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The Role of Business English in Blockchain-Based Approaches to Corporate Governance Enhancement

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Abstract. In traditional corporate governance, agency costs have long been influenced by information asymmetry, making it difficult to establish an efficient and transparent trust mechanism between shareholders, investors, and management. While conventional methods such as internal controls, enhanced information disclosure, and incentive alignment help mitigate this issue, they often fail to provide a fundamental solution. Blockchain technology, with its decentralized, immutable, and smart contract features, offers a more transparent, efficient, and democratic governance model. However, challenges remain in privacy protection, data security, and legal compliance, necessitating regulatory frameworks to ensure its safe and effective implementation. Additionally, in a globalized business environment, Business English plays a crucial role in the adoption of blockchain governance models, particularly in smart contract drafting, cross-border information disclosure, and international corporate communication. By integrating blockchain technology with Business English, companies can enhance governance efficiency and strengthen their competitive edge in the global market. This study explores how blockchain improves corporate governance and examines the role of Business English in this transformation, providing theoretical insights and practical references for the modernization, transparency, and legal development of corporate governance.

Keywords: blockchain, corporate governance, information asymmetry, agency costs, Business English

1 Introduction

In traditional commercial societies, centralized institutions have established the foundation of the credit system; however, a comprehensive and effective credit system has never been fully realized, leading to numerous challenges. Blockchain technology, as a decentralized distributed ledger system, can effectively address the shortcomings of traditional centralized trust mechanisms and is thus regarded as a technology with immense transformative potential [1]. In the realm of corporate governance, principal-agent issues are prevalent, and trust resources are particularly scarce. Blockchain technology, coincidentally, is well-suited to meet the demands of improving corporate governance. Therefore, this paper will adopt a corporate law perspective, focusing on the issue of agency costs, and comprehensively analyze the potential value, implementation strategies, possible risks, and corresponding legal countermeasures of blockchain technology in corporate governance. Through this research, we aim to provide a theoretical foundation and practical guidance for the effective application of blockchain technology in corporate governance, thereby driving the modernization and enhancement of corporate governance systems.

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2 Corporate Governance Dilemmas and Challenges

2.1 Agency Costs and Information Asymmetry

In 1932, two renowned economists, Adolf A. Berle and Gardiner C. Means, conducted a groundbreaking study that revealed the issue of agency costs arising from the separation of ownership and management in joint-stock companies. They explicitly pointed out that due to investors' disadvantaged position in accessing information, they face difficulties in comprehensively overseeing the company's operations. This leads to the possibility that managers may make decisions that maximize personal interests at the expense of investors' long-term benefits. For instance, managers can employ legal mechanisms such as issuing non-voting shares to enable a minority to effectively control the company; the dispersion of shareholders' holdings results in de facto control by a small group; and in the absence of significant voting shareholders, management naturally assumes control. These phenomena illustrate the typical patterns of control distribution in modern large enterprises, indicating that majority shareholder control is relatively rare in large public companies but more common in small, closely held companies [2]. In essence, the emergence of agency costs primarily stems from information asymmetry. This asymmetry exists not only between shareholders and company management but also between controlling shareholders (or major shareholders) and minority shareholders. Controlling shareholders, due to their central role in corporate decision-making and their potential access to comprehensive and sensitive information, hold a significant advantage, while minority shareholders are clearly disadvantaged in terms of information access.

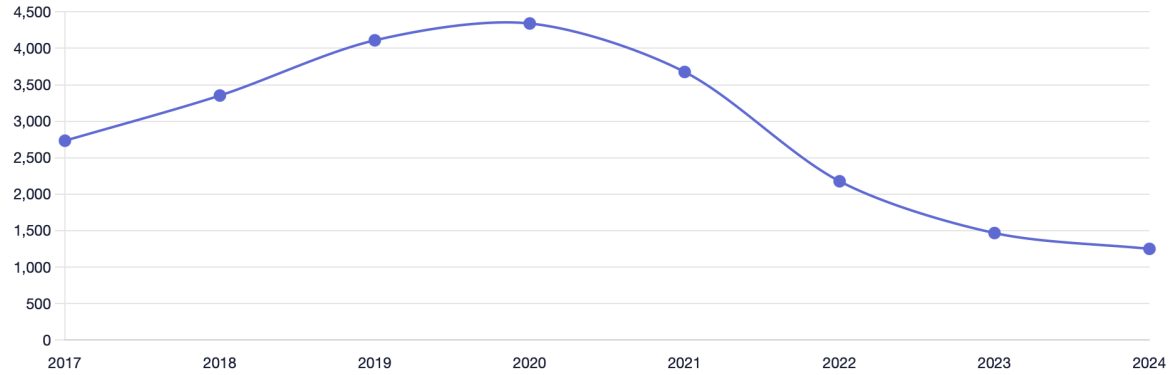
Information Asymmetry Between Managers and Owners. In contemporary society, the management structures and operational models within modern enterprises have become increasingly complex. Managers' deep involvement in day-to-day affairs and their proficiency in specialized skills often make it difficult for shareholders to directly access information at the same level of detail as managers. This informational disparity sometimes grants managers a latent power, providing them with opportunities to act in pursuit of personal benefit maximization without adequate oversight, a phenomenon known in economics as "moral hazard." Specifically, under the condition of information asymmetry, managers, as agents, may engage in behaviors that maximize their personal interests at the expense of the principals, i.e., the company's shareholders. This occurs because shareholders primarily aim for capital growth and the maximization of corporate value, whereas managers may be driven by various motivations, such as higher compensation, professional prestige, personal fulfillment, and so on. Consequently, managers may strategically conceal or mislead shareholders by leveraging their informational advantage, thereby inadvertently harming shareholders' interests. Such behaviors manifest in two primary ways: first, "shirking," where the agent's effort is disproportionate to the compensation received, leading to inefficiency; and second, "opportunism," where the agent's efforts deviate from the goal of maximizing the principal's interests, instead pursuing personal gains, reflecting a form of passive effort.

