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Managing Currency Risk in Global Supply Chains: Resilience Strategies

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ABSTRACT

Currency risk was a significant difficulty for firms involved in international commerce in the current global economy. The profitability and competitiveness of organisations with supply chains that span across borders were greatly affected by fluctuations in exchange rates. This introduction examined the intricacies of managing currency risk in global supply chains, investigating the most recent solutions used by organisations to strengthen their operations. Over the last 10 years, there has been an extraordinary increase in globalisation, characterised by more market integration and increased international trade. Nevertheless, globalisation brings with it not just benefits but also inherent concerns, with currency volatility being the most prominent among them. According to projections by Grand View Research, Inc., the global currency exchange market was expected to reach a value of \$28.8 trillion by 2025. This highlights the significant currency risk that firms throughout the globe were facing. The emergence of the COVID-19 pandemic emphasised the need to effectively handle currency risk in worldwide supply networks. Amidst trade interruptions and shifting currency rates, economies faced increased uncertainty and volatility, which in turn affected enterprises. Research conducted by the Foreign Monetary Fund had shown that there was a significant increase of 59% in currency volatility during the early phase of the epidemic. This has worsened the difficulties faced by companies that heavily depend on foreign commerce. In light of this situation, companies were obligated to reevaluate their methods for managing currency risk to strengthen their ability to withstand challenges and reduce the possibility of financial losses. Conventional methods such as forward contracts and currency options, while somewhat successful, may not be enough to handle the intricacies of contemporary supply chains. As a result, organisations are using novel methods and technology to effectively manage currency risk. Recent developments in Financial Technology have created new opportunities for innovative currency risk management strategies. Blockchain technology had the potential to provide transparent and secure cross-border transactions, which helped decrease the risk of currency exposure. Moreover, the advent of Artificial Intelligence and Machine Learning algorithms enabled organisations to analyse extensive information and forecast currency fluctuations with enhanced precision. Collaborative alliances within supply chains provided a strategic opportunity to reduce currency risk. Companies may enhance risk mitigation and improve their ability to adapt to market dynamics by developing stronger connections with suppliers and consumers. This can be achieved via the exploration of collaborative hedging methods and the sharing of risk burdens. Nevertheless, effectively managing currency risk in international supply chains requires the ability to quickly adapt, come up with new ideas, and work together. This summary summarised important findings from the following conversation, emphasising the need for proactive risk management techniques in protecting against the uncertainties of the global economy.

Keywords: Currency risk management, Global supply chains, Exchange rate volatility, International commerce, Financial technology (Fintech).

INTRODUCTION

Businesses in the current integrated global economy have a variety of issues, with currency risk being a significant one. Fluctuations in exchange rates may have a substantial influence on the profitability and competitiveness of enterprises involved in global commerce. Organisations must have strong methods to minimise the negative impact of currency fluctuations, given that their supply chains extend across several nations and currencies. This

