INTERNATIONAL JOURNAL OF BUSINESS AND MANAGEMENT (IJBM)
ISSN: 2815-9330 (Online)

VOL. 5, NO. 4 2026 https://iessociety.org/

Usage of blockchain technology and shareholder-oriented firm performance: Evidence from Indian listed firms

Dikshita Thakkar[1] and Dr. Himanshu*[2]

[1] [2]Netaji Subhas University of Technology, New Delhi India

Email: dikshita.thakkar.phd23@nsut.ac.in[1]

*Correspondence: himanshu.mgmt@nsut.ac.in

Abstract

Blockchain technology (BCT) is increasingly used to improve transparency and reduce information asymmetry within firms, yet evidence on how its usage affects shareholder-oriented firm performance (SFP) remains scarce, especially in emerging economies. This study examines whether usage of blockchain technology is associated with SFP among non-financial firms listed on the National Stock Exchange of India from 2016 to 2024. Usage is measured as a time varying binary indicator drawn from Compustat Global database and validated through textual analysis of annual reports. SFP is measured using the price to book value ratio, earnings per share, and the dividend payout ratio. A two-step system generalized method of moments estimator is used to address dynamic persistence and endogeneity, based on 3,501 firm year observations for 389 firms using BCT. The results show that usage of blockchain technology is positively associated with all the three measures. The association is significant at the 5 percent level for earnings per share and at the 10 percent level for the price to book value ratio and the dividend payout ratio. The study contributes to the fintech and corporate finance literature by providing multi-indicator evidence from an emerging market. It also offers implications for managers, investors, and policymakers who evaluate the financial returns to blockchain investment. The findings should be interpreted with caution given the modest significance levels and the binary measure of BCT usage.

***Keywords*:** Usage of blockchain technology, Shareholder Oriented Firm Performance, Price to Book Value Ratio, Earnings per Share, Dividend Payout Ratio, System GMM, Indian Listed Firms

JEL Classification: G32, G35, O33

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

1. Introduction

Emerging technologies like artificial intelligence, big data, blockchain, cloud computing, have revolutionized the way firms generate value, engage with their stakeholders and compete in fast-paced business environments (Bhardwaj et al., 2026a). Among these, BCT has gained substantial attention with its decentralized, immutable, transparent, and trustworthy ledger without any centralized third-party intermediary (Bellucci et al., 2022; Bhatia et al., 2024). BCT was first introduced to facilitate cryptocurrencies, but its usage has expanded into various domains such as accounting, auditing, financial reporting, supply chain management, corporate governance (Dai and Vasarhelyi, 2017; Fortin et al., 2025; Han et al., 2023; Jackson and Allen, 2024; Nakamoto, 2008; Tawiah et al., 2022). Blockchain is considered a building block for digital transformation in the business world, as it helps organizations to rethink business processes while providing greater transparency and organizational trust. Due to the increasing incorporation of blockchain into the business core, there arises a need to study the economic consequences of usage of blockchain technology. BCT is a decentralized, immutable, traceable, real-time, and distributed ledger that improves the quality of information and decreases the information asymmetry between managers and external stakeholders (Thakkar & Himanshu, 2026; Yang and Son, 2025). It reduces agency conflicts by reducing managerial discretion in recording transactions (Yu et al., 2018). It also reduces transaction costs through automation with smart contracts and real-time verification. The successful implementation of BCT builds confidence in the technology and the organizational innovativeness that positively effects investors' perceptions of future growth opportunities (Liao et al., 2025). These characteristics indicate that usage of blockchain technology affects firm value and the shareholder-oriented performance of firms.

Although BCT is increasingly gaining importance for strategic purposes, empirical evidence on the effect of usage of blockchain technology on SFP is limited. Prior studies on BCT have largely focused on technology adoption, supply chain management, financial reporting quality, auditing, investment efficiency and earnings management (Chen et al., 2023; Du et al., 2023; Fang et al., 2023). While numerous studies have investigated the adoption of BCT, there is little research on quantifiable improvements of SFP, especially based on multiple indicators. The prior research is mostly conducted using a single measure (e.g., Tobin's Q or stock returns) and therefore only gives part of the picture on the reaction of capital markets to blockchain implementation (Fang et al., 2023; Sharma et al., 2023). Overall, the effect of usage of blockchain technology on SFP is still unclear, with some evidence indicating benefits and others suggesting drawbacks (Li and Wan. 2021; Sharma et al., 2023). To fill this gap, the study analyses the effect of BCT on SFP following its usage by employing system-GMM estimation. Blockchain usage is a binary time-indicating variable whereas SFP is measured with three proxies, namely price-book value ratio, earnings per share and dividend payout ratio.

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

The study contributes in three aspects. Firstly, it takes blockchain research one step further from operational and accounting results to the shareholder-oriented firm performance indicators. Secondly, the study looks at firm performance from the viewpoint of shareholders by means of three complementary indicators: the price-to-book value ratio (PBV), earnings per share (EPS), and the dividend payout ratio (DPR). These measures reflect different but related outcomes that are important to shareholders. By examining these outcomes individually, a more comprehensive evaluation of the effects of usage of blockchain technology on shareholders can be obtained than would be possible by relying on a single performance measure. These measures explain different aspects of firms' performance from various aspects, in terms of expectations of investors, returns to shareholders and dividend payments. Thirdly, the study offers empirical evidence from the emerging economy, where empirical studies on blockchain are still relatively scarce. Finally, the study contributes to the understanding of how the usage of BCT generates value in organizations by considering various theoretical lenses.

The rest of the paper is organized as follows. Section 2 presents the theoretical background and research hypotheses. The methodology of research, sampling, variables measurement and empirical models are explained in section 3. The empirical results are given in Section 4. Discussion and implications of the study, both theoretical and practical, are presented in section 5, and the study is concluded in section 6.

