CEIBS

中国深度 全球广度
CHINA DEPTH GLOBAL BREADTH

2024 ESG WHITE PAPER

Environmental, Social and Governance

中歐國際工商學院
CHINA EUROPE INTERNATIONAL BUSINESS SCHOOL

中国深度 全球广度

CHINA DEPTH GLOBAL BREADTH

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Foreword

Sustainable development is not only an intrinsic driving force for business growth but also a common language facilitating global communication and collaboration. Within today's complex business environment, organizations are facing unprecedented challenges and opportunities. In this context, ESG has emerged as an essential strategic asset for firms to navigate risks, enhance competitiveness, and accelerate growth.

CEIBS has long been committed to advocating and implementing ESG. Leveraging China Depth and Global Breadth, we integrate ESG into teaching, case development, and research. Over the past year, we introduced both mandatory and elective courses focused on ESG, along with a collection of ESG-related teaching cases designed to empower students to understand ESG concepts comprehensively, tackle practical challenges, and devise solutions. Furthermore, the ESG Research Area consistently promotes interdisciplinary dialogues among faculty members and actively seeks collaborative projects with industry partners. By integrating academic research with real-world business practices, it lays the foundation for further advancing ESG practices.

As a significant step towards the green campus initiative, in 2023, we released the first "CEIBS Carbon Disclosure Report." Through a systematic examination of current carbon emissions and existing measures across our five campuses, we have outlined concrete steps for energy conservation and carbon reduction over the next three years, along with medium to long-term action plans. In operational practices, we are committed to consistently monitoring and evaluating our carbon management performance to ensure the orderly and efficient attainment of our carbon neutrality goals.

The CEIBS community always pursues goals beyond mere business success. We are delighted to see more CEIBS alumni and alumni-led enterprises empowering others by passing on their practical experiences while pioneering sustainable development. Collaborating with partners, they exchange opportunities and creating shared value, thereby promoting ESG principles across diverse business contexts.

30 Years and Beyond. 2024 marks the 30th anniversary of CEIBS. Looking back, we have always upheld the pursuit of excellence and continuously forged ahead. In the future, we look forward to closer collaboration among CEIBS community in promoting quality development, collectively shaping a better and more sustainable future.

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INTRODUCTION

We believe that regardless of a company's stage of development, it is essential to identify key points for integrating ESG topics with business operations and co-creating value with partners.

CEIBS 2024 ESG White Paper focuses on the theme of value creation and comprises five chapters. We hope that the theoretical framework, concepts, and valuable practical experiences outlined in this white paper will provide guidance and support for firms to better create ESG value and achieve sustainable transformation.

The first chapter consists of two review articles. The article "Global Trends and Chinese Practices: Value Creation through ESG Practices" by Professor Yajin Wang and Researcher Geng Liu presents the central role of value creation in ESG practices and outlines a series of industry and policy development trends. The article also discusses the current challenges and explores how these challenges can be addressed through innovative collaboration. **The article "Collaborating to Create ESG Value" by Professor Lydia Price and Laurie Underwood** introduces two important conceptual models. Through case studies, this article demonstrates how companies can find the most suitable ESG value creation collaboration models based on assessing their own situation. Additionally, by analyzing the characteristics and advantages of different collaboration approaches, they summarize some "best practices" to help companies avoid common problems and challenges.

The chapter on corporate ESG practices includes 3 cases. In this chapter, we intend to present how three different types of firms in different industries collaborate with partners to create ESG value. The key focuses of these three cases are: integrating sustainability into operation, technology innovation as the driving force, and empowering clients to improve cooperative relationships. Through summarizing the practical actions of these companies, we hope to inspire readers to reflect and act, promoting better ESG practices.

At CEIBS, ESG considerations and reflections have become important components of group project in many programmes. **This year's ESG White Paper has added a new chapter, specifically dedicated to showcasing student group projects,** demonstrating how 3 groups of students have integrated ESG concepts in their projects. By exploring research methods adopted by each project group in dealing with ESG issues, as well as the progress and experiences they have gained, we hope to provide valuable reference for companies.

The chapter on academic research on ESG by CEIBS faculty includes 3 academic studies: Professors Taiyuan Wang and Meng Rui focus on corporate internal management, examining the motivations and mechanisms behind the appointment of Chief Sustainability Officers by CEOs, demonstrating how management attitudes shape the implementation of sustainable strategies within organizations. Professors Jian Han and Bala Ramasamy focus on the relationship between companies and employees, specifically studying how a company's performance in social responsibility affects its attractiveness to potential talents. Professor Renxuan Wang and collaborators investigate the dynamic of ESG investing by studying the stock performance of companies with high ESG scores during crises.

CEIBS Centre for Wealth Management led by Professor Meng Rui presents the new annual " Study on the ESG Reports of A-share Listed Companies," and this White Paper selects a condensed version of the report. Through detailed data analysis and comparisons, the report comprehensively showcases the performance of A-share listed companies in the dimensions of environment, society, and corporate governance.

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ESG AND VALUE CREATION

INTRODUCTION

Starting from highlighting the role of ESG in corporate operations, this chapter focuses on global trends and China's practices, exploring the connection between ESG and value creation. By reviewing theoretical frameworks, cases, and policy trends, the authors demonstrate how to integrate ESG into strategy and operations, as well as best practices for successful cooperation in value creation.

Below are the key points summarized from the chapter:

· The ESG concept serves as a comprehensive framework for fostering sustainable growth within companies, influencing their strategies, operations, and internal governance. ESG practices not only reflect corporate social responsibility but also promote sustainable development and create value during the process.

· By implementing environmentally friendly operations, positive social relationships, and robust governance structures, companies can enhance market reputation and customer loyalty, thereby driving sales and profit growth.

· ESG practice is a dynamic and interactive value creation process.

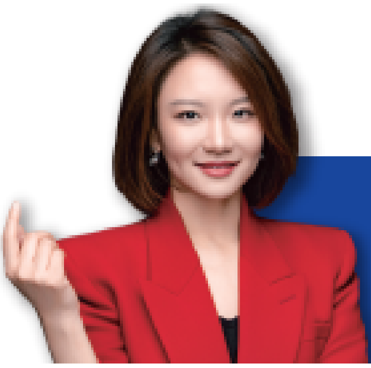
· No matter the size or stage of the sustainability journey, all companies can find value creation opportunities within the framework.

· ESG aims to drive transformation, and the difficulties and challenges brought by this transformation require companies to collaborate and leverage synergies.

ESG AND VALUE CREATION

Global Trends and Chinese Practices: Value Creation through ESG Practices

Yajin Wang and Geng Liu



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Introduction

In today’s globalized business environment, ESG standards have emerged as critical benchmarks for measuring corporate sustainability and social responsibility. This report explores how ESG practices drive value creation globally and within the specific context of China. With a primary emphasis on their impact across economic, environmental, and social dimensions, we analyze the mechanisms and pathways through which ESG practices foster value creation. To substantiate our analysis, we present a series of case studies that spotlight effective ESG adoption across various businesses and industries.

First and foremost, this report underscores the fundamental significance of value creation in ESG practices. It explores how these practices contribute to the enhancement of economic, social, and environmental value, and the interactions and synergies between these dimensions. Building upon this foundation, we then turn our focus to the global landscape, investigating the diverse mechanisms driving ESG value creation. Our examination encompasses cross-sectoral collaborations involving private companies, governmental bodies, and non-governmental organizations, as well as the pivotal role of ESG practices in areas such as technological innovation, stakeholder communication, and supply chain sustainability.

Transitioning to the specific context of China, our analysis zooms in on the experiences and advancements of Chinese companies in environmental stewardship, social accountability, and corporate governance. We further explore the influential roles played by government entities, local communities, and social organizations in shaping China’s ESG landscape. Moreover, this report conducts a comparative examination of ESG value co-creation between China and the West, elucidating the cultural, political, and economic factors that contribute to disparities in approach and outcomes.

Finally, we address the challenges inherent in ESG practices at both the Chinese and global levels. From issues of data transparency to aligning stakeholder demands and navigating regulatory uncertainties, we confront these challenges head-on, recognizing their potential to serve as catalysts for innovation and value creation. By projecting future ESG trends, this report offers actionable insights and recommendations for businesses and policymakers seeking to navigate the evolving landscape of ESG practices and unlock opportunities for sustainable value creation.

ESG, Value Creation, and Value Co-creation

ESG, standing for Environmental, Social, and Governance, represents a set of standards used to assess a company's operations. It evaluates the organization's impact on social and environmental factors, along with its governance practices. Under this framework, the "E" category encompasses aspects such as energy efficiency, carbon footprint, climate change mitigation, and pollution reduction. The "S" category covers labor standards, workplace diversity, human rights, and community relations. Meanwhile, the "G" category focuses on governance, including board composition, executives' compensation, and political contributions.[1]

Value creation in a business context involves the creation of products or services that customers consistently find valuable. It emphasizes innovation in products and processes to meet unique customer needs effectively and efficiently. This concept is critical for businesses of all sizes, emphasizing the importance of building a loyal customer base by consistently delivering significant value.[2]

Value creation and value co-creation are closely intertwined concepts. While value creation emphasizes meeting customer needs through innovative products and services, value co-creation extends this notion further. It emphasizes the creation, delivery, and exchange of value among different stakeholders throughout the process of creating, delivering, and exchanging goods and services.[3] This process aims to achieve mutual benefits through symbiotic relationships, making it a dynamic and interactive value creation process.

ESG practices embody corporate social responsibility and directly facilitate value creation. By implementing environmentally friendly operations, fostering good social relationships, and establishing robust governance structures, companies can enhance their reputation and customer loyalty, thereby boosting sales and profitability. Additionally, adopting ESG standards can help businesses reduce operational risks, attract investors, and strengthen their innovative capabilities. Thus, ESG practices are not solely philanthropic endeavors but strategic approaches that deliver tangible economic benefits.

Within the ESG framework, interactions between companies and their stakeholders (customers, suppliers, communities, and governments) are not just one-way value transfers but bi-directional value co-creation processes. Through collaboration with stakeholders, companies can create social and economic value while addressing environmental and social issues. For example, partnerships between companies and environmental organizations can lead to the development of more sustainable products while simultaneously enhancing brand image and market share.

ESG practices, value creation, and value co-creation reinforce each other. ESG practices not only contribute to value creation but also serve as crucial avenues for co-creating value with stakeholders.

ESG-Driven Value Creation

Over 2,000 studies have demonstrated that focusing on ESG issues does not detract from financial returns; instead, it can enhance them. Sixty-three percent of these studies have shown positive stock returns for companies that prioritize ESG, while only 8% have reported negative impacts.[4] Based on the 2022 ESG ratings of companies listed on the China Securities

Index, sample companies from the CSI 300, CSI 500, and CSI 1000 indices can be categorized into four groups. Analysis reveals that companies with higher ESG scores tend to demonstrate a higher Return on Assets (ROA) one year after the reporting period, underscoring their strong and lasting profitability.

This trend is also evident within the reporting period itself. For instance, during the reporting period, companies within the CSI 300 index that scored highly on ESG metrics had an average ROA of 8.17%, compared to 5.16% for those with lower ESG scores.[5] The IBM Institute for Business Value has observed that organizations with robust ESG data management capabilities tend to significantly outperform others in terms of profitability. This underscores a direct correlation between the effectiveness of ESG data management and a business's financial performance.[6] In the long term, robust ESG strategies can deliver superior returns in the A-share market and help reduce portfolio volatility.

Companies excelling in ESG often have better information disclosure, which reduces information asymmetry for investors, builds ethical and reputational capital, and provides an "insurance effect" for their market performance.[7] According to Thomson Reuters, companies with strong ESG performance typically enjoy higher credit ratings. Such companies have lower credit risks, which often translate to stronger market performance and higher investment returns.[8] Data from Deloitte Risk-X indicates that between 2015 and 2024, the average credit bond default rate of A-rated Chinese companies in the agriculture, forestry, animal husbandry, and fishery industries is significantly lower than D-rated ones, with a difference of about 1.90%.[9]

Chinese asset owners, such as the National Social Security Fund (NSSF) and major pension funds, are increasing the proportion of ESG assets in their portfolios, gradually investing more in green bonds and sustainable investment projects. By 2020, the NSSF had significantly increased the share of ESG-related investments in its total portfolio.[10] A survey found that 83% of traders conduct ESG due diligence when investing in and acquiring target companies. A 2021 report shows that 60% of respondents would cease investments due to negative assessments of potential target companies' ESG issues.[11] A 2022 survey of ESG investments among 184 asset owners across 26 countries reveals that 86% of asset owners incorporate ESG considerations into their investment strategies.[12]

Beyond generating financial returns, robust ESG practices afford companies enhanced recognition among critical stakeholders, thereby elevating non-financial aspects such as reputation and societal impact. This elevation manifests in several beneficial outcomes, including favorable policy considerations, and heightened customer and employee satisfaction. For instance, businesses that stand out for their ESG performance often foster stronger relations with governments, securing preferential policy support. Furthermore, commendable ESG practices are instrumental in cultivating a positive perception of a company's products or services, culminating in elevated consumer trust and satisfaction. Additionally, a significant proportion of millennials, 76%, consider a company's ESG credentials when deciding where to apply for employment.[13] The evidence is clear: organizations that dedicate themselves to ESG initiatives and actively involve their workforce not only boost employee engagement and productivity but also notably decrease staff turnover rates.[14]

ESG Value Creation Mechanisms

Robert P. Sroufe characterizes this process as "integrated management", which entails incorporating ESG performance into the fundamental activities and responsibilities of business processes, functions, teams, organizations, and systems. Value integration evolves from business practices, including ethics, environment management, and sustainability, with the objective of augmenting their overall efficacy rather than supplanting existing methodologies. By translating ESG endeavors into business jargon, such as performance enhancement, revenue growth, operational excellence, waste and cost reduction,

> The ESG concept serves as a comprehensive framework for fostering sustainable growth within companies, influencing their strategies, operations, and internal governance, thereby contributing to value creation.

improvement of operating margins, EBITDA, and asset utilization, ESG concepts become more relevant and compelling to executive leadership. There is a noticeable inclination among Fortune 500 companies to disclose the social and environmental impacts of their operations, and these entities are increasingly integrating sustainability considerations into financial reporting.[15]

McKinsey outlines a framework delineating five primary ways ESG contributes to value creation.[16]

1

Driving top-line growth

ESG initiatives play a key role in attracting both B2B and B2C customers, particularly those who prefer sustainable products. Positive engagements with communities and governmental bodies can improve resource access and unlock new growth opportunities. A notable example is a significant public-private infrastructure project in Long Beach, California, where the winning company was selected based on its commendable sustainability practices.

2

Cost reductions

Adopting robust ESG strategies can lead to operational cost savings related to raw materials, water usage, and carbon emissions. There is a significant correlation between resource use efficiency and financial outcomes. For instance, 3M' s Pollution Prevention Pays (3Ps) project, initiated in 1975, has resulted in savings of USD 2.2 billion through product redesign and improvements in manufacturing processes.

3

Reduced regulatory and legal interventions

A compelling external value proposition linked to ESG can enhance strategic flexibility for companies and reduce regulatory burdens. Advancing ESG practices often leads to a lower risk of government intervention and may even attract governmental support.

4

Employee productivity uplift

A strong ESG proposition helps in attracting and retaining talent, thereby increasing employee motivation and productivity. There is a positive correlation between employee satisfaction and shareholder returns. Companies with higher employee satisfaction often experience superior stock performance. Research by Alex Edmans of the London Business School indicates that firms featured in Fortune's list of 100 Best Companies to Work For enjoy annual stock returns that outpace their competitors by 2.3% to 3.8%.

5

Investment and asset optimization

A robust ESG proposition can enhance investment outcomes by directing capital towards more sustainable and promising ventures, thereby mitigating potential losses associated with long-term environmental challenges. For example, China' s air pollution mitigation efforts are expected to unlock over USD 3 trillion in investment opportunities by 2030.

ESG Value Creation: Evolution and Perspectives Worldwide and in China

The evolution of ESG concepts

The development of ESG concepts worldwide has gone through several key stages, beginning with ethical investment practices in the 18th century. During that time, religious groups guided their followers and the foundations they managed to avoid investing in industries that clashed with their moral values, such as tobacco, arms, and the slave trade. In the 1960s and 1970s, amid rapid economic growth in developed countries, concerns about significant environmental pollution and resource scarcity emerged. This period saw the rise of environmental movements in Europe and the United States, advocating for sustainable development, environmental conservation, and shifts in consumption patterns.

Entering the new millennium, the ESG framework quickly gained momentum. In 2004, Kofi Annan, then Secretary-General of the United Nations, initiated discussions on ESG-related topics. In 2005, the *Who Cares Wins* report was produced by 18 financial institutions, introducing the concept of ESG to the financial world. In 2006, the United Nations launched the Principles for Responsible Investment (PRI). Since then, numerous global organizations and agreements, including the Sustainability Accounting Standards Board (SASB), the Paris Agreement, and the United Nations Sustainable Stock Exchanges (UNSSE), have contributed to the advancement and global recognition of ESG principles.

In China, the evolution of ESG practices has occurred in three major phases. The journey began in 2001 when China joined the World Trade Organization (WTO), prompting increased awareness and adoption of social responsibility among Chinese companies. The second phase followed the 18th National Congress of the Communist Party of China in 2012, particularly with the introduction of the “Innovation, Coordination, Green, Openness, and Sharing” development principles in 2015. This solidified high-quality, sustainable growth as a key pillar of China’ s national development strategy. The third phase began in 2020 with the establishment of the “Dual Carbon” goals as a national strategy. This spurred a focus on low-carbon transition, leading to a surge in ESG practices related to low-carbon issues and greater integration with the capital market. As a result, a growing number of listed companies and asset management firms are prioritizing ESG considerations.[17]

Perspectives of value creation

Internationally, the development of the ESG concept represents a shift from prioritizing short-term profits to focusing on generating long-term value. Originally rooted in ethical investing and environmental activism, early ESG efforts emphasized protecting the environment and promoting social responsibility. However, these principles were not initially integrated into mainstream business and investment strategies. As global challenges like climate change and resource depletion became more pressing, the acceptance and application of ESG principles expanded significantly. This shift gained momentum following the establishment of the United Nations Principles for Responsible Investment (PRI) in 2006, marking a turning point in how ESG considerations were viewed within global capital markets and corporate governance. This evolution underscores a growing consensus among investors and businesses that integrating ESG factors is fundamental to creating sustainable, long-term value beyond fulfilling social and environmental obligations.

In China, the progress of ESG practices reflects a shift towards innovative value creation. Initially, Chinese companies’ focus on social responsibility was driven primarily by the need to meet international standards after China joined the World Trade Organization (WTO). As China’ s development strategy progressed, it introduced the “Innovation, Coordination, Green, Openness, and Sharing” principles, along with the “Dual Carbon” goals. Consequently, Chinese businesses have been integrating ESG principles more thoroughly into their corporate strategies. This shift marks a departure from a purely growth-oriented business model towards one that values sustainable development and long-term value creation. By adopting ESG practices, Chinese companies not only address global environmental and social challenges but also explore new opportunities for growth and competitive advantage.

Thus far, our discussion has focused on understanding ESG from a theoretical perspective and its role in fostering value creation. Grasping these theoretical aspects is essential for appreciating its broader impact on both the business sector and society as a whole. In the following section, we will shift our focus to real-world ESG value creation practices, both worldwide and within China. This next part aims to present a broader picture of global ESG trends before delving into China’ s practices. This separate discussion does not imply disconnection or significant differences between global and Chinese practices; rather, China’ s ESG strategies are a crucial part of the worldwide movement, contributing unique insights and leaving a substantial impact on the global stage. In examining the global narrative of ESG value creation, we will incorporate case studies from China to highlight its proactive engagement in the international arena. As we narrow our focus to China, we will explore the country' s regulatory framework, policy directives, and distinctive socio-economic landscape that shape its ESG initiatives. Our discussion aims to shed light on the dynamic evolution of ESG practices, reflecting both global patterns and China' s specific experiences and innovations. We also aspire to underscore China's role as a pioneer and leader in the ESG domain.

Global Trends

Global governance and international cooperation

In an increasingly interconnected world, global governance and international cooperation play a crucial role in advancing ESG value creation. By collaborating across borders and aligning policies, the global community addresses urgent challenges such as climate change, advocates for sustainable development, and enhances corporate social responsibility. This concerted effort strengthens global commitment to environmental stewardship while establishing a robust framework for achieving social and economic sustainability. Four key trends emerge within this global context:

(1) Consensus on energy transition: The crisis in Ukraine has exposed vulnerabilities in energy dependency, prompting a worldwide shift toward renewable energy sources. In response, the United States introduced the Inflation Reduction Act, allocating USD 369 billion to clean energy and climate initiatives. By 2030, electric vehicles are expected to account for 50% of new car registrations in the U.S. Similarly, the European Union' s Green Deal Industrial Plan aims to accelerate the development of net-zero technologies and ease state aid rules to advance clean energy development.[18] The EU' s plan aims for two-thirds of the Net Zero Emissions Scenario heat pump installations by 2030.

China is also pivotal in the energy transition, leading the way in clean technology adoption. In 2022, China accounted for nearly half of the global growth in wind and solar power and led in electric vehicle sales. China projects a further threefold increase in solar photovoltaic and offshore wind power installations. This rapid ascent of the global clean energy economy, particularly in photovoltaics and electric vehicles, illuminates the path forward. Clean energy investments have surged by 40% since 2020. In 2020, one in 25 vehicles sold was electric; by 2023, that ratio improved to one in five. To ensure a smooth transition to renewable energy, increased investments in clean energy infrastructure are essential worldwide. In emerging and developing economies outside China, investments in energy transition need to increase fivefold by 2030 to align with the Net Zero Emissions Scenario.[19]

(2) ESG-linked performance and compensation: Incorporating ESG criteria into executive compensation systems has become a key consideration for investors' decision-making. This integration suggests that ESG performance is gaining importance among business executives, influencing a company' s overall performance. Approximately half of the companies listed on the FTSE 100 have set quantifiable ESG goals for their CEOs and are incorporating these targets into executive compensation packages. This trend reflects a broader corporate acknowledgment that ethical business practices are integral to successful operations, and just as important as conventional performance metrics.Royal Dutch Shell set a precedent in 2018 as the first major oil company to integrate ESG factors into compensation packages. In 2021, the company raised its long-term net carbon footprint reduction goal from 10% to 20%. Rio Tinto Group adjusted its Short-Term Incentive Plan (STIP), reducing the emphasis on personal achievement from 30% to 15% and redistributing the remaining 15% to ESG criteria. This change complements the 20% already allocated for safety measures, expanding the company' s STIP to cover broader ESG metrics. Apple has also implemented a policy that can adjust executive bonus payouts by up to 10% based on alignment with “Apple Values,” including accessibility, education, environment, diversity and inclusion, privacy, and supplier responsibility.[20] By embedding ESG benchmarks within executive pay frameworks, companies are motivated to prioritize sustainability objectives, creating long-term value for shareholders and stakeholders.

(3) Litigation-driven changes: Around the world, regulatory bodies and companies face an increasing number of climate change-related litigation cases. These lawsuits, often driven by activists, non-governmental organizations (NGOs), or individuals directly impacted by climate change, call for stronger actions from companies or governments to reduce

greenhouse gas emissions. These litigations present legal and financial risks to companies, potentially leading to compensation claims and reputational damage. Activists initiating these lawsuits may also face risks such as litigation costs and public scrutiny.

Shareholder activism remains a significant force in influencing corporate ESG policies, particularly in the oil and gas sector. Despite a recent decrease in court support for such actions, shareholder activism persists as a method to impact corporate ESG strategies. Though these litigations and activist actions occur primarily in specific countries or regions, their effects often transcend borders, fostering international dialogue and cooperation on ESG issues. This collaboration reinforces stricter norms for environmental protection and social responsibility.

(4) Co-governance against greenwashing: Greenwashing, or making deceptive claims about the environmental benefits of products, services, or strategies, poses a significant challenge. In 2023, RepRisk reported a 70% surge in greenwashing incidents among global banks and financial service companies compared to the previous year. The analysis found that 106 of the 148 greenwashing cases stemmed from European financial institutions, with most cases occurring in the fossil fuel industry. Social greenwashing, where companies obscure fundamental social issues such as human rights violations or negative community impacts, also emerged as a trend. Greenwashing is associated with one in four climate-related ESG risk occurrences, with one in three implicated companies also exhibiting social greenwashing behaviors.[21]

To combat greenwashing, the European Commission has proposed initiatives requiring companies to independently verify and substantiate their “green claims” with scientific data before presenting them to consumers. These measures aim to enhance the accuracy and trustworthiness of environmental assertions, empowering consumers to make more sustainable choices and motivating genuine corporate commitment to environmental stewardship.

Addressing greenwashing requires global collaboration and unified efforts within an international governance structure. There is growing demand from the global financial community and investors for collective initiatives to boost corporate transparency and integrity. Regulatory institutions and international organizations are working to establish consistent standards and regulations to define and combat greenwashing behaviors effectively.

Emblematic ESG-related policies

In 2023, there was a noticeable increase in comprehensive ESG policies issued by countries around the world, showcasing a growing global commitment to sustainable value creation. These policies play a critical role in promoting environmental protection and social responsibility while providing new growth opportunities for corporations and investors.

(1) United States: The United States has been working on enhancing climate-related risk disclosures to increase market transparency and provide investors with more precise information. This effort is part of a broader strategy to guide the economy towards sustainability and unlock new avenues for corporate growth. Besides financial statement disclosures, the Securities and Exchange Commission (SEC) proposed new rules requiring public companies to disclose their Scope 1 and Scope 2 emissions, as well as major climate-related risks. Additionally, the Federal Trade Commission (FTC) is updating its Green Guides. California Governor Gavin Newsom signed three bills mandating climate-related disclosures from businesses operating in California, requiring them to report their Scope 1, Scope 2, and Scope 3 greenhouse gas emissions and comply with the Task Force on Climate-related Financial Disclosures (TCFD) reporting framework or other equivalent frameworks.[22]

(2) Canada: Canada plans to introduce mandatory ESG reporting in 2024, focusing on major banks, insurance companies, and federally regulated financial institutions. This initiative aims to promote the sustainable development of the financial market and encourage value creation. The mandated disclosures will cover climate-related financial risks and exposures, in line with the guidelines established by the TCFD framework.

(3) European Union: The European Union’ s Corporate Sustainability Reporting Directive (CSRD), implemented in January 2023, marks a significant milestone in European ESG policy. This directive requires companies to report

sustainability-related information according to the newly established European Sustainability Reporting Standards (ESRS). Around 50,000 companies will need to comply with the directive, making it Europe' s most extensive ESG regulation to date. The CSRD aims to enhance sustainability practices and foster value creation throughout the EU.[23]

(4) Japan: Japan is focused on developing the transition bond market to support companies in shifting towards more sustainable business practices. In 2023, Japan announced plans to issue JPY 20 trillion worth of "GX Transition Bonds" within FY 2023 to promote industrial decarbonization. This makes Japan the first sovereign issuer to adopt a transition bond framework.[24] Japan supports value creation in the green economy by providing financial backing for companies transitioning to low-carbon, sustainable models.

(5) China: China is advancing policies to promote both domestic and international green growth, aiming to create sustainable value for companies and the broader economy. In February 2024, the Shanghai, Shenzhen and Beijing Stock Exchange released guidelines on corporate sustainability reporting for public consultation (Guidelines), enhancing the consistency and transparency of corporate ESG reporting. Additionally, China has engaged in high-level discussions with the European Union to strengthen collaboration on global green transformation. The proposed "1+N" policy framework offers a comprehensive strategy to reach emissions peak across various sectors by 2030. This includes a range of action plans and policy measures. Furthermore, the Hong Kong Stock Exchange has proposed requiring all listed companies to include climate-related disclosures in their ESG reports, shifting from the current "comply or explain" approach. It also suggests introducing new climate-related disclosures aligned with the IFRS S2 Climate-related Disclosures Standards (ISSB Climate Standard), promoting a more reliable and sustainable investment environment for investors and stakeholders.

Finance

(1) Investment: ESG investments differ from traditional investments that primarily focus on financial metrics. ESG investments emphasize the impact of businesses on the environment and society, as well as their internal governance practices. In recent years, non-financial risks such as climate change, labor compliance, and supply chain vulnerabilities have propelled the ESG framework to the forefront of global investment trends, garnering significant attention worldwide. From 2014 to early 2018, ESG-mandated assets in the United States grew at an average annual rate of 16%, compared to 6% in Europe.[25] Between 2017 and 2019, the proportion of retail and institutional investors incorporating ESG principles surged from 48% to 75%. It is anticipated that by 2025, ESG investments worldwide will exceed USD 53 trillion, representing a third of total global assets under management (AUM).[26]

Europe leads in sustainable investment assets, totaling USD 14.1 trillion, with the United States close behind at USD 12 trillion. A 2022 survey by JP Morgan Asset Management revealed that European investors are at the forefront of sustainable investment demand, with ESG allocations exceeding 20% across Europe. Although the flow of funds may slow down, they are expected to remain positive.[27] Deloitte forecasts that in the United States, ESG-mandated assets will grow nearly three times faster than non-ESG assets by 2025, making up half of all professionally managed investments.[28]

China' s commitment to carbon neutrality is driving rapid growth opportunities for ESG investments as the country advances economic and social green transformation. China' s green bond market, a key aspect of ESG investment, has experienced substantial growth. By 2025, China' s ESG investment volume is expected to reach RMB 20 to 30 trillion, accounting for about 20% to 30% of the country's total AUM.[29]

(2) Funds: ESG funds integrate ESG metrics with traditional financial data to provide a comprehensive assessment of investment opportunities. These funds take into account companies' ESG performance in areas such as energy efficiency, community engagement, and corporate governance. Since 2019, global AUM in ESG funds has seen significant growth. By the end of 2021, the global sustainable fund AUM had reached USD 2.74 trillion, marking a 53% increase within that year alone. According to BCG, during the COVID-19 pandemic, ESG funds showed resilience and performed well across various market cycles. ESG indices outpaced market benchmarks in 78%, 75%, and 94% of cases in 2015, 2018, and during the COVID-19 pandemic, respectively.[30]

Europe remains the leader in the global ESG market, holding 81% of sustainable fund assets. This dominance is partly due to the EU's Sustainable Finance Disclosure Regulation (SFDR), which has significantly increased disclosure requirements for ESG financial products, expanding the reach of sustainable investments globally.[31]

The main driver for financial professionals to gravitate toward ESG investments is customer demand. In 2021, over USD 500 billion was invested in ESG-integrated funds, leading to a 55% growth in AUM.[32] The appetite for sustainable investment funds is set to grow further, with expectations of an unprecedented number of new ESG funds launching in the next three years. Deloitte projects that the United States will introduce around 200 new ESG funds within this period, more than double the launch rate of the previous three years.[33] However, between 2020 and 2023, the number of newly launched ESG funds in the United States did not increase significantly as expected. Instead, for the first time since 2020, there were more ESG fund closures than new launches. Reasons for this include waning investor interest in this asset class overall, regulatory scrutiny of the marketing practices of these funds, and political opposition, particularly from Republicans who claim these funds are detrimental to retirees' savings.[34]

(3) Insurance: The global insurance sector plays a unique role as a risk manager, risk taker, and significant investor in the economy, positioning it to advance economic, social, and environmental sustainability. As ESG continues to evolve and be integrated into risk assessment practices, the insurance industry faces both significant opportunities and challenges.[35]

According to a global survey by KPMG in 2022, 44% of insurance company CEOs acknowledged that ESG practices positively impacted their financial performance.[36] Additionally, 85% of global insurers believe ESG will affect all business functions. They identified investments as the area most impacted (91% of respondents), followed by risk and internal audit (90%) and underwriting (88%). Global insurers noted that the main drivers for pursuing ESG are to minimize the impact of climate change (26%), improve the firm's reputation (11%), and minimize risk (11%).[37] Insurance companies enhance their brand image by supporting renewable energy initiatives and other ESG-related activities. For instance, Hiscox plans to launch an ESG-focused syndicate in the Lloyd's insurance market to tap into the growing interest and investment in green technology.[38]

As global risks like climate change and cybercrime increase in frequency and severity, the insurance industry is recognized as a vital safety net for the public, gaining attention for its risk management capabilities and comprehensive coverage. Insurers understand the importance of addressing risks at their source to minimize potential losses. This is particularly crucial in regions like Asia, where insurance coverage is less widespread, leaving a substantial protection gap. This situation presents opportunities for the insurance industry to revise its offerings and introduce innovative solutions to meet emerging needs and serve underserved communities.

For example, Jintai Property & Casualty Insurance has introduced a weather index insurance product for Sichuan pepper growers, using scientific data to facilitate claims based on specific weather conditions affecting crop production, such as freeze or hail events. This type of insurance, which triggers claims based on predefined weather indices, streamlines the claims process, making it efficient and fully online. This initiative bolsters agricultural risk management while fostering collaboration among various stakeholders, including local government bodies, businesses, and farmers, providing significant support to local agricultural sectors.[39]

Insurance companies are undergoing multidimensional transformations in product services, channel marketing, operational models, digital capabilities, and ecosystem partnerships. In the Asia-Pacific region, a growing number of insurers are investing in technology platforms and ecosystem partners to offer low-cost and customized insurance products.[40] A PWC report indicates that 93% of global insurers are likely to consider working with industry groups to advance ESG initiatives, followed by 70% seeking partnerships with other companies. Additionally, 60% are likely to consider working with academic groups.[41]

(4) Banks: The banking sector plays a pivotal role in the global ESG ecosystem. Amidst the global push towards green transformation, banks are key players due to the substantial funding gap in sustainable development efforts. Banks drive

sustainable development, foster shared prosperity, and promote inclusive finance while also navigating heightened regulatory scrutiny and increased disclosure obligations. Banking practices are increasingly centered around green finance and digital transformation strategies, integrating ESG principles into governance structures and management processes. Leading banks such as Citibank and Barclays have established sophisticated approaches and comprehensive practices addressing substantive issues, strategic planning, organizational structure, and risk management.

International commercial banks are advancing their business transformation by continuously enhancing green finance efforts, expanding green financial assets, and innovating green financial products such as carbon quota pledge financing, green bonds, and green auto loans. Banks are also refining financing policies to support environmental sustainability. For instance, Citibank plans to gradually reduce financial support for thermal coal mining companies and cease providing financing services for new ventures or projects in high carbon emission industries, including thermal coal mining and coal-fired power generation.

In China, six major banks - Industrial and Commercial Bank of China, Agricultural Bank of China, Bank of China, China Construction Bank, Bank of Communications, and Postal Savings Bank of China - have made significant progress in ESG innovation and advancement. They have joined the United Nations Environment Programme Finance Initiative (UNEP FI) and signed the Principles for Responsible Banking (PRB), demonstrating their commitment to actively addressing climate change and other environmental challenges while contributing to sustainable development goals. In the realm of green finance, these six banks had issued green loans totaling approximately RMB 8.68 trillion by the end of 2021, marking a 39% increase from the previous year. This positions China as the world’ s largest green loan market, making green loans a foundational element of the international green finance landscape.[42]

Science and technology

(1) Digital technologies: Accenture’ s survey of 560 companies, each with revenues exceeding USD 1 billion, revealed that all companies view digital technologies as “important” or “very important” for achieving sustainable development goals.[43] This highlights the potential for companies to harness digital technologies not only to optimize their core operations but also to meet sustainability objectives.

The year 2023 marked the rise of generative AI, as exemplified by ChatGPT. McKinsey’ s report, The State of AI in 2023: Generative AI’ s Breakout Year, notes that, despite its recent debut, generative AI is being rapidly adopted across various sectors, such as marketing and sales, product development, and customer operations. According to the report, 79% of participants have encountered generative AI applications at least once in their work or personal lives, and 22% use these tools frequently at work. Moreover, one-third of respondents indicated that their organizations routinely incorporate generative AI tools into at least one business function.[44] For example, IBM and NASA have partnered to release a generative AI geospatial model to analyze vast amounts of satellite data, enabling forecasts of floods and forest fires and assessing their impact on crops. Additionally, AI technologies are helping visually impaired individuals better navigate physical and digital environments, enhancing their quality of life.[45]

Big data technology offers a comprehensive understanding of ESG factors, allowing for the analysis of returns and forecasting of business fundamentals for informed investment decisions. It also sheds light on how various industries navigate the transition to a low-carbon economy through innovation.[46]

Cloud computing facilitates the integration and analysis of ESG-related data, thereby improving management efficiency. By embedding ESG principles into the traditional QCDS management framework (Quality, Cost, Delivery, Service), cloud computing assists companies in enhancing their global competitiveness and building stronger connections with international markets, all with a focus on sustainability.[47]

Blockchain technology plays a critical role in gathering and processing ESG data. Its features - such as distributed networks, multi-party consensus, and transparent rules - make it well-suited for facilitating complex collaborations within the ESG sphere. The WeBank Blockchain project, led by WeBank, aims to establish a reliable ESG infrastructure that promotes fairness and sustainable development. Such initiatives are essential for building trust among various stakeholders, including governments, the public, and businesses.[48]

(2) Green technologies: Green technologies are designed to minimize environmental impact, improve resource utilization efficiency, and promote sustainable growth. These technologies play a pivotal role across various sectors, including the adoption of renewable energy, waste reduction, energy efficiency improvements, and the development of green materials and production processes. Central to the "Environmental" pillar of ESG, green technologies are crucial for transitioning from fossil fuel dependency towards clean energy sources such as wind and solar power. They also encompass cutting-edge recycling methods and sustainable packaging solutions. The push for electric vehicles and fuel cell technology aims to lower carbon emissions, while innovations in precision agriculture and sustainable irrigation practices help mitigate environmental degradation.[49] Recent advancements in green technology showcase a diverse array of innovations, including biomimicry (imitating nature' s sustainability solutions), molten salt energy storage (utilizing the thermal energy storage capacity of salt), artificial photosynthesis (using sunlight and carbon dioxide to produce usable energy), smart meters (reducing household energy consumption), and carbon capture and storage (CCS) technology (preventing carbon emissions from entering the atmosphere).[50]

Leading companies like Cisco Systems, Verizon Communications, NVIDIA, Apple, PayPal, Bank of America, Salesforce, Microsoft, Intel, and Alphabet (Google) are at the forefront of integrating green technologies into their operations to achieve ambitious ESG objectives. For instance, NVIDIA has committed to sourcing or producing enough renewable energy to offset its global electricity consumption entirely. Its H100 GPU, leveraging the advanced Hopper architecture, has proven to be 26 times more energy-efficient than conventional CPUs in benchmark tests. In November 2022, NVIDIA was recognized on the Green500 list for possessing the most energy-efficient supercomputer.Apple has successfully avoided 23 million metric tons of carbon emissions. The company focuses on eco-friendly product design, as seen in the Apple M1 chip in the 13-inch MacBook Pro, which has decreased the product' s carbon footprint by 8%. Apple has also increased the use of recycled materials in its products, with about 20% of the materials now sourced from recycled content. Apple aims to reach carbon neutrality by 2030. Overall, green technologies offer solutions to environmental challenges while creating green jobs and guiding corporate governance towards sustainable practices.

(3) Information security technologies: Achieving ESG goals while upholding stringent cybersecurity and privacy standards poses significant business challenges. Although the environmental aspect of ESG initiatives often garners significant attention, cybersecurity and privacy require further emphasis and development. This gap becomes increasingly problematic as the frequency of cyber threats increases, posing risks to companies' operations, continuity, and reputations.[51] By effectively managing cyber risks, organizations not only safeguard their operations, customers, and reputation but also align with broader ESG commitments. ESG rating agencies often include cybersecurity and privacy in their ESG scores, which many investors use as a shorthand for assessing companies' ESG status. For instance, cybersecurity and privacy can constitute nearly one-third (29%) of the ESG score for retail companies, 28% for telecom companies, and 20% for healthcare providers.[52]

Nasdaq integrates the National Institute of Standards and Technology (NIST) Cybersecurity Framework into its ESG reporting guide. This framework is widely adopted by both public and private entities globally, facilitating improved cyber governance and beneficial advancements for the global capital markets.[53] Ericsson, a leader in information and communications technology (ICT) services that handles 40% of the world' s mobile traffic, emphasizes its commitment to information security and privacy. The company' s Audit and Compliance Committee receives updates on cybersecurity at least twice a year and integrates security measures into its annual training programs. This ensures that security and privacy principles are embedded throughout its product and service lifecycle.[54] Wells Fargo, a diversified financial services company with assets of USD 1.97 trillion and serving one-third of all United States households, manages billions of customer interactions annually. The company adopts proactive strategies in information security and cybersecurity. It implements an information security program aimed at enhancing cybersecurity awareness. Additionally, Wells Fargo has initiated a

Third-Party Information Security Risk Management Program. The company also trains employees on protecting customer data, educates customers on digital security, and facilitates data protection in open banking environments.[55]

Media

(1) Explosion in media coverage of ESG topics

In recent years, there has been a noticeable uptick in media coverage of ESG topics, with the focus shifting from highlighting issues to emphasizing solutions. For example, coverage of the carbon market has gained prominence, and mentions of ESG in newspaper articles grew by 54% from 2020 to 2021. Notably, solution-oriented reports by Bloomberg and the South China Morning Post increased by 228% and 330%, respectively, in 2021. Cision' s 2023 Overseas ESG Communication Trends Report examines the challenges and opportunities for ESG and value creation in the wake of the COVID-19 pandemic. It tracks media trends and data from European and American markets, noting fluctuations in ESG coverage in response to economic and political changes. For instance, in the latter half of 2021, there was a heightened focus on sustainable growth and resilience, leading to an increase in traditional media coverage of ESG topics. However, the economic challenges brought on by the Russia-Ukraine war in 2022, such as rising energy prices and inflation, caused a reduction in ESG discussions and led some organizations to postpone or retract their ESG initiatives. Despite these setbacks, the importance of ESG topics remains strong, leading to a revival in related media coverage in 2023.[56]

(2) Diversification of ESG coverage

Media coverage of ESG-related issues has become more diverse, particularly in business media, which now closely examines how different sectors are addressing climate change challenges. This includes areas such as the burgeoning carbon market, financing sources, responsible asset management, professional providers of climate solutions, and scrutiny of ESG data and ratings. Hydrogen energy is one of the most frequently reported solutions, with the Japanese business media, Nikkei, significantly increasing its coverage of hydrogen energy in 2021.[57] Between 2019 and 2020, global media coverage of ESG investments surged by 75%. However, there remains a disconnect between the narratives companies aim to promote and media coverage, as only a third of financial news delves into companies' specific ESG investments or actions. The rest spans a broader spectrum, including topics such as greenwashing, portfolio management, performance, risks, and the overall growth of the ESG domain.[58] This diverse approach to reporting not only reflects the complex and multifaceted nature of societal and environmental challenges but also encourages corporations to innovate and integrate ESG strategies across different areas. This approach helps companies enhance their market competitiveness and support long-term viability.

(3) Rise of the gaming industry

The gaming sector plays a critical role in the global entertainment and media landscape. By 2024, the worldwide gamer population - spanning smartphones, tablets, consoles, and PCs - is expected to surpass 3.3 billion individuals. Projections for 2025 indicate that the global online gaming community will exceed 1.3 billion people. In the United States, gaming is prevalent in 74% of households, with 76% of individuals under 18 and 67% of adults participating in gaming activities; even 7% of those aged 65 and above enjoy video games.[59] From 2023 to 2027, the global gaming industry' s revenue is projected to rise from USD 227 billion to USD 312 billion, with a compound annual growth rate of 7.9%.[60] The gaming industry' s connection to ESG considerations is most evident in its social dimension, impacting young individuals' behavior, social abilities, and academic achievements. The industry also faces the challenge of addressing content diversity, inclusion, and gaming addiction. As the gaming sector rapidly expands, it presents opportunities for discussing and tackling social issues and places a responsibility on companies to foster an inclusive and sustainable societal framework.

(4) Adjustment of brand communication strategies

More than 200 firms have committed to achieving net-zero emissions by 2040, but skepticism exists about the verifiability of these pledges due to a lack of accountability frameworks. This could hinder stakeholders' ability to ensure brands fulfill their ESG commitments. Thus, branding directors need to clearly articulate their ESG ambitions with explicit roadmaps and definitions to address potential criticism and accusations of greenwashing.[61] Branding directors should also recognize that media focus is shifting from specific events to broader trends. This shift requires brands to adjust their communication strategies to resonate better with media outlets by emphasizing major themes and providing in-depth insights. Improved presentation and clarification of ESG efforts can help brands strengthen their reputation and build trust with consumers and investors, laying the foundation for long-term value creation.

(5) The politicization of ESG

In the United States, ESG considerations have increasingly become a subject of partisan politics. Conservative politicians have criticized companies for engaging in "woke capitalism," accusing them of prioritizing trendy environmental and social issues over the "core purpose" of maximizing shareholder profits.[62] During the Trump administration in late 2020, the U.S. Department of Labor introduced a rule to scrutinize ESG investments. However, this stance was revisited under the Biden administration, which decided not to enforce the rule. Since 2019, at least 15 states have actively integrated ESG considerations through laws and regulations. For instance, a law in Illinois requires state and local government entities managing public funds to consider sustainability-related factors. On the other hand, at least 19 states have taken steps to limit or discourage various kinds of ESG investing through new regulations or legislation. For example, Texas passed legislation in 2021 requiring the listing and possible divestment of financial institutions that are found to have ceased financing fossil fuel energy companies.[63]

The politicization of ESG issues highlights their importance and influence in modern society. Businesses and policymakers must navigate interests and perspectives to ensure that ESG investments and practices effectively promote sustainable development and societal well-being.

Supply chains

(1) Global supply chain challenges and ESG management

The COVID-19 pandemic has had a significant impact on global supply chains, creating challenges and uncertainties for businesses. Some companies have responded by increasing the number of their suppliers, while others have worked to strengthen upstream and downstream resilience to protect their supply chains.[64] For example, Tesla, the electric vehicle manufacturer, has taken the innovative approach of producing critical components in-house, such as car chips. This self-manufacturing strategy, although not feasible for all companies, demonstrates the potential for innovation and flexibility in overcoming supply chain hurdles. For entities that cannot manufacture essential parts themselves, expanding the supplier base serves as an alternative strategy. However, engaging more suppliers introduces new risks and increases workloads to maintain the integrity of each business line.