Information Asymmetry Under the Dominance of Major Shareholders. In small and medium-sized enterprises (SMEs), the equity structure often exhibits a concentrated characteristic, where major shareholders leverage their dominant position to exert significant influence over critical corporate decisions and gain access to sensitive internal information. To maintain their control, major shareholders tend to perpetuate information asymmetry [3]. This informational disparity enables them to exploit their dominant position within the enterprise through various means, such as related-party transactions, misappropriation of company funds, and tunneling, thereby harming the interests of minority shareholders for personal gain. Such actions not only directly infringe upon the legitimate rights of minority shareholders but may also have profound negative impacts on the company's overall value, market reputation, and long-term development. However, due to the general lack of sufficient information, minority shareholders often find themselves powerless in safeguarding their interests, struggling to effectively protect their rights. More concerningly, information asymmetry may lead minority shareholders to make erroneous judgments, prompting actions that further harm their own interests, such as increasing investments in the company at inopportune times or adopting inappropriate exit strategies due to a lack of confidence.

In China, this situation is relatively common. According to Article 57 of the 2023 Company Law of China, shareholders have the right to inspect and copy the company's articles of association, shareholder register, minutes of shareholder meetings, resolutions of the board of directors and board of supervisors, as well as financial and accounting reports. Furthermore, based on this right, minority shareholders can file a lawsuit with the court to assert their right to information, requesting access to the company's accounting books and other materi-

als to protect their rights. As shown in the Table 1, based on data from PKU Law, the number of shareholder right-to-information lawsuits in China has been increasing since 2017, reaching its peak in 2020. Although the number of cases has gradually declined after 2020, such lawsuits still persist.

Table 1. 2017-2024 Line chart of shareholders' right to information data in China



However, in practice over the years, although minority shareholders have become increasingly aware of their rights and more focused on protecting their interests, has the information suppression by controlling shareholders completely disappeared? Clearly, it has not. In fact, according to the Company Law, the right to information does not guarantee access to all company information but only protects access to key materials such as accounting books. It does not extend to certain operational information. As a result, information suppression by controlling shareholders still exists.

2.2 The Dilemma of Traditional Solutions

To address the issue of information imbalance in corporate governance, mandatory information disclosure at the legal level and regulatory measures using technological means are typically employed. However, the actual effectiveness of these methods has fallen short of the anticipated goals.

Mandatory Information Disclosure as Prescribed by Law. To address the challenge of information asymmetry among enterprises, legislators have employed legal measures to mandate the disclosure of financial conditions and governance structures, aiming to enhance corporate governance standards. This institutional design not only exerts a deterrent effect ex ante, reducing violations by company executives who fear legal penalties, but also serves a supervisory function ex post, ensuring that shareholders can promptly identify and hold executives accountable for misconduct [4]. For instance, the "Content and Format Guidelines for Information Disclosure by Companies Offering Securities to the Public No. 26—Major Asset Restructuring of Listed Companies (2018 Revision)" issued by the China Securities Regulatory Commission exemplifies this approach. The guidelines impose highly detailed disclosure requirements, covering aspects ranging from transaction backgrounds to personal information of transaction participants. They span the entire lifecycle of a company, from pre-listing preparations to delisting, and include various forms of disclosure such as preliminary announcements, periodic reports (e.g., annual reports, interim reports), and ad hoc reports, ensuring continuous updates and high transparency of market information.

However, despite the theoretical benefits of mandatory information disclosure systems, two major issues in their practical implementation limit their effectiveness in addressing information asymmetry: Firstly, the timeliness of information disclosure is often inadequate. For instance, while China's "Securities Law" mandates immediate reporting of significant events, this requirement conflicts with the longer submission cycles for annual and interim reports, resulting in delays in investors' access to critical information. Secondly, there is a risk of manipulation in information disclosure. Company executives may exploit legal and regulatory gray areas, using methods such as earnings management to manipulate disclosed information. This not only undermines the authenticity and accuracy of the information but also erodes investor confidence and market stability. Therefore, enhancing

the timeliness of information disclosure and preventing its manipulation have become crucial tasks for ensuring the healthy and stable development of capital markets.

Technical Control Methods. To effectively manage and control agency costs while mitigating information asymmetry, some experts and scholars have proposed strengthening internal control mechanisms and implementing external oversight and control measures. However, the effectiveness of this strategy in practical application is limited, as it does not fully resolve the issues of agency costs and information asymmetry.