2. Theoretical Background & Hypothesis Development

2.1 Usage of blockchain technology as a Strategic Organizational Capability

The blockchain has grown from a cryptocurrency use case to become a core digital infrastructure that can be applied to a wide range of organizational processes, governance structures and value-creation processes (Smith et al., 2024). Blockchain is a decentralized distributed ledger where transactions are cryptographically verified, time-stamped and permanently recorded across multiple participants on the network, in contrast to traditional, centralized information systems (Fang et al., 2023; Thakkar & Himanshu, 2026). These features provide a level of transparency, immutability, traceability and security that significantly decreases the likelihood of information being manipulated or altered by unauthorized users (Luo et al., 2024; Zang, 2012). When it comes to strategic management, the usage of blockchain goes beyond technology. Blockchain is not simply an information technology investment; it is a strategic capability of an organization that transforms the way firms create, validate, share, and use information (Smith et al., 2024). The technology connects operational processes across organizational boundaries, enhances stakeholders' coordination and supports the real-time sharing of information without the need for a central intermediary. As a result, blockchain has been seen as a key piece in the digital transformation of companies and their usage has been growing.

Information intensive fields where the quality of decisions relies heavily on the accuracy, timeliness and transparency of information are especially significant in terms of the strategic

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

importance of blockchain. The fields of information are important, with blockchain's strategic implications being especially apparent in environments that depend on the accuracy, timeliness and transparency of information. By providing permanent records of transactions and automated verification processes, blockchain enhances the trustworthiness of financial and operational data, alleviates agency conflicts, cuts down on monitoring expenses and transaction inefficiencies. These changes increase efficiency in the organization, boost the trust of stakeholders, and improve the organization's performance.

Investors in capital markets are now looking at companies beyond just past performance to also determine the technological prowess and future growth of a company. The use of sophisticated digital technologies often acts as a positive signal to the market about the management's skill level, the organization's innovation, and future competitiveness. In addition to the operational advantages, the usage of blockchain could potentially shape investor expectations, as it demonstrates a company's commitment to the technological modernization and sustainable value creation of its operations. With these strategic features, the use of blockchain should not be regarded as just an operational innovation, but as a competency of the firm that can create long-term competitive advantages. These advantages can be better understood through several complementary theory points of view of how they affect the market.

2.2 Theoretical Foundations

2.2.1 Stakeholder Theory

Stakeholder theory is a management approach that suggests that firms generate long-term value through their ability to develop effective relationships with various stakeholders such as investors, customers, suppliers, employees, regulators, and society (Freeman, 2010; Han et al., 2023). In addition to financial performance, building trust and legitimacy is an essential component of organizational success and blockchain enhances stakeholder relationships by making transaction processes more transparent, traceable, accountable, and secure with improved data integrity. stakeholders receive more reliable financial data due to enhanced transparency and efficient coordination enabling greater auditability (Akter et al.,2024; Jiang et al., 2025; Jumah and Li, 2023; Pflueger et al., 2024). Higher stakeholder trust leads to less uncertainty about an organization's performance and better firms' reputation in the capital markets. As a result, blockchain integration enhances organizational legitimacy, potentially leading to a greater market valuation and increased shareholder value (Smith et al., 2024).

2.2.2 Transaction Cost Economics

From the lens of Transaction Cost Economics (TCE) theory, BCT significantly reduces costs of searching, negotiating, monitoring, enforcing, and executing economic transactions. These transaction costs are significantly lowered by automating the verification process, facilitating peer-to-peer transactions, executing smart contracts, and sharing verified information (Li et al., 2022).

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

Reduced transaction costs boost the operational efficiency, cut down on administrative costs, speed up business processes and boost organizational productivity. These efficiency gains provide the competitive edge to the firms using BCT and lead to better performance in the market (Li et al., 2022; Sun et al., 2025).

Together stakeholder theory (trust and legitimacy) and TCE (transaction cost reductions) offer complementary arguments for why blockchain enhance firms' market valuation and depict how usage of blockchain technology can affect SFP.

2.3 Literature review

Over the last decade, the applications of blockchain in business have grown significantly. In addition to cryptocurrencies, companies are increasingly using blockchain to improve financial reporting, use smart contracts in contracts, increase traceability in supply chains, boost cybersecurity, minimize fraud and enhance data integrity (Hasan et al., 2020; Sim & Jang, 2023). Shareholder-oriented firm performance (SFP) is the firm-level outcome that directly reflects the economic consequences of the firm's activities for shareholders. In this study, SFP is conceptualized as a multidimensional construct consisting of three complementary dimensions: market valuation, earnings attributable to shareholders, and distribution of earnings to shareholders. Therefore, SFP is measured by price to book value ratio (PBV), earnings per share (EPS) and dividend payout ratio (DPR) respectively. PBV measures the market valuation of the shareholders' equity relative to its accounting book value and thus it reflects investors' expectations about the future value of the firm. EPS measures the earnings per ordinary share and is the firm's earnings result from the shareholders' point of view. DPR measures the percentage of earnings distributed to shareholders, and thus measures firm's shareholder distribution policy. Because these measures focus on related but different dimensions of shareholder-oriented outcomes, they are considered separately rather than combined into a single index.

2.3.1 Usage of blockchain technology and Price-to-Book value Ratio

The Price-to-Book (PBV) ratio measures the premium that capital market investors assign to a firm's equity relative to its net physical asset book value. Because usage of blockchain technology is primarily conceptualized as an intangible technological asset and organizational routine, its strategic value-added potential is not capitalized on the balance sheet under historical cost accounting standards (Sim & Jang, 2023; Zhang & Ruan, 2024). Rather, the market-clearing price of the stock incorporates this premium, directly driving up the PBV ratio (Chen et al., 2026; Sim & Jang, 2023; Zhang & Ruan, 2024). A key operational channel that mediates the PBV ratio premium is information transparency (Ali et al., 2023; Zhang & Ruan, 2024). Usage of blockchain technology significantly mitigates information asymmetry and enhanced transparency lowers the equity cost of capital, allowing investors to pay a premium price, thereby increasing the PBV ratio (Zhang & Ruan, 2024).