Beyond logistical challenges, global supply chains can also expose companies to ESG-related issues such as the depletion of natural resources, human rights violations, and top-level corruption. These factors can severely impact a company' s efforts to maintain ESG compliance. The supply chain often represents the most substantial area of ESG compliance risk for global brands. Therefore, effective management of suppliers and other third-party entities within the supply chain is imperative for large organizations.[65]

(2) Global regulatory oversight of supply chain ESG management

Several developed countries and regions, including the European Union, the United Kingdom, and the United States, have established regulatory frameworks for managing supply chains. For instance, the German Supply Chain Due Diligence Act requires companies to assess and disclose their suppliers' environmental and human rights compliance, including those in China. Similarly, the European Commission' s Corporate Sustainability Due Diligence Directive enforces due diligence on environmental protection and human rights within supply chains, significantly affecting companies operating in the EU market, especially Chinese ones.

China' s Standardization Administration has introduced the Green Manufacturing - Guidelines for Green Supply Chain Management of Manufacturing Enterprises, marking the country' s first set of standards to promote green supply chains. These guidelines set requirements for green supply chain management for manufacturers, covering the entire product lifecycle, including design, material selection, production, procurement, recycling, and environmentally safe disposal of waste. They also outline green management practices applicable to both upstream and downstream activities in the supply chain.[66]

As the world' s second-largest economy and a pivotal manufacturing hub, China' s engagement with and adaptation to global ESG norms and trends in supply chain management are critical. The ability of Chinese businesses to quickly align with these evolving international standards and fully integrate into the global division of labor is crucial for sustainable development and global prosperity.

(3) ESG influence and synergy in supply chains

Managing extended supply chains beyond first-tier suppliers has become an important trend, particularly in addressing issues such as climate change, labor and human rights, and the management of essential raw materials. The influence of ESG criteria is permeating the entire industry chain through the supply chain, affecting operational and strategic decisions at every tier.

In 2022, the automotive sector experienced intensified demands for carbon reduction throughout its supply chain due to revisions to the European Carbon Border Adjustment Mechanism (CBAM) and the release of China' s Carbon Peaking Implementation Plan for the Industrial Sector. In response, suppliers, including raw material providers and original equipment manufacturers (OEMs), are actively seeking ways to decarbonize the automotive supply chain and promote green supply chains.

Initiatives such as the "Drive Sustainability" project, co-hosted by CSR Europe and GoldenBee China, aim to strengthen the automotive industry' s ability to adhere to ESG standards along its supply chain, with a particular focus on carbon reduction and sustainable growth.[67]

Companies often have limited visibility into or control over supply chains, particularly the segments located in emerging markets. This opacity results in limited awareness of the negative effects of their supply chains on the environment, employees (especially those indirectly employed), and broader society. To address this, businesses are encouraged to cultivate transparency within their complex supply chains, identify ESG risks, assess these risks, and implement appropriate strategies as needed.[68]

Diversity, Equity, and Inclusion

Businesses worldwide are increasingly emphasizing the social dimension of ESG, recognizing the importance of Diversity, Equity, and Inclusion (DEI) principles. DEI is essential to ESG value creation because it enriches corporate social responsibility and governance by introducing a broader range of perspectives, fostering innovation, and enhancing decision-making quality. This, in turn, boosts business performance and sustainability. Moreover, a strong commitment to DEI significantly influences a company' s reputation and the trust it garners from stakeholders, crucial for creating long-term value.

(1) Diversity: The 2023 Manager ESG Survey by Russell Investments highlights the proactive steps many managers take to foster diversity within their organizations. According to the survey, 49% of managers have implemented specific policies aimed at increasing gender or racial diversity among senior management and investors. Additionally, 32% of those surveyed reported having female representation of 30% or higher in their teams, and 11% have achieved a minority representation of 30% or greater - an increase of 23% and 8%, respectively, from 2022.[69]

Studies from McKinsey and Grant Thornton further corroborate the business advantages of diversity in corporate governance, revealing that companies with greater gender diversity among their executive teams tend to have higher financial performance. Many firms now see women occupying a significant share of senior management roles. Regulatory authorities are increasingly scrutinizing aspects such as the gender pay gap and other non-financial disclosures related to diversity. Consequently, many companies are implementing specific gender diversity metrics - covering aspects like pay, recruitment, retention, promotion, and representation - to monitor and report on their progress over time.[70]

In Asia, both Malaysia and India have made significant strides toward improving board gender diversity in recent years. Malaysia has recommended that all boards include at least 30% women directors. India tightened its gender diversity mandates in 2020, requiring the top 1,000 companies by market capitalization to appoint at least one female independent director. The inclusion of more female directors enriches the board with diverse perspectives and experiences, positively contributing to human capital management (HCM).[71]

The role of women in the ESG sector is also becoming increasingly prominent, with women controlling a growing portion of wealth. Female investors often lean towards impact-driven investments, prioritizing causes and social justice issues they hold dear. This preference is particularly evident in the Nordic region, where there is a noticeable inclination among women for ESG investments, especially those emphasizing gender equality.[72]

Research indicates that investment products managed by women or minorities, as well as those from diverse-owned firms, often perform on par with or better than those managed by mainstream firms. Despite these findings, as of 2021, diverse-owned firms represented only 1.4% of assets under management in the United States.[73]

(2) Equity: Since 2022, the focus of societal concern has expanded beyond environmental issues like climate change and biodiversity to encompass social concerns, including equality and employee welfare. A survey by PwC indicates that 48% of consumers believe companies should do more to tackle social issues, specifically focusing on HCM matters such as hiring practices and fair pay.[74]

The increased demand for action has led to pressures for more accountability, stricter regulatory scrutiny, and credible disclosures supported by better data.[75] Global regulators have significantly hastened the development of intricate and highly detailed legal obligations related to ESG. These regulations are designed to promote increased disclosure, transparency, and accountability. While primarily focusing on environmental issues, they also extend to HCM and other ESG-related concerns.[76]

The United States Securities and Exchange Commission (SEC) is updating its human capital disclosure regulations. Companies that neglect ethical and responsible business conduct are increasingly at risk of financial repercussions. For example, Hyundai Motors, the South Korean automotive manufacturer, divested its subsidiary factory in Alabama due to allegations related to child labor.[77]

DiversityInc has released its 2023 ESG Leaders ranking based on a survey of American employers with a workforce of 750 or more, spotlighting companies that excel in fostering workplace equity. This recognition is based on their talent strategies, commitment to supplier diversity, and philanthropic efforts. Topping the list is Hilton, followed by U.S. Bank, Mastercard, and Walmart.[78]

A McKinsey survey highlights that companies like Walmart, Schneider Electric, Shiseido, Tata Steel, and Randstad have launched effective initiatives to promote equity. These initiatives focus on enhancing social mobility, bridging pay disparities, advancing gender equality, and supporting at-risk women.[79]

There’ s a growing interest in investing in enterprises that prioritize social welfare, education, and healthcare. Moreover, firms that tackle societal challenges, including income inequality and ensuring access to basic necessities, are viewed as appealing investment prospects.[80] HarbourVest, a private equity firm, is dedicated to ensuring more equitable access to private capital. The firm has a longstanding commitment to investing in emerging and diverse managers as well as in under-resourced markets. This approach is driven by the recognition of the untapped potential in deserving managers who have historically been bypassed by conventional investment avenues. A notable example of HarbourVest’ s commitment is its support for the LightBay Foundation, a fund designed to contribute positively to the community.[81]

(3) Inclusion: Given market and investor demands, companies are beginning to prioritize inclusion and sustainability strategies. This reflects a shift in mindset, encouraging leaders in the business and investment spheres to proactively and innovatively reassess their operations. This reevaluation is aimed at unlocking new avenues for value creation.

For example, in the transition to clean energy, the Council for Inclusive Capitalism is advocating for companies to follow its private sector guidelines. These guidelines highlight the importance of social impact in ensuring a smooth transition and driving business growth.[82] Led by Lynn Forester de Rothschild, the Council for Inclusive Capitalism is dedicated to engaging the private sector in building a more inclusive, sustainable, and trustworthy economic system. This system aims to generate profits that benefit not only shareholders but also employees, communities, and the planet.

Since its first public debut in December 2020, the council has expanded from 25 founding members to a vibrant community of over 550 global executives, asset owners, managers, and other influential figures. These members have committed to more than 780 specific, actionable, and measurable pledges to foster inclusive capitalism.

For many companies, Diversity and Inclusion (D&I) is intrinsically linked with and driven by ESG. Under this backdrop, in 2023, the emphasis on social value has notably increased. There' s a mounting expectation for transparency regarding how large organizations are fostering D&I and the specific initiatives they are implementing at the local level.

Employers are exploring how to effectively measure inclusion within their organizations. While past efforts predominantly centered on quantifiable diversity metrics, such as demographic data of employees, the focus is shifting towards a more nuanced approach. Measuring inclusion now encompasses not only hard data but also qualitative assessments that capture employees' sentiments and experiences within their work environments.[83]

Consumer awareness and behavior

(1) Rise in sustainable lifestyles

Consumer awareness and behaviors are increasingly shaping ESG value creation worldwide. According to research by McKinsey, many consumers are willing to pay more for "green" products. Surveys across various sectors reveal that over 70% of consumers are open to spending an extra 5% on green products if they perform as well as non-green alternatives.[84]

Deloitte' s four-year study of British consumers' sustainable behaviors shows a shift towards more sustainable lifestyles. In 2023, more consumers are purchasing second-hand items and investing in longer-lasting goods. Many are opting for "repair instead of replace" and reducing car usage. For instance, 76% of consumers are open to using repair services, an increase from 73% in 2022. Additionally, 39% are selling more unwanted items, up from 32% the previous year, and 34% are buying more second-hand products, compared to 29% in 2022.[85]

Simon-Kucher' s annual sustainability study revealed that in 2022, 94% of respondents actively incorporated sustainable practices into their lifestyle and purchasing decisions, and 62% valued sustainability more than a year earlier.[86]

According to Bain & Company' s report, 90% of Asia-Pacific consumers are willing to pay a premium for sustainable products, and over 60% are more inclined to buy from companies with strong ESG performance.[87]

The 2021 China Sustainable Consumption Report found that over 70% of consumers believe low-carbon consumption is a shared responsibility. Consumers are more willing to pay a premium for durable goods such as home furnishings and electronic appliances.[88]

(2) Positive response from major companies

As consumer attitudes shift, companies face increasing pressure to offer eco-friendly products and services. Businesses that lag in sustainable practices risk losing their competitive edge. For instance, Apple has been urged to reduce electronic waste and its carbon footprint by young consumers and environmental activists. In response, Apple uses recycled materials in its products and aims to be carbon neutral by 2030.

In Europe, consumer and environmental groups closely monitor corporate carbon emissions. In response to consumer and investor calls, Intel aims to reach net-zero emissions by 2040, a major commitment within the manufacturing industry, which is a major source of direct carbon emissions.[89]

Samsung Electronics is addressing concerns about the environmental impact of its products and operations. To improve its global brand perception and meet consumer expectations, Samsung plans to power all its operations with 100% renewable energy by 2030 and aims to cut greenhouse gas emissions.

In China, as environmental awareness increases, consumers demand sustainable actions from companies. Alibaba Group introduced the “88 Carbon Account,” a system that incorporates carbon points into software applications such as Cainiao, Xianyu (Goofish), Ele.me, and Tmall.

(3) Discrepancies between awareness and behavior

Nielsen IQ reports a gap in sustainable living: while 70% of global consumers consider it important, almost two-thirds of the global population lack the awareness, motivation, and action to live more sustainably. The main barriers to greener habits are cost and limited access to sustainable options.

Despite acknowledging the value of sustainability, factors such as affordability often take precedence over eco-friendly considerations in brand choice. Nearly all consumer groups prioritize affordability, particularly those adopting or considering green practices.[90]

For companies, achieving ambitious sustainability goals is challenging. They must understand and influence consumer behavior to effect real change. Given economic uncertainty and rising inflation, companies should focus on how sustainable choices can help consumers save money. Consumers are buying more second-hand goods and are willing to pay more for durable items; they are also opting for repairs over replacements and minimizing car usage.

Additionally, as energy costs rise, consumers are saving energy wherever possible, such as reducing heating times. However, they are hesitant to adopt costlier energy-saving measures, like improving home insulation or solar panel installation.

A growing trend is for consumers to consider sustainability in their buying decisions, focusing on product longevity and repairability and preferring responsibly sourced or produced items.[91]

Understanding these consumer priorities is crucial for businesses aiming to promote sustainable consumption. Offering more affordable sustainable options or emphasizing additional benefits, such as health advantages, could significantly influence purchasing decisions.

China’s ESG Practices

China has adopted a distinctive approach to value creation based on its policy frameworks, cultural traditions, and business innovation, setting itself apart in the global surge of ESG development. The country's ESG practices not only China has adopted a distinctive approach to value creation based on its policy frameworks, cultural traditions, and business innovation, setting itself apart in the global surge of ESG development. The country's ESG practices not only demonstrate a proactive response to international standards but also emphasize a sustainable development strategy that integrates local characteristics.

China's policy framework

(1) The "1+1" ESG framework

The "1+1" ESG framework combines universal indicators from international ESG standards ("1") with China-specific ESG indicators based on national conditions and strategic priorities ("+1"). For example, China prioritizes areas such as energy conservation, pollution prevention and control, resource conservation and recycling, clean transportation, clean energy, ecological protection, and climate change adaptation as part of its macro strategy for "ecological civilization construction."[92]

The efforts of brewer Budweiser APAC demonstrate this approach through the creation of carbon-neutral breweries and investments in solar energy. As the cost of solar power in China approaches that of non-renewable energy sources, the company has installed solar panels in seven breweries nationwide and established China's first third-party-certified carbon-neutral brewery in Wuhan, taking advantage of China's position as a global leader in the solar energy industry. Additionally, Budweiser prioritizes regenerative agricultural practices, collaboration, technological innovation, and reducing greenhouse gas emissions worldwide. These initiatives highlight the company's ability to adapt strategies to diverse regional contexts, effectively addressing local environmental and resource dynamics. By combining international standards with local nuances, Budweiser APAC demonstrate global responsibility and better serve the domestic socio-economic landscape, supporting long-term sustainable development and value creation.

(2) Aligning national and corporate narratives

ESG aligns closely with the theory of Chinese-style modernization, making it a "mission of the times" and a "shared value consensus" for Chinese enterprises. In terms of environment (E), ESG is consistent with national policies like the "Five-sphere Integrated Plan," "carbon neutrality," and "carbon peaking." In terms of society (S), ESG supports the long-term goals of rural revitalization and common prosperity. For governance (G), ESG aligns with China's focus on "high-quality economic development."

In the environmental dimension, which is the most prominent, China emphasizes promoting the "dual carbon" goals, transitioning towards low and zero carbon, adjusting energy structures, and implementing green finance. Social dimension indicators reflect national macro strategies such as rural revitalization, common prosperity, agricultural development, disaster relief, and public health. These indicators bring broader social issues like human rights and equality into the corporate realm, examining how companies interact with stakeholders such as employees, customers, and suppliers. When it comes to governance, China' s indicator system takes into account the role of state-owned and central enterprises, blending international best practices with China's unique national conditions and systems. For example, indicators related to structural reform, governance structure, and independent directors of state-owned enterprises include aspects of "party building."[93]

By aligning ESG with national strategic priorities, companies can effectively respond to government policies, enhance their market competitiveness, and improve their social reputation, achieving a win-win outcome between social responsibility and business interests.

(3) ESG evaluation system development

China is actively creating a locally distinctive ESG evaluation system that refines top-level design, improves policy coordination, establishes mandatory ESG disclosure standards and regulatory requirements for enterprises, and fosters local ESG rating agencies. These efforts aim to enhance the quality of evaluation systems while ensuring the security of corporate information and the stability of the national economy and society.

However, China faces significant challenges, including a lack of ESG evaluation tools and methods, mismatched domestic and international standards, and insufficient integrity and reliability in disclosed information. Discrepancies in social responsibility reporting among Chinese listed companies make the ESG evaluation process challenging, underscoring the importance of unified disclosure guidelines.

To enhance the quality of the ESG evaluation system, China is refining top-level design, strengthening policy coordination, and setting mandatory ESG disclosure standards and regulatory requirements for enterprises. The goal is to develop a comprehensive ESG evaluation system based on national conditions to prevent greenwashing.[94]

This holistic approach not only boosts the international competitiveness of Chinese enterprises but also attracts more attention from global investors, fostering the international integration and development of China's capital markets.

Indigenous Chinese culture

(1) Traditional culture

Traditional Chinese culture promotes a harmonious relationship between humanity and nature, emphasizing the concept of "unity between heaven and humanity." This philosophy aligns with ESG principles of environmental conservation. Confucian values of "benevolence" and "social harmony" also support corporate social responsibility. The cultural focus on long-term planning and collective interests guides businesses to consider lasting environmental and social impacts in decision-making. Additionally, the pragmatic tradition in China favors practical solutions to challenges, leading to direct policy interventions and technological innovations when addressing environmental issues like pollution and climate change.

However, rapid modernization in China can sometimes overshadow these environmental principles, contributing to environmental issues. Moreover, an excessive emphasis on social stability may conflict with individual rights and social justice, which are crucial to ESG's social responsibility framework. Bureaucratic culture in China can influence management styles and decision-making processes in ways that differ from Western practices, potentially compromising transparency and diversified governance. Although collectivism fosters teamwork and collective action, it may suppress individualism and innovation. In China, people often look to the government and businesses to take the lead on ESG issues, contrasting with Western individualistic approaches that emphasize personal responsibility.[95] While strong interpersonal networks facilitate business activities and resource sharing, they may also lead to conflicts of interest and unfair competition.

These cultural attributes shape ESG practices in China, presenting both opportunities and challenges. To effectively implement ESG strategies in China, understanding and adapting to these cultural features is essential.

(2) Modern governance

Balancing cross-cultural borrowing and autonomous discourse rights is a significant challenge in modern governance. Global ESG disclosure standards are gradually unifying, and as Chinese companies expand internationally, adhering to recognized ESG standards is crucial for maintaining competitiveness. Given China's unique social, economic, and political context, the country must balance its influence in global ESG discussions while ensuring that standards reflect its domestic realities and priorities.

For instance, the China Enterprise Reform and Development Society (CERDS) established the nation's first corporate ESG disclosure guidelines. These guidelines draw on international best practices while incorporating Chinese ESG laws and regulations. They include a social metric for "employee protection," evaluating opportunities for employees of public enterprises to join labor organizations and access unique entitlements such as social security and housing provident funds, key aspects of China' s social welfare system. Additionally, the guidelines integrate national strategies such as rural revitalization, innovation development, and common prosperity, underscoring the responsibility of Chinese companies to support national development objectives.[96]

The Western model of a purely market-driven approach to ESG standards has proven to be less effective in China. While financial institutions in the West aim to include a company's ESG performance in investment decisions, this market-driven strategy has had limited success in China. This emphasizes the need for the government to play a key role in market regulation and oversight. In response, China is bolstering its ESG investment infrastructure and promoting the development of ESG investment standards with distinctly Chinese characteristics. This involves establishing disclosure and evaluation systems, improving regulatory frameworks, and encouraging collaboration among diverse stakeholders.

In March 2022, the Postal Savings Bank of China and Deutsche Börse jointly launched an ESG index that combines international standards with Chinese-specific indicators. This effort aims to explore "Chinese standards" for ESG investments. The index methodology blends international indexing practices with China's unique ESG databases, offering investors innovative investment options.[97]

Chinese enterprises are increasingly integrating ESG principles in their activities within the Belt and Road Initiative and across Africa, adopting ESG investment standards tailored to China's characteristics. These practices demonstrate Chinese companies' ability to recognize and adapt to international ESG principles while also incorporating China's unique perspectives and approaches in advancing the Belt and Road Initiative and local development.

For instance, China Petrochemical Corporation, within its Belt and Road projects, not only boosts energy cooperation but also supports green, clean production and circular economy practices, emphasizing ecological preservation. Moreover, China Petrochemical prioritizes improving people's well-being by providing job opportunities and engaging in philanthropic initiatives to enhance the socioeconomic development of host nations.[98]

However, mainstreaming ESG investments in the Belt and Road Initiative faces challenges, including differing views on ESG development among participating countries and the lack of unified ESG investment standards and analytical tools.[99]

Business practices with Chinese characteristics

(1) ESG action reports by Chinese listed companies

Listed companies play a central role in China's capital market, making the development and enhancement of their ESG systems crucial for the overall stability and long-term prospects of China's ESG market. Since 2022, Chinese listed companies have accelerated their participation in ESG practices, spurred by both regulatory initiatives and market dynamics.

In terms of policy regulation, the China Securities Regulatory Commission (CSRC) issued the "Guidelines on Investor Relations Management of Listed Companies" in April 2022. Additionally, the State-owned Assets Supervision and Administration Commission (SASAC) released the "Work Plan for Improving the Quality of Listed Central SOEs" in May 2022, and the China Banking and Insurance Regulatory Commission (CBIRC) introduced the "Green Finance Guidelines for Banking and Insurance Industry" in June 2022. On 8 February 2024, Shanghai, Shenzhen and Beijing stock exchanges released the sustainability reporting guidelines for public consultation. These policy initiatives have progressively standardized and strengthened China's ESG development policies, raising the bar for listed companies' ESG capabilities and information disclosure.

In market investments, by the end of October 2022, 119 Chinese institutions had joined the United Nations Principles for Responsible Investment (UN PRI), marking an increase of approximately 43.4% from the 83 institutions at the end of 2021. Leading institutions are becoming more aware of ESG investments, resulting in the sustained growth of ESG-related products' scale and diversity.

In terms of corporate practice, there has been a noticeable increase in the number of A-share listed companies issuing independent ESG and CSR reports. Data analysis from 2007 to 2022 shows that the disclosure rate of independent ESG/CSR reports has stayed around 20% to 25%, indicating that about one-quarter of listed companies voluntarily disclose ESG-related information in the market. In 2022, 1,455 A-share listed companies released ESG or social respon sibility reports, with a disclosure rate of 28.65%.[100] By the end of July 2023, the ESG information disclosure rate for A-shares had risen to 34.85%, covering about three-quarters of the total market value of A-shares.[101] Moreover, international rating agencies have expanded their ESG ratings coverage for Chinese listed companies, highlighting the companies' increased focus on ESG regulatory policies and their own management practices.

The Chinese Listed Companies ESG Action Report (2022-2023) by the International Institute of Green Finance (IIGF) of the Central University of Finance and Economics (CUFE) and National Business Daily (NBD) examines the ESG performance of seven key sectors: finance, healthcare, real estate, transportation, internet, daily consumption, and new energy. Each sector has specific substantive issues reflecting its unique characteristics and challenges. For instance, the real estate sector focuses on green engineering, construction, emissions, and waste management, while the transportation sector prioritizes safety, road management, product safety, and quality. ESG ratings vary across sectors; for example, the real estate sector excels in environmental performance, while the transportation sector scores well in both environmental and governance dimensions. For more details, please refer to Table 1.

Table 1: ESG value creation within seven key sectors of listed companies in China

Sector	ESG rating overview	Substantive issues	Characteristics of value creation
Finance	123 listed companies; 34.15% in the A grade range, 18.7% in the A+ grade range.	Corporate governance, human capital, privacy, and data security.	Improve corporate governance quality, optimize human resource management, safeguard customer privacy, and ensure data security.
Healthcare	483 listed companies; most in B and C grades, with 30.43% in the B grade range.	Corporate governance, product safety and quality, human capital, carbon emissions, and waste management.	Strengthen product safety and quality management, optimize corporate governance structure.
Real estate	114 listed companies; majority in A and B grades; excellent performance in the environmental dimension.	Green engineering and architecture, emissions and waste management, climate change adaptation.	Increase energy efficiency and reduce environmental impact, focus on employee welfare and working conditions.
Transportation	121 listed companies; 38.02% in A grade range, 28.93% in B grade range.	Transport safety and road management, product safety and quality, occupational health and safety, information security and privacy.	Improve transportation safety management and product quality, enhance service quality and safety.
Internet	331 listed companies; primarily in B and C grades.	Strengthening social responsibility, improving ESG capabilities.	Strengthen data security and privacy protection, enhance user trust, increase social responsibility, and improve ESG practices.
Daily consumption	267 listed companies; mostly in B and C grades.	Product safety and quality, human capital, carbon emissions, and waste management.	Enhance product quality and safety, achieve circular economy and green packaging.
New energy	117 listed companies; 67.52% in A grade, 42.74% in A+ grade.	Corporate governance, human capital, energy management, and ecological impact.	Drive energy management and ecological impact assessment, strengthen corporate governance, and optimize human capital.

Source: Organized by the author based on the Chinese Listed Companies ESG Action Report (2022-2023) by the International Institute of Green Finance (IIGF) and Daily Economic News (NBD).

(2) Examples of ESG value creation in Chinese enterprises

An in-depth analysis of Chinese enterprises' value creation in ESG practices reveals a series of innovative and impactful cases. These cases not only highlight companies' deep understanding and adept execution of sustainable development but also demonstrate significant progress through strategic transformations and innovations. They showcase a diversity of approaches to integrating ESG principles into corporate culture, strategic planning, and daily operations, leading to multidimensional improvements in economic, social, and environmental value.

(1) Strategic leadership for value creation

China Mobile exemplifies how integrating sustainable development principles into corporate governance and operations can yield significant benefits for a company. By focusing on sustainability, the company has enhanced its operational efficiency and transparency while reinforcing its commitment to environmental and social responsibilities. This strategy has resulted in notable improvements in corporate governance and market competitiveness.

Since 2006, China Mobile has systematically implemented strategic corporate social responsibility management based on global standards and best practices. One key aspect of this implementation is the establishment of a Sustainable Development Guidance Committee and a strong ESG management structure. These frameworks enable effective execution of ESG strategies, with active participation from senior management and coordinated efforts across different departments.

To guide its ESG initiatives, China Mobile adopts mainstream ESG evaluation systems and creates a normalized management system for benchmarking key sustainable development issues. The Development Strategy Department leads various units in benchmarking management, gap analysis, and improvement tasks. This approach involves using third-party assessment systems such as MSCI and Sustainalytics to continuously refine its management practices.

As a result of these measures, China Mobile's comprehensive value creation capabilities and influence continue to expand. The company has maintained the highest A-grade evaluation in the performance assessment of Central State-Owned Enterprises (SOEs) by the State-owned Assets Supervision and Administration Commission (SASAC) for 19 consecutive years.[102]

(2) Innovation-driven value creation

Lenovo Group is an exemplary model of innovation-driven value creation within the context of ESG (Environmental, Social, and Governance) practices. The company integrates ESG concepts with technological innovation to create meaningful impact in areas such as scientific carbon reduction and diversity and inclusion. Through its ESG initiatives, Lenovo enhances its competitiveness and helps other companies achieve their own ESG transformations, reflecting its role as a leader in value creation through innovative approaches.

Lenovo's journey with ESG practices began in 2009 when the company joined the United Nations Global Compact organization. Since then, it has actively pursued various ESG-related initiatives, setting emission reduction targets and enforcing its Supplier Code of Conduct. This commitment to global ESG requirements established a solid foundation for the company's global development.

A pivotal moment for Lenovo's ESG development occurred in 2017 when the company closely integrated its business with ESG strategies by combining ESG with digital productivity. Lenovo's self-developed warm water-cooling technology and intelligent production scheduling system, along with other innovative solutions, have effectively reduced carbon emissions in data centers. These innovations have not only helped the company reduce its environmental footprint but have also added value to its business practices.

In order to ensure the comprehensive integration of ESG principles across its entire value chain and functional system, Lenovo established an ESG Executive Oversight Committee (EOC). By 2022, Lenovo's ESG practices had become one of the core pillars of the company's overall strategy. That year, Lenovo's ESG performance was recognized by MSCI, which upgraded its rating from AA to the highest AAA.

In addition to its existing ESG initiatives, Lenovo has also begun exploring new areas such as carbon-related services and solutions. For example, the company launched the Lenovo Enterprise Carbon Accounting Platform, aimed at supporting manufacturing industry customers in their low-carbon transformation efforts. Moreover, in 2023, Lenovo introduced the enterprise-level ESG solution LeGreen, which integrates multifunctional modules such as product carbon footprint and environmental compliance. This solution not only promotes ESG data-driven decision-making and closed-loop management processes within organizations but also empowers companies to pursue low-carbon transformation and contribute to sustainable development.[103]

(3) Value creation in supply chain management

JD Logistics' practices and innovations in green supply chain management embody a comprehensive approach to environmental responsibility. The company has introduced around 20,000 new energy vehicles across over 50 cities nationwide, particularly in Beijing, where all its urban distribution vehicles are now powered by new energy sources. This change helps reduce carbon emissions by approximately 400,000 tonnes annually.

JD Logistics is also a pioneer in developing distributed photovoltaic power generation systems in China. The company has installed a rooftop distributed photovoltaic system at its Shanghai Asia No. 1 Warehousing Center and plans to establish the world's largest network of rooftop photovoltaic ecosystems by 2030, measured by installed capacity.

Other sustainable initiatives include using reusable delivery boxes, thermal insulation boxes, and alternative packaging to cut down on disposable plastic usage. Additionally, the company' s "Asia No.1" Smart Logistics Park in Xi'an has achieved carbon neutrality, marking a first for China. JD Logistics employs advanced technologies such as fully integrated intelligent packaging systems, ADAS intelligent driving assistance, and big data planning routes to improve transportation efficiency and minimize environmental impact.

By reducing carbon emissions and maximizing energy efficiency through innovation and application of new technology, JD Logistics demonstrates its commitment to green supply chain management, allowing it to make significant environmental and sustainability contributions while also delivering commercial value. JD Logistics sets a standard for potential green transformation across the logistics industry, ultimately benefiting its sustainability, society, and the environment as a whole.[104]

(4) Value creation shared among stakeholders

In Carl Zeiss Group's ESG practices, both internal and external stakeholders are key contributors to the company's strategy and operations. Internal stakeholders such as employees, managers, and board members help shape and guide the company' s ESG policies. Concerns from employees about sustainability, ethical operations, and governance prompt internal discussions and inspire the development of new ESG policies.

External stakeholders - including investors, shareholders, creditors, suppliers, customers, local communities, activist groups, non-governmental organizations, media, and regulatory bodies - also play a pivotal role in shaping and implementing ESG policies. The Carl Zeiss Group' s ESG strategy emphasizes the importance of connecting value creation with all stakeholders to drive long-term sustainable success. Its ESG metrics and targets are specifically tailored to enhance stakeholder value, rather than just serving as superficial goals.[105]

In its operations in China, Zeiss focuses on localizing its business practices to meet market-specific needs. For example, the company develops products for presbyopia and cataracts and supports eye health education activities at senior universities in China. These efforts demonstrate Zeiss's responsiveness to consumer demands and help build positive relationships with consumers.

Furthermore, Zeiss' s establishment of innovation and research centers in China highlights its commitment to the Chinese market and fosters collaboration with local businesses and research institutions. This approach facilitates smoother integration into the local market.

Zeiss Group is also dedicated to achieving carbon neutrality worldwide, including in China, where the company procures green electricity and increases the use of renewable energy sources. These environmental protection efforts enhance Zeiss's reputation in Chinese society and address concerns about environmental conservation from both the government and the public.

(5) Value creation in evolving business models

Industrial Bank's ESG practices have significantly transformed its business model. As China's first bank to adopt the Equator Principles - a risk-management framework for assessing and managing environmental and social risks in projects - the bank has placed sustainable development at the core of its corporate strategy, emphasizing green finance. By establishing ESG strategic planning and management systems, Industrial Bank has evolved from offering traditional banking services to providing comprehensive financial solutions.

Industrial Bank plays a major role in supporting the national "dual-carbon" strategy by offering essential financial services for the carbon market, innovative carbon financial products, and loan products that facilitate carbon reduction. These initiatives significantly support the national "dual-carbon" strategy's implementation.

In addition, Industrial Bank actively promotes a range of ESG products, such as green trusts, green public funds, and ESG wealth management products. These products provide accessible opportunities for small and medium-sized investors to participate in green investments.

The bank also backs inclusive finance and rural revitalization plans by introducing financial services for agriculture and rural development. These efforts aim to improve the competitiveness of rural industries and the quality of basic public services while promoting financial literacy and risk awareness.

Industrial Bank is accelerating its digital transformation, focusing on building service platforms using advanced technology. For instance, the bank developed a system that leverages AI, GIS, and big data technology to measure the environmental benefits of low-carbon economy-related industries accurately. Digital transformation is a key part of the bank's business model, enhancing service efficiency and customer experience.[106]

From strategic management to innovation-driven practices, green supply chain transformation, stakeholder engagement, and evolving business models, these areas illustrate the foresight and creativity of Chinese enterprises in ESG practices. These examples reflect businesses' efforts to address global sustainability challenges and highlight China's leadership and influence in global ESG practices.

Through these cases, we gain a deeper understanding of how Chinese companies align their development needs with global sustainability objectives in a dynamic global economic landscape, thereby generating new business value and societal impact.

(3) Practical methods for integrating ESG into strategy and operations

Integrating ESG into corporate strategy and operations requires a thoughtful and structured approach. Based on the analysis of ESG value creation in domestic and international enterprises, several key factors have emerged as crucial for successful integration:

1. Develop a clear ESG strategy:

   Define precise environmental, social, and governance objectives that align with the company's business model and stakeholder expectations. Establish measurable performance metrics and timelines for achieving each ESG goal.

2. Leadership support and commitment:

   Secure the support and involvement of top management in driving the ESG strategy. Communicate the significance of ESG internally to foster understanding and buy-in across all levels of the organization.

3. Integrate ESG into business operations:

   Apply ESG standards to product development, supply chain management, and operational processes. Allocate the necessary financial and human resources to achieve ESG goals and embed sustainability into daily operations.

4. Employee training and participation:

   Provide ESG-related training to employees to increase awareness and understanding of ESG issues. Develop incentive mechanisms to encourage employee participation and engagement in ESG practices.

5. Stakeholder engagement and communication:

   Collaborate with stakeholders such as investors, customers, and communities in shaping and assessing ESG strategies. Maintain transparency by regularly reporting ESG performance to stakeholders and incorporating their feedback.

6 Continuous monitoring and improvement:

Regularly evaluate ESG performance to ensure it aligns with established goals. Use feedback and assessments to refine ESG strategies and practices, ensuring continuous improvement.

7 Public reporting and disclosure:

Publish regular ESG reports detailing the company's performance and future plans.

By following these steps, companies can effectively integrate ESG into their strategies and operations, achieving business success while fulfilling their social responsibility goals.

• Clear ESG Strategy: Serves as the starting point, where specific environmental, social, and governance objectives are established as the base for all ESG practices.

• Leadership Support and Commitment: Extends from the ESG strategy, underlining the essential role of senior management in endorsing and driving the ESG strategy throughout the organization. Leadership ensures alignment with ESG goals and fosters internal communication.

• Integrating ESG into Business Operations: Follows from leadership support, translating ESG objectives into practical aspects of business operations, such as product development, supply chain management, and other operational processes.

• Employee Training and Engagement: Stems from business operations, emphasizing the need to equip employees with knowledge and understanding of ESG issues. This ensures active employee participation in ESG initiatives and practices.

• Stakeholder Engagement and Communication: Builds on employee training and engagement, highlighting the significance of maintaining transparent and open interaction with stakeholders such as investors, customers, and communities.

• Continuous Monitoring and Improvement: Arises from stakeholder engagement, feeding back into the ESG strategy. This continuous assessment allows for ongoing evaluation and improvement of ESG practices, ensuring they remain effective and aligned with goals.

• Public Reporting and Disclosure: Shares the results of continuous monitoring and improvement with the public, enhancing transparency and accountability. This feedback loop helps ensure ongoing alignment with the initial ESG strategy.

Each element of the ESG process is interdependent and influences the others, forming a dynamic system rather than a linear path.

Common challenges and a shared future

We are at a pivotal moment in exploring ESG value co-creation. While globalization presents complex cross-border challenges - such as differing standards for ESG disclosure, supply chain intricacies, and increased demands for transparency - it also brings opportunities to shape a shared, sustainable future. By collectively addressing these challenges and aiming for shared goals, we can collectively work towards a more sustainable, equitable, and prosperous world.

1. Information disclosure and transparency

Countries and regions have varying requirements for ESG reporting, leading to inconsistent standards across global companies. This lack of consistency hinders effective comparisons and decision-making for investors and other stakeholders. Companies need to align reporting with global standards, which requires substantial investments in systems, processes, controls, and governance.[107]

Additionally, inconsistencies in ESG data across industries and regions challenge effective comparisons and collective progress in ESG practices.[108] The surge in the adoption of ESG ratings has highlighted challenges related to the complexity and lack of transparency in rating methodologies. These challenges make it difficult for companies and institutions to interpret ESG ratings and their underlying algorithms. This lack of transparency can limit the effectiveness of ESG ratings in addressing sustainability-related risks and opportunities.[109]

Given that companies operate globally with diverse value chains, risks, and capital sources, there is a pressing need to establish a unified standard for sustainability reporting. A consistent approach to ESG reporting will improve communication between investors, companies, and other stakeholders, allowing for better comparability and reliability of information.[110]

Furthermore, leveraging big data and AI technology is becoming an important trend for improving data quality and authenticity, which supports ESG development. To address the challenges posed by globalization and diverse ESG reporting requirements across regions, companies must focus on strengthening cross-regional cooperation and communication while enhancing information disclosure and transparency. By doing so, companies can work toward unifying standards and promoting collective progress in global ESG value creation.

2. Integrating growth, profitability, and ESG

Increasingly, studies emphasize the interconnectedness of sustainability and financial health, leading to a closer integration of the two. This trend is captured in triple bottom line accounting, which considers economic benefits alongside social and environmental impacts.[111] Integrating ESG into a company's overall business strategy goes beyond traditional risk management and is also seen as an opportunity for growth. This means companies must embed ESG factors in areas such as product strategies, internal audits, and leadership to uphold their ESG commitments.[112]

Leading companies do not treat ESG-related measures as add-ons; instead, they weave them into the overall company strategy. When implementing ESG strategies, important steps include defining a clear ESG vision and mission that aligns with the company's goals and priorities; identifying synergies between ESG goals and business objectives - such as metals and mining companies focusing on decarbonization to unify growth, profitability, and ESG targets; developing strategic ESG initiatives that bolster organizational goals and address significant ESG concerns; and establishing short-term and long-term ESG objectives that align with business targets and industry standards. These goals should be ambitious yet attainable, supported by concrete action plans and resource allocation.[113]

Integrating ESG strategy into a business's core operations not only enables synergies between financial performance and sustainability but also represents an investment in the company's long-term growth and profitability, reflecting the integration of modern corporate social responsibility and sound business practices.

3. Strategic importance of supply chains and ESG value creation

The strategic importance of supply chains in ESG value creation is increasingly recognized worldwide. Labor shortages and inflation pose significant risks to supply chain management, causing potential production slowdowns, inventory imbalances, distribution interruptions, and customer dissatisfaction. Additionally, environmental changes and geopolitical tensions impact global supply chains, leading organizations to reconsider how to construct more resilient supply chains.[114]

Meanwhile, supply chains play a crucial role in ESG value creation, providing an opportunity to address environmental and social issues. Supply chain activities, such as transportation and manufacturing, often result in significant environmental impacts, including carbon emissions, waste generation, and excessive resource consumption. Labor issues within the supply chain, including unfair wages, unsafe working conditions, and child labor, are concerning challenges globally. Transparency and compliance challenges in supply chain management can lead to corruption and illicit activities.[115]

In recent years, global supply chains have faced heightened risks of disruptions. To mitigate the impact of unforeseen events such as natural disasters, geopolitical tensions, or public health crises, many companies are diversifying their supplier base, leveraging local procurement, and establishing robust contingency plans. As environmental concerns grow, companies adopt more sustainable practices, such as responsibly sourcing materials and optimizing transportation routes to reduce carbon footprints.

Digitization has become a standard in supply chain management, ranking as the top industry trend for 2024. Many companies are leveraging advanced analytics and predictive modeling to gain real-time insights from data, allowing for more precise demand forecasts, effective inventory management, and accurate risk assessment. This proactive approach enables companies to enhance the overall agility of their supply chains. Additionally, using blockchain and other digital technologies can improve the tracking and management of supply chain activities, ensuring transparency and compliance.[116]

As companies manage global supply chains, integrating ESG values throughout every aspect of the supply chain is essential. This integration ensures that the entire process, from raw material procurement to product delivery, adheres to environmental and social responsibility standards, fostering a more sustainable business model.

4. Legal definition and increased scrutiny of greenwashing

The concept of greenwashing, which refers to the misleading portrayal of sustainability efforts and disclosures by corporations, is expected to become more legally defined in 2024 and beyond. This clearer legal definition will bring greater repercussions for companies, including reputational, regulatory, and litigation risks. As there is currently no consistent legal definition of greenwashing, the interpretation of this concept can vary by product, service, regulator, and jurisdiction.[117]

The EU is developing new rules to limit false advertising and improve consumer information, making significant strides in tackling greenwashing. This heightened scrutiny now requires companies to demonstrate their commitment to sustainability with verifiable data and actions.[118]

By introducing new mandatory disclosure requirements globally, such as the EU's Corporate Sustainability Reporting Directive (CSRD) and the International Sustainability Standards Board (ISSB) standards, corporate transparency is undergoing major change. Publicly and privately held companies must now comply with stricter sustainability measurement and reporting standards. The shift toward mandatory disclosure is expected to integrate sustainability more deeply into core business strategies and risk management functions.[119]

As awareness of greenwashing grows, companies must prioritize the authenticity and verifiability of their ESG commitments. This is crucial not only for fulfilling external responsibilities but also for aligning with a company’s internal culture and values for overall sustainability.

Reflecting on the journey of ESG value creation, it serves as a guiding light in a rapidly changing world, paving the way for businesses and society. ESG is more than a set of standards; it’s a commitment to a responsible future for society and the environment. True value goes beyond numbers and profits; it encompasses our respect for the planet and its inhabitants. ESG value creation opens up infinite possibilities, where every decision shapes our shared future. Environmental harmony, social progress, and improved governance are achievable goals, and each step forward contributes to a better world.

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Collaborating to Create ESG Value

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Introduction

The theme of the 2024 World Economic Forum was "rebuilding trust." As European Commission President Ursula von der Leyen addressed the forum, she commented that it is "time to drive global collaboration more than ever before." Von der Leyen was reacting in particular to the WEF' s annual Global Risk Report, which she called "stunning and sobering" for its emphasis on the harmful impacts of societal polarization and misinformation, and for the impacts of climate change and geopolitical conflict. The best medicine for all of these ills, she asserted, is a spirit of collaboration built upon trust.

This message can serve as a useful theme, as well, for business leaders addressing today' s daunting ESG issues. When companies collaborate, they can leverage synergies to design value propositions that each would be unable to offer alone. Collaborations have potential, therefore, to solve many of the complex, systemic and multi-faceted problems of sustainable development, but this will only happen if profitable collaboration models can be identified and scaled. In this chapter, we share insights into gainful business sector engagement in sustainable development through collaboration. Going forward, as the global economy transforms to become more equitable and nature-friendly, sustainability-linked value pools are forecast to reach USD hundreds of billions[1] Collaboration is key to unlocking that potential. Below, we compile compelling recent research findings on value creation via collaboration, and we showcase two highly effective models now used to support business strategies. To make these conceptual frameworks tangible and actionable for managers, we also highlight six real case examples of the models in use. Our goal: to inspire business leaders to access the benefits of collaborative value creation in their own companies while avoiding the most damaging pitfalls.

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ESG Partnerships and Ecosystems

Collaborations can be simple or complex, ranging from two-party resource-pooling agreements to complex synergistic ecosystems comprised of multiple public and private, for-profit and non-profit institutions. As more companies and organizations form complementary collaborations, the potential for complex problem-solving similarly grows, but so does the difficulty of managing the network of relationships. Successful collaborations tend to rely on a leading party, or orchestrator, to establish and enforce the rules of participation as well as the mechanisms of value capture and sharing. In the digital commerce space, an orchestrator such as Alibaba or Amazon controls the networking technology and the corresponding transaction data that ultimately endow the owner with superior insight into profitable value creation opportunities. In the sustainability space, by contrast, the orchestrator tends to be the participant with the most insight into the problem, or pain points, that the collaboration seeks to alleviate.[2] When practiced well, these problem-solving collaborations expand opportunities for all participants by offering shared benefits including: attracting new customers, identifying new product/service ideas, or opening access to innovative technologies. Two conceptual models, explained below, illustrate how these ideas work.

EoM Model

Researchers at think tank and advisory EoM Solutions posit that visualizing an ecosystem with a clear social purpose at its core will help networked participants to identify value-creation opportunities. As an example, pet food maker Royal Canin grew the market for its own products by first identifying "healthy pets" as the motivating purpose underlying its ecosystem, then helping veterinarians to identify and fulfill an unmet need in the healthy pet ecosystem. Based on deep-dive research into the problems faced by pet owners and the challenges of operating veterinarian clinics profitably, Royal Canin realized that cat owners were an underserved market and cats were less healthy than dogs in general. The company found that 53% of feline pets in the US were not taken regularly to the vet for two primary reasons. First, unlike dogs, cats do not clearly express discomfort. Second, most cats greatly dislike visiting veterinarian clinics due to the pervasive smells and sounds of dogs. Thus, not only were half of pet cats not receiving proper medical care, but many vets were missing business from cat owners.

To address this issue, Royal Canin began collaborating with US vets to create a certification process for cat-friendly clinics. The company then launched a "Take your cat to the vet" information campaign featuring online articles, videos and links assisting cat owners to determine if and when their pet needed a vet visit, then finding a certified "cat friendly" clinic. Today, the #Cat2Vet program is operating in 35 countries worldwide and has formed a new collaboration with Uber to make transport of pet cats less stressful, removing another common obstacle to the goal of cat health.

