addition, the proposal also under the three pillars of E, S and G, there are a number of relevant issues that investors, analysts can focus on.

Table 1. ESG-related issues raised by "Who Cares Wins"

E	• Climate change and consequential risks • Reducing pollution emissions and waste of resources • Reducing the environmental impact of products and services • Environmental improvement services and environmentally friendly products • Transparency in environmental information disclosure and impact of achievement of environmental objectives on corporate reputation
S	• Health and safety at workplaces • Community relations • Respect for human rights by companies and partners • Transparency of social responsibility information disclosure and impact of achievement of social responsibility objectives on corporate reputation
G	• Board membership and accountability • Financial disclosure • Independence of audit institutions • Executive compensation • Anti-corruption
Source: UNGC.	

ESG is not a new concept but a re-organization, integration, and re-classification of some of the previous sustainable development-related concepts. Capital markets have been paying attention to the sustainable development performance of listed companies since the 1960s (Carroll, 2008) when the disclosure of sustainable development information was published mainly in the form of Corporate Social Responsibility (CSR).In order to further promote and regulate corporate disclosure of information on sustainable development, the United Nations (UN) Compact proposed the Ten Principles of the Global Compact between 2000 and 2004. Up to now, listed companies at home and abroad disclose their sustainable development information, still according to their specific circumstances, and issued CSR or ESG reports periodically. In 2015, the UN Compact further expanded the "Ten Global Compact Principles" to 17 specific sustainable development Goals (SDGs), and many listed companies at home and abroad have recently published CSRs or ESG reports that have begun to use them extensively.

Table 2 shows that ESG is compatible with the UN's Ten Principles of the Global Compact and 17 Sustainable Development Goals. The Sustainable Development Classification System complements each other.

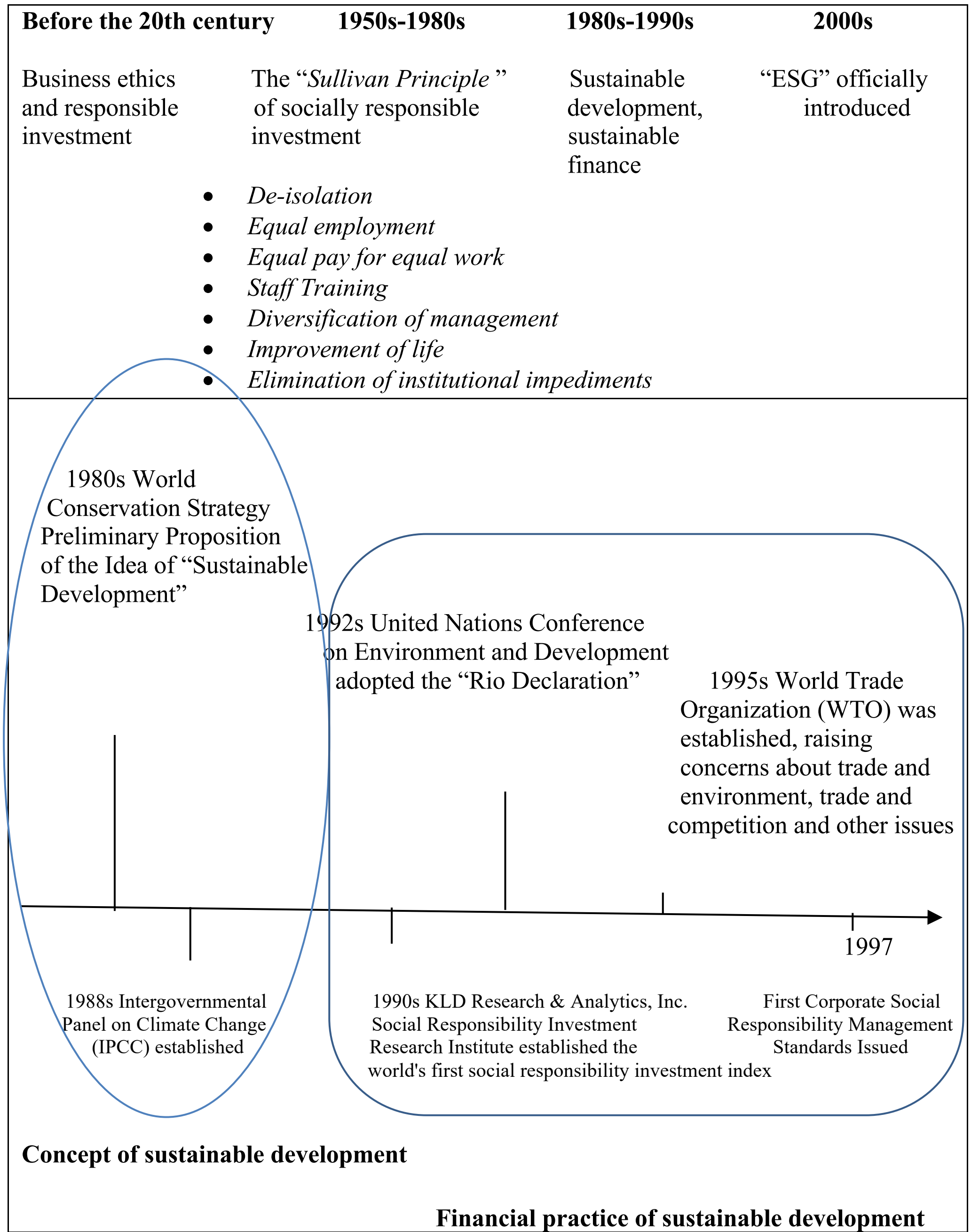
Table 2. Correspondence between ESG and CSR and SDGs

