





# The Compliance Framework of Anti- Bribery for Multinational Corporations in China

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**Abstract.** In the wave of globalisation, multinational corporations have become a significant driver of economic development. However, one of the problems they face is bribery, which seriously disrupts the international market economy and harms the interest and vested benefits of countries. In China, particularly, both foreign companies engaging in bribery within China and Chinese companies engaging in bribery abroad have posed a serious issue and challenge. Relying solely on the legal regulations is insufficient to solve this particular issue. It is essential for multinational corporations to establish compliance systems to combat bribery. Therefore, Chinese multinational corporations urgently need to develop compliance systems that are tailored to local circumstances to prevent cross-border bribery. By implementing effective compliance systems, companies can mitigate bribery risks, reduce criminal liabilities, and enhance their corporate image and reputation. At the same time, government departments should strengthen guidance and supervision of corporate compliance, and form a collaborative effort to jointly combat cross-border bribery activities. This article aims to explore the necessity of multinational corporations engaging in anti-bribery measures and establishing effective compliance practices against bribery. Doctrinal approach is employed for this research, in which. primary sources and secondary sources such as legislation, official reports from the government and non-governmental organisations, international conventions and books are referred.

**Keywords:** Bribery, Corporate compliance framework, Multinational corporations.

## 1 Introduction

Bribery is a phenomenon that involves social and legal issues. With the development of economic globalisation, its impact has expanded to international trade and overseas investment. In order to access foreign markets and global resources, companies continuously expand their operations and market influences. They gradually become cross-border, multinational, or even global corporations. Following this corporate expands, bribery crimes have transcended the boundaries of individual countries or regions, evolving into international acts of business corruption. These corrupt practices severely affect the effectiveness of market resource allocation and distort the competitive conditions of the international market. Bribery enables companies to gain undue advantages through unfair business rivalry. When such behavior becomes widespread, it will further disrupt the market order, tarnish the corporate reputations

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and trigger a vicious cycle. Many developed countries started combating and addressing overseas bribery crimes since a long time ago. For instance, the United States (US) enacted the Foreign Corrupt Practices Act of 1977 (FCPA), which became the world's first legislation targeting overseas corruption. Additionally, the United Kingdom (UK) also introduced the Bribery Act 2010. These statutes require multinational corporations to establish corporate compliance systems for self-prevention, self-supervision, and self-examination of their bribery practices.

Currently, China does not have a unified law which is specifically targeting on bribery, as the related legal provisions on bribery is scattered. There is also insufficient guidance for the establishment of corporate compliance mechanisms. It is essential for multinational corporations to enhance their compliance awareness and establish compliance mechanisms to prevent involvement in overseas business bribery crimes.

This article primarily focuses on the importance of combating bribery for multinational companies and lessons that can be learned from other jurisdictions and international organisations in combating bribery. With the growing presence of Chinese companies in the international market, recommendations are made for compliance construction.

## **2 International Organisations and Governments' Anti- Bribery Compliance Framework**

### **2.1 International Organisations' Anti- Bribery Compliance Framework**

The Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (OECD Anti-Bribery Convention) which came into force in 1999, is an international instrument with legally binding standards on criminalisation of foreign public officials' bribery in international business transactions [1]. The convention encourages member states to adopt necessary measures to ensure the implementation of laws, regulations, and practices related to accounting standards, external audits, and internal corporate controls. These measures are aimed at preventing and curbing the bribery of foreign public officials in international business activities.

In 2003, the United Nations adopted the "United Nations Convention against Corruption" (UNCAC), which is currently the most influential and comprehensive international convention that sets standards and combats corruption [2]. The convention provides detailed requirements for member states regarding both substantive and procedural issues related to combating corruption. It establishes a legal framework for addressing transnational bribery crimes and carries binding obligations. In addition, building upon the United Nations Global Compact, the convention introduced the Tenth Principle in 2004, which calls for the business sector to actively combat all forms of corruption, including extortion and bribery [3]. The principle requires businesses to establish anti-bribery policies and report on their anti-bribery efforts during annual meetings, sharing experiences and providing practical assistance for anti-bribery compliance across all enterprises.