Through this program, vets were able to grow their clientele and associated profits. Royal Canin similarly boosted the sales of nutritious cat food being prescribed by the vets. Most importantly, cats and their owners enjoyed a healthier home life. By taking up the challenge of researching ecosystem bottlenecks and stakeholder pain points, then coordinating the development of solutions, Royal Canin fulfilled the

Mutuality Explained

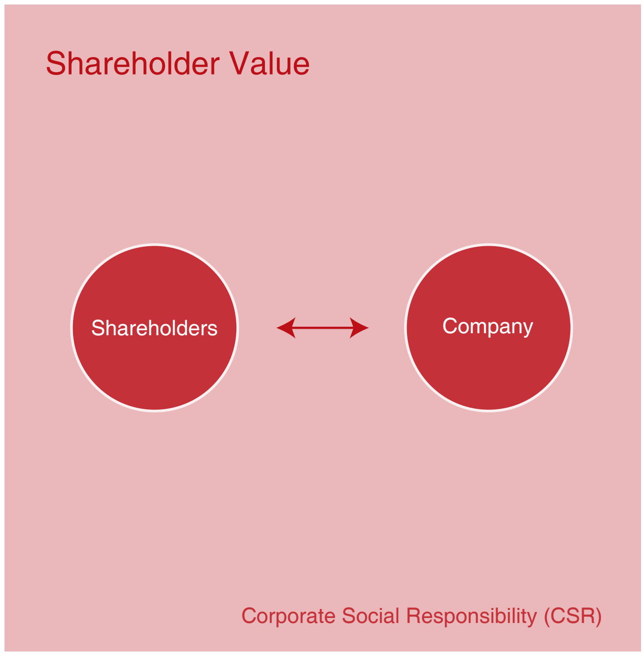
Since 2007, the EoM model has served as a catalyst for Mars Corp - owner of Royal Canin and originator of EoM research -- to refocus its entire operations to realign vision, mission, and values. The company launched an Economics of Mutuality Foundation as an independent management think-tank and consultancy that assists other corporations to make a similar purpose-led strategic shift. EoM research has mapped the evolution of "responsible business" models through three stages from 1) increasing shareholder value while delegating "responsibility" primarily to CSR departments, to 2) adding value for all key stakeholders while building "responsibility" into all strategic business units, to 3) investing in the overall health and growth of ecosystems with a social purpose at the center (see Figure 1). Mutual value creation (stage 3) emphasizes measurement and management of four interconnected capitals that underpin ecosystem health -- financial, natural (environment), social (communities) and human (individual well-being).

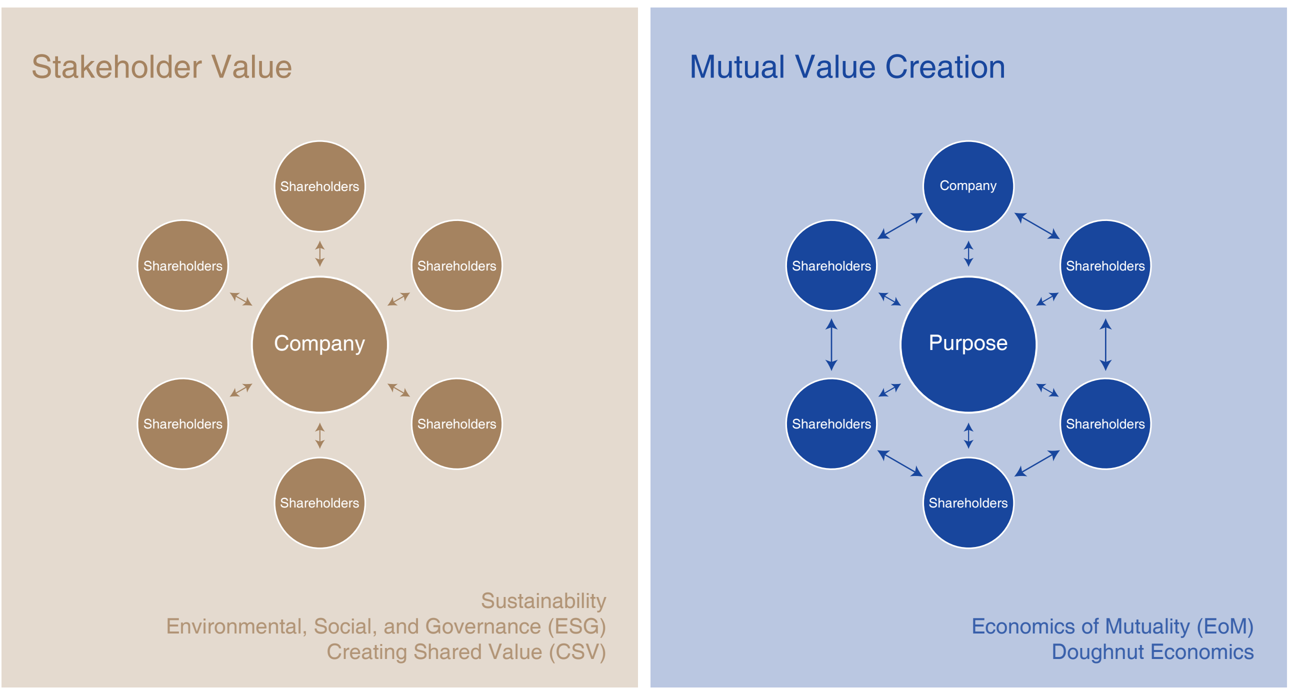
orchestrator' s role of growing opportunities for all ecosystem participants. Moreover, new growth opportunities can be found whenever pain points vary across markets. As an example, China has a serious shortage of vets qualified to care for the expanding number of small household pets. Following the principle of mutual value creation, Royal Canin China can offer training and certification programs that increase the qualified vet population, thereby helping partner clinics to attract clients and grow their incomes, while simultaneously increasing Royal Canin's potential sales of pet food at these clinics.

EoM Solutions Director Alastair Colins-Jones explains : "Mutuality is about proximity to a social problem. The value is mutual to all stakeholders in the sense that value is defined by how well the problem is addressed. As the problem is solved, value is distributed to all material stakeholders. Thus, value is not filtered through the lens of the company but through the lens of purpose."

The EoM model is operationalized in four steps: First, redefine the role of the firm and all key stakeholders to determine which social, human or environmental issue should serve as the central purpose. Next, conduct a detailed "ecosystem mapping" to discover how each stakeholder is connected to all others and to audit the pain-points faced by each key stakeholder. Then, collaborate to find solutions to the pain points and weak spots. Finally, establish accounting mechanisms to measure and maintain balance not only for financial gain but also human, social and environmental gains. In the Royal Canin #Cat2Vet project, success is measured in terms of overall health gains for cats, but also as increased knowledge and stronger peace of mind of pet owners, augmented revenues for Royal Canin, and financial gains for veterinarians.

Evolution of value creation business models





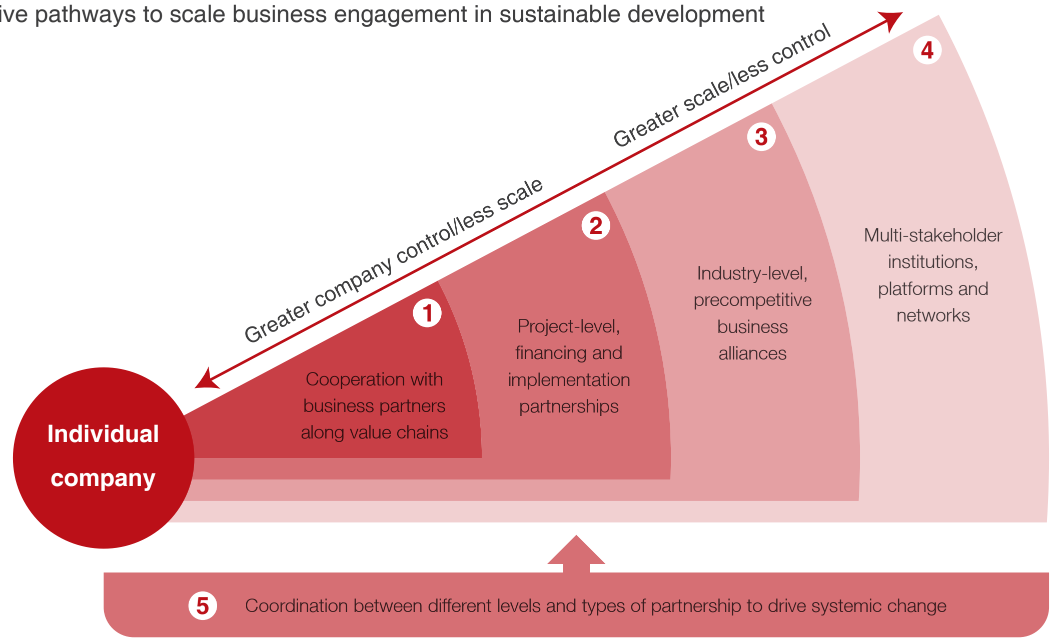
Source: Economics of Mutuality Foundation

Royal Canin, as ecosystem orchestrator, actively connects the individual stakeholders and maintains the purpose-led focus. Colins-Jones explains: "There are three critical elements needed in an ecosystem orchestrator. First, the role is not bought; it' s earned. Second, it' s earned through knowledge of the situation of all players. Third, it' s reinforced by behaviors that grow the whole pie." For companies seeking a role model, Royal Canin' s actions as ecosystem orchestrator in this project offer a useful guide.

Five Stages Model

The notion of creating and capturing value by "growing the pie for all" works for simpler forms of collaboration as well. Harvard Kennedy School researcher Jane Nelson was commissioned by the Business and Sustainable Development Commission, in 2017, to determine how business, government and civil society can collaborate to accelerate and scale transformative solutions to sustainable development challenges. After reviewing the literature and 100-plus ESG collaborations, Nelson identified five pathways for business sector engagement in sustainable development, as well as noting the key principles for collaboration success. Although her research emphasized the importance of public-private collaborations, her concepts and caveats hold equally well for business collaborations. To follow, we detail five ongoing, successful business collaborations which illustrate the main features and benefits of Nelson' s five engagement pathways. As Figure 2 illustrates, these pathways offer progressive levels of commitment and complexity. As companies shift to higher levels, they cede individual control in order to grow the collaboration' s scale and impact. Companies working to improve traditional industries operate at levels 1 and 2 while those driving large-scale industry- or sector-level transformations can operate at levels 3 to 5 of the framework. No matter the size or stage of the sustainability journey, we believe that all companies can find value creation opportunities within the framework.

Collaborative pathways to scale business engagement in sustainable development



Source: Harvard Kennedy School

Level 1: Cooperation with business partners along value chains

Level 1 companies use their resources and influence to improve practices within their existing value chains. Orchestrators first identify pain points, then leverage relevant company strengths -- including purchasing power, brand reputation, technologies and even executive charisma -- to entice upstream and downstream partners to jointly improve upon traditional practices. Reports abound on global MNCs that have successfully transformed their value chains, but even small companies can galvanize meaningful change using this model. When Level 1 initiatives are conceived in order to build consumer brand equity and boost professional relationships, the resulting reciprocal value creation can be substantial. In our example, a newcomer to the Chinese market, Oatly, leveraged its resources and network in China to improve employment opportunities for a segment of the disabled population, thereby improving diversity and inclusion as well as making "decent work" more accessible. Since its founding, Oatly has championed low-carbon farming methods and healthy eating. This new initiative is part of the company's global campaign for continuous improvement in all three aspects of ESG.

Oatly China's "Silent Barista" Initiative

SDG/ESG issues

Diversity Equity & Inclusion; Decent Work (including prospects for fair income, personal development, social integration, and equal treatment by gender)

Background

Swedish oat milk maker Oatly expanded rapidly in China by partnering with premium coffee and tea retailers such as Starbucks, Pacific Coffee, Tim Hortons, and Heytea. Five years after entering China, Oatly had attained "near cult status" among targeted upscale urban consumers who resonate closely with the brand' s socially conscious positioning as a good tasting, healthy and eco-friendly plant-based dairy alternative. Strong social media buzz from enthusiastic buyers continuously sent the company's revenues soaring.

Against this backdrop, Oatly China launched an initiative in 2020 to address the disproportionate unemployment and underemployment of people with hearing disabilities (PWD), who number more than 20 million in the country. The "Silent Barista" initiative offered training and certification in gourmet coffee-drink preparation specifically for hearing impaired individuals, and then supported them to secure employment in partner retail shops. The first trained Silent Barista was certified by China' s Specialty Coffee Association (SCA) and hired by Unibrown Coffee in November 2020. As of late 2023, nearly 260 "silent baristas" had been trained. In addition, retail partners had expanded to include Hinichijou and other coffeeshops as well as non-coffee retailers including IKEA and Hyatt hotels. Several Silent Baristas have gained substantial social media followings, and others have opened entrepreneurial coffee shops of their own. Another positive outcome of the program: the creation, in 2022, of a sign language dictionary for Chinese baristas, now in use nation-wide.

How partners create value

Characteristic of Level 1 partnerships, the Silent Barista initiative sets standards, creates support materials and builds capacity for the retail coffee and tea industry to develop a more inclusive model of growth. Benefits accrue for Oatly as well as its retail partners and People With Disabilities.

- Retailers gain access to an expanding pool of certified baristas at a time when China' s coffee market is booming, causing a severe need for staff. Participating retailers who hire PWD enjoy differentiation from competitors on a social issue of widespread public interest (employment and job security) following the global Covid pandemic.
- As the program matures and expands, both sides benefit from media buzz surrounding high-profile Silent Barista events such as latte art contests and drink-making speed competitions. Oatly organized and participated in 64 such public events from 2020 to 2022 including the annual Lujiazui Coffee Festival in Shanghai (attracting 200+ exhibitors) and a 20-day national online latte art contest in 2022 (drawing 2.59 million views and 2000 comments).
- Public awareness and support for PWD populations has grown and Chinese PWDs have gained inspiring role models. As participating retailers proliferate and prosper, Oatly's market presence and visibility grows.
- A final, but important benefit: the initiative helps both Oatly and its partner retailers to align with recent Chinese government policies incentivizing companies to employ PWDs.

Level 2: Project-level, financing and implementation partnerships

Level 2 companies increase the scale of their impact but sacrifice some control in order to develop new goods, technologies or business models that stretch beyond the company' s existing network to benefit wider communities. Level 2 projects often are done in collaboration with research institutes, investors, NGOs or government units and can range from large-scale PPP infrastructure developments and branded global alliances like UN' s Partnerships for SDGs or Business

Fights Poverty to smaller-scale rural development programs. The aim is to remove barriers (money, resources, knowledge, access) that impede community development. Projects often set specific, measurable goals (such as cutting GHG emissions or reducing unemployment), then track progress over time and continuously identify areas for improvement. Partnering boosts the resources available for application while reducing unilateral development costs and risks.

Mars Wrigley China's Rural Youth Employment Project

SDG/ESG issues

Decent Work (including fair income, workplace security, social protection for families, participation in decision-making); Diversity, Equity & Inclusion; Sustainable Communities; Corporate Purpose

Background

In 2019, Mars Wrigley China identified the issue of "rural revitalization and youth employment" as its central social purpose for operations in Yunnan province. The trend of 20-somethings leaving China' s rural communities to seek work in cities was causing a brain drain which left rural communities impacted by split families and a hollowing out of society. Meanwhile, the urbanized young people themselves often struggled with loneliness, isolation, and the difficulty of finding meaningful well-paid jobs in cities. China' s Rural Revitalization policies are intended to improve local economic conditions and simultaneously activate the consumption economy that is critical to the country' s ongoing growth.

Mars Wrigley addressed these pain points by training and incubating young rural entrepreneurs who launch professional retail businesses. The company provides access to on- and off-line training, a broad portfolio of products (mainly candies, chocolates and chewing gum), a digital sales support system, a network of potential B2B and B2C customers and an experienced Mars mentor. Participating entrepreneurs are encouraged to expand their offerings beyond Mars Wrigley brands to include other popular brands, thereby boosting the entrepreneur' s financial viability as well as the appeal for potential B2B clients.

By late 2021, nearly 100 rural youth in 16 provinces in China had joined the program, and graduates were earning an average of RMB 3,500 per capita. As of early 2024, the program had trained 350+ youth in 22 provinces. Long term, Mars aims to train 10,000 rural youth and to also train rural women seeking part-time entrepreneurial work. One factor in the project' s success is the close alignment of the project' s rural employment goals with China' s central and local governments - including working with Mianning County, an autonomous prefecture of the Li minority in Sichuan Province.

How the partnership creates value

As a Level 2 partnership, this project helps entrepreneurs to reduce costs and risks, and catalyzes Mars' inhouse resources to enhance the chances of business success. In addition, Mars regularly monitors key metrics and adjusts operations to overcome entrepreneurial challenges. The company uses innovative metrics to balance four different "capitals" (financial, natural, social, and human) that are critical to ecosystem health and growth potential. By investing financial capital and access to company resources, Mars grows each participant's human, financial and social capitals, for the benefit of all.

- Entrepreneurs benefit from a proven training curriculum and the full support of Mars' established retail technologies and human networks. Thus, human capital -- as measured by work satisfaction—increases.
- Rural communities enjoy financial capital growth from a boost in retail transactions, as well as growth in trickle-down consumption
- Communities see an increase in social capital -- i.e., community trust - which correlates with reduced poverty and income inequality
- Mars Wrigley China expands its market presence and penetration in China's growing rural provinces

Level 3: Industry-level, "precompetitive" business alliances

At Level 3, companies partner within and across sectors to jointly address systemic challenges that impede industry transformation. Direct competitors cooperate - for example by pooling resources and purchasing power -- in order to accelerate, scale and bring innovative solutions to market at affordable prices. They also partner to set standards and reporting guidelines that level the playing field for early innovation adopters. And they collectively advocate for policy change while actively working to change the mindsets of key decision makers. Transformative models including circular economy, regenerative agriculture, and responsible investment are gaining momentum as executives across sectors recognize the gains to be made when this level of cooperation succeeds. Given the growing risks and potential payoffs as partners move to higher levels of the Nelson framework, the orchestrator plays an increasingly critical role by keeping partners committed to cooperating for the greater good.

Carbios' Plastic Recycling Consortia

SDG/ESG issues

Responsible Consumption and Production; Circular Economy; Plastics; Corporate Purpose

Background

In 2017, Carbios (a green biotech company focused on advancing the circularity of plastics and textiles) joined forces with L'Oreal (the world's largest beauty conglomerate) to launch a consortium aiming to accelerate the global transition to a circular economy for plastics. Fast forward to 2023, when the duo won a "Pioneer Award" from the Solar Impulse Foundation for developing and putting to use the world's first plastic cosmetic bottle that can be fully recycled "enzymatically". Compared against traditional recycling, the benefits of Carbios' enzymatic technology include a "circularity rate" four times higher (assessed by the Ellen MacArthur Foundation), an ability to process a wider range of PET types (including multilayer, colored and textile), and the capability to create recycled PET of "virgin" and "food contact" quality. Enzymatic recycling also emits 57% less CO_2 emissions than conventional virgin plastic production and uses 1.3 tons less petrol to produce each ton of recycled PET.

During its six-year existence, as its technology evolved, the consortium has expanded into the sectors of food & beverage (attracting Nestlé Waters, PepsiCo and Suntory Beverage & Food Europe) and textiles (gaining Patagonia, On, Puma and Salomon). To meet the growing demand from consumer goods companies, Carbios also recently teamed with world leading enzyme producer Novozymes to ramp up industrial deployment of the technology including operating the world's first PET biorecycling plant. Now under construction in France, when launched in 2025, the plant will process 50,000 tons of PET waste annually. Carbios has also been co-creating with Technip Energies to improve its technologies, as well as collaborating with academic institutions including TBI Laboratory and INSA Toulouse, both in France.

How the partnership creates value

By scaling a promising solution to a massive waste management and carbon-reduction problem faced by all FMCG companies, this Level 3 collaboration is tapping into one of the huge value pools linked to the global net-zero transformation. Carbios plays a critical role as orchestrator, granting access to its breakthrough technologies and attracting independent but modular businesses that cooperate to reduce the risks inherent in co-innovation and new product adoption. As seen in many business ecosystems, the value creation potential grows along with the number of complementary members. Unlike digital platforms, which gather and mine proprietary data to better understand the market's pain points, the members of this network must work together to improve the underlying technology, then design and develop workable applications and scale productivity. No single member of the network could achieve these outcomes alone.

- Through these FMCG consortia, Carbios gains increased credibility as a solutions provider, as well as accessing production resources and knowledge from Novozymes, and technical research support from academic laboratories.
- Novozymes wins B2B clients with high potential for future growth and ongoing co-innovation, as well as accessing partners which are equally committed to achieving sustainability goals.
- Academic partners realize their potential to improve knowledge and innovation capabilities, and to test early-stage ideas for practical applications.
- FMCG companies reduce risks and challenges in pursuing sustainability goals, while adding the valuable feature of sustainable packaging, which increasingly is linked to consumer choice.

As the consortia goals shift from recycling to achieving a fully "circular economy" for consumer packaging, this industry-level collaboration moves toward a Level 4 multi-stakeholder ecosystem. Already, members are working on solutions for recovering and processing post-consumer packaging and textiles. New members with additional skills and resources will be required to scale and monetize that business. The already-advanced stage of this emerging circular economy ecosystem will make it an attractive alternative for all.

Level 4: Multi-stakeholder institutions, platforms and networks

Level 4 collaborations bring together groups of companies along with other institutions to drive large-scale transformational change when current governance and market systems are insufficient for the purpose. One familiar type of Level 4 collaboration is a "technology-enabled open collaboration platform." Individual companies relinquish a great deal of control at this level in order to maximize the scale and impact of the collaborative' s work. Mindsets shift from competition to cooperation, and from information protection to knowledge dissemination for the greater good. The orchestrator brings highly diverse participants together in settings that break down barriers and rigid thinking patterns. Though partnering at this level is challenging, the potential to gain first mover advantages -- in totally new markets or with breakthrough technologies and business models -- keeps participants engaged and motivated.

Thought For Food's (TFF) Next-Generation, Open-Innovation Platform

SDG/ESG issues

Zero Hunger; Sustainable Land Use; Biodiversity; Water; Corporate Purpose

Background

Self-described as a "decentralized, community-powered movement of … change-makers," with a mission to "transform our world' s food systems to become nourishing, resilient and regenerative through next generation entrepreneurship," TFF got its start in 2011 as the brainchild of a young executive at Swiss agribusiness firm Syngenta Crop Protection AG (now owned by ChemChina). Christine Gould, then head of Next-Gen Innovation and Engagement for the company, had a passion for the power of open-source innovation to improve food security. With the support of Syngenta, Gould launched a "Thought for Food Challenge" which invited university students from all disciplines to submit solutions that improve food security. By 2022, the contest had soared in popularity to attract 3000 people (including non-students) from 139 countries. Now reigning as the "world' s largest and most diverse agri-food-tech innovation challenge," the contest - along with TFF' s other projects -- seeks to offer "creative, impactful solutions" to the question "How do we feed 10 billion people on a hotter planet?"

TFF, which spun off from Sygenta in 2013 to become a 501 (c) non-profit, now offers content and programs that attract 8 million+ visitors annually, while its competitions and forums generate 700+ discussion topics, 200+ learning modules, and 400+ videos advancing food security. In 2019, TFF launched Digital Labs as an incubator and accelerator for food-related startups. As of 2023, the initiative had raised US$300 million and helped to launch 100+ startups. Corporate sponsors include The Rockefeller Foundation, Google, Cargill, Danone, DSM, and DHL. In addition to holding open innovation competitions, TFF assists sponsor firms to arrange competitions on themes of their choosing. An example is the Food Logistics Challenge sponsored by DHL in 2023.

Moving toward a true community-led ecosystem, founder Christine Gould, who had been serving as CEO, replaced her position in 2023 with a Transition Committee that includes leaders from the North, Central and South America, Europe, Asia, and Africa who have pledged commitment to the platform's motto of "Make no small plans."

How the partnership creates value

Built to benefit all partners as it scales up and expands, the platforms creates and shares value with a variety of individuals and institutions. As a non-profit orchestrator, TFF applies the revenues from its various activities to growing the platform and its reach. The direct benefits sought by participants are many and varied, but ultimately all parties are dedicated to improving global food security. Pursuit of that goal confers value in its own right.

- Startup businesses and entrepreneurs gain access to professional training, coaching and mentoring in pitching, business models, storytelling, social media, impact measurement, intellectual property and more. Select startups receive prize money and access to venture capital investment.
- Investors and food-related businesses get early access to innovative ideas, products and services, as well as opportunities to pose challenges and ask questions on themes they find relevant. At the annual competition festival, companies also can open booths to illustrate and receive feedback on their latest developments. The festival is also an opportunity for employer branding with a highly targeted audience of enthusiastic young people.
- Policy makers and public institutions have opportunities to learn the needs of the market and to educate the market about their own issues and priorities.
- As the platform expands, TFF gains access to highly skilled, knowledgeable, and committed professionals who serve as contestants, coaches, judges, speakers, and sponsors. Individuals or companies which participate in a TFF event are invited to continue as members of the platform, thus contributing to the transformation of food-related industries for the good of all.

Level 5: Coordination between different levels and types of partnerships to drive systemic change

Level 5 collaborations recognize that ESG challenges are interconnected in ways that require systemic solutions. Problems are mapped across geographies, along value chains and among different aspects of the Sustainable Development Goals (SDGs) to determine feasible pathways for corrective action. Since no single entity can drive change at such a grand scale, Level 5 participation consists of memberships within and leadership of many interconnected coalitions at different levels of the 5-step framework. Nelson and colleagues show how global initiatives launched by the United Nations (e.g., Global Alliance for Improved Nutrition) or World Economic Forum (e.g., New Vision for Agriculture), for example, are implemented in cascades of programs, initiatives and projects each addressing issues which fall within its purview. As one aspect of participating in such global movements, companies are starting to connect the dots among various commercial parts of their business.

New Energy Blue Biomass Refining

SDG/ESG issues

Affordable and Clean Energy; Climate Action; Sustainable Land Use; Biodiversity; Water; Circular Economy; Corporate Purpose

Background

New Energy Blue (NEB) is a bio-technology company and member of the Renewable Fuels Association that produces ethanol - a low-carbon renewable fuel - from farm residue. Most ethanol is produced from corn kernels, pitting fuel against food in competition for farm output. NEB, by contrast, uses the corn stalks remaining after corn harvest as its feedstock, thereby eliminating the competition with food and offering farmers a second revenue stream from the same land. To amplify the benefits for farming writ large, NEB partners with farmers who use regenerative practices to sequester carbon in the earth while improving soil quality and reducing wind and water erosion. Hence, NEB fuel production has positive links to sustainable land and water use.

To assure reliable commercial-scale operations, NEB recently partnered with farmers to launch a biomass aggregation company that procures, collects and bales excess corn stalks using innovative methods and machinery from six different farm equipment suppliers. The new methods increase bale weights, which lowers the costs of transportation and storage.

Downstream, NEB has entered an alliance with global materials supplier Dow to produce bio-based ethylene feedstocks for the production of bio-plastics. Dow in turn will reduce its sourcing of fossil fuel feedstocks to produce recyclable packaging for consumer goods from low-carbon renewable inputs. The alliance is thus part of Dow' s contribution to a circular economy for materials. Furthermore, Dow and NEB are working with the international sustainability certification program ISCC to provide Dow' s customers with certified documentation of the bio-based materials in their supply chains, a part of scope 3 emissions mapping. Hence, NEB fuel production has positive links to sustainable consumption and production.

In the future, NEB plans to grow the list of downstream alliances to include producers of textiles, auto and jet fuels, lubricants and carbon fiber among others, expanding the company' s positive links to sustainable fashion and transportation. Like other advocates of systems change, NEB has set up a knowledge center to collaborate with business partners and academic institutions on research and the cultivation of a skilled workforce for creating energy from crop waste.

How the partnership creates value

New Energy Blue' s biomass conversion technology opens the path for all partners to advance on inter-related ESG targets while growing commercial business opportunities. As a viable replacement for fossil fuels, bioenergy products are poised to capture enormous profits in the coming years if they can be scaled reliably and without causing new types of negative externalities. The potential gains are evident for NEB itself, but also for the diverse set of partners with whom it can grow its business prospects and its impact.

- Farmers attain a unique additional revenue source while lowering their waste- management costs and simultaneously boosting crop yields as the quality of their soil improves.
- Downstream application partners, beginning with Dow, gain access to traceable low-carbon, renewable feedstocks that will boost their appeal with their own downstream B2B customers.
- UN, WEF and other organizations committed to sustainable transformation of the economy gain viable proofs of concept for business models that are good for shareholders and society.

Best Practices for Partnering Successfully

ESG collaboratives seek transformative change, which by nature is controversial and hard to accomplish. When entering such arrangements partners should prepare to encounter setbacks, diversions and even failures alongside victories. At times, cooperation will feel strained. Scholars and consultants agree that a few best practices can help participants to avoid the most common partnering pitfalls.[23, 24, 25]

Establish a Common Vision or Purpose

Whether you visualize your North Star at the center of an ecosystem map (EoM) or the pinnacle of a cascading institutional pyramid (UN and WEF), take time to agree on the future your collaborative seeks to realize. Because ESG is complex and transformation takes time, it is easy to lose motivation along the way. The old adage about brick makers cherishing their role in building a cathedral is a fitting analogy. Sharing a common “grand vision” can keep parties moving forward even when individual steps seem small. Carbios and its FMCG partners, for example, envision a future in which plastic stays out of waterways and landfills. Enzymatic recycling is only one promising solution among many, and it is too early to predict if it will become a dominant solution over the long run. It is easier to persist if the work is viewed as an important step in a necessary and inevitable economic transformation that requires many players in order to progress.

Don't Predefine "Success"

Although it is essential to share a common vision, it is equally important to allow flexibility and discovery regarding how to achieve success. Royal Canin and its partners see many paths toward a world with healthy pets. Veterinarians knew their clients were more likely to own dogs than cats, but it took careful stakeholder research and a mapping of the pet ecosystem to realize that a new product -- cat-friendly clinics -- would open immediate opportunities for business growth. Those who study ecosystems and partnerships note that growth opportunities follow when companies shift from an inside-out search for competitive superiority to an outside-in search for new problems to be solved. Keeping an open mind is a prerequisite for success.

Establish Concrete Strategies and Targets

Strategies determine the path toward the shared vision, while targets identify critical milestones toward the final goal. In combination, they align the contributions of individual partners and determine the required resources. As TFF works toward a vision of global food security, its strategic path of open-source innovation sets boundaries and expectations for all members. One critical commonality is a spirit of sharing and cooperation as opposed to competition. TFF members cooperate to cultivate entrepreneurial talent and to bring the most promising technologies and business models to market. By hosting its annual challenge (as well as regularly repeating trainings and festivals), TFF keeps the ideas and resources flowing and makes it easy to set annual targets. Though the platform' s individual activities have evolved over time, the strategic direction and drive for annual results remain constant, supporting the organization' s impressive rapid growth and expansion of impact.

Agree on Metrics to Track and Adjust Progress

Partnerships require transparency and regular reports about progress. Pre-agreement on what will be measured, who will track the data, and who will take corrective action helps to avoid conflicts as relationships mature. Mars Inc. and EoM have spent years to develop reliable measures, with the aid of domain experts, for the four capitals (financial, social, human and environmental) which they manage within each product division' s ecosystem. Improvements in the four metrics assure Mars that its investments are in fact growing ecosystem health -- and hence, business opportunities -- over time. That knowledge helps Mars, as system orchestrator, to keep individual members engaged and motivated to achieve agreed upon goals.

Send Your Best Team

Collaboration is a collective effort and failure to 'pull one' s weight' will bring friction and tension into relationships. Resources include human capital, and partners are advised to assign staff who are both qualified and motivated by the partnership' s long run vision. It is a mistake to reserve your best talent for proprietary initiatives while sending to the partnership those who lack the power and influence to drive change. New Energy Blue is careful to select farming partners who are willing to adopt regenerative agriculture innovations. In reality, any corn residue can fulfill NEB' s resource requirements, but by working with forward-looking farmers, the company can amplify its overall environmental impact. What' s more, the company is investing in local talent development to remove possible bottlenecks for its future growth. The more ambitious a collaborative's transformation agenda, the more critical the role of talent will be.

Define Partner Roles and Responsibilities

By attracting members with complementary skills and resources, collaborations increase the possibility of designing unique value propositions. The leading player, or orchestrator, typically owns or dominates the design process on the basis of superior problem understanding, trustworthiness, or willingness to invest whatever resources are needed for the collaborative' s launch and ongoing viability. In its Level 1 partnership, Oatly played an outsized role in designing and funding the Silent Barista initiative, leveraging its retail connections to arrange employment opportunities, and organizing events to grow public awareness and interest. Without the support of coffee retailers, however, Oatly' s efforts would amount to naught. Hiring the certified new baristas and assuring their ongoing success is thus a critical responsibility of each participating retail partner.

In closing, with the above six recommendations in mind, we seek to embolden managers leading corporate ESG efforts to develop more and better partnerships. As ESG-focused companies replace traditional silo-ed and protective business strategies with cooperation and mutual effort, trust in the power and effectiveness of collaboration will grow. Turning back to the theme of this year' s WEF for inspiration, our examples show clearly that solutions to the world' s most urgent and critical issues can be found by unlocking the power and potential born from partnering, joint innovation and collaboration.

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02 CORPORATE ESG PRACTICES

INTRODUCTION

When it comes to sustainability, businesses in different industries face unique challenges and opportunities, each requiring different strategies and approaches. These differences are not only from industry characteristics and competitive environments but also related to the different value positions within the supply chains and product lifecycles.

In this chapter, we select three corporate case studies to further discuss this topic. We will see how these companies not only integrate sustainable development principles in their own business operations but also drive the sustainable transformation agenda forward through innovation and collaboration with other stakeholders.

In this chapter, we will explore the following three key questions:

- How do businesses integrate sustainability into their operations to ensure comprehensive execution of sustainability strategies while creating societal and industry value?
- Facing decarbonization challenge, how do businesses promote the internal practice of ESG principles and lead supply chain sustainability through technological innovation?
- How do businesses enhance consumer experience through service excellence, embody the concept of empowering partners, and co-create shared value?

CORPORATE ESG PRACTICES

Budweiser APAC: Integrating Sustainability into Business for Continuous Value Creation

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Faculty Comments

Budweiser APAC has devised and implemented a systematic approach to crafting sustainable development strategies, with three key components clearly delineated. Firstly, establishing realistic, measurable, and specific strategic objectives. Secondly, designing explicit, step-by-step action plans grounded in on-site investigations. Thirdly, it involves the effective and comprehensive assessment of sustainable development performance through timely monitoring of various data indicators.

While actively promoting sustainable practices and achieving tangible results, Budweiser APAC also faces a series of challenges: How to improve data collection and accounting in supply chain emissions reduction? How to address various constraints in beer packaging recycling industry? How to further enhance the quality of sustainable practice information disclosure? How to clarify the impact of sustainable development performance on financial performance? How to embed sustainable development indicators into financial reporting frameworks?

These complex issues cannot be addressed by one company. They require the involvement of upstream and downstream partners, local recycling systems, the entire industry, and regulatory systems. Confronting these challenges requires collaboration, in-depth research, and joint efforts from companies, industry associations, academic and research institutions, as well as regulatory authorities and other sectors of society.

Introduction

As firms create economic value, contributing to societal value has become a common expectation and a benchmark for many firms. Indeed, for most companies, financial value is crucial as it directly impacts the survival of the business. However, this perspective often sees the social value as an added feature rather than an integral part of a company's core operations. Few companies can integrate the two and articulate the underlying logic clearly. Budweiser APAC (Bud APAC) stands out as an exception.

Operating under the philosophy "Sustainability is our business," Bud APAC is a subsidiary of the world's largest brewer, AB InBev. It is also the largest beer company in the Asia Pacific region, operating in 35 countries with 47 breweries and 51 distribution centers, focusing on markets such as China,

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Vietnam, South Korea, and India. Emphasizing localized production, the company sources raw materials locally, employs local talent, establishes breweries, and sells beer to local consumers. The localized production reinforces the company's belief that business success is intricately linked to the prosperous local community. Without access to high-quality water sources, it is impossible to produce excellent beer. Likewise, the absence of thriving agriculture would not provide great raw materials. This forms the rationale behind Bud APAC's deep integration of ESG , (Bud APAC uses SUSTAINABILITY) principles with its business.

Systematic Sustainability Strategy: Adding Management Value

Bud APAC follows a scientific, systematic, and clear methodology in setting Sustainability strategy goals, tracking performance, and evaluating outcomes.

The Materiality Assessment serves as the starting point for Bud APAC's **Sustainability** strategy. Through rigorous steps and on-site research, the company identifies key **Sustainability** focus. In 2020, the company initiated a Materiality Assessment to identify the key **Sustainability** topics most relevant to its business and stakeholders, analyzing risks and challenges. The process includes Identification, Prioritization, and Validation. As the first step, the company systematically reviewed corporate documents of the company and AB InBev, peer practices and sector-specific standards, sustainability assessment questionnaires by ESG rating agencies, and other publicly available information. Then, based on the strategic importance to the company, legal requirements, stakeholder expectations, and standards from rating agencies such as MSCI, CDP, and Sustainalytics, the company further assessed the relevance and importance of each **Sustainability** issue. Building on these, the company prioritized **Sustainability** issues related to long-term value creation and approved by the Board. As a result, 23 key issues emerged as top priorities shown in the latest Sustainability Report.[1]

Once the key topics are identified, the next step is to translate them into specific actions. Gap analysis, aimed at assessing the current situation, analyzing differences, and identifying weaknesses, becomes the subsequent stage. After consulting with professional organizations and reviewing feedback from **Sustainability** rating agencies, Bud APAC initiated the evaluation of **Sustainability** risks associated with each topic. The company clarified issues that require improvement, explored preliminary approaches for enhancement, and assessed the difficulty of implementing improvements.

Bud APAC has developed a clear roadmap, outlining short-term, mid-term, and long-term action plans. It also established a set of quantifiable, specific, and measurable detailed objectives. Taking "Climate Action" as an example, using 2017 as the baseline year, Bud APAC has committed to reducing absolute greenhouse gas emissions from Scope 1[②] and Scope 2[③] by 35% by 2025. The company also extended carbon reduction efforts from its operations throughout the entire value chain for emissions reduction in Scope 1,2 & 3[④] 25% of carbon intensity[2].

To track progress, Bud APAC adopted the Voyager Plant Optimization (VPO) global management system, monitoring the completion of targets and progress in key performance indicators including water resource usage and carbon emissions reduction[3]. Since 2020, the company has established the Sustainability Committee, directly reporting to CEO and Co-Chairman of the Board, Jan Craps. The committee includes an Sustainability Working Group dedicated to formulating goals, taking actions, and monitoring progress related to Sustainability issues[4]. The cross-functional team consists of 25 members from departments such as Sustainability & Procurement, Supply Chain and Legal and Corporate Affairs teams, each responsible for a specific area, such as green logistics, sustainable procurement, employee diversity, and corporate inclusion.

② Scope 1 (Direct Emissions) refers to direct greenhouse gas emissions generated from fuel combustion activities and physical-chemical production processes under the direct control of the enterprise. Typical Scope 1 emissions include greenhouse gas emissions from coal-fired power generation, in-house vehicle use, chemical material processing, and equipment.
③ Scope 2 (Indirect Emissions) refers to greenhouse gas emissions generated from the purchase of external energy sources, including electricity, heat, steam, and refrigeration.
④ Scope 3 (Indirect Emissions from Upstream and Downstream Activities in the Value Chain) covers a wide range of activities both upstream and downstream in the value chain.

Bud APAC embeds Sustainability into its corporate governance, internalizing Sustainability as an integral part of company management and operations by establishing a dedicated working group. At Bud APAC, Sustainability is not treated as a standalone "extra project" separate from the company's core operations, nor is it only a " favorable tool" used for branding. The formulation of Sustainability strategy, selection of issues, establishment of objectives, implementation of plans, and progress tracking all adhere to a scientific, rigorous, and systematic process. These practices ensure the comprehensive, systematic, and sustainable implementation of the Sustainability strategy, but also contribute to refine the company's internal governance system. This integration genuinely incorporates Sustainability into every aspect of decision-making and corporate management.

Localized Sustainability Actions: Creating Social Value

Beer is composed of four key ingredients: water, barley, hops, and yeast, with water accounting for 90% to 95% of beer. Water Stewardship is a crucial part of Bud APAC's Sustainability strategy. In some regions of India, water resources are severely scarce. The 2020 gap analysis identified 5 breweries at high risk, constituting 9.8% of the company's facilities in the Asia-Pacific region. Bud APAC initiated watershed programs in these areas, supporting local communities in constructing reservoirs in regions with weak infrastructure. These reservoirs store excess rainwater during the monsoon season for use during dry periods.

Apart from being a raw material, water is also extensively used in every step of the brewing process, as regular cleaning is required for almost every stage. Typically, it takes seven gallons[⑤] of water to produce one gallon of beer in a brewery. In less efficient ones, this ratio may be as high as 10:1. For Bud APAC, it implemented water conservation plans across all breweries, presenting targeted water solutions. The company's overall water-use ratio is 2.03 hl per hectoliter (hl), a 32% reduction from 2017 baseline, placing Bud APAC at the forefront of the industry[5]. In China, the company initiated the "Community Water Replenishment" program, recycling reclaimed water[⑥] for landscaping and artificial lakes.[6]

Figure 1： Budweiser APAC India WaterAid Program
Source: Budweiser APAC, '2021 Environmental, Social, and Governance Report.

The brewing process of beer generates carbon dioxide. Bud APAC is unwaveringly committed to creating value from carbon reduction. In 2020, China introduced the national "dual carbon" (carbon peaking and carbon neutrality) goals, encouraging carbon emission reduction efforts. In 2021, Bud APAC achieved China's first third-party certified carbon-neutral brewery in Wuhan, marking it as the first carbon-neutral brewery under the AB InBev Group. In this brewery, biomass boilers replace natural gas boilers, 100% renewable energy is procured through power purchase agreements, purchasing zero refrigerants as cooling agents, switching to electric shuttle buses from vehicles that consume gasoline or diesel, and recycling carbon dioxide from the brewing process.[7]

⑤ One gallon is approximately equal to 3.79 liters.

⑥ Reclaimed water refers to sewage that, after undergoing appropriate recycling processes, meets the required (specified) water quality standards and can be beneficially reused within certain parameters.

China leads the world in solar energy industry[8], providing opportunities for renewable energy investing. With the national "dual-carbon" (carbon peaking and carbon neutrality) policy, Bud APAC has observed that in various provinces, the cost of solar power is gradually approaching that of non-renewable energy sources. Consequently, Bud APAC has installed solar panels in 14 breweries across China for renewable energy generation by end of 2023.[9] Additionally, the company has initiated projects such as green logistics, procurement of renewable energy, efficiency improvement, and the use of recyclable materials, creating value from the breweries to every process in the value chain.

Figure 2: Beers with 'Carbon Neutral Label
Source: Budweiser APAC, '2021 Environmental, Social, and Governance Report.

Case Study: Further Decarbonization in Our Brewery with Industry-first Electric Boiler Installation

(Reference: Budweiser APAC Sustainability Report 2023: We Dream Big to Create a Future with More Cheers)[10]

Our Ziyang Brewery in Sichuan, China became the China beer industry' s first to install electric boilers using hydropower in 2023. The electric boilers replaced the natural gas ones to generate steam with a newly constructed power generation and storage system. Leveraging the peak-valley power pricing to achieve cost-effectiveness, the system generates and stores the heat by the off-peak hours electricity (the price is 72% lower than peak hours) to meet the brewery's steam production needs throughout the day.

In addition to the power cost-effectiveness, we strategically took a sustainable project model, "Energy as a Service (EaaS)" , to capture the transition opportunity with financial benefits. We have formed a partnership with the selected service provider for a 20-year procurement contract who invested approximately RMB40 million in the infrastructure and equipment for the whole system, with a building area of around 3,000 square meters within Ziyang Brewery.

The project includes the construction of a new 25 MW electric steam boiler, two 1,000 m^3 high-pressure energy storage tanks with a daily steam supply capacity of 250 tons, a new 25.5 MW high-voltage distribution system, a new purified water system, and an intelligent energy management platform. The project is expected to realise a reduction of approximately 7,000 tons of $CO2$ emissions.

SUSTAINABILITY Empowerment Across the Supply Chain: Contributing Industry Value

The value chain of beer industry is long and complex, with upstream activities such as crop cultivation providing raw materials for brewing, and downstream processes including packaging, transportation, refrigeration, retail, and waste management. Bud APAC sources raw materials from 172 direct suppliers and distributes beer through 4,000 direct wholesalers and 2,000 indirect wholesalers. So, the execution of Sustainability strategy goes beyond its internal operations, involving the entire value chain of beer production[11]. For instance, in terms of carbon emissions, less than 6% are generated inside the breweries, while the remaining 94% come from the value chain.

In the upstream, farmers provide raw materials for brewing beer. Bud APAC assists growers in enhancing profitability while preserving biodiversity, promoting sustainable agricultural practices.

Initiatives such as the Soil Program, Biodiversity Program, and Training Program have been launched. The Soil Program helps growers understand and improve soil quality practices through ongoing communication, timely information collection, and targeted advice. In the Biodiversity Program, Bud APAC collaborates with external partners to explore and formulate standardized solutions tailored to each market, actively participating in industry conferences related to the Convention on Biological Diversity. Recognizing the impact of biodiversity on soil composition, water quality, and the yield and quality of purchased crops, Bud APAC integrates Sustainability into business operations. The Training Program aims to enhance farmers' skills through cooperation with agricultural research institutes, covering trainings of agricultural principles, industrial mechanization, pest management, and harvest storage. Currently, 100% of Bud APAC direct farmers are skilled, connected and financially empowered.[12]

In the downstream, packaging is a critical link in the supply chain and an important component of Budweiser's Sustainability strategy. Packaging represents the highest carbon-emitting segment in the entire beer production chain, accounting for 47.9%[13]. Every year, Bud APAC have a Champion program, encouraging employees to share, discuss and add initiatives to utilize innovative, cost-effective, and sustainable packaging materials[14]. The company is committed to reducing the thickness of film packaging to minimize the usage of plastic film and implementing lightweight packaging materials, thereby reducing the weight of bottles and aluminium cans. In China, Bud APAC have rolled out a lightweighting project, reducing the weight of aluminium cans and saving approximately 135 tons of aluminium. Huaxing Group is Bud APAC's largest glass supplier. With the influence and empowerment of Budweiser, Huaxing has begun utilizing renewable energy for power generation. Since March 2021, Huaxing has incorporated solar panels as the key energy source in its Zhejiang factory, subsequently expanding the solar energy project to seven other factories.[15] In 2023, Bud APAC launched its lightest aluminum can for beer in China, with its 330ml can weighing only 9.57g, 4% lighter than the industry average. The average carbon footprint per can is only 185g, nearly 100g lower compared to the 2017 baseline. Bud APAC’ s aluminum packaging has helped to reduce more than 40,000 tons of carbon emissions, compared to the 2017 baseline, through continuous efforts, with carbon emissions per can down by over 30%.[16]

For logistics operation, in 2020, Bud APAC deployed 216 alternative energy vehicles in China, including 180 liquefied natural gas trucks, 31 electric trucks, and 5 newly-deployed hydrogen fuel cell vehicle trucks, all utilizing advanced technology to reduce carbon emissions. By 2023, the total number of "green vehicles" increased to401, further reducing Scope 3 emissions. In 2023, the company continued to implement Green Logistics Program and constantly assessed the greenhouse gas emissions of the logistics supply chain.