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

However, on the other hand, Li & Wan (2021) and Fortin et al. (2025) demonstrated that usage of blockchain technology is heavily compromised by corporate hype in emerging capital markets. Specifically, lower-performing, distressed firms have a much stronger incentive to disclose blockchain "plans" or "activities" in their annual reports purely as a speculative gimmick or hype to capture short-term positive investor sentiment and temporarily inflate stock turnover and Cumulative Abnormal Returns. In reality, these "hype" firms do not increase R&D expenditures, investment, or blockchain patents. Because their underlying corporate operational and governance defects remain uncorrected, their long-term growth rate of income, government innovation subsidies, and financial performance continue to decline, causing Price-to-Book (PBV) ratio to significantly decline in the long run (Li & Wan, 2021; Fortin et al., 2025).

H1: Usage of blockchain technology is positively associated with firms' PBV ratio.

2.3.2 Usage of blockchain technology and Earnings per Share

Earnings per Share (EPS) is a measure of the profits available for each ordinary share in the company. Blockchain contributes to operational efficiency through reduced transaction costs, improved processing accuracy, resource productivity and internal control. These enhancements result in improved profitability and shareholders' earnings for firms in the long term (Ali et al., 2023). BCT can simplify business processes, automate manual workflows, and save costs on financial intermediaries (clearing houses, third-party payment gateways, etc.). Smart contracts automate the execution of contracts and reduce time and cost of monitoring. Empirically, Hasan et al. (2020) and Pan et al. (2020) showed that BCT usage is positively associated with asset turnover and negatively with sales expense rate, which ultimately resulted in significant improvement in the overall operational efficiency of the firms. BCT reduces inventory carrying cost and double spending risk by optimizing the logistics supply chain and helping to join the demand in real time (Fortin et al., 2025; Srivastava et al., 2026). Furthermore, the BCT is a solution to the fundamental problem of principal-agent relationship in corporate governance. BCT can have an impact on information asymmetry between manager (agent) and owner (principal) by keeping a record of all of the company's financial transactions in an immutable, decentralized, and tamper-proof ledger (Du et al., 2023). The system of corporate governance that is embedded in code removes the need for costly oversight and monitoring from the principals. These agency costs are subsequently lowered and significant process efficiencies mean that the firm's net income directly improves, and consequently the effect on Earnings Per Share (EPS) is positive and significant. An understanding of how blockchain improves the efficiency of operations and lowers transaction and agency costs is crucial to understanding the effect on Earnings Per Share (EPS) from implementing BCT.

H2: Usage of blockchain technology is positively associated with firms' Earnings per Share.

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

2.3.3 Usage of blockchain technology and Dividend payout

The dividend policy reflects the ability of the companies to ensure sustainable cash flows and financial stability (Pramahender et al., 2021; Essel, 2026). As the firms become more efficient and financially sound with usage of blockchain technology, they may be able to payout more dividends to shareholders. Increased transparency also could help eliminate uncertainty of cash flows in the future, allowing managers to adopt more stable dividend policies.

Dividends payout represents the direct distribution of accumulated corporate earnings to common shareholders, acting as a crucial indicator of a firm's long-term operational viability and financial health (Ali et al., 2023, Rani et al., 2026). Usage of blockchain technology serves as a powerful foundation that supports a stable, growing dividend payout policy through two key mechanisms: (1) cash flow stabilization, and (2) fraud and default risk mitigation (Chen et al., 2023; Klöckner et al., 2022). By utilizing BCT to automate supply chain logistics and optimize inventory management (reducing days of inventory and increasing inventory turnover rates), firms achieve streamlined working capital cycles and stable, highly predictable operational cash flows (Bag et al., 2023; Li et al., 2022). Additionally, synchronized ledger, cryptographic verification, and smart contract execution eliminate the risks of duplicate transactions, partner default, and financial statement manipulation (Ezzi et al., 2023; Fortin et al., 2025).

A firm with highly stable, verified cash flows and minimized risk of cash constraints is capable of committing to and sustaining a high dividend payout ratio. From a capital market perspective, the announcement of usage of blockchain technology itself triggers positive market signaling. Ali et al. (2023) analyzed stock returns and demonstrated a significant short-term abnormal return on the day of a BCT announcement. This market reaction is significantly more pronounced when the BCT project is explicitly designed for cost and time savings, providing a credible efficiency-oriented signal to the market. By enhancing cash flow predictability and signaling operational strength, usage of blockchain technology enables firms to reward shareholders with superior and highly sustainable dividend payout (Ali et al., 2023).

H3: Usage of blockchain technology is positively associated with firms' dividend payout ratio.

3. Research Design

3.1 Data and Sample

India is an appropriate institutional setting for analyzing this relationship. Indian government initiatives such as Digital India have made tremendous strides in financial technology, digitalization of company processes and infrastructure over the last ten years. The digital transformation of businesses is gaining momentum as a result of the government's digital innovation initiatives, the rising investments in technologies of the "Industry 4.0" and the usage of blockchain in financial services, manufacturing, logistics, and information technology (Bhardwaj et al., 2026b, Himanshu & Baker, 2025). With these developments, it is crucial to explore the

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

potential of blockchain in improving the shareholder-oriented performance of companies in Indian context.

The empirical analysis is conducted on the all the companies using BCT and listed on the National Stock Exchange (NSE) of India. The study period covers years 2016 to 2024, when the world is witnessing fast digital transformation and the growing usage of BCT in diverse corporate sectors. Out of total 2 439 companies listed on NSE, 495 financial companies such as banks, insurance companies and other financial service companies are excluded as their accounting practices, capital structures and performance indicators are significantly different from those of non-financial companies and may introduce estimation bias. Also, the sample excludes 642 firms that don't have enough financial data or don't report annually. Out of remaining companies, 389 companies are identified as blockchain adopters based on the identification and validation procedure. The final and consistent sample of 3501 company-year observations is used for all metrics.

3.2 Variable Measurement

The variables were categorised into three categories: dependent variable, independent variable, and control variables.