In April 2005, the Basel Committee on Banking Supervision issued the document "Compliance and the Compliance Function in Banks", which sets forth basic principles and institutional frameworks for

member country banks to establish compliance departments and compliance systems [4]. This document has been widely recognised as an authoritative reference for the establishment of compliance risk systems and regulation in the global financial industry and regulatory agencies. It defines compliance risk in banking as the risk of legal or regulatory sanctions, significant financial loss, or reputational damage that a bank may face due to non-compliance with laws, regulatory requirements, rules, codes of conduct established by self-regulatory organisations, and ethical standards applicable to its own business activities.

Additionally, in 2010, as part of the implementation of the G20 Anti-Corruption Action Plan, the OECD, United Nations, and World Bank collaborated to develop Anti-Corruption Ethics and Compliance Handbook for Business. This initiative was undertaken with the voluntary assistance of associations such as the International Chamber of Commerce, Basel Committee, and Transparency International [5]. The handbook aims to provide practical tools for companies to enhance their compliance efforts. It provides detailed guidance on conducting risk assessments and directs companies on how to develop and implement anti-bribery ethics and compliance systems in accordance with various international anti-corruption frameworks. For multinational corporations, this handbook is a valuable and useful guide, offering practical insights and recommendations for their compliance endeavors.

With the process of globalisation, multinational business bribery has become an undeniable issue in international economic interactions. With the growth of international trade and business activities, it has provided more opportunities for acts of bribery abroad. This has raised concerns within the international community and prompted the awareness and actions by countries to prevent and intercept such improper conduct. International organisations have addressed overseas bribery by formulating conventions and other legal instruments to regulate and govern it. They also call on member states to regulate large multinational corporations and require them to establish internal compliance mechanisms to mitigate compliance risks. Countries like the United States and the United Kingdom have also enacted legislation and engaged in cooperation efforts to prevent and combat foreign bribery, aiming to uphold a fair and competitive market environment.

## **2.2 National Legislation on Anti-Bribery Compliance Framework**

### **The United States Foreign Corrupt Practices Act (FCPA)**

The Watergate scandal of 1972 sparked public distrust of government and of big business. Investigations by the Securities and Exchange Commission (SEC) revealed that more than 400 US companies admitted making questionable payments to foreign government officials, political parties and politicians [6]. The public Congressional hearings also exposed the involvement of prominent corporations such as Exxon, Lockheed and others in bribery [7]. In response, the US Congress passed the FCPA in 1977, with the aims of combating bribery of foreign officials and restoring public confidence in the integrity of the American free market system. FCPA mainly consists of anti-bribery provisions and provisions on accounting practice [8]. Pursuant to the anti-bribery provisions, US persons and companies (domestic concerns), US and foreign public listed companies or such companies which are required to file periodic reports with the SEC (collectively referred to as “issuers”), foreign companies and persons acting within the territorial

jurisdiction of the United States, are prohibited from corruptly paying the foreign officials to obtain or retain business or secure improper advantage. The accounting provisions play an indispensable role in preventing bribery and strengthening the front line against corruption in advance. Issuers must keep books, records and accounts in reasonable detail which accurately and fairly reflect their business transactions. They must also devise and maintain a system of internal controls [9], [10]. Hence, the jurisdiction of this Act is broad, operating on the principles of territorial or nationality jurisdiction [11].

The enforcement of the accounting provisions is the responsibility of the SEC, while the criminal aspects are overseen by the Department of Justice. The requirements regarding accounting books and records include “related transaction records and financial statements”, prohibiting the inclusion of any inaccurate or misleading items. Additionally, issuers are required to develop and implement a reasonable system of internal controls and maintain effective compliance oversight. This internal control system should meet the standards of “reasonable assurances” and be “reasonable detail” to ensure that prudent officers who handle the duties are satisfied with the system [12].

Violations of the anti-bribery provisions will result in criminal penalties. Corporations may be fined up to \$2 million while individuals may be fined up to \$250,000 and imprisonment for up to 5 years. As for the violation of the accounting provisions, corporations may face a fine of up to \$25 million while individuals may face a fine up to \$ 5 million and a maximum imprisonment term of 20 years.