Regarding the recycle process, with a focus on enhancing the research and development applications of recycled materials, in 2022 Bud APAC have developed a new technology to achieve 55% recycled content in glass bottles in China[17]. The Taizhou Brewery has become the first "zero waste" brewery in the Asia-Pacific region. To transform Corona into the first plastic-neutral beer brand, the company initiated a plan to protect marine biodiversity, recycling approximately 155 tons of plastic waste.[18]

Figure 3: Corona Plastic Fishing Tournament Campaign
Source: Budweiser APAC Environmental Social and Governance Report 2022: We Dream Big to Create a Future with More Cheers

Conclusion

Bud APAC has integrated Sustainability initiatives into its operations and the entire value chain, collaborating with partners upstream and downstream. This approach not only builds the company's competitive advantage but also generates management value, social value, and industry value. Significant progress has been made towards its 2025 Sustainability Goals, with some targets achieved ahead of schedule, and the ambition of achieving net-zero emissions across the entire value chain by 2040 is being pursued.

Reflecting on the progress of Budweiser's Sustainability strategy: its operations in India achieved an impressive 199% water replenishment rate, effectively returning 20million hectoliters of water to local communities facing high water stress[19]. End of 2023, carbon intensity per hectoliter across the entire value chain has decreased by 23.8% compared to 2017. Following the Wuhan brewery, the Jinzhou brewery has become Bud APAC's second carbon-neutral brewery[20]. In green logistics, there are a total of 401 green trucks. 64.8% of its total beer volume in returnable or made from majority of recycled material. All partnering farmers in China and India have access to barley varieties and technical training suitable for their regions...

Only by truly integrating Sustainability principles into the company's business can the systematic, economical, long-term, and sustainable nature of Sustainability actions be ensured. Bud APAC sources natural ingredients for its beer, contributing not only to the quality of its brewing but also adding value to the natural environment in the regions where it operates. With brewing taking place in various local communities, the company's contributions act as a protective net for the sustainability of local communities, promoting prosperity and stability. Given the complexity of the beer supply chain, Budweiser's empowerment of both upstream and downstream stakeholders ensures business security and contributes to the ecological well-being of the beer industry. Budweiser's strategic integration of business and Sustainability will continue to create more value for communities, industries, and regions.

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JD Logistics: Technology-driven to Lead Global Efficient Circulation and Sustainable Development

By Ziqing He①

Zhao, Xiande

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Faculty Comments

As an important component of corporate ESG initiatives, JD Logistics has introduced the Supply Chain Emission Management Platform (SCEMP). Through the utilization of digital technology and big data applications, JD Logistics can continuously monitor carbon emissions across various stages of the logistics process, including warehousing, transportation, distribution, and packaging. By leveraging technology-driven sustainable practices, the company not only delivers more efficient and eco-friendly logistics services to its customers, but also creates innovative business opportunities in carbon management. This case exemplifies how digital technology-driven low-carbon services generate value for multiple enterprises!

Hu, Wei

CEO of JD Logistics, CEIBS EMBA Alumnus

Comments

For supply chain companies, ESG represents both a challenge and a wealth of development opportunities. Incorporating the ESG concept into development is a gradual process for all companies. JD Logistics has always adhered to the business philosophy of "long-termism," consistently pursuing challenging yet vital endeavors to create long-term value. Together with all stakeholders, we are committed to driving the development of a green integrated supply chain, bridging resources between consumption and production, and achieving long-term sustainable growth.

Introduction

As the urgency and importance of decarbonization become increasingly evident, businesses face challenges in the complexity of supply chain processes, difficulties in accounting for Scope 3 emissions, managing supply chain carbon emissions, and high decarbonization costs. As a leading technology-driven supply chain solution provider and logistics service provider in China, JD Logistics' mission is not only to lead global efficient circulation but also to promote sustainable development. Besides being a trusted provider of supply chain infrastructure services, JD

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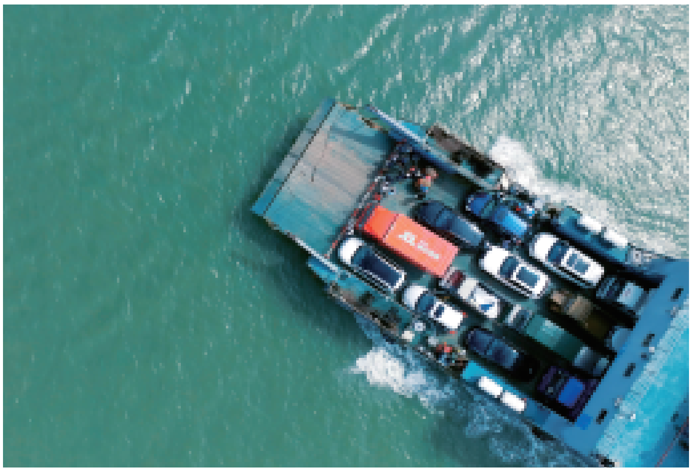
Logistics is the first logistics company in China to establish science-based targets (SBTi), actively promoting the implementation of ESG principles within the organization. So, in practice, what does JD Logistics' commitment to "long-termism" involve? How does it collaborate with supply chains partners to address decarbonization and promote sustainability across the industry? JD Logistics' case will demonstrate how to fully leverage the expertise and resources of a company to solve problems and create growth opportunities during the process.

Adhering to "Long-termism", Pursuing Challenging yet Vital Endeavors

Originating from JD Group's in-house logistics, JD Logistics was officially established as a business group in 2017, opening up its logistics infrastructure. In May 2021, JD Logistics was listed on the Hong Kong Stock Exchange. Transitioning from corporate logistics function to a logistics service provider, JD Logistics' warehousing network has become one of China's largest, covering nearly all cities, towns, and populations in China. Throughout its development over the past decade, adhering to "long-termism" and building a "responsible supply chain" has remained a critical topic for JD Logistics.

Is there a conflict between the long-term goal of sustainable development and the short-term goal of achieving operational efficiency? How does a firm balance these two or make trade-offs? Hu Wei, CEO of JD Logistics, answers, "JD Logistics' long-termism is about pursuing challenging yet vital endeavors to create long-term value. For us, ESG is not just a cost but brings sustainable 'long-term value', including intrinsic value, investment value, brand value, and social value." When formulating and implementing goals, JD Logistics does not only focus on short-term profits but also considers the interests of various stakeholders, adjusting its business strategies. For JD Logistics, practicing ESG is not simply a means to meet regulatory requirements or pass compliance checks; it also embodies a comprehensive consideration of business value, industry value, and social value.

To begin with, enhancing internal management serves as a significant driving force for ESG initiatives. In the process of formulating and executing ESG goals, analyzing and addressing risks, as well as innovation, will enhance efficiency and boost sales for the company. This further drives improvements in ESG information disclosure and brand image, bringing direct business value to the company. Secondly, JD Logistics has always been committed to providing customers with efficient and convenient service experiences, and its ESG strategy is also an important manifestation of creating value for customers. By optimizing warehousing, transportation, distribution, and other processes to reduce costs and improve efficiency, while also prioritizing green and low-carbon development, JD Logistics can offer customers a higher quality and more reliable service experience.



Action-oriented and Efficient Governance Mechanism

Adhering to the down-to-earth philosophy of long-termism, JD Logistics has also established mechanisms from the formulation to the execution of ESG strategies, starting with the enhancement of its internal management. This efficiently drives the integration and implementation of ESG goals with business objectives.

In November 2022, JD Logistics upgraded the company's ESG governance structure based on its ESG taskforce, formally establishing the ESG Management Committee . The committee is headed by the Chief Executive Officer (CEO), with heads of various business functional departments serving as members, jointly responsible for supervising and deciding on ESG-related issues. At the same time, an ESG taskforce has been established, composed of representatives from various business functional departments, responsible for the implementation of ESG. In addition to setting goals, the ESG Management Committee also links goals to business assessments and clarifies the short-term, medium-term, and long-term goals of each business line to participate in by 2030.

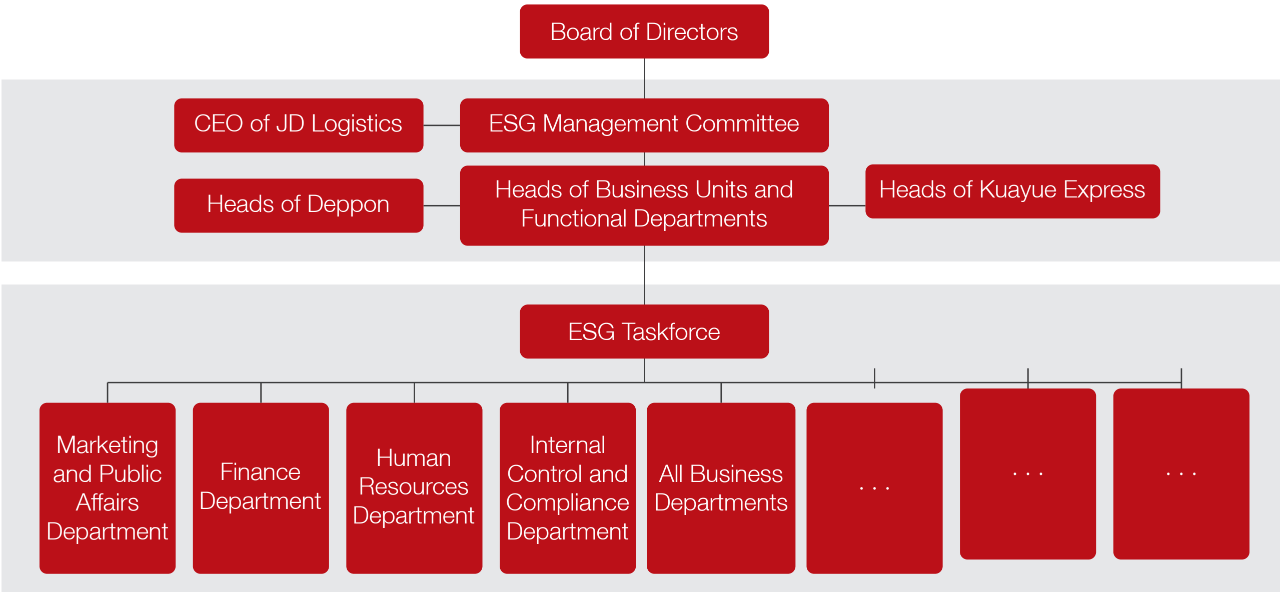


Figure 1 JD Logistics ESG governance structure Source: JD Logistics

JD Logistics also regards the implementation of ESG goals as a key to improving corporate governance and promoting business innovation and development. Taking carbon emissions reduction as an example, JD Logistics has pledged to reduce Scope 1, 2, and 3 carbon emissions by 50% compared to 2019 levels by 2030. In terms of specific implementation, JD Logistics has set specific targets for each business link such as warehousing, sorting, transportation, and distribution based on different characteristics of processes, and distinguishes between short-term, medium-term, and long-term goals. The corresponding goals are broken down into specific annual and quarterly key performance indicators (KPIs) and allocated to the heads of various business lines. Not only for specific business departments, but also for coordinating departments such as Marketing and Public Affairs, the achievement of detailed ESG-related objectives will also become key performance indicators for the responsible personnel. For example, by increasing the number of new energy charging vehicles, fast-swappable vehicles, and liquefied natural gas (LNG) vehicles, JD Logistics has achieved the target of replacing new energy vehicles under ESG guidance in the transportation department, not only reducing carbon emissions but also improving its operational efficiency.

By employing a target-oriented approach, JD Logistics' efficient ESG governance mechanism also provides clear timelines and plans for different business departments to participate in the ESG goals, ensuring the orderly and efficient implementation of ESG goals. From the company's perspective, the ESG governance mechanism has been deeply integrated into its internal management system, and ESG governance has truly been integrated into all aspects of the company's operation and development.

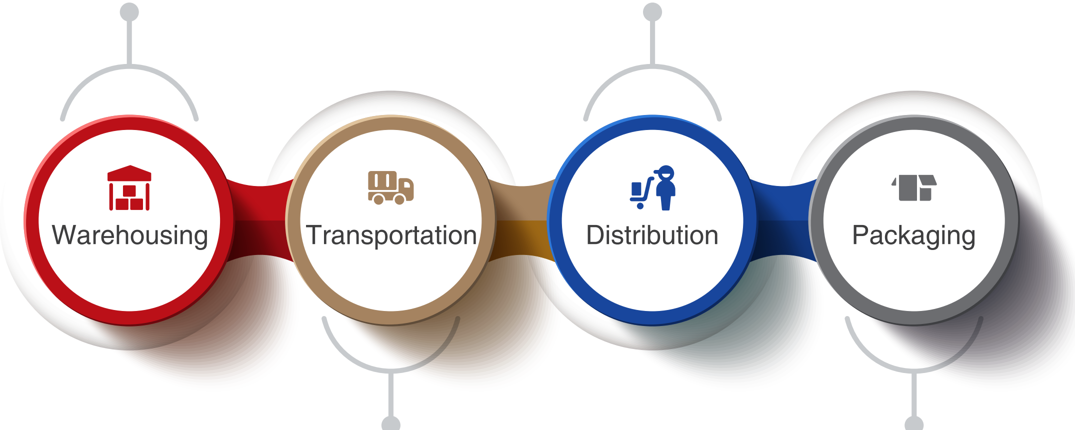
Technology-Driven Sustainable Development

Sustained investment in research and development is a key manifestation of JD Logistics' commitment to "long-termism." The application of technological innovations not only enhances the effectiveness of the company's ESG management but also creates new business growth opportunities.

Real-time monitoring and emission management of various emission sources through a digital management platform.

Digital scheduling and coordination of warehousing and transportation to enhance operational efficiency.

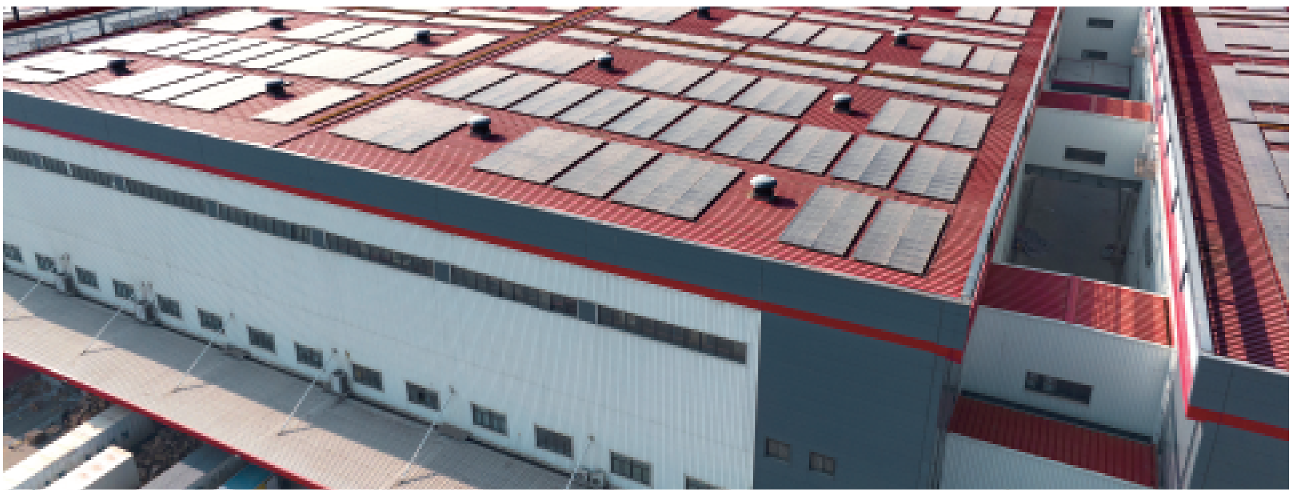
Introduction of mechanized and intelligent equipment for "last-mile" delivery to reduce energy consumption.



Improve vehicle efficiency through digital management, algorithm optimization of transportation routes, and optimization of warehouse network planning.

Reusable packaging, intelligent recommendation of packaging materials.

Figure 2 Examples of technology-driven decarbonization measures[2]



Since the beginning of 2023, JD Logistics has continuously improved its ESG database. Through digital integration, it has achieved online monitoring and management of 20 data sources in five major scenarios including transportation, warehousing, office operations, travel, and services. While enhancing its own carbon management through the carbon footprint monitoring system, JD Logistics' upstream customers often face challenges in monitoring and calculating emissions from mobile sources. In response to this issue, JD Logistics has opened up its carbon management system, originally designed for internal use, to external customers and developed tailored solutions based on customer needs.

In April 2023, JD Logistics, in collaboration with the Green Supply Chain Committee of the All-China Environment Federation, officially launched the Supply Chain Emission Management Platform (SCEMP).

As an example, Hu Wei shared that, within one month of the system's launch, JD Logistics assisted a large customer in calculating the carbon emissions of over 200,000 B2B waybills, providing fundamental data for carbon reduction and enabling the calculation of verifiable greenhouse gas emission reductions.

Through technology-driven sustainable transformation, JD Logistics has not only improved its own operational efficiency and service competitiveness but also provided other companies with more efficient and environmentally friendly logistics services. Moreover, it has established innovative product business in carbon management, driving the sustainable transformation of the entire industry.

Empowering Industry Collaboration for Sustainable Value Creation

While an increasing number of firms have recognized the importance of emissions reduction in Scope 3 activities (including transportation and distribution), the associated costs of data accounting and emission reduction measures have deterred many, especially for small and medium-sized enterprises. As a provider of transportation and distribution services, JD Logistics, while ensuring effective internal management, also broadens its perspective from individual enterprise to industry-wide, persistently exploring this challenging yet vital endeavor.

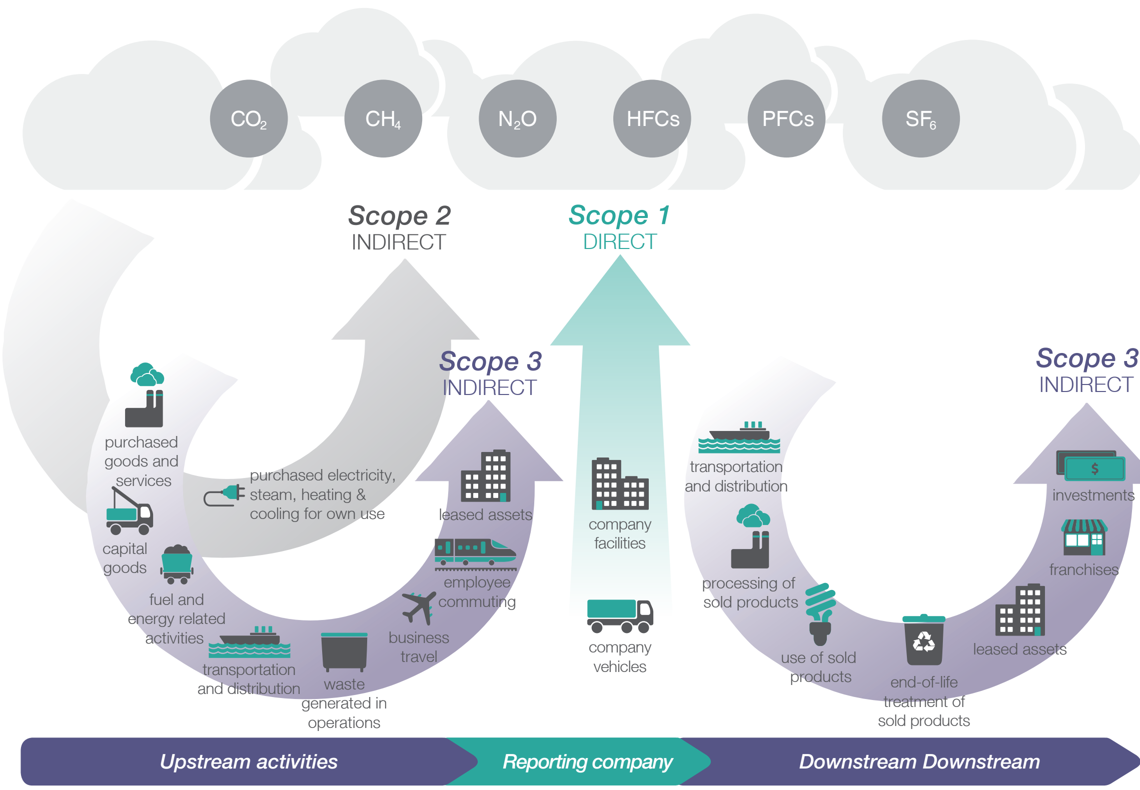


Figure 3 GHG Protocol scopes and emissions across the value chain [3]

Shared Carbon Footprint in Supply Chain. When accounting and disclosing carbon emissions data, emissions from transportation and distribution in the upstream and downstream processes are regarded as indirect emissions in the Scope 3 category, which are closely linked to the direct emissions of supply chain enterprises. This situation may result in duplicate calculations of emissions and diminish the incentive for emission reduction by businesses. To address this issue, JD Logistics has proposed an innovative concept of “Shared Carbon Footprint in Supply Chain” . Firms can utilize the Supply Chain Emission Management Platform (SCEMP) to collaborate with supply chain partners upstream and downstream, sharing carbon footprint data. After establishing a unified carbon emission baseline, the carbon emissions in different segments of the supply chain can be accurately calculated to identify key areas for improvement. Subsequently, the focus will be on applying decarbonization technologies, using data-based cost-sharing mechanisms to reduce carbon emissions with fewer resources. This initiative drives collaboration among supply chain partners, resulting in a combined effort to reduce carbon emissions, achieving an outcome greater than the sum of its parts.

Green Supply Chain Technology Sharing. In 2023, JD Group, Lenovo Group, and BOE Technology Group jointly launched the "Green Supply Chain Technology Sharing Platform" . In this shared platform (patent pool), companies such as JD will offer patents related to green supply chain technology to small and medium-sized enterprises (SMEs) for free licensing, reducing cost pressures for SMEs while accelerating the promotion and application of green supply chain technology.

In engaging brand partners, JD Logistics initiated the green supply chain project, "Green Stream Initiative" in 2017. This initiative aims to enhance resource utilization throughout the entire chain of goods packaging, transportation, and delivery. Reduction and recycling are two important principles for the green transformation of packaging. If the logistics company implements a circular packaging initiative itself, standardizing logistics boxes is relatively easier to achieve in B2B operation scenarios. However, achieving the implementation of recycling packaging in direct interaction scenarios with end consumers requires broader coordination and cooperation. Given the customized demands of brands and the vast variety of packaging types and specifications, how can a supply chain company achieve scalable implementation while ensuring packaging quality and transportation safety? In 2022, marking the fifth anniversary of the "Green Stream Initiative," JD Logistics released its original packaging standard, the DWOP (Delivered with Original Package) certification. Starting from the design process, this approach integrates product and packaging into a unit, thereby avoiding extra packaging during transportation and delivery.

In doing so, while meeting safety standards, minimizing excess packaging, and using environmentally friendly materials, JD Logistics ensures the customization needs of brand clients are met. Presently, tens of thousands of product SKUs have transitioned to DWOP (Delivered with Original Package), saving over 2 billion single-use disposable packages annually for the industry. JD Logistics also collaborates with multiple partners to set new goals: by 2030, over 80% of products sold through e-commerce channels will apply DWOP standard. This initiative is expected to drive a reduction of disposable packaging by 10 billion units across the entire industry.

Unclear and disjointed actions cannot effectively lead and guide the sustainable development of the entire industry. What's necessary is the integration of fragmented innovations and the collective utilization of resources across the green supply chain, thereby collaboratively driving the industry's sustainable transformation and high-quality development.

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Carl Zeiss Vision China: Empowering Customers through Education to Create Shared Value

By Ziqing He[①]

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Faculty Comments

ZEISS empowers corporate clients and partners greatly by offering various forms of professional training and management training. This company goes above and beyond to offer first-rate service and exceptional experiences to its consumers. These corporate practices fundamentally represent a form of service innovation.

The company's commitment to service excellence drives value creation across all aspects, fully embodying the inherent logic of the service-profit chain and the corporate ethos of “shared value”. ZEISS’s win-win philosophy is also reflected in its empowerment of the entire industry, thus bringing profound impact to the industry's development. This win-win approach to value creation and social responsibility sets a valuable example for other companies to follow.

Xiaoguang Yang
General Manager of Carl Zeiss Vision China Sales Company
CEIBS CMO/HEMBA/DBA Alumnus

Comments

Innovation, precision, and social responsibility are the brand genes of ZEISS. While continuously driving technological innovation, we also consistently empower the training and development of industry talents. Within the ZEISS Elite College, we integrated various high-quality education resources, providing clients with cutting-edge systematic management training. Throughout the journey, we continuously expand and enrich our training content, enhancing the end consumer experience while also fostering value co-creation with partners.

Introduction

As a leading brand providing lenses and vision-testing equipment and products, Carl Zeiss partners with entities like optical centres, eye clinics, and eyewear retailers to deliver products and services to consumers. In addition to prioritising affordability and functionality in products, consumers now place growing importance on the in-store experience, seeking professional advice and personalized service during the glasses and lenses purchase process. Given these shifting market dynamics, how does ZEISS navigate these challenges and meet the increasingly high expectations of consumers?

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Service Transformation Strategy: Transition from the 4Ps to S.A.V.E

In 1846, ZEISS was founded in Germany. The company gradually expanded its business around optical equipment, evolving into a leading global technology group in the optical and optoelectronic industries. As a crucial segment within the ZEISS Consumer Markets, Zeiss Vision focuses on products along the value chain of ophthalmic optics. In 1995, Zeiss Vision entered the Chinese market, establishing a sales company in Guangzhou and introducing resin lenses to China for the first time.

Traditionally, marketing strategies under the 4Ps model primarily focused on Product, Price, Place, and Promotion, mainly from a sales perspective. However, ZEISS was facing challenges, relying heavily on a few key customers while lacking brand recognition among end consumers. After thorough analysis of these issues, Xiaoguang Yang shifted the focus from traditional product marketing to providing solutions, he aimed to explore empowering customers and breaking through the limitations of traditional B-to-B marketing. Instead, transitioning to a B-to-B-to C model to significantly enhance marketing effectiveness.

Between 2013 and 2014, Xiaoguang Yang attended the CMO program at the China Europe International Business School, where a marketing professor introduced the S.A.V.E. model. In the traditional 4P model, marketing strategies primarily focus on Product, Price, Place, and Promotion, emphasizing sales-centric approaches. However, at that time, ZEISS was facing challenges with heavy reliance on a few key customers and low brand recognition among end consumers. After thorough analysis of these issues, Xiaoguang began considering whether to draw inspiration from the S.A.V.E. model, shifting the emphasis from traditional product marketing to providing solutions. He wanted to see if empowering customers could break the limits of traditional B2B marketing, leading to a shift to a B2B2C model and greatly improving marketing efficiency.

4P	S.A.V.E.
Product Product-centric, can only provide lenses to consumers through distributors	**Solution** Enables consumers to experience comprehensive solutions, considering individualized needs during fitting
Place Primarily relies on retail stores operated by offline distributors, relatively limited	**Access** Combines online and offline channels, guiding stores and consumers to join online platforms. This not only allows consumers to choose stores more conveniently but also addresses the pain point of low foot traffic in offline stores
Price Faces disorganized low-price competition in the market	**Value** Standardizes high-quality services, explores brand and service value that resonate with consumers
Promotion Short-term discounts, rebates, and incentives aimed at boosting short-term sales	**Education** Systematically empowers customers to enhance consumer awareness

Exploring Training Empowerment: Specialized Programmes

Leveraging Management Experience for Lean Healthcare. In 2014, as a newcomer to the market, ZEISS faced challenges in establishing partnerships with hospitals, including eye hospitals, despite being a crucial channel client. Prior to his role as General Manager of ZEISS China Sales, Xiaoguang Yang had nearly a decade of experience at ZEISS, holding key positions in various areas such as supply chain, operations, strategic management, and manufacturing. At that time, ZEISS's two production factories in Guangzhou were leading globally in lean management, ranking first and second respectively in ZEISS' s global review. This prompted Xiaoguang to think whether to leveraging the advantage of "lean management" for market entry strategy. After that, a small-scale training initiative called "ZEISS Lean Management Course" was launched. In eye hospitals at the time, patients typically endured long waiting queues, resulting in low efficiency. Drawing on the experience of lean management, ZEISS trained on-site personnel at these hospitals, redesigning processes to improve operation efficiency and achieve the goal of "zero waiting." This training initiative later extended to the other functional departments and the entire hospital. Promoting lean healthcare marked ZEISS's inaugural attempt at providing external training.

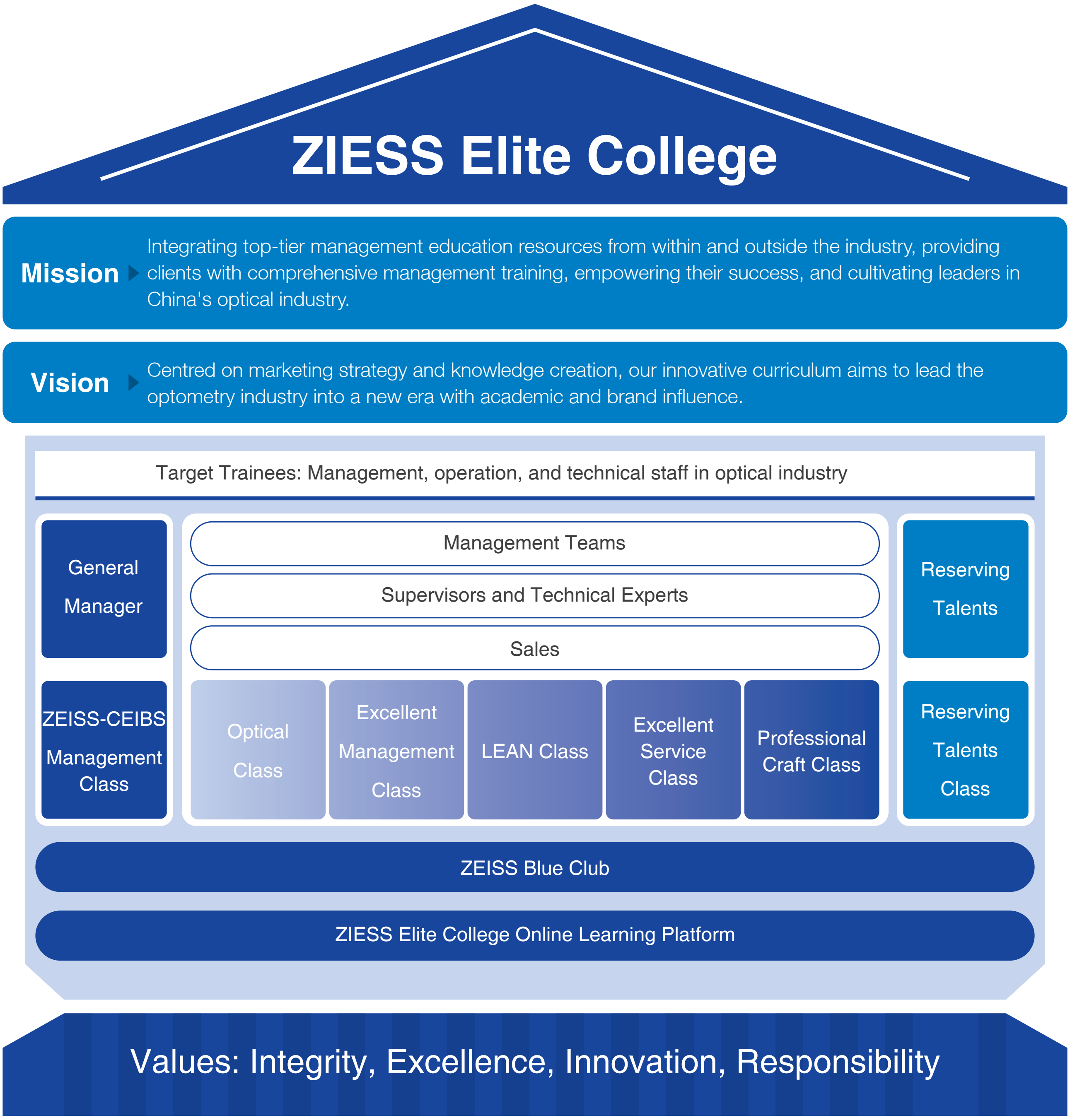
Strengthening the Proficiency of Frontline Optometrists. In the eyecare industry at that time, there was a shortage of experienced and specialized optometrists. While some held optometry qualifications, the majority had only received basic training and lacked comprehensive professional development. Meanwhile, eye hospitals hold the most professional resources. Therefore, ZEISS decided to collaborate with hospitals to establish specialized training programs tailored to frontline optometrists from non-hospital channels. This aims to enhance their professional skills and address the shortage of professional optometrists within the industry.

Advancing Sales and Service at Retail Stores. As the training for lean management and optometrists progressed, Xiaoguang also realised that the distributor teams were facing a transformational challenge in sales. In the past, the training provided by ZEISS as a brand focused more on the products, emphasizing the advantages and technological advancements of products. However, from a consumer-centric perspective, consumer experience and service quality have become crucial. Especially for high-end and personalized products, solely emphasizing product features is no longer sufficient to meet consumer demands. Therefore, ZEISS has also embarked on developing a series of sales skills training aimed at helping retail stores enhance their service and promoting the sales of high-end products.

Innovative Business Model: Establishing ZEISS Elite College to Create Shared Value

Over time, ZEISS has continued to update the design of its training programs annually. After four years of development, by 2017, ZEISS Vision China decided to integrate its existing training programmes and formally establish the ZEISS Elite College. This initiative not only streamlines internal management but also provides a unified platform for external communication and collaboration.

As of now, the ZEISS Elite College has over 100 staff members, including both internal employees and external trainers. Combining online and offline training, it is able to reach over 200,000 trainees annually, covering nearly half of the industry's total workforce. The College's curriculum, centred on marketing strategy and knowledge creation, is forward-thinking. Tailored to the needs of different groups, seven different types of classes have been offered to meet the needs of various levels and professions. Additionally, an online learning platform has been launched, offering over 700 online courses.


ZIESS Elite College
Mission
Integrating top-tier management education resources from within and outside the industry, providing clients with comprehensive management training, empowering their success, and cultivating leaders in China's optical industry.
Vision
Centred on marketing strategy and knowledge creation, our innovative curriculum aims to lead the optometry industry into a new era with academic and brand influence.
Target Trainees: Management, operation, and technical staff in optical industry
General Manager
ZEISS-CEIBS Management Class
Management Teams
Supervisors and Technical Experts
Sales
Optical Class
Excellent Management Class
LEAN Class
Excellent Service Class
Professional Craft Class
Reserving Talents
Reserving Talents Class
ZEISS Blue Club
ZIESS Elite College Online Learning Platform
Values: Integrity, Excellence, Innovation, Responsibility

Programmes	Content	Target Audience
Excellent Service Class	Standardization and Enhancement of Excellence Service	Top Management, Middle Management, Frontline Service Staff
ZEISS-CEIBS Management Class	Integrating Management Education Resources, Customizing Course Development	Top Management, Middle Management
Optical Class	Collaboration with Professional Optical Organizations, Sharing Management Knowledge and Latest Industry Trends	Middle Management, Supervisors and Technical Experts, Store Frontline Staff
Excellent Management Class	Providing Trainees with Comprehensive Management Skills and New Retail Knowledge Empowerment	Middle Management, Store Managers, Key Talent Development
LEAN Class	Collaboration with Lean Management Experts from Inside and Outside the Industry to Assist Clients in Improving Internal Process Efficiency	Top Management, Middle Management
Professional Craft Class	Training on Glasses Processing and Prescription Skills	Opticians, Quality Control Staff, Sales Assistants
Reserving Talents Class	Industry-Education Collaboration to Enhance Students' Job Skills	Students, Reserving Talents

Table: Training Programmes at ZEISS Elite College

Source: ZEISS

Challenges and Rewards: Transformation of Customer Relations

Reflecting on the challenges along the way, Xiaoguang stated that the biggest challenge was actually launching the first class of training. On the one hand, potential competition among distributors made the process of promoting the course full of uncertainty. Gathering clients for training inevitably leads to their comparisons of ZIESS' s support for sales across different channels. On the other hand, internal doubts within the company arose regarding the investment in the training program, questioning whether the expenditure would boost sales as anticipated. Therefore, the initial 30 students were mostly personally invited by Xiaoguang through one-on-one communication.

However, these concerns were gradually dispelled as the training programme evolved. Xiaoguang believes that the effectiveness of training is not only reflected in the improvement of the professional capabilities of clients, but also, more importantly, in the development of a healthier industry ecosystem. Taking the initial LEAN management class as an example, the relationship between ZEISS and its clients has shifted from the original “sales-purchase” dynamic to a “partnership” dynamic, further enhancing trust and expanding the possibilities for cooperation.

Through a series of classes about strategy and branding, the management teams of distributors have also gained a deeper understanding of ZEISS's brand philosophy. They have moved the focus away from low prices, now emphasizing effective market collaboration, and delivering quality consumer service.

As the number of clients participating in the education program continues to increase, ZEISS has also gradually made its market policies more transparent and uniform. As a result, the education program has enabled ZEISS to engage more effectively with clients, fostering trust not only between ZEISS and its clients but also among the clients themselves. Additionally, it has promoted internal governance improvements within ZEISS.

The ZEISS Elite College, through its innovative business model of empowering client success and creating shared value, has gained recognition from the ZEISS Group, and was honored with the Zeiss Global Innovation Award in 2019.

However, looking towards the future, Xiaoguang believes that the ZEISS Elite College, as an independent profit centre, still needs further development of its curriculum.

Currently, the management team has not comprehensively tracked the effectiveness of the training, resulting in a limited understanding of performance changes pre- and post-training. Through a deeper analysis of the industry value chain, Xiaoguang aims to address this challenge while creating new growth opportunities, thus better identifying and meeting clients' needs.

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03

STUDENT PROJECTS

INTRODUCTION

As CEIBS incorporates ESG and sustainable development topics into the curriculum, discussions related to ESG have become a mandatory component of student group projects.

In these projects, students must focus on real issues and challenges facing their businesses, conduct systematic and in-depth analyses based on the actual situation of the enterprise. Building upon this foundation, students need to consider constraints such as resources and time and propose targeted and feasible solutions. Therefore, discussions on ESG topics in these group projects also reflect current business considerations in addressing relevant issues.

Some of the student projects focus on the specific connection between ESG issues and businesses, examining related risks and opportunities. For example, under new policies and guidelines, how should companies incorporate these issues into strategic consideration?

Additionally, some projects address sustainable business transformation and business model innovation. For instance, how can companies find a Second Curve, balancing the needs of various stakeholders, while establishing long-term business models?

Finally, some projects focus on ongoing "sustainable development transformation" practices, emphasizing the systematic implementation of ESG initiatives, including implementation of strategy and organizational structure in new scenarios.

In this chapter, we showcase three groups to illustrate the practical application and outcomes of ESG in student projects.

STUDENT PROJECT

Integration of Green Governance and Retail Excellence: Exploratory Research on New World Department Store's "Green Retail" System

EMBA2021 Huifang Xie, Guodong Li, Yudong Shen, Han Zhang

Currently, green and low-carbon initiatives are not only a focal point of international and societal concern but also a significant emphasis for businesses to fulfill their social responsibilities. As hubs for residential consumption activities, shopping centers and malls have become important channels for promoting green consumption. This project, starting from the application of the green retail theoretical framework in the shopping mall sector, explores the feasibility of integrating green governance with retail performance. The aim is to achieve a sustainable development model that prioritizes environmental protection, social responsibility, and retail performance simultaneously.

Research Question and Objectives

Energy conservation, emissions reduction, and sustainable development are not just challenges faced by production-side enterprises; they should also extend to consumption-side enterprises and consumers. For retail enterprises like New World Department Store, it plays a crucial role in bridging production and consumption.

Despite promoting clean energy use and advocating eco-friendly consumption becoming important topics and practices in department store operations, the lack of a unified definition, guidelines, and evaluation system for green retail poses a pressing issue. Therefore, the objective of this project is to research and establish a tailored "green retail" theoretical framework suitable for New World Department Store, which will be used to monitor and guide the implementation of green retail practices within the enterprise.

Research Design and Highlights

1) Research Scope and Perspective: Previous studies primarily focused on green assessment within traditional manufacturing industries, paying less attention to the service sector. This project investigates the feasibility of integrating green governance with retail performance, offering a fresh perspective on the green development of the retail sector.

2) Application of Evaluation Indicators: Past research tended to simplify green evaluation indicators, predominantly focusing on environmental aspects. They often relied on metrics such as electricity consumption, overlooking other issues like resource recycling and material usage. While these traditional indicators may suit external evaluations, they lack the depth required for internal management. Additionally, this project also addresses the challenge of balancing sustainability with retail performance. By refining multi-level indicators, the study provides a more detailed and comprehensive assessment for internal management, enabling a more accurate identification and resolution of practical issues.

3) Research Methods and Data Collection: In addition to literature reviews, the project team employed data collection methods such as in-depth expert interviews and offline surveys at stores. By conducting on-the-ground assessments at multiple stores of New World Department Store, the study gains deeper insights into the green retail practices of different sites. This approach provides a more specific and comprehensive practical foundation for the indicator system.

Summary and Outlook

The research team has developed the "Green Retail Theory " indicator framework. Under the primary indicators of green governance and retail performance, it includes 8 secondary indicators and 21 third-level indicators, corresponding to the responsibilities and values of firms to different stakeholders such as shareholders, the environment, employees, consumers, and society. Meanwhile, this framework has also been adopted in evaluating five stores under the New World Department Store. In terms of the operational feasibility, New World Department Store has maintained active exploration. Looking back over the past three years, there has been approximately a 22% reduction in energy consumption indicators in 2023 compared to 2021.

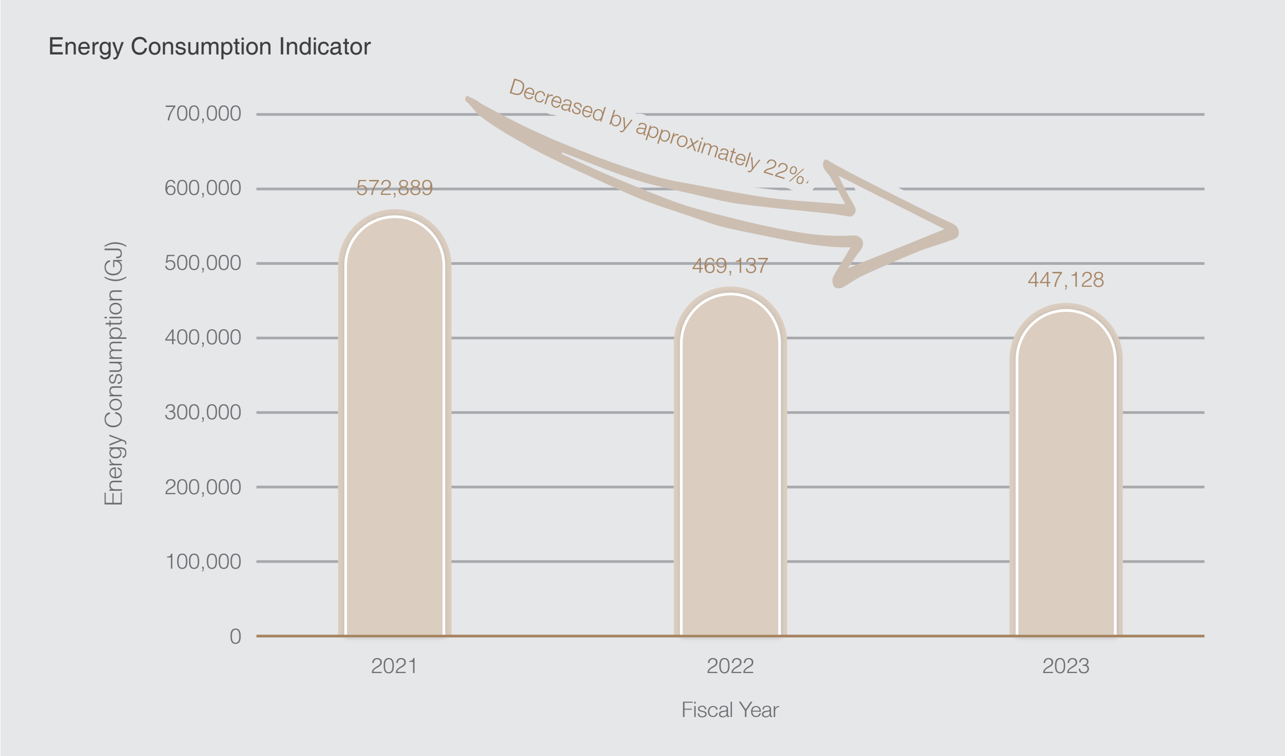


Figure: energy consumption for all stores over the past three fiscal years

In the implementation process, the project team has also identified some challenges. For instance, certain sites of New World Department Store have been operating for over a decade. Retrofitting these stores with new environmentally friendly equipment may face constraints such as construction difficulties. Additionally, the initial investment required for venue and facility upgrades could impose significant financial pressure on the operation side. Therefore, evaluating and monitoring progress, as well as summarizing the experience learned will be crucial. It will also be an important part of reflecting on the project's outcomes.

Appendix: Green Retail Practices at New World Department Store

1. **Energy-saving Equipment and Emissions Reduction** (corresponding to material consumption and emissions indicators)

Examples：Adoption of more efficient and environmentally friendly infrastructure systems such as wind energy, temperature control, water conservation, etc. Introduction of natural light from the top of the ceiling.