3.2.1 Dependent Variable

The dependent variable of the study is the shareholder-oriented firm performance (SFP). Following the conceptualization discussed in Section 2.3, SFP is viewed as a multidimensional construct that consists of three different shareholder-relevant outcomes: market valuation, earnings attributable to shareholders and distribution of earnings to shareholders. Thus, three complementary measures are used: Price-to-book value ratio (PBV), Earnings per share (EPS) and Dividend payout ratio (DPR). These measures are considered as separate measures of different dimensions of shareholder-oriented performance, rather than as alternative measures of the same outcome.

i. Price-to-book value Ratio (PBV): The Price-to-book value ratio captures the market valuation of a firm relative to its book value and reflects investors' expectations regarding its future growth and value. Higher values indicate stronger investor expectations concerning future profitability.
ii. Earnings per Share (EPS): Earnings per share measures profitability attributable to ordinary shareholders and reflects shareholders' earnings generated by each outstanding share.
iii. Dividend payout ratio (DPR): Dividend payout measures earnings distributed to shareholders. Higher DPR generally reflects stronger financial capacity and dividend-paying ability.

Thus, these three measures are used as complementary indicators of SFP. PBV captures the market-valuation dimension, EPS captures the shareholder-earnings dimension and DPR captures the shareholder-distribution dimension.

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

Their calculation is shown in Table 1.

3.2.2 Independent Variable

Usage of blockchain technology is the explanatory variable of the study. The data on BCT usage is obtained from the Compustat Global database (Autore et al., 2024), which provides firm-level information on its usage. To enhance the reliability and validity of the database-based classification, the reported usage of blockchain technology information was subsequently validated through a systematic textual analysis of firms' annual reports. For each firm identified as using BCT in Compustat Global database, the corresponding annual reports were examined to verify the existence and timing of usage of blockchain technology. The textual analysis involved searching annual reports for references to blockchain technology and its related terminology. The usage was validated when the annual report provided evidence of the firm's implementation, deployment, use, or integration of blockchain technology into its business activities or organizational processes. The first year in which usage of blockchain technology is identified in the Compustat and supported by the firm's corporate disclosure is treated as the usage year. Based on this procedure, 389 NSE-listed companies were identified as firms using BCT.

The usage of blockchain technology variable ($\boldsymbol{BCT_{it}}$) is constructed as a binary, time-varying variable:

$$\boldsymbol{BCT_{it}} = \begin{cases} \mathbf{0} & \text{if firm } \boldsymbol{i} \text{ has not adopted blockchain by year } \boldsymbol{t} \\ \mathbf{1} & \text{if firm } \boldsymbol{i} \text{ has adopted blockchain by year } \boldsymbol{t} \end{cases}$$

Thus, once a firm uses blockchain, BCT takes the value of one in the usage year and in all subsequent years. All years preceding usage year are assigned a value of zero. This coding captures the transition from the pre-usage to the post-usage period within BCT using firms and enables the study to examine whether firms' WCE changes after Usage of blockchain technology.

3.2.3 Control Variables

The study controls for firm-specific variables that may influence SFP. The study uses firm size (SIZE), leverage (LEV), research and development intensity (RD), cash and cash equivalents (CASH), selling, marketing and administrative expenses (ADMIN), number of employees (EMP), and firm age (AGE) as controls. Their descriptions are shown in table I.

Table 1. Description of the Variables

Variables	Symbol	Measurements	Literature support
Dependent variable:			
Price-to-book value ratio	PBV	Taken from Refinitiv database	Jyoti and Khanna (2024)

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

Earnings per share	EPS	Taken from Refinitiv database	Jyoti and Khanna (2024)
Dividend payout ratio	DPR	Taken from Refinitiv database	Jyoti and Khanna (2024)
Independent Variable:			
Blockchain Technology Usage	BLOCKCHAIN	Compustat global database	Autore et al. (2024)
Control Variables:			
Research and development expenses	RD	R&D expenditure / total assets	Ezzi et al. (2022)
Leverage	LEV	Ratio of total debt to total assets	Sharma et al. (2023), Autore et al. (2024)
Firm age	AGE	Log of the company's age after Incorporation	Zhang and Ruan (2024), Luo et al. (2024)
Cash and cash equivalents	CASH	Cash & cash equivalents / total assets	Du et al. (2023), Luo et al. (2024)
Size	SIZE	Log of total revenue	Cai (2026)
Selling, marketing and administrative expenses	ADMIN	Taken from Refinitiv database	Fang et al. (2023)
Number of employees	EMP	Taken from Refinitiv database	

3.3 Method

The study employee system- generalized method of moments (GMM) to analyze the impact of BCT on SFP indicators. The endogeneity issues due to reverse causality, omitted variables, and dynamic persistence in firm performance when considering the relationship between usage of blockchain technology and SFP were considered. The firms with stronger shareholder-oriented performance could have more resources and technological skills, making them more likely to adopt blockchain technology. To overcome these concerns, the study estimates a two-step System Generalized Method of Moments (System GMM) model. The estimator includes the firm specific effects, endogeneity, and simultaneity bias by operating on internal instruments which are based on previous values of the endogenous variables (Pandey et al., 2026). The Hansen test of

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

overidentifying restrictions and the Arellano–Bond AR (1) and AR (2) serial-correlation tests are used to test the validity of the estimated models.

3.4 Empirical Model

The following equations are estimated to evaluate the effect of usage of blockchain technology on firms' shareholder-oriented performance indicators, using system-GMM.

$$PBV\ Ratio_{i,t} = \beta_0 + \beta_1 PBV\ Ratio_{i,t-1} + \beta_2 BLOCKCHAIN_{i,t} + \Sigma Controls_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$EPS_{i,t} = \beta_0 + \beta_1 EPS_{i,t-1} + \beta_2 BLOCKCHAIN_{i,t} + \Sigma Controls_{i,t} + \varepsilon_{i,t} \quad (2)$$

$$DPR_{i,t} = \beta_0 + \beta_1 DPR_{i,t-1} + \beta_2 BLOCKCHAIN_{i,t} + \Sigma Controls_{i,t} + \varepsilon_{i,t} \quad (3)$$

4. Empirical Results

This section presents the empirical findings on the relationship between usage of blockchain technology and firms' shareholder-oriented performance.