In November 2012, the US Department of Justice and the SEC jointly issued “A Resource Guide to the US Foreign Corrupt Practices Act” (FCPA Resource Guide). This guide serves as a reference document, providing further explanation and guidance on the application of the US FCPA to overseas corruption. While the guide itself does not have legal binding force, it offers clarity and systematic guidance in the following areas [13]. Firstly, the guide provides clear definitions of certain terms, such as “foreign official”, helping to explain the specific application of these terms under the FCPA. Secondly, the guide offers specific guidance on the applicability of defenses, such as facilitation payments, assisting companies in understanding when these defenses can be raised and providing explanations and requirements related to them. Additionally, the guide emphasises the importance of effective compliance programs and offers recommendations to help companies develop and implement compliance measures that meet the requirements of the FCPA. Overall, the release of this guide has provided greater clarity and systematisation in the application of the FCPA, offering valuable guidance to companies in complying with the law and regulations.

### **The Bribery Act 2010 In the United Kingdom**

On 1 July 2011, the Bribery Act 2010 of the United Kingdom (UK) came into force. This legislation has extraterritorial effects and introduces the principle of “strict liability” for companies. According to this principle, multinational companies are not only required to oppose bribery but also must take measures to prevent bribery by third parties acting on their behalf, or else they will be held responsible for the actions of those third parties [14]. The Bribery Act 2010 stipulates that a company can only claim a defense if it can demonstrate that it has taken “adequate procedures” to prevent bribery [15]. However, the Act does not explicitly define what constitutes “adequate procedures.” To address this ambiguity, the UK government issued the Bribery Act 2010 guidance in October 2010, which provides guidance on how

commercial organisations can implement measures to prevent bribery [16]. The purpose of the guidance is to assist commercial organisations in understanding and implementing the requirements of the Bribery Act 2010. It provides detailed explanations of the requirements for adequate procedures and suggests feasible compliance solutions. The guidance emphasises the flexibility of individual circumstances, encouraging organisations to make reasonable adjustments and implementations based on their own characteristics and risks. It offers a range of recommendations regarding training, risk assessment, internal controls, and monitoring to help organisations establish effective anti-bribery systems. Overall, through the introduction of the Bribery Act 2010 and the Bribery Act guidance, the UK government provides commercial organisations with a clear legal framework and guidance, prompting them to take proactive measures to prevent and combat bribery. This aims to protect the integrity of the business environment, promote fair competition, and enhance the country's image.

The six principles of “adequate procedures” outlined in the Bribery Act guidance provide useful guidance for building robust internal control procedures. The principle of “proportionate procedures” requires commercial organisations to consider factors such as their size, nature of business, and types of associated persons to develop preventive procedures that are appropriate to their own circumstances. The design of such procedures should be tailored to the specific enterprise, facilitating practical implementation and execution. The principle of “top-level commitment” emphasises the responsibility of the leadership of commercial organisations. The most appropriate individuals should assume responsibility for communicating, personally participating in the design, formulation, and implementation of anti-bribery procedures, as well as making relevant decisions, to ensure effective implementation of this work. The “risk assessment” and “due diligence” principles complement each other, as due diligence serves as both a means of assessing bribery risks and a method of mitigating risks. Due diligence procedures should align with the risk assessment, with the depth and level of investigation determined by the magnitude of the risks. The principle of “communication” includes dissemination and training, aiding employees and associated persons in understanding and comprehending the relevant procedures. Effective communication enhances awareness and compliance with compliance requirements. The “monitoring and review” principle requires commercial organisations to actively improve and continuously update the preventive bribery procedures they have established to adapt to changes in business, scale, and the external environment. This is crucial to ensuring the effectiveness of the procedures. Overall, these six principles are of significant value in promoting standardised internal control within commercial organisations and demand that they be reasonable and feasible. It is foreseeable that multinational companies that construct internal control systems based on these principles will be able to effectively prevent incidents of bribery.