Firstly, the so-called "internal controls" primarily rely on incentive compensation systems to address information asymmetry. Specifically, companies enter into implicit or explicit contracts with managers, linking their compensation to verifiable indicators such as corporate performance, thereby aligning the interests of managers with those of owners. The aim of this approach is to incentivize managers to wholeheartedly fulfill their responsibilities. Under this system, to maximize their own interests, principals (companies) must not only establish effective monitoring mechanisms to ensure that agents' actions align with their interests but also design reasonable incentive mechanisms to motivate agents and foster a sense of responsibility. Additionally, requiring agents to provide guarantees serves as a risk control measure, ensuring that agents' actions do not deviate from the principals' interests and providing a means of compensation for principals in the event of violations [5]. However, as a key solution to agency problems, the effectiveness of incentive compensation systems is also influenced by subjectivity and bias in their design. Despite high expectations over the past four decades, in practice, these systems still struggle to fully eliminate human interference.

Secondly, external control is primarily achieved through two approaches. One approach leverages market competition to transmit signals, thereby identifying the efficiency and information of managers [6]. However, empirical analysis shows that this approach has not been truly effective, as real-world markets are not in a state of "perfect competition" but rather "imperfect competition," making it difficult to accurately assess managers' efficiency. The other approach involves external institutions or governments controlling agency costs; however, this method is actually more costly and has failed to effectively reduce agency costs, falling short of advancing marketization. Therefore, while external control is theoretically a viable solution, in practice, it faces numerous challenges and limitations [7].

2.3 New Opportunities for Addressing Information Inequality

In the realm of corporate management, the issue of agency costs arising from information asymmetry has long persisted, presenting a significant challenge for both corporate executives and shareholders. Despite various attempts to address this problem, including but not limited to strengthening internal audits, enhancing the transparency of financial reporting, and introducing third-party oversight, the effectiveness of these efforts has often been unsatisfactory, sometimes failing to meet expectations. However, with the emergence of new technologies such as blockchain, a novel solution to this issue appears to be on the horizon. Blockchain technology, with its unique characteristics of decentralization, immutability, and cryptographic security, offers a fresh perspective and tools for addressing information asymmetry.

By closely integrating big data, algorithms, artificial intelligence, and machine learning, enterprises can design more precise and personalized incentive compensation schemes for top management. These schemes can dynamically adjust compensation structures based on managers' performance and the company's actual operations, thereby enhancing the objectivity and fairness of decision-making. Additionally, leveraging blockchain technology for information dissemination not only improves transparency and traceability but also reduces illicit activities such as data tampering and insider trading, providing robust support for the continuous optimization of compensation schemes and shareholder oversight. The irreversible recording and distributed ledger capabilities of blockchain ensure that all transactions and decisions are open and transparent, enabling all stakeholders to track and verify information in real time. This significantly reduces agency costs and elevates the overall governance standards of the enterprise.

3 Blockchain Pathways to Enhance Corporate Governance

3.1 Fundamental Principles of Blockchain Technology

The origins of blockchain technology can be traced back to 2008, when a mysterious figure known as Satoshi Nakamoto first introduced the concept in the seminal paper "Bitcoin: A Peer-to-Peer Electronic Cash System" [8]. Blockchain is a unique data structure that connects data blocks in chronological order, forming a chain-like representation. This structure leverages advanced cryptographic techniques to ensure data immutability and authenticity, thereby creating a decentralized, trustless distributed ledger system [9]. Unlike traditional distributed databases, which rely on a single central server for data maintenance, blockchain's "distributed" nature is evident in both data maintenance and recording. As shown in Fig. 1, in a decentralized blockchain network, each node can have a copy of the database. In a blockchain system, all nodes collectively participate in data maintenance, ensuring that changes in individual nodes do not compromise the integrity of the entire system, significantly enhancing data security. Specifically, the data layer comprises the underlying data blocks and their chain structure, supported by hash algorithms, timestamps, Merkle trees, and asymmetric encryption techniques, ensuring the integrity and traceability of block data. The network layer includes data propagation mechanisms and transaction verification mechanisms, supported by P2P network technology, facilitating the transmission and validation of data among distributed nodes.