CSR (Based on the ten principles of the global compact)	**ESG**	**SDGs**
• Businesses' preparation for environmental challenges • Enterprises should take the initiative to increase their responsibility for environmental protection • Enterprises should encourage the development and dissemination of environmentally friendly technologies	E	3. Good health and well-being 6. Clean water and sanitation 7. Affordable and clean energy 9. Industry, innovation and infrastructure 11. Sustainable cities and communities
• Enterprises should respect and uphold internationally recognized human rights • Enterprises will never participate in any disregard or abuse of human rights ("co-conspirators"). • Enterprises should safeguard freedom of association and recognize the right of collective bargaining between labor and management • Enterprises should eliminate all forms of forced labour • Businesses should support the elimination of child labour • Enterprises should put an end to any discrimination in employment and occupation	S	1. No poverty 2. Zero hunger 3. Good health and well-being 4. Quality education 5. Gender equality 8. Decent work and economic growth 9. Industry, innovation and infrastructure 10. Reduced inequalities 16. Peace, justice and strong institutions
• Businesses should oppose all forms of corruption, including	G	10 Reduced Inequalities 16 Peace, Justice and Strong Institutions 17 Partnerships for the goals

extortion and bribery		
Source: UNGC.		

ESG has undergone four main stages in its history, as can be seen in Figure 1. From the early ethical integration into business activities, to the rise of responsible investment, to the promotion of sustainable development concepts, the current comprehensive sustainable financial practice is finally formed. Since the mid-20th century, the United Nations has been a major driver of the integration of sustainable development and ESG concepts into global economic activities through the issuance of official initiatives and the establishment of a series of multilateral institutions.

Figure 1. Evolution and practical development of ESG



Source: Author's own elaboration.

The concept of “sustainable development” was formally introduced in the 1980s. (UNEP,1980) In a short period of 10 years, the United Nations and a number of international organizations have launched a series of initiatives and institutions related to sustainable development. As a result, sustainable development was substantially promoted in a number of ways and became a worldwide consensus in the 1990s, and the financial requirements for its development led to further changes in the financial system. It is worth mentioning that at the very beginning of the WTO’s establishment, the focus was on trade and labour standards, trade and environment, trade and competition, and so on. Since then, environmental and social influences have become the important evaluation criteria in transnational trade, and promoted the application of a series of labour and social responsibility standards.2015 is a major milestone in ESG development. At the Global Summit on Sustainable Development on September 25, the United Nations proposed 17 Sustainable Development Goals (SDGs), which cover the three dimensions of economic development, social harmony and environmental governance currently facing the world. On December 4, the Financial Stability Board (FSB) established the Task Force on Climate-Related Financial Disclosures (TCFD) to set a set of ESG standards to assess the impact of climate change on businesses. On December 12, the United Nations Climate Summit adopted the Paris Accord, hoping to jointly slow global warming.

ESG’S PAST AND PRESENT LIFE

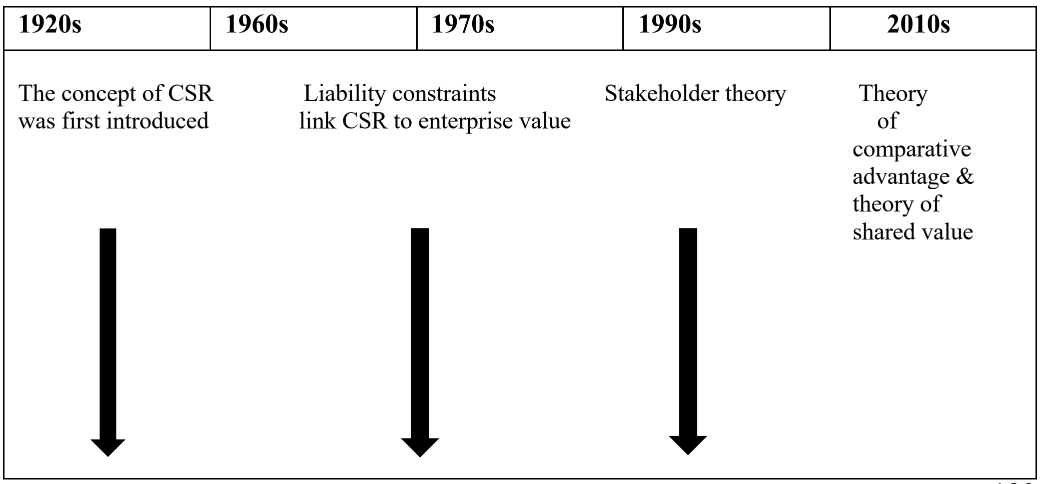
ESG traces its roots to traditional business ethics, such as the need not to destroy trees, manufacture weapons, collect usury, etc (Bressler, 1996). in some Western business groups.