Table 2 shows the baseline regression results, using system GMM, that demonstrates the effect of usage of blockchain technology on firms' shareholder-oriented performance. Column 1 shows system-GMM regression results of equation (1). The coefficient of BLOCKCHAIN is positive and statistically significant (β=2.635, p<0.10), indicating that firms that uses BCT have significantly improved its PBV ratio, supporting hypothesis (H1). Therefore, it implies that usage of blockchain technology improves SFP (Price to book value ratio). Column 2 reports the results where the dependent variable is EPS. After regressing blockchain on EPS, the coefficient of BLOCKCHAIN shows a positive and statistically significant impact on EPS (β= 0.102, p<0.05). The hypothesis (H2) is supported. The coefficient of BLOCKCHAIN is positive and significant in column 3 (β= 0.137, p<0.10) as well depicting that usage of BCT improves its dividend payout ratio.

Table 2. GMM Results of Shareholder-Oriented Firm Performance Indicators

	(1)	(2)	(3)
VARIABLES	**PBV**	**EPS**	**DPR**
L.PBV	0.937***		

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

	(0.0663)		
L.EPS		0.743***	
		(0.0691)	
L.DPR			0.372***
			(0.0866)
BLOCKCHAIN	2.635*	0.102**	0.137*
	(1.440)	(0.0509)	(0.0717)
SIZE	-0.748**	-0.00707	0.0247
	(0.310)	(0.0177)	(0.0204)
EMPLOYEE	-1.68e-06	1.94e-07	-2.21e-07
	(4.01e-06)	(3.92e-07)	(4.27e-07)
LEV	7.143*	0.0991	0.433*
	(3.854)	(0.178)	(0.228)
RD	15.55	-2.212	4.443***
	(27.24)	(4.005)	(1.157)
CASH	1.189	0.255	0.0839
	(3.343)	(0.213)	(0.181)
ADMIN	-2.503	-0.116	-0.0721
	(4.834)	(0.189)	(0.0643)
AGE	0.232	0.0236	0.0500*
	(0.359)	(0.0244)	(0.0281)
Constant	15.31**	0.171	-0.622
	(7.413)	(0.332)	(0.399)
AR (1)	-5.7704	-4.6902	-5.7068
	(0.0000)	(0.0000)	(0.0000)
AR (2)	-1.0230	-1.6887	-0.3280
	(0.3063)	(0.0913)	(0.7429)
Hansen J	10.1592	68.5286	41.3688

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

	(0.6020)	(0.1855)	(0.0497)

Note(s): Standard errors are reported in parenthesis, *** p<0.01, ** p<0.05, * p<0.1

For AR (1), AR (2) and Hansen J test, p-values are reported in parenthesis.

5. Discussion, Implications and Future Scope

The study examines the effect of usage of blockchain technology on shareholder-oriented firm performance (SFP) and uses price to book value ratio (PBV), earning per share (EPS) and dividend payout ratio (DPR) as measures of SFP. The findings demonstrate that SFP improves significantly after usage of blockchain technology. The positive and significant coefficient all three measures (see table 2), shows that usage of blockchain technology increases firms' market valuation, earnings available to equity shareholders and shareholders' payouts. The findings suggest that economic effect of usage of blockchain technology extends beyond the technological and operational benefits to the outcomes that are actually beneficial and relevant to shareholders.

5.1 Usage of blockchain technology and the Market-Valuation Dimension of SFP: PBV

The positive association between usage of blockchain technology and PBV suggest that shareholders are ready to pay share price premium for the firms using BCT. PBV shows the market valuation of equity to its accounting book value, and therefore captures the potential future value of the firm. BCT with its transparent, real-time and immutable ledger reduces information asymmetry between among the managers and stakeholders. This enhances shareholders trust and helps them to take informed investment decisions. The finds of the study are consistent with Sharma et al. (2023), who evidenced that adoption of blockchain technology increased Tobin's Q and improved market value of the firm. Similarly, Du et al. (2023) demonstrated that usage of blockchain technology enhances company's valuation by alleviating inefficient investments. Prior studies argue that usage of blockchain technology enhances firms' performance but the magnitude of market benefits depends on the different characteristics and use cases of the technology. For e.g., stock market reaction to usage of blockchain technology is less favourable when it was used for tracing objects or involves sensitive data or in presence of external technology provider (Klöckner et al., 2022). Furthermore, Fang et al. (2023) found that BCT improves accounting information quality and thus improves firms value. However, the findings of the study are contrary to Li and Wan (2021) that demonstrated a negative correlation between usage of blockchain technology and firm performance. They argued that usage of blockchain technology is a marketing gimmick to attract investors that led to short-term stock returns but a decline in long-term performance metrics such as market-to-book ratio.

5.2 Usage of blockchain technology and the Shareholder-Earnings Dimension of SFP: EPS

The findings also show a significant and positive impact on EPS after usage of blockchain technology. EPS measures the earnings that are directly attributable to equity shareholders. The

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

positive association suggests that usage of blockchain technology help firms to generate higher earnings for the shareholders by reducing the cost related to coordination, data management, transaction verification and improving process efficiency. Findings are consistent with Ahluwalia et al. (2020) who explained that BCT reduce transaction costs by making verification, monitoring, and information sharing more efficient. Similarly, Culot et al. (2024) found that usage of blockchain technology can improve business operations, including productivity, operating-cycle efficiency, and profitability. The positive relationship of BCT usage with EPS is a novel finding of the study as prior research reported that usage of blockchain technology improves Tobin's Q (market valuation) but does not have a significant effect on ROA or ROE and found no immediate improvement in accounting performance (Himanshu & Singh 2022; Sharma et al., 2023). Therefore, the study's novel finding adds to literature by evidencing that usage of blockchain technology provides benefits that are reflected not only in market value but also in the earnings available to shareholders. The reason is that the firms in this study have moved beyond simply testing blockchain and have actually implemented it. As a result, the improvements in business processes and information sharing have started to appear in their financial performance.