The Bribery Act 2010 upholds the international community's emphasis on internal control. By requiring commercial organisations to provide evidence of having established “adequate procedures”, compliant organisations will have the opportunity for lenient treatment or even exemption from penalties under appropriate circumstances. In practice, this makes the completeness of a commercial organisation's internal control system a key determining factor for the establishment of the offence of failure to prevent bribery. This will prompt the commercial organisations to recognise that the internal control responsibilities represented by the six principles act as a “protective umbrella” safeguarding them from sanctions. As a result, it encourages organisations to actively build robust internal control systems and promotes the healthy development of commercial entities.

### **3 Building China's Anti-Bribery Compliance Framework**

#### **3.1 Current Status of China's Corporate Compliance Framework**

Currently, at the legal level, China has not established unified regulations for corporate internal control compliance systems. The provisions on internal control responsibilities in the Criminal Law of the People's Republic of China (Criminal Law) are relatively weak, with relevant articles limited to Article 162, which pertains to the crime of "concealing or intentionally destroying accounting vouchers, accounting books, and financial accounting reports." However, the scope of this crime is too narrow, as it only covers accounting vouchers, accounting books, and financial accounting reports, excluding other accounting materials. Furthermore, it only addresses acts of concealment and intentional destruction, without addressing other acts such as falsification and forgery, thus failing to effectively prevent bribery crimes. Although the Amendment VIII to the Criminal Law of the People's Republic of China (Amendment VIII), revised in 2011, added the "crime of bribing foreign public officials and officials of international public organisations", Chinese companies' involvement in bribery crimes abroad remains persistent. The root of the problem lies in the insufficient recognition of the harmful nature of overseas bribery crimes. Additionally, there is a lack of supporting measures and implementation guidelines against foreign bribery. The Company Law of the People's Republic of China (Company Law) explicitly states that companies should assume social responsibilities, including pollution prevention and resource conservation. However, it is regrettable that Company Law only introduces the concept of corporate social responsibility and internal control systems at a conceptual level, lacking corresponding theoretical and cultural support. As a result, there are deviations in the understanding and application of legal provisions by companies, and some companies still adhere to a profit-first mindset, even unaware of the deficiencies in their internal management.

Although relevant departments have successively issued some guiding documents to promote corporate compliance management, such as the "Measures for the Compliance Management of Central Enterprises (Central Enterprise Compliance Guidelines)" issued by the State Council in 2018 [17] and the "Notice by the State Administration for Market Regulation of Issuing the Guidelines on the Overseas Anti-monopoly Compliance of Enterprise (Overseas Compliance Guidelines for Enterprises)" issued by the National Development and Reform Commission of the People's Republic of China in 2018 [18]. The Measures for Compliance Management of Central Enterprises issued by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) requires central enterprises to formulate special guidelines for anti-bribery compliance management in the form of departmental regulations [19]. However, these documents have a lower legal status. A national survey conducted by a research centre of the Beijing Normal University on the anti-bribery compliance of the enterprises in China reported that the preliminary foundation for the Chinese enterprises' anti-bribery compliance system has been established, in terms of organisation, institution and mechanism. However, the foundation is still at an elementary level. The construction of the anti-bribery compliance system can be further advanced through the improvement of the business environment [20].

#### **3.2 Recommendations for Establishing Compliance Framework by Multinational Corporates**

The legislative authorities in China should clearly define the basic concepts and contents of anti-foreign bribery laws to enable judicial practices to accurately define and handle related cases. Firstly, for the regulated entities, it is necessary to provide a detailed definition and criteria for “foreign public officials” and “officials of international public organisations”. This will assist judicial authorities in accurately determining whether the entities involved fall within the scope of these definitions. Secondly, clear regulations should be established for overseas bribery and accounting compliance, including a detailed list of elements constituting criminal offenses. Lastly, considering the ambiguity of certain legal provisions, it is advisable to include provisions for affirmative defenses to ensure that the handling mechanisms can effectively address situations that are unclear or subject to doubt.