Quakers, born in England in the 17th century, was an early group that practiced ESG comprehensively in economic activities in the form of consensus. Quaker advocates basic concepts such as Simplicity, Peace, Integrity, Community, Equality, and Responsibility, much like the sustainable development we advocate today. British Broadcasting Corporation (BBC) once called Quaker members “ natural capitalists ” (Jackson, 2010) who established businesses such as Lloyd’s Banking Group, Friends Provident, C. & J. Clark, Sony, and others in commercial banking, insurance, footwear, and consumer electronics. During the Industrial Revolution in the 18th century, capitalists’ consumption of natural resources and the hiring of slaves led to massive protests over the excess profits achieved at low cost. As a result, modern socially responsible investments (SRI) focused on the social and environmental impact of business began to emerge: in 1971, the Pax World Funds were established to exclude sectors such as arms manufacturing and tobacco that were not suitable for church funds. Pax, named after the Roman goddess of peace, has grown into one of the world's leading mutual funds for social responsibility (Pax World, 2011). The Sullivan Principle promotes responsible investors to participate in corporate governance. In 1977, Sullivan proposed the Sullivan Principles as a member of GM's board of directors to promote corporate social responsibility. Later, the Sullivan Principles were adopted by the United Nations as part of the United Nations Global Compact. (Lashgari, 1989)

1. The Theoretical Evolution of ESG:

ESG itself is a classification and evaluation tool for sustainable development, so most of the ESG-related theories come from the evolution of sustainable development theory. The academic discussion of sustainable development began with neo-classical economics, and is devoted to discussing ways to balance environmental protection and economic development from the perspective of theoretical research. Then, researchers in the field of management put forward the concepts of corporate social responsibility (CSR) and Stakeholder, and put forward specific issues and subjects to be paid attention to in order to promote sustainable development. As represented in Figure 2, Bowen (1953) first formally defined CSR: an obligation for employers and businesses to act and make decisions in line with the needs and values of society. (Friedman, 1962) argues that CSR is the use of resources to carry out activities aimed at achieving long-term benefits, provided that they are carried out in free competition without deception (Hetherington, 1969). links these relationships to legal compliance in response to social needs, pointing out that companies' rights and ways of maximizing corporate value need to be legally bound to ensure that companies are accountable and thus protect the welfare of society as a whole. (Freeman, 1984) first proposed the Stakeholder Theory: corporations should no longer be limited to the positions of shareholders that the "agent theory" focuses on, but must be held accountable to multiple stakeholders. In addition to shareholders, the stakeholders of the enterprise include employees, customers, suppliers, communities, the natural environment, and even creditors, government units at all levels. (Porter and Kramer, 2006) incorporate CSR into their Competitive Advantage theory, arguing that CSR practice can create a competitive advantage for enterprises, win the favour of consumers and society, and stand out from their peers. This can not only be responsible to the public and society, but also enhance the value of enterprises, forming a win-win situation. Porter and Kramer (2011), combine comparative competitive advantage theory with stakeholder theory to propose creative shared value theory. The main idea is that if a firm addresses pressing social problems and offers solutions to stakeholders, it can create shared values and enhance their utility and value, thus distinguishing itself from competitors.

Figure 2. Evolution of ESG-related theories in management



1953s conceptual definition	1962s liability constraint	1984
Source: China International Capital Corporation.		

2. *ESG application and practice in the industry:*

Against this background, countries have actively promoted the optimization of water and soil resources utilization, the raising of mining threshold and the establishment of discharge standards. The positive impact of ESG on water and land resource utilization is also divided into different models by industry, such as agribusiness: optimizing waste disposal in agricultural production and reducing soil pollution caused by fertilizers. For example, in the *2021 Sustainable Development Report*, China Oil and Foodstuffs Corporation (COFCO, 2021) will review and improve the use of global soybean crops to achieve deforestation-free soybean supply chains in environmentally sensitive areas by 2030 and reduce the use of fertilizers and other polluting resources; Shunxin Agriculture, in its 2021 ESG Report, revealed that the introduction of livestock waste management mechanism and biological treatment equipment has effectively reduced land pollution, sewage pollution and air pollution in agricultural production.