5.3 Usage of blockchain technology and the Shareholder-Distribution Dimension of SFP: DPR

The significant increase in DPR following usage of blockchain technology provides further evidence of its impact on shareholder-oriented consequences. Unlike PBV, which captures market valuation, and EPS, which captures earnings attributable to shareholders, DPR reflects the extent to which firms distribute their generated earnings to shareholders in form of dividends. The positive association therefore suggests that usage of blockchain technology not only improves accounting profitability, but also leads higher shareholder distributions. Improvements in operational efficiency, information quality, and financial performance increases firms' ability to generate and distribute earnings to shareholders.

Taken together, the findings across PBV, EPS, and DPR provide a more comprehensive view of the relationship between usage of blockchain technology and SFP. The simultaneous improvement in market valuation (PBV), earnings generation (EPS), and shareholder distribution (DPR) suggests that the effect of usage of blockchain technology is not confined to investors' expectations alone. Rather, the findings indicate that usage of blockchain technology is associated with improvements across different dimensions of shareholder-oriented outcomes. The results are also in line with previous studies on digital transformation, which suggest investments in the development of advanced digital technologies are strategic investments that can develop intangible assets that will improve the competitiveness of the organization and the value of the company in the long run (Smith et al., 2024). In the digital environment, usage of blockchain technology seems to serve as one such strategic capability, benefiting the quality of governance by enhancing operational efficiency and stakeholder confidence. Overall, the results provide evidence that usage

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

of blockchain technology is positively associated with shareholder-oriented firm performance. The findings are particularly important because they demonstrate that usage of blockchain technology may create value through multiple channels simultaneously: enhancing market valuation, improving earnings attributable to shareholders, and supporting shareholder distributions. Thus, blockchain should not be viewed solely as an operational technology; its usage may have broader implications for firms' financial outcomes and their relationships with capital-market participants.

5.4 Theoretical Contribution

The results are also in line with the stakeholders and TCE theories. BCT's decentralized record-keeping and automation streamline transaction verification, coordination, and contract enforcement, lowering associated costs. Reduction in transaction costs increases organizational efficiency and enables efficient utilization of resources, thereby enhancing long-term firm performance. The study provides empirical evidence to the concept of TCE by showing how usage of BCT decrease coordination and verification costs that leads to improvement in firms' market valuation, shareholder-oriented consequences and overall organizational efficiency. Additionally in line with stakeholder theory, blockchain brings transparency and accountability that enhances trust among investors, suppliers, customers, and regulators. Better stakeholder relationships eliminate uncertainty about future performance and enhance firms' legitimacy in the capital markets. In sum, these theories imply that usage of blockchain technology is not an operational improvement, but rather involves a number of complementary mechanisms that bring value for the shareholders.

5.5 Practical Implications

The study provides number of policy, managerial and investment implications. First, the corporate managers should invest in blockchain implementation not only as a technology but as strategic investment. If implemented successfully, it can boost organization transparency, governance quality and investor confidence, which in turn lead to better market valuation. Usage of blockchain technology further gains investors' attention while the assess companies' long-term growth, technology, and governance. Second, the regulators and policymakers should develop clear regulatory frameworks, digital infrastructure, and technological standards to help foster usage of blockchain technology by firms while safeguarding investors.

6. Conclusion

With the fast spread of blockchain technology and the scarcity of empirical studies on its implications for the capital market and shareholder's performance metrics, this study assesses the effect of BCT on SFP post its usage, using a panel data of companies listed on NSE of India from 2016 to 2024. Prior studies on blockchain have focused largely on accounting quality, auditing, supply chain management, operational efficiency, investment efficiency and earnings management (Autore et al., 2024; Fang et al., 2023; Nasse et al., 2026). There are relatively few studies that

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

have explored the relationship between usage of blockchain technology and shareholder-oriented firm performance especially in context of emerging economies, like India. Usage of blockchain technology is binary and time varying dummy variable in the study. Shareholder-oriented firm performance is operationalized using three complementary indicators: price-to-book value ratio (PBV), earnings per share (EPS), and dividend payout ratio (DPR). PBV captures the market-valuation dimension, EPS captures the earnings attributable to shareholders, and DPR captures the distribution of earnings to shareholders. By employing system GMM, the study's empirical results demonstrate that shareholder-oriented firm performance improves significantly after firms adopt BCT. The results enrich the digital transformation and corporate finance literature by providing evidence that blockchain acts as a key tool to increase the value of organizations not only by improving transparency and governance but also by increasing operational efficiency and stakeholder confidence.

The study has several limitations. First, the usage of BCT is measured as a binary variable, meaning it only indicates whether a company is using or not using blockchain technology, and it does not capture the intensity of, nor maturity or scale of, the usage. Indeed, future studies could refine and complexify measures of blockchain integration. Second, the analysis is limited to the listed companies in India. Further research can be conducted in comparative panels across multiple countries to explore the interaction between aspects of usage of blockchain technology and shareholder-oriented firm performance in different institutional environments, regulatory qualities, and digital infrastructure. Third, the study focuses on direct effects. Future studies could explore what factors mediate the relationship between innovation capability and financial reporting quality, or between financial reporting quality and operational efficiency, or between financial reporting quality and investor confidence, and what factors moderate the relationship between financial reporting quality and those variables. Last, quasi-experimental techniques like difference-in-differences or natural experiments could be used in future research to enhance causal inference and give additional evidence for the economic impacts of adopting blockchain.