introduction examines the complexities of currency risk in global supply networks and investigates current techniques used by organisations to protect their operations. Over the last ten years, there has been a significant expansion in globalisation, marked by a remarkable merging of markets and a rise in international commerce. Nevertheless, globalisation brings with it some hazards, with currency volatility being the most significant one. The global currency exchange market is forecasted to reach \$28.8 trillion by 2025, as stated in research by Grand View Research Inc. [1], This highlights the significant currency risk exposure that firms throughout the globe are confronted with. The COVID-19 epidemic highlighted the need to effectively handle currency risk in worldwide supply networks. Amidst trade interruptions and shifting currency rates, economies faced increased uncertainty and volatility, which companies had to deal with. Research conducted by the Foreign Monetary Fund (IMF) found that there was a 59% increase in currency volatility during the early stages of the epidemic. This increase in volatility made it more difficult for enterprises that depend on foreign commerce, adding to their existing issues [2]. In light of this situation, companies are obligated to reevaluate their methods for managing currency risk to strengthen their ability to withstand challenges and reduce the possibility of financial losses. Conventional methods like forward contracts and currency options, while somewhat useful, may not adequately handle the intricacies of contemporary supply chains. As a result, organisations are increasingly using creative methods and technology to better manage currency risk. Recent progress in financial technology (Fintech) has created new opportunities for innovative methods of managing currency risk. Blockchain technology has the potential to provide transparent and secure cross-border transactions, which may help to decrease the risk of currency fluctuations. Furthermore, the advent of artificial intelligence (AI) and machine learning (ML) algorithms empowers organisations to analyse extensive information and forecast currency fluctuations with enhanced precision [3]. Furthermore, establishing collaborative collaborations throughout supply chains provides a strategic opportunity to reduce currency risk. Companies may develop stronger connections with suppliers and customers to facilitate collaboration on hedging strategies and the sharing of risk responsibilities. Collaborative efforts not only improve the reduction of risks but also promote increased flexibility and adaptability in addressing changing market circumstances [4]. Amidst the present worldwide economic environment, effectively managing the potential impact of currency fluctuations on global supply chains has become a crucial obstacle for organisations. Volatility in currency exchange rates may have a substantial influence on the expenses and profitability of global commerce, influencing both those who bring in goods and those who export them. Although there are many risk management options available, firms often have difficulties in devising efficient methods to reduce currency risk and guarantee the durability of their supply chains. The growing intricacy of worldwide supply systems underscores the rising need to manage currency risk. The report highlights the need for firms to implement proactive policies to efficiently manage currency volatility. The study conducted by Gupta et al. [5], investigated how digital technology might improve the management of currency risk in global supply chains. Their study highlights the capacity of blockchain and artificial intelligence (AI) technologies to provide immediate insights and enable proactive decision-making. The citation for this information is Chen and Wang [6]. Chen and Wang analyse the difficulties encountered by small and medium-sized firms (SMEs) when it comes to controlling the risks associated with currency fluctuations in their worldwide supply chains. Their research cites the limitations imposed by restricted resources and lack of access to financial instruments as significant obstacles, emphasising the need for customised solutions for small and medium-sized enterprises (SMEs). The study by Johnson. [7], is provided. Johnson's study explores the consequences of central bank policy on techniques for managing currency risk. The research emphasises the need to closely monitor macroeconomic data and regulatory developments to successfully manage currency volatility. The study conducted by Lee et al. [8], examines the influence of currency risk on the performance of companies within the framework of global supply networks. Their research indicates a strong inverse relationship between the volatility of exchange rates and profitability, highlighting the pressing need for effective risk mitigation techniques. In their study, Kumar and Singh. [9], investigate the efficacy of conventional hedging methods, such as forward contracts and options, in reducing the impact of currency risk. Their study emphasises the constraints of conventional methods under unstable market situations and advocates for inventive risk management strategies. Wong and Chan. [10], examine the incorporation of sustainability factors into the management of currency risk in global supply networks. Their research promotes the use of a comprehensive strategy that integrates environmental, social, and governance (ESG) concerns into the evaluation of risks and the process of making decisions. The study conducted by Martinez et al. [11], examines the influence of technology disruptions, such as cyber-attacks and data breaches, on the level of currency risk exposure in global supply chains. Their study highlights the need to implement strong cybersecurity measures to protect against any financial losses caused by disturbances connected to currencies. The study was conducted by Brown and Patel. [12], investigates the consequences of uncertainty in trade policy on methods for managing currency risk. Their research emphasises the difficulties organisations encounter in predicting and reacting to changes in trade agreements and tariffs, which require a higher level of flexibility and adaptation in risk management strategies. This review paper focuses on resilience strategies that lessen financial

sensitivity to foreign exchange rate fluctuations in global supply networks. This study combines peer-reviewed journals, books, industry reports, and recognised websites including research over the previous two decades. Use keywords and Boolean operators to improve searches, carefully collect data, and use theme analysis to uncover efficient methods and technological operations. A full understanding of global supply chain stability strategies is ensured.

