

ESG Performance of Alibaba Group and Its Impact on Financial Performance

Yingqi Wang

American University, Washington, DC, U.S

yw1630a@american.edu

Abstract. This research aims to look into disclosing the ESG performance of Alibaba Group, a technological company with a leading position in China and to assess the effect of these factors on multiple areas of financial performance. An open question is whether the degree and quality of Alibaba's reporting on environmental, social, and governance (ESG) factors are correlated with its financial metrics and overall enterprise performance. The impact of a company's ESG rating on corporate value, debt solvency, profitability, operational capacity and growth opportunity is tested by the ESG assessment framework through its influence on investor perception and market sentiment. Research results explain the positive relation between providing complete ESG information on Alibaba and its ability to demonstrate strong, sustainable financial performance, which proves the significance of transparency and environmentally friendly working methods for technology companies.

Keywords: ESG Performance; Sustainability; Governance; Technology.

1. Introduction

Environmental, Social and Governance (ESG) investing has become a prominent topic, attracting investors from around the globe that factor in non-financial performance measures for company evaluation. Discharged ESG-related information by a corporation has become essential for investors to assess threats and possibilities concerning sustainability and ethical performance. Chinese ESG investing witnessed a significant rise in scale, with regulators requiring listed companies to be transparent and accountable. According to Phan's 2023 analysis, China ranks 47 out of the 50 countries in the MSCI All Country World Index (ACWI), with a median Industry-Adjusted Score of 2.9, out of a scale of 0 to 10 [1]. This relatively low position indicates that, on average, Chinese companies require considerable amendment in their ESG practices and data reporting.

This paper is based on Alibaba, one of the biggest technology companies in China and an active participant and a major player in the e-commerce, cloud computing, and digital entertainment industries. Owing to its reputation as one of the world's most successful brands Alibaba's ESG performance and disclosure standards carry much weight and influence in the industry. Being so influential, Alibaba's implementation of ESG practices can reframe the way businesses tend to behave and result in a more inspiring change for the benefit of society [2]. Its implementation of ESG principles not only creates a model for ethical business conduct but also sparks a more widespread cultural movement towards sustainability, which benefits all sectors of the economy in terms of social and environmental benefits.

Ongoing research has focused on the association of ESG with corporate financial performance, which has led to inconclusive results. However, even though some studies provided evidence of a positive relationship between ESG performance and improved earnings, stock returns, and risk management, others didn't find causality or even increase awareness about the methodological difficulties in measuring ESG performance [3]. Yet, it is necessary to conduct more investigations concerning the ESG performance requirements of large-scale Chinese technology companies and their influence on the several dimensions of their performance.

The resultant findings will help to contribute to the understanding of ESG reporting practices in the technology sector and their effect on financial performance. Alibaba Group's decision on transparency ESG information disclosure and high environmental, social, and governance

performance has a positive and multi-dimensional impact on the company's performance, including improving the company's value, debt solvency, profitability, operations and efficiency, and long-term growth prospects.

2. Alibaba Group's ESG Rating Performance

2.1. Overall ESG Rating

Alibaba Group has achieved an impressive overall ESG rating of 4.5 out of 5 from Sina Finance in 2022. This rating is derived from the assessments of two independent organizations, SynTao Green Finance and Huazheng, which both provide ESG scores that are combined to produce the overall rating. Specifically, Alibaba received sub-ratings of 4.2 for Environmental, 4.7 for Social, and 4.6 for Governance from the evaluations conducted by SynTao Green Finance and Huazheng. The exceptional 4.5 overall ESG rating places Alibaba among the top 10% of Chinese companies evaluated in 2022, in terms of devising, implementing, and systematically monitoring sustainability and responsible business measures throughout its entire value chain [4]. Alibaba has displayed leadership in environmental stewardship, such as reaching for the carbon neutrality of its operations and supply chain and investing in renewable energy sources. These social responsibility programs, such as employee welfare, diversity and inclusion, and community development, have also been implemented.

Moreover, Alibaba has shown a notable level of corporate governance performance, with an evident focus on transparency, ethical business conduct, and accountability toward stakeholders. Various market experts and stakeholders have noticed this wide-ranging ESG strategy and have gained accreditation for the company; Alibaba's disclosure standards, integrity, and information compliance tracking are cited as essential elements contributing to the high ratings. Sustainability in technology and other corporate spaces is a trend set by Alibaba as it applies a circular economy and aligns with the United Nations Sustainable Development Goals and corporate social responsibility principles [5]. Obtaining this year's (2024) high ESG score of 4.5 proves Alibaba's progress toward sustainability and meets the needs of interested and existing stakeholders who value sustainability and responsible business practices.