References

Ahluwalia, S., Mahto, R. V., & Guerrero, M. (2020). Blockchain technology and startup financing: A transaction cost economics perspective. *Technological Forecasting and Social Change, 151*, 119854. https://doi.org/10.1016/j.techfore.2019.119854

Akter, M., Kummer, T.-F., & Yigitbasioglu, O. (2024). Looking beyond the hype: The challenges of usage of blockchain technology in accounting. *International Journal of Accounting Information Systems, 53*, 100681. https://doi.org/10.1016/j.accinf.2024.100681

Ali, H. S., Jia, F., Lou, Z., & Xie, J. (2023). Effect of blockchain technology initiatives on firms' market value. *Financial Innovation, 9*(1), 48. https://doi.org/10.1186/s40854-023-00456-8

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

Autore, D., Chen, H. A., Clarke, N., & Lin, J. (2024). Blockchain and earnings management: Evidence from the supply chain. *The British Accounting Review, 56*(4), 101357. https://doi.org/10.1016/j.bar.2024.101357

Bag, S., Rahman, M. S., Gupta, S., & Wood, L. C. (2023). Understanding and predicting the determinants of blockchain technology adoption and SMEs' performance. *The International Journal of Logistics Management, 34*(6), 1781–1807. https://doi.org/10.1108/IJLM-01-2022-0017

Bellucci, M., Cesa Bianchi, D., & Manetti, G. (2022). Blockchain in accounting practice and research: Systematic literature review. *Meditari Accountancy Research, 30*(7), 121–146. https://doi.org/10.1108/MEDAR-10-2021-1477

Bhardwaj, T., Pandey, V., & Himanshu (2026a). Determinants of fintech adoption: An Analytic Hierarchy Process (AHP) approach. *International Journal of Commerce, Economics and Management Research (IJCEMR)*, *1*(1), 79-91.

Bhardwaj, T., Pandey, V., & Himanshu (2026b). Corporate ESG Performance and Climate Resilience: A Pathway for India's Nifty 50 Firms towards a Developed Economy. International Journal of Commerce, Economics and Management Research (IJCEMR), 1(1), 40-48.

Bhatia, M. S., Chaudhuri, A., Kayikci, Y., & Treiblmaier, H. (2024). Implementation of blockchain-enabled supply chain finance solutions in the agricultural commodity supply chain: A transaction cost economics perspective. *Production Planning & Control, 35*(12), 1353–1367. https://doi.org/10.1080/09537287.2023.2180685

Cai, C. (2026). Unexpected effect of digital transformation on corporate earnings management. Finance Research Letters, 109778.

Chen, W., He, K., & Wang, L. (2023). Blockchain technology, macroeconomic uncertainty and investment efficiency. *International Journal of Emerging Markets, 18*(7), 1493–1514. https://doi.org/10.1108/IJOEM-10-2020-1250

Chen, K. H., Zhang, Y., Elston, J. A., Chen, P. H., & Hsu, K. H. (2026). Environmental, social, and governance (ESG) initiative scores and firm performance: The importance and role of firm size. *Small Business Economics, 66*(1), 71–95. https://doi.org/10.1007/s11187-025-01096-1

Culot, G., Podrecca, M., & Nassimbeni, G. (2024). Usage of blockchain technology and operational performance: A secondary data analysis on effects and contingencies. *International Journal of Operations & Production Management, 44*(13), 69–99. https://doi.org/10.1108/IJOPM-05-2023-0346

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

Dai, J., & Vasarhelyi, M. A. (2017). Toward blockchain-based accounting and assurance. *Journal of Information Systems, 31*(3), 5–21. https://doi.org/10.2308/isys-51804

Du, J., Shi, Y., Li, W., & Chen, Y. (2023). Can blockchain technology be effectively integrated into the real economy? Evidence from corporate investment efficiency. *China Journal of Accounting Research, 16*(2), 100292. https://doi.org/10.1016/j.cjar.2023.100292

Essel, R. E. (2026). Financial management practices and corporate performance in an emerging African capital market: A moderation analysis. *Journal of African Business, 27*(3), 639–682. https://doi.org/10.1080/15228916.2025.2505359

Ezzi, F., Abida, M., & Jarboui, A. (2023). The mediating effect of corporate governance on the relationship between blockchain technology and investment efficiency. *Journal of the Knowledge Economy, 14*(2), 718–734. https://doi.org/10.1007/s13132-022-00892-4

Fang, B., Liu, X., Ma, C., & Zhuo-Soh, Y. (2023). Blockchain technology adoption and accounting information quality. *Accounting & Finance, 63*(4), 4125–4156. https://doi.org/10.1111/acfi.13088

Fortin, M., Pimentel, E., & Boulianne, E. (2025). Accountability in permissioned blockchains: Through the ledger, the code and the people. Accounting, Auditing & Accountability Journal, 38(3), 853–878.

Freeman, R. E. (2010). *Strategic management: A stakeholder approach*. Cambridge University Press. https://doi.org/10.1017/CBO9781139192675

Han, H., Shiwakoti, R. K., Jarvis, R., Mordi, C., & Botchie, D. (2023). Accounting and auditing with blockchain technology and artificial intelligence: A literature review. *International Journal of Accounting Information Systems, 48*, 100598. https://doi.org/10.1016/j.accinf.2022.100598

Hasan, M. R., Shiming, D., Islam, M. A., & Hossain, M. Z. (2020). Operational efficiency effects of blockchain technology implementation in firms: Evidence from China. *Review of International Business and Strategy, 30*(2), 163–181. https://doi.org/10.1108/RIBS-05-2019-0069

Himanshu, & Kent Baker, H. (2025). The impact of contemporary accounting reform on financial reporting quality: evidence from an emerging economy. *Journal of Accounting in Emerging Economies*, *15*(5), 965-1001.

Himanshu, & Singh, J. P. (2022). Has Ind-AS adoption affected earnings management in India? *Journal of Public Affairs*, *22*(4), e2620.