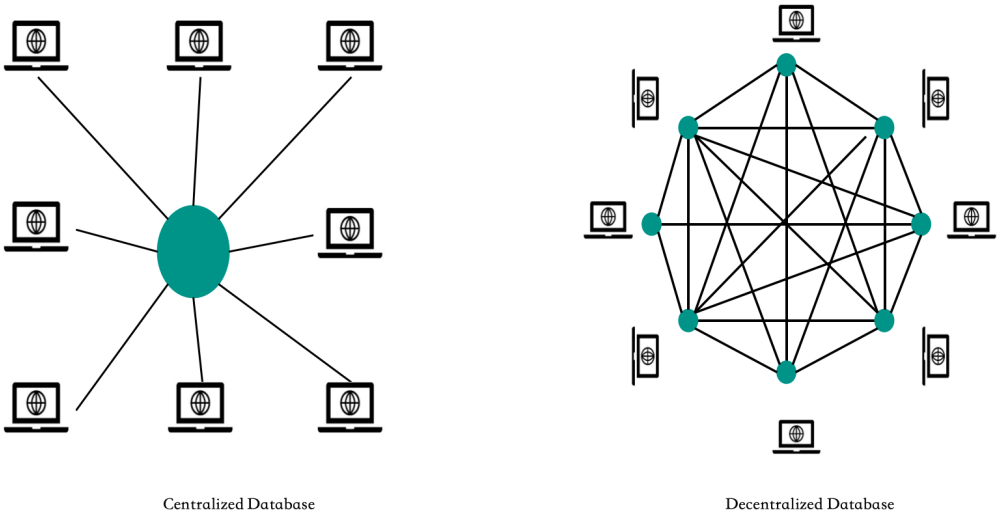


Fig. 1. Blockchain data storage method

The core of blockchain technology lies in its use of chain structures and data blocks to store information. Each block consists of a block header and a block body, each with a unique hash value as an identifier. The block header stores critical information such as the hash value of the previous block and a timestamp, which are essential for maintaining the chronological order and integrity of the blockchain. The block body contains transaction data, which is the information recorded on the blockchain. Each transaction is verified through digital signatures, ensuring data immutability and authenticity. All verified transactions are permanently stored in the block body and are available for query and verification by all network users. Through the Merkle tree hash algorithm, transaction data is transformed into a unique Merkle root value, which is recorded in the block header. During the construction of the blockchain, each newly added block is assigned a timestamp by the node responsible for accounting, precisely marking the block's creation time. The continuous recording of timestamps ensures that blocks are tightly linked, forming a chronologically ordered chain. This characteristic ensures that data on the blockchain can be traced in chronological order, maintaining data integrity and traceability.

3.2 The Value Proposition of Blockchain in Corporate Governance

Effective Control of Information Asymmetry. Leveraging the unique distributed ledger and consensus mechanisms of blockchain technology, the environment for information transmission has undergone a revolutionary transformation. Applying this cutting-edge technology to corporate management can significantly improve information asymmetry within companies across three key dimensions—information sharing, authenticity, and real-time availability—thereby effectively reducing agency costs.

In traditional corporate governance models, managers (i.e., corporate operators) typically control critical information and make decisions based on it. In most cases, shareholders and the board of directors are only involved in major decisions. This long-standing practice has made it difficult for shareholders to access timely information about the company's operational status. However, blockchain ledger technology records various "transaction data" in a series of continuous and secure blocks, which exist in an immutable form [10]. In corporate applications, this transaction data can provide a detailed account of the company's operations and decision-making processes, enabling shareholders to quickly grasp the company's operational status and latest developments.

As shown in Fig. 2, blockchain technology relies on hash functions, consensus mechanisms, Merkle trees, and timestamps, which collectively grant it immutability. Specifically, once a company records data on the blockchain, it becomes nearly impossible to alter or erase, ensuring the stability and reliability of corporate data. Once a company records data on the blockchain, it becomes nearly impossible to alter or erase, ensuring the stability and reliability of corporate data. Particularly in applications such as corporate financial data and audit processes, blockchain technology proves exceptionally effective. It not only ensures data immutability but also provides transparency, allowing all stakeholders to trust the data recorded by the company.

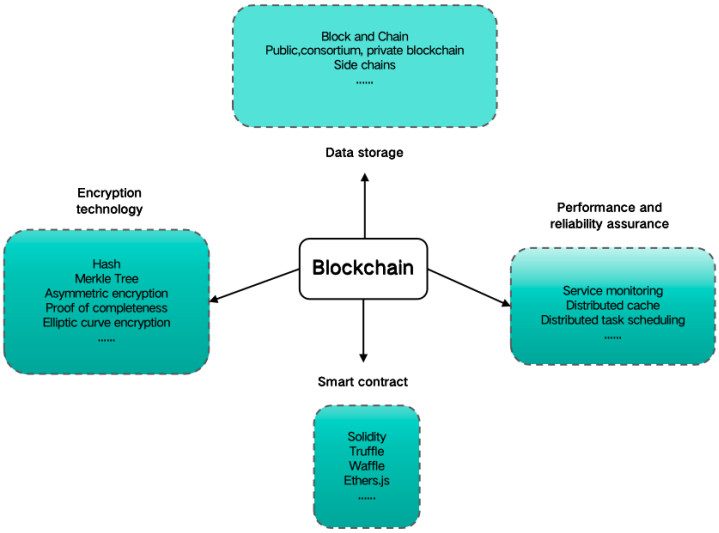


Fig. 2. Principle diagram of blockchain data immutability

Finally, blockchain technology successfully prevents alterations to internal corporate data and ensures that shareholders have direct access to the latest, unaltered data, thereby maintaining data immediacy. Blockchain ledgers are characterized by real-time updates, enabling the rapid recording of the latest transaction data. From the occurrence of a transaction to its secure recording on the blockchain, the entire process is both efficient and swift, significantly reducing the time required. For example, the Linq blockchain platform, used by the NASDAQ stock exchange in the United States, provides private companies with services for recording the transfer of shares held by founders, initial investors, and employees. Since no third party is needed to verify and approve these transactions, the standard settlement time has been reduced from three days to ten minutes [11]. This not only improves

efficiency but also lowers costs, creating a more transparent and trustworthy transaction environment for shareholders and investors.