Introducing natural light

2. **Green Power** (corresponding to renewable energy utilization indicator)

Example: Actively promoting rooftop photovoltaic construction, planning to establish a distributed photovoltaic power generation system at the Chengshan store in Shanghai, and gradually expand to other cities' multiple stores.


Rendering of the rooftop photovoltaic project

3. **Paperless Operations** (corresponding to material consumption, customer value, and operational profit indicators)

Example: New World Department Store has initiated many paperless operational practices including digitalization of membership card vouchers, invoices and receipts, and membership. These practices optimise the customer experience while significantly reducing paper usage.

Online member management system, promoting paperless operations through multiple channels

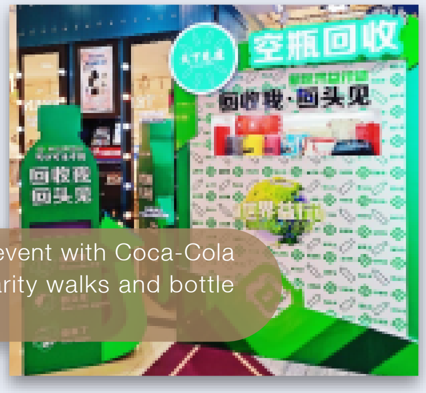
4. Volunteer Teams for Social Welfare (corresponding to employee development and social responsibility indicators)

Example: Since its establishment in 2013, the New World Department Store Volunteer Team has been actively providing services in education assistance, elderly care, poverty alleviation, environmental protection, and assistance to the disabled.


Volunteer Team's charity event at the nursing home

5. Promoting Environmental Awareness (corresponding to resource recycling and food saving indicators)

Example: Various shops are launching green initiatives such as bottle recycling and trade-in programs, while also collaborating with artists to organize thematic environmental exhibitions, aiming to promote the concept of green consumption and sustainable lifestyles to customers.



Collaborative event with Coca-Cola promoting charity walks and bottle recycling

6. Supply Green Products (corresponding to operational profit and renewable energy utilization indicators)

Example: In terms of the supply chain, streamlining product packaging and adopting more environmentally friendly packaging materials.


Self-operated stores selling eco-friendly bags made from apple peels

Business Actions for Social Impact: Promoting Sustainable Fashion with Recycled Marine Plastics

EMBA 2021 Shujun He, Guang Zeng, Weiyu Sun, Weihua Xiong

The goal of sustainable fashion is to comprehensively consider the sustainability of the environment, society, and economy, aiming to mitigate the negative impacts of the fashion industry on these fronts. By utilizing marine recycled plastics in polyester fabrics and products, it promotes resource circulation, protects marine biodiversity, reduces plastic and microplastic pollution, and boosts consumer consciousness of protecting the ocean. Based on the collection and management of marine plastics and recycled fabrics, this project proposes a systematic solution. After conducting comprehensive industry and market analysis, this group introduces a business plan centered on a closed-loop sustainable business model. This model tackles social issues through OBP certification and transparent digital traceability systems.

Research Question and Objectives

The ocean, is the world's largest "commons" . Although international efforts have been made to tackle marine plastic pollution, progress has been slow due to various challenges. In the fashion and textile industry, while major brands are increasingly using recycled materials for their products, the overall adoption remains limited, primarily focusing on individual items rather than a systematic sustainable fashion initiative. The project team has extensively studied the collection and reuse of marine plastics, identifying several key challenges. Firstly, coastal regions lack dedicated management systems and trading systems for plastic. This results in challenges in terms of collection difficulty, low efficiency, and relatively low collection rates.

Secondly, marine plastics, after exposure to the natural environment, are often contaminated or broken down, making them difficult to collect and clean. This reducing their value for recycling and rendering existing waste management systems ineffective. Additionally, the textile industry and product manufacturing processes face obstacles. Certified recycled plastic manufacturers are limited domestically, and there is relatively low transparency in the supply chain, making it difficult to establish trust among stakeholders. Moreover, importing raw materials incurs tariffs and transportation costs, along with increased carbon footprint from non-local sourcing, which limits the widespread adoption of recycled plastics despite their significant attention and recognition.

Research Design and Highlights

Designing Systemic Solutions. Recognizing the complexity of the environmental issue of plastic pollution, it's clear that a single approach is insufficient. Addressing the challenges identified above, a systematic solution has been designed from four dimensions: raising awareness, promoting circularity, reducing leakage, and cleaning the oceans.

Firstly, supporting the establishment of a more comprehensive plastic collection system in coastal areas to ensure effective management and collection of materials. This includes establishing suitable plastic collection and packaging sorting centers, introducing price leverage mechanisms to appropriately increase subsidies for collectors and the prices of marine recycled plastics, developing marine plastic modification technology, and promoting the reactivation of market collection systems.

Secondly, ensuring the authenticity and credibility of marine recycled plastics through International Ocean Bound Plastic (OBP) certification. The strict certification process of OBP focuses on substantially preventing plastic waste leaking into the sea, ensuring products maintain reasonable premiums to establish a sustainable business model.

Thirdly, integrating the plastic recycling fashion industry chain. Through a digital traceability platform, digitizing and transparently managing the supply chain system, bridging the service links to ensure high-standard collection and management processes while achieving high-value productization of marine recycled materials.

Fourthly, creating a fashion brand for recycled plastics. By developing high-quality recycled fabrics and designing fashionable products, further guiding consumers and society in their awareness of marine environmental protection and sustainable development, encouraging consumers to engage in more actions to protect the oceans.

Figure 1: Handbags made from marine recycled materials

Figure 2: Attires made from marine recycled materials

Creating ESG indicators for sustainable fashion products from recycled plastics. The project team, in collaboration with fashion brands such as KAVON and HONGGU, has introduced traceable recycled sustainable fashion products, including sustainable bags and clothing.

These products are equipped with QR codes that allow consumers to scan and view the entire process from raw material collection to the transformation into fashion items. This not only ensures transparency and credibility along the supply chain but also strengthens consumers' awareness of marine environmental protection.

According to team’ s calculations, for every ton of sustainable fashion products made from marine recycled plastics, it is equivalent to reducing 3.3 tons of carbon dioxide emissions, saving approximately 2 tons of petroleum extraction, and conserving 5 tons of water usage. Avoiding the leakage of 1 ton of plastic into the ocean is equivalent to protecting one billion cubic meters of seawater from plastic pollution.

Summary and Outlook

The project team members co-founded Ocean Cloud Environmental Technology Co., Ltd. The startup has achieved significant progress, establishing an effective system for collecting marine plastics and transforming them into sustainable fashion products, collaborating with dozens of upstream and downstream companies in the industry chain. In November 2022, Ocean Cloud obtained the first OBP collector certification in China, followed by the first OBP recycler certification in March 2023. Their collection management and certification cover over 85% of beaches in China at risk of plastic leakage, making them the only Chinese company involved in the development of the Social+OBP international standard.

Looking ahead, the project team aims to further implement plans to address social issues through commercial actions and achieve the goal of "changing consumer behaviour through consumption." By promoting awareness of ocean protection and plastic recycling through fashion products made from recycled marine plastics, the team hopes to inspire and guide consumer behaviour changes, thereby generating positive social impact.

The key to solving social issues sustainably through commercial activities lies in profitability. Only when these problems are turned into profitable business opportunities can they be resolved sustainably. Guided by this principle, the team seeks to leverage the market to allocate resources and use social tools to close the loop of plastic pollution value chain. Ultimately, the team aims to establish a sustainable cycle of "social issues-business actions-awareness enhancement," achieving value co-creation in green innovation and business development.

From Good to Excellent - Organization design for CanSinoBio 2.0

Global EMBA 2019 Gerard Vongsady, Rosa Tao, Jingqi Li, Nisa Ni, Jan Heinz, Jeanne Wang

Established in 2009, CanSinoBio is an A+H listed biopharmaceutical company focus on the R&D and supply of innovative and high-quality vaccines. With the sudden surge in market demand triggered by COVID-19 pandemic, its operational mode and startup mindset can no longer meet the growth demands of the company, putting it into a constant firefighting operation mode. In response to this challenge, the goal is to shift the leadership team's focus away from firefighting and towards capturing long-term value, designing a commercially driven, highly integrated new organizational structure, to drive CanSinoBio towards sustainable growth.

Research Question and Objectives

Founded by four senior scientists with extensive experience from MNCs Pharmaceutical industry, CanSinoBio' s mission is to develop, manufacture, and commercialize high quality, innovative and affordable vaccines. At the outset, the founders devoted almost all their efforts to research and development, and the company achieved a series of successes and breakthroughs. However, over time, the rapid growth of the company has significantly increased the complexity of internal management. The management model where founders collectively make decisions on all details is no longer practical. Therefore, CanSinoBio urgently needs to establish a future-oriented organizational structure that aligns with the company's strategic vision.

Research Design and Highlights

In response to this question, the project team has identified several key objectives. In terms of research methodology, in addition literature reviews, the project team also integrated theoretical model frameworks with practical business scenarios to conduct comprehensive primary data collection.

Key Steps	Main Contents	Methodology and Frameworks
Strategic Objectives Review	Strategic context confirmation including industry trend, business model, priorities	Questionnaire and In-depth Interview with Founders, SWOT Analysis, Desktop Research
“As-Is” Structure Diagnosis	Diagnostic of the current organization structure, conclude successes and challenges	Congruence Model, Value Chain Analysis
External Benchmarking	Benchmark leading enterprises in the industry, summarize experiences in different operation mode	Benchmarking Analysis
New Structure Proposal	Clarify organizational design principles, compare the advantages and disadvantages of different options, and promote the implementation	Change Management Theory, Organization Design Theory, RASIC Model

The project includes ESG and CSR in discussion. CSR is an essential aspect of the founders’ vision of CanSino. To better integrate organizational design with social responsibility goals, particularly regarding the supply of ***Innovative*** and ***affordable*** vaccines, the project team also devoted special consideration to this aspect.

1 A dedicated function to enhance external communication and internal coordination.

Within its organizational structure, there was no dedicated position responsible for this, and all related decisions were made by the founders. The project proposes adding a function specific to ESG in Board office directly reporting to Chairman. This new position, together with HR, would initiate and drive all ESG/CSR initiatives, to better engage with external stakeholders and coordinate internal resources.

2 Integration of ESG/CSR into strategy and operations.

Through the redesign of the organizational structure, CanSinoBio is better able to focus on making innovative vaccines more affordable. This allows the firm’ s responsibilities within the value chain to be more efficiently distributed. For example, vaccine accessibility in underdeveloped regions has been one of the social responsibility practices for CanSinoBio. Integrating ESG/CSR principles into strategy and operations has led to collaborative efforts such as affordable vaccine supply, clinical and medical research partnerships, technical transfer to empower local production, and public health education initiatives. These collaborations not only effectively enhance the accessibility of company products, but also address unmet public health needs in local communities.

3 Change management for organizational restructuring.

Implementing a new organizational structure is a challenge for any firm. The project utilizes change management theories and systematic design methods to guide the team in smoothly adapting to the changes. On the one hand, the management team needs to communicate with employees, motivating them to better understand the reform goals and participate in the change. Simultaneously, necessary training and support are provided to help employees adapt to new tasks and processes. Additionally, during the implementation, it's important to actively pay attention to team feedback and make timely adjustments to ensure the stability of outcomes.

ESG Governance Structure

Figure 1: Current ESG Governance Structure   Source: CanSinoBio 2022 ESG & CSR Report

Summary and Outlook

Based on the research findings of the project, the team has presented the recommendations for the new organizational design to all founders and the HR department. The implementation of the new organizational design began gradually in 2021, assisting CanSinoBio in establishing a stronger and more adaptive organizational structure. Additionally, the project has focused on feedback during the organizational transformation process and has summarized a series of follow-up recommendations. This ensures that the transformation continues to sustainable impact and tangible business outcomes over time. The implication of the new organizational design also provides insights for other enterprises undergoing developmental transitions.

04

PERSPECTIVES OF CEIBS FACULTY ON ESG

INTRODUCTION

ESG Research Area is one of the four cross-disciplinary research areas at CEIBS, bringing together over 30 faculty from five academic departments, providing academic research and teaching support for the school's “moving to the forefront of educating responsible leaders" strategic goal.

ESG Research Area’ s mission is to investigate the essential question of how businesses, respond to the increased expectations to reduce adverse impacts on society and the natural environment and to become a pioneering force for sustainable developments. The Vision is to become the “go-to place” in China and Asia for the generation and dissemination of cutting-edge knowledge related to sustainability and corporate social responsibility.

In this chapter, we select three research articles covering different disciplinary perspectives. Through the research outcomes resulting from interdisciplinary collaboration among faculty members, we gain a more comprehensive understanding of how businesses perceive ESG-related topics, providing essential references and guidance for related decision-making.

The three studies investigate the following questions:

· Why do some CEOs appoint CSOs while others do not? What are their motivations and decision-making mechanisms?

· How does employer brand signals, particularly in terms of social responsibility performance, affect a company's attractiveness to potential employees?

· During crises, can investing in stocks of companies with high ESG ratings yield outperforming returns?

PERSPECTIVES OF CEIBS FACULTY ON ESG

CEO Decisions on the Appointment of Chief Sustainability Officers

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Programme Director of Family Office Diploma Programme

Why do some chief executive officers (CEOs) appoint chief sustainability officers (CSOs) for their firms while others do not? We answer this question by examining CEOs' attention allocation to competition for stakeholders' approval, which can be triggered by both industry peers' corporate social responsibility (CSR) and corporate social irresponsibility (CSiR). CEOs' attention allocated to industry peers' CSR and CSiR can increase their perceived importance and urgency of appointing CSOs for their firms to "catch up with the good" (responsible peers) and to "stay away from the bad" (irresponsible peers). We also theorize the moderating roles of CEOs' motivational attributes, such that predominantly prevention-focused CEOs are more (less) likely to appoint CSOs as peers increase CSR (CSiR) and future-oriented CEOs are more (less) likely to appoint CSOs as peers increase CSiR (CSR).

This is adapted from Wang, T., Fu, YZ., Rui, M., & De Castro, J. (2023). Catch Up with the Good and Stay Away from the Bad: CEO Decisions on the Appointment of Chief Sustainability Officers. Journal of Management Studies. https://doi.org/10.1111/joms.12926

Findings and Implications

After DuPont appointed Linda Fisher as its chief sustainability officer (CSO) in 2004, some leading corporations (e.g., AT&T, UPS, and Coca-Cola) designated similar positions in their top management teams (TMTs). CSOs' presence and importance have been increasing, as is evidenced by a survey showing that 30% of companies capable of profiting from sustainability practices had appointed CSOs. However, not only have most business enterprises still not appointed CSOs, but also ‘many corporate sustainability TMT positions are being removed despite having only relatively recently been introduced’ (Strand, 2014, p. 687). This contradiction suggests that firms differ substantially on whether they should appoint CSOs to their TMTs.

Research interest in CSOs, in parallel, has been growing. Since Strand (2013, 2014) identified and traced CSO positions of large corporations, more researchers have joined this scholarly conversation. Three limitations, however, have constrained the development of CSO research. First, the antecedents to CSO appointment are largely unknown. Second, little is known about how CEOs make decisions about CSO appointment. Third, limited knowledge is generated about CSO appointment in non-U.S. business contexts. Extant studies of CSOs have largely focused on samples of large corporations drawn from the S&P 500 and the Fortune 500 indices. While these large corporations publicly traded in the United States are pioneers in CSO appointment, after almost 20 years since DuPont appointed the first CSO, it is surprising that still little research has yet been conducted to examine whether and how CEOs in other business contexts have considered CSO appointment for their organizations.

To fill these gaps, we first conceptualize CSO appointment as a CEO decision to make a strategic commitment to sustainability by restructuring the firm's TMT. We then draw on the attention-based view (ABV), arguing that CEOs' attention allocation to competition for stakeholders' approval is triggered by both the CSR and the CSiR of industry peers, but through different mechanisms. An increase in peers' CSR draws their attention to a comparison effect: peers’ improvement has threatened their own firms. A rise in peers' CSiR draws their attention to an association effect: peers’ retrogression should intensify stakeholders’ demand for sustainability and thus place higher sanctions on their own firms in the future. Either mechanism will increase CEOs' perceived importance and urgency of appointing CSOs, to catch up with the good (responsible peers) or to stay away from the bad (irresponsible peers). Therefore, the decision to add a CSO to the TMT is based on CEOs’ comprehensive consideration of both peers’ CSR and their CSiR.

Because people pay attention to what they care about, attention allocation also depends on their motivations. We extend the ABV by examining the moderating roles of regulatory focus and temporal orientation—two motivational attributes that often affect CEOs' decisions. An increase in industry peers' CSR (CSiR) can trigger a perceived loss (nonloss) situation in the short run for the focal firm. Because predominantly prevention-focused CEOs tend to perceive situations in a loss–nonloss framework, they are more (less) likely to appoint CSOs as industry peers have increased CSR (CSiR). Furthermore, because the competitive threat of peers' CSR has already occurred while the association effect of peers' CSiR takes time to happen, future-oriented CEOs, who emphasize future situations and consequences over present ones, are more (less) likely to appoint CSOs as peers have increased CSiR (CSR). We analyzed 7,882 decisions made by 758 Chinese executives in two conjoint experiments, interviewed 8 CEOs who decided to appoint a CSO in one conjoint experiment and 2 CSOs of large corporations, and found evidence for these tenets.

This study makes three key contributions. First, we reveal the comprehensiveness of CEOs' decision-making about CSO appointment by distinguishing their attention allocation to the comparison effect of peer firms' CSR and to the association effect of peer firms' CSiR. Second, we advance research on how regulatory focus and temporal orientation shape CEOs' decisions in sustainability commitment. While researchers have extensively examined the effects of CEO attributes on business decisions, their broader implications for CEOs' worldviews and values toward sustainability are less known. Third, we report CEOs' decisions on CSO appointment in China through two studies with large executive samples. Although the CSO position was introduced by U.S. corporations, the diffusion of this sustainability commitment into other business contexts deserves further investigation.

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Appendix: A summary of CSO appointment rationales

CEOs	Comparison effect	Association effect	Other rationales
A	If industry peers do a good job in CSR, it means that they have paid a lot of attention to social and environmental issues. They have received positive feedback from society in all aspects. If our firm is not doing enough [compared with peers], we must keep up with them, and keep up with them quickly. This is the reason for my decision [to appoint a CSO].	If industry peers have been socially irresponsible, we should also set up this position [CSO]. We need a CSO to avoid the related negative impact.	I think my decision on CSO appointment is a result of considering a combination of various factors.
B		If an industry peer gets worse in social performance, then in my perception, it would cause some negative impact on the whole industry such as an overall negative image.	We will learn from industry peers if they are doing good, and we will also analyze the reasons for them doing bad things. [Appointing a CSO helps us analyze and learn from industry peers.]
C	I will pay close attention to my industry peers. If they are doing good things, I want to chase them. But if they are doing bad things, I don't think I need to compare or imitate them.		When my company is doing well, I might be able to spend a large portion of spare funds every year on sustainability, and we are likely to need a CSO to do that. But when my company is not doing well, I could not pay attention to this [CSO appointment].
D	If other companies have done some good things, such as taking good care of their employees or communities, we will thank them but also want to compete with them to show that we can do good as well.	We will pay attention to peers' CSiR because it will have a negative effect on our company indirectly. For example, our competitors had damaged the ocean in the past years, and insurance companies will increase premium for most firms in the industry.	

CEOs	Comparison effect	Association effect	Other rationales
E			Industry peers' CSR and CSiR will attract my attention, but the most important thing is that I will look at what they want to achieve, how they think, and what has caused their changes in CSR and CSiR. I will then decide whether to appoint a CSO for my own company by considering all these.
F	If industry peers have done good things, we will analyze them. For example, if they participate more in public welfare and have positive impact on society, we will analyze whether this is the cause or the consequence. We want to understand what kind of relationship is between their CSR and competitiveness in the market. If this thing [CSR] can add a competitive edge, I will be inclined to consider appointing a CSO.	Peers' CSiR will certainly have a negative effect on the industry; in fact, this has already occurred in our industry. And I believe that having a CSO should help mitigate this effect.	We can't follow the trend or just imitate others to appoint a CSO. The source of each firm's competitive advantage is different, the logic of doing things is different, and the business model is also different. Therefore, even if industry peers have appointed CSOs, we may not necessarily do the same. I will consider many factors to see whether we need to do this [appointing a CSO].
G	Those responsible peers are not only my opponents but also positive role models. When I see that they are doing the right thing, I will accelerate the synchronization of the decisions and actions that I have learned from them. Certainly, appointing a CSO will help me do so effectively.	When I see that they [peer firms] are doing the wrong thing, I need to establish distance from them [by appointing a CSO].	From a long-term perspective, I believe that any responsible company, or a company that has its own mission and plans to become a sustainable organization, will do it [appointing a CSO].
H		Our opponents have caused a lot of harms on society, and we are deeply concerned with them. Their bad deeds will not do us any good, making it difficult for our business because the public and other stakeholders tend to think that we are similar.	

Do Good Companies Attract Good People

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Building an employer brand is a crucial initiative in the field of human resource management for companies. In theory, it is widely understood that when consistent brand signals are conveyed both internally and externally, the brand's impact becomes stronger. However, in reality, due to differing goals and interests among various company departments, management measures and external communications often exhibit inconsistencies. These conflicting signals can significantly influence an organization's external audience, especially the perceptions of potential job applicants, thereby hindering the establishment of a consistent and positive employer brand.

This issue is particularly pronounced in the field of talent recruitment, as at this stage, potential job seekers typically have limited knowledge about the company, resulting in information asymmetry. Consequently, an organization's employer brand and the messages it conveys become even more critical. Additionally, our understanding of how job applicants comprehend and respond to these internally conflicting employer brand signals remains limited, thereby impeding companies from effectively planning their investments and implementation strategies concerning employer branding.

In this study, we focused on three elements of the employer brand: corporate ability, Corporate Social Responsibility (CSR), and Corporate Social Irresponsibility (CSiR). Corporate ability encompasses various attributes related to business, such as manufacturing capability, management proficiency, specialized resources, and profitability. CSR, on the other hand, involves a company's consideration of stakeholder expectations and its performance in economic, social, and environmental aspects during its strategic and operational processes, with the deliberate intention of contributing to societal well-being. Conversely, Corporate Social Irresponsibility (CSiR) signifies a company's actions conducted in an irresponsible manner towards society and stakeholders, such as environmental harm or involvement in tax disputes.

This is adapted from Wang, L., Han, J., Ramasamy, B., & Peng, S. (2022). Incongruous employer brand signals and organizational attractiveness: Evidence from multinational companies in China. Human Resource Management, 61(5), 563-584.

Corporate ability and CSR are regarded as positive signals that enhance the employer brand, while CSiR represents a negative signal that damages the company's image. The various combinations of these three signals and their strengths and weaknesses give rise to different permutations, resulting in "imbalanced" or "contradictory" employer brands. We collectively refer to these scenarios as "inconsistent" employer brands.

Our research primarily focused on an important question: how do inconsistent employer brand signals affect a company's attractiveness to job seekers? To address this question, we conducted a series of studies:

We firstly conducted interviews and surveys with 900 multinational company employees in China. Participants were asked to evaluate the corporate social responsibility and corporate ability aspects of influential multinational companies in China and select a real multinational company as their ideal employment choice. This study aimed to explore how employees naturally balance corporate social responsibility and corporate ability and to test the impact of employer brand when these two factors are imbalanced. We then conducted an experiment involving 811 participants. The purpose of this experiment was to test how inconsistent or contradictory employer brand signals influence organizational attractiveness. Finally, among these 811 participants, we invited 721 individuals to reflect on their real job-seeking experiences and assess their willingness to join a real multinational company to retest our hypotheses. This approach allowed job seekers to evaluate personalized employment choices.

Our study reveals that if a company excels in social responsibility but is relatively weak in corporate competitiveness, its outstanding performance in social responsibility will enhance its attractiveness to potential job seekers. Conversely, if a company excels in corporate competitiveness but performs poorly in social responsibility, in such cases, the company's shortcomings in social responsibility are magnified. Specifically, when an employer demonstrates a higher level of corporate ability (such as financial performance), the lack of social responsibility becomes more likely to be the focal point of evaluation. At this point, negative signals regarding social responsibility may undermine the audience's high expectations of the company, increasing their disappointment in the organization.

In the current landscape, many businesses are paying significant attention to the tension between fulfilling corporate social responsibility and achieving economic performance, such as efficiency and profitability. In this context, we have placed particular emphasis on studying how prospective employees react to incongruent employer brand signals, which encompass a combination of corporate ability, CSR, and CSiR. Our research has yielded new empirical evidence, indicating that when corporate ability is relatively weak, the positive impact of CSR on organizational attractiveness is strengthened. Furthermore, within the realm of employer branding, our study represents one of the pioneering investigations into negative signals like Corporate Social Irresponsibility (CSiR) and conflicting employer brand signals. We have found that, compared to the combination of weak corporate ability and CSiR, the combination of strong corporate ability and CSiR is less attractive. This is likely because conflicting and inconsistent brand signals can undermine the employer brand, leading to potential employees' feelings of disappointment, mistrust, or cynicism.

Additionally, our research advocates for a holistic perspective on employer brand construction, an aspect often overlooked in prior studies. We propose that an integrated approach to brand building, requiring horizontal synergy among a company's public relations, human resources, and marketing functions, is essential for employer branding. Our findings further underscore the significance of CSR for multinational corporations (MNCs) operating in China in attracting potential employees. This aligns with calls for more CSR research in specific cultural contexts and is consistent with international business literature suggesting that MNCs should promote CSR in local markets to align with host-country institutions and gain local legitimacy. Of course, there have been criticisms that CSR is mere window dressing and that MNCs have been slow in fulfilling ethical responsibilities in China. Undoubtedly, these criticisms even highlight the increasing importance of CSR in the employer brand portfolio of MNCs.

Our research findings have several practical implications. Firstly, in a highly competitive environment, companies seek ways to leverage limited resources for optimal outcomes. Balancing investments in profit-oriented initiatives and Corporate Social Responsibility (CSR) can be challenging. **Our research suggests that if a multinational corporation has relatively weak corporate ability, it can use CSR-related brand signals to compensate for the deficiency in corporate ability.** This finding is particularly important in the digital age, where the internet empowers stakeholders to express their values more effectively and influence a company's business.

For example, ERKE, a Chinese sportswear brand, faced bankruptcy rumors after being delisted from the Singapore Exchange following years of suspension in 2020. The company announced a donation of 50 million RMB in funds and materials to the flood-stricken Henan province, which experienced a "millennium flood" in July 2021. These CSR actions garnered approval from 20 million netizens who flooded ERKE's Tmall live streaming sessions with fervent consumption. The company's Weibo page also received over 800,000 likes. Similar to this story, our research provides evidence of CSR's advantages in attracting potential employees. As workplaces in China become increasingly diverse, with employees from different generations, cities, and social backgrounds having varied values and preferences, investing in positive CSR signals can be an effective way to attract talent, in addition to emphasizing a company's business strength.

Our research also highlights that companies should be more sensitive and vigilant to signals of Corporate Social Irresponsibility (CSiR). While we widely acknowledge the negative impact of CSiR on organizations, we should also recognize that not every company intentionally neglects corporate responsibility. Unethical business decisions can result from cognitive blind spots among executives, such as biases, lack of knowledge and experience, peer pressure, confusion, and lack of courage. However, the consequences of CSiR are significant and can even backfire on a company's previously earned reputation for corporate social responsibility. Our findings further indicate that when potential employees evaluate an employer brand based on CSiR signals, they may make rapid decisions based on intuition in situations of incomplete information, unable to distinguish between intentional and unintentional CSiR. Therefore, corporate managers should not only invest in positive signals regarding corporate ability and social responsibility but also enhance awareness of CSiR within the organization, conduct extensive training, and foster coordination to reduce discordant employer brand signals across different departments.

Investing in High ESG Stocks And Outperforming the Market During Crisis?

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ESG investing has increasingly become mainstream. A popular argument for this new style of investing is that firms with high ESG scores are safer investments due to their more resilient fundamentals, and their stocks should perform better than the market during crises. Our research comprehensively examines the fundamental and financial market performance of high vs. low ESG stocks in the last three market crises and finds that this conventional wisdom does not completely hold true. While high ESG firms do have relatively better fundamentals, their stock returns do not outperform the market, and sometimes perform worse. We delve deeper into the forces that may drive this empirical phenomenon and provide our outlook for the expected returns and risks of ESG investing going forward.

This paper is based on a working paper by Renxuan Wang (CEIBS), Russ Wermers (U Maryland) and Ruoke Yang (U.S. SEC), 2023

Background

ESG investing, which integrates environmental (E), social (S), and governance (G) factors into the investment process, is projected to reach $50 trillion by 2025, accounting for a third of all assets under management in developing countries. The growing popularity of ESG investing stems from investors' ideal of "doing well by doing good" — outperforming the stock market while improving the ESG practices of companies through the power of their capital. A popular belief is that firms adhering to higher ESG standards have inherently solid fundamentals due to their long-term vision and better governance structure, and therefore, their stock prices should be more resilient during market crises, such as the Great Financial Crisis of 2008. Surprisingly, academic literature has not provided a clear answer to whether this belief is true.

Better Fundamentals but No Outperformance During Crisis

We conducted a comprehensive empirical study into firms' fundamental and stock market performance during the recent three crisis periods in the U.S. when ESG investing was potentially relevant, including the dot-com bubble (2000 - 2002), the Great Financial Crisis (2007-2009), and the Covid Crisis (2020).

We paid particularly more attention to the Great Financial Crisis (GFC) due to its depth and long-lasting impact on the economy. In sum, if you are an investor who religiously buys the top 10% highest ranked stocks according to popular ESG ratings, such as the MSCI ESG rating, you lose on average about 0.20% per month, or 2.4% per year in risk-adjusted returns during the GFC, when compared to stocks ranked as the lowest 10% on ESG. Simply put, for two stocks similar in their riskiness, such as their sensitivity to the market, market capitalization, valuation, the one with higher ESG scores ended up having 2.4% lower returns during the GFC. We find this number to be close to zero during the dot-com bubble, but slightly positive during the recent Covid crisis. Overall, the belief that holding stocks of higher ESG scores would deliver better risk-adjusted returns does not hold true.

On the contrary, we do find that high ESG firms exhibit better fundamental or operating performance than their low ESG counterparts, and these differences are significant even during the GFC period. For example, high ESG firms have a 5.2% higher gross margin, 4.9% higher sales growth, 0.53% higher operating return on assets, and $16,000 higher sales per employee. These findings are consistent with the conventional belief on ESG investing.

Why? Two Forces Driving the Stock Returns

The seemingly puzzling empirical findings can be reconciled by potentially two opposing forces that drive the realized returns of high vs. low ESG stocks. A firm' s stock price can go up because it delivers better fundamental performance, e.g., the firm's earnings are better than what the market expected, leading to a positive realized stock return. On the other hand, a firm' s stock price can also go up because a big investor suddenly believes the stock is worth more than its current market prices for reasons potentially unrelated to the firm' s fundamentals. We see many investors exhibit such behavior in reality: they bought a stock without doing much fundamental analysis and made the decision perhaps because they had just won a Mahjong game. The second force is often termed the investor sentiment channel and is known to drive short-term stock price movements.

Indeed, these two forces together could lead to the puzzling pattern that high ESG stocks do not outperform even though their fundamentals tend to be more resilient during crises. Indeed, if investors' sentiment changes over time and they prefer to buy more of high-ESG stocks during the good times and sell them during crises, this force could potentially outweigh the fundamental channel and lead to the empirical phenomenon we find. Our leading hypothesis for why investors have this type of sentiment dynamic is that they view high ESG stocks as highly prized luxury goods: they buy more high-ESG stocks when times are good to satisfy their ideal to do good to the world, while they sell these stocks during crises when they need to pay their bills. We use funds' stock holdings to verify our hypothesis and find supporting evidence.

Lessons for ESG Investors Going Forward

Knowing the facts in history is important for decision-making going forward. Our findings highlight the importance of understanding the sober reality for investors who want to "do well by doing good" . Furthermore, our research reveals the dynamic nature of ESG investing and highlights the need to understand the evolving investor demographics: with the fast adoption of ESG investing, it is important to also understand who are becoming the main ESG investors going forward. If the next generation no longer views ESG investing as a luxury good but rather a necessity, high ESG stocks potentially will exhibit more price resilience and outperform the market due to the strong hold of these investors during the next crisis.

05

2023 STUDY ON THE ESG REPORTS OF A-SHARE LISTED COMPANIES (CONDENSED)

INTRODUCTION

ESG information disclosure is an important channel for listed companies to convey their ESG development achievements and engage in transparent communication with stakeholders, also offering decision-making references for investors. With the continuous improvement of ESG disclosure requirements for Chinese listed companies, the quality of ESG-related information disclosure have also been gradually enhanced.

This report conducted by the CEIBS Centre for Wealth Management led by Professor Meng Rui, showcases the practices and performance of A-share listed companies in environmental, social, and governance aspects. A distinctive corporate social responsibility indicator system is used that integrates Chinese and international methodologies, ESG reporting guidelines from authoritative bodies, key societal concerns in China.

Through data analysis, the research also demonstrates the performance of A-share listed companies across different ESG dimensions:

- Overall, A-share listed companies are showing an upward trend in ESG composite scores.
- There is a growing emphasis on environmental protection, with increased investment in energy conservation, emission reduction, and waste reduction.
- Companies are increasingly prioritizing their responsibility towards employees, with a focus on enhancing safety management systems and occupational health.
- More companies are striving to improve corporate governance capabilities, choosing to operate their businesses with integrity and intensifying efforts on anti-bribery and anti-corruption.

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ESG has a long-standing history in the Western world, evolving through four stages: ethical investment, socially responsible investment, sustainable investment, and ESG investment. In recent years, there has been a burgeoning global interest in ESG investment, leading to rapid expansion in both the number and scale of ESG public fund products in China. The rising demand for ESG investment aligns with companies' willingness to disclose ESG reports, fostering a mutually reinforcing dynamic that emphasizes environmental, social, and governance factors in investment decision-making.

We owe a special thanks to Sichuan Swellfun Co., Ltd. for its support in compiling this report.

Introduction

Research subjects

2022 annual environmental, social, and governance (ESG) reports and corporate social responsibility (CSR) reports published by A-share listed companies listed in 2022 or earlier.

Methodology

A distinctive corporate social responsibility indicator system is used that integrates Chinese and international methodologies, ESG reporting guidelines from authoritative bodies, key societal concerns in China, and big data technology.

Data sources

Most data used in the study was derived from digital ESG reports, CSR reports, and the annual reports of listed companies published on cninfo.com.cn. Other sources include the ESG Database, Internal Control Database, Green Patent Database, and Environmental Governance Database of the Chinese Research Data Services Platform (CNRDS); the Basic Information of Listed Companies, Actual Controllers of Listed Companies, and CSI Industry Classification sections of the WIND database; and relevant news stories from Baidu and the Genius Finance database.

Data processing

Various big data techniques were employed to derive the indicators in this study, including data collection, data cleaning, data mining, and data cross comparison. Manual corrections were also made where necessary:

(1) Data collection: Large volumes of raw data were gathered from company websites, regulatory authorities, and popular search engines using big data techniques.

(2) Data cleaning: Data underwent cleansing procedures based on predefined rules to rectify errors, eliminate duplicates, and remove outliers to ensure consistency.

(3) Data matching: The required information was accurately matched from numerous sources such as social responsibility reports, news reports, and announcements.

(4) Data mining and visualization: A combination of manual processing and machine learning techniques was utilized to extract and mine information from vast datasets, including textual information, and to visualize relevant findings effectively.

About the authors

Center for Wealth Management, CEIBS

Established with the approval of CEIBS, the CEIBS Center for Wealth Management ("The Center") is dedicated to the creation and dissemination of financial knowledge, as well as advancing exploration and innovative research in the fields of finance and wealth management, all while upholding the highest academic and pedagogical standards. The Center's mission is to promote industry standardization and specialization, and to generate sustainable value for the global financial sector. Moreover, the Center aims to equip high-net-worth individuals and families, financial advisors, and wealth management professionals with the knowledge and responsibility needed to act as conscientious stakeholders, thereby empowering people, capital, and society to contribute positively to the world.

We would like to thank the following authors for their contributions to this study:

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Abstract

ESG (Environmental, Social, Governance) has become a prominent investment philosophy in recent years, reflecting investors' growing recognition of the significant impact that environmental, social, and governance factors have on investment portfolios. ESG investing aims to incentivize companies to improve their environmental, social, and governance practices by directing investments towards those with strong performance in these areas. This approach contrasts with traditional financial analysis methods, which primarily focus on companies' financial performance without considering broader social responsibility and sustainability factors.

ESG has a well-established history in the Western world, evolving through four stages: ethical, socially responsible, sustainable, and ESG investment. In recent years, there has been increasing global interest in ESG investment, leading to a continued increase in global sustainable investment assets. According to the latest data from the Global Sustainable Investment Alliance (GSIA), by the end of 2022, sustainable investments in the world's five major markets—Europe, the United States, Japan, Canada, Australia, and New Zealand—reached $30.3 trillion, representing 37.9% of global asset management. This marked a 32.56% increase since the beginning of 2016.

This year's report maintains the upgraded analysis system from last year, expanding the study' s scope to include both CSR and ESG reporting of A-share listed companies. The report focuses on three main indicators: environmental, social, and governance, with two, three, and three topics under each, respectively. Each topic includes 4–9 sub-indicators, totaling 50. Overall, A-share listed companies demonstrated further improvement in their ESG disclosure practices in 2022 compared to the previous year.

In 2022, a total of 1,535 A-share listed companies published CSR reports (ESG reports are referred to as CSR reports for consistency with previous reports), an increase of 192 compared to the previous year, including four companies listed on the Beijing Stock Exchange (BSE) for the first time. Over the past 16 years, there has been a general increase in the number of disclosing companies. In 2022, the overall disclosure rate reached 30.04% (excluding data from BSE), surpassing 30% for the first time.

By sector, the manufacturing sector continued to lead in the number of disclosing companies, while the financial sector maintained the highest disclosure rate. In terms of region, East China had the most disclosing companies, while western regions exhibited higher disclosure rates, with significant progress observed in the northeastern region. By province, there was strong correlation between the number of disclosures and economic development, with Guangdong, Zhejiang, Beijing, Shanghai, and Jiangsu ranking at the top of the list. In terms of business type, non-SOE (State-Owned Enterprise) disclosures far outnumbered SOE disclosures, which increased to 52.3% in 2022, surpassing 50% for the first time. In terms of exchanges, which included BSE for the first time, all boards demonstrated a clear upward trend.

The study yielded the following significant findings:

Environmental:

1. Regarding environmental management, approximately 47.6%, 43.4%, and 52.8% of the sampled listed companies either developed or utilized environment-friendly products, equipment, or technologies, achieved the Environmental Management Systems (EMS) standard (ISO14001), or disclosed their participation in environmental protection and public welfare activities.

2. Concerning energy conservation and emissions reduction, 65.5% and 68.3% of listed companies disclosed their policies and measures aimed at energy conservation and reducing three types of waste (gases, water, and residue), showing a notable improvement compared to the previous three years.

Social:

3. In 2022, disclosing companies continued to enhance the quality of products and services, with an increasing number receiving quality awards or certification. The proportion of R&D personnel in the sampled companies remained steady or slightly increased compared to the previous year.

4. Regarding employee wellness, 1,020 companies disclosed their remuneration incentives, while 1,173 companies disclosed supplementary benefits for employees. Moreover, 1,455 companies provided on-the-job training for employees, representing an increase of 210 compared to the previous year.

5. In terms of charitable activities, 1,338 companies disclosed their engagement in social welfare programs in 2022, up 200 from the previous year to an impressive 87.2% of the total. Total donations amounted to RMB 26.2 billion, showing a notable increase of approximately RMB 12 billion compared to the previous year.

Governance:

6. Concerning CSR management, listed companies addressed a wider range of issues in their CSR reports, with a significantly higher number referencing international authoritative standards. They stepped up external ESG promotion initiatives, with over 80% of them featuring ESG or CSR columns on their websites, indicating a further increase from the previous year.

7. In terms of company operations and management, more companies allocated additional resources to cross-industry collaboration, resource sharing, and partnership strengthening. However, attention should be given to the rising trend in accounting irregularities and financing disputes from the previous year.

8. Regarding diversity and equal opportunities, 986 companies disclosed having at least one female executive, with 224 featuring at least one female director, marking an increase from the previous year. Additionally, 391 companies proposed inclusive policies targeting vulnerable groups, such as individuals with disabilities or those who have been released from re-education centers, more than triple the number from the previous year.

In summary, in 2022, the 1,531 reporting A-share listed companies (excluding the four companies listed on the BSE) achieved a weighted average score of 51.15 (out of 100) and median score of 52.2 for all ESG indicators, marking an increase of 0.31 or 0.6% from the previous year. Looking at data from 2018 to 2022, there is an overall upward trend in ESG composite scores.

In terms of economic value, we compared the composite scores with the scores for various topics, dividing them into five groups, with approximately one fifth of the number of stocks in each group, and then calculated their weighted returns by group. We assume that the investment strategy begins on the first trading day of May each year with a buy order and ends on the last trading day of the year with a sell order. The five groups based on the ESG composite scores achieved weighted average returns of -4.59%, -3.28%, -4.75%, -7.56%, and -10.47% in 2023, respectively, showing a certain hierarchical progression. The top fifth relative to the bottom fifth had excess returns of 5.88%.

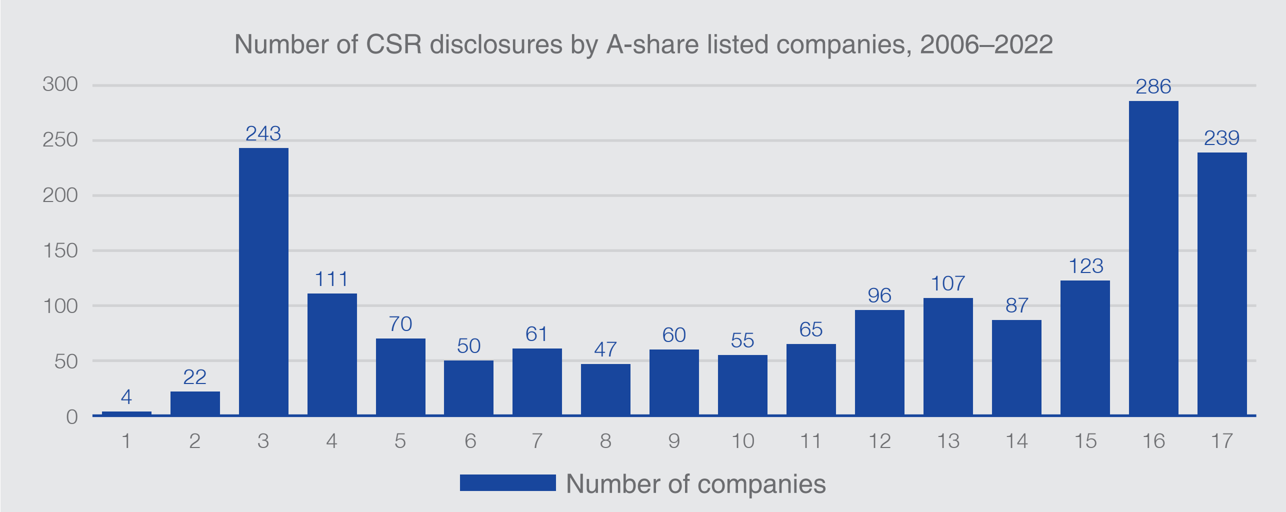
1 https://www.gsi-alliance.org/members-resources/gsir2022/

Overview of ESG disclosures by A-share listed companies

Total disclosures: ESG disclosures by A-share listed companies continued to show steady growth. In 2022, the number of companies that disclosed CSR reports reached 1,535, representing 30.04% of the total (excluding data from the BSE), marking the first time it surpassed the 30% threshold. Notably, four BSE-listed companies made ESG disclosures for the first time. Overall, there is still significant potential for future growth in this area.

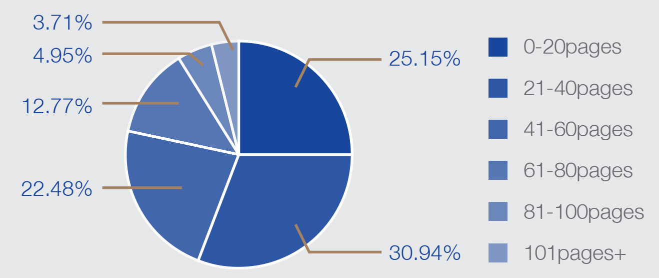
Over the 17-year period from 2006 to 2022, the number of disclosing companies witnessed a steady increase. In 2022, a total of 1,535 A-share listed companies made CSR disclosures, marking a 14.3% increase or 192 more companies than the previous year. On average, between 2018 and 2022, approximately 27.75% of A-share listed companies made CSR disclosures each year, with the disclosure rate climbing to 30.04% in 2022.

Per-company disclosures: In 2022, the number of companies that disclosed only once did not rank highest for the first time since 2006, with a total of 239 such companies. This shift is attributed to additional requirements imposed by the China Securities Regulatory Commission (CSRC) and stock exchanges regarding ESG report disclosures. Once listed companies disclose an ESG report, they are encouraged to continue doing so in the future. In summary, the per-company disclosure count displayed a u-shaped distribution when visualized on a chart. The most prevalent category consisted of companies that disclosed twice during the period, totaling 286 or 16.57% of the total. Following closely behind were companies with 15 disclosures, numbering 243 and representing 14.08% of all companies. The number of companies consistently disclosing CSR reports annually remained steady at 4. Moreover, the total number of disclosures in 2022 exceeded that of the previous year, indicating a rising awareness and emphasis on CSR among A-share listed companies.