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

Jackson, D., & Allen, C. (2024). Enablers, barriers and strategies for adopting new technology in accounting. *International Journal of Accounting Information Systems, 52*, 100666. https://doi.org/10.1016/j.accinf.2023.100666

Jiang, Q., Zhang, C., & Wei, Q. (2025). Digital technology usage and enterprise investment efficiency. *Finance Research Letters, 72*, 106623. https://doi.org/10.1016/j.frl.2024.106623

Juma'h, A. H., & Li, Y. (2023). The effects of auditors' knowledge, professional skepticism, and perceived adequacy of accounting standards on their intention to use blockchain. International Journal of Accounting Information Systems, 51, 100650.

Jyoti, G., & Khanna, A. (2024). How does sustainability performance affect firms' market performance? An empirical investigation in the Indian context: G. Jyoti and A. Khanna. Environment, Development and Sustainability, 26(8), 20457-20483.

Klöckner, M., Schmidt, C. G., & Wagner, S. M. (2022). When blockchain creates shareholder value: Empirical evidence from international firm announcements. *Production and Operations Management, 31*(1), 46–64. https://doi.org/10.1111/poms.13609

Li, R., & Wan, Y. (2021). Analysis of the negative relationship between blockchain application and corporate performance. *Mobile Information Systems, 2021*, 9912241. https://doi.org/10.1155/2021/9912241

Li, G., Xue, J., Li, N., & Ivanov, D. (2022). Blockchain-supported business model design, supply chain resilience, and firm performance. *Transportation Research Part E: Logistics and Transportation Review, 163*, 102773.

Liao, K., Lin, L., & Sun, Y. (2025). Usage of blockchain technology and corporate financial reporting quality. *Journal of Accounting and Public Policy, 49*, 107265. https://doi.org/10.1016/j.jaccpubpol.2024.107265.

Luo, Y., Fang, M., Li, A., & Chen, S. (2024). Opportunity or opportunism? Blockchain technology usage and corporate default risk. *Humanities and Social Sciences Communications, 11*(1), 1–14.

Nakamoto, S. (2008). *Bitcoin: A peer-to-peer electronic cash system.*

Nasse, T. B., Tuurosung, A. I. S., & Nangpiire, C. (2026). Usage of blockchain technology and agricultural supply chain efficiency: Insights from Wa East District, Ghana. *International Journal of Business and Management (IJBM), 5*(2), 368–393.

Pan, X., Pan, X., Song, M., Ai, B., & Ming, Y. (2020). Blockchain technology and enterprise operational capabilities: An empirical test. *International Journal of Information Management, 52*, 101946. https://doi.org/10.1016/j.ijinfomgt.2019.05.002.

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

Pandey, V., Himanshu, & Abhayawansa, S. Does Firms' Environmental, Social and Governance (ESG) Performance Buffer the Crash-Risk Consequences of Earnings Management? Evidence From Emerging Markets. *Sustainable Development*, e71690.

Pramahender, Himanshu, & Kandpal, V. (2021). Determining interlinkages between the measures of financial literacy: An MCDM approach. *Journal of Public Affairs*, *21*(2), e2287.

Pflueger, D., Kornberger, M., & Mouritsen, J. (2024). What is blockchain accounting? A critical examination in relation to organizing, governance, and trust. *European Accounting Review, 33*(4), 1139–1164. https://doi.org/10.1080/09638180.2022.2147973.

Rani, S., Danu, A., & Himanshu. (2026). Does digital competence really matter? The impact of attitude and ICT on research performance. *Journal of Applied Research in Higher Education*, *18*(4), 1125-1147.

Sharma, P., Shukla, D. M., & Raj, A. (2023). Usage of blockchain technology and firm performance: The contingent roles of intangible capital and environmental dynamism. *International Journal of Production Economics, 256*, 108727. https://doi.org/10.1016/j.ijpe.2022.108727.

Sim, J. Y., & Jang, K. (2023). Blockchain innovation and firm's financial performance: Patent analysis based on firm-level information. *Applied Economics, 55*(60), 7178–7193. https://doi.org/10.1080/00036846.2023.2166665.

Smith, K., Gupta, M., Prakash, P., & Rangan, N. (2024). Wealth effects of firm's strategic technology investments: Evidence from Ethereum blockchain. *Internet Research, 34*(5), 1775–1799. https://doi.org/10.1108/INTR-08-2022-0591.

Srivastava, S. P., Himanshu, Jyoti, G., & Gupta, S. (2026). Breaking Down IPO Barriers: Cultivating Conducive Retail Investment Environment. *Journal of Public Affairs*, *26*(2), e70127.

Sun, L., Bai, C., & Sarkis, J. (2025). How do circular economy and blockchain technology usage relate to firm financial performance? *International Journal of Production Economics*. https://doi.org/10.1016/j.ijpe.2025.109655.

Tawiah, V., Zakari, A., Li, G., & Kyiu, A. (2022). Blockchain technology and environmental efficiency: Evidence from US-listed firms. *Business Strategy and the Environment, 31*(8), 3757–3768. https://doi.org/10.1002/bse.3030.

Thakkar, D. and Himanshu (2026). A study on Critical Factors for Blockchain Adoption in India: Analytic Hierarchy Process. *International Journal of Commerce, Economics and Management Research (IJCEMR)*, *1*(2), 33-46.

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174

Yang, Y., & Son, H. (2025). Blockchain technology, audit quality and operational risks: Evidence from listed companies. Management Decision, 1–24. https://doi.org/10.1108/MD-02-2025-0449.

Yu, T., Lin, Z., & Tang, Q. (2018). Blockchain: The introduction and its application in financial accounting. *Journal of Corporate Accounting & Finance, 29*(4), 37–47.

Zang, A. Y. (2012). Evidence on the trade-off between real activities manipulation and accrual-based earnings management. *The Accounting Review, 87*(2), 675–703. https://doi.org/10.2308/accr-10196.

Zhang, J., & Ruan, C. (2024). Blockchain technology and corporate performance: Empirical evidence from listed companies in China. *Sustainability, 16*(21), 9177. https://doi.org/10.3390/su16219177.

Copyright: © 2026 by the authors. Licensee IJBM IESS, New Zealand. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.

DOI: https://doi.org/10.56879/ijbm.v5i4.174