Review of Existing Literature

The exposure to fluctuations in currency values in global supply chains has become a significant worry for enterprises functioning in a highly linked and unpredictable market environment. This literature review offers a comprehensive examination of current research and publications about techniques for managing currency risk in global supply chains, with a particular emphasis on measures that enhance resilience. The emergence of globalisation has broadened the range and intricacy of supply networks, requiring a more profound understanding of the elements that affect currency risk exposure. According to Fichtner et al. [13], the interaction of macroeconomic factors, geopolitical events, and financial market dynamics has a substantial influence on changes in exchange rates. This creates difficulties for enterprises involved in international commerce. As a result, it is increasingly important for organisations to have strong strategies for managing currency risk to reduce possible losses and improve their ability to withstand challenges. Businesses have historically used traditional methods like forward contracts and currency options to mitigate the impact of exchange rate fluctuations on their currency risk exposure. Nevertheless, new research indicates that these traditional approaches may be inadequate in dealing with the complex and diverse aspects of currency risk in worldwide supply chains. Glaum et al. [14], argue that typical hedging products may not be as effective due to liquidity restrictions, counterparty risk, and basis risk. This emphasises the need to find novel alternatives. Businesses are increasingly relying on technology advancements to enhance their ability to manage currency risk since conventional hedging strategies have shown to be limited. Blockchain technology has attracted interest due to its ability to completely transform cross-border transactions and reduce the risk associated with currency fluctuations. The study conducted by Cheng et al. [15], investigates the use of blockchain-based platforms to improve transparency, security, and efficiency in global commerce. This has the potential to decrease the need for intermediaries and lower transaction expenses. Moreover, the incorporation of artificial intelligence (AI) and machine learning (ML) algorithms shows potential in improving currency risk prediction and decision-making procedures. AI-powered algorithms use data analysis and pattern recognition in currency fluctuations to assist firms in making real-time hedging choices with more accuracy and knowledge [16]. Nevertheless, the implementation of AI-driven solutions presents difficulties with data privacy, the capacity to understand the models, and the potential for biased algorithms. This calls for a thoughtful examination of the ethical and legal consequences. Implementing collaborative risk management strategies inside supply chains provides an additional method for reducing currency risk and improving resilience. Kim and Lee. [17], emphasise the significance of establishing strategic alliances with suppliers and customers to collaboratively evaluate and control currency risk exposures. Through the act of exchanging information, resources, and the distribution of risk, organisations may create customised hedging strategies that are in line with their shared interests and goals. This, in turn, promotes increased flexibility and the capacity to adjust to market uncertainties. To summarise, effectively managing currency risk in global supply chains requires a comprehensive strategy that incorporates technical advancements, cooperative alliances, and adaptable risk management tactics. Although conventional hedging mechanisms continue to be important, firms should also embrace innovative technology and take a proactive approach to mitigate risks. Companies may strengthen their ability to withstand currency fluctuation and unpredictability by using blockchain technology, artificial intelligence, and collaborative risk management strategies. The exposure to fluctuations in currency values in global supply chains has become a significant worry for enterprises functioning in a highly linked and unpredictable market environment. This literature review offers a comprehensive examination of current research and publications about techniques for managing currency risk in global supply chains, with a particular emphasis on measures that enhance resilience. The emergence of globalisation has broadened the range and intricacy of supply networks, requiring a more profound understanding of the elements that affect currency risk exposure. According to Fichtner et al. 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CONCLUSION

To address currency risk in global supply chains, a thorough strategy is necessary that combines financial instruments, operational tactics, and risk management frameworks. Although there is no universally applicable answer, firms may use a blend of hedging instruments, diversification strategies, natural hedging, and risk management policies to mitigate the effects of currency changes on their operations and financial results. Studies in this field emphasise the need to take preemptive measures to reduce risks and make strategic decisions when dealing with fluctuations in currency values. Companies may increase their ability to withstand currency risk and stay competitive in the global market by using effective hedging procedures and diversifying their exposure. Select procurement, manufacturing, and sales currency risk sectors for focused mitigation. Determine the company's risk profile and hedge via futures, options, and swaps. Reduce currency dependence by diversifying suppliers and markets. Consider selling and sourcing in stable currencies or natural hedges. Align income and spending in the same currency for natural hedging. Establish tolerance boundaries, contingency plans, and constant monitoring in risk management policies.

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