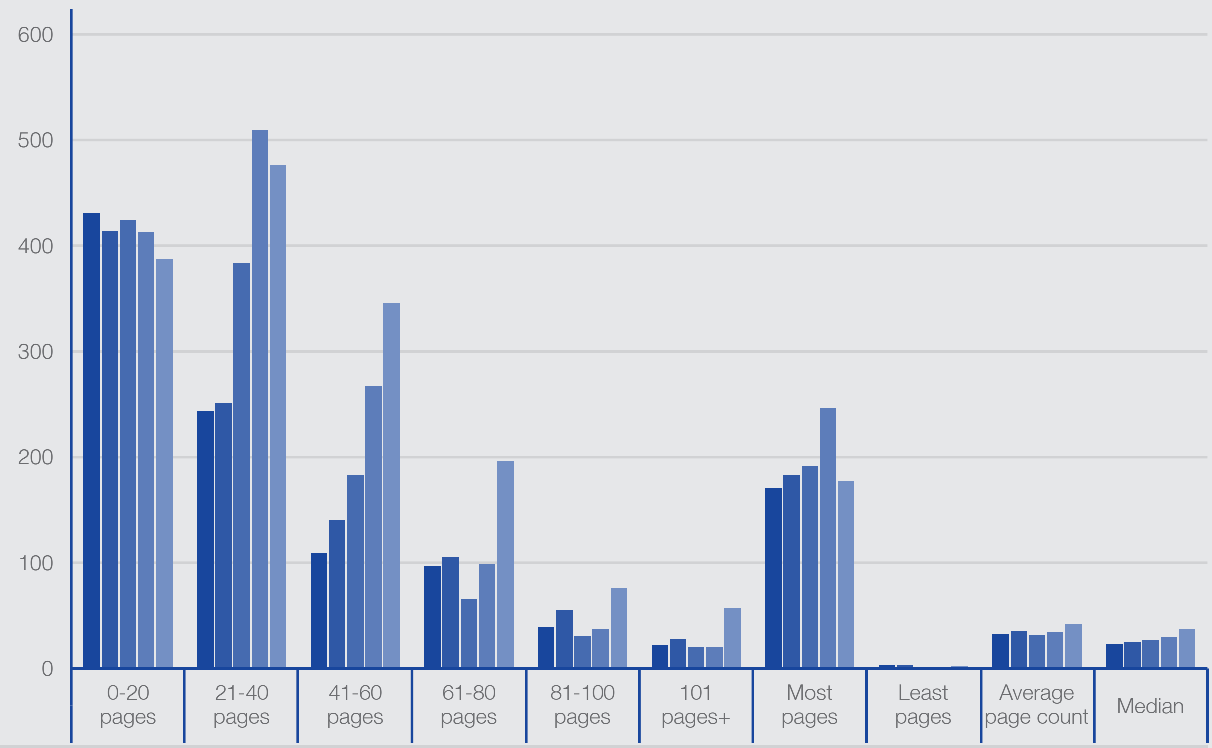
Length of CSR reports: In the CSR reports disclosed by A-share listed companies, there was a notable uptick in the total number of pages compared to previous years. The average report length stood at 41.6 pages, with a median of 37 pages, representing an increase of 7 pages from the preceding year. Nonetheless, there remained a substantial variance between the shortest and longest page counts, with the majority of reports spanning below 40 pages, encompassing over 55% of the total reports.

Length of CSR reports by A-share listed companies, 2022



In 2022, the shortest CSR report disclosed by the 1,535 reporting companies was two pages long, while the longest was 177 pages, representing a significant gap of 175 pages. Approximately 25.15% of the reports were between 0 and 20 pages, while 30.94% totaled 21–40 pages, both showing a sharp decline from the previous year. On the other hand, 8.66% were over 80 pages long, more than double the 4.24% recorded the previous year. Overall, the quality of disclosures improved compared to previous years. Reports with longer page lengths tended to be more detailed, well-structured, and featured more visually appealing designs.

Length of CSR reports by A-share listed companies, 2018–2022



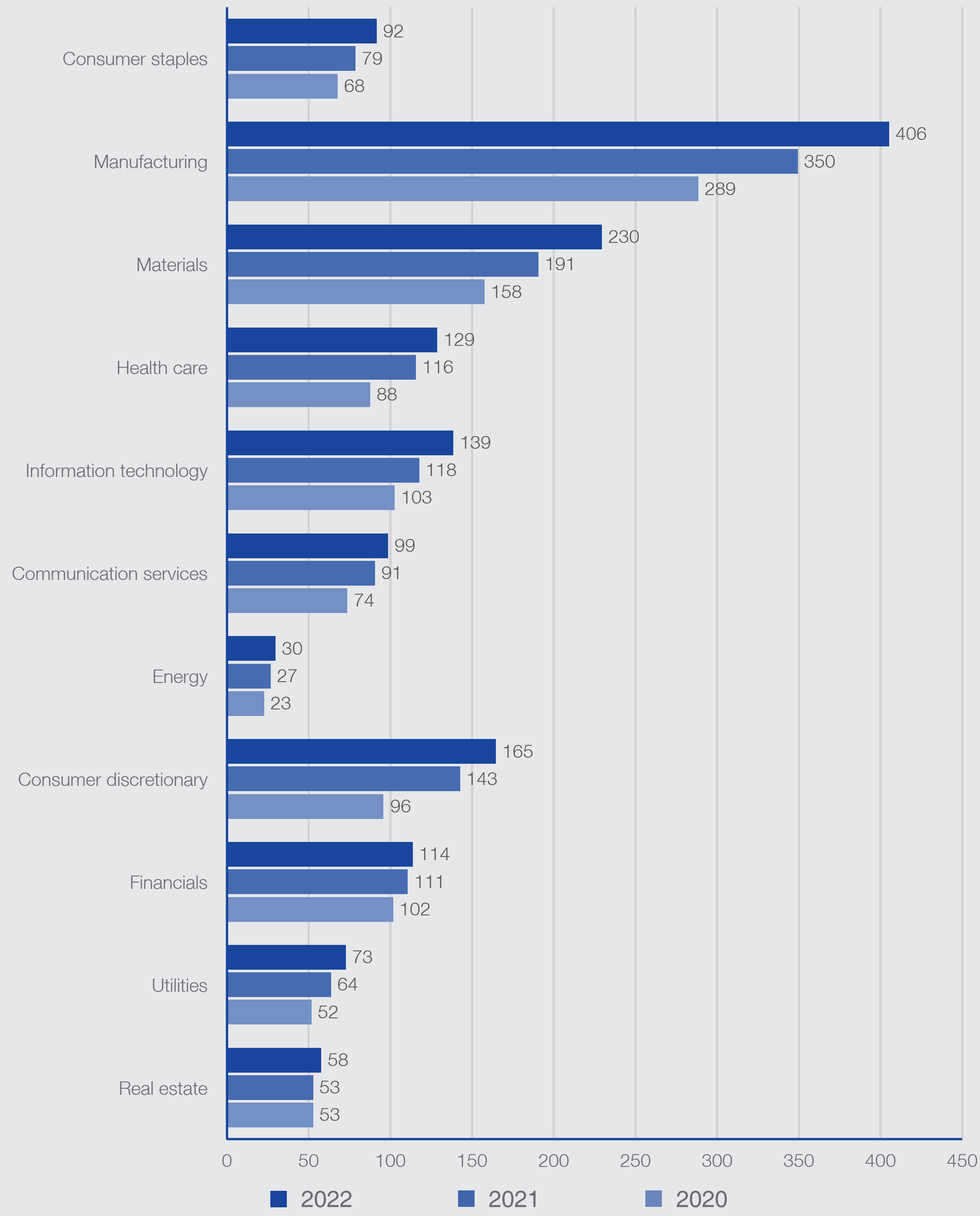
	0-20 pages	21-40 pages	41-60 pages	61-80 pages	81-100 pages	101 pages+	Most pages	Least pages	Average page count	Median
2018	430	243	109	97	39	22	170	3	32.4	23
2019	413	251	140	105	55	28	183	3	35.3	25
2020	423	383	183	66	31	20	191	1	32	27
2021	412	508	267	99	37	20	246	1	34.2	30
2022	386	475	345	196	76	57	177	2	41.6	37

From 2018 to 2022, there were about 400 reports annually, ranging from 0 to 20 pages each year. The count of reports with 21 to 40 or 41 to 60 pages increased steadily each year. Additionally, there was a notable rise in the number of reports with 61 to 80, 81 to 100, or over 101 pages in 2022, representing a significant shift from previous years. During this period, the median number of pages also showed a significant upward trend, indicating a growing emphasis placed by A-share listed companies on CSR reports.

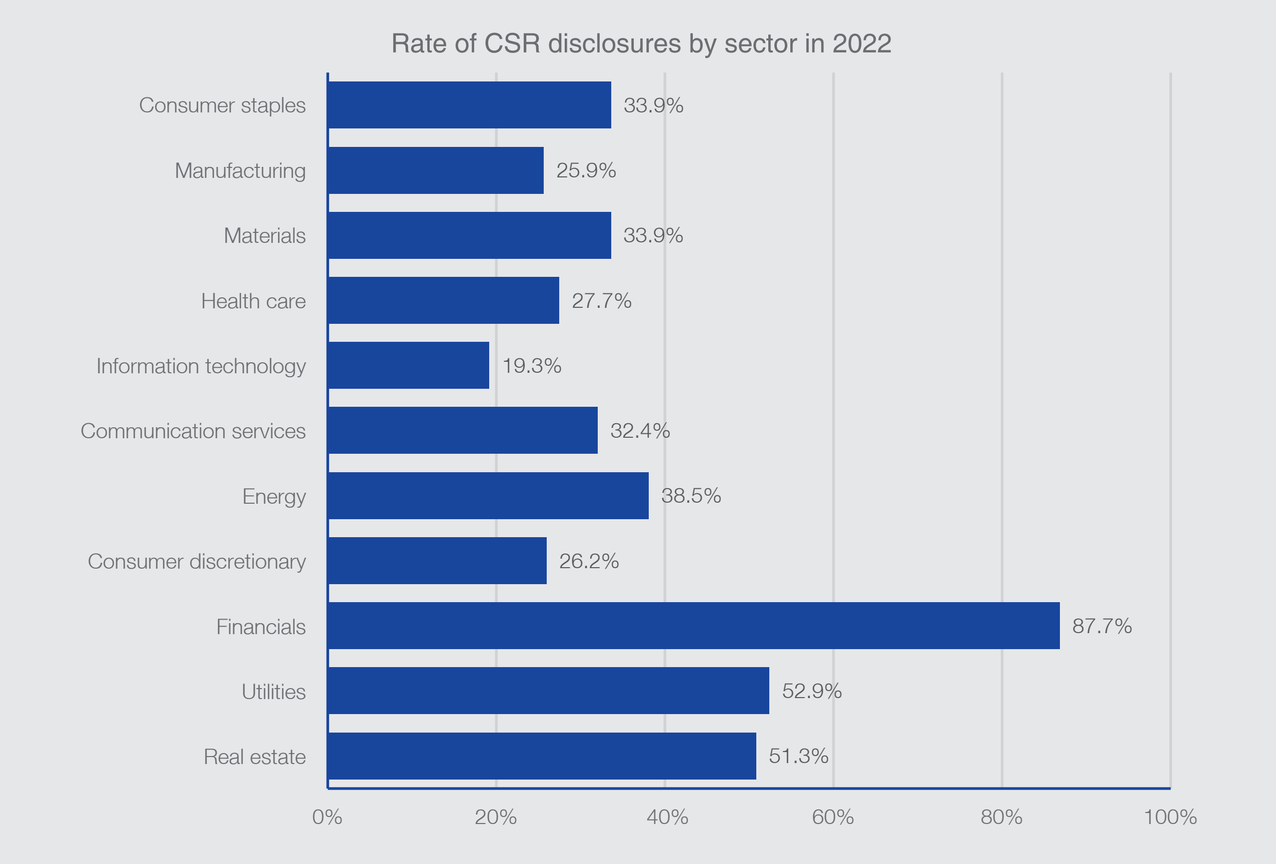
Analysis of CSR reporting companies in 2022

I. Sectoral distribution of reporting companies: All sectors exhibited a notable increase in the number of annual CSR disclosures from 2020 to 2022. In 2022, every sector experienced positive growth, with the manufacturing sector leading with 406 disclosures and the financial sector boasting the highest percentage of disclosures at 87.7%.

Distribution of CSR disclosures by industry for 2020–2022



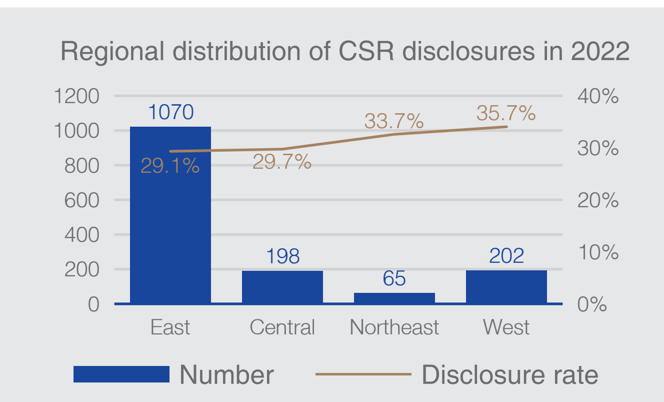
In 2022, the manufacturing sector led with the highest number of CSR disclosures at 406, marking an increase of 56 or 16% from the previous year. The materials sector experienced the most significant surge, with a total of 230 disclosures, up by 39 reports or 20.4% compared to the previous year. Across all sectors, there was an average of 140 reports, representing a rise of 18 from the preceding year.



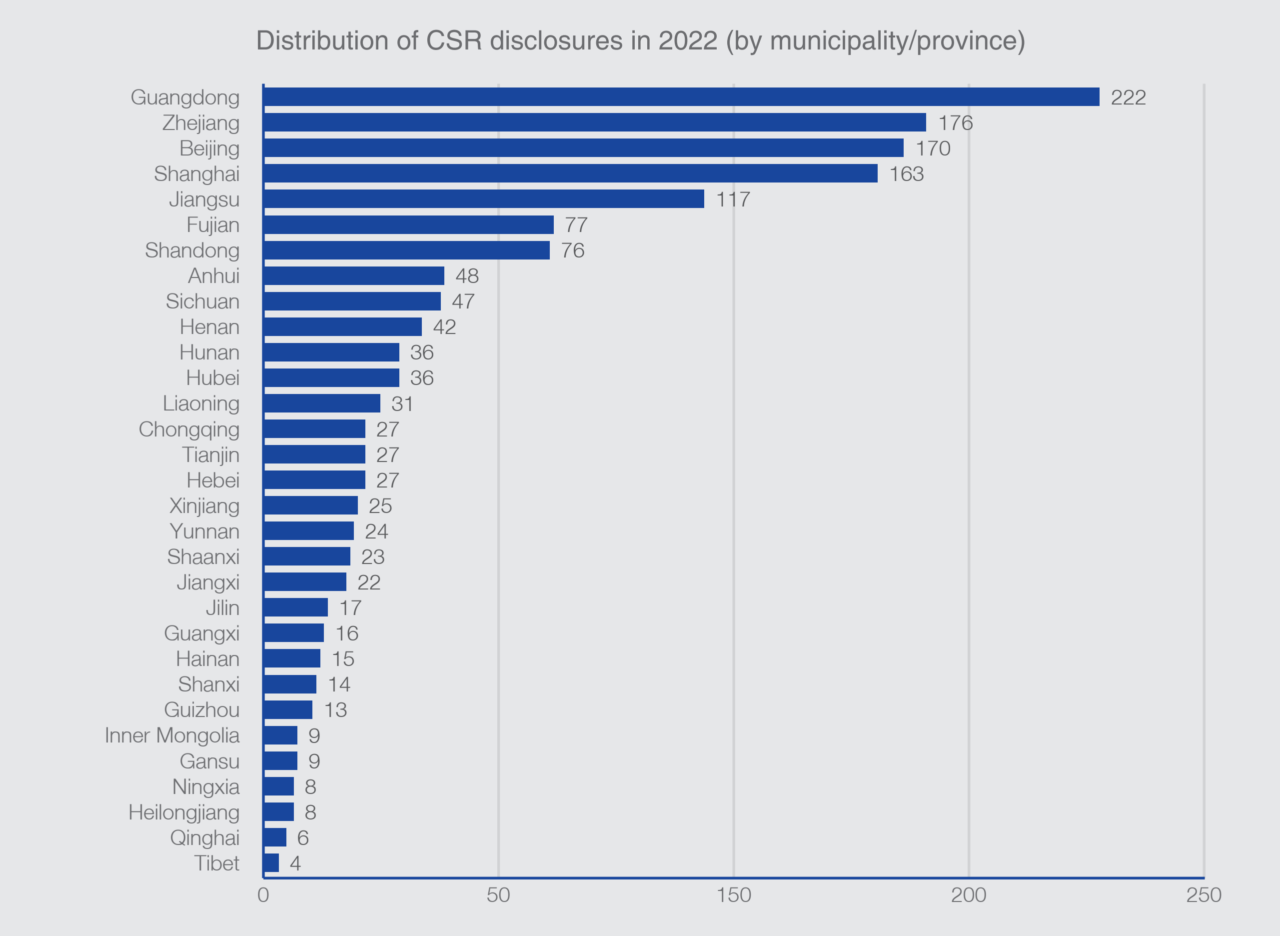
While the manufacturing sector had the highest number of disclosures in absolute terms, its disclosure rate was relatively low at just 25.9%. In contrast, the financial sector, with only 114 reports, had the highest disclosure rate at 87.7%, primarily driven by mandatory disclosure requirements from regulatory agencies. The utilities and real estate sectors achieved the second and third-highest disclosure rates at 52.9% and 51.3%, respectively.

II. Regional distribution of reporting companies: In absolute terms, East China led with the highest number of disclosures, totaling 1,070. Meanwhile, West China maintained the highest disclosure rate at 35.7%, followed closely by Northeast China at 33.7%, experiencing a rapid rise to second place.

In 2022, East China reported the highest total number of CSR disclosures, constituting 69.7% of the total that year, surpassing the combined totals of Central, West, and Northeast China. All regions experienced growth in the number of companies with CSR disclosures, with the fastest growth occurring in Northeast China at 27.5%, propelling it to the second rank with a 33.7% share. However, disclosure rates varied by region, with West China boasting the highest rate at 35.7%, while East China, despite leading in the number of disclosures, had the lowest rate at 29.1%.

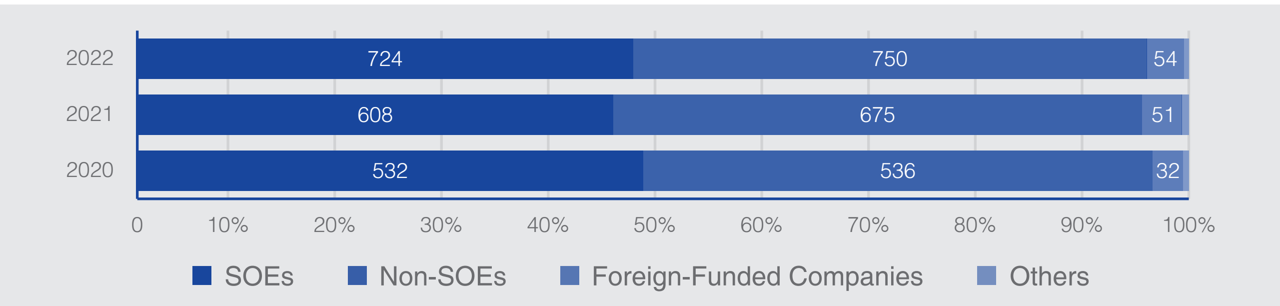


III. Distribution of companies by municipality/province: Guangdong, Zhejiang, Beijing, Shanghai, and Jiangsu had the highest number of disclosures, with each region boasting more than 100 companies that published CSR reports. Furthermore, there was a notable increase in the overall number of disclosures across all localities.



In 2022, the majority of municipalities or provinces in China (excluding Tibet, which remained unchanged from 2021) witnessed an uptick in the number of CSR reports disclosed by A-share companies compared to the previous year. Guangdong led this trend with an increase of 40 reports, marking the most disclosures among all municipalities/provinces and surpassing 200 for the first time. Overall, Guangdong, Zhejiang, Beijing, Shanghai, and Jiangsu maintained their positions at the top of the list in 2022, with Guangdong recording 222 reports, followed by 176 in Zhejiang, 170 in Beijing, 163 in Shanghai, and 117 in Jiangsu.

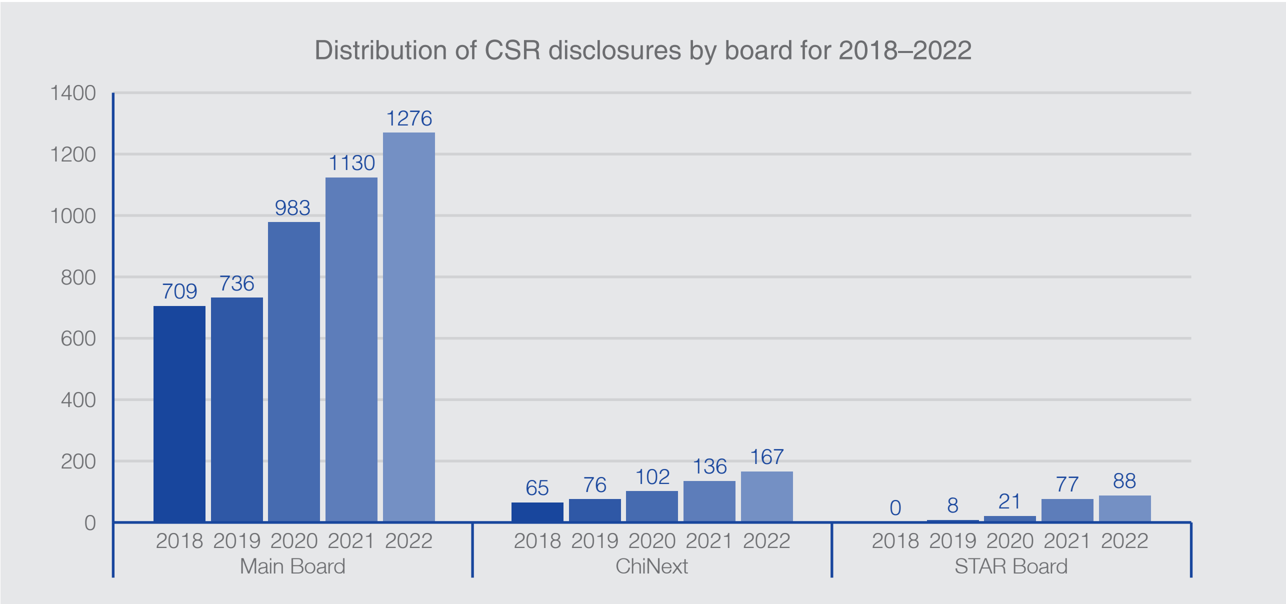
IV. Distribution of companies by business type: The number of reporting SOEs saw a notable increase, with over half of listed SOEs making disclosures.



Of the 1,535 CSR reports published in 2022, 724 reports originated from SOEs, including both central and local SOEs, marking a notable increase of 116 or 19.1% from the previous year. Non-SOEs contributed 750 reports, maintaining the top rank despite a modest increase of only 75 or 11.1% from the previous year. Additionally, 54 reports were filed by foreign-funded companies, reflecting an increase of 3 from the previous year. Statistics from 2020 to 2022 indicate that non-SOEs consistently led in terms of the number of reports.

Among all A-share listed SOEs, 52.3% made CSR disclosures, surpassing 50% for the first time. This was followed by foreign-funded companies at 29.5% and non-SOEs at 21.4%.

V. Distribution of companies by board: In 2022, Main Board listed companies made the most CSR disclosures, representing over 80% of the total. Additionally, four companies listed on the BSE made ESG disclosures for the first time.



Of the 1,535 CSR reports released by A-share listed companies in 2022, 1,276, or more than 80%, were from Main Board listed companies. Over the period from 2020 to 2022, the number of reports by listed companies from all three boards showed a steady upward trend. Specifically, Main Board listed companies disclosed 146 more CSR reports, marking a 12.9% increase from the previous year, while ChiNext listed companies disclosed 31 more reports, up by 22.8%, and STAR Board listed companies disclosed 11 more reports, reflecting a 14.3% increase. Additionally, it is noteworthy that the BSE Board made its debut in ESG disclosure, with four listed companies releasing their reports.

Analysis of ESG indicators in 2022

The 2023 Study on the ESG Reports of A-share Listed Companies maintained the adapted indicator system from the previous year, encompassing three main dimensions: environmental, social, and governance. Each dimension comprises several topics aimed at providing comprehensive insights into the companies' sustainability practices.

1. Environmental dimension:
· Environmental management
· Energy conservation and emission reduction

2. Social dimension:
· Product quality and innovation
· Employee wellness
· Social contributions and charity

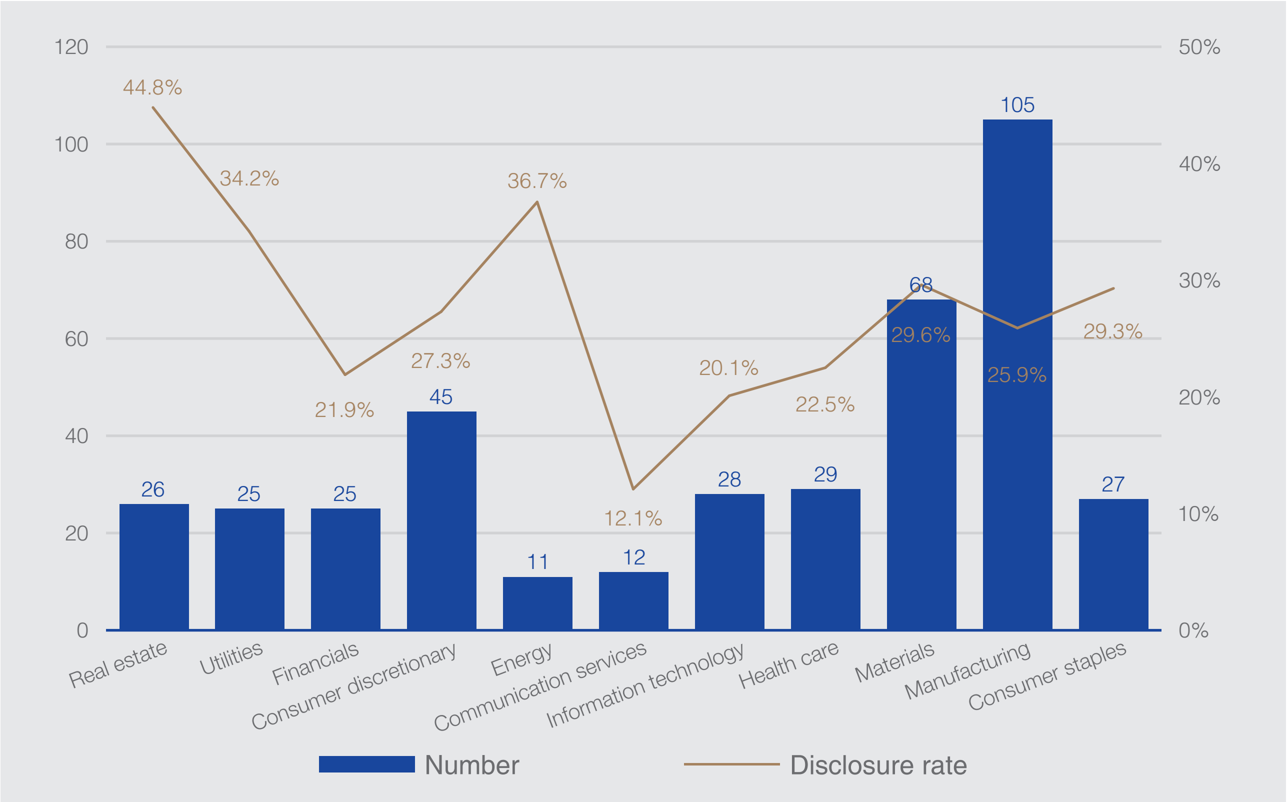
3. Governance dimension:
· Information disclosure and management
· Company management
· Diversity and equal opportunity

Each topic is comprised of 4–9 sub-indicators. The data and information pertaining to these indicators undergo rigorous processes, including the collection of big data using web crawlers, data cleaning, data mining, and thorough cross-comparison. Further detail on the indicator system is provided below:

ESG research indicator system

Environmental (E)	A. Environmental management	(1) Environmental benefits (condensed) (2) Environmental certification (condensed) (3) Environmental protection and public welfare	(4) Environmental recognition (condensed) (5) Environmental penalties
	B. Energy conservation and emission reduction	(1) Energy conservation (condensed) (2) Reduction of three types of waste (condensed)	(3) The circular economy (4) The green office
Social (S)	C. Product quality and innovation	(1) Quality management (2) Quality reputation (3) After-sale services (condensed) (4) Customer satisfaction (5) Patents	(6) R&D expenditure (condensed) (7) Share of R&D personnel (8) Share of technical personnel (condensed)
	D. Employee wellness	(1) Remuneration incentives (2) Supplementary benefits (3) On-the-job training (condensed) (4) Communication with employees (condensed) (5) Employee care (condensed)	(6) Safety management system (7) Training on production safety (8) Occupational health and safety certification (9) Disputes over staff health and safety
	E. Social contributions and charity	(1) Donations (condensed) (2) Social contribution value per share (3) Contribution to education (4) Charitable activities (condensed)	(5) Volunteering (6) International aid (7) Job creation (8) Contribution to economic growth (9) Layoffs
Governance (G)	F. Information disclosure and management	(1) CSR report reliability (2) CSR report comprehensiveness (condensed)	(3) ESG website columns (condensed) (4) ESG education and training (5) ESG leadership teams
	G. Operations and management	(1) Strategic cooperation and sharing (condensed) (2) Anti-bribery and anti-corruption	(3) Business integrity (4) Accounting irregularities (condensed) (5) Financing disputes
	H. Diversity and equal opportunities	(1) Female executives (2) Female directors (condensed) (3) All-male directors, supervisors, and executives	(4) Vulnerable groups (condensed) (5) Equal opportunities (condensed)

(4) Environmental recognition: In 2022, a total of 401 companies, constituting 26.1% of the total, disclosed that they had received environmental recognition, including for being exemplary energy-saving and emission-reduction companies, green companies, or for other government awards. This marked a notable increase of 60 companies or 17.6% from the previous year. Among these, the manufacturing sector had the highest number of disclosing companies, with 105 in total. The real estate sector led in terms of disclosure rate, with 44.8%.



Analysis of the social contributions and charity topic

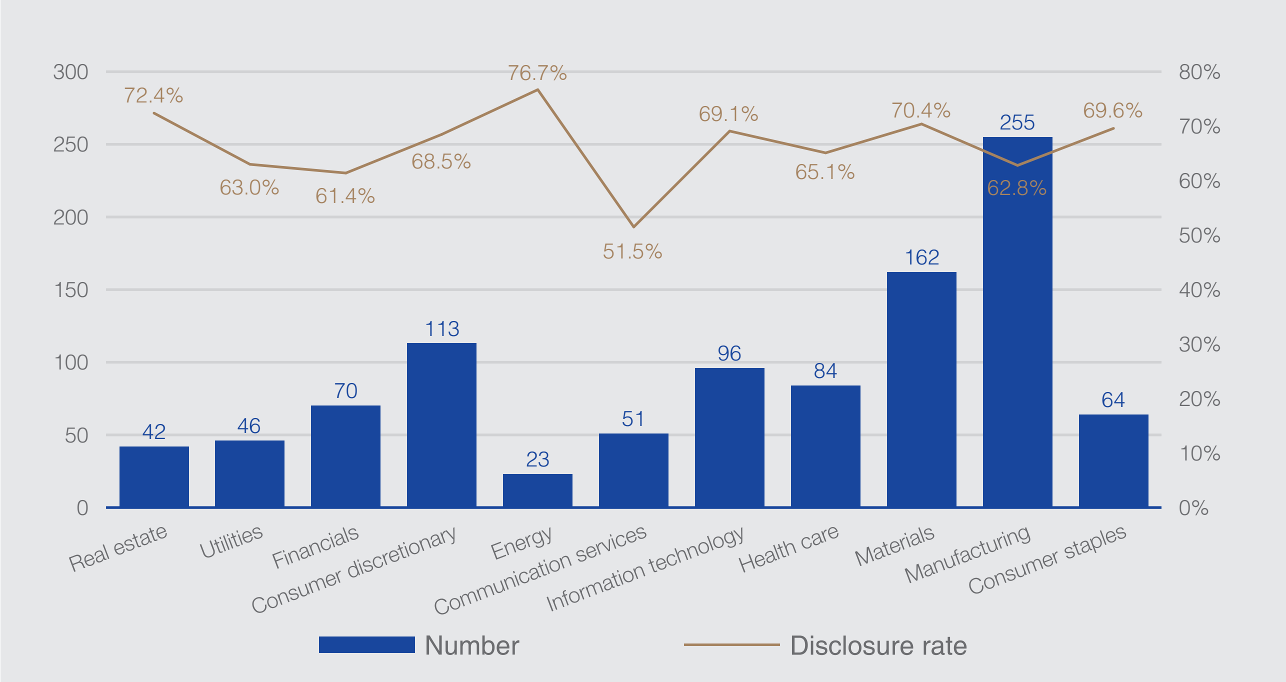
In 2022, a total of 1,338 or 87.2% A-share listed companies disclosed their involvement in social contributions and charity activities, marking an increase of nearly 200 from the previous year. These companies collectively donated RMB 26.2 billion, representing a significant increase of approximately RMB 12 billion or 85.3% from the previous year. Other sub-indicators, such as contributions to education, charitable activities, volunteering, international aid, job creation, and contribution to economic growth, also showed improvement compared to the previous year. However, adverse social impacts also grew during this period, with substantial layoffs reported by 24 companies, a rise of 2 from the previous year. Among them, the real estate sector disclosed the most layoffs, accounting for more than half of the total due to an industry downturn. Despite these challenges, overall, social contributions and charity can have a positive impact on social development by narrowing the wealth gap, alleviating social tensions, and promoting social harmony.

Energy conservation and emission reduction

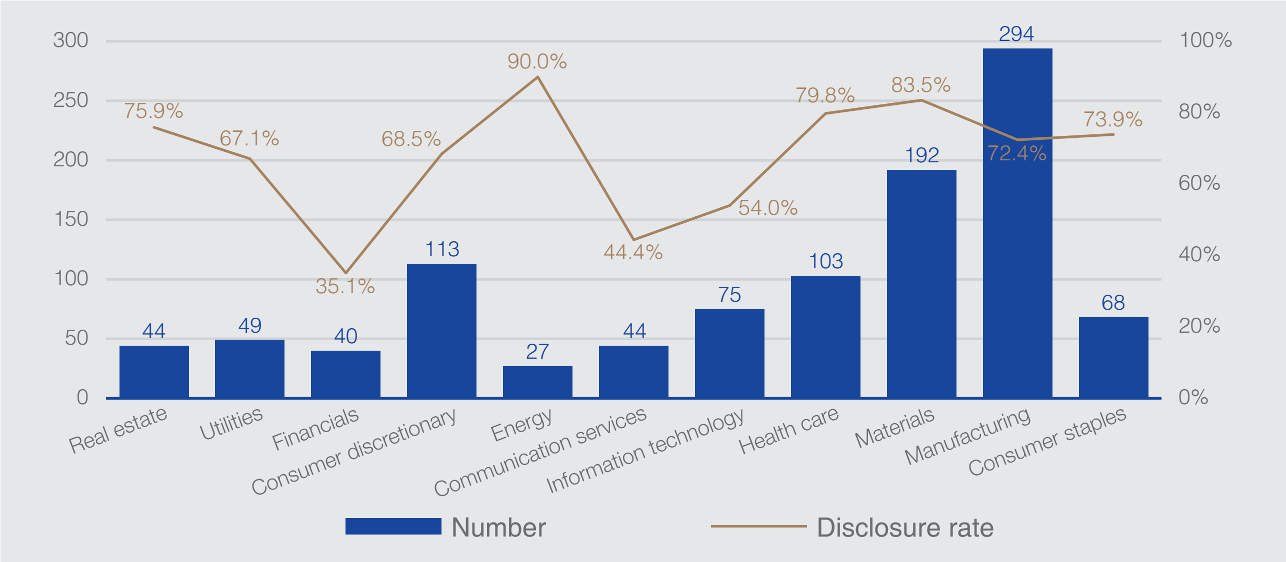
This topic comprises 4 sub-indicators:

1. Energy conservation　　2. Reduction of three types of waste
3. The circular economy　　4. The green office.

(1) Energy conservation: In 2022, approximately 65.5% or a total of 1,006 companies disclosed their policies, measures, or technologies for energy conservation, marking a notable increase of 167 companies or 19.9% from the previous year. The communication services sector saw the most significant rise at 41.7%. Within these disclosures, the manufacturing sector led with 255 disclosures, while the energy sector boasted the highest disclosure rate at 76.7%, and the communication services sector had the lowest at 51.5%.



(2) Reduction of three types of waste: In 2022, approximately 68.3% or a total of 1,049 companies disclosed their policies or measures for reducing three types of waste (gases, water, and residue), reflecting an increase of 129 companies or 14% from the previous year. The largest increase came from the communication services sector (76%). The manufacturing sector had the most disclosures at 294, while the energy sector and materials sector boasted the highest disclosure rates at 90.0% and 83.5%, respectively.



Analysis for the energy conservation and emission reduction topic

In 2022, A-share listed companies made significant strides in investing in energy conservation and emission reduction. Specifically, 65.5% of companies disclosed their policies and measures for energy conservation, while 68.3% revealed strategies for reducing three types of waste (gases, water, and residue). Moreover, the number of companies embracing circular economy practices and implementing green office initiatives has surged to 688 and 687, respectively. As corporate

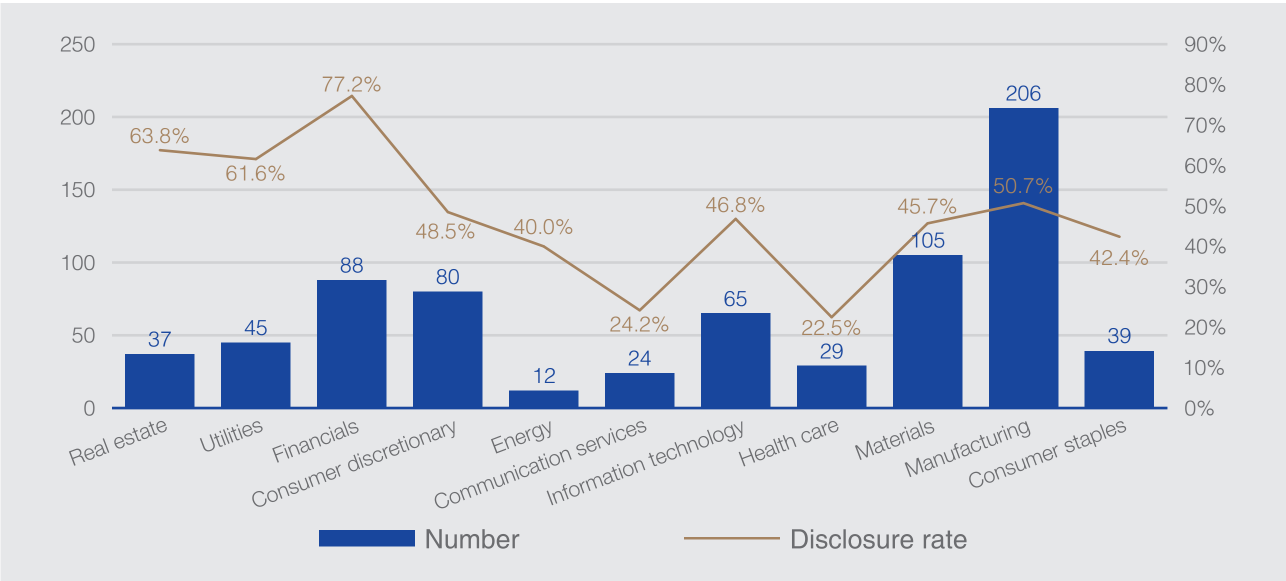
I. Environmental dimension

Environmental management

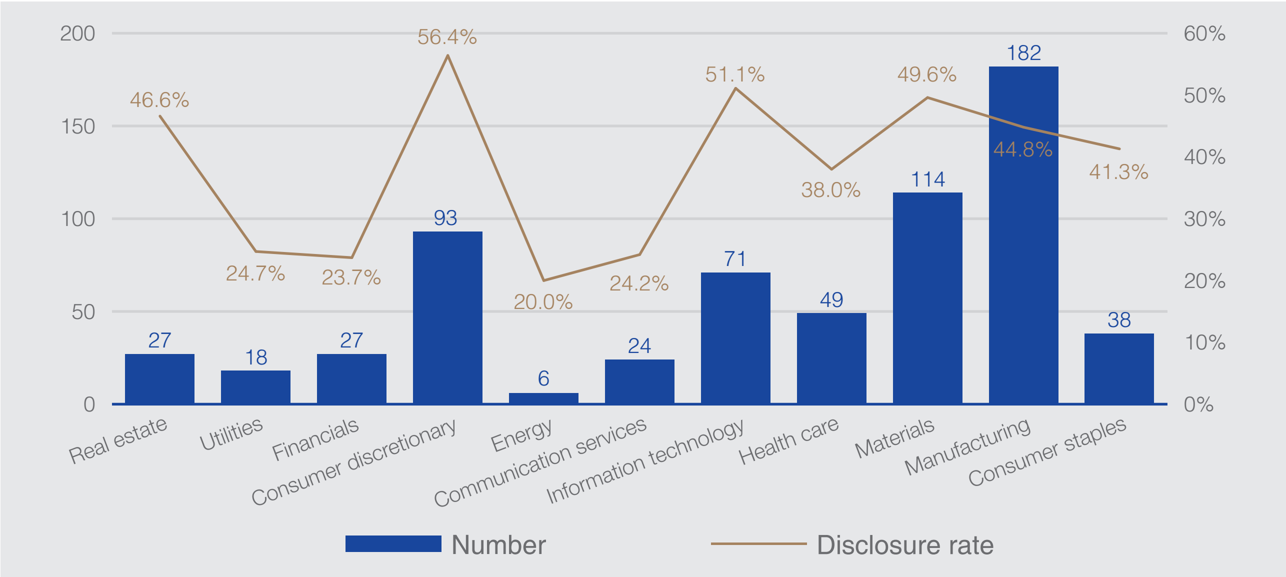
This topic comprises five sub-indicators:

1. Environmental benefits 2. Environmental certification 3. Environmental protection and public welfare
4. Environmental recognition 5. Environmental penalties

(1) Environmental benefits: In 2022, 730 companies, accounting for 47.6% of the total, disclosed that they had developed or adopted products, equipment, or technologies beneficial to the environment. This represented an increase of 82 companies or 12.6% from the previous year. Among these, the manufacturing sector led with the highest number of disclosing companies, totaling 206. In terms of disclosure rate, the financial sector ranked the highest at 77.2%, while the healthcare sector had the lowest disclosure rate at 22.5%. Notably, the utilities sector witnessed significant growth, with 45 companies engaged in environmentally beneficial initiatives, marking an 80% increase from the previous year.



(2) Environmental certification: In 2022, approximately 649 companies, accounting for around 43.4% of the total, disclosed that they had achieved the Environmental Management Systems (EMS) standard, ISO 14001. Among these, the manufacturing sector had the highest number of disclosing companies, with 182 in total. The consumer discretionary sector led in terms of disclosure rate, with 56.4%. Compared to the previous year, the real estate sector experienced the most significant increase, with a growth rate of 42.1%, compared to the overall increase of 11.3% across all sectors.



environmental disclosure policies continue to advance, data on energy conservation and emission reduction has become more transparent. This transparency has facilitated the implementation of circular economy practices and green office initiatives, providing a robust foundation for China to achieve its “30-60 Dual Carbon target” , to peak carbon dioxide emissions by 2030 and reach carbon neutrality by 2060.