Enhancing the Scientific and Democratic Nature of Corporate Decision-Making. In the third phase of blockchain technology development, commonly referred to as the Blockchain 3.0 era, a more efficient and innovative solution has emerged for addressing agency problems in corporate governance. Taking Decentralized Autonomous Organizations (DAOs) as an example, they utilize smart contracts to establish a structure based on trust and efficient governance, significantly reducing the potential for self-serving behavior by agents in the execution of their duties. The core concept of DAOs is decentralization, which means that agency costs can be nearly eliminated, as the entire process requires minimal human intervention or external oversight [12]. Smart contracts, serving as the primary executors, ensure the strict enforcement of all established rules, which are collectively confirmed and recorded by nodes in the network, thereby eliminating the issues of insufficient monitoring and agency loss costs that may exist in traditional agency relationships. This innovative model not only enhances transparency but also strengthens the autonomous capabilities of organizations, enabling them to operate more flexibly and efficiently.

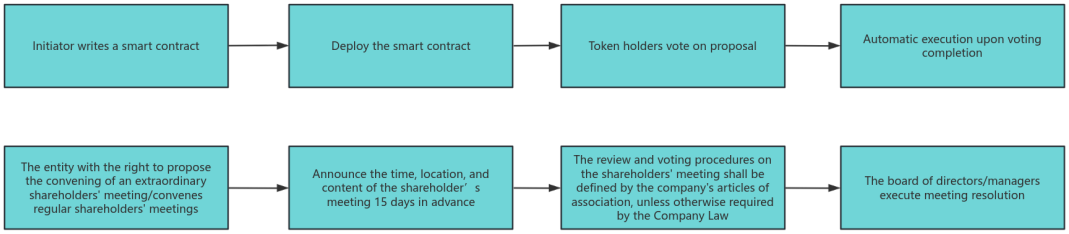


Fig. 3. Comparison of DAO online voting and traditional shareholder meeting decision-making processes

Upon closer examination of Fig. 3, it becomes evident that Decentralized Autonomous Organizations (DAOs) demonstrate significant advantages in addressing the myriad challenges faced by traditional corporate governance processes. Firstly, DAOs, through their unique blockchain technology, offer a governance model characterized by streamlined procedures and transparent information. In this model, token holders can directly participate in the decision-making process. Utilizing the voting mechanisms on the blockchain, they can express their intentions more fairly, effectively mitigating the "free-rider" phenomenon commonly observed in traditional corporate governance. Additionally, smart contracts, as a core technology of DAOs, possess high levels of determinism, real-time capability, and autonomy. These characteristics of smart contracts not only eliminate the cumbersome steps of intermediary involvement required in traditional contracts but also significantly enhance the efficiency and security of transactions. Through smart contracts, both parties to a transaction can ensure the automatic execution of contract terms, free from concerns about human intervention or fraudulent behavior, thereby safeguarding the rights and interests of both parties while increasing the trustworthiness and reliability of the entire system [13].

Currently, the application of blockchain technology in China's corporate governance system is undergoing rapid development, particularly driven by leading technology enterprises, resulting in an increasing number of practical use cases. This technological adoption trend has formed a two-way driving relationship with national policies. According to the Blockchain Technology Development White Paper (2023) released by the Ministry of Industry and Information Technology of China, blockchain has been designated as a key breakthrough area in the digital economy during the 14th Five-Year Plan period. It is projected that by 2025, the relevant industry scale will exceed 2 trillion yuan. Under the dual incentives of policy guidance and financial support, enterprises' willingness to adopt blockchain technology has significantly increased. Statistical data shows that from 2022 to 2023, the proportion of publicly listed companies deploying blockchain governance systems grew by 37.6% year-over-year, with penetration rates reaching 42.3% in the financial sector and 35.8% in the logistics sector.

In terms of specific applications, blockchain technology has been widely integrated into various core aspects of corporate governance, including dynamic charter management, decentralized decision-making, equity and

profit distribution, auditing and compliance, supply chain governance, and data privacy protection. As shown in the Table 2, in supply chain governance, BMW has integrated Hyperledger Fabric with IoT technology to implement traceability management for auto parts, resulting in a 92% reduction in counterfeit rates and a 50% improvement in collaboration efficiency. Additionally, in auditing and compliance, the Shanghai Stock Exchange has successfully implemented a blockchain auditing system, which has reduced audit costs by 38% while improving compliance efficiency by 60%.

Table 2. Core applications and empirical data of blockchain technology in corporate governance

Application Scenario	Technical Mechanism	Key Metrics	Empirical Data Source
Dynamic Charter Management	Smart Contracts (Solidity), DAO Voting Mechanism	50% improvement in charter update efficiency (response time < 24 hours)	Tencent Cloud Blockchain Platform (2023, 10 pilot enterprises)
Decentralized Decision-Making	PoS Consensus, On-Chain Voting (e.g., Aragon Framework)	35% increase in shareholder participation, 45% reduction in decision-making cycle	Walmart Supply Chain DAO Pilot (2022)
Equity and Profit Distribution	Tokenized Equity, Automated Dividend Smart Contracts	Distribution error rate reduced to 0.1%, disputes decreased by 72%	AntChain Cross-Border Equity Platform (2021-2023)
Auditing and Compliance	On-Chain Proof (Merkle Tree), Real-Time Regulatory Interfaces	38% reduction in audit costs, 60% improvement in compliance efficiency	Shanghai Stock Exchange Blockchain Audit System (2023)
Supply Chain Governance	Hyperledger Fabric, IoT Data On-Chain	92% reduction in counterfeit rate, 50% improvement in coordination efficiency	BMW Auto Parts Traceability Consortium Blockchain (2020-2023)
Data Privacy Protection	Zero-Knowledge Proof (ZKP), Federated Learning + Blockchain	85% reduction in data breach risk, 55% improvement in data-sharing efficiency	Beijing Government Data-Sharing Platform (2021)

A positive interaction has emerged between government policy support and corporate innovation efforts. This interaction not only accelerates the iteration and advancement of blockchain infrastructure but also facilitates a shift in corporate governance models from traditional centralized control to decentralized, smart contract-driven collaborative governance.