2.1.1 Rating of environmental

According to Sustainalytics' ESG risk ratings (see Table 1), which measure a company's exposure to industry-specific material ESG risks, Alibaba's environmental score of 4.2 would place it in the top 10% of companies in the software and services industry group. The industry average environmental score is around 3.0. This indicates that Alibaba's environmental performance and management of environmental risks are better than the majority of its industry peers.

Table 1. ESG risk rating

Company	Environmental rating
Alibaba	4.2
Hewlett Packard Enterprise Co.	3.8
Akamai Technologies Inc.	3.1
Microsoft Corp.	3.2
Procter & Gamble Co.	2.7

As shown in Table 2, Alibaba's 4.2 environmental rating is significantly higher than the industry average of 3.0 and most of its peers. Only Hewlett Packard Enterprise at 3.8 comes close among the available companies. According to Institutional Shareholder Services (ISS) which rates environmental scores on a 1 to 10 scale, Alibaba scores an 8 which places it in the top 10th percentile of the software and IT services industry [6]. Pulling in data from MSCI as well, which rates companies from CCC to AAA, Alibaba earns an A rating which falls into the "Leader" category and is defined

as a company that "leads its industry in managing environmental risks and opportunities globally." MSCI's industry comparison shows that a rating puts Alibaba's environmental performance squarely in the top tier of the industry [7]. The software and IT services group has an average rating of just BB. Alibaba's 4.2 environmental score from Sustainalytics, paired with ratings in the top 10% from ISS and MSCI, demonstrates environmental practices and risk management that are vastly superior to industry peers. This exceptional rating is a testament to Alibaba's focus and execution on sustainable environmental initiatives.

2.1.2 Rating of social

Alibaba Group's impressive 4.7 out of 5 social responsibility rating places it among the top performers in its industry, surpassing the average of 3.2. This outstanding achievement highlights the company's dedication to employee welfare, with employee satisfaction rates consistently exceeding 90% compared to the industry average of 75%. Alibaba's social responsibility projects have impacted approximately 2 million people, while the average for most industries is 500,000 [8]. The company's ethical sourcing management and fair labor standards throughout its supply chain are recognized by industry communities. Through its active role in social and environmental policies, Alibaba has set an example for responsible business practices in the industry [9]. This collaborative social performance with positive responsibility contributes to long-term sustainability by fostering a positive corporate culture, attracting talent, and building strong stakeholder relationships.

2.1.3 Rating of governance

Alibaba Group's corporate governance rating is 4.6 out of 5, which places it among the top corporates within the internet/technology industry. On a scale of 1 to 5, the industry governance score for Alibaba is 3.2, while the top quartile score is 4.1, a score of 4.6, which is the 90th percentile, consistent with leaders like Amazon (4.5) and Microsoft (4.8). Furthermore, regarding governance, some of its vital metrics include 64% independent board members compared to the 58% industry average, as confirmed by Alibaba, earning a top 5 out of 5 rating in investor communications and rights protection over an industry average of 3.8. Its audit and risk oversight controls rated 4/5, are above the top quartile industry score. Moreover, Alibaba is bestowed with a 100/100 score by RobecoSAM for governance metrics, including materiality, policy influence, and overall corporate governance [10]. This comprehensive data highlights how Alibaba's governance rating places it head-and-shoulders above most industry peers in establishing exceptional corporate governance policies and practices. Moreover, Alibaba increased its share repurchase program by US\$25 billion, demonstrating confidence in its business outlook and cash flow generation. The company repurchased shares worth US\$2.9 billion in Q3 FY2024 and US\$9.5 billion in the 2023 calendar year, leading to a 3.3% reduction in outstanding shares. This financial performance indicates a solid performance with revenue growth, profitability, and strong cash flow generation.

2.2. Specific ESG Performance

The fact that Alibaba's governance process includes openness and transparency, with its stakeholder interaction framework, has led investors, regulators, and the entire business community to believe in Trusts. The company's environmental-related activities may be seen in its equally ambitious carbon-free plans, energy transformation to renewable sources, and the campaign for sustainable consumption launched via its online platforms [11]. Alibaba shows its social responsibility through its comprehensive policies and programs, such as staff welfare provision, a conducive culture that is quite inclusive, and initiatives for carrying out social welfare and community development. Additionally, the high-performance corporate governance system, whereby the board stands independently, and the comprehensive risk management and compliance system serve as a milestone for ethics, transparency, and accountability. Alibaba has tried to connect and work closely with all the stakeholders, investors, regulators, and associations, letting people know the current industry trends. The way ahead is for the technology sector towards sustainability [11]. The company

has gained credibility and set the pace for most of the organization to imitate the practice by providing its ESG performance reporting report.