ESG AND ENTERPRISE VALUE MANAGEMENT

Enterprises play a vital role in achieving sustainable development goals and are important participants in ESG ecosystems. The United Nations Development Programme (UNDP) estimates that the private sector will provide two-thirds of the funds, resources, and technologies needed to achieve global sustainable development goals according to its 2020 "China Enterprise and Sustainable Development Goal Practice Survey". The sustainable management of enterprises provides the fundamental impetus for sustainable economic development, and the consensus between investors and other stakeholders is an important driving force for enterprises to carry out ESG projects. ESG management practice is an important link in the ESG ecosystem, and it is also a concrete implementation of ESG investment practice at the enterprise level. Hong Kong Exchanges and Clearing Limited (HKEX) put forward ESG management, which is "the management and operation mode that enterprises should adopt to consider environmental and social risks or impacts", which involves not only the sustainable development of enterprises but also the impact of enterprises on their operating environment. The development of an enterprise ESG management system is based on investors and other stakeholders' concerns and expectations for ESG practice.

1. *Factors influencing ESG management in enterprises:*

ESG management system theory provides practical methodology and tools for evaluating and monitoring ESG performance, and also provides guidance for stakeholder communication. (Papadopoulos and Araujo,

2020) argue that enterprises should take full account of six key elements of ESG management: monitoring and inspection, ESG importance issues, strategic alignment, board oversight, policies and initiatives, indicators and goals. Although there is a reference paradigm in ESG management, ESG management has different management styles with the difference of external environment and internal characteristics. When constructing ESG management system, enterprises should fully consider the macro-economy, industry stage, supervision requirement, enterprise management mode, and choose the mode that matches their own enterprise characteristics.

According to the economic type of enterprise ownership, Chinese enterprises can be divided into state-owned enterprises, joint-stock enterprises, collective enterprises, private enterprises and foreign-owned enterprises. (Eng and Mak, 2003) found that the structure of enterprise ownership influences the internal supervision and information disclosure of enterprises, and the information disclosure of state-owned enterprises is more comprehensive. (Mosh and Khatib, 2021) conducted an empirical study on the influence of enterprise ownership on ESG information disclosure, and found that ESG information disclosure of SOEs and foreign-funded enterprises was higher. We think that this phenomenon may be due to the different requirements of the shareholder structure related to the ownership of enterprises, which the government and foreign shareholders are the main shareholders.

In China, for example, the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) and other departments have made clear demands on State-owned enterprise (SOEs) to assume social responsibility, while the regulatory departments have also made demands on private enterprises to develop ESG. China's state-owned enterprises are an important pillar of its national economy, with a gross domestic product of 114.37 trillion yuan (NBS, 2022) in 2021 and a total operating income of 75.55 trillion yuan (MOF, 2022) in 2021, accounting for 66%.CSR disclosure of state-owned enterprises in China dates back to 2006: State Grid (SGCC, 2010) issued its first CSR report on CSR attributes in 2006, which facilitated the process of CSR disclosure. In order to promote enterprises to fulfill their social responsibility and give full play to the responsibility of state-owned enterprises with Chinese characteristics, the SASAC has issued several documents. According (SOAR, 2022) to *the ESG Job Analysis Report of State-owned Enterprise Listed Companies* published by Responsible Cloud Research Institute in March 2022 in the journal State Capital Report, About 50% of listed state-owned enterprises have identified ESG work authorities, while 40% of the remaining state-owned enterprises said they have plans to set up ESG authorities in the near future. State-owned enterprises (SOEs) are flexible in setting up separate ESG or social responsibility departments, with board offices, propaganda departments, etc. or two or more departments jointly responsible. According to the report, ESG disclosure is higher than the average ESG disclosure of A-share listed companies during the same period, with 48% of A-share listed companies and 30% of A-share listed companies. Private-owned enterprises have played an irreplaceable role in promoting development, promoting innovation, increasing employment, improving people's livelihood and expanding opening-up.

(PRCCPG, 2019). In recent years, Chinese private enterprises have responded positively to the global sustainable development trend and China's common prosperity and dual carbon targets. The Government has given abundant support to private enterprises from various aspects and made relevant requests.

2. *Financial performance of ESG and enterprises:*

We find that ESG's influence on corporate financial performance is gradually evident with the deepening of the understanding and practice of ESG's ideas among investors, enterprises, regulators and other stakeholders. Beginning in the 1960s, some investors in Europe and the United States began exploring social responsibility investment. These investors are concerned about the increasing industrial pollution and ecological destruction under the social background and believe that the negative externalities of enterprises need to be regulated by external forces. The early socially responsible investment behavior corrects the negative externalities of enterprise management to some extent, embodies the ethical values of some investors, and explores the true value of the enterprise. However, due to the limited number of socially responsible investors and the fact that social responsibility is mostly based on subjective judgment or qualitative analysis, there is no rigorous logic method of investment.

Since the 21st century, more and more investors have noticed the impact of non-financial risk on enterprise management and investment analysis. In 2004, the United Nations Global Compact (UNGC) first introduced the ESG concept in its *Who Careers Wins report*, reflecting the interrelationship between enterprise's environmental, social, and corporate governance performance. It is also suggested that as more and more analysts and fund managers try to integrate environmental and social factors into the investment process, ESG awareness in the industry, Investors have also made more explicit demands for ESG products and services, and ESG investment practices have mature conditions. Therefore, the report recommends that financial institutions and analysts combine ESG factors with industry analysis to systematically integrate ESG into investment analysis to verify the relationship between ESG factors and financial performance.