Legal liability should encompass not only criminal liability but also civil and administrative liability. In this regard, it is necessary to establish clear grounds and standards for penalties to avoid excessive discretion in decision-making. Drawing on the provisions of the US FCPA, compliance requirements can be introduced, specifying certain obligations to be fulfilled within a designated period after the imposition of penalties, thus ensuring a combination of punishment and remediation. Additionally, there should be a strengthening of internal control and reporting systems, with a mandate for prompt and timely disclosure of information. The law should clearly define provisions for due diligence exemptions or lenient treatment regarding internal control compliance, while encouraging companies and executives to establish robust compliance systems and organisational structures, thereby guiding and incentivising proactive compliance and cooperation with investigations. Through these measures, it is possible to ensure that laws against overseas bribery are more clearly defined in practice regarding entities, actions, and responsibilities, and to guide relevant entities in establishing effective compliance mechanisms, thus avoiding a situation of heavy penalties and inadequate compliance measures.

To strengthen the internal compliance culture of enterprises, central companies should focus on promoting compliance awareness and training. When constructing an enterprise’s compliance culture system, it is beneficial to draw a lesson from mature compliance management practices of other companies and explore a compliance path that suits their own development. Through various forms of compliance promotion, companies can establish their unique core compliance values, create a strong compliance culture atmosphere, and lay the foundation for subsequent compliance efforts. For example, innovative methods such as producing compliance videos through new media can be employed for compliance training of employees. Additionally, measures such as publishing the latest regulatory information and compliance enforcement case commentaries in internal compliance columns can be taken. Similarly, companies like China Mobile focus on cultivating compliance literacy among grassroots employees and launch compliance initiatives through top management, clearly defining their attitude and stance to all employees. These compliance promotion measures contribute to enhancing employees’ acceptance and understanding of compliance management, encouraging them to internalise and externalise compliance consciousness in their behavior. Furthermore, a well-designed and effective internal compliance system can have a profound impact on employee behavior. Therefore, companies should prioritise the cultivation and promotion of a compliance culture, ensuring that employees understand and comply with compliance requirements through targeted training and promotional activities. This will help establish a sustainable compliance management system, enhance the company’s reputation, and improve its competitiveness.

#### 4. Conclusion

As global attention to the issue of overseas bribery by multinational corporations continues to increase, the enactment of anti-corruption laws signifies the gradual improvement of legal regulations governing the governance of bribery by multinational corporations worldwide. This places dual compliance requirements on multinational companies, requiring them to comply with both the laws of the host country and their home country, while also demanding a strict oversight and improved legal systems from governments around the world. However, despite the multiple legal and commercial risks that multinational corporations face, cases of bribery still occur frequently, which is thought-provoking.

It is submitted that multinational corporations should promptly improve their compliance systems against commercial bribery, fulfill their global corporate social responsibilities, and strive for sustainable development. However, compliance systems should not be limited to mere paper regulations but should permeate the organisation's internal culture, ingrained in the hearts of every employee, making compliance a conscious effort. Some worry that in the current environment, refraining from bribery may result in loss of business opportunities and easily to eliminate by other competitor. However, taking US as an example, as one of the earliest countries to implement anti-corruption laws, its corporations still wield significant influence and economic power globally. Therefore, for Chinese companies to further develop and grow stronger, they must adhere to international rules, uphold honesty and trustworthiness, enhance corporate reputation, and bolster national credibility. Establishing comprehensive anti-bribery compliance systems will help Chinese companies quickly align with international standards, breaking free from the limitations of traditional thinking and habits. Specifically, fostering a compliance culture is crucial, advocating integrity and clean behavior from top to bottom.

On the other hand, governments around the world should improve the investment environment, combat corruption behavior, and enhance relevant legal regulations as external factors to eradicate commercial bribery. The effectiveness of corporate compliance efforts can only be realised with the support of the external environment. Therefore, relevant departments should strengthen supervision of compliance by multinational companies, safeguarding fair and free market order. For example, companies could be required to develop compliance manuals and training programs in their annual reports or audits, review financial statements to assess compliance implementation, and impose more severe administrative penalties for violations. Only in a fair and free market can companies compete on a level playing field, combat bribery, reward compliance and integrity, and conduct business activities within the framework of the law. Only through the joint development and improvement of the company itself, the external environment, and government regulation can a bribery-free business environment truly be created.