3.3 The Role of Business English in the Promotion of Blockchain Governance Models

The Standardization of Smart Contract Terms. Smart contracts are a core application of blockchain technology in corporate governance, as they automatically execute contractual terms based on predefined rules, thereby reducing human intervention, mitigating the risk of breaches, and enhancing transaction security and efficiency. However, due to variations in legal systems and regulatory frameworks across different countries, the legal validity and applicability of smart contracts may differ significantly between jurisdictions. For example, some countries recognize smart contracts as legally binding agreements, while others may only consider them as technical arrangements without formal contractual status. These legal discrepancies create substantial compliance challenges for multinational enterprises when implementing smart contracts in their operations [14]. Therefore, to ensure that smart contracts remain enforceable and legally valid across different jurisdictions, multinational companies must establish a standardized contract drafting system that is adaptable to diverse legal environments.

Business English, as the universal language of international business communication, plays a decisive role in the standardization process of smart contracts. On the one hand, Business English helps unify the linguistic expression of contract terms, ensuring accuracy and consistency across different legal frameworks while minimizing legal risks arising from linguistic misunderstandings. On the other hand, standardized Business English contracts reduce language ambiguity, enabling enterprises, regulatory bodies, and legal professionals worldwide to interpret contractual terms clearly, thereby enhancing legal enforceability. Furthermore, to improve the applicability of smart contracts, companies can develop a repository of standardized smart contract templates, drafted in Business English and designed for various legal jurisdictions. By integrating AI-powered translation technology, businesses can further validate and refine contract language to ensure global readability and legal compliance. This approach not only facilitates the international adoption of smart contracts but also enhances corporate competitiveness and operational efficiency in the global market.

Enhancing Transparency in Cross-Border Information Disclosure. In multinational corporate governance, information transparency is a crucial factor in enhancing investor confidence and ensuring regulatory compliance. Traditional cross-border information disclosure often involves diverse legal frameworks and languages, leading to potential misinterpretations or misunderstandings of disclosed content. These inconsistencies can result in compliance risks, misinformed investment decisions, and governance inefficiencies. Blockchain technology provides an innovative solution by offering an immutable and traceable distributed ledger, allowing companies to securely record and share critical corporate data, including financial reports, shareholder rights,

and Environmental, Social, and Governance (ESG) metrics [15]. The transparency and integrity of blockchain ensure that disclosed information remains verifiable and resistant to manipulation, thereby strengthening corporate accountability. However, despite the technological advantages, language barriers still pose a significant challenge—without a standardized linguistic framework, even blockchain-based disclosures may fail to achieve seamless cross-border communication. Research on the Blockchain-Based Industry-Education Integration Model for Business English Talent Development

As the predominant language of global commerce, Business English serves as a unifying tool in standardizing information disclosure, ensuring that investors, regulatory bodies, and corporate stakeholders across different jurisdictions can access and interpret key financial and governance-related data without ambiguity. To further enhance transparency, enterprises can implement blockchain-based bilingual disclosure mechanisms, integrating automated multilingual conversion functionalities within smart contracts or blockchain platforms. By leveraging AI-driven translation technologies, companies can maintain consistency across different language versions of disclosed data, reducing cross-cultural communication errors and regulatory discrepancies. This approach not only facilitates compliance with international financial disclosure requirements but also fosters a more transparent and inclusive corporate governance framework, ultimately improving trust and collaboration in the global business landscape.

Cross-Cultural Communication Coordination in Global Corporate Governance. Effective corporate governance in a globalized environment requires seamless communication and collaboration across diverse cultural backgrounds, yet language barriers remain a significant challenge. As businesses expand internationally, they must navigate linguistic and cultural differences to ensure effective governance and decision-making. Blockchain's decentralized governance model promotes fair participation among stakeholders, allowing all involved parties to engage in governance discussions and decision-making without relying on centralized authorities. However, if communication is ineffective or inconsistent, it can lead to misinterpretations in decision-making, execution delays, and even legal disputes. Inconsistencies in language usage, unclear governance proposals, and differing interpretations of contractual obligations can hinder the effectiveness of decentralized governance structures. Therefore, establishing a standardized linguistic framework is crucial for maintaining clarity, ensuring stakeholder alignment, and avoiding governance inefficiencies.

As the global language of commerce, Business English plays a critical role in facilitating cross-cultural communication within blockchain-based governance models. In decentralized autonomous organizations (DAOs), for example, members from various countries contribute to governance discussions, voting mechanisms, and proposal drafting, all of which require a unified Business English framework to ensure that governance rules are interpreted consistently. To further improve governance efficiency, enterprises can adopt Blockchain + Business English collaboration platforms, integrating on-chain translation tools, real-time communication systems, and AI-driven language processing to bridge linguistic gaps. These platforms enable corporate leaders and stakeholders from different regions to engage in governance activities effectively, improving decision-making efficiency while minimizing conflicts arising from language discrepancies. By fostering seamless multilingual collaboration, businesses can enhance cross-border governance effectiveness, drive innovation, and strengthen trust among international stakeholders.