II. Social dimension

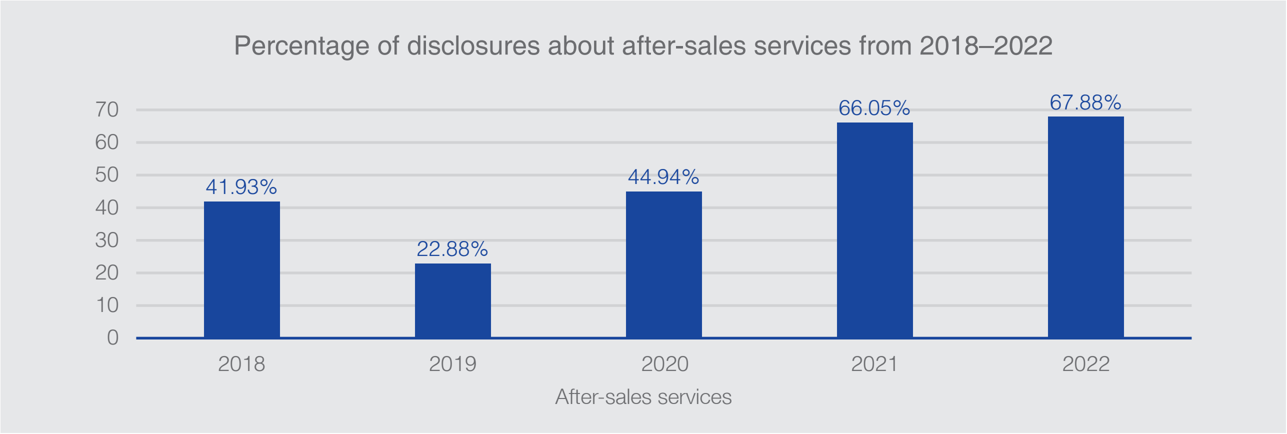
Product quality and innovation

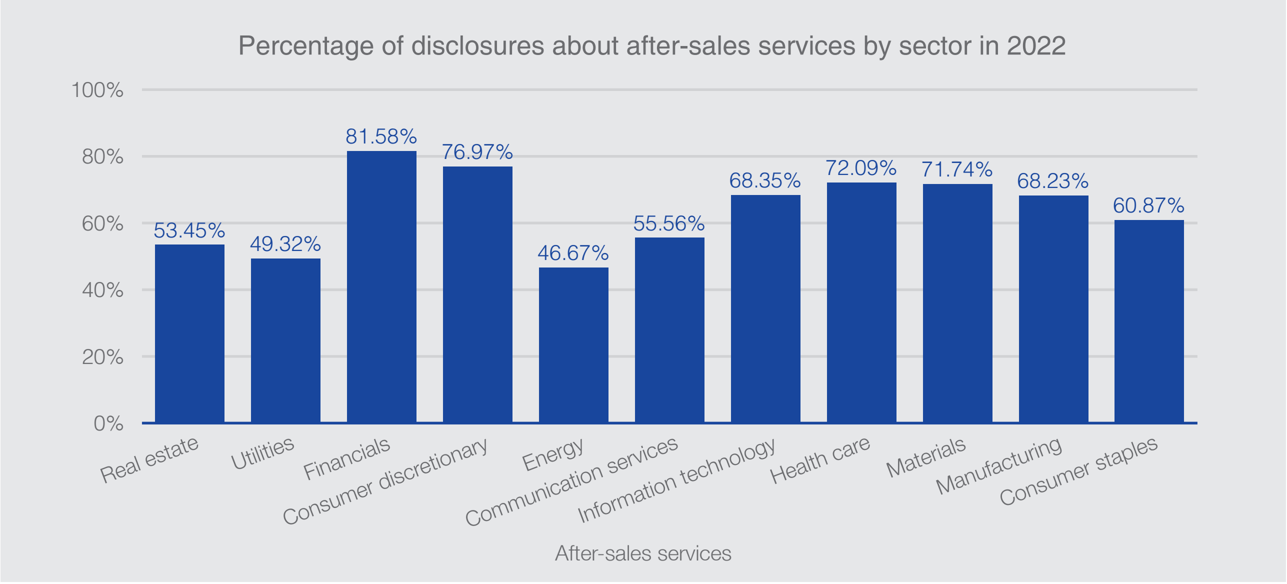
This topic comprises 8 sub-indicators:

1. Quality management 2. Quality reputation 3. After-sales services 4. Customer satisfaction
5. Patents 6. R&D expenditure 7. Share of R&D personnel 8. Share of technical personnel

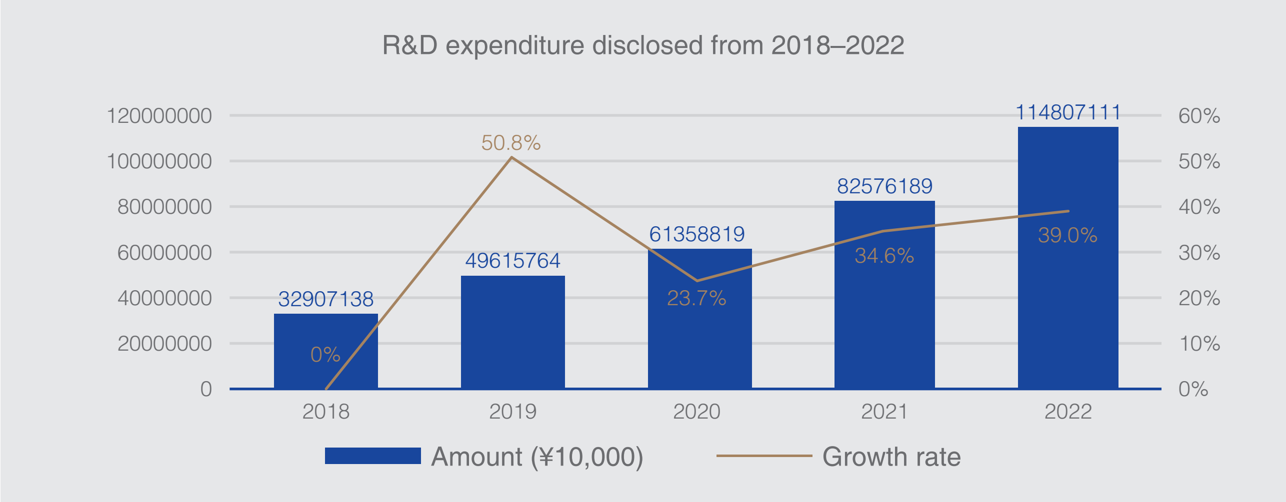
By aggregating the above indicators, this topic assesses the overall performance of A-share listed companies regarding product development and services.

(3) After-sales services: Among the 1,535 reporting companies in 2022, 1,042 (67.88%) disclosed the steps they had taken to enhance after-sales services, marking an increase of 155 from the previous year. Across sectors, financials and consumer discretionary exhibited higher disclosure rates, at 81.58% and 76.97%, respectively. Conversely, the energy industry (46.67%) ranked at the bottom in this regard.

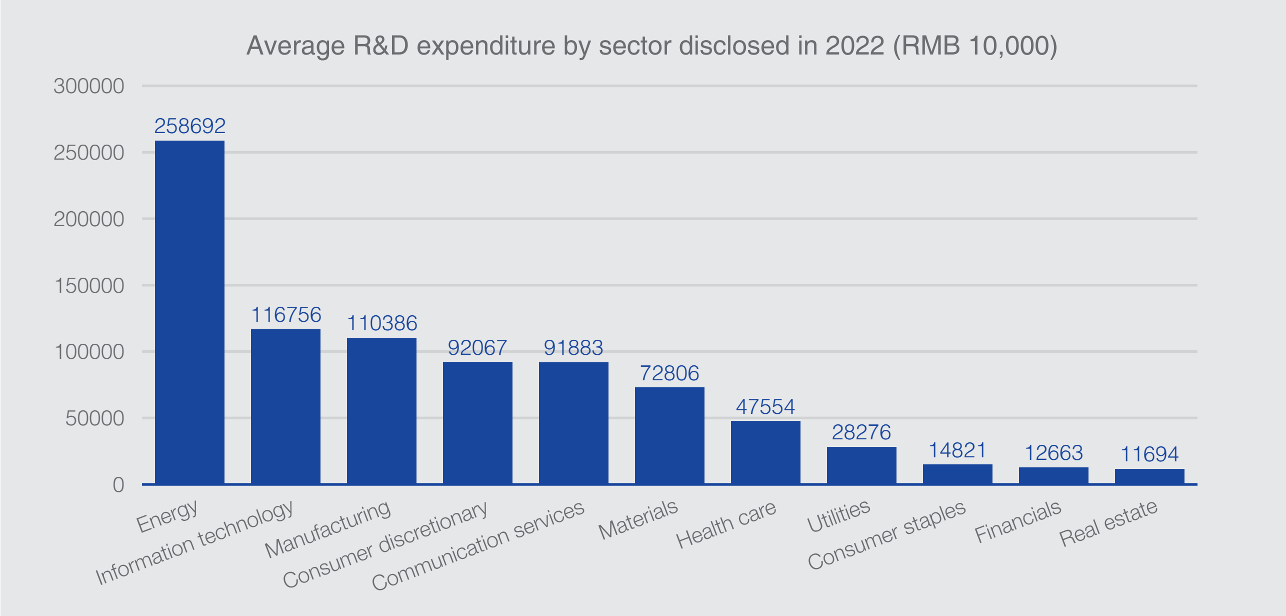




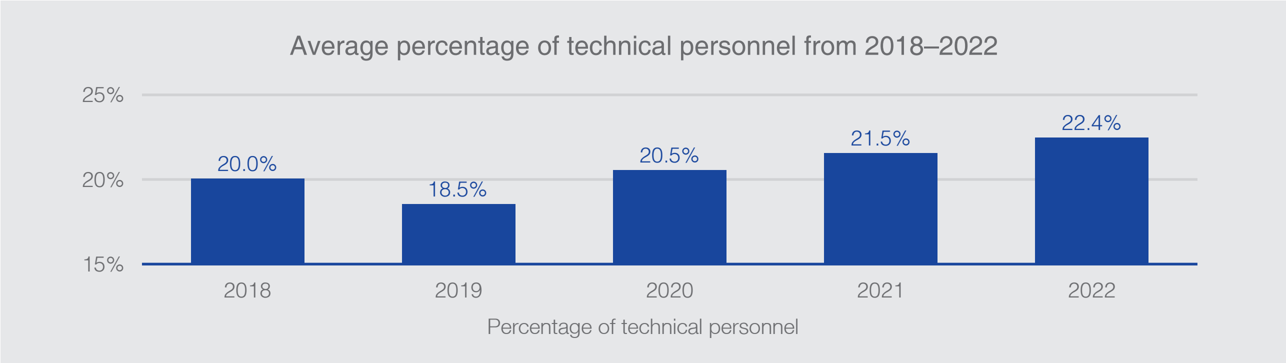
(6) R&D expenditure: According to available statistics, A-share listed companies disclosed a total of RMB 1148.1 billion in R&D expenditure in 2022, marking a 39.0% increase from the previous year. Overall, R&D expenditure witnessed a significant rise from 2018 to 2022, with growth peaking at 50.78% between 2018 and 2019, followed by a 39.0% increase between 2021 and 2022.



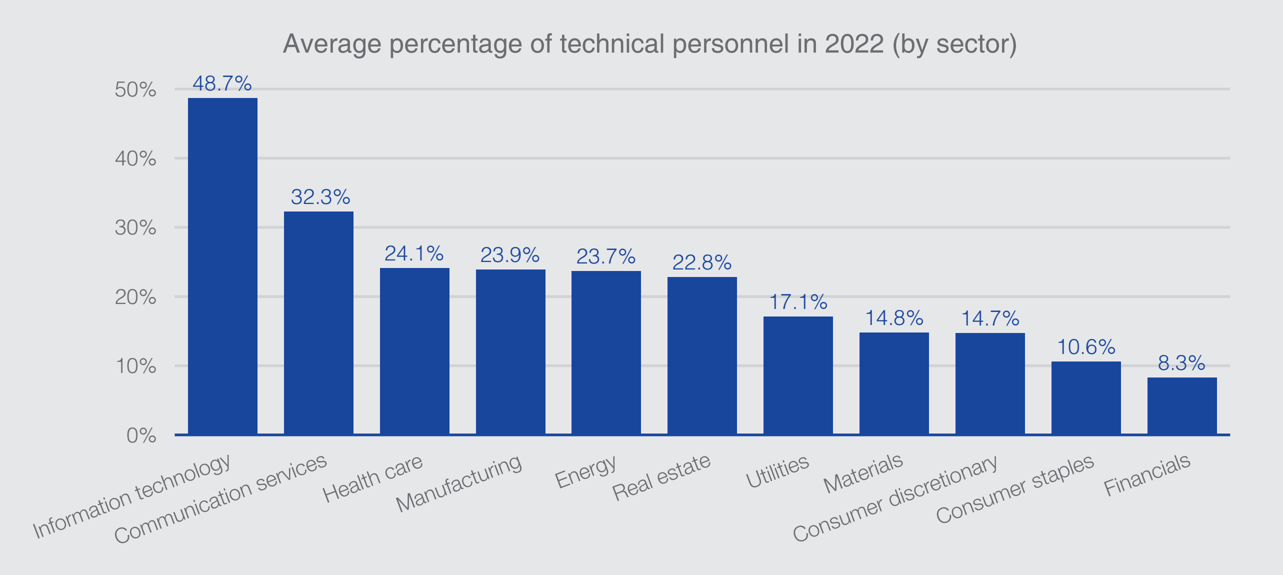
In 2022, the energy sector led in R&D expenditure with RMB 2.59 billion, representing a threefold increase from the previous year's RMB 860 million. This surge can be attributed to additional disclosures from large energy companies that had not previously reported their specific R&D expenditure. The information technology sector and the manufacturing sector ranked 2nd and 3rd, respectively, at RMB 1.17 billion and RMB 1.1 billion, while the consumer staples, financials, and real estate sectors ranked at the bottom of the list.



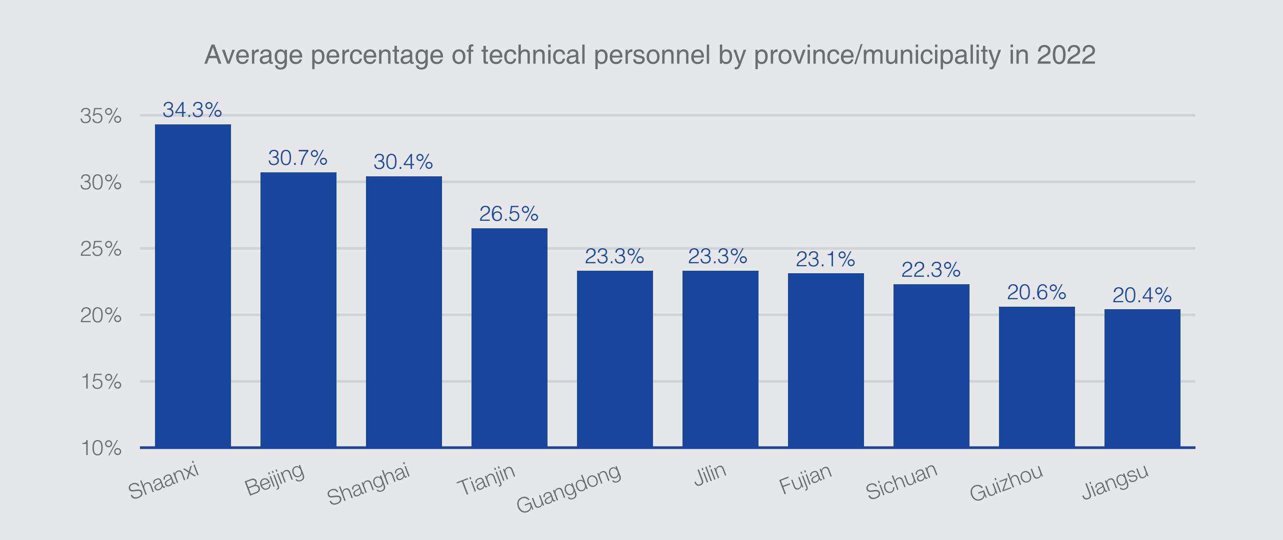
(8) Share of technical personnel: In 2022, the average percentage of technical personnel reached 22.4%, indicating a 0.9% increase from the previous year. This growth reflects a consistent upward trend over the past five years.



By sector, the information technology sector recorded the highest percentage at 48.7%, followed by the communication services sector at 32.3%. Conversely, the financials sector had the lowest percentage at 8.3%.



By province/municipality, Shaanxi surged to first place in 2022, boasting an average percentage of 34.3%. Following Shaanxi, Beijing, Shanghai, and Tianjin ranked closely at 30.7%, 30.4%, and 26.5%, respectively.



Analysis for the product quality and innovation topic

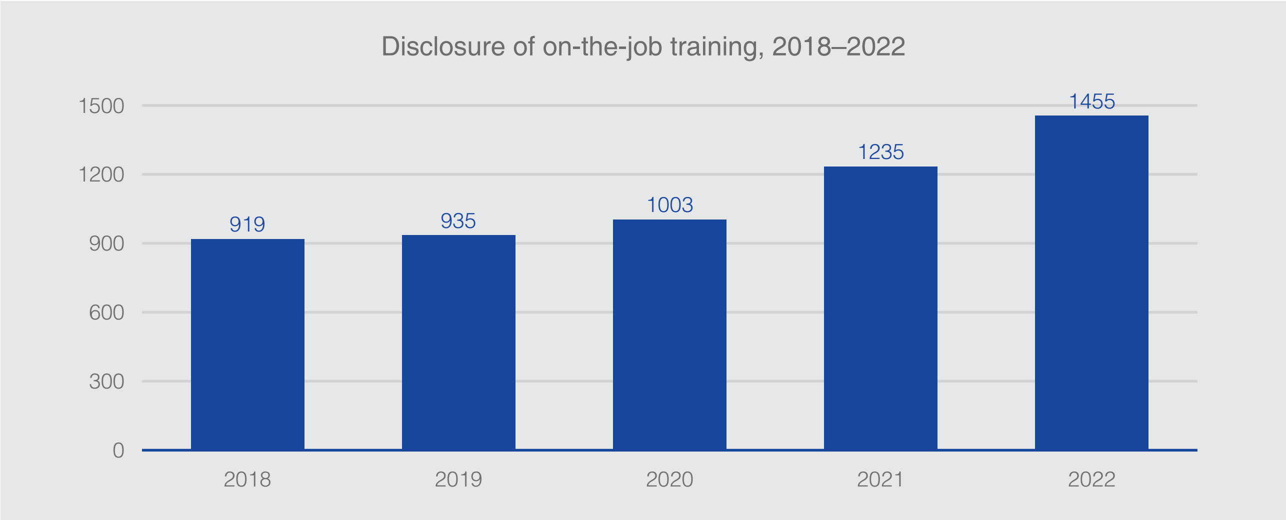
In 2022, several sub-indicators related to product quality and innovation witnessed significant improvements. This underscores the prioritization of product quality within these companies. Factors such as quality management, quality reputation, after-sale services, and customer satisfaction all experienced notable increases. In terms of research and development, corporate disclosures in 2022 indicate a decrease in the number of patents developed, totaling 96,368. This decline is partially attributed to some companies disclosing only newly acquired patents for the year, rather than the total number of existing patents. As a result, this change makes it difficult to compare the total figure to previous years. The average percentages of R&D and technical personnel remained stable or slightly increased from the previous year, ranging from 15% to 20%. Meanwhile, R&D expenditure surged to RMB 1.1481 trillion, marking a substantial 39.0% increase over this period. This surge signals China's strong push towards high-end intelligent manufacturing.

Employee wellness

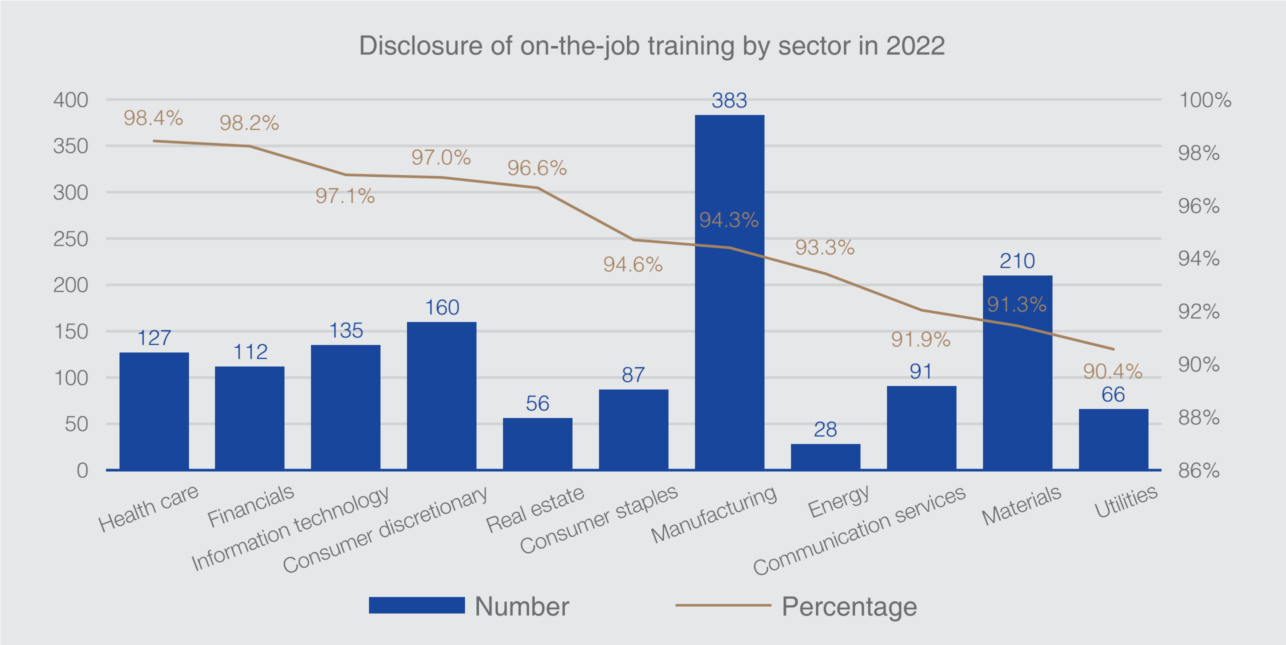
This topic comprises nine sub-indicators:

1. Remuneration incentives 2. Supplementary benefits 3. On-the-job training
4. Communication with employees 5. Employee care 6. Safety management systems
7. Training on production safety 8. Occupational health and safety certification
9. Disputes over staff health and safety

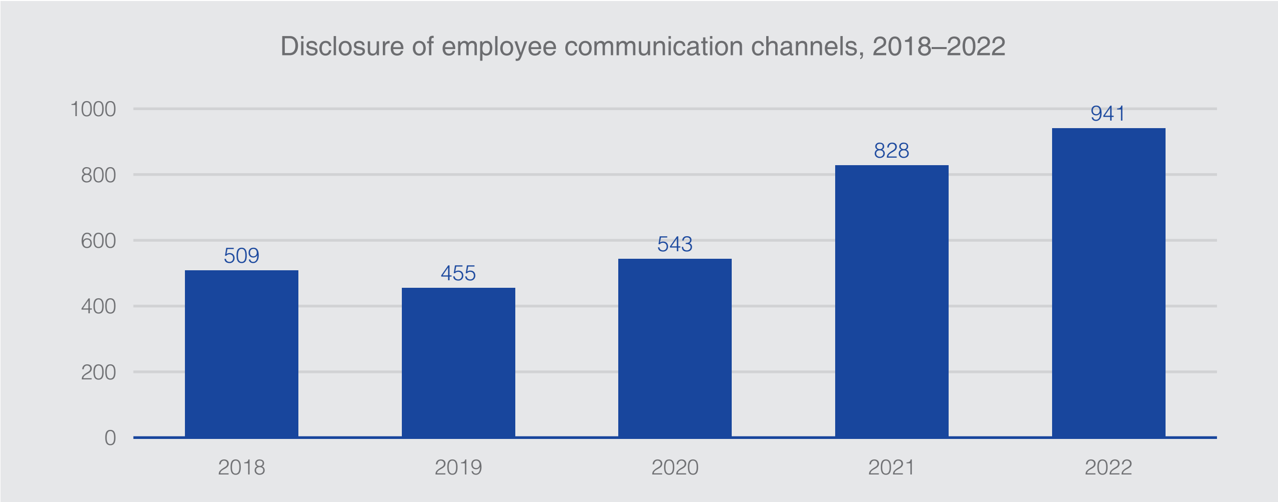
(3) On-the-job training: In 2022, out of all reporting companies, 1,455 disclosed their provision of on-the-job training for employees, marking an increase of 210 compared to the previous year. Data from 2018 to 2022 reveals a steady rise in the number of companies offering on-the-job training, with an average annual growth rate of 12.4%. This trend indicates that companies are placing greater emphasis on developing employee skills.



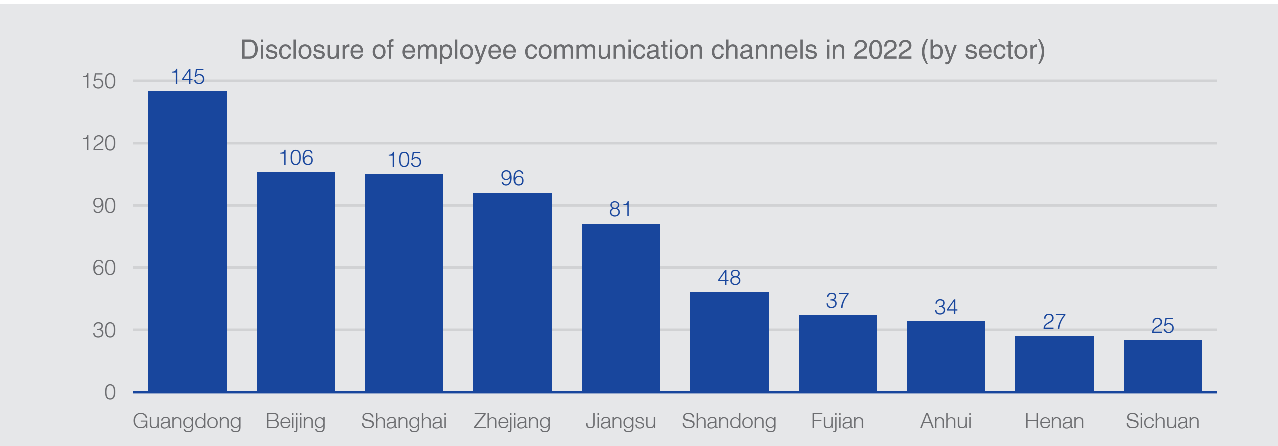
By sector, the manufacturing sector disclosed the highest provision of on-the-job training at 383, with its disclosure rate falling somewhere in the middle. Although all sectors boasted high disclosure rates exceeding 90%, the healthcare and financial sectors led the pack with rates of 98.4% and 98.2%, respectively.



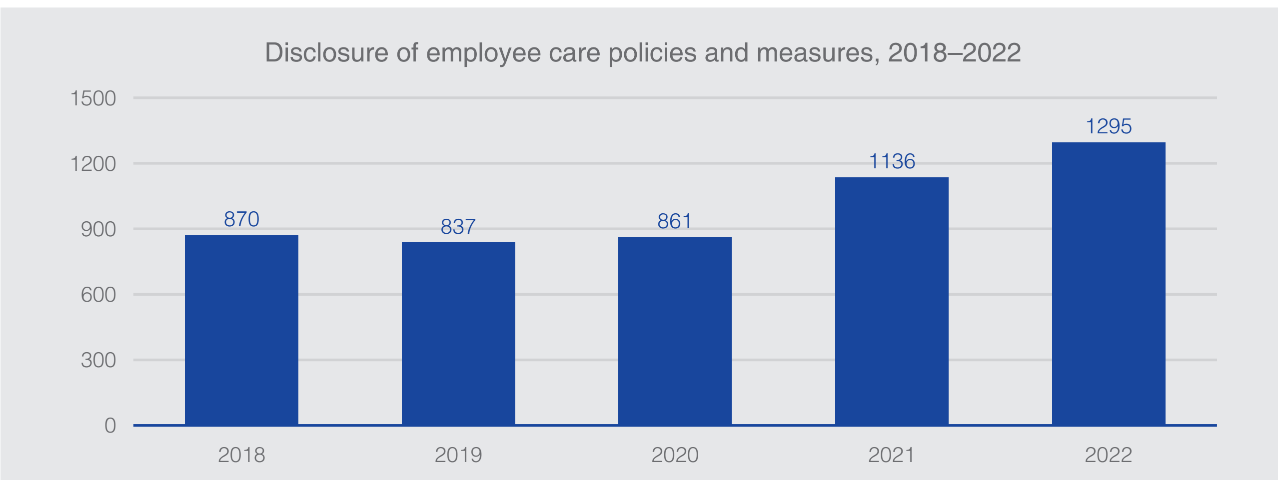
(4) Communication with employees: In 2022, a total of 941 companies disclosed the availability of communication channels between employees and senior management, including chairman's mailboxes, suggestion boxes, employee interview systems, and more. This marks an increase of 113 companies, or 13.7%, compared to the previous year.



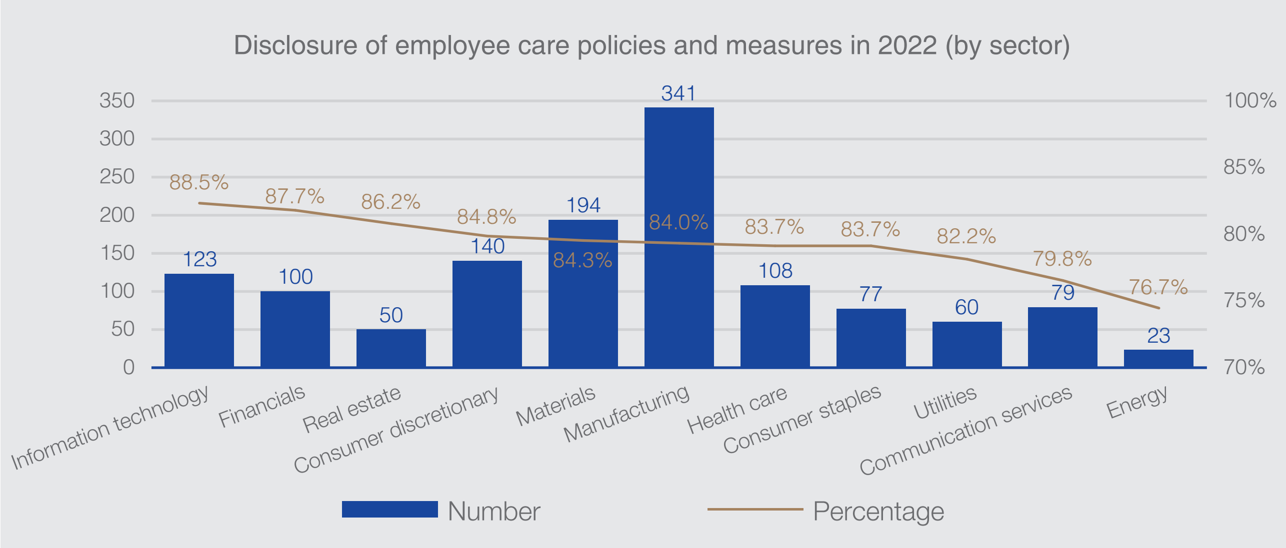
By province, Guangdong, Beijing, and Shanghai had the highest number of companies that disclosed communication with employees, with 145, 106, and 105 companies, respectively.



(8) Employee care: In 2022, a total of 1295 companies disclosed employee care policies or measures, including leadership outreach, physical examinations, childcare services, employee mental health seminars, and more. This represents an increase of 159 companies, or 14%, compared to the previous year.



By sector, the manufacturing sector had the most disclosures at 341, while its disclosure rate ranked in the middle of the pack. All sectors boasted high disclosure rates, mostly over 80%, with the information technology sector leading at 88.5%, and the energy sector at the bottom with 76.7%.



Analysis of the employee wellness topic

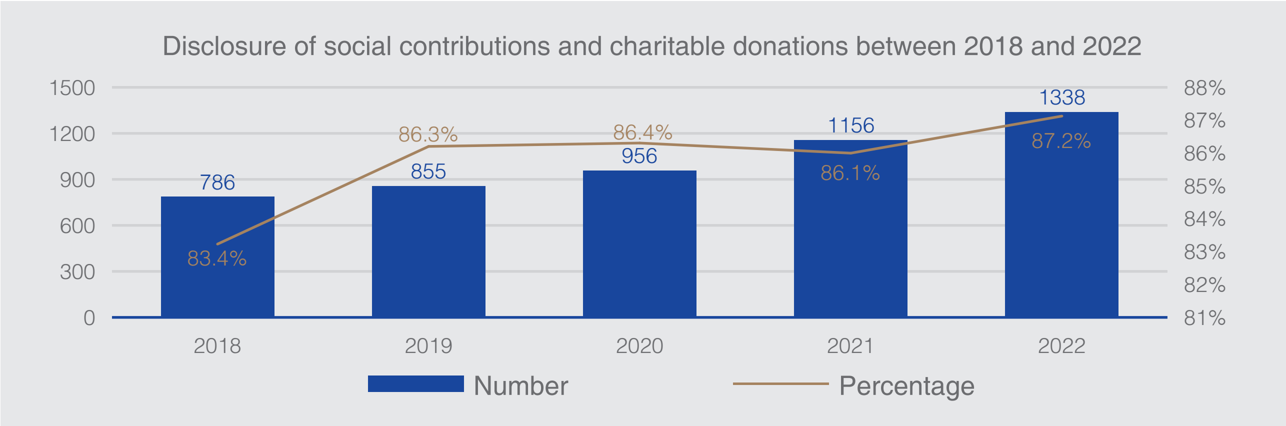
In 2022, A-share listed companies significantly boosted their investment in employee wellness compared to the previous year. A total of 1,020 companies disclosed remuneration incentives, and 1,173 disclosed supplementary benefits. Moreover, there was a notable increase in attention to communication and information exchange, with 941 companies disclosing communication channels with employees and 1,295 disclosing employee care policies or measures, representing a 13.7% and 14% increase from the previous year, respectively. Additionally, 1,455 companies provided on-the-job training for employees, marking an increase of over 200 from the previous year. Furthermore, there were notable improvements in other sub-indicators, such as safety management systems, training on production safety, and occupational health and safety certification. For companies, enhancing employee wellness is a win-win strategy. By prioritizing employee wellness, companies not only empower workers to exercise their employment rights and realize their potential but also enhance their operating efficiency.

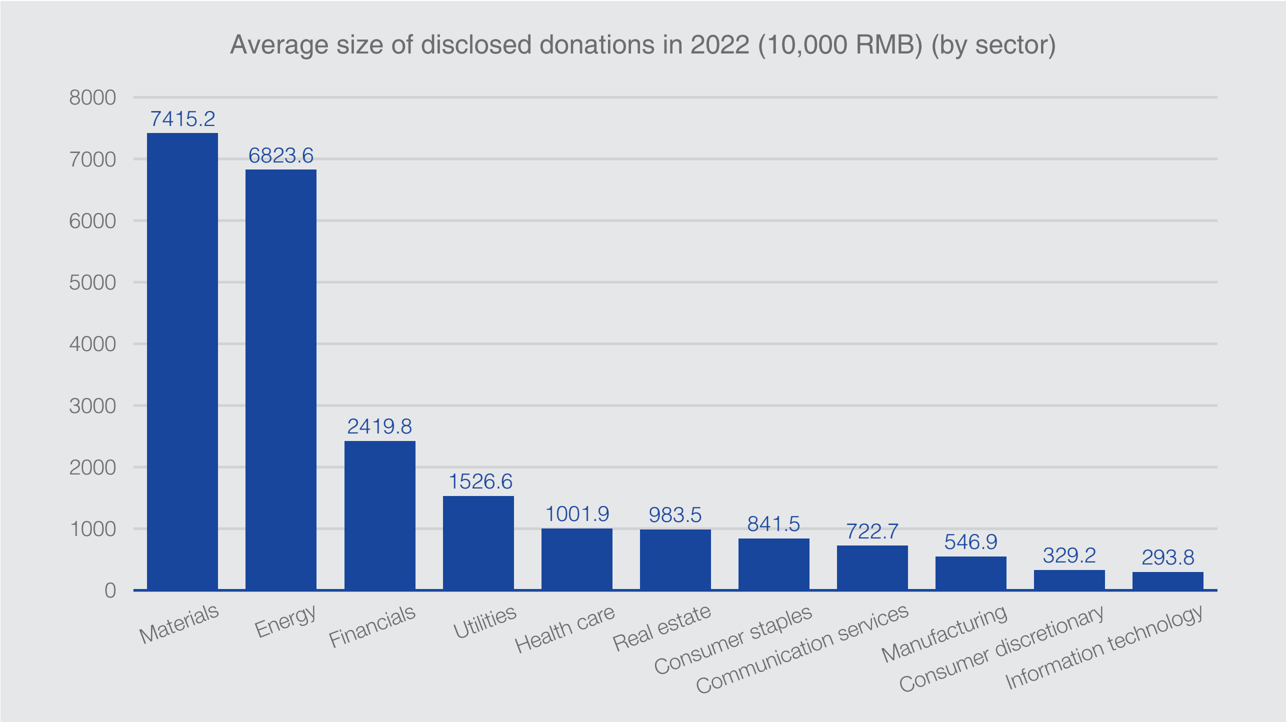
Social contributions and charity

This topic comprises nine sub-indicators:

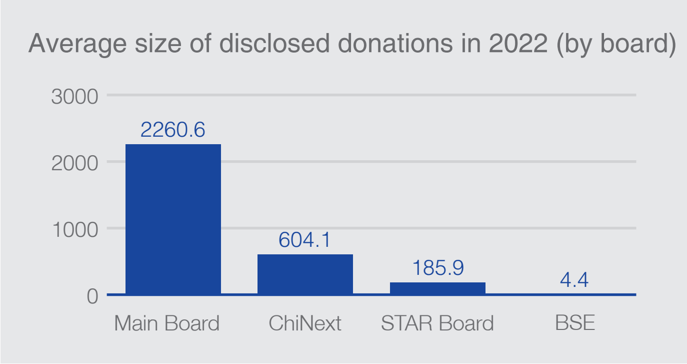
1. Donations 2. Social contribution value per share 3. Contribution to education 4. Charitable activities
5. Volunteering 6. International aid 7. Job creation 8. Contribution to economic growth 9. Layoffs

(1) Donations: In 2022, 1,338 companies reported their involvement in social welfare activities, which is 182 more than the previous year. This represents 87.2% of the total, marking a 1.1 percentage point increase. These companies collectively donated a total of RMB 26.24 billion, reflecting an increase of approximately RMB 12 billion or 85.3% compared to the previous year. Overall, there was a noticeable rise in the number of companies making charitable donations between 2018 and 2022.

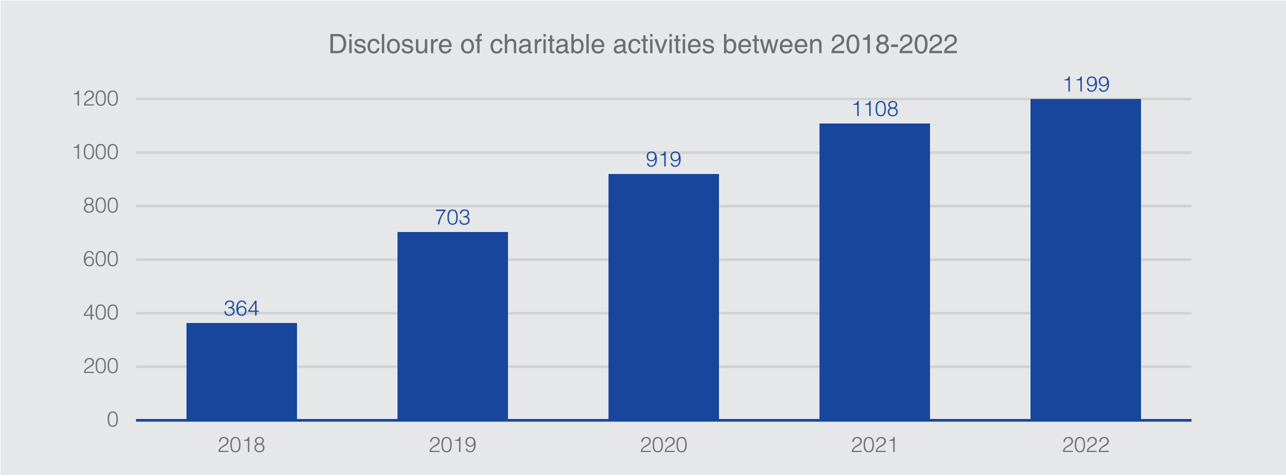




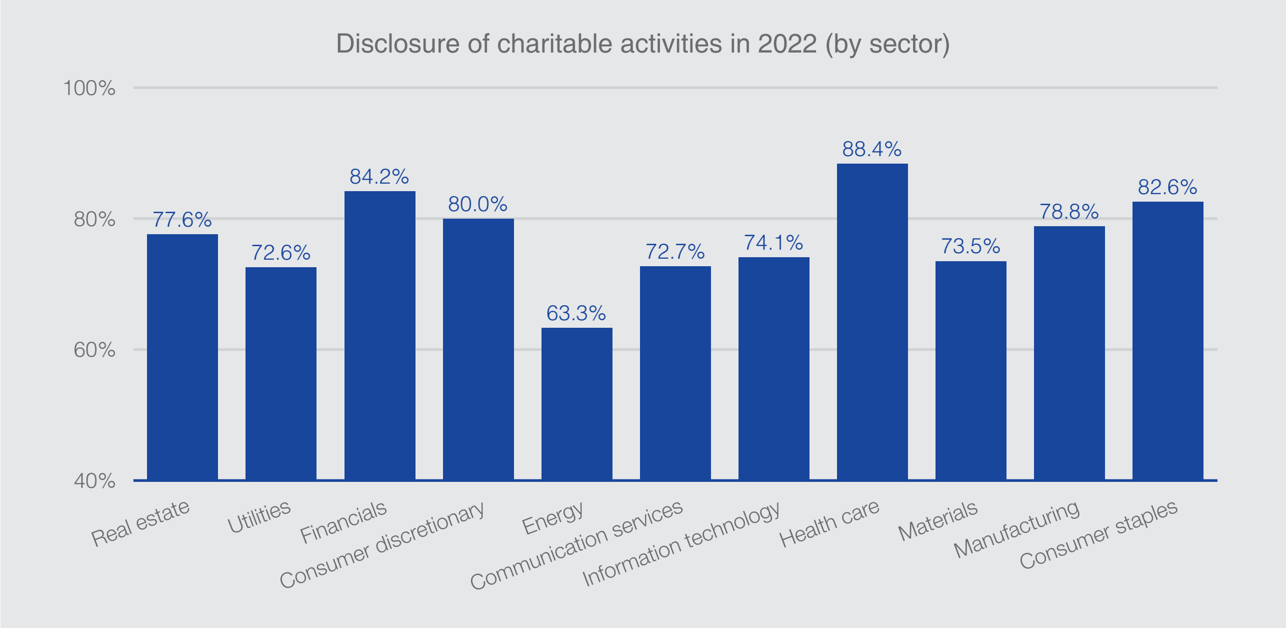
By board, companies listed on the Main Board had the highest average donations (RMB 22.606 million), followed by those listed on the ChiNext (RMB 6.041 million) and STAR board (RMB 1.859 million).



(4) Charitable activities: In 2022, a total of 1,199 companies engaged in charitable donations, marking an increase of 91 from the previous year. Over the past 5 years, there has been a growing number of A-share listed companies participating in charitable activities, with an average annual growth rate of 36.5%.



By sector, manufacturing had the most disclosures at 320, while healthcare had the highest disclosure rate at 88.4%, and energy had the lowest at 63.3%.



Analysis for the environmental management topic

Measures have been taken by listed companies in the sample to tackle environmental issues. Specifically, 47.6% of the companies have developed or used eco-friendly products, equipment, or technologies; 43.4% have obtained ISO 14001 certification for their environmental management systems; and 54.1% have participated in environmental public welfare activities. In 2022, a total of 401 companies received recognition for their environmental achievements while 21 received environmental penalties—an increase of 60 and 8, respectively, from the previous year. Corporate investment in environmental protection continues to rise, signaling a heightened environmental consciousness among A-share listed companies. If companies can sustain or increase their investment in environmental management and integrate it into their corporate social responsibility strategy, they could enhance their corporate value, brand image, and long-term competitiveness.

III. Governance dimension

Information disclosure and management

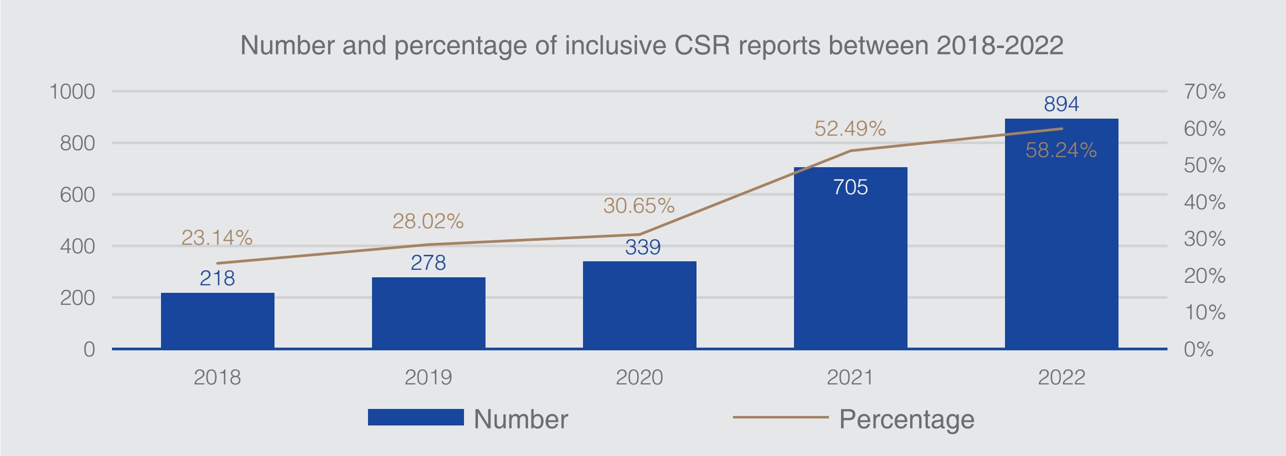
This topic comprises five sub-indicators:

1. CSR report reliability 2. CSR report inclusiveness 3. ESG website columns
4. ESG education and training 5. ESG leadership teams

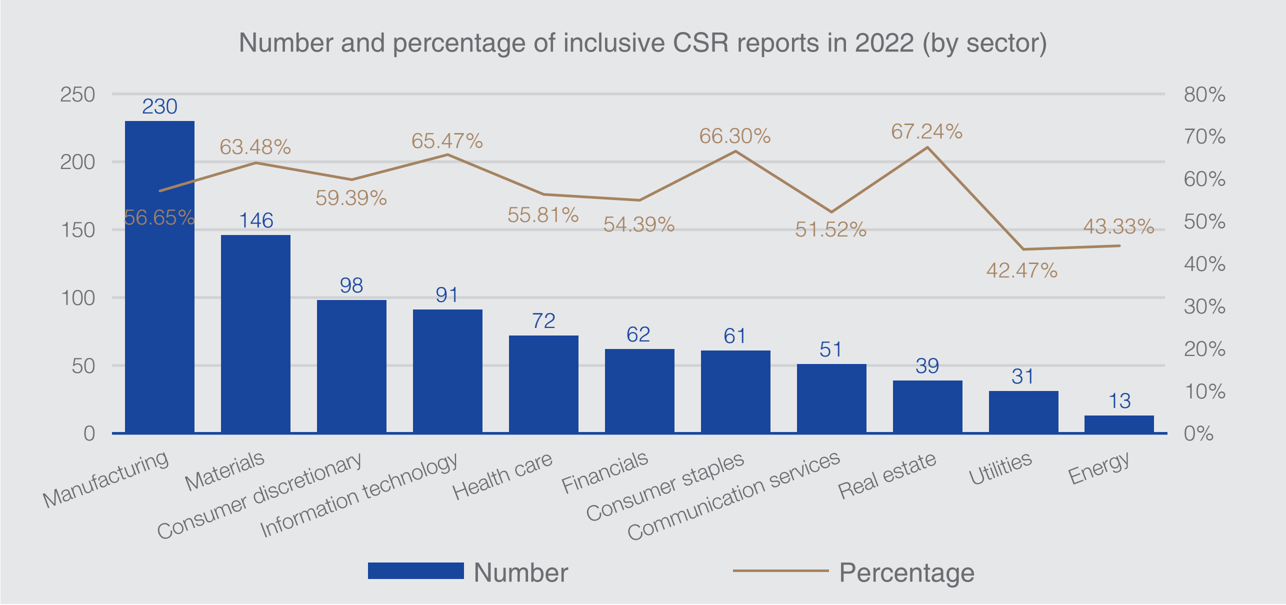
These five indicators reflect the attention and performance of reporting entities regarding information disclosure and the implementation of ESG management principles. Below are the focal indicators for 2022:

(2) CSR report inclusiveness: To ensure comprehensive information disclosure in the CSR report, a company should explicitly state its adherence to the G3 Sustainability Reporting Guidelines by the Global Reporting Initiative (GRI) during report preparation. Alternatively, the company should assess whether the report aligns with the G3 Standards and covers all six aspects, including shareholders, creditors, employees, customers, communities, and the environment. Founded in 1997 by the U.S. non-profit environmental economic organization CERES and the United Nations Environment Programme (UNEP), GRI aims to provide a universally accepted CSR reporting framework worldwide.