Another important event in ESG's development was the establishment of UNPRI in 2006, which led to a global consensus among financial institutions and provided guidelines for ESG investment practices. Under the leadership of international organizations, regional regulators and financial institutions, ESG investment has expanded its influence in the world. Investors' recognition of ESG investment value is not only reflected in ESG's ability to create long-term value, but also in its ability to generate short-term profits for the company. McKinsey's 2020 report, *ESG Premium: A New Perspective on Value and Performance* reveals the results of a survey of professional investors in 2009 and 2019 on whether ESG creates value (McKinsey & Company, 2020). The survey distinguishes environmental, social and governance factors and further divides shareholder value into short-term and long-term values. As a result, professional investors as a whole are more and more recognized that ESG can create short-term and long-term value, and respondents are more recognized that environmental direction brings long-term value and short-term benefits. Respondents are increasingly recognizing the short-term value of environmental projects that are less productive from a traditional perspective. In the one-way investigation, the positive influence of ESG on enterprise's social evaluation, market competitiveness and financing ability is proved year by year. ESG's financial impact may come from the balance sheet profit statement and cash flow statement. The Standard for Accounting Standards (SASB) suggests that the impact of ESG performance on enterprise financial performance can be analyzed as detailed in Table 3 through four channels: revenue, cost, assets and liabilities, and cost of capital. The SASB also uses this analysis method in the process of identifying issues of industry importance. We complement the four financial impact mechanisms proposed by the SASB.

Table 3: Mechanism of the impact of ESG performance on enterprise financial performance

Income	**Cost**	**Assets and liabilities**	**Cost of capital**
Increased green consumption trends ESG Performance Promotes Brand Influence and Customer Satisfaction	Good employment relationships reduce turnover, reduce recruitment and training costs Energy conservation measures to reduce energy spending	Devaluation of corporate assets due to climate-physical risks	Practice management of ESG risk to reduce enterprise's operating risk

Source: SASB, CICC.

ESG factors may affect the valuation of an enterprise by influencing elements in the balance sheet, profit statement, and cash flow statement. By incorporating ESG factors into enterprise valuation, financial performance and non-financial performance can be analyzed, and investors can judge the true value of the enterprise. The International Valuation Standards Council (IVSC) noted in a prospective report on *ESG and Business Valuation* that ESG has become a core principle of capital allocation for capital providers such as investors and users of capital such as enterprises. (IVSC, 2021) On the one hand, institutional investors use ESG investment strategies to screen for higher returns, and on the other hand, management begins to incorporate ESG factors into the corporate budget process to improve financial performance sustainability. The IASB cited the way ESG factors affect corporate valuations and suggested that ESG information is not just "non-financial information" but also "pre-financial information" that can help long-term investors judge the value of hedged assets.

(Pedersen, Fitzgibbons and Pomorski, 2021) in *Responsible Investment:*

An Effective Frontier for ESG proposed three impact mechanisms in discounted cash flow models: cash flow channels, special risk channels and valuation channels. They used MSCI's ESG rating data and financial data as independent and dependent variables to verify the impact of ESG information on corporate valuation. The results show that as presented in Figure 2, ESG performance can be expressed as lower capital cost, higher valuation and special risk, and can be transferred to valuation and financial performance with higher profitability and lower tail risk exposure.

Figure 3. Cash flow channels, special risk channels and valuation channels for ESG performance impact valuation

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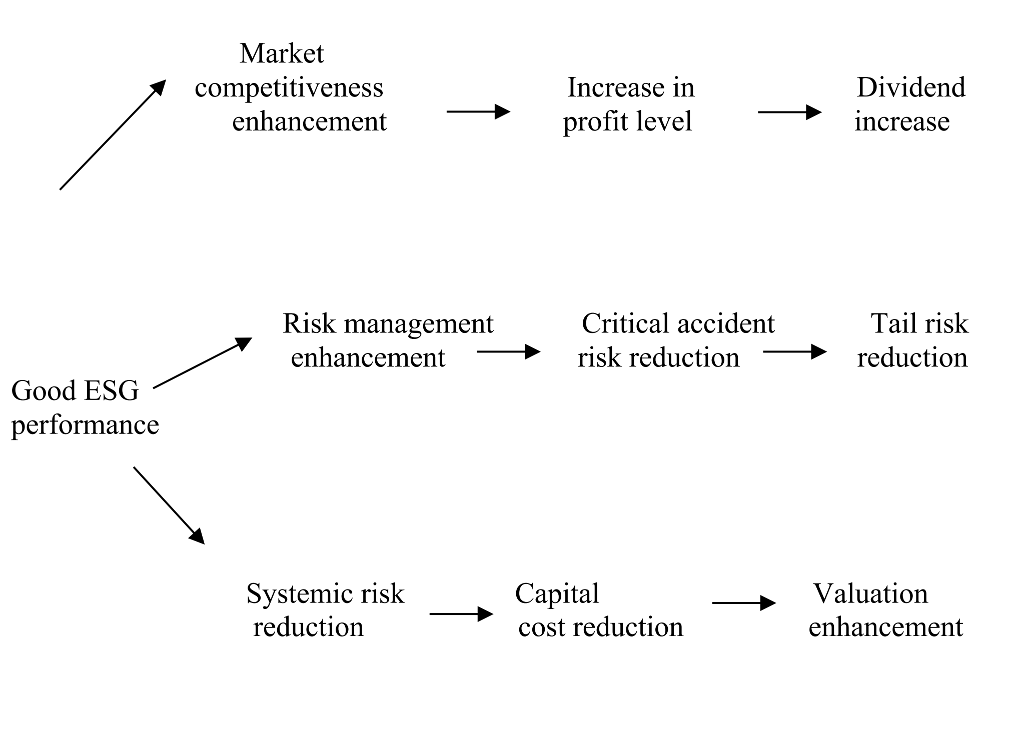