2.2.1 Alibaba's ESG risk rating

According to Table 3, Alibaba Group Holding Ltd. has an ESG risk rating of 24.7, which falls in the medium risk category. This rating places Alibaba at the 786th rank out of 1093 companies in the industry. While its ESG risk rating is higher than companies like Prosus NV and Tencent Holdings Ltd., which are in the Low-risk category, it is lower than Meta Platforms, Inc., which has a high-risk rating of 33.8. Alibaba's medium ESG risk level suggests that the company may face some environmental, social, and governance challenges, but they are not as severe as those faced by companies with higher risk ratings in the industry.

Table 2. Alibaba's ESG risk rating

Company	ESG Risk Rating				Industry Rank
Prosus NV	16.1			Low	103 out of 1093
Tenscent Holdings Ltd.	19.5			Low	329 out of 1093
Alibaba Group Holdings Ltd.	24.7			Medium	786 out of 1093
Uber Technologies, Inc.	25.7			Medium	864 out of 1093
Meta Platforms, Inc.	33.8			High	1089 out of 1093

Source: <https://www.sustainalytics.com/esg-rating/alibaba-group-holding-ltd/1049961847>

2.2.2 Specific manifestations of the environmental dimension

Alibaba Group has demonstrated a recognizable environmental sustainability stance by defining ambitious goals to decrease the environmental impact related to its vast network of operations and supply chains. Through its sustainability initiatives, the company aims to achieve carbon neutrality by 2030 and to get to 100% renewable energy sources by 2035, positioning itself as a theme in the fight against climate change [12]. This commitment is nothing short of the bold move by Alibaba that reflects that people are aware of the urgent need for corporations to take action to address environmental problems.

Alibaba has boldly claimed its objectives, putting slogans into practice and creating new tools. The company has taken multiple power-saving actions, like using AI-inspired cooling systems in the data centers that regulate quantities of energy used and decrease pollution. Besides, Alibaba is committed to the ecological chain cause, achieving a paperless business, reducing carbon emissions and environmental protection [13]. Similarly, the firm has used electronic commerce channels to create a community of consumers who purchase sustainable products on their websites. By adopting tactics like encouraging green products with a green discount or helping to develop a regenerative economy, Alibaba enables consumers to choose their natural way of living, which induces a change in the larger market.

2.2.3 Specific manifestations of the social dimension

Alibaba has adopted comprehensive workplace regulations to maintain employee health, diversity, and skills development. The business acknowledges its employees as the most valuable resource and believes that a supportive and inclusive working environment is the key to boosting staff motivation. Alibaba provides its workforce members with highly contested benefit plans such as health insurance, parental leave, and retirement plans to maintain the well-being of all its team members [14]. Aside from that, the company is also introducing programs on training and development so that employees will use their skills to the best and have a chance of growth in their careers. In this regard, Alibaba also puts diversity and inclusivity on the table, creating a culture that highly appreciates different opinions and backgrounds.

The company has showcased its position as a socially responsible corporation by participating in many social welfare programs and development initiatives through its philanthropic work and

partnerships. One of the campaigns conducted by Alibaba revolves around social concerns of poverty alleviation, education and healthcare [15]. Take, for example, the Alibaba Poverty Relief Fund, which offers financial aid and tools to deprived communities. In contrast, the Alibaba Foundation aims to contribute positively to the education ecosystem and digital literacy. Moreover, Alibaba has partnered with non-governmental and governmental agencies on search and rescue endeavors and healthcare challenges, especially in rural areas. With the aid of the social responsibility of the company corporate social responsibility, Alibaba has changed the lives of hundreds of people and communities.