3.4 Feasible Approaches to Integrating Blockchain Technology with Business English

To foster the deep integration of blockchain technology and Business English, enterprises and institutions can implement the following feasible strategies. These measures aim to enhance transparency, communication efficiency, and cross-border collaboration in corporate governance, ensuring that blockchain-based governance models function seamlessly in an increasingly globalized business environment:

1. Establish a Blockchain Business English Terminology Database: Creating a standardized Business English terminology framework for blockchain-related fields—including smart contracts, decentralized governance, and corporate transparency—can significantly reduce terminological discrepancies and misunderstandings in multinational transactions. This terminology database would ensure consistent language usage across legal documents, corporate governance policies, and financial disclosures. For example, terms such as "proof of stake" and "hashing algorithm" may have different interpretations in various languages; a standardized glossary of blockchain governance terms in Business English can provide a reference for companies, legal professionals, and regulatory bodies. Additionally, this terminology database

can be integrated into AI-powered translation tools, ensuring accuracy and coherence when converting technical and legal texts into multiple languages.

2. Develop Blockchain-Based Smart Translation Systems: Leveraging blockchain technology to store and verify translation data can improve the accuracy, transparency, and reliability of multilingual business communications. Unlike traditional translation systems, blockchain's immutable ledger ensures that all translation records remain verifiable and free from manipulation. Enterprises could develop smart translation contracts that automatically verify and certify translations, ensuring that legal agreements, cross-border contracts, and financial reports maintain their original meaning in multiple languages. For instance, an international company using a blockchain-based multilingual contract system could automatically generate legally consistent English, Chinese, and Spanish versions of a smart contract while ensuring that updates or modifications are securely recorded and tracked. This approach enhances contract authenticity and compliance across different jurisdictions.
3. Implement Business English Training for Blockchain Governance: As blockchain governance models continue to evolve, corporate executives, legal professionals, and business managers must acquire specialized Business English skills tailored to blockchain-based corporate governance. Companies, business schools, and industry associations can introduce training programs to improve professionals' ability to draft, interpret, and negotiate blockchain-related contracts and governance documents in Business English. For example, a multinational corporation implementing a DAO governance model could offer an internal Business English blockchain governance course to ensure that all employees, regardless of their native language, can participate effectively in governance discussions, voting, and policy drafting. Furthermore, such training programs could focus on case studies of blockchain governance disputes, teaching professionals how misinterpretations in multilingual agreements have led to legal challenges and how Business English can serve as a universal medium for clarity and compliance.
4. Promote Standardized Business English for Smart Contracts: To enable seamless international transactions, smart contracts should adhere to a standardized Business English framework, ensuring that their legal enforceability remains intact across different jurisdictions. Currently, many smart contracts are written in technical code, limiting accessibility to non-technical business professionals and regulators. By promoting Business English-based smart contract templates, companies can reduce ambiguities in contract interpretation and enhance global business adoption. For example, a cross-border supply chain management system using smart contracts could incorporate predefined Business English contract clauses, ensuring that terms such as "late delivery penalties" or "quality control conditions" are universally understood. In addition, blockchain can serve as a validation mechanism, ensuring that all versions of a smart contract—regardless of their language—maintain uniform contractual terms.
5. Build a Blockchain-Based Cross-Border Business English Disclosure Platform: Transparency in corporate governance is crucial for global investors and regulatory bodies. Companies can develop a blockchain-powered cross-border disclosure system that enables businesses to publish key financial and governance information in Business English, while also providing automated translations into multiple languages. This system would help maintain consistent, verifiable, and tamper-proof financial reports, ensuring that investors worldwide have equal access to accurate data. For instance, a publicly traded company expanding into multiple markets could use this platform to disclose annual reports, shareholder agreements, and ESG compliance statements in a single Business English format, with blockchain verifying the authenticity of translated versions. This approach strengthens investor trust and ensures compliance with global corporate governance standards.

By implementing these strategies, enterprises can maximize the role of Business English as a bridge in global governance, while leveraging blockchain technology to enhance transparency, information flow efficiency, and cross-cultural collaboration, ultimately strengthening their competitive advantage in the international market.

4 Risks of Blockchain Technology and Corresponding Legal Measures

4.1 Data Breach Risks and Legal Countermeasures

The risks associated with blockchain technology applications primarily consist of four aspects: Firstly, risks stemming from blockchain information product providers, including product design flaws and substandard ser-

vices; secondly, risks arising from participating nodes, which may involve improper node operations and weak security awareness; thirdly, risks from centralized institutions, which may include management loopholes and inadequate supervision; and finally, threats from hackers who may exploit technical vulnerabilities to launch attacks, steal information, or disrupt systems.

The security of blockchain systems has always been a focal point of public concern. Unlike traditional blockchain applications, when corporate governance is integrated with blockchain technology, all critical company information is recorded on the blockchain. While this transparent and immutable nature enhances information security, it also introduces new challenges. If hackers exploit vulnerabilities or weaknesses in the blockchain system, such as cracking the private keys of participating nodes and stealing equity tokens and voting tokens, it could lead to severe consequences, including the leakage of corporate trade secrets and the loss of critical information. The "DAO Attack" incident in 2016 is a typical example of such risks.