Source：Author's own elaboration.

OVERVIEW OF ESG'S POLICY TRENDS AND INDUSTRIES IN CHINA

The regulation route of ESG with Chinese characteristics remains to be explored. Europe and Hong Kong, China mainly rely on compulsory disclosure rules to urge large enterprises to do ESG information disclosure, and Japan relies on top-down asset managers to form feedback on ESG performance. The United States, on the other hand, is biased towards its case law practice and strictly standardizes the essence of ESG-related economic activities from the principle of "anti-fraud" information disclosure. No matter what course we choose, our ESG regulatory system will aim to build an inclusive ESG regulatory framework that can adapt to both the ESG investment system of overseas investors and the ESG development model of the Chinese capital market.

1. *Daily consumption industries:*

Consumer goods are the most essential and basic consumer goods in everyday life, including food, beverages, tobacco, personal and household items. Consumer goods are less sensitive to the economic environment and economic cycle because they meet the basic needs of people's lives and are oriented towards the common end-market, where they tend to be used more frequently and demand less elastic. In addition, the end of industrial chain of consumer goods industry is directly facing the consumer group, so it is very important for consumer goods enterprises to establish a responsible corporate image through ESG management and ESG practice. As can be seen in Table 4 according to the Global Industry Classification Standard (GICS) industry, the daily consumption industry is divided into three secondary industries: food and main products retail, food and beverage, tobacco, household and personal goods. At the level of four industries, there are many subdivided industries according to the difference of product attributes. Among the A-share listed companies, the daily consumption industries under the GICS classification correspond to the agriculture, forestry, animal husbandry, fishery, agro-food processing, food manufacturing, liquor, beverage and refined tea industries.

Table 4. Breakdown structure of daily consumption industries

Primary Industry	Daily Consumption
Secondary Industry	• Retailing of food and major supplies • food and beverage tobacco • Household and personal effects
Tertiary Industry	• Retailing of food and major supplies • Beverage • Food • Tobacco • Household goods • Personal effects
Quaternary Sector of Industry	• Drug retailing • Food retailing • Distribution of food distribution • A supermarket store • Beer • Distilled wine and wine • Soft drink • Agricultural products • Packaged food and meat • Tobacco • Household goods • Personal effects
Source: Morgan Stanley Capital International (MSCI), China International Capital Corp (CICC), re-arranged by the author	

In the current domestic policy trend, ESG practice is closely related to food security, food security, circular economy and green agriculture. As shown in Table 5, the government has adopted laws and regulations, standards and industry regulations, on the one hand, it has set higher requirements for ESG practice in daily consumption.

Table 5. ESG-related policies in daily consumption

Topic	**Time**	**Policy**
Green Agriculture	September, 2017	Opinion on Innovation System and Mechanism to Promote Green Agriculture Development
Food Safety	October, 2019	Regulations for the Implementation of the Food Safety Law of the People’s Republic
Food Security	October, 2019	China's White Paper on Food Security
Recycling Economy/Waste Recycling	July, 2021	14th Five-Year Cycle Economic Development Plan
Source: State Council, State Development and Reform Commission, CPC Central Committee, etc. re-arranged by the author.		