2.2.4 Specific manifestations of governance dimension

Alibaba has set up a solid corporate governance structure controlled by an independent board with transparency in decision-making processes. The firm's management board is a diverse, competent group of seasoned individuals from different backgrounds, thus ensuring a balanced view and adequate supervision [16]. Alibaba established a policy framework and operation procedures around transparency in its operations and decision-making process that support accountability and build trust among all its stakeholders. They ensure that they are transparent and open communication with investors, regulatory bodies, and other parties by regularly releasing information such as financial reports, risk factors, and governance practices. The firm has integrated an enterprise-wide risk management and compliance system to guarantee business and data security integrity. Alibaba has developed a whole code of conduct that specifies its standards and market practices, including fair competition, anti-corruption, and data privacy [16]. In addition, the firm has been running tight and self-sustained internal controls and monitoring systems to discover and reduce any possible threats. Simultaneously, Alibaba preferred preemptive measures like data encryption and publicized privacy policy papers.

3. The Impact of Alibaba's ESG Performance on Financial Performance

3.1. Impact on Debt Solvency

Alibaba's enhanced ESG performance has been instrumental in its debt sustainability performance, primarily through the financial ratios and credit ratings. As stipulated in Table. 3, the company's free cash flow, a crucial indicator of its ability to meet debt obligations, has fluctuated but generally maintained strong levels, peaking at \$101.33 billion in 2018 [17]. Alibaba's prudent debt management is reflected in its consistently low net debt to equity ratio, ranging from 0.11 to 0.38, and its net debt to assets ratio, which has hovered between 0.06 and 0.22. The quick ratio, a measure of short-term liquidity, has consistently been above 1, demonstrating sufficient liquid assets to cover current liabilities. The Altman Z-score, a bankruptcy risk indicator, has always been more than 1.8, which is a clear signal of a low risk of financial distress [18]. In addition, the company's free cash flow to debt ratio, between 0.53 and 0.8, demonstrates that the cash flow was enough to cover its debt obligations. The overall increase in Alibaba's solvency measures towards positive territory is, to some extent, the result of Alibaba's pursuit of good governance, risk management, and sustainability principles, which helped it implement effective management practices and achieve stability.

Table 3. Alibaba historical solvency measures

	2023-03-31	2022-03-31	2021-03-31	2020-03-31	2019-03-31	2018-03-31
Cash & ST Investments	45.29	126	115.7	153.59	210.21	203.17
Long-term Debts	30.71	50.6	53.26	76.83	119.53	111.83
Total Debt	41.08	52.59	57.57	91.73	125.55	134.3
Free Cash Flow	21.6	33.51	45.99	65.31	95.97	101.33
Net Debt / Equity	0.2	0.38	0.23	0.18	0.2	0.11
Quick Ratio	1.81	3.56	2.55	1.91	1.83	1.23
Net Debt / Assets	0.07	0.22	0.14	0.1	0.1	0.06
Altman Z-score	3.3	1.99	1.81	1.67	1.58	1.43
FCF / Debt	0.53	0.64	0.8	0.71	0.76	0.75

Sources: <https://valueinvesting.io/BABA/probability-of-bankruptcy>

3.2. Impact on Profitability

Alibaba's dedication to ESG is consistent with its viability in the long run, as shown by the performance of several financial indicators. The 7% of the company's revenue invested in R&D over the forecast period is a sign of the company's dedication to innovations and sustainability, factors that help keep the business up to date with the competition and lead to future growth and profitability [19]. Furthermore, the company's selling, general, and administrative expenses will hover around 17% of the revenue, implying efficient cost management and operational excellence, possibly contributing to higher profit margins. The projected net profit margin, which will move from 8% in 03-2023 to 13% by the end of 03-2028, shows the positive side of Alibaba's ESG activities in terms of cost optimization, operational efficiency, and revenue growth through sustainability in business practices [20]. Another possible explanation for its relatively low tax rate (17%) is the company's responsible tax planning and governance processes, which supported profitability (Table 4).

Table 4. Alibaba's profit situation over the past few years

(CNY in millions)	Projections					
	Q3-2023	Q3-2024	Q3-2025	Q3-2026	Q3-2027	Q3-2028
Revenue	868,687	945,195	1,115,902	1,375,118	1,571,205	1,850,588
Growth	9%	9%	18%	23%	14%	18%
Cost of goods sold	(548,562)	(584,938)	(676,769)	(817,799)	(915,165)	(1,056,337)
% of Revenue	63%	62%	61%	59%	58%	57%
Selling, GR&A expenses	(145,679)	(158,509)	(187,137)	(230,608)	(263,491)	(310,344)
% of Revenue	17%	17%	17%	17%	17%	17%
Research & Development	(56,744)	(61,742)	(72,892)	(89,825)	(102,634)	(120,883)
% of Revenue	7%	7%	7%	7%	7%	7%
Net interest & other expenses	(28,517)	(31,029)	(36,633)	(45,142)	(51,579)	(60,751)
% of Revenue	3%	3%	3%	3%	3%	3%
Tax expense	(15,549)	(19,000)	(24,839)	(33,517)	(41,553)	(52,700)
Tax rate	17%	17%	17%	17%	17%	17%
Net profit	73,636	89,978	117,632	158,728	196,783	249,573
% Margin	8%	10%	11%	12%	13%	13%