On June 17, 2016, a hacker exploited a recursive call vulnerability in the DAO's smart contract to launch an attack on the DAO platform. The hacker first created a child DAO and transferred some Ether into it. The hacker then invoked the `splitDAO` function, requesting to separate their funds from the DAO and transfer them to the child DAO. During this process, the hacker exploited the recursive call vulnerability, repeatedly invoking the `splitDAO` function, thereby continuously separating more Ether from the DAO's funds pool and transferring it to the child DAO. The hacker's attack lasted several hours, resulting in the separation of 3.6 million Ether, which accounted for one-third of the total Ether raised by the DAO, valued at approximately $60 million. In this incident, the hacker successfully stole tens of millions of dollars worth of cryptocurrency through a smart contract vulnerability. In China, when a corporate blockchain is attacked by hackers, recourse can be sought under Article 127 of the Civil Code for private law remedies, which states: "Where laws provide for the protection of data and virtual network property, such provisions shall apply." However, some argue that this approach is not effective, primarily due to the underdeveloped system for virtual property rights and the difficulty in identifying hackers [16].

This paper proposes that legislative bodies should keep pace with the times and enact separate laws for blockchain governance. Currently, China's regulations on blockchain, in addition to the Civil Code, include the "Blockchain Information Service Management Regulations" issued by the Cyberspace Administration of China in 2019. These regulations require blockchain services to be registered to facilitate supervision and protection. However, due to their lower legal hierarchy, actual protective measures must rely on the broader "Cybersecurity Law," resulting in a lack of targeted protection for blockchain. Therefore, this paper suggests that specific laws for blockchain technology should be enacted to provide clearer and more effective protective measures. Additionally, the research and application of blockchain technology should be strengthened to enhance the security and stability of systems, thereby reducing the occurrence of risks.

4.2 Regulatory Risks and Legal Response Strategies

Under the current legal framework, China has yet to establish clear regulations specifically targeting blockchain technology applications, leading to uncertainty in the use of blockchain technology in corporate governance. Due to the lack of explicit legal guidance, the varying attitudes and policy orientations of regulatory authorities may significantly impact the application of blockchain technology in corporate governance. Looking ahead, regulatory agencies may need to adopt more flexible and adaptive regulatory approaches to accommodate the rapid development and widespread application of blockchain technology. Blockchain technology, with its characteristics of decentralization, high transparency, and strong traceability, brings convenience and efficiency to corporate governance, significantly enhancing the immediacy and security of transactions. Simultaneously, it provides regulatory authorities with clearer and more efficient oversight tools, contributing to increased transparency and efficiency in regulation.

In terms of international experience, we can draw lessons from the practices of other countries. For instance, on August 1, 2017, the state of Delaware in the United States passed a significant amendment that allows companies to use distributed ledger technology to record and track stock transactions. This represents the latest advancement in blockchain technology in Delaware, showcasing the state's open attitude and forward-thinking approach to innovative technologies. According to this bill, the entire process of issuing, transferring, regulating, communicating, and redeeming company shares can be seamlessly integrated into a blockchain platform, greatly simplifying the cumbersome procedures of traditional financial systems. The implementation of this bill signals potential major transformations in global securities markets and could reshape their network structures. China can reference these international experiences, strengthen cooperation and coordination with the global communi-

ty, promote a virtuous cycle of technological innovation and compliant development, and enhance the efficiency and transparency of regulation. Through these measures, it will contribute to the healthy development of China's digital asset market and lay a solid foundation for the prosperity of the digital economy.

5 Conclusion

Blockchain technology, as a revolutionary innovation, has significantly enhanced transparency in specific domains by leveraging its unique advantages, effectively mitigating issues of information asymmetry and thereby establishing a robust foundation of trust. By strengthening internal information sharing, ensuring the authenticity and timeliness of information, it fundamentally addresses the problem of information asymmetry in corporate governance, promoting a marked improvement in governance capabilities. However, under current circumstances, corporate law needs to gradually reform and make appropriate adjustments to accommodate technological advancements, ensuring the deep integration and harmonious coexistence of technology and corporate governance. The introduction of this technology has not only transformed the way data is stored and transmitted but has also significantly reshaped internal operational mechanisms and external business interaction models within enterprises. The decentralized nature of blockchain makes data records more resistant to tampering, increasing data credibility. Simultaneously, the application of smart contracts further automates transaction and contract execution processes, reducing the likelihood of human intervention and errors. These changes undoubtedly bring positive impacts to corporate operational efficiency and market competitiveness. However, the accompanying challenges cannot be overlooked, such as how to achieve data sharing while protecting personal privacy and how to promote the widespread adoption and application of technology while ensuring security. Therefore, the reform of corporate law must not only consider how to adapt to technological progress but also how to protect the interests of all parties in the new technological environment, ensuring the deep integration and harmonious coexistence of technology and corporate governance. Furthermore, in the context of accelerated corporate globalization, Business English plays a crucial role as a key tool for international business communication in the promotion and application of blockchain-based governance models. Whether in the standardized drafting of smart contract clauses, enhancing the transparency of cross-border information disclosure, or facilitating cross-cultural communication in global corporate governance, Business English serves as an indispensable bridge and link. By fostering the deep integration of blockchain technology with Business English, corporations can not only enhance governance efficiency but also strengthen their competitive positioning in the international market.

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