#### References

1. The Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, <https://www.oecd.org/corruption-integrity/explore/oecd-standards/anti-bribery-convention/>, last accessed 2023/7/16.
2. United Nations.: Convention Highlights. <https://www.unodc.org/unodc/en/corruption/convention-highlights.html>, last accessed 2023/7/16.
3. United Nations Global Compact.: The Ten Principles of the UN Global Compact.



- <https://unglobalcompact.org/what-is-gc/mission/principles#:~:text=The%20Ten%20Principles%20of%20the%20United%20Nations%20Global%20Compact%20are,United%20Nations%20Convention%20Against%20Corruption>, last accessed 2023/7/16.
4. Compliance and the compliance function in banks, <https://www.bis.org/publ/bcbs113.htm>, last accessed 2023/7/16.
  5. OECD, UNODC and the World Bank, Anti-Corruption Ethics and Compliance Handbook for Business, <http://www.oecd.org/corruption/Anti-CorruptionEthicsComplianceHandbook.pdf>, last accessed 2023/7/16.
  6. Olsen, W.P.: The Evolution of the Foreign Corrupt Practices Act. In *The Anti-Corruption Handbook: How to Protect Your Business in the Global Marketplace*. John Wiley & Sons, 2010.
  7. Rossbacher, H.H., Young, T.W.: The Foreign Corrupt Practices Act Within the American Response to Domestic Corruption. *Dickinson Journal of International Law* 15(3), 509-532 (1997).
  8. Olsen, W.P.: The Evolution of the Foreign Corrupt Practices Act. In *The Anti-Corruption Handbook: How to Protect Your Business in the Global Marketplace*. John Wiley & Sons, 2010.
  9. 15 US Code §§ 78m(b)(2)(A), (B).
  10. Tarun, R.W., Tomczak, P.P.: *The Foreign Corrupt Practices Act Handbook*. 5<sup>th</sup> edn. American Bar Association, (2018).
  11. Olsen, W.P.: The Evolution of the Foreign Corrupt Practices Act. In *The Anti-Corruption Handbook: How to Protect Your Business in the Global Marketplace*. John Wiley & Sons, 2010.
  12. 15 US Code §§ 78(b)(7).
  13. A Resource Guide to the US Foreign Corrupt Practices Act, <https://www.justice.gov/criminal-fraud/fcpa-resource-guide>, last accessed 2023/7/16.
  14. Bribery Act 2010, s 7(1).
  15. Bribery Act 2010, s 7(2).
  16. Bribery Act 2010 Guidance, <https://www.gov.uk/government/publications/bribery-act-2010-guidance>, last accessed 2023/7/16.
  17. Measures for the Compliance Management of Central Enterprises (Central Enterprise Compliance Guidelines), <http://lawinfochina.com/display.aspx?id=39703&lib=law>, last accessed 2023/7/16.
  18. Notice by the State Administration for Market Regulation of Issuing the Guidelines on the Overseas Anti-monopoly Compliance of Enterprise, <http://lawinfochina.com/display.aspx?lib=law&id=36952>, last accessed 2023/7/16.
  19. Measures for the Compliance Management of Central Enterprises, [https://webvpn-1729.gz2.findres.net/http/gffga6ae4bfbcde7b499cspkf6wnw99nko6cnk.fhli.libproxy.ruc.edu.cn/en\\_law/f8ad6b52b9e6aca2bdfb.html](https://webvpn-1729.gz2.findres.net/http/gffga6ae4bfbcde7b499cspkf6wnw99nko6cnk.fhli.libproxy.ruc.edu.cn/en_law/f8ad6b52b9e6aca2bdfb.html), last accessed 2023/7/16.
  20. Zhao, J.: The Report on Anti-bribery Compliance in China and Relevant Explanation. *Crime Research*. 6, 2-33 (2022). [https://m.sohu.com/a/553500384\\_120172170?\\_trans\\_=010004\\_pcwzy](https://m.sohu.com/a/553500384_120172170?_trans_=010004_pcwzy), last accessed 2023/7/16.

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