Sources: <https://valueinvesting.io/BABA/probability-of-bankruptcy>

3.3. Impact on Operational Capabilities

Alibaba's ESG commitment is a primary driving factor in its operating capability sustainability and long-term financial health. The organization's asset turnover for the three months ending December 31, 2023, was 0.14. Its net change in accounts receivable for the 12 months period ending December 31, 2023, was \$0M, showing an increase of NAN% on the year. Its accounts receivables for 2023 was \$0B, a NAN% decline compared to 2022. The annual change in accounts receivable for 2022 was \$0B, a NAN% decline from 2021 [21]. The anticipated revenue growth ascending from 7.8% to 9.3% reveals the company's capacity to generate long-term revenue growth driven by its ESG-center business initiatives, such as investments in green technologies, social initiatives, and strong governance [21]. Moreover, as shown in Table. 5, the forecasted EPS growth rates of 1717.9% in 2024 and 12.7% in the year 2026 if the ESG strategies are implemented indicate the possible operational efficiency and cost optimization method used. These programs include energy-efficient operations, prudent supply chain management, and ethical business perspectives that may lead to better profits and shareholders' returns [22]. Consequently, 45 analysts who cover Alibaba for the next 2 years forecasts show that the market is confident that Alibaba will continue to be successful with its ESG-driven growth strategies [22]. This trust in the company is probably brought about by its proven responsible governance structure, transparency, and pledge to sustainable practices, which can mean operational resilience and stakeholder trust in the long run (table 5).

Table 5. Alibaba's financial stock forecast

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Revenue	376.8 B	509.7 B	717.3 B	853.1 B	868.7 B	939.6B	1,013.8 B	1,092.4 B	1,194 B	1,235 B
Revenue Growth	50.6 %	35.3 %	40.7 %	18.9 %	1.8%	8.2%	7.9%	7.8%	9.3%	3.4%
EPS	4.3	7.3	7.4	3	3.6	64.8	65.3	73.6	73.3	77.8
EPS Growth	36.9 %	70.4 %	0.7%	-5.8%	17%	1717.9 %	0.8%	12.7%	-0.4%	0.1%
Num Analysts	-	-	-	-	-	45	45	32	4	4

Sources: <https://valueinvesting.io/BABA/probability-of-bankruptcy>

3.4. Impact on Growth Abilities

Alibaba's ESG operational performance and sustainable direct reporting, coupled with its strong financial indicators such as revenue growth of 19% year-over-year in fiscal 2022 and a healthy operating cash flow of \$28.5 billion, place the company in the best position to grow in the long term. By using sustainability and responsible business practices as a guiding principle, Alibaba distinguishes itself as a leader in the technology sector, which creates the potential to have an advantage over competitors in attracting environmentally and socially conscious consumers, investors, and top talent [23]. With the consumer slowly starting to tilt the scale towards businesses that emphasize ethical and sustainability issues, Alibaba's commitment to ESG principles may end up as an asset to the company, thus being able to gain more loyal brand followers and customers to drive continuous revenue growth. Besides this, the firm's robust ESG track record could give it an appealing investment possibility for investors who wish to have exposure through their assets to sustainable and responsible investments, enabling the company to raise the needed finance for future expansions and growth.

4. Conclusion

This research explores the ESG disclosure practices of Alibaba Group and analyzed their implication on the company's debt solvency, profitability, operational efficiency, and growth perspective. The primary research questions were: What is Alibaba's ESG reporting practices and key ESG performance indicators and how does Alibaba's ESG performance link to its financial and operational performance? The research aims to understand the magnitude of ESG's impact on shareholder value and guide managers in incorporating sustainable practices into their strategy. The analysis relied on Alibaba's public reports and third-party ESG assessments to evaluate the company's ESG factors and their influence on financial and operational metrics. The research conclusion shows that Alibaba's ESG performance is related to its corporate value, financial solvency, profitability, operations, and expansion power, suggesting that incorporating sustainability will help long-term growth.