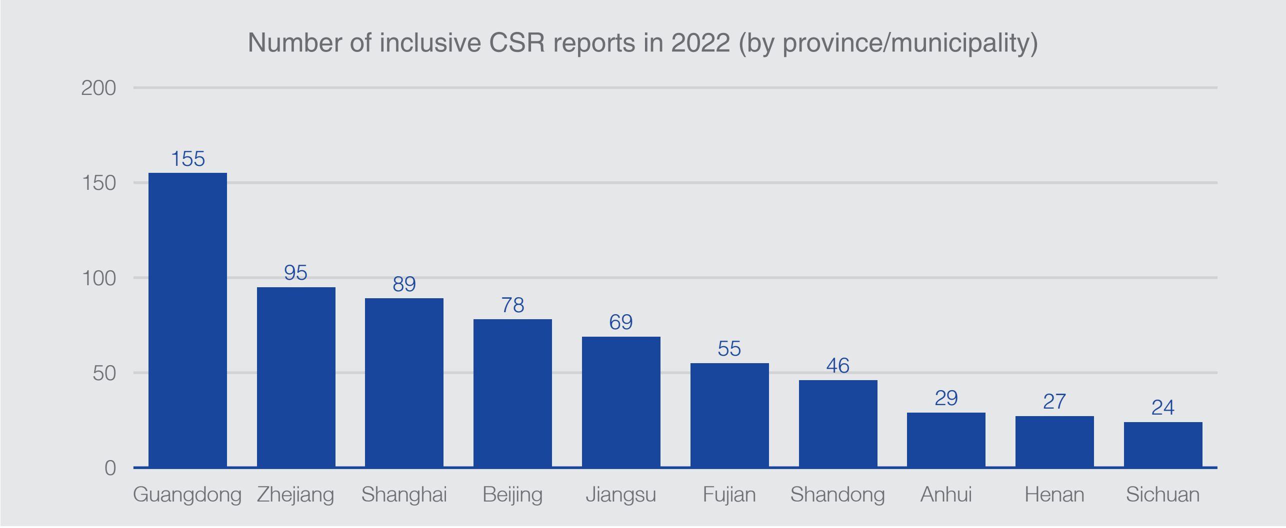
In 2022, 894 out of 1,535 CSR disclosures, accounting for 58.2% of the total, claimed to have referenced the G3 or higher standard during report preparation. The disclosure rate has shown a significant increase from 2018 to 2022, surpassing 50% in both 2021 and 2022. The average annual growth rate during this period reached 39.3%, indicating that A-share listed companies were increasingly prioritizing standardized disclosure practices and fostering stakeholder relationships in CSR reporting.



By sector, the comprehensiveness of CSR reports varied across industries, with most ranging between 40% and 70%. The real estate sector exhibited the highest proportion at 67.2%, whereas the utilities sector had the lowest at 42.5%.

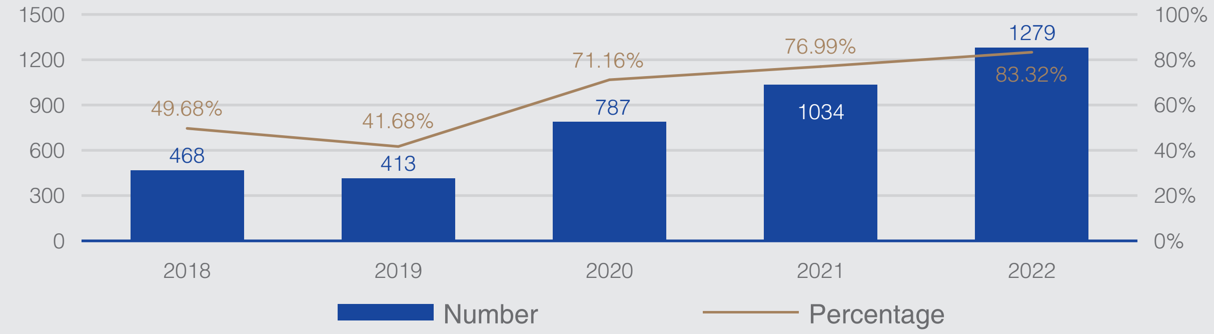


By province/municipality, Guangdong, Zhejiang, and Shanghai ranked in the top three, with 155, 95, and 89 companies, respectively.



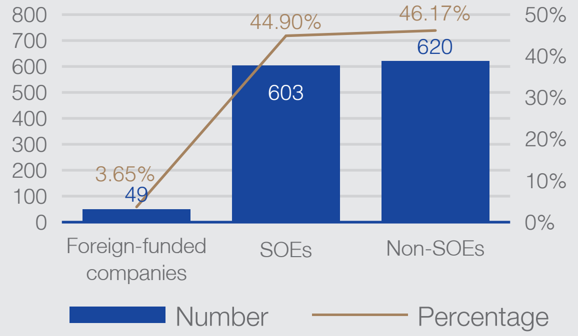
(3) **An ESG website column** refers to sections published on the websites of reporting companies that provide information about ESG or CSR topics. In 2022, out of all the reporting A-share listed companies, 1,279 (83.3%) had published a CSR column on their websites where visitors could access ESG information, marking an increase of 6.3% from the previous year. Statistics from 2018 to 2022 indicate that both the number and proportion of companies that published ESG columns on their websites increased, suggesting that A-share listed companies were placing greater emphasis on CSR.

Number and percentage of ESG columns on the websites of companies from 2018–2022



By business type, SOEs and non-SOEs had a similar number of ESG columns on their websites, accounting for 44.9% and 46.1% of the total A-share disclosure reports in 2022, respectively.

Number and percentage of ESG columns on the websites of companies (by business type)



Summary of the information disclosure and management topic

The changes in the five sub-indicators for information disclosure and management reflect the increasing number and enhanced quality and formatting of ESG disclosures made by A-share listed companies in China. These changes indicate a standard that is increasingly aligned with international norms. Additionally, we have observed a heightened focus on ESG promotion by companies, with over 80% now featuring ESG or corporate social responsibility columns on their official websites. This marks a sustained increase from the previous year. Furthermore, there has been a growing trend among companies to establish dedicated ESG leadership and management teams and departments, along with providing ESG-related education and training for employees. We believe that ESG disclosures will become standard practice among Chinese companies over time, fostering more socially responsible enterprises that actively contribute to society.

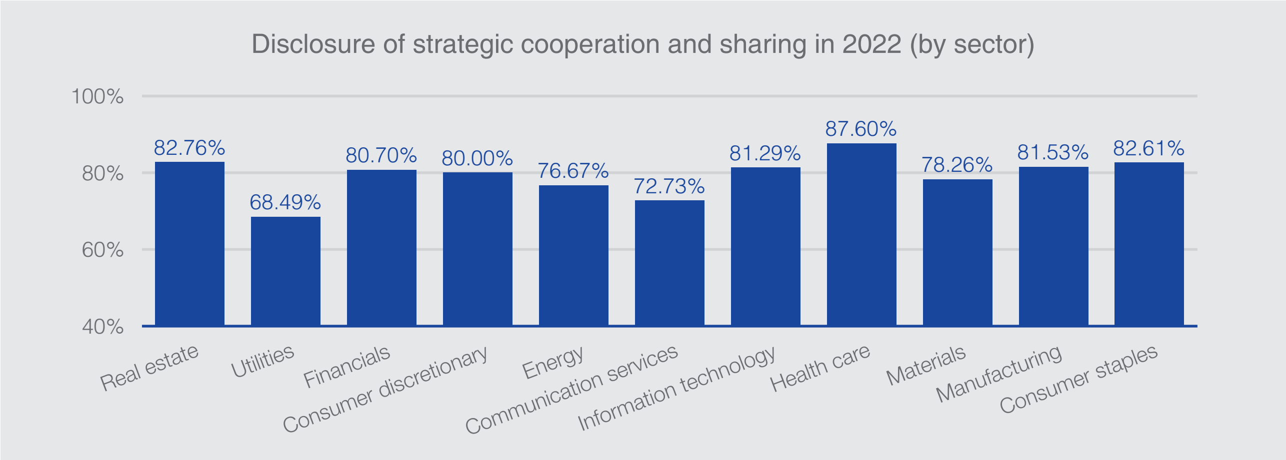
Company operations and management

This topic comprises five sub-indicators that measure the operational performance, business and social ethics compliance, and financial management of A-share listed companies, examining both favorable and unfavorable aspects. They are:

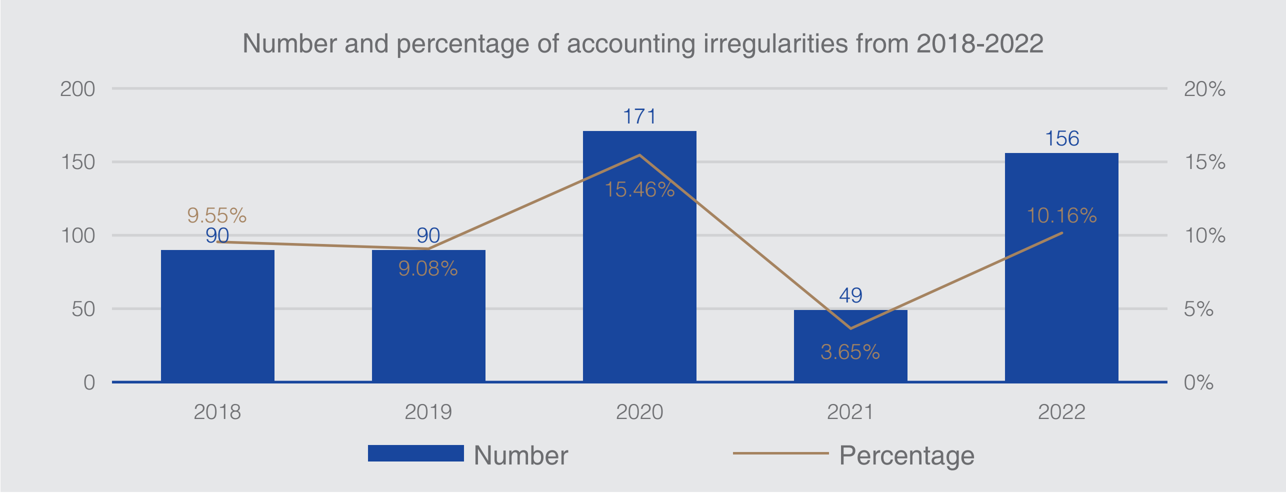
1. Strategic cooperation and sharing 2. Anti-bribery and anti-corruption 3. Business integrity
4. Accounting irregularities 5. Financing disputes

(1) Strategic cooperation and sharing

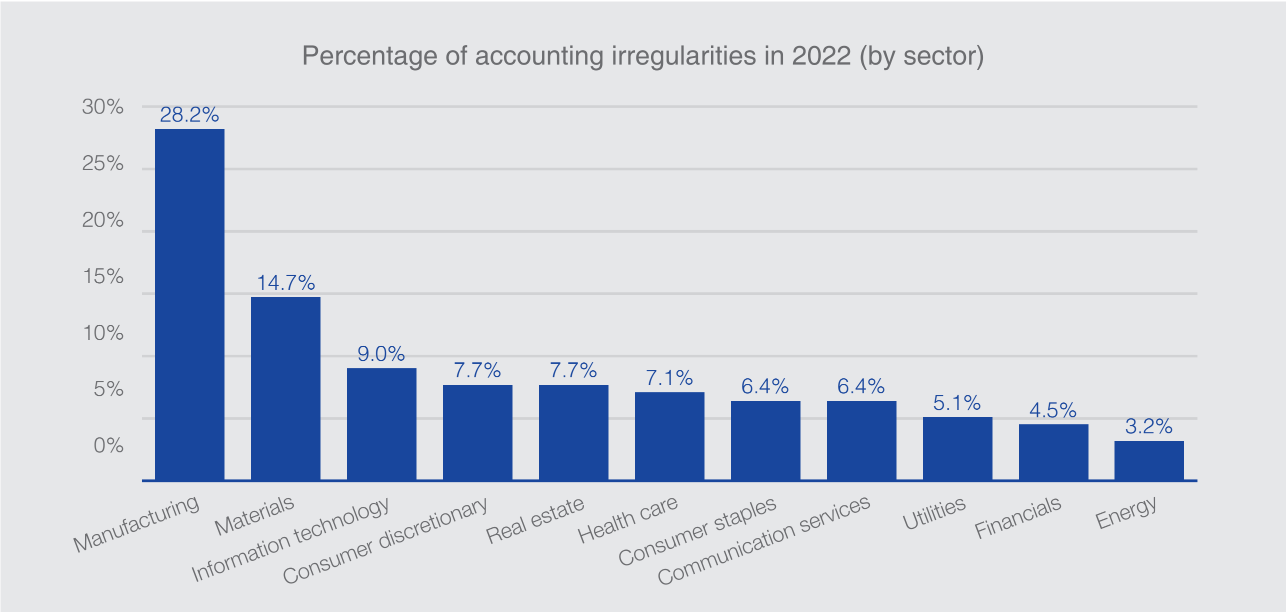
In 2022, 1,230 A-share listed companies disclosed a variety of strategic cooperation and sharing methods in their CSR reports, constituting 80.1% of the total CSR disclosures. These methods encompassed multilateral technology collaborations, supply chain expansion, transitioning into digital partnerships with internet companies, co-building data knowledge repositories, signing strategic trade agreements, and forming strategic alliances. Across sectors, the healthcare sector boasted the highest disclosure rate at 87.6%, whereas the utilities sector exhibited the lowest at 68.5%.



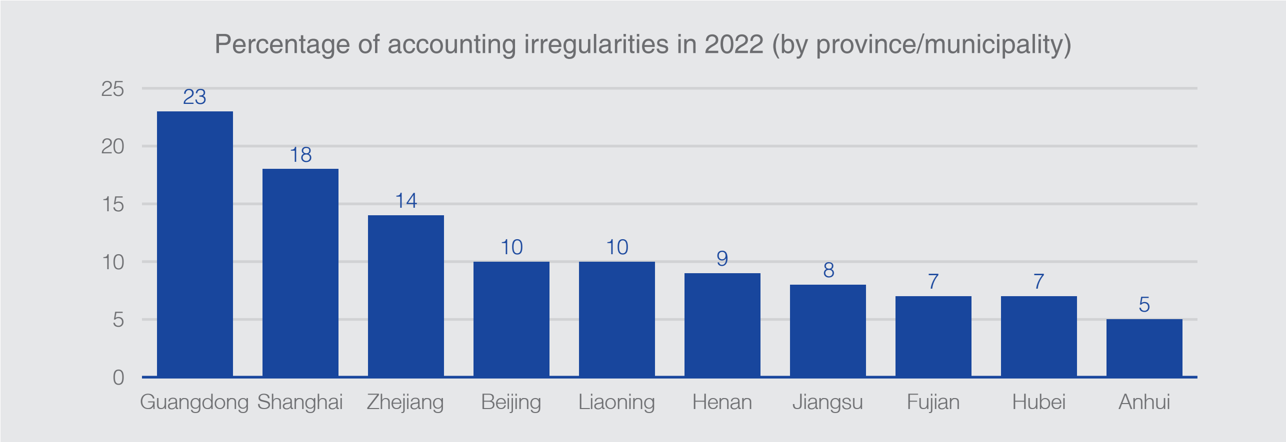
(4) Accounting irregularities: Based on a publicly accessible database documenting corporate violations and punishments, the accounting irregularities of reporting companies are summarized as follows: In 2022, 156 companies, accounting for 10.16% of the reporting entities, disclosed accounting irregularities. This represents a significant increase compared to previous years, trailing only behind the data from 2020.



By sector, of the 156 companies reporting accounting irregularities in 2022, 28.2% were from the manufacturing sector, followed by the raw materials sector at 14.7%. Conversely, the energy sector exhibited the lowest rate, with only 3.2% of companies reporting accounting irregularities.



In 2022, accounting irregularities were more prevalent in East China, with Guangdong, Shanghai, and Zhejiang leading the way with 23, 18, and 14 cases, respectively.



Summary of the corporate operations and management topic

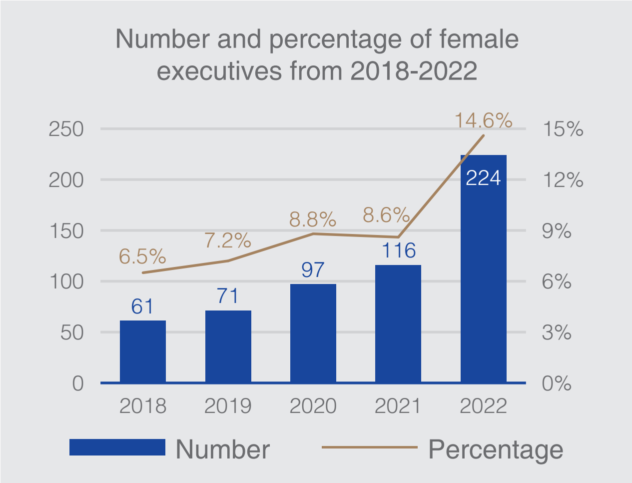
From 2018 to 2022, we witnessed notable advancements among reporting companies in areas such as strategic cooperation and sharing, business integrity, and anti-bribery and anti-corruption measures. However, it is important to highlight that during this period, the number of financing disputes and accounting irregularities also experienced increases of 6.51% and 7.2%, respectively. Today, there is a growing recognition that companies should not solely prioritize profit maximization but also fulfill social responsibilities, including maintaining business integrity and promoting strategic sharing. These elements have emerged as fundamental components of corporate values in the modern era.

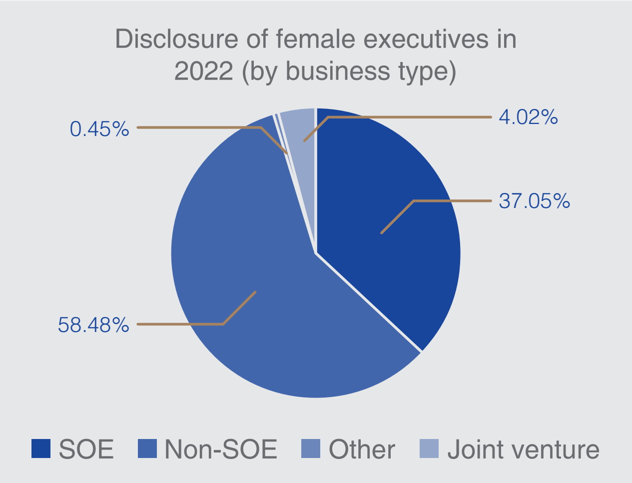
Diversity and equal opportunities

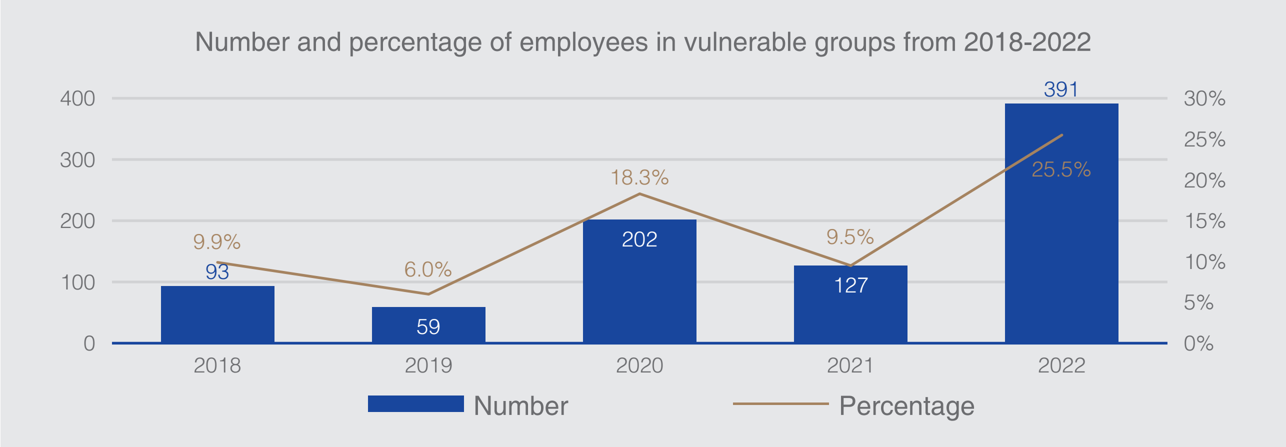
This topic comprises five sub-indicators:

1. Female executives 2. Female directors 3. All-male executives
4. Vulnerable groups 5. Equal opportunities

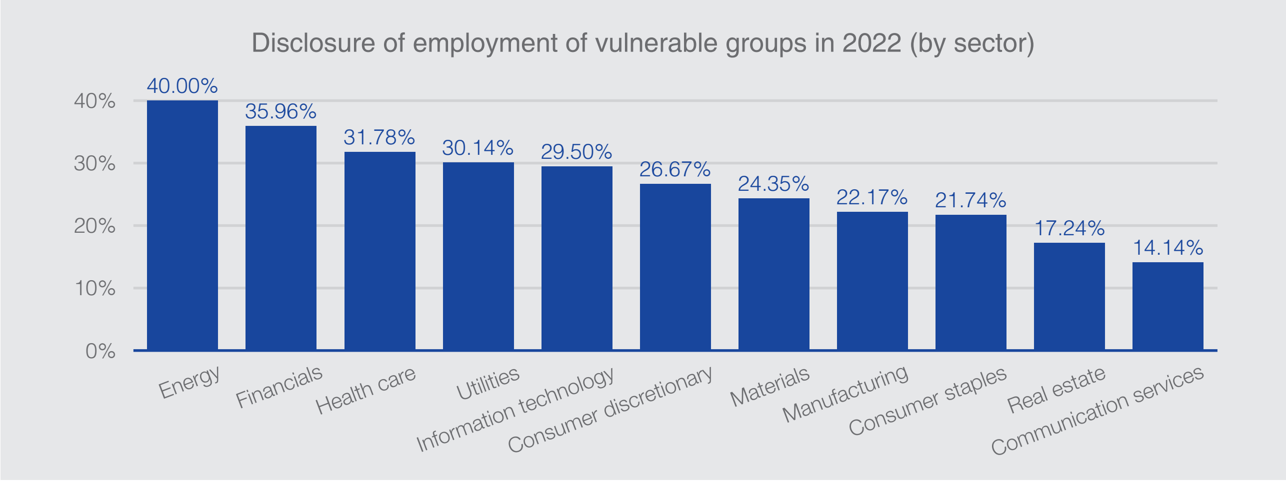
(2) **Female directors:** In 2022, 224 A-share listed companies reported having four or more female board members, constituting 14.6% of the total disclosures for the year. This marked a substantial increase of 108 companies from the previous year, nearly doubling the number. When categorized by business type, non-SOEs accounted for the highest proportion of female board positions at 58.5%, whereas SOEs comprised 37.1%.



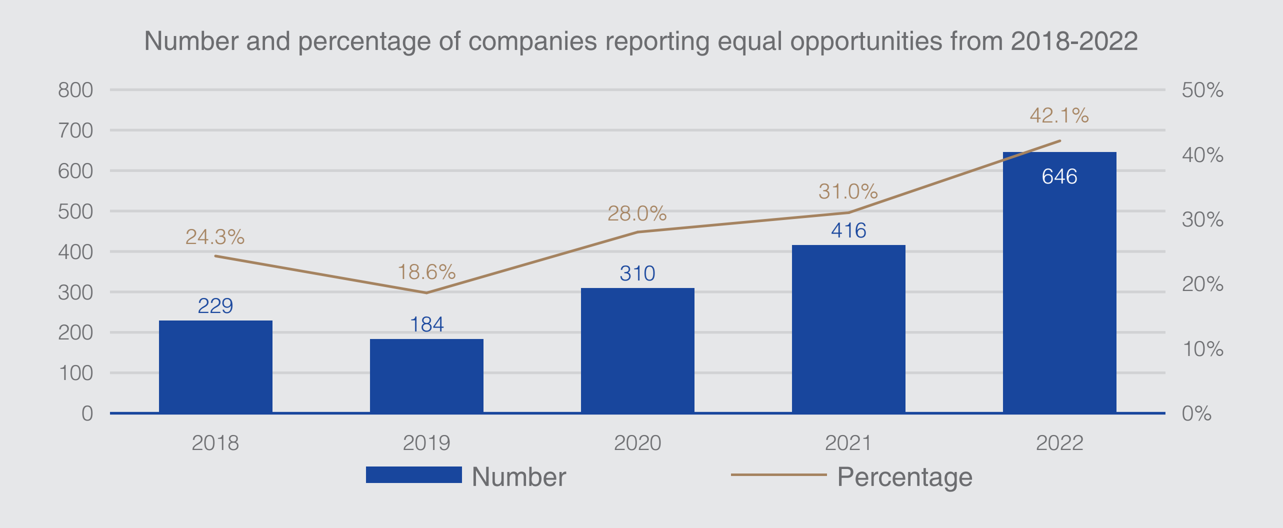


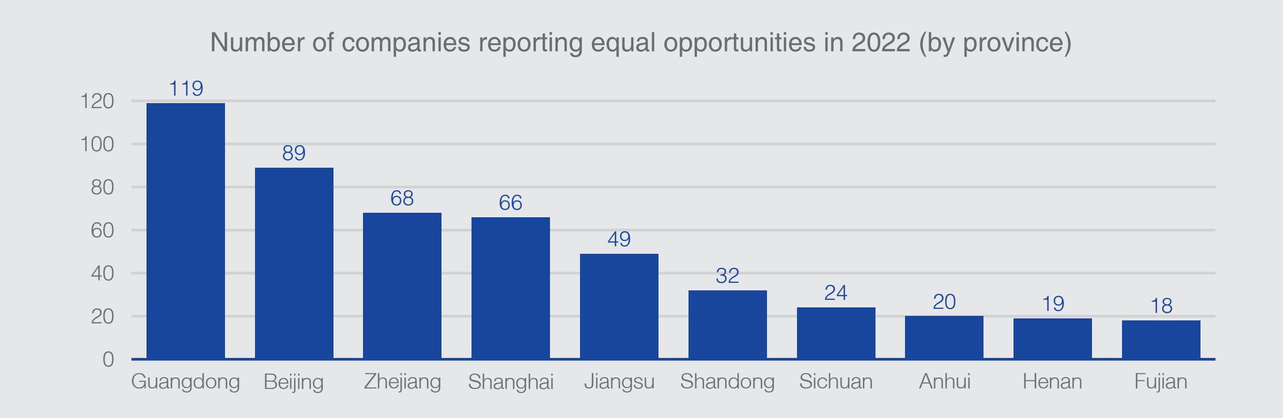


(4) **Vulnerable groups:** In 2022, 391 companies, comprising 25.5% of reporting entities, disclosed inclusive policies or positive employment practices towards vulnerable groups, which include individuals with disabilities or those who have undergone rehabilitation. This marks an increase of 264 companies or 208% compared to the previous year. When categorized by sector, the energy sector exhibited the highest proportion of vulnerable individuals employed, accounting for 40%, while the communication services sector had the lowest at 14.1%, which was nonetheless a significant improvement from the less than 5% reported in the previous year.



(5) Equal opportunities: In the 2022 CSR reports, a record high of 646 companies, constituting 42.1% of the total, emphasized equal opportunities for individuals of diverse ethnicities, religions, and nationalities. This represents a significant increase of 230 companies from the previous year. By province, Guangdong had the highest number of companies reporting equal opportunities, with 119, followed by Beijing, Zhejiang, and Shanghai, with 89, 68, and 66 respectively.



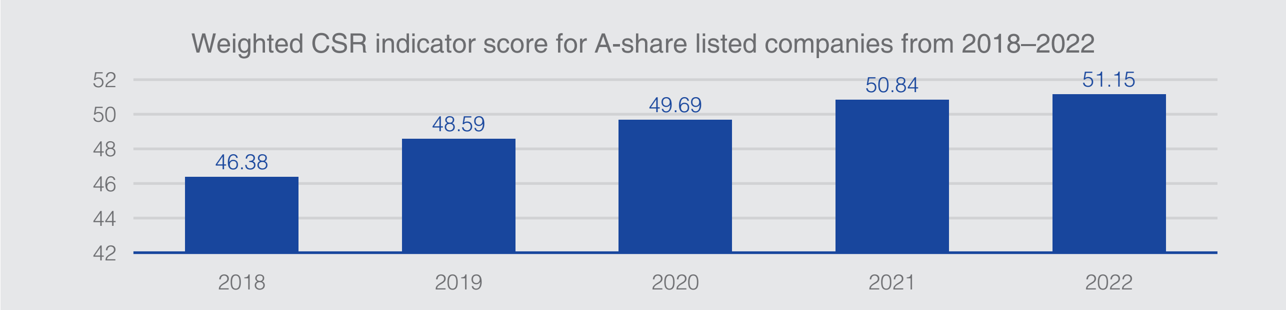


Summary of the diversity and equal opportunities topic

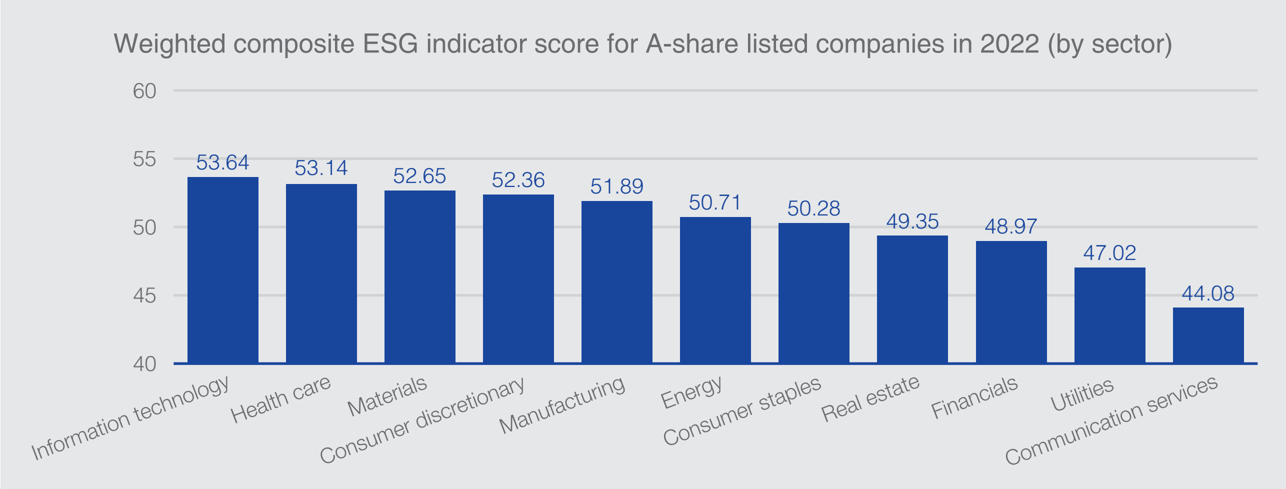
The 2022 data suggested that A-share listed companies are increasingly valuing the role of women in senior management positions. Overall, 986 companies disclosed having at least one female member in their senior management teams. Additionally, 224 companies, or 14.6% of reporting entities, disclosed having at least one female director, representing an increase in both number and percentage. In terms of fair treatment of vulnerable groups, 391 companies proposed inclusive policies, marking a threefold increase from the previous year. Moreover, there has been progress in promoting equal opportunities, with more companies now focusing on the fundamental interests of vulnerable groups. This focus could contribute to promoting social harmony, alleviating social conflicts, and accelerating shared prosperity.

Year-on-year comparison and analysis of composite ESG indicators

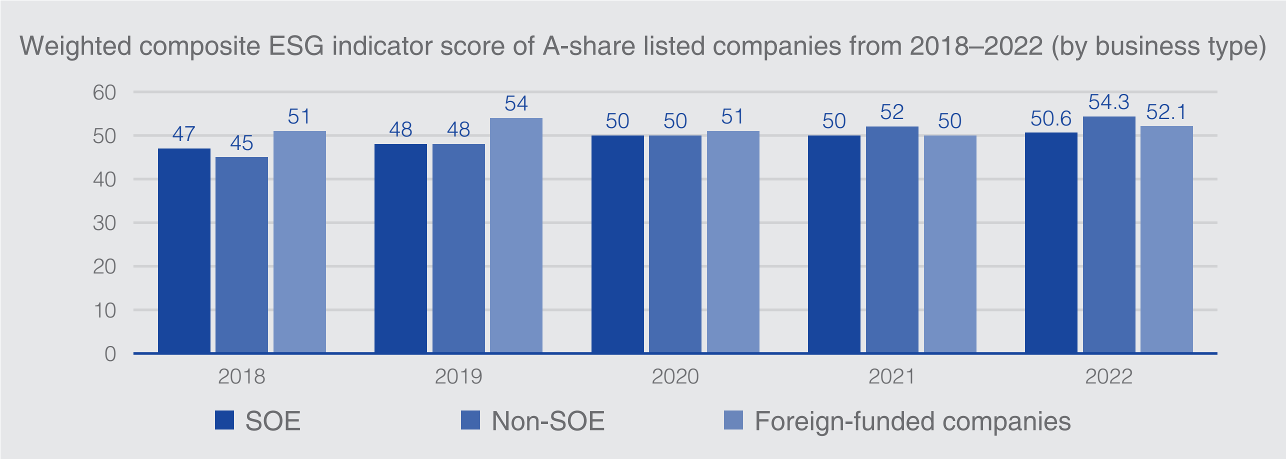
In 2022, 1,535 reporting companies achieved a weighted score of 51.15 (out of 100) and a median score of 52.2 for all ESG indicators. This represents an increase of 0.31 points or 0.6% from the previous year. While this score has been steadily increasing every year from 2018 to 2022, it still falls significantly below the "pass mark" of 60.



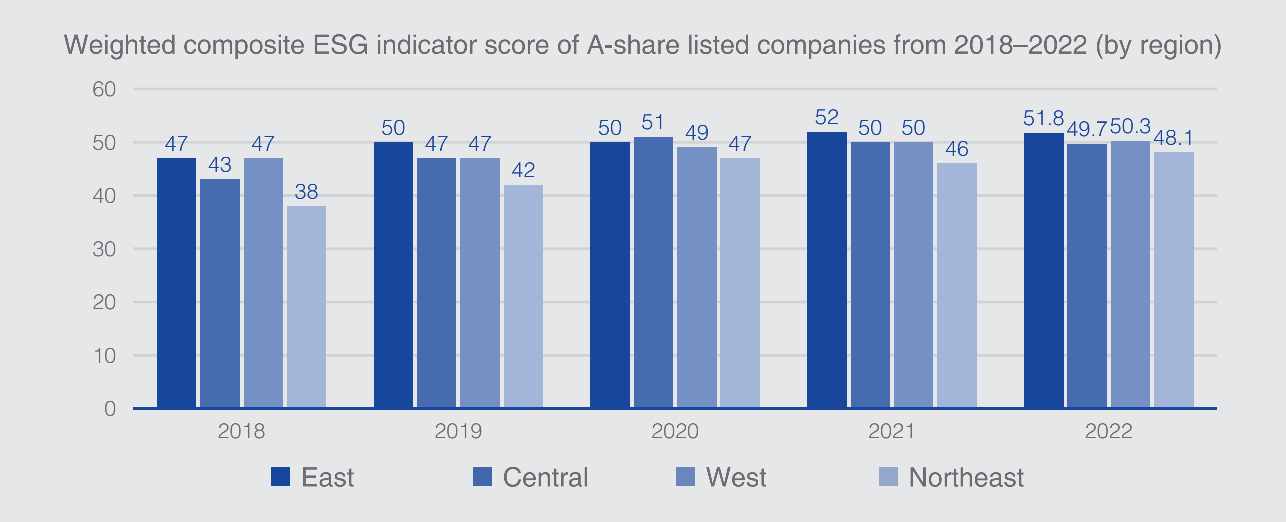
In 2022, all sectors exhibited an increase in their weighted composite ESG indicator scores, contributing to a narrowing gap between sectors. The information technology sector achieved the highest score at 53.64, reflecting a 0.51-point improvement from the previous year. Following closely, the communication services sector ranked second with scores of 53.13 and 53.09, respectively. Lastly, the financial sector achieved a score of 43.68.



By business type, in 2022, SOEs achieved a score of 50.6, which remained close to the previous year' s score. Non-SOEs recorded a score of 54.3, an increase of 2 points from the previous year. Similarly, foreign-funded companies achieved a score of 52.1, also up by 2 points from the previous year. Between 2018 and 2022, CSR scores increased for both SOEs and non-SOEs. Notably, non-SOEs experiencing a significant rise from the lowest score of 45 in 2018 to the highest score of 54.3 in 2022.

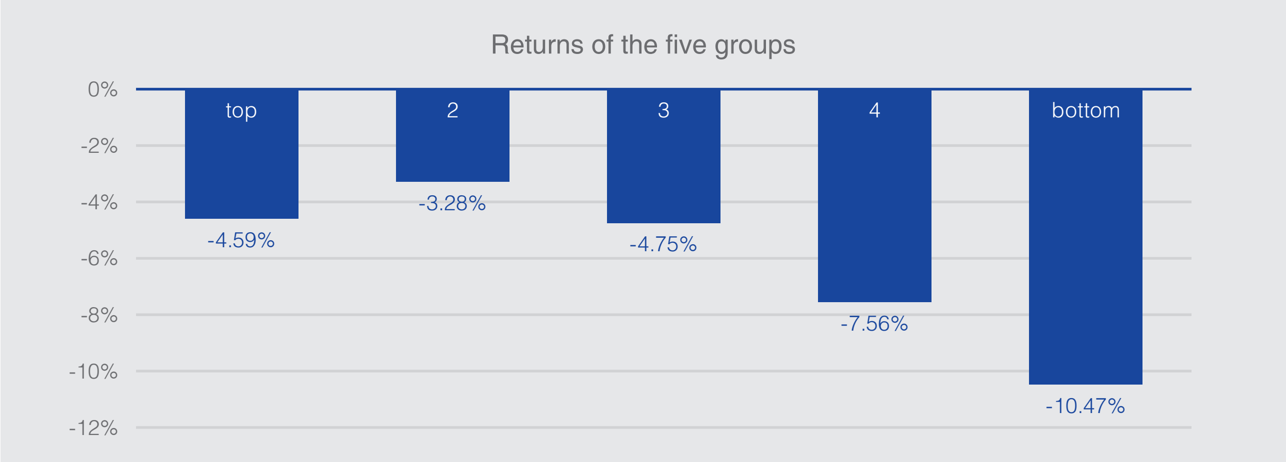


In 2022, most regions maintained scores similar to the previous year, except for Northeast China. East China achieved the highest score at 51.8, while Northeast China had the lowest at 48.1, despite experiencing the most significant increase of 2 points during this period. Between 2018 and 2022, CSR scores for companies across all regions generally rose. Specifically, scores increased by 5, 7, 3, and 10 points respectively for East, Central, West, and Northeast China.



Analysis of the economic value of composite ESG indicators

For investors in various capital markets, the economic value of ESG composite scores is a focal point of concern. This report constructs an investment strategy based on the ESG composite scores of A-share listed companies and examines its profitability to address this issue. Specifically, we compared the composite scores with the scores for various topics, dividing them into five groups, with approximately one fifth of the number of stocks in each group, and then calculated their weighted returns by group. Thus, 1,531 listed companies (excluding the 4 companies listed on the Beijing Stock Exchange) were divided into five groups of 306, 306, 307, 306, and 306 companies, respectively, and their weighted returns were calculated per group. Given that ESG reports and CSR reports of A-share listed companies typically accompany the annual report, which is due for disclosure by April 30 each year, and considering that most companies release their reports toward the end of April, we presume that trading commences on the first trading day of May each year (May 4, 2023) and concludes on the final trading day of the year (December 29, 2023). In 2023, the five groups achieved weighted average returns of -4.59%, -3.28%, -4.75%, -7.56%, and -10.47% respectively, indicating a certain hierarchical progression. The top fifth relative to the bottom fifth had excess returns of 5.88%. This data suggests that reporting companies with higher composite indicator scores tend to generate greater excess returns.



We also categorized companies within each component indicator into five equally sized groups, observing that the scores generally exhibited a certain hierarchical progression. Significant excess returns were attainable by implementing a long-short strategy for the top and the bottom groups within each component indicator. Therefore, based on the actual excess returns documented in this report, we assert that the CSR performance of companies can serve as a valuable guide for investors.

Conclusion

As global awareness of sustainable development grows, more investors are directing their focus towards companies' social responsibility and environmental practices. In China, ESG mutual funds serve as a significant institutional force promoting ESG investment principles. Between 2019 and 2023, the number and scale of ESG mutual fund products surged, with the 818 existing funds totaling RMB 514.324 billion in assets under management. However, the overall market trend weakened in 2023, causing ESG mutual funds to follow the market downturn and experience poor performance, posing new challenges to the development of ESG funds. Despite this setback, some ESG funds still demonstrated strong performance, with most showing advantages in the medium to long term, fostering confidence and commitment among investors dedicated to ESG investment.

This year's report retains the upgraded analysis system from last year, focusing on three main indicators: environmental, social, and governance. Each indicator comprises two, three, and three topics, respectively, with each topic featuring 4–9 sub-indicators, totaling 50. Under the environmental dimension, notable progress was observed in environmental management, energy conservation, and emission reduction among companies, indicating increased attention to environmental protection and investment in energy conservation, emission reduction, and waste reduction by A-share listed companies. In the social dimension, companies are concentrating on enhancing product and service quality while emphasizing innovation, resulting in a surge in patent applications due to increased investment in research and development. Prioritization of employee wellness, particularly safety management systems and occupational health, is also evident, alongside increased participation in social welfare activities, leading to notable improvements in social contributions and charity indicators. In terms of governance, companies are prioritizing their ESG public relations efforts and expanding the scope of CSR reports. At the same time, more companies are striving to enhance their operations and management capabilities, as evidenced by their business integrity practices, as well as anti-bribery and anti-corruption efforts. Additionally, there is a growing trend among A-share listed companies to promote diversity and equal opportunity in the workplace, reflecting a heightened recognition of the importance of female executives.

Finally, we evaluated whether our composite ESG indicator score could serve as a basis for investment strategies. The five groups achieved weighted average increases of -4.59%, -3.28%, -4.75%, -7.56%, and -10.47% respectively in 2023, exhibiting a certain hierarchical progression. Implementing a long-short strategy by taking a long position for the top group and a short position for the bottom group resulted in a significant excess return of 5.88%.

Appendix: Top 50 companies in the 2022 CSR report

No.	Stock code	Company	No.	Stock code	Company
1	300308	Zhongji Innolight	26	000977	IEIT SYSTEMS
2	000100	TCL Technology	27	002600	Lingyi iTECH
3	600690	Haier Smart Home	28	002180	Ninestar Corporation
4	600066	Yutong Bus	29	603992	Xiamen Solex High-Tech Industries
5	688183	Shengyi Electronics	30	002352	S.F. Holding
6	002386	Tianyuan Group	31	002384	Suzhou Dongshan Precision Manufacturing
7	300729	Loctek Ergonomic Tech	32	000913	Zhejiang Qianjiang Motorcycle
8	000786	Beijing New Building	33	600031	SANY Heavy Industry
9	002459	JA Solar	34	000661	Changchun High-Tech
10	601992	BBMG	35	002422	Sichuan Kelun Pharmaceutical
11	000001	Ping An Bank	36	688390	GOODWE
12	002048	Ningbo Huaxiang	37	000682	Dongfang Electronics
13	002061	Zhejiang Communications Technology Co., Ltd.	38	300433	Lens Technology
14	002773	Chengdu Kanghong Pharmaceutical Group	39	300031	Boton Technology
15	300363	Porton Pharma Solutions	40	000156	Wasu Media
16	002497	Sichuan Yahua Industrial Group	41	300760	Mindray
17	600089	TBEA	42	000932	Valin Steel
18	000039	China International Marine Containers	43	601088	China Shenhua
19	002493	Rongsheng Petrochemical	44	000717	SGIS Songshan
20	300316	Zhejiang Jingsheng Mechanical & Electrical	45	000825	STSS
21	600022	Shandong Iron & Steel Group	46	002387	Visionox
22	601633	Great Wall Motor	47	002648	Satellite Petrochemical
23	603501	Will Semiconductor	48	600346	Hengli Petrochemical
24	000708	CITIC Pacific Special Steel Group	49	601966	Linglong Tire
25	000021	DeepTech	50	600256	Guanghui Energy

Afterword

Nowadays, an increasing number of businesses recognize the importance of ESG issues in their operations. These factors are not only crucial for the long-term sustainability of businesses but also have profound effects on engaging with stakeholder expectations and enhancing competitiveness. In this light, ESG is no longer perceived as merely a cost center; instead, it is the core of value creation.

Focusing on this, the China Europe International Business School ESG White Paper 2024 explores the important topic of ESG practices and value creation. This white paper presents insights through conceptual frameworks, academic research, and business cases. We firmly believe that discussing the significance and practical methods of ESG for value creation will empower businesses to effectively navigate challenges and seize opportunities.

Throughout the journey, we received invaluable support from the extensive network of CEIBS alumni and alumni companies. We would like to extend our appreciation to the CEIBS Alumni Association, as well as all the students and alumni who contributed to the project. Drawing from practical experience, you have offered valuable suggestions to enhance its content. We are sincerely grateful for everyone's collaborative efforts.

Finally, we would also like to express our gratitude to everyone who participated in the white paper project. In particular, we are grateful to the School' s leadership for the consistent support and encouragement that has brought this project to fruition. Additionally, we would like to thank the faculty members, case center, and various programme teams for their support in choosing topics and creating content. Moreover, we extend special thanks to the CEIBS Alumni Relations & Development Office, Marketing and Communications Department, and Translation and Interpretation Department for their professional support.

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***Formerly known as Corporate Social Responsibility White Paper**