The safety and quality of food and beverage are the key areas of national concern .The report of the Nineteenth National Congress of the Communist Party of China clearly put forward the implementation of the food safety strategy and made major arrangements for the food safety work. China's food safety policy is based on *the Food Safety Law of the People's Republic of China (Revised in 2021)*, which stipulates safety rules for food industries from production, processing, packaging to storage and transportation. (LINANGOV, 2022) During “the 14th Five-Year Plan period”, the National Health Commission put forward stricter and scientific regulations on food safety standards and monitoring and evaluation. At the same time, China has established a relatively complete system of food safety standards and constantly perfected them. In addition, agriculture, agricultural production and processing involve major national strategies such as rural revitalization and food security. Food security is “the great man of the country”. The report of the 20th National Congress of the Communist Party of China (CPC) pointed out that it is necessary to establish a large-scale view of food and build a diversified food supply system. (XINHUANET, 2022) At present, China has formed a relatively complete grain security policy system, which ensures arable land, production capacity and technology production, strengthens the national grain security foundation and guarantees medium- to long-term grain security. On the policy of main body of grain production, we should continuously cultivate new management bodies such as family farms, farmers' cooperatives and leading agricultural industrial enterprises. (COOTSC, 2021) Food production and retailing industries, especially agricultural production, processing and marketing industries, can effectively support the national food security strategy by stabilizing production capacity and ensuring food production and supply.

In the field of sustainable development, circular economy and green agriculture are closely related to daily consumption. Agricultural production and processing are the key areas of circular economy. For agriculture, forestry, animal husbandry and fisheries, agricultural waste recycling and green agriculture practice can be used as raw materials and environmental protection. In addition, packaging materials in the food and main products retailing industry are one of the important sources of waste such as waste plastics. China’s “plastic restriction order” and other comprehensive waste management policies will force the daily consumption industry from the source to control waste production, implement green packaging and other practices.

2. *Industry:*

The industrial sector in GICS rating system can be divided into three sub-industries: capital goods, commercial and professional services, and transportation. Capital goods mainly refers to machinery and equipment used in production, including construction, aerospace and national defense, electrical equipment, machinery and military industry and other subordinate industries. Commercial and professional services refer to the exchange of services involved in commercial activities, which can be divided into support services such as commercial printing, environment and facilities, and professional services such as human resources and consulting. Transportation refers to the transportation of passengers and goods, according to the transport mode and nature of the sub-industries can be divided into aviation, maritime, logistics, transport infrastructure and so on.

Industry is the economic foundation of a modern country and the key industry of energy use and emissions. In recent years, China has increased pollution control for industrial enterprises, with remarkable results. It has also set up regional carbon markets and national carbon markets to guide industrial enterprises to optimize production and reduce carbon emissions. In order to realize the “just transition” in the process of production efficiency, how to push industrial production from high energy consumption and high emission to zero carbon production has become the key direction of industrial development. In order to meet China’s commitment to “double-carbon” climate goals, several ministries have introduced systems on emissions, energy conservation, carbon neutrality, systematic construction of environmental issues and policy support for industrial transition. In addition, several ministries have issued policy documents on promoting safe production in industry, proposing to build innovative production monitoring system through building and strengthening safety production norms. Because of their industry characteristics, industrial enterprises generally rely more directly and indirectly on upstream raw materials, energy and labour in production and processing. At the same time, the social and environmental impact of the production and operation of industrial enterprises is more obvious. On the other hand, with the boom in new energy circuits and the further implementation of the two-carbon policy, the market for photovoltaic lithium-electric equipment and environmental and facility services is gradually expanding. Therefore, for industries with complex structures to be subdivided into diverse industries, financial and risk characteristics and related ESG importance issues need to be considered comprehensively.

3. *ESG and corporate governance:*

As a specialized outside investor, institutional investors can help investee companies advance ESG improvements. Institutional investors have more preference for social responsibility. They actively participate in corporate governance as shareholders by means of "hand vote" and supervise and restrain corporate behavior by means of direct intervention or withdrawal threat. Research by (Hong & Kacperczyk, 2009 and Pedersen et al., 2021) confirmed the positive impact of institutional ownership. (Dyck et al., 2019) used BP's oil spill as an exogenous variable and found that institutional ownership was positively correlated with environmental scores in 41 countries. In contrast, (Azar et al., 2021) analysed the impact of the rights of the three major institutions (BlackRock, Vanguard and State Street Global Advisors) on actual carbon emissions not environmental ratings and found that the "green" relationship between the two was not "stable".