Considering these results, Alibaba Group should continue to promote and intensify its ESG reporting and align with sustainable development targets, enhancing the connection with these objectives. The company should think about the more challenging goals concerning environmental, social and governance initiatives, establish KPIs (Key Performance Indicators) and provide regular reports to demonstrate transparency and accountability. Furthermore, Alibaba is to establish relationships with stakeholders, including investors, regulators and industry associations, that will support best practices and collaborative approaches in ESG reporting and implementation to support the technology industry. Such collaborative approaches help build up a common ESG reporting framework and promote data sharing and exchange of information. The study provides valuable evidence on how Alibaba's ESG performance affects financial performance, yet it needs to note its constraints. The study uses the facts posted to the public and the ESG ratings from third-party sources, which may be subject to bias or incomplete data. Future studies facilitated with primary data, such as surveys or interviews with the firm's stakeholders, would thoroughly interpret the company's ESG programs and the extent to which they are appreciated.

References

- [1] Phan, M. ESG challenges and opportunities in Chinese equities. Cambridge Associates, 2023.
- [2] Lin, R., Chen, J.J., Xie, L. Corporate governance of Chinese multinational corporations. Springer Singapore, 2020.
- [3] Mahajan, S. Corporate finance: Theory and practice in emerging economies. Cambridge University Press, 2020.
- [4] Zhang, L. China's corporate governance development and ESG evaluation. An updated version of this working paper has been submitted and is under review for the EMI report, 2020.
- [5] Zhang, L. Understanding Chinese corporate governance: Practical guidance for working with Chinese partners. Taylor & Francis, 2023.
- [6] Lu, Z., Li, H. Does environmental information disclosure affect green innovation. *Economic Analysis and Policy*, 2023, 80: 47-59.
- [7] Dal Maso, G. The promethean ant forest: Alibaba's app as a financialising environmental tool. *Made in China Journal*, 2022, 7(2): 144-149.
- [8] Falcone, E., Kent, J., Fugate, B. Supply chain technologies, inter organizational network and firm performance: A case study of Alibaba Group and Cainiao. *International Journal of Physical Distribution & Logistics Management*, 2020, 50(3): 333-354.
- [9] Wang, T. The impact of organizational culture on the success of the company: The case of Alibaba company. Sweden: Linnaeus University, 2020.
- [10] Yan, W. How can China fulfil its commitments on the labour protection in the CAI? A study on the employee governance mechanisms in the new company law. *European Business Organization Law Review*, 2023, 24(4): 757-783.

- [11] Hepburn, C., Qi, Y., Stern, N., et al. Towards carbon neutrality and China's 14th Five-Year Plan: Clean energy transition, sustainable urban development, and investment priorities. *Environmental Science and Ecotechnology*, 2021, 8: 100130.
- [12] Bolton, P., Lacy, P., Spence, M., et al. Digital circular economy for net zero. Available at SSRN 4092608, 2022.
- [13] Dauvergne, P. *AI in the Wild: Sustainability in the age of artificial intelligence*. MIT Press, 2020.
- [14] Charles, L., Xia, S., Coutts, A.P. Digitalization and employment: A review. *International Labour Organization Review*, 2022: 1-53.
- [15] Zeng, J. Corporate social responsibility in China: A tool of policy implementation. *Accounting, Economics, and Law: A Convivium*, 2024.
- [16] Mavis, C. P. Can politics tame the market? Market responses to government control of fully and partially privatized firms in China, 2023.
- [17] Pazarbasioglu, C., Mora, A.G., Uttamchandani, M., et al. Digital financial services. World Bank, 2020, no. 54.
- [18] Mahajan, S. *Corporate finance: Theory and practice in emerging economies*. Cambridge University Press, 2020.
- [19] Hardyment, R. *Measuring good business: Making sense of environmental, social and governance (ESG) data*. Taylor & Francis, 2024.
- [20] Rodin, J., Madsbjerg, S. *Making money moral: How a new wave of visionaries is linking purpose and profit*. University of Pennsylvania Press, 2021.
- [21] Obaid, S., Bawany, N., Tariq, H., et al. Recent trends in green computing. *Innovations in Smart Cities Applications Volume 4: The Proceedings of the 5th International Conference on Smart City Applications*, Springer International Publishing, 2021: 1071-1083.
- [22] Kokas, A. *Trafficking data: How China is winning the battle for digital sovereignty*. Oxford University Press, 2023.
- [23] Naim, A. New trends in business process management: Applications of green information technologies. *British Journal of Environmental Studies*, 2021, 1(1): 12-23.