On the one hand, ESG scores affect institutional investors' choices. ESG scores reflect the sustainability of the business, and institutional investors with longer horizons are attracted to companies with higher ESG scores. (Fu et al., 2020) confirmed with four government initiatives to improve ESG, including anti-corruption campaigns, visa restrictions, smoking bans and accountability gambling, that the increase in ESG scores has led to a significant increase in institutional ownership in Macau casinos. Successful environmental solutions (Chava, 2014) and the issuance of green bonds (Tang & Zhang, 2020) will also increase institutional ownership. On the other hand, the altruism and social pressure of institutional ownership make it adopt the pro-social strategy, and institutional ownership will influence the enterprise's ESG policy. (Kim et al., 2019) validated this causal relationship based on the theory of delegated philanthropy and transaction costs, with local agency ownership negatively correlated with toxic emissions from nearby plants. Another literature focuses on the relationship between ESG and family-owned enterprises, private enterprises and green investors. Family-owned enterprises and private enterprises are subject to less institutional constraints and less external oversight, and independent private enterprises are less likely to be punished by Environmental Protection Agency (EPA) than listed enterprises (Shive & Forster, 2020). As a result, private and family businesses are likely to focus more on short-term financial objectives than on ESG practices. (Dekker & Haso, 2016) tested this with a sample of Australian private SMEs. Family firms paid less attention to environmental performance than non-family firms. This suggests that while private enterprises ignore ESG practices, they will proactively improve ESG performance when faced with strong external constraints. (Li & Wu, 2019) also provides evidence that private companies have significantly reduced their negative ESG incidents following their participation in the United Nations Global Compact (UNGC).In addition, a key factor influencing the reform choices of polluting enterprises is the proportion of green investors, and (Heinkele et al., 2001) models show that reform of polluting enterprises can only be promoted if the proportion of green investors exceeds 20%. (Angelis et al., 2022) further confirmed that an increase in the proportion of green investors would reduce corporate carbon emissions, which would be 4.9% less intense when the proportion of assets managed by green investors doubled. Therefore, increasing the proportion of green investors can be one of the ways to improve environmental performance.

4. The impact of ESG on enterprise risk:

Effective ESG management can benefit businesses as well as help them hedge against potential risks. ESG practice can reflect enterprise’s production and operation situation and future development direction, reduce stakeholder information asymmetry, help enterprise make more accurate decision, reduce operation risk and overall risk. Existing research provides considerable evidence that firms with stronger ESG characteristics have lower risk (Verheyden et al., 2016). Litigation risk reflects the compliance of enterprises with institutional norms, and ESG practice involves stakeholders' rights and interests, which forms a supervisory mechanism. (Hong & Kacperczyk, 2009) corroborated this view by finding that the “Crime Unit” (Low ESG Unit) faced higher litigation risks. On this basis, (Hong et al., 2019), using the Anti-Overseas Corruption Act, found that companies implementing ESG policies significantly reduced bribery and reduced sanctions by $14.3 million (65%). ESG defends downside risks. The downside risk of the continuous change of market environment may be lower than investors' expectations. Most studies have verified the positive effect of ESG practice.

Institutional investors have invested in companies that are performing well at ESG (Sherwood & Pollard, 2018). Solutions to environmental problems or an increase in environmental ratings (Nofsinger et al., 2019) can significantly reduce the downside risk of an enterprise, and the extent to which the downside risk is determined by whether or not the ESG problem is solved. However, there are differences in conclusions based on the crisis period. (Varma & Nofsinger, 2014) demonstrated the ESG fund's ability to reduce downside risks in times of financial crisis, and (Demers et al., 2011) based its research on ESG's failure to invest in the stock market as a proxy V preventing a fall in stock prices. The difference of the above conclusions shows that agency friction between shareholders and managers affects the implementation of ESG, and ESG funds with a long view are more likely to gain the ability to resist downside risks. ESG mitigates credit risk. ESG score is a comprehensive evaluation of the company's ESG performance. The higher the score, the better the company's overall performance and the lower the probability of credit breach. A study by (Jagannathan et al., 2018) confirmed this negative correlation between the ESG score and enterprise credit risk. Furthermore, (Barth et al., 2022) quantifies the extent to which ESG reduces credit risk, using American and European companies as a sample, It is found that a higher ESG rating not only reduces credit risk, but also shows a U-shaped risk mitigation effect. An improved ESG rating will reduce the credit default swap (CDS) spread by about 4%/8%/3% for low/medium/high ESG companies.

CONCLUSION

The influence of ESG on enterprise value The relationship between ESG and enterprise performance has been paid close attention by government, academia and industry. Based on the long-term perspective theory, ESG can stop short-term opportunistic behavior, help enterprises maintain a longer-term perspective, and increase their value in the long run. Strict environmental standards (Dowel, 2000), higher environmental scores (Gilan et al., 2010), lower carbon emissions (Bose et al., 2021) and voluntary environmental information disclosure (Flammer et al., 2021) are positively correlated with enterprise value. On the other hand, some studies show that ESG is negatively related to enterprise value, and this kind of research suggests that executives choose to sacrifice shareholder's benefit to improve ESG score. Thus, policies that increase greening activities do not create value, while policies that reduce environmental risks are the right choices for shareholders' interests (Fernando et al., 2017).ESG metrics can also reduce corporate value by hampering resilience in difficult times.

Although the domestic and foreign ESG rating standards are still in the process of development and perfection, mature ESG professional rating agencies are still scarce. As sustainable investment grows, the importance of environmental, social and corporate governance (ESG) becomes increasingly important, and the impact of ESG on valuation is increasing. With more and more investors using ESG data to support their investment decisions, ESG has become an important strategy for sustainable development. The contribution of this paper is 2 points, first of all, based on foreign literature, combined with China's unique cultural background, economic environment and policy system. Secondly, according to the evolution of theory, according to the different industries to ESG, the influence factors and economic consequences of ESG in China are studied through discussion of environmental, social and corporate governance.

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